Process Management: Some Implementation Aspects

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Abstract. An organization can make a transition to process management by three steps: planning, introduction and implementation. Every step has a list of measures that form an algorithm or a step-by-step instruction for the manager to implement the modern management tool. The article analyses scientific sources to identify problems and solutions to methodological problems associated with the implementation of process management; its implementation stages are justified and described; the future of such innovations in organisations is outlined. In order to identify economic problems, three approaches to expenditure classification are proposed: analytical, functional and content ones. The implementation algorithm for a comprehensive approach to the expenditure classification was developed.

1. Introduction

It is necessary to study different aspects of process management implementation in companies, as it is essential to reduce process costs and important to achieve the main performance indicators in the company. Today process management is used as management tool that allows to organise and improve operation processes using external and internal resources of an organisation.

Process management implies that an organisation is managed as a network of interconnected and interacting processes, and at the same time different types of activities and functions are managed by identified processes. As for responsibilities and functions, process management demonstrates the role, importance and workload of individual divisions, which gives an opportunity to establish justified requirements for qualitative and quantitative indicators for labour resources, logistics, information and other resources.

Along with the advantages of process management, there are a number of implementation challenges:

- methodological ones (process approach targeted application; identification of processes and simulation of a process network; introducing various changes to process management model, etc.);
- organisational ones (responsibility and function distribution; development and implementation of capacity building programs; overcoming expressed opposition to change, etc.) [1];
- economic ones (structure and contents of costs associated with process management; development of approaches for the evaluation of economic and social impact, efficiency and effectiveness of using this approach, etc.).

The goal of the article is to describe the implementation of process management in an organisation taking into account methodology and some economic aspects.
2. Ease of use
Proposed methodological approaches and economic aspects of process management are implemented in integrated companies and employed in the creation of modern management tools based on information technologies [2, 3, 4]. Indicator calculation and big data are necessary for process monitoring, performance evaluations of processes and of an organisation as a whole. These measures require modern processing for better responsiveness and objective managerial decisions in modern organisations.

3. Methodological basis for process management
The analysis of works of E. Endovitskaya [5], G.Mikheeva et al. [6], N.Volodina [7], N.Ostroukhova [8], L.Ermolina [9], O.Slinkova, R.Skachkova [10], V.Kruglova, E.Aleksandrova [11] allows to sum up the methodological aspects of process management in a company:
- management functions are carried out towards an individual process; there are many different management functions due to the uniqueness of management processes and practical aspects associated with their implementation;
- the lack of a unified approach to developing a list (a roster) of processes that allows an organisation to simulate a unique process chain that reflects activities of a specific organisation;
- as for existing types of activity and specific functions, the importance of identifying all the processes in an organisation grows in relation to the goal of comprehensive introduction of the process approach in a company;
- identification, simulation and development of measures for the list of processes in an organisation must be also done in relation to 3 types of processes: business, management and support processes;
- targeted application of process management is determined at the planning stage in one of the two areas: - Costs of a company or the quality of products (services);
  - process monitoring is aimed at ensuring transparency and reliability of information and, therefore, to promote unbiased management decisions;
  - it is necessary to provide for a possibility to update processes that all the stages of process management.

The substance of the transition to process management in an organisation should be considered as a consistent implementation of three stages: planning, introduction and implementation (Figure 1).

In the article the proposed methodological basis for process management is complemented by economic approaches within process management.

4. Economic aspects of process management
The well-known approach to the production and sales costs classification implies that a few classification features are used: ways of product costs transfer (direct and indirect ones); production volume impact on costs (constant and variable ones); feasibility of expenditures (productive and counter-productive), etc. The main documents that show the costs of a company: Data on financial and material funds and the relevant spending, and a Report on financial and business operations made by a organization. Process management requires a deeper approach to the content and structure of costs, for example: analysis of expenditures in an organisation in terms of processes identified in the organisation.

The expenditure classifications presented in publications of A.Khachatryan [12], I.Goncharova et al. [13], G.Bondareva et al. [14] are based on detailed analysis of sources and causes of expenditures in an organisation, or as a rule, in departments, which allows to see this approach to cost classification as an analytical one. It will allow to identify possible causes of financial losses and "focal points" in the organizational chart for cost reduction, however, the itemized costs complicate the implementation of process management. In order to employ the analytical approach, there is a need for a transition mechanism from expenditure accounting to estimated cost groups.

Zh. Chesnokova [15], A.Suleimenova [16], Y.Cherkesova, Y.Popova [17] regard the functions of the process, this is why a functional approach can be applied to the cost classification in an
organization. We should say that the cost structure in terms of processes and groups corresponds to the process management ideas, but at the same time the functional approach does not allow to analyse the costs of an organization. The functional approach also provides a toolkit that allows to make a transition from expenditure accounting to estimated cost groups in terms of processes.

The approach developed by D.Mironova with co-authors [18], G.Stolyarchuk [19], V.Korchagin [20] includes the analysis of the process cost content, this is why we refer to this approach to cost classification as the content approach.

Any of the three proposed approaches to the cost classification complicate their evaluation and analysis in terms of management decision making for the purposes of expenditure reduction and redistribution, which is one of the process management economic problems. This is why the comprehensive approach to the cost classification will allow to avoid the aforementioned problems and analyse structures and cost content in terms of company processes.

It is necessary to employ the functional approach to represent costs in their relation to organization process based on the initial data on a company's expenditures. It is obvious that at this stage it is essential to develop a method to distribute every cost indicator by processes taking into account the nature of the organization. For example, the "salary" indicator must be at first represented by divisions within the organization, and then itemized by the contribution of a specific division (an office, a department, a service, etc.) to the identified processes in an organization with specification. Then it is recommended to sum up and group costs by three categories of process: business processes; management processes and support processes [21].

The analytical approach provides cost substantial specification, first, in terms of cost groups adopted by the organization, for example, useful and useless expenditures, and then the costs are divided by divisions, processes and process categories using the relevant method.

Taking into account the research on project management and practical aspects of its implementation [22, 23], the introduction of process management in a company could be viewed as implementation of an investment project exposed to risks under uncertainty and influence of external and internal factors. Technical, technological, economic and other parameters of a project aimed at the transition of an organization to process management and the plans for its further implementation are associated with the problem of achieving the targets while meeting all the relevant requirements.

5. Conclusion
When a manager introduces process management into the work of a company, he or she expects that the efficiency will be enhanced, the company will become more competitive and the costs will be reduced, etc. However, while implementing the process management in practice, the manager can come to doubt his or her choice of this management tool: enormous costs, prolonged preparatory steps, lack of short-term effect after the introduction, the opposition of the employees, etc. The authors of the present article do not exclude the possibility of such problems, but they also believe that the proposed methodological approaches to process management will allow to reduce the impact from these negative forces on the management. Along with the proposed methodological and economic approaches, there is a need for addressing organizational issues associated with process management.

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Planning stage description:
1. Defining goals for process management introduction
2. Analysis of planning and accounting documents
3. Process identification and simulation
4. Development of process roster
5. Identification of process interaction sequence
6. Process network (simulation) systematization
7. Identification of process monitoring indicators
8. Identification of process monitoring criteria
9. Identification of process monitoring frequency
10. Allocation of necessary resources for process implementation

Introduction stage description:
1. Assessment of the initial condition of processes in an organization
2. Process introduction
3. First measurement of process indicators
4. First comparison of process indicators against the established criteria
5. Initial update of the process roster
6. Initial adjustments to the process network (simulation)
7. Initial adjustments to process monitoring criteria
8. Initial evaluation of process support resources
9. Development of measures for increasing process monitoring indicators

Implementation stage description:
1. Implementation of measures for increasing process monitoring indicators
2. Measurement of process indicators
3. Comparison of process indicators against the established criteria
4. Update of the process roster
5. Adjustments to the process network (simulation)
6. Adjustments to process monitoring criteria
7. Development of the organization operation integrated index
8. Evaluation of process support resources
9. Development of measures for increasing process monitoring indicators
10. Repeat the steps of Stage III.

Figure A1. Stages of process management implementation.