

**WEAKNESSES IN APPLYING A PROCESS APPROACH  
IN INDUSTRY ENTERPRISES**

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**Abstract**

*The paper deals with a process approach as one of the main principles of the quality management. Quality management systems based on process approach currently represents one of a proofed ways how to manage an organization. The volume of sales, costs and profit levels are influenced by quality of processes and efficient process flow. As results of the research project showed, there are some weaknesses in applying of the process approach in the industrial routine and it has been often only a formal change of the functional management to process management in many organizations in Slovakia. For efficient process management it is essential that companies take attention to the way how to organize their processes and seek for their continuous improvement.*

**Key words**

*quality management, process approach, interaction of processes, description of processes, weaknesses*

**Inroduction**

Process approach in quality management is based on the principle of the process interaction and management of all processes in enterprise and helps to achieve identified goals of the organization. Efficient processes flow is an important tool for maintaining and strengthening the position of enterprise in a market-oriented environment. We suppose that it is important to take attention to the way how their processes have been organized and seek for their continuous improvement. Process management system is an effective tool for ensuring efficiency and effectiveness, it helps to meet customer's requirements and internal needs of the company.

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## Characteristics of the process approach

Process is a group of value-added activities and activities in process are interrelated in a system, they are not random but interconnected and organized with own competency.

Process management is defined as a systematic identification, visualization, measurement, evaluation and continuous improvement of business processes using methods and principles based on the process approach. Main goal of the process management is to achieve a process efficiency. Process management provides a comprehensive view of all company activities that are integrated in processes. Main principles of the process management are a process orientation and horizontal management. Many organizations were able to reduce their costs, enhance quality and shorten time of product realization and in this way to achieve also inconsequent goals. Change of the functional to the process management means not only change of the organization structure, but also change of people thinking.

There are some recommendations how to apply process management in organization. Every identified/defined process should have its owner, responsibility and competence. There are actually many forms of process documentation and every of them has its pros and cons. Processes might be documented as a process map and a process card, where are defined a process owner, process inputs, outputs, method of measurement, monitoring and indicators.

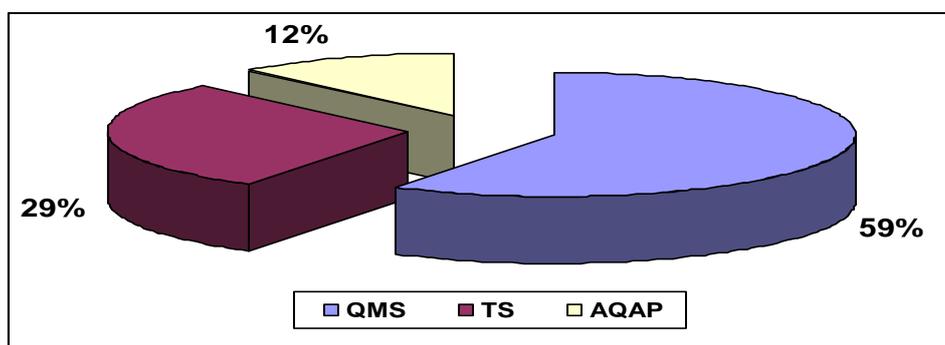
## Materials and methodology of experiment

In the research project dealing with applying of the quality management in industrial enterprises in Slovakia, we asked about the application of the basic principles of quality management system (QMS) in questionnaire completed in 135 organizations.

We found out that 87% of surveyed organizations have implemented QMS and 13% had no at all.

So we have considered only the organizations with implemented QMS and these were divided according to the refereed model in three groups as shown in figure 1:

1. Organizations with a quality system certified according to ISO 9001,
2. Organizations with a quality system certified according to TS 16949,
3. Organizations with a quality system certified according to AQAP.



*Fig. 1 Structure of organizations according QMS certification*

In our research project we asked about level of process management implementation in different types of organizations with established and certified quality management system by means of following questions:

- ⤴ How are identified and described processes in the organization?
- ⤴ Are there defined flows of processes and interaction between them?
- ⤴ Which form of process description has been used in organization?
- ⤴ Do you use in organization a software support in process management?
- ⤴ What kind of the benefits of process management do you see?
- ⤴ Can we say that in your organization is realized a systematic collection of data?
- ⤴ Does management examine the objectivity and reliability of data from individual processes?
- ⤴ How the results of process data analysis are used?

### **Reached results and discussion**

Our research showed that 84% of all organizations with the quality management system identified their processes, 91% organizations of automotive industry and 86% of defense industry organizations.

In question about a definition of flows and processes interaction in organization, almost all organizations responded positively (94%). We expected that organizations with quality management system should identify processes, their sequence and interaction as the subject of quality management system models. We recognized that mostly it's all a formality and often are interrelated and defined only core processes. This approach can reduce the effectiveness of process management.

This was confirmed by the information about the identification of process owners, their responsibilities and competencies. We find out that only 71% of organizations have identified their process owners and defined the responsibilities and competence. In our opinion this is in contradiction with the results, according to which said that 84% of organizations identified processes. One of the process management requirements is that each process owner should be identified providing responsibilities and competencies.

In organizations was realized a identification of processes often as a verbal description (e.g. internal standards, guidelines) or flowcharts, less were used process maps.

We considered process management as a comprehensive area, so it is convenient to use a software support to facilitate and streamline the work. In a questionnaire 46% of the respondents answered that they use some software support in managing processes, 51% of the respondents stated that they doesn't use software support and 3% had no comment to this question. As software support there are used EISOD - Electronic ISO documentation PalstatCAQ, ARIS and some less known software products.

Process approach in organization means a necessary to ensure permanent monitoring, measuring and analyzing of processes, as well as measuring and monitoring the whole performance of the quality management system.

For effective process management it is necessary not only to ensure a systematic data collection, but collected data should be verified for objectivity and reliability. We see some significant opportunities for improvement here, because 42% of organizations with ISO 9001 certificate stated that they were collecting data only from selected processes. Other organizations mainly collect data from all the processes included in the quality management system (see Table 1 and Fig. 2). This we see as a weakness, because to achieve customer satisfaction it is necessary that all of the processes taking place in the organization should clearly and effectively managed. This can only be achieved if all process data will be

objective and reliable. In organizations of automotive industry is a better situation, because systematic data collection from all processes had 80% of them.

IS A SYSTEMATIC DATA COLLECTION IN YOUR ORGANIZATION? Table 1

Is a systematic data collection in your organization?								
<i>a) from all processes in QMS</i> <i>b) only from realisation processes</i> <i>c) only from some selected processes</i> <i>d) no data collection at all</i> <i>e) didn't answer</i>								
	All enterprises with QMS		Certificate ISO 9001		Certificate TS 16 949		Certificate AQAP	
	Answers		Answers		Answers		Answers	
<i>a)</i>	61	52%	24	35%	27	79%	10	72%
<i>b)</i>	20	17%	15	22%	3	9%	2	14%
<i>c)</i>	34	29%	29	42%	3	9%	2	14%
<i>d)</i>	1	1%	1	1%	0	0%	0	0%
<i>e)</i>	1	1%	0	0%	1	3%	0	0%

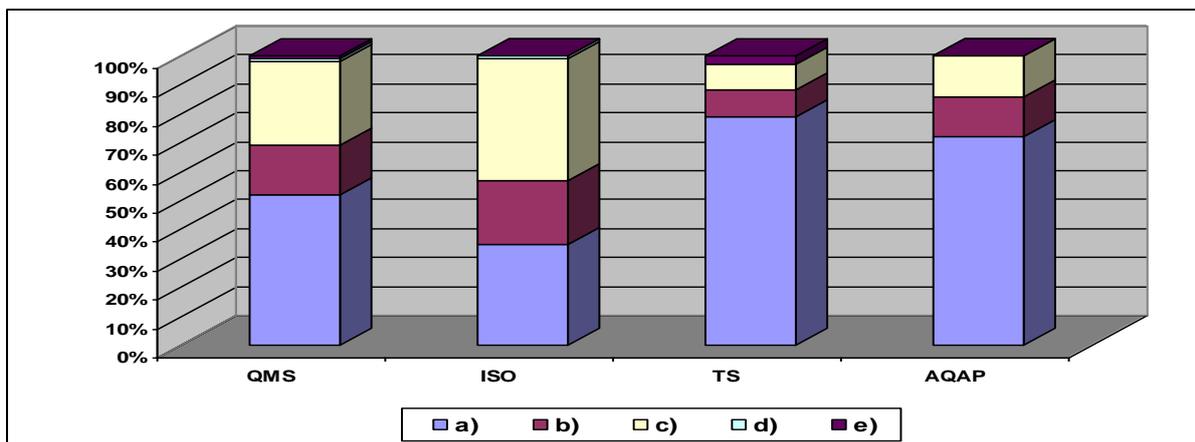


Fig. 2 Is a systematic data collection in your organization?

Our research showed also that about in half of all organizations were verified data from individual processes by the management to ensure their objectivity and reliability. However, cca 30% of organizations reported that management verified the objectivity and reliability of data from selected processes.

We find out that objectivity and reliability verification of process data took place in only about 50% of organizations, including organizations from the automotive industry.

It is important not only to acquire, analyze, store and provide some information obtained from processes, but they should be used, either to improve the process or to improve the growth of the organization. The research project showed that in organizations with ISO 9001 and TS 16949 were used the results of data analysis as a basis for process improvement (see Table 2 and Figure 3).

How the results of process data analysis are used?								
a) as a reference for management								
b) for determination of the quality objectives								
c) for process improvement								
d) for planning of financial resources within the quality management system								
	Organizations with QMS		ISO 9001 Certificate		TS 16 949 Certificate		AQAP Certificate	
	Answers		Answers		Answers		Answers	
a)	64	55%	32	46%	18	53%	14	100%
b)	65	56%	37	54%	22	65%	6	43%
c)	92	79%	55	80%	27	79%	10	71%
d)	33	28%	19	28%	10	29%	4	29%

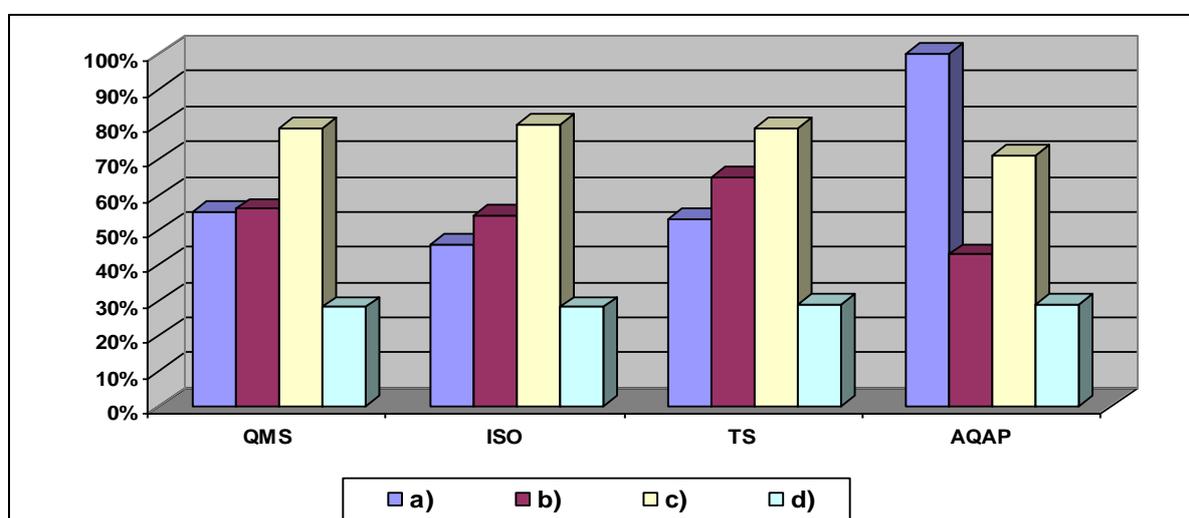


Fig. 3 How the results of process data analysis are used?

#### Summary of questionnaire results:

- Almost all surveyed organizations had a defined process performance/flow and interaction between processes.
- For each process were identified some criteria and methods to ensure the efficient performance of the process.
- Mostly is used for description/defining of the process only a verbal description is used, less a flowchart and process maps.
- Owner of each process was identified in only about 2/3 of organizations, cca 20% of organizations had owners only for some key processes.
- Software support in managing process was used in less than half of the organizations.
- Sufficient monitoring and measurement of the process performance in the quality management system was in only a minority of surveyed organizations.
- The systematic collection of data from all processes was carried out only about half of the organizations. Nearly a fifth of the organizations indicated that they collected some data only from the realization process.
- A systematic approach should be shown in increased efficiency and effectiveness in

the whole organization. However, very few respondents understood that a systematic approach can be also reflected in detecting and defining some relations between processes as well as in identifying some processes barriers in organization.

- Interactions between processes and a relation among process owners is the issue that isn't practiced in business enough and properly, because it isn't fully understood.
- One of the weaknesses in the process approach versus quality management in business practice in Slovakia are a system of measurement and used methods.
- We consider as a failing of management in organizations that a lot of data within the organization are used in non-conforming way.
- Many data were collected from various processes with practical records, but obtained information was not used adequately at all levels of the organization.
- In our opinion measurement and monitoring, which are realized in business practice have only a formal character and the data are not used effectively in the management of quality.
- Many organizations could use in research the information in more effective way, because in any organization there are many information which are not systematically handled and it influences also a quality management system.

### **Conclusion**

Process approach is characterized as a systematic identification and management of processes in the organization and also the processes interactions. Model of a process-oriented quality management system emphasis the importance of understanding and meeting customer requirements, the need to monitor processes according of value, reaching results in terms of performance and efficiency of the process and continuous processes improvement based on results of objective measurement.

Measurement of processes performance is important for every organization, because it provides many objective and exact information about the individual processes and then processes can be controlled by a process owners in order to fulfill all process requirements.

To improve the performance of the organization should be set up a system of indicators, which characterize not only a performance of whole organization but also individual processes. It is necessary to understand the interaction between processes performance indicators and core performance results, or economic indicators.

Enhancement of process performance in organization means a profit for the enterprise, improvement of competitiveness, better market position as well as economic benefits of the enterprise.

We recommend that managers systematically deals with results obtained in the framework of their strategic and operational decisions. The organization should define, plan and implement measurement and monitoring activities to ensure conformity and improvement.

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