

BUILDING PHASES OF THE PROCESS-ORIENTED SYSTEM

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Abstract

In some conditions we often find a formal method towards the application of the process approach in quality management systems. This lecture shows a procedure of phase building the process-oriented quality management systems as a reaction to this formal approach.

Key words

application of the process approach, the process-oriented quality management system, phases of building the process-oriented quality management system

Introduction

If the company attempts to create the process-oriented quality management system with the customer's best interests in mind, while forming a value-creating chain, then it is necessary to build this system at the very beginning on the basis of clearly defined objectives derived from the company strategy. Any process and its operations not meeting these essential preconditions may not ultimately lead to the customer's satisfaction and thereby to the effective management of the company itself.

Phases of building in the process-oriented system

Creating of the process-oriented quality management system consists of the following phases:

1. In the first phase of the process-oriented quality management system it is necessary to review or develop a company strategy that will serve as the basis for designing future processes. Another important aspect in compliance with the requirements of a respective ISO standard, is that all parties involved are aware of the company objectives. In addition, it is pertinent for all involved (although not mentioned in the ISO standard) to know the key qualifications and strategic risks of the company.

Key qualifications of the company include abilities and possibilities of a respective company in individual areas of activities that are necessary and at the same time limiting for a successful implementation of the company strategy. Goals, requirements, and desires of the company may be great and ambitious, but they must be based on real capabilities and opportunities of the company. If not, the strategy and its particular aims become unattainable. It is important not only to know key qualifications of the company, but to also have abilities to develop them and thereby acquire competitive advantages. Critical success factor (CSF) is a criterion of particular qualification for a respective company.

Strategic risks of the company are threats to the successful company business. The highest risk is an unknown risk (the feeling that there is nothing that would endanger a respective company). In order to judge particular risks, a risk priority number must be expressed taking into account the probability of the risk occurrence, seriousness of the risk impact on internal or external customers, and probability of revealing the risk (modification of the FMEA method).

Examples of key qualifications of the company (CSF) may include:

- advanced technology in a certain field
- individual qualifications and personal quality of the company employees
- uniqueness of implemented designs in the field
- uniqueness and inimitability on the market
- ability of effective utilization of financial sources
- knowledge of the market, customers, and competition
- special knowledge and expertise of the company and its employees
- ability to implement internal changes early and effectively
- ability to learn from own mistakes, etc.

Strategic risks of the company (risk priority number) may include:

- business risks of a respective field of business
- credit risks of the company
- risks resulting from acting and politics of the country
- international risks relating to the field of business
- competition in the respective field of business, etc.

The scheme of creating the company strategy is expressed in Figure 1:

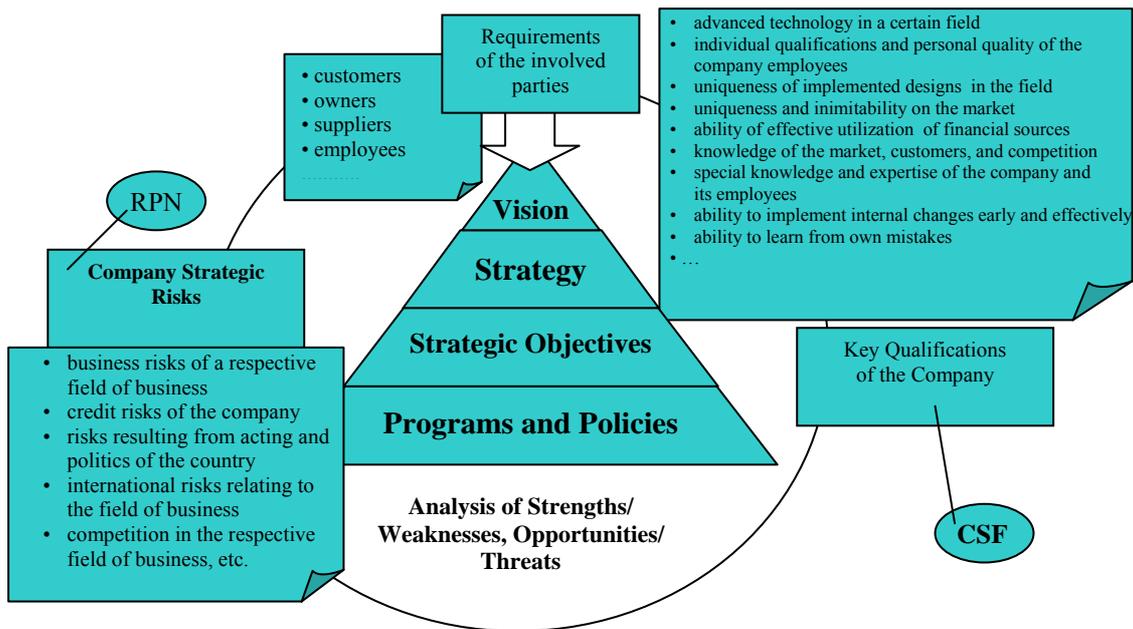


Fig. 1. Determination of the Company Strategy

2. The second phase of building the process-oriented quality management system consists of determination of the requirements of processes. Processes of the company are an instrument and means for achieving set-up objectives resulting from the strategy. In this phase of building the process-oriented quality management system it is therefore important to determine basic requirements on the present and future processes. When determining these requirements the following key questions should be applied:
- Are particular categories of processes in the company defined correctly?
 - Do the present and future processes correspond to a determined strategy of the company?
 - Are any basic partial processes known relating to a value-creating chain of the operations creating a value added for customers of the company processes?
 - Are the processes able to meet requirements of the involved parties?
 - Are any links known between individual processes and lower order processes of the company?
 - Do the processes have active feedback and control mechanisms for their effective management?
 - Are the owners of processes who are competent and qualified to control the company processes defined correctly?
 - Is there any negative impact of local interests inside the company that would result from a respective organizational structure?
 - With respect to processes of the company, are competences and responsibilities of the employees responsible for the implementation of partial company processes determined correctly?

In this phase it is particularly important to determine requirements on individual processes of the company completely and clearly, as well as to determine interconnection among these processes with regard to objectives and tasks resulting from the company strategy.

This phase also includes determination of basic partial processes of a value-creating chain creating a value added for the customer.

3. The third phase of building the process-oriented quality management system deals with determining criteria for individual processes. Based on set up requirements on individual processes of the company, criteria of individual processes are determined here. The effort should be made to determine such criteria that will clearly show performance and efficiency of the management of individual processes.

Individual criteria of processes are based on the nature of a monitored process. It is very important how a respective criterion expresses the quality of management of a respective process, its inputs and outputs. The principle shall apply that criteria of processes must be evaluable and can be easily monitored for a long time.

Key efficiency indicator of the process (KEI) is a criterion of a particular quantitative and qualitative feature of the process and when it is not met, it may, in general, influence outputs and the fact whether expectations of internal or external customers are satisfied.

A critical point of the process is the operation or a set of operations that in a decisive way influence outputs from the respective process and whose low efficiency may essentially influence the processes in a negative way or worsen obtained values of the key efficiency indicators of the process, thereby not satisfying expectations of internal or external customers. Besides determining the respective criteria (efficiency process indicators) it is also necessary to determine their required or target values. The scheme of determining process criteria is shown in Figure 2.



Fig. 2. Determination of the Process Criteria

4. Making a process pattern is the phase of building the process-oriented quality management system in which a process pattern is made as well as the structure of individual mutually interconnected processes of the company. It is done in such a manner that a value-creating chain is made which will create a value added for the customer. Intentions and ideas of the company transformed to objectives through clearly defined and formulated requirements on individual processes are projected together with determined criteria and their target values in a respective process pattern of the company.

It is very important to define individual inputs and outputs of processes of the company regardless of whether the processes are implementation or supportive ones or whether they are processes satisfying an external or internal customer. It shall apply that the amount of satisfied internal customers is a precondition for satisfying external customers. The same shall apply for the case that if internal customers are not satisfied, then most likely external customers will not be satisfied as well.

As far as we know the requirements on individual processes, individual criteria and their target values (that should be reached), it is foremost important to know any input requirements and sources of individual processes. It would be very difficult to reach the expected outputs without defining the input requirements.

It is also required to know inputs and necessary sources of the individual processes of the company as well as the individual outputs and the expected effects of these processes. Any aspects must be in compliance with the aforementioned targets and criteria of individual processes that resulted from the company strategy.

When creating a particular process, the company has to deal with so-called operational risks with the same extent as when dealing with strategic risks while determining the company strategy.

Operational risk (process disorder) may considerably influence the stability of a respective process and result in expected outputs from this process (FMEA process) not being met. Operational risks shall include, for example:

- technological disorders of processes
- failure of used methods and procedures
- real status of qualifications and abilities of the personnel
- failure to cope with mutual links among processes (handover of outputs among individual divisions)
- indirect influence of strategic risks on operations of processes and decisions during their management
- failure of control mechanisms
- incompetent decisions and their impacts on the efficiency of processes

The scheme of formation of a process pattern is shown in Figure 3:

The figure shows requirements on inputs to processes and outputs from processes.

The examples of inputs to processes may be as follows:

- requirements of internal and external customers on inputs to processes
- expectations of internal and external customers from processes
- sources of processes (requirements on facilities, material, employees, and information system)
- methods, procedures, and regulations relating to respective processes, etc.

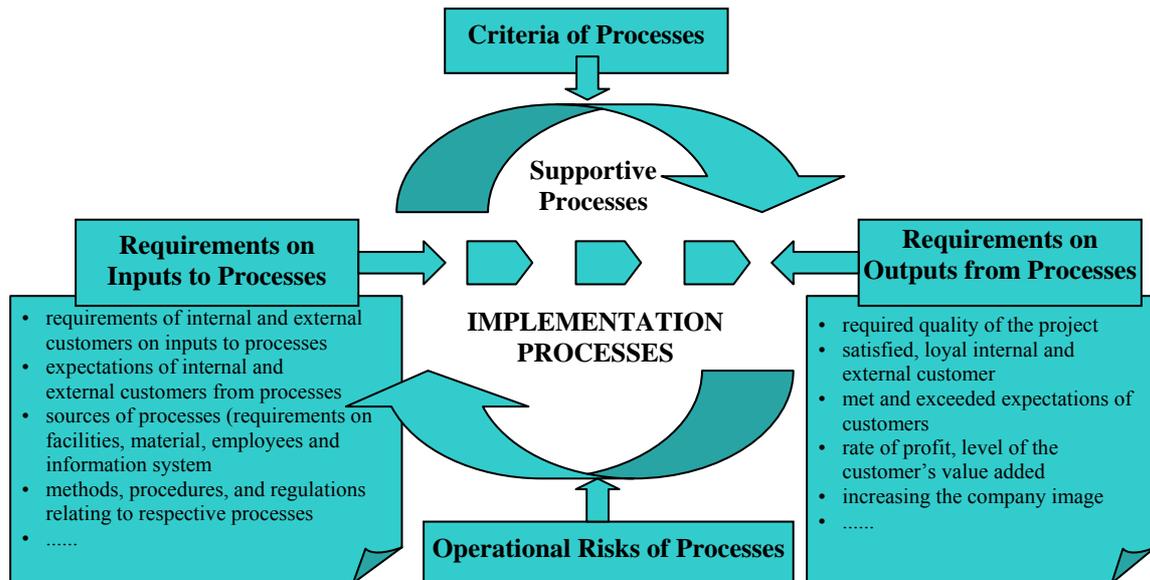


Fig. 3. Formation of a Process Pattern

Requirements on outputs from processes may be as follows:

- required quality of the project,
- satisfied, loyal internal and external customer,
- met and exceeded expectations of customers,
- rate of profit, level of the customer's value added,
- increasing the company image, etc.

Contribution

The contribution of an author of this article lies in the fact that he reacts to shortcomings of a formal approach in the process perception of the quality management. A proposed stage method of the process approach application fully respects principles of the process orientation of management and also refers to the sequence of steps in building the process-oriented quality management.

Conclusion

Formal application of the process approach represents only one form of Q-business and it rather decreases than increases the efficiency of the quality management system. The process-oriented quality management systems on the other side represent a reserve in increasing the efficiency of the quality management system.

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