



THE ROLE OF MANAGERS IN OPTIMIZING BUSINESS PROCESSES IN THE IT INDUSTRY

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Abstract: In the modern business environment, business process optimization has an important role in achieving competitive advantage, especially in the dynamic IT industry. Managers in this industry must be skilled at identifying inefficiencies within business processes and guiding teams to implement innovative solutions that improve overall performance. Optimization involves the systematic improvement of operational activities through the identification of inefficiencies, elimination of redundant steps, automation of tasks, and implementation of innovative technological solutions. This paper aims to explore the role of managers in business process optimization. A quantitative study was conducted using an online survey. The research results indicate that business processes are optimized at a high level, although many respondents recognize opportunities for further improvement. Managers frequently initiate process improvement initiatives, with Agile and Lean management being the most commonly used approaches in IT companies. ANOVA analysis showed that, in most cases, there are no significant differences in the perception of business process optimization concerning managerial position.

Keywords: Business processes, optimization, managers, IT industry.

1. INTRODUCTION

The IT industry is a dynamic sector where innovation and rapid technological development dictate business conditions. Organizations face challenges arising from the need to quickly adapt to new technologies, market trends, and user demands. In order to remain competitive, organizations must frequently optimize their business processes. Managers play a crucial role in this process, as their decisions, skills, and approach directly impact performance. Quality management is essential for the functioning of business systems.

This paper explores the role of managers in the optimization of business processes in the IT sector, focusing on their ability to identify the need for process improvement, use modern

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tools and techniques, and measure success. Daines (2011, p. 128) defines a business process as "a series of interconnected activities that cross functional boundaries." Business process optimization involves the continuous improvement of existing procedures. Current business trends and constant market changes demand that managers increasingly focus on business processes and their efficiency (Zahar Đorđević, 2019).

The first part of the paper presents the theoretical framework of the research, which includes defining business processes and business process optimization, as well as the main optimization methods and the role of managers in this process. The main optimization methods presented in the paper are Agile Management, the Lean approach, Six Sigma, Business Process Reengineering, and Total Quality Management. The next part of the paper presents the research methodology, along with the presentation and interpretation of the research results. Finally, the paper concludes with a summary and a list of references.

2. BUSINESS PROCESSES AND BUSINESS PROCESS OPTIMIZATION

Rentzhog (2000) states that a process represents a chain of activities that, through feedback loops, creates value for consumers. Vukšić et al. (2008, p. 17) define a business process as "a structured and analytical cross-functional set of activities that requires continuous improvement. It consists of activities with clearly established beginnings and endings, during which value is created for consumers at more or less regular intervals." Dobrosavljević and Urošević (2019b) define business processes as a complex network of interconnected activities, whose role in organizational operations is reflected in the creation of value for consumers. A business process encompasses a series of activities, steps, or tasks, with each activity defined by its inputs and outputs (Daines, 2011). Dobrosavljević and Urošević (2020) emphasize that an appropriate approach to managing these processes enables an organization to achieve flexibility and agility.

Zahar Đorđević (2019) points out that the inputs and outputs of a process can be tangible, such as documents, records, or (semi)finished products, but also intangible, such as services, data, requests, or decisions. The most common inputs into a process include customer information, materials, service execution requests, work plans, events, changes, and proposals. Common outputs include processed materials, completed services, invoices, reports, analyses, improvement proposals, projects, and technological procedures.

Rentzhog (2000) argues that processes can be improved through supporting activities and preventive measures. Supporting activities involve identifying and analyzing problems to determine root causes and develop appropriate solutions. Preventive improvement efforts focus on actively seeking improvement opportunities before problems occur. Vukšić et al. (2008) note that when improving business processes, it is important to focus on key processes that generate value, as this helps avoid unnecessary costs associated with improving "wrong" processes. Process optimization is particularly oriented towards increasing value for both the customer and the company (Bojanić, 2021).

Buble (2010) emphasizes that one of the main characteristics of process orientation is the striving for constant improvements. Since every attempt to enhance organizational efficiency constitutes a whole, such improvements are usually implemented through a series of projects aimed at improving business processes. Whether through radical redesign of business processes to dramatically improve performance or through the introduction of continuous and less drastic improvements leading to increased competitiveness, efficiency, and flexibility of the organization, both approaches are essential.

According to Dobrosavljević and Urošević (2020), improving business processes leads to greater efficiency, enhanced customer service, improved information and data flow, more

effective use of information technology, and the reduction of repetitive tasks within processes. Business process improvement initiatives range from marginal continuous improvements to business process reengineering. Business processes vary from one organization to another, depending on industry needs, so the process improvement methodology must be tailored to individual organizations. Business process management focuses on achieving efficiency and effectiveness, regardless of whether the processes are creative or labor-intensive.

The most important business process optimization methods, according to Dobrosavljević and Urošević (2019a) are Agile Management, Lean Management, Six Sigma, Business Process Reengineering (BPR), and Total Quality Management (TQM). Sweeney and Cifuentes (2010) highlight that the Agile approach is a set of management principles that can be applied to almost any process driven by the development of functionalities. The goal of the Agile approach is to deliver functional, potentially shippable product units within a limited time frame. Meanwhile, Lean production is defined as “a systematic approach to identifying and eliminating waste (activities that do not add value) through continuous improvement by changing products and services according to customer demand in the pursuit of perfection” (Adams et al., 1999, p. 1092). According to El-Sayed (2013), one of the main drivers of Lean thinking is the simplification of processes, requiring processes to have a minimal number of steps.

Stojanović (2016) defines Six Sigma as an approach that enables organizations to drastically improve their core operations by designing and monitoring daily business activities in a way that minimizes resource waste while simultaneously increasing customer satisfaction. Business Process Reengineering can be defined as “the radical redesign of business processes to achieve dramatic improvements in business performance” (Riposo et al., 2013, p. 19). Kapor and Lizdek (2023) state that Business Process Reengineering fundamentally changes business practices to achieve better overall effects in terms of cost, service quality, speed, and expertise; it is applied in cases where dramatic solutions to specific inefficiencies are required. Ireh (1994, p. 9) defines Total Quality Management as “a comprehensive philosophy of life and work within organizations that emphasizes a continuous striving for constant improvement.”

3. THE ROLE OF MANAGERS IN BUSINESS PROCESS OPTIMIZATION

Caples (1965) emphasizes that when we talk about managers, we usually refer to a group of individuals employed by a company, paid by that company, and expected to manage operations for the benefit of another group of people—the owners. The work of management is often defined as planning, organizing, and controlling a business enterprise, or as the allocation of resources to achieve the desired goal of producing goods or services at the lowest possible cost. Management can also be defined as the art or science of leading people and managing organizations to achieve goals set by others (Caples, 1965). As Srivastava (2020) states, managers have always strived to improve working conditions, business practices, job satisfaction, and worker productivity.

Human resources represent one of the key variables that determine the success of an enterprise, and they are also a crucial factor in the success of implementing organizational improvement programs. Considering the central role of people in programming measures to enhance organizational processes highlights the importance of motivating the actors involved in business process improvement projects (Buble, 2010). Ankli and Sommer (1996) point out that it is the task of management to anticipate the future and to shape and align the short-term and long-term goals of the organization. Long-term planning should prevent managers from uncritically projecting current trends into the future and assuming that today’s products, services, markets, and technologies will remain unchanged.

Mohanty (2016) states that an organization's success depends equally on the skills and motivation of its members as it does on other key factors. The modern pace of change emphasizes the importance of human resource development activities in preparing members of the organization to successfully overcome challenges. The difference between success and failure in a corporation often lies in how effectively the organization utilizes the energy and talents of its employees (Ralston, 1985).

Human resource management includes the planning, recruitment, training, and retention of a qualified workforce, representing a key aspect of managerial activities. It focuses on continuous development, achievement of business goals, as well as on the motivation, fulfillment of needs, and retention of competent employees. The role of people has been identified as one of the key factors in the success or failure of business process improvement initiatives (Dobrosavljević & Urošević, 2020).

4. RESULTS OF THE CONDUCTED RESEARCH

4.1. Research methodology

The research focuses on the role of managers in the process of business process optimization within the IT industry. The study explores how managers in the IT sector contribute to the improvement of business processes through the application of various optimization methodologies. It examines the current level of business process optimization in companies, areas for improvement, the extent to which managers initiate optimization initiatives, as well as the effectiveness of the tools and technologies they use. Furthermore, the research investigates how managers monitor and measure the success of optimization efforts.

The study involved 79 managers working in the IT sector. The research was conducted from December 2024 to February 2025. Data were collected through an online survey created specifically for this research, using multiple-choice questions and a Likert-type scale. The questionnaire consists of 15 questions, three of which relate to the demographic structure of the respondents. Data were processed using the SPSS software. To examine differences between groups of managers, an ANOVA test was applied.

4.2. Presentation of research results

4.2.1. Demographic data

In the research, 79 respondents participated, of which 38% are first-line managers, 57% are middle managers, and 5.1% belong to top management. As shown in Table 1, the majority of respondents (92.4%) are employed in companies with more than 100 employees, while 5.1% work in companies with 10 to 49 employees. A smaller number of managers (2.5%) work in companies with 50 to 100 employees. The largest portion of the sample (44.3%) consists of managers with 10 to 20 years of work experience, while 36.7% of respondents have between 5 and 10 years of experience. Managers with less than 5 years of experience make up 12.7% of the sample, while 6.3% of respondents have over 20 years of work experience.

Table 1. Demographic data

		Frequency	Percent
Position in company	First-line menager	30	38.0
	Middle menager	45	57.0
	Top menager	4	5.1
	Total	79	100.0
Numbers of employees in company	10 to 49	4	5.1
	50 to 100	2	2.5
	More than 100	73	92.4
	Total	79	100.0
Years of work experience	Up to 5 years	10	12.7
	5 to 10 years	29	36.7
	10 to 20 years	35	44.3
	Over 20 years	5	6.3
	Total	79	100.0

4.2.2. Descriptive statistics results

Based on the results of the conducted research, we can conclude that the majority of managers in the IT industry believe that business processes are optimized at a high level (54.5%). However, there is a certain number of individuals who have a neutral stance or believe that optimization is not at a satisfactory level. Although a higher percentage of respondents believe that business processes are optimized, a significant number of managers (38%) still believe that there is room for improvement. Managers often initiate process improvements, with 35.4% of respondents answering "true," while 26.6% selected the answer "completely true" (Table 2).

Table 2. Methodologies used in the optimization process in IT companies

		Responses	
		N	Percent
Methodologies used	Agile Management (Scrum, Kanban)	72	60.5%
	Lean Management	27	22.7%
	SIX Stigma	4	3.4%
	Business Process Reengineering (BPR)	11	9.2%
	Total Quality Management (TQM)	5	4.2%
Total		119	100.0%

The results also show that Agile Management (Scrum, Kanban) is the most commonly used methodology in companies, applied by 60.5% of the respondents. Lean Management ranks second with 35.5%, while other methodologies are used to a lesser extent: Business Process Reengineering (BPR) at 14.5%, Total Quality Management (TQM) at 6.6%, and Six Sigma at only 5.3%.

4.2.3. Results of the ANOVA test by managerial position in the company and discussion

As shown in Table 3, the results of the ANOVA analysis indicate that there are no significant differences between the groups of respondents regarding the perception of business process optimization, the space for improvement, and the frequency of managerial initiatives.

Table 3. ANOVA – The impact of managerial position on responses regarding business process optimization

Question	Between Groups	
	F	Sig.
Business processes in the company are optimized at a high level.	.226	.798
There is significant room for improvement of business processes in the company.	.084	.920
Managers in the company often initiate initiatives to improve business processes.	.479	.621

The results suggest that there are no statistically significant differences between the groups regarding the above-mentioned questions (Table 4).

Table 4. ANOVA – The impact of managerial position on responses regarding tools and techniques for optimization

Question	Between Groups	
	F	Sig.
The tools used by managers significantly contribute to the efficiency of business processes.	.250	.779
Managers regularly update and improve tools and technologies for business process optimization.	3.019	.055
Managers use automated tools for business process optimization.	2.175	.121

The results of the ANOVA test, presented in Table 5, indicate that for most questions, there are no significant differences in the responses based on the managerial position. The only significant difference in responses is related to the use of clearly defined metrics for monitoring the success of business process optimization. Top managers use these metrics less frequently compared to middle-level managers. No significant difference was observed for other questions among managers working at different levels.

Table 5. ANOVA – The impact of managerial position on responses regarding the efficiency and measurement of optimization

Question	Between Groups	
	F	Sig.
The parameters monitored by managers reliably indicate the success of business process optimization.	.367	.694
Managers use clearly defined metrics to monitor the success of business process optimization.	3.843	.026
Managers regularly evaluate the effectiveness of the tools they use for business process optimization.	2.175	.121

5. CONCLUSION

Based on the conducted research, we can conclude that business processes in the IT industry are optimized at a high level, but there is still room for further improvements. Managers frequently initiate business process improvement efforts and use various tools and methodologies. Agile management is the most prevalent approach in the industry, with Lean management coming in second. The ANOVA analysis showed that, in most cases, there are no significant differences in the perception of business process optimization based on the position of the manager. The result indicates that, regardless of their position, managers assess how business process optimization works in their organization in a similar way. A significant difference in responses exists only regarding the use of clearly defined metrics to monitor the

success of business process optimization. This difference in perception regarding metrics may point to a communication gap between different levels of management, as well as a need for better defining, communicating, and using performance indicators across all organizational levels. Future research can analyze the impact of specific methodologies such as Lean management, Six Sigma, TQM, or BPR on the efficiency of business processes in the IT industry. Additionally, optimization processes in companies of different sizes, as well as in other related sectors, can be explored.

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