# A SYSTEM APPROACH AS A OUALITY MANAGEMENT PRINCIPLE

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***Abstract:*** This article deals with a system approach. The decision to introduce a system approach in organization is important strategic decision. A quality management system is defined as a set of interdependent processes that are working together to achieve a common purpose by using various resources, to achieve objectives related to quality. The aim of this article was to highlight the advantages of the system approach in the organization.

**1 A System and a quality management system.**

Process model based on the requirements of ISO standards, model EFQM or CAF is focused on continuous improvement of the quality management system, based on customer requirements towards sustainability and meet customer needs through the processes that the organization carried out. A system might be generally defined as: „a collection of interrelated, interdependent components or processes that act in concert to turn inputs into some kind of output in pursuit of some goals. Systems influence and are influenced by their external environment." (Dettmer) A system can be defined as interrelated processes and their support structures. Becker states: „A process is a completely closed, timely and logical sequence of activities which are required to work on a process-oriented business objects." The organization as a quality management system is a system of processes, and these processes are glued together by means of many input-output relationships. Quality management system is in transformation (old to new state) and there are independent processes that must cooperate to achieve the purpose and the system must create value by managing interactions of processes to produce desired outcomes. A system is a whole that cannot be divided into independent parts without loss of its essential properties or functions. Systems and processes produce results in different way. A process produce results through work done in the process. We will manage the achievement of results by planning, organizing, controlling and continually improving the work required to produce them. A system produces results through the interaction of processes. We will manage a system of interacting processes that function together to achieve certain goals. System characteristics are system boundaries, vulnerability, connections and interconnections,

relations and interrelations, interdependencies, utility, interactions, value chains, supply chains, delays, reserves, overproduction. (Hoyl, p. 112) Haines states 12 characteristics of systems and organized them into 4 categories as follow: the whole (holism - synergism and organicism, open systems, systems boundaries, input-transformation-output model, feedback), the goals (multiple outcomes/goal seeking, equifinality of open systems), the internal workings (entropy, hierarchy, interrelated parts - subsystems or components), the long term results (dynamic equilibrium - steady state, internal elaboration). Once we see relationship between structure and behavior, we can begin to understand how systems work, what makes them produce poor results, and how to shifts them into better behavior patterns. (Meadows) The system of managed processes covers the whole organization and results are the outputs and outcomes of the organization, which should satisfy all stakeholders and thus lead to sustained success. There are 4 groups of organization's outputs: a demand creation processes, a demand fulfilment processes, a resource management processes and a mission management processes. (Hoyle, p. 134) According a system approach to quality management system shows the processes by which inputs are transformed into outputs and we drive towards outcomes, and take action for continuous improvement through the feedback. A quality management system is a combination of three sub-systems: a social, a technical and a management sub-system. The social sub-system requires culture change in organizational culture (the values, norms, attitudes and role expectations), communications (quality of relationships between individual members and among groups, reward structure, symbols of power etc.), and behavioural patterns. Among the characteristics of the social system, are customer satisfaction, continuous improvement, management based on facts, and respect for people. The technical subsystem includes a transformation process as the interaction among the input, resources and output, and all the tools, task activities, skills, techniques, strategies, methodologies, knowledge, machinery and quantitative aspects of quality, and its inputs and outputs etc. required to perform the transformation process. The managerial sub-system provides the framework for the policies, procedures, practices, and leadership of the organization. The managerial sub-system includes the issue related to the organizational structure (formal design, policies, division of responsibilities, and patterns of power and authority),the mission, vision, and the goals of the organization, and administrative activities (planning, organizing, directing, coordinating,

and controlling organizational activities). The managerial sub-system uses processes like review, control, direct and evaluation and takes corrective actions on the basis of the feedback received.

**2 A System approach to management**

System approach to management is referred as: „Identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives. (STN EN ISO 9000) Systems thinking looks at relationships (rather than unrelated objects), connectedness, process (rather than structure), the whole (rather than just its parts), the patterns (rather than the contents) of a system, and context. We obviously need to focus on relationships and communication between those parts, on putting them together and on things that strengthen or weaken those relationships. (Ackoff) „Hence, a system approach is characterized by careful analysis of interrelationships and interdependence of constituent units and subsystems and interpretation of this interactions in terms of predicting what may happend in other parts of the system if certain changes are made in a particular part.“ (Mukhopadhyay) A systems approach to any endeavour requires rigorous methodology. „Systems thinking entails classification of objects according to common characteristics, and identification of hierarchical relationships of these classifications, identification of the nature of interrelationships and interdependencies between objects, and recognition of both cause and effect and synergism between objects. (Turner) System thinking emphasizes the importance of cohesiveness and interdependency within organizational structures and communities. When members of a team share common visions and goals, they work together as a part of a process to achieve positive results through commitment rather than compliance. (Black)

Applying the principle of system approach to management typically leads to structuring a system to achieve the organization's objective in the most effective and efficient way, understanding the interdependencies between the processes of the system, structured approaches that harmonize and integrate processes, providing a better understanding of the roles and responsibilities necessary for achieving common objectives and thereby reducing cross-functional barriers, understanding organizational capabilities and establishing resource constraints prior to action, targeting and defining how specific activities within a system should operate and continually improving the system through measurement and evaluation.(STN EN ISO 9004)

**Conclusion.** The System approach enables the organization to meet customer requirements and deliver continual improvement. Systems approach is a management tool that allows individuals to examine all aspects of the organization, to interrelate the effects of one set of decisions to another and to optimally use all the resources at hand to solve the problem. Key benefits of system approach are integration and alignment of the processes that will best achieve the desired results, ability to focus effort on the key processes and providing confidence to interested parties as to the consistency, effectiveness and efficiency of organization.(ISO 9004) System approach encourages the accepting the existence of the increasing complexity and variety of problems faced by organizations, developing a diversity and variety of methodologies, methods, techniques, models, which could be used in tackling the management problems.

**LIST OF LITERATURE**


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