THE ANALYSIS OF TRENDS FOR THE INTRODUCTION OF PROCESS MANAGEMENT IN RUSSIAN AND WESTERN CORPORATIONS

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Abstract

Enterprises that introduce and develop process management systems need to analyze current trends in domestic and foreign enterprises. This article summarizes the research results of leading Western and Russian consulting organizations on the main trends in the application of process management methodologies: Lean Production, Six Sigma, Lean Production + Six Sigma, Rummler-Branch, Hammer, SCOR, BPTrends Associates, CMMI; and software-embedded methodologies. About half of Western companies systematically carry out activities to update and develop process management. 50% of respondents called value chain modeling an important task; 30% - measurement of the parameters of the main processes, training of managers and the use of process information by managers; and 40% - automation of key business processes. The most important tasks of Russian enterprises are also documentation (79%), standardization (40%), optimization (42%), and automation (46%) of business processes. The analysis carried out in the article allows us to talk about an increase in the interest of Russian and Western corporations in process management technologies, their more active application for the development of enterprises. Under these conditions, the analysis of the trends of process management, the goals of introducing the process approach and the regularity of the implementation of the main activities of the process development gain their relevance. The authors give their interpretation of the obtained results, as well as formulate conclusions.

Keywords: process management, methodologies, industrial enterprise, business process.

1 INTRODUCTION

The main process management methodologies are Lean Manufacturing, Six Sigma, Lean Manufacturing + Six Sigma, Rummler-Branch, Hammer, SCOR, BPTrends Associates, CMMI; the software-embedded methodologies (for example, “BAAN”, “SAP”, “1C”). Each of them has its own specific subject of study (analysis of these methodologies was carried out by us in [1-5]). As a rule, the implementation of process management is carried out by a combination of several of the presented methodologies.

2 MAIN PART

One of the most respected Western companies dealing with the problems and trends of process management is BPTrends. Table 1 presents the results of its research "The State of Business Process Management-2014, 2016" [6,7], on the basis of which it is possible to determine the main vectors of application of efforts of leading Western corporations.

Previous analysis of the main process management methodologies: Lean Production, Six Sigma, Lean Production + Six Sigma, Rummler-Branch, Hammer, SCOR, BPTrends Associates, CMMI; the software-embedded methodology (for example, "BAAN", "SAP", "1C") made it possible to identify their advantages, disadvantages, and application features [6,7,9,10]:

1.1. The basis of Lean Production methodology is the concept of value for the consumer. Management decisions are made on the basis of assessing the value for consumers of products of possible changes in the company's activities. Particular attention is paid to the analysis of the value stream, which refers mainly to production and logistics processes. The methodology focuses managers on the analysis and optimization of the costliest business processes of the enterprise.

1.2. Six Sigma is a customer-oriented methodology, with the goal to improve the quality of products. Achieving the goal is based on the stabilization of technological operations of the main business processes. The proactive search for weaknesses in the implementation of technological processes and the adoption of proactive management decisions on them contribute to improving product quality and reducing rejects. The methodology focuses the attention of managers on the analysis, reducing the level of rejects and improving the quality of the costliest business processes of the enterprise.

1.3. Six Sigma optimally complements the management methodology of Lean Production. For this reason, the scientific literature often provides a combined system of process control of production processes "Lean Production + Six Sigma".

1.4. Rummler-Brache focuses on a general analysis of labor productivity, which makes the process of making managerial decisions somewhat unilateral. This leads to a limitation of the capabilities of the enterprise management system. A significant drawback of this methodology is the methodological problems of calculating labor productivity in supporting business processes.

1.5. CMMI is focused on the implementation and development of the process management system. The methods used make it possible to determine the level of development of the process management of the enterprise and to indicate the direction of further efforts for its development. The main drawback of the methodology is the lack of a strict algorithm for the development of a process control system.

1.6. The enterprise management methodologies embedded in the 1C, BAAN, and SAP software products allow us to automate the enterprise's business processes in a short time and at an affordable price. The main disadvantage of this approach to enterprise management is a partial or complete discrepancy between the real business processes of the enterprise and the "reference" business processes embedded in the software product. This leads to both the need to modify software algorithms and, consequently, to additional costs.

1.7. Hammer is focused on the fundamental redesign of the organization's business processes based on the latest advances in science and technology. The

disadvantages of this methodology, significantly reducing the possibilities of its practical application, are the lack of methods for implementing the methodology and modification of business processes, as well as a high level of risk for the implementation of reengineering projects. In our opinion, Hammer should be considered as a philosophical concept of management.

1.8. SCOR is focused on the analysis, management, and optimization of supply chains of the enterprise's business processes of material resources and goods. A serious advantage of the methodology is the collected information on the most advanced business processes of advanced foreign enterprises. This allows analyzing and optimizing your business processes, focusing on benchmarks. The identified shortcomings of the SCOR methodology indicate the need to use it in combination with other process management methodologies.

1.9. The BPTrends Associates management methodology is a methodology for implementing process management of an enterprise and includes standard stages of development of a process management system. The methodology, due to its identified shortcomings, should also be supplemented by the methods of other enterprise management methodologies.

Table. 1. The used process approach-based management methodologies.

No.	**Methodology**	**2011,%**	**2013,%**	**2015,%**
1	Lean Production	27	34	34
2	Six Sigma	22	23	20
3	Combined methodology Lean Production + Six Sigma	26	36	40
4	Methodology in a software information product	11	9	9
5	Business process modelling notations	14	13	12
6	BPTrends Association Methodology	10	14	18
7	Rummler Methodology	5	6	7
8	Hammer Methodology	8	6	6
9	Structural Methodology (SCOR, eTOM)	12	12	10
10	CMMI Methodology	16	15	17
11	Own methodology of a company	43	45	34
12	Other option, not presented above	11	9	10

Note to the table: several options are possible

Based on the analysis of this table, the following conclusions can be made:

a) Significant efforts of Western companies are aimed at analyzing and optimizing the main (production) business processes. This is evidenced by interest in Lean Production, Six Sigma, and Lean Production + Six Sigma.

b) The idea of a radical restructuring of business processes (Hammer) is committed to a small number of Western corporations. This can be explained by the high risk associated with business process reengineering projects.

c) A significant part of the companies uses standard templates for the implementation and development of process management (SCOR, eTOM, CMMI), as well as their recommendations and targets. The presence of targets, as well as a plan for the implementation and development of process management, provides serious support to the process implementation approach groups.

d) As the analysis of the basic indicator “labor productivity” showed, the Rummler management methodology is not very popular. This is due to the complexity of calculating this indicator for auxiliary business processes, the problematic assessment of labor productivity in terms of three hierarchical levels, and the lack of methods for improving the parameters of business processes and their structural elements.

e) 9% of respondents use process control algorithms embedded in automated enterprise management systems. Such insignificant interest can be explained by their main drawback: incomplete compliance or complete discrepancy between the real business processes of the enterprise and the "reference" business processes embedded in the software product.

These conclusions can be supplemented and the level of maturity of process management can be estimated on the basis of the frequency of implementation of basic process activities (presented in Table 2).

Table. 2. Organizational measures of Western companies to assess the maturity of their process management [6,7].

Mechanism of action / **Organizational Event**	**Never,%**		**Sometimes,%**		**Often, %**		**In most cases, %**		**Always, %**	
	2013 year	2015 year	2013 year	2015 year	2013 year	2015 year	2013 year	2015 year	2013 year	2015 year
Documenting of processes	3	4	49	50	29	29	17	14	2	4
Standardization of processes	5	9	51	48	26	20	17	20	2	1
Modelling of value chain	11	7	41	44	24	26	19	19	5	5
Measuring parameters of main processes	14	14	55	59	17	10	12	11	2	6
Sequential IT automation	9	3	54	59	24	17	12	18	2	3
Definition of process qualification of a company	12	8	49	47	24	28	14	14	1	3
Training of managers	24	18	52	56	15	13	5	11	4	2
Application of process information by managers	13	13	55	60	21	16	10	8	2	3
Process improvement	11	12	50	54	26	18	12	13	1	4
Average value for the year	11	10	51	53	23	20	13	14	2	3

Based on the analysis of Table 2, the following conclusions can be made:

1. Approximately 50% of enterprises regularly carry out activities to update and develop process management. 45% of such activities are carried out on an irregular basis. Systematic work on the process documentation is determined by the need to

maintain it in an updated state when modifying the product policy, production technologies, and performing supporting business processes.

2. The most important goals in the implementation and development of process management are standardization of results and optimization of business processes. Achieving these goals is based on documentation and modeling of business processes.

3. Automation of key business processes is relevant for approximately 40% of respondents. The implementation of this task is carried out on the basis of the business process model and its regulating documents.

4. About 40% of respondents consider the most important task to determine the process qualifications of the company. This is due to the need to maintain the knowledge of personnel about the business processes technology.

5. About half of the respondents called value chain modeling an important task. This can be explained by the influence of Lean Production, which basic concept is the value for the consumer. In practice, the implementation of the principle of "customer orientation" in the framework of this methodology means focusing on business processes that form important consumer characteristics of a product or service.

6. About 30% call the introduction of process control the measurement of the parameters of the main processes. Based on these data, subsequently, systems of performance evaluation indicators are developed in accordance with one of the most common KPI management technologies.

7. About a third of the respondents named the training of managers and the use of process information by managers as the goals of implementing process management. We think, this figure is not large enough since the use of process technologies significantly affects the enterprise management system as a whole and its individual components. Most likely this is due to the fact that company managers do not fully understand the advantages that the process management system provides at higher stages of its development.

8. The dynamics of the frequency of application of process technologies for managing Western corporations is positive.

According to the research results of ABPMP Russia [8] in 2015, Russian companies ranked the goals of implementing process management as follows: regulation and standardization of business processes (68%), process automation (54%), process optimization (41%), implementation of a management system quality (24%), operational risk management (19%), for solving accounting problems (17%). Table 3 summarizes the measures implemented by domestic enterprises as part of the development of process management systems.

Table. 3. Organizational measures of Russian companies in 2015 to assess the maturity of their process management [8].

No.	**Organizational event**	**% of responds**
1	Documenting of processes	79
2	Standardization of processes	40
3	Modelling of value chain	17
4	IT automation	46
5	Skills improvement by employees	26
6	Continuous process improvement	17
7	Improvement (optimization) of processes	42

Since the information collection methods in the above studies are different, the correct comparison of trends in the implementation and development of process management technologies in Western countries and Russia is problematic. We can only conclude that the most important tasks of domestic enterprises are also documentation, standardization, optimization and automation of business processes.

3 METHODS

The study applied the following methods:

1. A selective analysis of specialized literature with a high citation index for the topics indicated in the title of the article. In particular, information was collected on methodologies of process management.

2. The generated array of information was systematized for the purpose of further analysis. In particular, based on an analysis of the methodologies reviewed, the main trends in the formation of process management systems for enterprises were identified.

3. The authors interpreted the results of the study and made conclusions.

4 RESULTS AND DISCUSSION

Western companies are most interested in the analysis and optimization of the main (production) business processes with the help of Lean Production, Six Sigma, and Lean Production + Six Sigma. This can be explained by the greatest economic feasibility since all the costs of the supporting business processes are accumulated by the main (production) processes.

5 SUMMARY

About half of Western companies systematically carry out activities to update and develop process management. 50% of respondents called value chain modeling an important task; 30% - measurement of the parameters of the main processes, training of managers and the use of process information by managers; and 40% - automation of key business processes.

The most important tasks of Russian enterprises are also documentation (79%), standardization (40%), optimization (42%), and automation (46%) of business processes.

6 CONCLUSIONS

The conducted analysis allows us to talk about an increase in the interest of Russian and Western corporations in process management technologies, their more active application for the development of enterprises.

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