

TRANSFORMATION OF UNIVERSITY PUBLISHING ACTIVITY BASED ON BUSINESS PROCESSES REENGINEERING

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The paper reveals the role of business processes reengineering (BPR) in key organization business processes transformation. Some methods for evaluating business processes effectiveness and BRP tools are reviewed. The main directions of the transformation of business processes in the publishing activities of Polotsk State University are proposed.

In the context of radical changes in the economy, new tools and methods are urgently needed that can help companies to become more efficient. BPR aims to achieve a radical improvement in the company. It is one of these types of tools. The foundations of this theory were laid in the United States between 1984 and 1990, and since then major companies, world market leaders, have used redesign techniques in their work, significantly improving their performance.

BPR became popular from the 1990s and remains one of the top five leadership aspects for IT leaders. M. Hammer introduced the concept of redesign as a radical redesign of business processes to achieve dramatic improvements in critical performance measurement [1]. T. H. Davenport and J.E. Short defined BPR to analyze and design workflows and processes within and across organizations [2]. T. H. Davenport transformed the BPR definition into a procedure that interferes with organizational boundaries [3]. R. Talwar defined BPR as a procedure for creating and delivering organizational value by focusing on re-evaluating and centralizing business structures, processes, working methods, management systems and external relations [4]. BPR incorporates business process-based thinking and innovation, fundamental reassessment, radical planning, dramatic improvements and enabling technology, largely accepted by the private sector, and remains valid. Various techniques and tools have been utilized to speed up and improve the process. Business process redesign and redesign are usually dramatic and lasting improvements.

The widespread development of the theory and practice of BPR is related to the fact that the predominance of the functional approach to management that offers the effect of division of labor poses many problems. First of all, vertical organizational structures lead to a division of the process between different departments. This leads to failures due to inadequate coordination of work and conflicting objectives of different departments in the same process and to the division of responsibilities between the different departments in the process. Secondly, the functional units are not directly interested in the overall results of their operations, since the evaluation of their work is of little relevance to the overall performance of the company. Third, in vertical structures geared to functional division of labor, horizontal exchange of information is too complex due to bureaucratic procedures and rigid hierarchical management. This type of leadership often results in the loss of actual and potential customers.

BPR involves comprehensive and systematic modeling, as well as a profound reorganization of material, financial and information flows, resulting in simplification of the organizational structure, redistribution and minimization of the use of various resources, reduced customer satisfaction and quality of service. When implementing BPR projects, a large number of decisions need to be made to dramatically increase the competitiveness of the organization's results.

In order to determine the feasibility of changing a particular business process in the publishing activity and to choose one of these possible options for change, an approach is needed that allows a quantitative assessment of its effectiveness. A summary of the experience gained from designing and applying approaches to quantifying the effectiveness of business processes shows that there is no common methodology at present because not only the list of performance, but also the methods of their quantitative measurement indicators vary.

There are a number of methods for evaluating business processes effectiveness. V. Bazyliuk highlights the following such methods: EVA (Economic value added); methods of cost analysis of business processes ABC (Activity-based costing); Tableau of bord methodology and the balanced system of indicators BSC (Balanced Scorecard) [5].

EVA methodology focuses on the fact that all business processes can be divided into two components: the first one adds the value for the product cost, and the second one does not increase its use value. It is adding value by the business process that is generally used as the main incentive for its implementation. In correspondence

with the presented approach, there is an assessment of the business process that adds value by means of a specific indicator, defined by the ratio of market value and incurred costs of producing goods. However, under such circumstances, the proposed method is effective for the assessment of key business processes and development processes only, and applying this approach for the evaluation of providing business processes in PPA in the region that do not relate to the processes which add value directly is impractical.

The EVA methodology focuses on dividing all business processes into two sections: the first one adds value to the product cost and the second one does not increase its value in use. It adds value to the business process, which is usually used as the main incentive to implement it. According to the approach presented, a business process that adds value through a specific indicator, which is defined as the ratio of the market value to the cost of goods production, is assessed. Under these circumstances, however, the proposed method is only effective for assessing key business processes and development processes, and applying this approach to the evaluation of publishing activity's internal business processes that are not directly related to value-added processes is impractical.

Another widespread method for evaluating business processes effectiveness is the ABC method, which includes business process cost planning and calculation based on the definition and preparation of operational processes that ensure this process. The ABC method is an effective way of evaluating the use of resources and processes and can be used separately from a comprehensive evaluation of qualitative and quantitative indicators. However, the major disadvantage of this approach is that the process is usually implemented in a number of different units, so obtaining information for each revenue and resource is a complex task.

The next method for evaluating business processes effectiveness is 'tableau de bord'. In French, "tableau de bord" is the name of the dashboard, and the manager is thus metaphorically compared to a pilot. According to this tradition, the tableau de bord is "a tool for the top management of the firm, allowing it a global and quick view of its operations and of the state of its environment" [6, p. 113]. It is one of the oldest integrated methods for managing the efficiency of complex socio-economic systems, based on the approach of constructing a hierarchical tree of indices through their decomposition. The main advantage of this method is the ability to create a tree of target and functional indices. Thus, target indices are used primarily at the upper levels of the tree, and functional indices are used at the lower and middle levels. Despite the advantages of evaluating business processes in a complex socio-economic system at all levels, as well as the formation of diverse groups and flexible performance, this technique has some disadvantages, namely, difficulties in ensuring a certain balance in system parameters. This problem could be partially solved by BSC, another known and more commonly used technique formulated by D. Norton and R. Kaplan. The main feature of BSC compared to other approaches was the division of community activities into four areas: financing; customers; internal processes and personnel.

By using BPR-based tools, professionals should be able to improve productivity, finish projects faster, deliver better quality results, eliminate destructive cleaning efforts, and focus on value-added. According to the work, to get these benefits, BPR tools should be useful for managers and specialists, which are responsible for analyzing business needs and designing a new process to meet those needs. These tools should improve the clarity of the BPR team's vision and also ensure consistency in analysis and design. In addition, they should allow iterative, top-down refinement from BPR project objectives to solution. BPR tools should produce an acceptable return on investment. Much of BPR's work involves analyzing data from existing processes and then comparing it with proposed substitution processes. Project management (PM) tools can be used to analyze business processes. Specialized BPR analysis tools and PM tools deal with the same problems in designing optimal processes. Typically, the BPR analysis report consists of: 1) data collection about the existing processes; 2) splitting an existing process into operations; 3) capture of information on costs, personnel and materials for cost activities; 4) capturing the order and timing of multiple operations; 5) capturing data streams and material streams through the process. PM tools are not suitable for displaying data and material streams through the processes. However, if PM tools are used in combination with spreadsheets, they can be very effective in comparing the productivity and cost of alternative process design. In addition, PM tools have the advantage that they are easier to use and cheaper than specialized BPR tools. Because long-term learning requires specialized tools, the PM tools approach often provides the best solution for BPR analysis and modeling. Such systems as SAP / R3 and Business Studio combine the capabilities of both BPR and PM tools.

Business Process Reengineering project in Publishing department of Polotsk State University was completed by the authors using Business Studio software system tools. The main tasks of the department are the following:

- organization and implementation of editorial and publishing and printing processes with the aim of publishing educational, teaching and methodological literature that meets the requirements of the state educational

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standard, as well as the issuance of scientific, reference, and other types of literature, advertising, letterhead and other products in the interest of providing educational and educational processes research work;

- ensuring high consumer quality of products and receiving a profit from publishing and printing activities;
- organization of operational work on the production of printing products for structural units of the university, employees and students, legal entities and individuals.

The publication of educational literature on paper and electronic media in Polotsk State University is based on long-term and annual plans for the publication of educational literature. The long-term plan of the university for a period of three years is considered by the scientific and methodological council of the university and approved by the Rector. The annual publication plan is compiled by the head of the university's teaching and methodological department on the basis of the department's summary applications for inclusion in the plan, taking into account the long-term plan of the university's publication. The plan is approved by the Vice-rector for Academic Affairs and it is the basis for the organization of publishing at the university during the calendar year.

As a result of a survey of employees of the Publishing department of the Polotsk State University and study of documentation, business processes were developed that described the department's work "as it is". Analysis of the business processes has shown that there is a large variation in the duration of the processes for preparing the mock-up of teaching handbooks, which is primarily due to the mismatch of the material provided by individual authors with the technical requirements and low willingness some of the authors to cooperate.

Typical tools and techniques associated with business process improvement methodology include Six Sigma, Lean and TQM methodologies [7, p. 10]. Choosing or developing a combined approach may be a possible way for transformation of the university publishing activity. Six Sigma provides a structured, knowledge-based and statistical approach, Lean provides a value and waste philosophy and TQM ensures that authors' issues are taken into account.

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