INTEGRATION OF MANAGEMENT SYSTEMS, SYNERGY OF QUALITY, KNOWLEDGE AND RISKS IN BUSINESS MANAGEMENT

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Abstract
This article focuses on modern management systems. It describes the systems in the defined space dealing with the possibility of their integration into one management system. Therefore, the focus is specifically on quality management, risk management, knowledge management. The quality management means customer orientation and fulfillment of requirements, the risk management means risk-based thinking and knowledge management in the business (knowledge management).

Keywords
management, integration, quality management, risk management, knowledge management.

1 INTRODUCTION
Many renowned authors agree that the future of management in the 21st century will be based on other principles as it was in the 20th century. It is the result of dynamic developments in globalized society and in economics. Management therefore creates new paradigms in response to developments in the global market economy. These changes require a change of management approach and all employees in a business to maintain the competitiveness of their business. Changing management's approach to business has the sole goal of adapting businesses to these changes that are constantly changing and evolving external environment.

2 ANALYSIS OF CURRENT TRENDS IN MANAGEMENT
This section briefly describes and analyzes current trends in corporate governance.

Global Informational Society of today and in the future
- It can be said that we live in an information civilization (at least as far as developed countries are concerned), which is rapidly developing and will continue to dynamically develop, we live in a global economy, one of the main features of which is the creation of a global information society.
- Currently, a change in organizational structures in businesses are ongoing and there will be a much greater change in the near future then today - going from the classic vertical organizational and governance structures to horizontal structures. This process creates, and especially in the future will create, very flexible independent businesses with a high degree of autonomy in management.
- Business management visionaries have understood that a 20-century corporate governance model built on the hierarchy and the ever-increasing volume of labor and capital inputs lag behind the needs of today's businesses. These need, in particular, to strengthen cooperation and value creation by talented employees.
- The pace and frequency of change is steadily accelerating, with naturally growing risks in the business sphere, increasing uncertainty about business in the global economy.
- Gradually, new trends in business management and development are being applied in businesses, changes are in the approach to leadership and human resource management, employee competencies are transferred and organizational structures change from horizontal to vertical.
- We are witnessing the acceleration and massive development of global trade and services, due both globalization and electronic technologies.
- The success of a business is increasingly dependent on effective partnerships with suppliers and customers, so the importance of quality management is growing, that is, the orientation of the business on the customer and the fulfillment of its needs is considered to be self-evident.
- There is a growing need to implement modern management systems in businesses (e.g.: risk management, knowledge management, innovation management, lean management, etc.).
- In fact, businesses have a number of consultants who transfer know-how from successful businesses to less successful ones and thus the natural competitive advantage levels.
- Information and ideas are spreading freely.
- The life cycle of both strategies and products is shortening.
Reaction, adaptation of businesses to changes in the market and to changes in management

| Observation of environment: |
|-----------------------------|
| - external                 |
| - internal                 |
| Strategy formulation:      |
| - mission                  |
| - objectives               |
| - strategy                 |
| Strategy implementation:   |
| - programs                 |
| - projects, methods,       |
| - budgets, calculations    |

Figure 1. Adaptation of businesses to changes in the market and in management

Adaptation of companies to changes in the market is also necessary by changes in corporate management, meaning the implementation of modern and beneficial management systems in business management. Among these management systems belong quality management, risk management and knowledge management.

Let’s briefly describe the three management systems mentioned above: quality management, risk management and knowledge management.

Quality management, increasing the importance of quality management

The quality of products and services offered has a crucial place in industrial practice of the global economy, quality is now understood as a business phenomenon. The driving force of business success and prosperity is the customer, the satisfied customer. This is the core of quality, to meet customer needs, but also needs of other stakeholders (e.g., legislation, standards).

Quality management system

The quality management system is described in controlled documentation, which consists of, for example: a quality manual, guidelines and other cross-sectional documents and working procedures. The quality management system is used to guide and manage the business with regard to quality. The quality management system is a system for determining policy and goals and achieving these goals. The system is a set of interconnected or interacting elements. The quality management system is a tool for managers to set policy and quality objectives and to achieve these goals. It is a means of ensuring compliance of products with the requirements of the customer and the stakeholders. The Business Quality Management System is an important part of the overall management system in the business. [1]

The main goal of implementing a quality management system should be to create a favorable business environment, meet customer requirements and continually improve in all processes because your competition is doing the same.

Risk management

It is not our job to precisely plan the future of the business, because it is simply impossible. Especially at the time of uncertainty in the world of business in the global economy Pericles said, “It is not our job to predict the future, but to be well prepared for it.” Business risk management should be a framework for risk-based preparation and optimization of risk and possible negative consequences [3].

Principles of quality risk management

There are two basic principles of quality risk management:

- Quality risk assessment should be based on scientific knowledge and ultimately aimed at protecting the customer, client,
- The degree of effort, method and documentation of quality risk management should be proportionate to the degree of risk. [3,4]

Knowledge Management

Intellectual capital and its efficient use in the business is one of the key conditions for the competitiveness of businesses in the 21st century. Sufficient use and development of knowledge is a challenge for businesses, because by using employee knowledge, these businesses can adapt to more and more rapidly changing conditions for doing business on the global market. Our world is full of chaos and uncertainty. The world of rapid changes, with the number of changes growing; the world in which the foundation of business prosperity is and will increasingly be - the intellectual capital of corporate employees.

Knowledge management and its objectives:

- The main goal of knowledge management is to make even better use of the intellectual capital of employees for the benefit of the business.
- Successful, progressive businesses that are and still want to remain competitive dedicate increasing attention to knowledge, knowledge management. They shift attention to knowledge, to their origin, transformation, storage, selection, processing, to their efficient use for further business development. Knowledge management is therefore part of corporate governance.

A tool that provides effective, functional implementation of a knowledge manager in a business is an integrated information system, business intranet, data warehouse, etc., as well as an organizational structure, a business culture that supports knowledge management. Indeed, it is important to create a business culture that will be motivating the employees who know to share their knowledge with other employees.

The integrated management system consists of the subsystems: quality management, risk management and knowledge management. That is, where quality is obvious risk management begins (risk-based thinking) and knowledge management means applying and using knowledge for the competitiveness of the business.
3 INTEGRATION OF MANAGERIAL SYSTEMS

Integration of quality management, risk management and knowledge management in business management

Integrated quality management system, risk management, and business knowledge management

This management system serves the business manager and involves changing attitudes, management, thinking, and actions. Such a management system allows managers to pay increased attention to quality management - risk of processes (risk-based thinking) and capture the current trend of implementing knowledge management into business development activities. So, at the same time, implement these management systems at the company and take advantage of their synergy effect.

Reason for integrating risk management and knowledge management:

All necessary and new knowledge must be used by businesses to increase innovation activities, product innovation, processes, while reducing the risks that are growing in the global economy. Many businesses are aware that employee knowledge is the intellectual capital that is needed to maintain the competitiveness of a business, knowledge is also needed for innovation. Knowledge management should not be understood as a knowledge base in the business, but I emphasize that it is essential to create a corporate culture and utilization of technology that will motivate employees who create knowledge to share their knowledge with other employees.

The basic processes in knowledge management are: knowledge creation, handling, or knowledge storage, dissemination, or knowledge sharing, and the combination of available knowledge. In a dynamic, turbulent environment of the current market economy, managers must naturally count with the possible risks that such an environment generates. Consider the possible risks before they happen, because they will also influence the company's results. The goal of risk management is that, besides identifying, analyzing and evaluating individual risks, there is a possibility of responding to these individual risks. The worst approach in the business would be to overlook these risks, not to pay proper attention to them. The core, meaning of implementation of the management system is as follows - we want to constantly improve processes by putting more emphasis on process risks and sharing the knowledge needed to improve processes and innovation in a business. In the context of adapting businesses to a changing global market economy environment with many changes and uncertainties, it is necessary to change the way of thinking of managers and employees, that is, part of the adaptation of the business so that both managers and employees have risk-conscious thinking, they have the idea of accepting rising risks to have risk-based thinking.

Risk and risk management are therefore a possible future step in quality management. Risk and risk management are the next step in quality management, and "quality managers" should deliver value to their employers by offering risk management solutions based on their knowledge (knowledge management).[1]

4 IMPLEMENTATION OF QUALITY MANAGEMENT AND RISK MANAGEMENT IN PRACTICE, IN SOLAR TEAM SLOVAKIA PROJECT

Revision ISO 9001: 2015 (Quality Management Systems - Requirements).

Quality Management and Risk Management - Thinking based on risks

ISO 9001 is an important international standard for quality management systems that describes the requirements for these systems. Risk-based thinking is a fundamental change in the revision of ISO 9001: 2015. Whether a business is small or large, engaged in production or services, every day it encounters various influences that represent uncertainty, which influences achievement of goals. The effect - positive or negative, which these uncertainties have on business goals, represents "risks". So all the processes and activities that are taking place in the company represent a

Figure 2. Integration of the quality management system, risk management and knowledge management

Figure 3. Integration of quality management, risk management and knowledge management in business management
potential risk. Risks are managed by identifying, analyzing, and assessing them. If you assess the risks as significant, you set them against the risk measures that you subsequently manage. During these activities, you are consulting the risks and risk measures with the affected people and other stakeholders. You then regularly monitor and review the individual risks to be sure that the proposed measures are effective. ISO 31000: 2009 describes the process in details. The ISO 31000 standard provides rules that should be followed to ensure that your risk management is effective. Norm recommends that you develop, implement and continually improve your risk management system. Its goal is to integrate the process of risk management into business management. The standard describes: principles, system, process, general guidance on risk management. A key feature of the standard is to establish relationships at the start of the risk management process. These relationships take into account the individual requirements and business environment and all the influences that can help with risk management. The standard can be applied to any type of risk regardless of whether it has a positive or negative effect. The standard can be used by any business or organization. The standard is not sector-specific. The standard is not a "certification". It has only the character of a recommendation.

Performing risk management in full, in part or not at all, can be started by:
- Acquaint yourself with ISO 31000, management and risk management,
- Perform a difference analysis of the current risk management situation in your organization or your organization according to ISO 31000 recommendations,
- Develop an action plan for the introduction of risk management according to ISO 31000. [5]

Table 1
Example of risk management used by Solar Team Slovakia, control software safety analysis

| Potential risk that may affect the activity of the project (identification of potential risks) | Example - Insufficient financial resources, necessary to ensure project processes |
| Consequences, the outcome of the risk | 1. insignificant consequence | 2. noticeable consequence | 3. Critical consequence | 4. catastrophic consequence |
| Measures to reduce the negative effects of risks | |
| Assessment of the risk after the implementation of the measures taken | |

The following table below shows simplified example of how to start managing the risks of the project. The entire risk management process must be complete. Risk management begins with identification of all possible risks (financial, technical risks, material security, personnel, legislative risks, etc.). This identification is performed periodically by managers. The analysis and risk assessment follows, that means, quantifying the implications of identified risks for the project if they occur. In the third step, we need to take measures against risk, we start with risk measures that address the risks that have the greatest possible impact on the project, if the identified risk situation would occur. In the last step, we evaluate the effectiveness of the risk measures adopted and, where necessary, modify them. We perform this entire process regularly, periodically.

Figure 4 shows a further practical example of risk management, namely the assessment of risks related to the safety of the machine in an industrial plant.

**CONCLUSION**

The paper focuses on trends and changes in the global economy, as well as the risks to business, because the changes naturally relate to the risks that these changes bring to business. In this turbulent time of the global market, business leadership is therefore gaining more and more beneficial and necessary management systems such as change management, risk management, knowledge management, and so on. The company management system should incorporate and integrate these new management subsystems, such as risk management and knowledge management, integrating them with quality management, thereby making use of their synergies.

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