

Електронний журнал «Ефективна економіка» включено до переліку наукових фахових видань України з питань економіки (Категорія «Б», Наказ Міністерства освіти і науки України № 975 від 11.07.2019). Спеціальності – 051, 071, 072, 073, 075, 076, 292.

Ефективна економіка. 2023. № 1.

DOI: <http://doi.org/10.32702/2307-2105.2023.1.28>

УДК 65.014

I. Chyrak,

PhD in Economics, Associate Professor of the Department Economics and Economic Theory, West Ukrainian National University

ORCID ID: <https://orcid.org/0000-0003-1593-7042>

BUSINESS PROCESSES REENGINEERING OF THE COMPANY: ESSENCE OF THE APPROACH AND ITS FEATURES

I. M. Чирак,

к. е. н., доцент кафедри економіки та економічної теорії,

Західноукраїнський національний університет

РЕІНЖІНІРИНГ БІЗНЕС-ПРОЦЕСІВ КОМПАНІЇ: СУТНІСТЬ ПІДХОДУ ТА ЙОГО ОСОБЛИВОСТІ

The scientific article identifies the key factors impacting the state and development of domestic companies, such as deep and prolonged financial and economic crisis, the COVID-19 pandemic, as well as the Russian-Ukrainian war, which led to financial instability, inflationary processes, devaluation of the national currency, reduction of aggregate demand and significant limitation of resource capabilities.

It has been highlighted the means and methods of restructuring the work of companies in modern conditions in order to increase the efficiency of its functioning. It has been considered the approaches to restructuring the company based on the concept of business process reengineering. This concept is based on organizational changes and the use of new information technologies in the company's activities. The

theoretical and practical principles of using reengineering of the company's business processes as a modern way of its organizational restructuring have been analyzed and substantiated.

It has been found that it is possible to reduce the company's total costs by 60-90 % and its error rate by 40-70 % by using the reengineering toolkit correctly. However, it has been proven that business process reengineering can be correctly used for only 5-20 % of the company's main processes.

It has been established the main goal of business processes reengineering, in particular, creation of conditions for ensuring the stability of the company in crisis situation, improving its response to changes in the external or internal environment.

It has been found that its achievement is possible due to the formation of the organization's development strategy taking into account the prospective needs of consumers; definition of a new set of business rules or business procedures, which will allow to optimize costs and terms for decision-making; creation of an effective organizational management structure; improvement of staff work organization; clear division of duties, rights and responsibilities between managers and performers, as well as ensuring the functioning of all organizational divisions based on the use of information systems and the latest information technologies.

It has been concluded that the business processes reengineering is one of the most effective toolkit for implementing the essential or radical changes in the company's business processes such technological changes, strategic processes, project changes and transformation of business processes, culture and personnel of the company.

У статті виявлено фактори впливу на стан та розвиток вітчизняних компаній, ключовими серед яких є глибока та тривала фінансово-економічна криза, пандемія COVID-19, а також російсько-українська війна, що призвели до фінансової нестабільності, інфляційних процесів, знецінення національної грошової одиниці, скорочення сукупного попиту та суттєві обмеження ресурсних можливостей.

Висвітлено засоби та методи перебудови роботи компаній у сучасних умовах з метою підвищення ефективності їх функціонування. Розглянуто підходи до реструктуризації підприємства на основі концепції процесного управління, зокрема реінжинірингу бізнес-процесів, що базується на організаційних змінах і використанні нових інформаційних технологій у діяльності компанії.

Проаналізовано та обґрунтовано теоретичні та практичні положення використання реінжинірингу бізнес-процесів компанії як сучасного способу її організаційної перебудови. Виявлено, що за умови правильного використання інструментів реінжинірингу можна досягнути зниження сукупних витрат компанії на 60-90 % та рівня її помилок – на 40-70 %. Разом з тим, доведено, що реінжиніринг бізнес-процесів може бути коректно використаним для 5-20% основних процесів компанії.

Встановлено головну мету реінжинірингу бізнес-процесів, а саме створення умов для забезпечення стійкості підприємств у кризовій ситуації, покращення його реагування на зміни в зовнішньому чи внутрішньому середовищі. З'ясовано, що її досягнення можливе за рахунок формування стратегії розвитку організації з урахуванням перспективних потреб споживачів; визначення нового набору бізнес-правил або бізнес-процедур, який дозволить оптимізувати витрати та терміни щодо прийняття рішень; створення ефективної організаційної структури управління; покращення організації праці персоналу; чіткого розподілу обов'язків, прав та відповідальностей між керівниками і виконавцями, а також забезпечення функціонування всіх організаційних підрозділів на основі використання інформаційних систем та новітніх інформаційних технологій.

Дійдено до висновку, що реінжиніринг бізнес-процесів являється одним із найбільш ефективних інструментів здійснення радикальних чи кардинальних змін бізнес-процесів у компанії, які охоплюють технологічні зміни, стратегічні процеси, проектні зміни і трансформацію бізнес-процесів, культуру та персонал компанії.

Keywords: *business process; reengineering; company; effective change management; organizational process; business process design; reengineering toolkit.*

Ключові слова: *бізнес-процес; реінжиніринг; компанія; ефективне управління змінами; організаційний процес; проектування бізнес-процесу; інструментарій реінжинірингу.*

The problem formulation. Ability to use changes in the interests of the company is one of the most important skills of managers in market conditions. Depending on the availability of such management skills, the company can ensure

positive changes and achieve success, or not be ready for changes and spoil its position at the market to the point of bankruptcy. In general, the variability of the market environment is an objective factor and therefore change management should be present in the management system of all companies.

The long-term evolution of economic and management science has formed an effective toolkit in ensuring the controllability of changes and the company's adaptation to them. One of such tools is business process reengineering. Its main advantage is the ability to reformat processes at the enterprise comprehensively and successfully due to the circumstances of internal and external environment. According to this, the research problem of business processes reengineering of company management is an actual topic that needs additional research.

Analysis of recent researches and publications. The issue of business process development and management, the use of reengineering tools and methods for business processes in the companies are important areas of scientific researches. There are many scientists who deeply research this topic. We should mention among them such famous Ukrainian scientists as L. Batchenko, V. Didukh, Hadetska, L. Riznichenko, L. Sakun, L. Sukhomlin, B. Velkin, et al. Foreign scientists who research business processes reengineering include J. Chamty, M. Hammer, S. Porter, M. Robson, St. Stanton, R. Sh. Ullah, et al. However, regardless of sufficiently thorough research results, the changing environment requires a constant revision of the methodological and practical principles of reengineering due to the operating conditions of a particular company.

Objectives setting. The purpose of the scientific article is to develop and substantiate the theoretical and practical principles of reengineering usage of the company's business processes as a modern method of its organizational restructuring.

Presentation of the main research material. The deep and long financial-economic crisis that has been observed in Ukraine in recent years as well as the COVID-19 pandemic with its strict quarantine restrictions, and the Russian-Ukrainian war have had a very negative impact on the state and development of domestic companies. Financial instability, inflationary processes, devaluation of the national currency have significantly destabilized their activities by essentially

limiting its resource opportunities, and therefore, competitive potential. Strategic planning of companies became actually impossible as a result of significant instability and uncertainty of the external environment due to combination of internal and external destabilizing factors against the background of the often irrational behavior of the state as a subject of economic policy. The issue of finding approaches to the effective companies management, its restructuring and rehabilitation become more and more urgent, which, despite the unfavorable nature of the operating environment, must still determine priorities and form a policy for its implementation.

Justification of such approaches is impossible without introduction of anticrisis management models, rethinking the concept of development and requires a critical evaluation of the system of management technologies from the point of view of their anticrisis orientation, one of which is the reengineering of business processes. In general, reengineering is a set of means, measures and methods including relevant information technologies, intended for the drastic improvement of the main indicators of the company. For this reason, the analysis and subsequent change of existing business processes is carried out.

Business process reengineering is focused on the radical redesign and fundamental rethinking of business processes in order to achieve a significant improvement in the quality of the system's functioning. In addition, the reengineering process is also called new process development or process innovation, as this approach provides a fresh look at the process goals and completely ignores both the existing process and company structure. This approach looks like starting from scratch, as if you are just starting to develop this process.

It's worth to mention that experts are absolutely sure about the usefulness of reengineering. They say that if the process is carried out correctly, then it reduces costs and cycle time by 60-90 % and the level of errors by 40-70 %. Taking into account the Pareto principle, business process reengineering can be correctly used for 5-20 % of the company's main processes [1].

It's absolutely fair to say that business process reengineering is not just a change, but actually it is a dramatic change and dramatic improvements. This is only achieved through overhaul the organization structures, job descriptions, performance

management, training and the most importantly, the use of information technologies and so on.

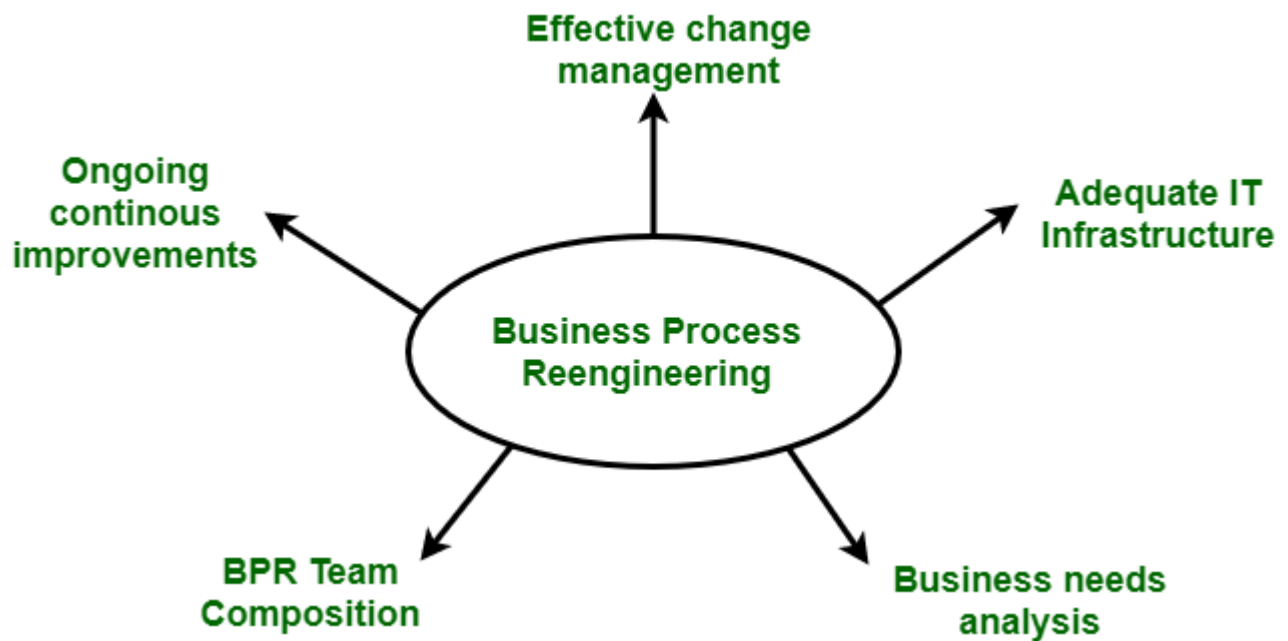


Fig. 1. Business process reengineering [2]

As it is seen from the fig. 1, business process reengineering (BPR) projects have failed sometimes to meet high expectations. Many unsuccessful BPR attempts are due to the confusion surrounding BPR and how it should be performed. It becomes the process of trial and error.

Reengineering of business processes allows the company to plan the business process in such a way that there are no restrictions, that is, to make the process ideal from the point of view of its construction without being limited by the availability of financial resources, information capabilities, etc. [2]. This allows the company to create a new process using the latest scientific and technological achievements, in particular systems for automating information processing. As a result, business process reengineering makes it possible to make a real breakthrough for the company

At the same time business processes reengineering does not involve the implementation of permanent, but insignificant changes, which lead to a small increase in growth (by units or even tens of percent) of improving the company's performance indicators. As a result of successfully conducted reengineering (quick implementation of deep and comprehensive radical changes of the management

system), the company achieves a significant "breakthrough" of tens and hundreds of times more efficiency.

The specificity of reengineering is that management is reintegrated into end-to-end business processes, the responsibility of which is assumed from beginning to end by groups of like-minded people capable of performing a wide range of work [3].

It should be mentioned that the category "business process reengineering" emerged relatively recently, at the end of the 20th century. For the first time, the concept of business process reengineering appeared in scientific articles by American scientists M. Hammer, T. Davenport and J. Short in 1990.

However, today there are many different points of view on the definition of "business process reengineering", which are represented in scientific works of domestic and foreign economists. Thus, in the modern scientific literature, the reengineering of business processes covers several directions, which determine, respectively, two fundamentally different methodological approaches to its implementation.

The founder of the first, traditional approach to reengineering is considered Michael Hammer who in 1990 introduced the terms "reengineering" and "business process reengineering" (BPR). According to his definition, reengineering is a fundamental rethinking and radical redesign of business processes in order to achieve sharp improvements in such modern indicators of the company's activity such as cost, quality, service and rate [2].

It also should be mentioned that in Michael Hammer's famous article "Reengineering Work: Don't Automate, Obliterate", the scientist defined reengineering as "fundamental redesign of business processes of companies to achieve fundamental improvement in the main relevant indicators of their activity: cost, quality, services and pace" [4].

However, the essence of the business process reengineering is the most fully described in the Michael Hammer's fundamental work "Industrial Engineering Handbook" (1956). At that time, this book had created a new business philosophy. In this book, engineering process was considered as the art and science of organizing the use and unification in the production process of labor and material resources in order

to produce goods in the established terms that meet the required quality at minimum production costs.

Concerning the second approach, one of the first scientists who adopted and developed the concept of business process reengineering was Robson M. and Ullah F. It is appropriate to cite two of their explanations regarding the essence of reengineering: "the first of which is more related to the practical role of business process reengineering, and the second - to issues of the technology of its application. They define that business process reengineering is a tool that was specially designed to help in cases that require large-scale changes and when the used process improvement schemes are not capable to ensure its implementation. At the same time, the business processes reengineering is the creation of completely new and more effective business processes without taking into account those that existed before.

What is more, business process reengineering uses a significant number of tools and techniques within the conventional framework, but it primarily focuses on unifying functions at the macro-organizational level. This means that subprocesses can be kept within the framework of one function or division and business process reengineering can also be applied to them [5].

The analysis of scientific works proved that today there is no single view on the definition of such the concept "business processes reengineering". Among the most complete and comprehensive explanations of the concept we highlight the definition that explains the business process reengineering as "a method of restructuring business processes at a company on the basis of redesigning the financial, production, marketing, logistics, resource, management, personnel, information and environmental components of the economic mechanism of economic entities in the conditions of the market environment, which ensures an increase in the economic efficiency of their activities" [6]. The proposed definition comprehensively covers the areas of business process reengineering and takes into account all components of enterprise activities. This definition allows us to form theoretical and methodological provisions regarding the formation of business process reengineering systems of the company.

The main purpose of the business processes reengineering is to create conditions for ensuring the stability of enterprises in a crisis situation, improving its response to changes in the external or internal environment.

According to the mentioned purpose, the tasks of business processes reengineering should be the following:

- company orientation to the current and future needs of consumers;
- significant increase in the degree of consumer satisfaction;
- increasing the role of effective management decisions and the initiative of each individual performer;
- radical reduction of the number of processes and its cost;
- significant improvement of the quality management process;
- reduction of the duration of the production cycle;
- a sharp reduction of time spent on performance of production functions;
- effective organization of group work;
- a sharp decrease in the number of employees;
- implementation of innovative technologies;
- ensuring adaptation of the company to functioning in conditions of information space.

Achieving the set goal and completing tasks is ensured due to the presence of organizational, methodical and informational components of reengineering, in particular:

- forming a new set of business rules or business procedures, which will allow to optimize costs and deadlines for decision-making;
- forming the organization's development strategy, taking into account the prospective needs of consumers;
- application of communication approaches, which are absolutely necessary for obtaining information from consumers;
- creation of an effective organizational management structure;
- improvement of staff work organization;

- a clear division of duties, rights, responsibilities between managers and performers;
- ensuring the functioning of all organizational divisions based on using information systems and the latest information technologies.

The definition of the term "reengineering" covers various aspects of organizational and production processes. The initial stage of reengineering is called fundamental. At this stage, it is necessary to answer the following basic questions like: "Why does the company do what it does?", "Why does the company do it this way?", "What does the company want to become?" [6].

These questions force us to think about the unspoken rules and assumptions that form the business management system. Such rules are often outdated, erroneous or simply not suitable for a specific situation, but they are originally embedded in most processes. Therefore, business process reengineering begins with the elimination of all assumptions. "When redesigning, first it is determined what the company should do, and then how it should do it. Business process reengineering does not accept anything as an established fact, ignoring what is and concentrating on what should be" [6].

One more thing that needs to be said is that business processes of companies are often significantly different from each other, but there are a number of general requirements that each of them must meet. In the process of reengineering, the main principles of business process organization can be identified as:

- Integration of business processes. Complex work functions require a different organization than simpler ones. Naturally, in reality one employee cannot always perform all stages of work on his own. In this case, a team is responsible for this process.
- Rationalization of horizontal connections is implemented by creation of linear functional divisions. It means that work is performed by those divisions that are most suitable for it. In the process of reengineering, horizontal management connections are created between departments. This makes it possible to avoid unnecessary integration.

– Diversification of business processes. Execution processes can be different. For example, a traditional process aimed at mass production. It is supposed to be performed uniformly for all inputs and lead to consistent outputs. As a rule, traditional processes are quite complicated, too detailed and to a greater extent designed for exceptions and private cases.

– Horizontal compression of business processes. Comparative evaluations provided by companies that have already implemented business process reengineering patterns, show that the transition from traditional process organization to one-person execution is able to reduce the number of personnel and reduce the time cycle of process execution by approximately 10 times. The number of costs and errors is significantly reduced, which makes it possible to not keep specialists who solve such problems on staff. By reducing the number of personnel and clearly dividing responsibilities, it becomes much easier to manage processes.

– Decentralization of responsibility. This means that the number of decisions that the executors of certain works can make independently, without contacting the company's management, has been expanded.

– The logic of business processes implementation. It's obviously that to save time, different tasks are often performed in parallel, thus increasing the efficiency of the work performed.

– Rationalization of managerial impact is recommended only in case when it is absolutely necessary and can affect material results.

– Development of various variants of business processes. In modern conditions, it is important to develop processes that will be effective in different, constantly changing market conditions. It is necessary to create a control stage so that at the beginning of the process it is possible to check which option is the most successful for its implementation. Thus, new processes will become more understandable, because they will be implemented according to the most appropriate option [7].

Thus, with the help of business process reengineering the following consequences can be observed:

- the number of company personnel is reduced, while the volume of production remains at the previous level;
- cost reduction, maintaining the former volume and quality of products;
- reducing the number of management levels;
- increase in business value, which attracts investors;
- increasing the value of business in the industry;
- growth of the company's profitability.

So, as it is seen, reengineering is a useful toolkit for introducing the radical changes in the company that can give it a significant boost to the economic development under the conditions of weakening its stability and sustainability. Such a toolkit can be the following (table 1):

Table 1. Reengineering toolkit in the company [8]

Type of tools	Characteristics
Tools focused on technological change	Implementation of innovative developments in the system of production processes, quality management of products and services, based on certification, introduction of the concept of safe work, development of intellectual capital, improvement of energy efficiency and environmental friendliness of production, use of informal management procedures and outsourcing
Tools aimed at strategic changes and structural restructuring	Current innovative technologies usage, improvement of management methods, development of employee competencies, development of a map of strategic resources, ability to adapt and flexibility of the organizational structure of management, decentralization of management, improvement of the communication system
Tools aimed at project changes and business model transformation	Document regulation and optimization of business processes, focus on ESG criteria (environment, social interaction, cooperation with authorities) in strategic management and determination of investment goals, identification of consumer priorities, optimization of the business portfolio
Tools aimed at company culture and personnel	Effective communication system setting, creating an atmosphere of trust, improving the level of qualifications of employees, involving personnel in management processes and changes, motivation and personal development, popularizing the values of social responsibility and the corporate code of ethics

As we can see, the main areas of business process reengineering from the point of view of change management concern technological aspects, strategy and strategic management, directly business processes and business models, as well as both personnel development and organizational interaction. Each of the identified areas has a set of tools that allow optimizing the components of the company's business processes.

Nowadays, reengineering is an advanced method of strategic management from the points of view of financial improvement, management optimization or organizational improvement of the company.

The main feature of reengineering is a focus on innovative developments and methods that involve the introduction of fundamentally new approaches to business process design, as well as the latest technological inventions. In conditions of instability and high level external environment risks, the business processes reengineering performs the role of a stabilizer and reformatting of processes due to its alignment with the impact of internal and external changes.

Conclusions from the study and prospects for further research in this direction. Thus, it can be concluded that reengineering is one of the most useful tools for implementing the radical changes in business processes in the company. It is aimed at determining the real state of the research object, identifying its problematic aspects, and developing measures for the complete restructuring of business processes in order to solve existing problems. However, the main change management toolkit includes technological changes, strategic processes, project changes and transformation of business processes, culture and personnel. So, as we can see, business process reengineering has essential impact on the developing of the company especially in conditions of internal and external environmental risks, that's why it requires further scientific researches.

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Стаття надійшла до редакції 20.01.2023 р.