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**BUSINESS ENGINEERING IN CANADA  
AS A TOOL FOR ADAPTATION TO THE NEW REALITY  
UNDER THE CONDITIONS OF COVID-19**

*The aim of the work is to analyze the current mechanisms of adaptation of innovative processes in Canadian corporations in the context of COVID-19 by demonstrating technologies and approaches that can be applied to solve modern problems. The authors analyzed the statistical material, evaluated the changes in modern information technologies used to attract potential consumers. Methods of observation, analysis, generalization and interpretation of the results were used in the study. The analysis has shown that the Internet remains the most dynamically growing segment of the market for promoting products and services. It has been revealed that innovations can become the link in the company that will help it survive the crisis and open up opportunities for stating, analyzing and testing new processes. The results of the study strongly prove that the use of new technologies and openness to innovation can be a decisive factor for outperforming competitors in the future.*

**Keywords:** coronavirus pandemic, entrepreneurship, adaptation, innovation processes, COVID-19, openness to innovation.

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**Introduction**

The coronavirus pandemic turned out to be a true challenge for a lot of companies and brought about substantial changes to the business environment. A wide range of restrictions imposed by governments with regard to the coronavirus, from the closure of offices, shops and malls, restaurants and fast food cafes to the prohibition of traveling, and finally the closure of borders both for strangers to come to the country and for citizens to leave the country, have led to the chaotic situation in various economic sectors. For lots of companies, those that were not prepared, these restrictions represented the end of any kind of business activities. Consequently, the modern economic environment from day to day shows us that the market already has a place exclusively for the companies that adapt to changes most quickly, are the most flexible in their activities and business processes, and are ready to respond at any moment to changes in the business environment and to what is happening in the world as a whole.

Also, it is important to emphasize that the need for companies that adapt to the various changes so quickly is not only related to the pandemic, but is a reflection of the actual trends that have developed in the modern economic

world – rapid consumption, rapid technology updates, and so on. Rather, the pandemic was a situation in which the lack of adaptation of many companies to the above-mentioned realities came to the fore and called into question their continued presence in the market.

### **The concept of business engineering**

Before passing to the analysis of the business process adaptation to the new pandemic realities, we suggest looking a little bit deeper into the concept of business engineering as an instrument of these adjustments. In general, the idea of business engineering is a rather new concept that has appeared with the transformation of the society from an industrial type to an information society [1], that is closely related to the digitalization of enterprises, organizational processes, administrative functions, document circulation, etc. Thereby, business engineering is considered to be a multi-layered approach to business problem-solving and process optimization that can be used to attain higher and better performance and, what is important to highlight, considers an organization as a holistic system [2]. Whereas this field, both academic and practical, has appeared with the transition to the information society, the core of this concept is formed by the proper use of the supportive information technology and digital decisions. Because of this, business engineering is frequently regarded as a subfield of business informatics as it helps enterprises to reach a new, more competitive level through digitalization [3].

According to the theory of business engineering, approaches for optimizing processes and solving various organizational problems and complexities can vary and include, for example, such approaches as the Open Group Architecture Framework (TOGAF) [2], The3rdgear Business Engineering Model [4], and many others, determined by the needs of the business and the size of the organization. However, these methods do not answer the question of each specific organization, do not solve any problem that arises, but allow choosing one of the schemes for achieving and implementing a certain solution. Thus, it can be defined that business engineering is a creative process associated with the search for unique solutions to resolve atypical situations peculiar to each individual organization [4]. Hereby, according to the author's point of view, business engineering inherently possesses the following characteristics: systemic character, administrative and managerial character, novelty and creativity.

Now let us return to the issue of the coronavirus as a cause of dramatic economic changes. The pandemic reality has led to the widespread lockdowns, restrictions on physical presence in various places, including offices. The issue of urgent transformation of business processes, document flow, interaction with clients and, in general, transfer to the “virtual economic world” was on the agenda. Hence, the world has met the necessity of prompt digitalization in order not only to improve performance, but also not to forfeit the human resources, not to deprive people of an occupation and income to live, and not to lose a place in the market. This situation, for sure, can be considered that kind of a challenge that business engineering is called to respond.

The statistics below (Fig. 1) represent the reaction of economic agents to the beginning of the pandemic, as well as the measures they took to save their business [5]. Originally, the table made by the Statistics Canada includes 18 criteria which disclose how economic agents tried to adapt their business activities to the new reality. In accordance with the business engineering characteristics mentioned above, these criteria were divided into 2 groups – corresponding to the concept of business engineering (in general) or not. In the pie chart below, it is possible to see the percentage of the economic units that preferred a particular type of business optimization at the systemic level during 2020.

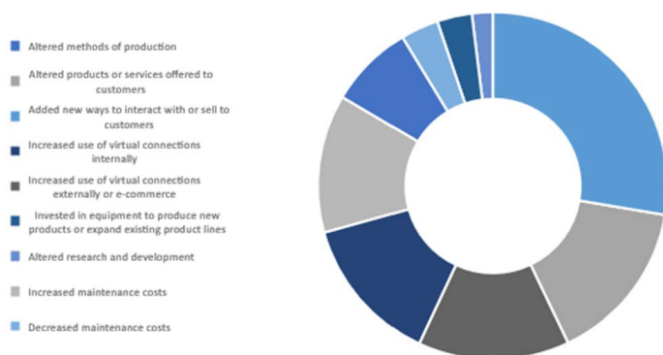


Figure 1. Business optimization in the Canadian business sphere in terms of COVID-19.  
Prepared by the authors according to the statistics by Statistics Canada

Hence, it can be easily noticed that the crucial method turned out to be adding new ways of interaction with or sell to customers – easier said than done. Transformation of ways of communication with the client has become one of the most significant problems and at the same time the most difficult to implement. However, this task was most subject to the methods of business engineering. The second most popular change was the increase in the role of virtual space in work, which, of course, has a close connection with the first change.

In the second chart below (Fig. 2), we can see in a more precise way business transformation by the sector of economy on the example of Canada. Again, all the studied methods are related to the business engineering approaches in terms of business adaptation to the new reality of post-industrial world.

### **The fastest-adapting sectors of the Canadian economy**

From the provided information, the real estate, finance, and retail sectors have become the fastest-adapting sectors of Canadian economy. Those were companies in the area that were most prepared to implement qualitatively new approaches to business process organization, integrate new technologies, automate existing business processes, and transfer part of their activities to cloud and virtual spaces that are most viable in the context of the pandemic, as well as the most promising in the coming decades of the 21st century [6].

Among the leading sectors of the economy in terms of the number of business transformations were catering and accommodation services, health and social support, culture, wholesale trade, and some others.

In addition, we suggest paying attention to another important and very interesting aspect, in terms of which it is possible to analyze the degree of business adaptation – the characteristics of business owners. For example, according to the statistics, the largest number of changes that correspond to business engineering methods occurred in companies that are mostly owned by people with disabilities.

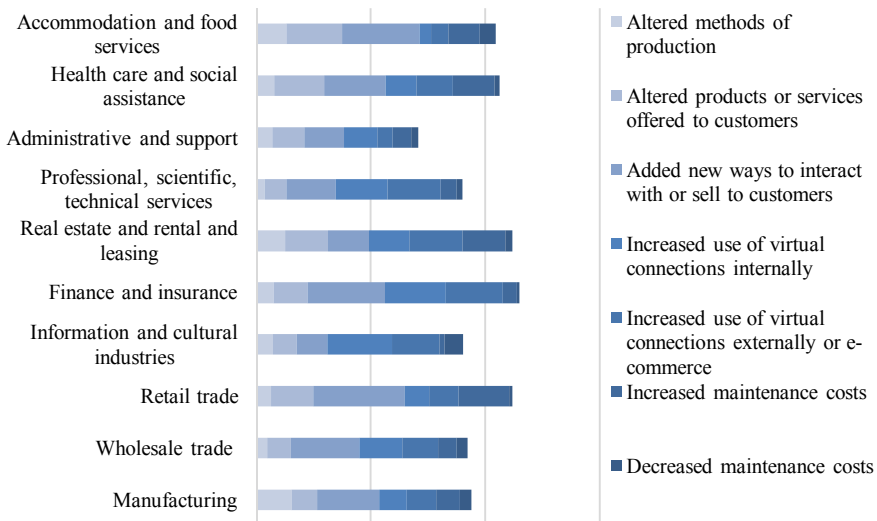


Figure 2. Business transformation in Canada by sector of economy.  
Prepared by the authors according to the statistics by Statistics Canada

In the second place there are societies in which owners identify themselves as LGBTQ2, followed by societies in which the majority of owners are women [7]. This trend is unusually interesting, because it allows us to draw attention to the fact that companies whose managers are probably more associated with modern trends were the most flexible and were more able to adapt their business to the challenges of the pandemic.

It is also important to note that according to Statistics Canada, the duration of the business did not affect the nature of the changes made. In the total share of changes that have occurred in the country's business environment, from 25 to 27% are the shares of business structures that have occupied their place in the industry for 30 to 10 years, from 11 to 20 and more than 20 years, respectively. Companies with a life span of less than two years are slightly singled out. According to the authors, this phenomenon can be associated with two key factors: 1) the lack of funds to implement large-scale changes in the nature of business processes; 2) the start of activities was already carried out taking into account the latest requirements for automation and digitalization of business processes of

organizations, which is why updates and adaptations were less in demand by them [8].

In addition, to support Canadian business in these difficult times, it was allowed to defer the payment of taxes on goods and services and customs duty payments to June 30, 2020 [9]. This is quite a significant measure to ease the burden on the business, since these taxes are applied to sales of most goods and services in Canada and at each stage of the supply chain [10].

The new Canada Emergency Business Account system is also an important measure of business support. The \$ 25 billion program intends to provide small businesses and nonprofits with interest-free loans of up to \$ 40,000 to help cover their operating expenses during a period when their income was temporarily reduced due to the economic impact of the COVID-19 virus [3]. In addition, the government has introduced financial support measures such as guaranteeing companies when they receive loans, as well as a co-financing system for the Canadian business jointly by the Canadian Development Bank with commercial financial institutions.

### Conclusion

So, we have considered the mechanisms for adapting innovative processes in corporations in the context of COVID-19 via demonstrating technologies and solutions that can be applied to meet current challenges. Innovation can be the link in a company that will help them survive a crisis and open up opportunities for identifying, analyzing, and testing new products and processes. The use of new technologies and openness to innovation can be a crucial factor for getting ahead of competitors in the future.

All of us will eventually return to a similar pre-COVID-19 lifestyle, but with new preferences. Then it is possible to change habits, because the longer the environment of self-isolation expands, the newer rules take root in our lives, and this creates opportunities for flexible business. The crisis creates unique consequences, penetrating into every layer of the organization, and affects both internal and external processes, but understanding the dynamics of how the situation will affect the organizations and drawing up an action plan to prevent and minimize the consequences is an integral part of stabilization. 53% of Canadian companies claim that they have already become much stronger, and 43% have taken more favorable positions in the market after emerging from previous crises than before. Remember that a chain reaction of tipping points can not only cause damage, but also reveal gaps in processes that will create a starting point for growing and achieving better results.

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## БИЗНЕС-ИНЖИНИРИНГ В КАНАДЕ КАК ИНСТРУМЕНТ АДАПТАЦИИ К НОВОЙ РЕАЛЬНОСТИ В УСЛОВИЯХ COVID-19

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**Аннотация.** Цель работы – проанализировать актуальные механизмы адаптации инновационных процессов в корпорациях Канады в условиях COVID-19 путем демонстрации технологий и подходов, которые могут быть применены для решения современных задач. **Процедура и методы исследования.** Авторами проведен анализ статистического материала, оценены изменения современных информационных технологий, используемых для привлечения потенциальных потребителей. При проведении исследования применены методы наблюдения, анализа, обобщения и интерпретации результатов. **Результаты проведенного исследования.** Проведенный анализ показал, что интернет остается самым динамично растущим сегментом рынка продвижения продуктов и услуг. Выявлено, что инновации могут стать тем звеном в компании, которое поможет ей пережить кризис и откроет возможности для констатации, анализа и тестирования новых процессов. **Теоретическая и практическая значимость.** Результаты исследования убедительно доказывают, что использование новых технологий и открытость к инновациям могут стать решающим фактором для опережения конкурентов в будущем. **Ключевые слова:** пандемия коронавируса, предпринимательская деятельность, адаптация, инновационные процессы, COVID-19, открытость к инновациям