

# ENSURING THE SAFETY OF ORGANIZATIONS' KNOWLEDGE IN THE CONTEXT OF REQUIREMENTS OF THE ISO 9001:2015 STANDARD

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**Abstract:** *The article presents how the ISO 9001:2015 standard indicates the directions of action for organizations that have implemented a quality management system in the context of knowledge management and employee competence.*

**Keywords:** *ENSURING KNOWLEDGE SECURITY, ISO STANDARD REQUIREMENTS, MANAGEMENT RISK, KNOWLEDGE MANAGEMENT, COMPETENCE AND AWARENESS*

## 1. Introduction

Knowledge management is derived from ancient times, but the very terms "knowledge management" appeared in 1997 and only from that moment can be regarded as functioning as a form of separate approach in modern management. Among many definitions that describe this area, it is worth mentioning the one developed by K. Stewart, which says that it is: "*Possessing knowledge about we know, its acquisition and organization, and use in a manner that brings benefits*" [1].

However, regardless of what concept or definition we want to use in our organization, all activities related to knowledge management focus on common elements, which include: cyclicity and regularity, analysing processes related to the location of knowledge and its acquisition, linking processes with business objectives implemented through the organization, support of acquired and owned knowledge with IT tools and modern technologies, deriving benefits resulting from this activity and, perhaps above all, ensuring the security of acquired and owned knowledge. Among the concepts of knowledge management, there are three approaches: Japanese, resource and process. The process approach probably captures the concept in the most transparent way, the main parts of which are: acquiring knowledge, sharing it and converting it into decisions. Taking into account the elements of the process approach mentioned above, it can be seen that each of them is closely related to the next key trend of management, i.e. human capital management. Acquiring knowledge or creating it is, after all, nothing but using the intellectual potential of your employees or using external sources in the form of knowledge that you can buy, but there is always the danger that it will not have a unique character. In turn, sharing knowledge is closely related to its dissemination not only within the organization, but also outside. It also requires the creation of appropriate incentive solutions for employees, codification of knowledge and finding recipients who actually use such knowledge. At this stage of the organization's operation, there is a problem related to ensuring a secure flow of information, which should only reach the indicated recipient. The stage of knowledge processing in managerial decisions requires the involvement of the most competent managers, responsible and decisive, who, acting with appropriate commitment and equipped with appropriate tools, not only are responsible for the decisions made, but also can assess the value of innovative ideas of their most competent employees in the right way.

## 2. Benefits and barriers related to knowledge management in the organization

Contemporary organizations require their employees to be highly committed and identify with the objectives set and adopted for implementation. In such conditions, the ability to use owned knowledge comes to the fore. Certainly the fact that knowledge management is the subject of interest for employees in most departments of a given organization is a very beneficial phenomenon. This results from the increase of awareness, understanding, perception of clear benefits resulting from the fact of

having and using the codified knowledge of the organization in order to achieve a higher level of development and appreciating such solutions. The level of organizational culture is certainly important in the development and consolidation of this type of approach. It is widely believed that the higher the level, the easier it is to manage knowledge and consolidate positive employee behaviour. However, one should also take into account such a possibility that the high organizational culture cultivated for many years may cause unwillingness to new solutions, learning and changing the way of acting or patterns of behaviour perpetuated over a long period of time. Changing the type of procedure is, after all, nothing but the implementation of new methods, tools, programs that are carriers of all kinds of knowledge. And here the human appears as the biggest barrier on the way to striving for changes in the organization. Hence the fear that the high level of organizational culture perpetuates solidified patterns of behaviour so conscientiously introduced and strengthened as the only just and right ones. Taking into account the above, the most frequent changes concern the implementation of new IT programs supporting such areas of functioning as: accounting, finance, HR, marketing, technology, etc. Most employees often appreciate moving around the beaten path and are afraid of putting more effort into new ventures. The lack of trust in colleagues is a common barrier resulting from fears of their own position in the organization, lack of cooperation between the various departments of the organization, resulting from the phenomenon of mutual combating, which in turn is caused by the sense of superiority of own department over others or superiority of one manager over others. Hence the need for integration between employees and creating a sense of belonging to a given task group and identifying each individual goal with the goals of the group and organization. Hence, there is a great challenge ahead of the leadership of the contemporary organizations, who are responsible for triggering positive manifestations of solidarity, cooperation and integration. An important benefit resulting from knowledge management is certainly raising the level of organization's competitiveness, access or possession of unique knowledge, which is the basis for the development of any organization. It is worth ensuring that knowledge is maintained, stored and its uncontrolled leak cannot be allowed, which could lead to strengthening of our competitor. An important element beneficial for each organization is the possibility to reduce operating costs resulting from the fact that duplication of knowledge does not occur and the funds saved in this way can be allocated to other areas of activity. The need to adapt knowledge management to different goals depending on the area of management and the place of activity in the organization remains problematic. It is about the fragmentation of knowledge and the emergence of narrow specializations, rather than solving needs in the global scope of the organization. However, on the other hand, it can be assumed that each area of the organization requires different strategies. In the area of competence management, and this is about the competences of employees in the organization, which we can treat as qualifications, including: knowledge, skills, experience, education, personality traits, we are talking here about the added

value of the organization. Valuation of the value of each organization is now perceived as the value of the intellectual potential of each employed member of the organization. An important aspect is to keep an employee in the organization of knowledge not only in connection with retirement, but also in the case of transition to another organization. Knowledge management affects employees' learning and skills development resulting from the need to become more competitive and results from the willingness generated by healthy competition. It also has a significant impact on the development of innovation and reduction of excess information and saving time.

### **3. *Qualitative approach resulting from international ISO 9000 standards***

The pedigree of quality standards dates back to the 50s when the US defence industry began to demand equipment of adequate quality from its suppliers. Such an approach prompted the manufacturers to develop new solutions of a qualitative nature, having regard to the quality covering the entire process from the customer's order up to the moment the finished product is made. The effect of adopting this type of solutions was to create a systemic approach that often required the organization to carry out revolutionary activities, at the expense of a great joint organizational effort. However, this effort was not only noticed, but also appreciated, which caused the willingness to use good managerial practices in the economy. The standardization of quality systems was a way to popularize the pro-quality approach. At the end of the 1950s, the first NATO-AQAP standard was issued. Great Britain decided to adopt ready-made solutions adopted and tested in military sectors, and with the consent of the British government, the BS 5750 standard was developed, which marked a breakthrough in pro-quality solutions on the international arena and allowed them to be adopted to the "civil" sectors. As a result, in 1987, the first series of ISO 9000 standards was issued, which included model solutions for the certification of quality management systems. Subsequent improvements to these standards made in stages were carried out in 1994, followed by a major amendment in 2000 – a change in the philosophy of standards, less ground-breaking in 2008, and the last in 2015. Thanks to these standards, there has been a significant change in the process of matching quality not only with the product, service, but above all with the quality of processes and the manner of their management. The introduction of the ISO 9001:2000 standard in 2000 was a particularly breakthrough moment, i.e. eight TQM (Total Quality Management) management principles, often referred to as TQM foundations. These are: customer orientation, leadership, people involvement, process approach, system approach to management, continuous improvement, decision-making based on facts, mutually beneficial relationships with suppliers. Until 2000, the ISO 9000 standards were considered as "dry" requirements without life, which concerned the manufacturing capacities. The TQM principles saturated them with life and allowed for the use of soft elements related to human behaviour [2]. Total Quality Management – is an organization's philosophy equipped with a set of guiding rules that assume its continuous improvement. In quality management, all effective methods that improve the products and services provided by the organization, improve the efficiency of all processes in the organization, improve the level of meeting the customers' requirements, both now and in the future. Traditional methods of social sciences and qualitative methods are equally used here [3].

### **4. *The concept regarding the organization's knowledge and protection of its security resulting from the ISO 9001:2015 standard***

Point 7.1.6 of the International Standard EN ISO 9001:2015 takes into account the need to define and manage knowledge maintained by the organization mainly to ensure the functioning of processes and to achieve compliance of products and services. A rather dry and enigmatic normative clause does not develop a topic related to the entire process of keeping knowledge in the organization in a

way that allows it to be used and made available in a secure way to both internal and external clients of any organization. Notes to this point only speak about sources of knowledge that can be based on internal and external sources. Annex A (informative) in point A.7 the organization's knowledge approximates the purpose for which the provision concerning the organization's knowledge has been introduced and it speaks about securing the organization against its loss in the event of staff turnover or incorrect accumulation and distribution of information. To better understand the essence of the problem related to securing the organization's knowledge, please refer to Annex A.4 risk-based approach. The concept regarding this approach was indirectly included in the previous edition of this International Standard. Currently, the requirements for understanding the organization's context and identifying risks as a basis for planning have been specified. The use of a risk-based approach under point 6.1 of this International Standard imposes on each organization the responsibility for applying the risk-based approach and for the actions that are taken to account for the risk. And on the other hand, it allows the organization to have a flexible approach to this topic, especially since not all quality management system processes present the same level of risk. It is worth considering the level of risk associated with the possibility of losing knowledge at the planning stage of projects in the organization concerning the areas of operation defined as opportunities, such as: introducing new products to the market (products are treated in a normative approach equally with the service), implementing new practices, acquiring new clients, opening new markets, building partner relations with other entities, using new technologies, exchanging information with the environment of the organization and all other activities related to taking into account the organization's needs or the needs of its customers [4]. As can be seen from the cited points of the standard and the Notes, there are instruments that allow the protection of the possessed and documented knowledge in the organization, although the standard itself only indicates the directions of action, while it leaves each organization with the freedom in terms of developing specific securities and all solutions in this respect. One of these methods may be to develop a table of risks that make up the entire area related to the knowledge of the organization. The implementation of this extremely risky undertaking requires all members of the organization to be strongly involved at every level of its management, particularly from the managerial staff. A lot depends on how the system of formal and informal relationships functions, how individual employees perceive responsibility for common goals and implementation of undertakings, if everyone is equally motivated for joint activities ensuring success in the organization. A lot depends on the way of thinking, and this in turn results from the level of organizational culture. It is possible to condition all areas of the business with various prohibitions and orders, internal regulations and other documents in the form of instructions or procedures in force, but the redundancy of this type of formalized rules may prove as harmful as the lack thereof. Returning to the sources of knowledge indicated in the Notes to point 7.1.6 of the EN ISO 9001:2015 standard, the authors focused only on their specification, but without indicating how to protect them. Intellectual property is best protected due to statutory regulations in force in each country, but if you do not specify what constitutes an intellectual property of an organization, it will be difficult to prove the right to it. This applies in particular to documents, such as projects, technologies, research results, procedures related to the implementation of processes, IT programs – it is worth ensuring that they are the property of the organization, development, training topics and documentation related to them, and a whole range of this type of documented knowledge. Therefore, it seems that the internal knowledge of the organization can be more easily protected, but how to ensure that it is protected against its loss. This type of security will not be described by even the most perfect standard. Everything depends on the people employed and their level of loyalty. The leakage of the organization's knowledge can take place at the level of a regular employee, but also at the level of the top manager. There are known cases of selling a competitive

organization's database in exchange for the opportunity to obtain a lucrative job or other material benefits. Less serious cases concern the possibility of using another computer station in the company under the pretext of failure of own equipment, then the data may be lost through the irresponsible behaviour of the colleague, and still the burden of this type of leak or theft will affect the owner of the computer, on whose access password the operations were carried out. We often also deal with such a situation that someone is employed in a competitive organization in a position that would seem insignificant from the point of view of the organization and after acclimatization and gaining the trust of the environment steals data from the boss's computer (a known case of a person cleaning executive offices, who in fact turned out to be an IT specialist). It may happen that a person feeling unjustly dismissed from the position, when moving away, steals the company's data or deletes it on his/her workplace, thus preventing the possibility of their quick reconstruction. Similarly, if a dissatisfied employee retires. Considering the above cases, one should bear in mind situations that may occur at any time. Most organizations put more and more effort into protecting their intellectual assets from external attacks, and unfortunately less attention is devoted to the threats described above, and resulting from the actions of their own employees. Therefore, it is worth to perform a risk analysis and take into account even the most unlikely possibilities of occurrence of individual events. Another important aspect of knowledge management is the implementation of the standard for storing documented knowledge in the organization. This is related to the need to store payrolls, personnel and other documents related to the employee, which in turn results from the Labour Code. The period of storage of this type of documents was 50 years in Poland. Only the last amendment to the Labour Code introduced on January 1, 2019, shortened this period to 10 years. It is a serious challenge for any organization, not every one of them can afford to maintain a properly secured archive, and it is not only about theft, but also damage, destruction through flooding, incineration and other random events. A solution for this type of problem is the emergence of companies specializing in archiving the storing documents on the market. The question is, how reliable and responsible they are in the case of many years of using their services. Such companies are also exposed to random events and may also be subject to the same threats as any other company. As it can be seen, the requirements of the EN ISO 9001:2015 standard are a universal structure, but the "dry" statements of the requirements conceal the huge amount of activities to be performed. The flexibility of this type of approach lies in the fact that organizations leave a large area of freedom in this respect, but this cannot be associated in any way with the release from liability. Each company that has implemented a quality management system must develop its own solutions. A good practice in this area would be to create a system where organizations could share ideas for implementing the requirements of the standard. The truth is that nowadays, in fear of the action of the competition, there is no possibility that the organizations would pass on their methods of solutions and share knowledge in this area. This is evidenced by the fact that every auditor who conducts an audit in a given organization is obliged to observe confidentiality and refrain from providing any kind of consultation. The only hope for the spread of this type of knowledge is related to training, which is organized by national accreditation bodies, which have the power to provide explanations related to the interpretation of the requirements of the standard.

### **5. *Activities ensuring the increase of knowledge security in the organization***

The basis for the proper functioning of every organization in the modern world is the adaptation to the changing environment conditions. This is favoured by well-developed communication, the use of modern technologies and modern IT programs. These are elements inseparably connected with changes that are increasingly faster and more often affecting everyone. Most employees are afraid of organizational changes, often seeing them as a threat to their peaceful existence or fearing not to meet the new requirements. In

such situations, it is worth creating a system ensuring security and motivation in the valuing of employees open to innovation, and at the same time analyse the team of employees in the context of commitment, loyalty, persistence, diligence, learning and pursuing ambitious goals, focused on learning opportunities. An important element in the appropriate way of accounting for teamwork, in which not the number of innovative solutions developed by individuals is decisive, but by a group of employees. The idea is to reward the team by creating an appropriate motivation system. Another important element conducive to the safety of knowledge is the position of the leader, who influences the behaviour of employees through positive attitude, promotes positive emotions, motivates positive behaviours, fills the environment with his own energy and ideas, and is able to bring the whole team with him. It is very important that the attitude of the leader is a role model to be followed. On such a strong foundation, one can build an appropriate level of organizational culture. It is easier for employees to understand that each of them is an important element of a larger whole. Education and maintenance of good relations of the manager with employees is an art that requires a certain level of competence and effort. The ability to deal with employees determines the efficiency of the team's work and – in a slightly longer perspective – maintaining the ability to manage and, therefore, maintain the managerial position [5]. The organization's culture is also the creation of an appropriate organizational structure, which will not be focused on large fragmentation and will enable a smooth flow of information. Very often people who do not necessarily have a leading role in a given organization have a desire to prove that their own position is superior to strategic goals, which leads to stiffening of the existing organizational structures and prevents the flow of information and thus knowledge sharing between cells, departments or branches. Separation of individual functional divisions known as the silos effect is not conducive to cooperation and, unfortunately, undermines the mutual trust of employees. A big problem to be solved is the question of who needs knowledge and who has it, and to what extent it can be made available. Another challenge is learning, which as a process in itself is not devoid of errors, and stigmatizing employees, who at the learning stage can commit them, is a serious barrier in sharing knowledge. The unfriendly IT programs, which are considered by users to be too complicated and not very intuitive, are the barrier in learning and acquiring knowledge. So it is worth investing in tailor-made programs, which are implemented with a strong involvement of future recipients. Nevertheless, all actions aimed at developing an organization based on knowledge and ensuring its safety, rests on people, whose responsibilities and competences are the basic foundations. Creating a well-designed incentive system is the basis for strengthening mutual bonds and the loyalty of employees. The perfect model is an organization in which all employees identify with its goals and participate in all activities. Even the best implemented quality management system is a signpost, but it will not solve the problems of the organization and will not replace loyal and competent employees.

### **6. *Competence and awareness in the context of the ISO 9001:2015 standard***

Currently, we are functioning in times known as the era of knowledge management, which according to many researchers is the basic element on which the value of each organization is currently being built. Modern organizations base their competitiveness on it. Acquiring knowledge and competence of employees is the basis of every contemporary organization. Employees are the most valuable capital based on their qualifications, knowledge, skills, experience and personality. That is why human capital occupies the leading position among all capitals being the most important part of intellectual capital. The modern economy is mainly based on knowledge, and people who constitute the main assets of the organization are its most valuable asset. The organization's knowledge is inextricably linked to the competencies of employees, which include such elements as: general, theoretical and practical knowledge, that is everything that

the employee has learned in the education process and within the framework of self-education. This type of knowledge is confirmed by credentials, certificates and diplomas and is often referred to as qualifications. This kind of knowledge should be distinguished from practical skills, that is, what the employee can actually do. This kind of knowledge, in turn, is identified with the concept of experience. Controversies are raised the inclusion of personality traits into the competence, which, however, have a significant impact on the professional performance. The ISO 9001:2015 standard deals with the issue of competence of point 7.2, in which the organization is required to determine the necessary competences of persons performing work affecting the effects of the activity and the effectiveness of the quality management system. In practice, this means the same as creating the so-called competence profiles of each employee or job description cards. Documents of this type make it easier to assess employees in the intervals required by the organization, as well as to keep track of whether an employee actually meets the requirements specified in his/her job. The standard, of course, does not impose any method of fulfilling this requirement, leaving free choice to every organization. Frequent practices related to the implementation of this requirement include the creation of a set of important competences desired at a given position and the minimum desirable at a given position. The difference resulting from actual skills in combination with the minimum is a competence gap, which should be filled by improving qualifications within training. It may also happen that the employee surpasses the position within one of the traits and does not grow up to others. The adoption of such solutions is aimed at smoothing out differences and striving to achieve a state of harmony. Only in situations similar to ideal, job and employee profiles will be identical. This kind of approach allows to achieve better selection of employees and to effectively use the potential of knowledge related to a given position and to make a better selection of personnel and its development. The standard requires that each organization should store the properly documented information as evidence of its competence. Thus, the valuation of jobs is also the knowledge of the organization. Periodic job audits are invaluable knowledge of the organization, which, collected systematically over the years of the organization existence, allows for a very effective use of employees' knowledge described meticulously in job cards or competence profiles. Knowledge of competency profiles by employees is an element of motivation and indicates the direction of development of each employees based on an established career path. An important element accompanying this type of activity is the adjustment of job profiles to the changing environment of the organization on an ongoing basis and the constant provision of information flowing from them to indicate development opportunities. Point 7.3 of the ISO 9001:2015 standard specifies the concept of awareness that should characterize every employee of the organization. Awareness understood as knowledge of the current activity of an employee in understanding the goals that each organization has and encouraging participation in co-creating the added value of each organization and the ability to draw conclusions in situations that required learning from mistakes as part of improving the effects.

## 7. Summary

The International Standard ISO 9001:2015 uses a process approach and a risk-based approach. The measurable benefits of using a process approach are undoubtedly enabling the organization to plan processes and relationships between them aimed at continually increasing customer satisfaction by providing products and services that meet their requirements, and applying various forms of improvement, such as innovation and reorganization. The risk-based approach allows for the maximum minimization of the negative effects of the action and the maximum use of emerging opportunities, while often indicating the possibility of risk in certain areas of the organization's activity may initiate many positive actions in its functioning. The qualitative approach allows for solving organizational problems in a holistic manner [6]. Each process has an impact on the overall activities carried out in the organization. All areas are interrelated in relations that serve superior purposes, such as effectiveness and continuous improvement. The requirements of the standard in a comprehensive way show all the areas of the organization's operation, constituting a kind of user's manual, at the same time indicating the most important elements of the organization's functioning.

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