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## PERFECTION OF MANAGEMENT BASED ON REFERENCE MODELS

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**Key words:** functional approach, process approach, reference model, structure of management, perfection of a company management, introduction of changes, process optimization, analysis, objective.

In this article the author considers the evolution of approaches to a company management, defines and analyses "reference models" application of which promotes introduction of the process approach in companies. The purpose of application of "reference models", in the author's opinion, is the perfection of a company management.

Various theories of management develop in conditions of constant aspiration to increase the business efficiency. Their basic purpose is to create and efficiently control the organizations of varied character. But the universal algorithm or the theory of creation of such systems does not exist yet, as each enterprise is individual in its own way<sup>1</sup>.

The founder of the modern management science is Frederik Taylor. At the beginning of the XX century he dealt with the scientific approaches and principles of the construction of a control system in the book "Principles of scientific management" for the first time. From F.Taylor's point of view, "the manager should become not only a technical expert, but also a social engineer who knows personal qualities of employees, resolves conflicts, and keeps a position of the leader. He believed that the objective of managers consists of making the organization more effective by means of the applying of scientific principles to all processes in the organization"<sup>2</sup>.

The approach suggested by F.Taylor, consists in dividing the labour process into separate operations and in describing the interaction between the elements of the structure. The division was often based on a functional attribute. Now the majority of enterprises has subscribed to this approach to management also called a functionally focused approach.

But the competition growth as well as growing requirements of consumers to the quality of products and services have resulted in the necessity for the enterprises to trace the market tendencies and the positions of the competitors and to react to their actions in due time. The requirements to the received information, namely to speed of its search, timeliness, ur-

gency and reliability therefore grow. At the same time the necessity of the material and time resources economy increases, and the value of decision-making speed and a degree of the responsibility for result raises. These tendencies show new requirements to the speed of reaction, the coordination of divisions' interaction, the adaptability of the management structure as a whole. In such conditions the existing strict functionally focused control system is not capable to satisfy requirements of the market.

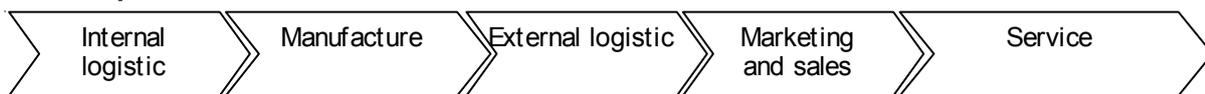
One of the new approaches changing the fundamental principles of the organization of the control system is the process focused approach to management.

### **Process focused approach to management**

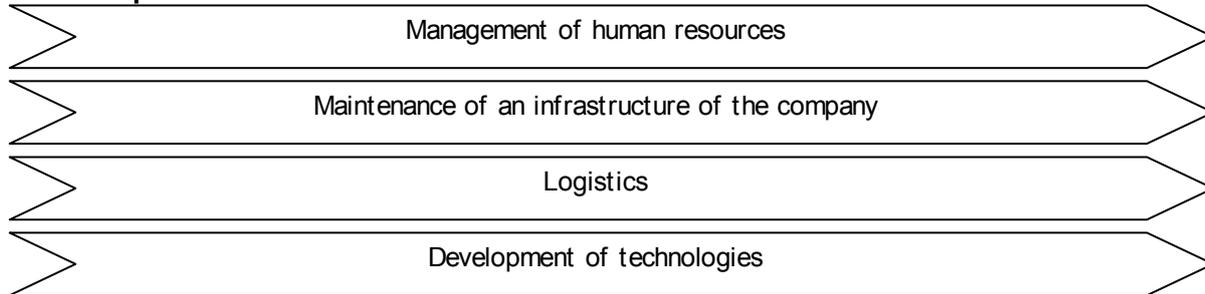
The process focused approach to the business management allows receiving a structure of management which is directed at the constant improvement of the quality of the product and the satisfaction of the client. The beginning of an epoch of formation of the process focused approach to management dates to the 50-s of the last century. The model offered then by E.Deming, was a variation of the concept for the regulation of the manufacture processes known in the 30-s of the XX century as "Plan, Do and See" - concept, developed by the outstanding American expert in the field of statistics V.Shuhart. Deming's Model is a sequence of four repeating stages for a continuous improvement: "Plan, Do, Study (Check) and ACT". This model is also named a cycle of quality continuous improvement or Deming's cycle. In 1985 M.Porter offered a Value Added Chain Model which presented the organization as a chain of consecutive actions (see figure).

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**The basic processes**



**Additional processes**



**Fig. Model of a chain of addition of value by M. Porter**

The model reflects the following processes:

- ◆ the basic processes of the goods production and their delivery to the consumer. The basic processes were placed in a chain going through the whole organization and reflecting the creation of additional value for the client;
- ◆ additional processes the purpose of which is to maintain the performance of the basic processes and increase their efficiency.

The further development the process focused approach was marked by a significant event – the publishing of the book “Reengineering of the corporations. The manifest of the revolution in business” by M.Hammer and G.Champy (1993). The book became a basis for the ideas of the process focused approach. In modern management there has been a gradual rapprochement between the concepts “process” и “business process”. According to ISO 9001:2000 standard, a business process is a steady, purposeful set of the interconnected kinds of activity (sequence of works) which by means of the certain technology transforms inputs to the outputs having value for the consumer.

**Application reference models for the perfection of the company management**

The activity of the organization consists of set of the interconnected business-processes the structure of which is determined by the specificity of the company’s field of activity. The process approach connects a separate activity of different divisions of the companies by a consecutive way focused on the customer and the attention is removed from the hierarchy to the consumer and the operation expenses are also reduced. The application of the process

focused management requires a full cycle of management by processes.

These processes should be structured and described.

1. It is necessary to realize the processes with the help of regulations and information systems.

2. It is necessary to carry out the control and the analysis of processes - to supervise the accuracy of their performance, to estimate the values of parameters of efficiency and to correlate them to the scheduled values, then to reveal problems and drawbacks.

3. It is necessary to constantly improve these processes.

During the introduction of the process approach to management of the company one may face a problem of the estimation of the suitability of the received results which is connected to the absence of the experience in application of the process approach to the companies’ management. This problem has both objective, and subjective character. Its general understanding is limited to the fact that there is a purpose specified into a set of objectives, but there is no idea of the final result.

For the effective introduction of the process focused approach, considerable aid can be given by the reference models which are developed for specific kinds of activity or branches. Process reference models include the piloted procedures and methods of the organization management. They allow the enterprises to allocate their own processes, to adapt model for their own needs and to begin developing own models on the basis of an available set of processes.

Here are examples of the developed reference models:

- ◆ model of the classification of the business processes, developed by the International center of gathering and the analysis of benchmarking information (APQC International Benchmarking Clearinghouse, Houston, Texas) together with Arthur Andersen&Co;

- ◆ The 8-process model developed by the BKG Profit Technology, a consulting company, and intended for use in projects aimed at the description, analysis and optimization of business-processes of the enterprise;

- ◆ Model of processes eTOM (TeleManagement Forum, 2004) is a generalized model of activity management of the telecommunication company enhanced Telecom Operations Map (TMF eTOM) which describes the general(common) activity scheme in telecommunication business and also, mentions questions of the strategic management of the telecommunication business at various levels according to the importance of business-processes and their priorities;

- ◆ Supply Chain Operations Reference model (SCOR-model) is a reference model of a circuit of the deliveries, created and developed by Supply Chain Council (SCC) as the interbranch standard of management of the chain supplies;

- ◆ Reference models on the branches, developed by SAP AG (Solution Map) company.

### **The analysis of the process reference models**

The analysis of the process reference models is modified by the following parameters:

- ◆ purpose – this parameter reflects a scope of the process reference models and reflects the purpose of its creation;

- ◆ integrity of the representation of the company activity - this parameter characterizes the model from the point of view of its structure (the theory of the system approach) and reflects the application of the model in terms of the whole enterprise or covers only one part of its activity;

- ◆ reflection of logic of the processes - this parameter characterizes the business - processes model from the point of view of logic and reflects the interrelations between the processes;

- ◆ classification of processes – this parameter reflects the division of the processes into the groups of processes with identical properties;

- ◆ reflection of the environment of the processes - describes different objects connected

to the given process, for example: in-coming and out going streams of the information, documents, resources, products / services, parameters, purposes, risks;

- ◆ depth of detailed elaboration - together with completeness of the description this parameter characterizes the volume of the description of processes in the reference models;

- ◆ presentation of representation - reflects the intuitive understanding of the model without additional explanatory materials.

### **eTOM**

*Applicability:* reference structure of the processes which are carried out by the telecommunication operator .

- ◆ *Integrity of representation of the company activity:* the model covers all the processes of the telecommunications operator.

- ◆ *Allocation of through business processes / reflection of the logic of the performance of the processes:* through processes are described in detail, but logically are not connected in a uniform chain.

*Classification of processes, principles of classification:* the processes are divided into company management processes, processes of the operational activity connected to granting the telecommunication services to the client, and processes which are not directly connected to the service, but connected to the management and operational maintenance of the operational processes.

*Reflection of the environment of the processes:* the environment of the processes is not reflected.

*Depth of detailed elaboration:* 3 levels of detailed elaboration are included.

*Presentation of representation:* the model is difficult for perception unless additional comments are added.

### **SAP AG variant for mechanical engineering**

*Applicability:* The model of the mechanical engineering enterprise bound to the functional areas of the branch SAP decision.

*Integrity of representation of the company activity:* the model is not full, as it only covers the processes of the enterprise subject to automation in SAP.

*Allocation of the through business processes / reflection of the logic of the performance*

*of processes:* through processes are distinguished. Processes of the model are adhered to the functional modules of the ERP-system. At the second level of elaboration the general sequence is reflected. At the top level the connections between the processes are not reflected.

*Classification of processes, principles of classification:* not used.

*Reflection of the environment of the processes:* the purposes for each process are determined, parameters of activity are generated.

*Depth of detailed elaboration:* 2 levels of detailed elaboration are included. Also best-practice SAP examples of several processes scenarios are given.

*Presentation of representation:* the model is intuitively clear for perception.

### **SCOR-Model**

*Applicability:* model of a circuit of deliveries, the interbranch standard of management of deliveries circuits.

*Integrity of representation of the company activity:* the chain of deliveries is reflected, not the company activity as a whole.

*Allocation of through business processes / reflection of the logic of the processes performance:* a through process is allocated at the first and second levels of detailed elaboration. For example, at a level 1 the chain of deliveries can be considered as a through process consisting of planning, supply, manufacture, delivery, processing of returns. On the second level, the numbering of the detailing processes reflects the logic of the performance of the processes.

*Classification of processes, principles of classification:* classification of processes is not used.

*Reflection of the environment of processes:* parameters of activity are formulated, inputs / outputs of processes are determined, the best methods are specified, and the recommendations (if possible) are given.

*Depth of detailed elaboration:* 3 levels of detailed elaboration.

*Presentation of representation:* the model is simple enough for understanding.

### **IBC Model**

*Applicability:* interbranch reference model.

*Integrity of representation of activity of the company:* the model covers all the activities of the company.

*Allocation of through business processes / reflection of the logic of performance of the processes:* the chain of a through process is identified within the framework of the description of the basic processes. At the second level this connection is not reflected, but the numbering of the detailing processes reflects the logic of the performance.

*Classification of processes, principles of classification:* processes are divided into basic and providing.

*Reflection of the environment of the processes:* the environment of the processes is not reflected.

*Depth of detailed elaboration:* up to 5-th level of detailed elaboration.

*Presentation of representation:* the model is simple enough for understanding.

### **BKG Profit Technology Model**

*Applicability:* interbranch reference model.

*Integrity of the representation of activity of the company:* the model does not cover the management activity of the company as a whole.

*Allocation of through business processes / reflection of the logic of the performance of the processes:* a through process of the creation of the goods is not specified, but it can be traced by means of the designated connections.

*Classification of processes, principles of classification:* classification of processes is not used.

*Reflection of the environment of the processes:* inputs and outputs of processes are determined.

*Depth of detailed elaboration:* up to the fourth level of detailed elaboration.

*Presentation of representation:* the model is simple enough for understanding.

The main purpose of the creation and application of the reference models is a fast introduction of the process focused approach of the company management. It can be used as a starting point at improving of the company management, namely at modeling business processes of the company and their subsequent analysis. The parameters of the process reference model can differ and depend basically on its branch applicability. The greatest importance and applicability are demonstrated by the models in which the description of all processes, parameters for measurement of productivity and effi-

ciency of activity, as well as detailed elaboration of processes are included. It is necessary to mention that while developing the reference models it is advisable to describe the processes only up to the second level as a deep detailed elaboration is peculiar to a specific company which contradicts the basic purpose of the reference models.

The carried out analysis of the reference models allows revealing the following requirements typical of such models:

- ◆ *integrity*. The model should cover all the processes of the company of a specific branch;
- ◆ *presentation*. On model should reflect through processes of creation of product / service for the client - chains of the added cost be;
- ◆ *applicability*. The use of the reference models will simplify the introduction of the process management in the companies or will serve as the standard for comparison with the process approach which is applied to other companies of branch;

- ◆ *measurability*. A reference model should contain parameters to estimate the productivity and efficiency of the processes;

- ◆ *adaptability*. A reference model should contain an interconnected list of the business – processes, which is focused on business in a certain branch.

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<sup>1</sup> *Acberdin, R.Z., Kibanove, A.Ya.* Perfection of structure, functions and economic mutual relations of the administrative divisions of the enterprises at forms of managing: Studies. the textbook M., 1993; Eliferov V.G., Repin,V.V. Business processes. The regulation and management: the Textbook. M., 2004; *Rice, M.* Optimum complexity of administrative structures // Problems of the theory and practice of management. 1994. ч 5; *Telnov, Y.F.* Reengineering of business - processes. Componental methodology. 2-d edition. M., 2005.

<sup>2</sup> The dictionary - directory (based on “International Encyclopedia of Public Politic and Administration”). SPb., 2000.