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THE ROLE OF DIGITAL PROCESSES IN THE INNOVATIVE DEVELOPMENT OF UKRAINIAN BUSINESS: ECONOMIC ASPECT

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РОЛЬ ДІДЖИТАЛ ПРОЦЕСІВ В ІННОВАЦІЙНОМУ РОЗВИТКУ УКРАЇНСЬКОГО БІЗНЕСУ: ЕКОНОМІЧНИЙ АСПЕКТ

Українські суб'єкти бізнесу все активніше використовують діджитал процеси для вдосконалення своєї діяльності, зокрема у напрямках отримання прибутку та розвитку нових продуктів та послуг. Ці процеси сформовані використанням цифрових технологій та програмних продуктів у різних аспектах вітчизняного бізнесу та відіграють важливу роль в його інноваційному розвитку. Відтак, стаття спрямована на дослідження сучасної ролі діджитал процесів в інноваційному розвитку українського бізнесу, зокрема її економічного аспекту. Авторами реалізоване визначення сутності та сучасної типології базових діджитал процесів, які впливають на інноваційний розвиток бізнесу, а також надана системна характеристика їх основних типів, їх ролі в інноваційному розвитку українського бізнесу. У межах дослідження доведено, що діджитал процеси в бізнесі слід ідентифікувати як процеси, які залежать від використання цифрових технологій та різноманітних програмних продуктів, що дозволяють автоматизувати, оптимізувати, прискорювати отримання прибутку та розвитку нових продуктів і послуг, забезпечуючи інноваційність розвитку. За результатами дослідження визначені основні типи діджитал процесів в інноваційному розвитку українського бізнесу, до яких віднесені: цифрові маркетингові стратегії, електронна комерція; автоматизація процесів в бізнесі; електронний документообіг; аналіз даних та штучний інтелект. Встановлено, що комплексні цифрові процеси, наведені вище, допомагають суб'єктам бізнесу не тільки вирішувати важливі завдання, але також сприяють формуванню основних напрямків інноваційного розвитку українського бізнесу. За таких умов,

інноваційність розвитку бізнесу можна розглядати як загальну категорію, яка залежить від формату використання цифрових технологій та програмних продуктів. Дослідження діджитал процесів є комплексним напрямом, який формує підґрунтя для подальшого дослідження впливу діджитал процесів на ефективність бізнесу. Оцінка ефективності діджитал процесів в бізнесі може бути проведена за допомогою різноманітних показників, таких як збільшення прибутку, зниження витрат, покращення якості продуктів та послуг, покращення задоволеності клієнтів, підвищення конкурентоспроможності тощо.

Ukrainian businesses are increasingly using digital processes to improve their activities, particularly in the areas of profit generation and development of new products and services. These processes in Ukrainian business are formed through the use of digital technologies and software products in various aspects of domestic business and play an important role in its innovative development. Therefore, the article aims to investigate the contemporary role of digital processes in the innovative development of Ukrainian business, particularly in its economic aspect. The authors provided a definition of the essence and modern typology of basic digital processes that influence the innovative development of businesses, as well as a systematic characterization of their main types and their role in the innovative development of Ukrainian businesses. It has been established within the study that digital processes in business should be identified as processes that depend on the use of digital technologies and various software products that enable the automation, optimization, and acceleration of profit generation and the development of new products and services, essentially ensuring the innovativeness of development. According to the research, the main types of digital processes in the innovative development of Ukrainian businesses have been identified, which include: digital marketing strategies, e-commerce, business process automation, electronic document management, data analysis, and artificial intelligence. It is noted that the complex of the above basic digital processes helps businesses not only to solve important tasks but also to form the main directions of innovation in the development of Ukrainian business. Under these conditions, the innovativeness of business development can be interpreted as a collective category that depends on the format of using digital technologies and software products. The study of digital processes is a comprehensive direction that forms the basis for further research on the impact of digital processes on business efficiency. The effectiveness of digital processes in business can be evaluated using various indicators, such as increased revenue, reduced costs, improved product and service quality, improved customer satisfaction, increased competitiveness, and so on.

Ключові слова: цифрові маркетингові стратегії, електронна комерція, автоматизація процесів; документообіг; аналіз даних; штучний інтелект.

Key words: digital marketing strategies, e-commerce, process automation, document flow, data analysis, artificial intelligence.

PROBLEM SETTING (DESCRIPTION OF THE PROBLEM BEING ANALYZED IN GENERAL AND ITS CONNECTION WITH IMPORTANT ACADEMIC OR PRACTICAL TASKS)

At present, Ukrainian business entities are increasingly using digital processes to improve their operations, particularly in the areas of generating profit and developing new products and services. These processes of Ukrainian business (sometimes also referred to as digital processes or processes of digital transformation) are formed by the use of digital technologies and software products in various aspects of domestic business and play an important role in its innovative development. From the transition to online commerce to the use of smart production and distribution technologies, all these processes accelerate the pace of innovation in various fields. In particular, in e-

commerce, digital processes allow companies to increase the efficiency and scale of sales, reduce costs for storage and transportation of goods, and improve interaction with customers through the development of electronic platforms and internet marketing. In manufacturing, digitalization of processes enables the adoption of new technologies and the development of more efficient production methods, promoting automation and optimization of business processes. In addition, digital processes allow for the implementation of new technologies and the development of more efficient methods of production, promote automation and optimization of processes in business. Moreover, digital processes help to increase the level of data security, ensure convenient and secure access to information, and reduce the number of errors that may occur in the process of manual data entry. Accordingly, the research in the outlined direction is relevant and timely.

ACTUAL SCIENTIFIC RESEARCHES AND ISSUES ANALYSIS

Among the studies and publications that initiated the solution to the problem of studying the role of digital processes in the innovative development of Ukrainian business, we have identified the groundwork of Savitska O.M., Salabay V.O. [4], Lihonenko L.O., Khripko A.V., Domanskyi A.O. [2]. The author relies precisely on the outlined sources. However, the problem is that in most sources only the main stages and factors that affect the process of digital transformation of business are outlined. In addition, among other studies, it is possible to distinguish best practices conducted by Mashika H., Zelic V., Kiziun A., Maslyhan R. et al [5], where the main results and advantages of digital processes are presented, directions, stages and obstacles on the way of its implementation are identified. At the same time, the typology of digital processes and their role in the innovative development of Ukrainian business, which are not investigated in most existing studies, form the general problematic, which is devoted to the mentioned article.

THE WORDING OF THE PURPOSES OF ARTICLE (PROBLEM)

The aim of the article is to investigate the contemporary role of digital processes in the innovation development of Ukrainian business, particularly in its economic aspect. To achieve the stated aim, the following research objectives must be accomplished:

- 1) to define the essence and modern typology of basic digital processes that affect the innovation development of business;
- 2) to provide a systematic characterization of the main types of digital processes and their role in the innovation development of Ukrainian business.

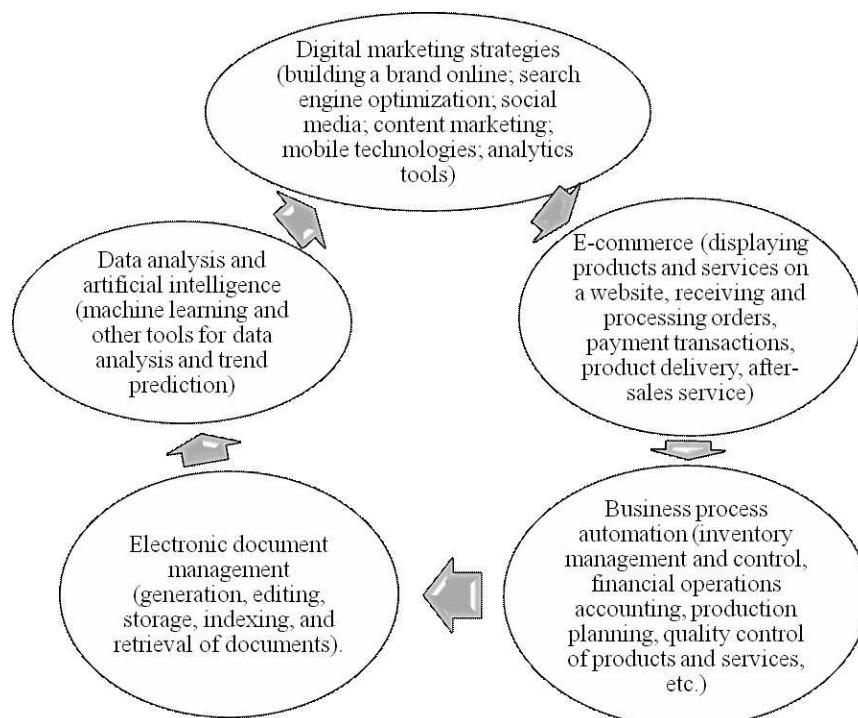


Fig. 1. Digital processes that impact the innovative development of Ukrainian businesses

Source: formed based on [1, 2, 3, 4].

THE PAPER MAIN BODY WITH FULL REASONING OF ACADEMIC RESULTS

Digital processes in business are processes that depend on the use of digital technologies and various software products that allow for the automation, optimization, and acceleration of profit generation and the development of new products and services, essentially providing innovation in development.

The main types of such processes in the innovative development of Ukrainian business can be attributed to: digital marketing strategies, e-commerce, automation of business processes (automation of routine tasks), electronic document management, data analysis, and artificial intelligence. It is noted that the innovativeness of development can be interpreted as a collective category that depends on the format of using digital technologies and software products.

The outlined processes, although not exhaustive, form the main directions of innovation in the development of Ukrainian business. Digital processes that influence the innovative development of Ukrainian business, as well as the technologies and software products inherent to them, are summarized in Figure 1.

Therefore, let us consider in more detail the main types of digital processes by systematically characterizing them and outlining their role in the innovative development of Ukrainian business. To do this, we need to determine which specific needs each of the aforementioned digital processes solves for the business entity and what results are provided by the practical application of such a process.

So, digital marketing strategies or the use of communication channels and marketing tools on the internet play an important role in the innovative development of Ukrainian businesses, as they expand opportunities for

customer acquisition and revenue growth through the use of technologies and software products in the following areas [3]: building a brand online; applying search engine optimization; using social media; using content marketing; using mobile technologies; and using analytics tools. The characterization of the role of technologies and software products of digital marketing strategies in the innovative development of Ukrainian business is systematized in Figure 2.

The confirmation that digital marketing strategies can be a powerful tool for innovative development of Ukrainian business is the experience gained by a number of entities, including "Rozetka".

This business entity actively utilizes digital marketing to attract and retain its customers, including SEO optimization (for promoting its products and services), social media, and mobile technologies (for communicating with customers, expanding its reach and popularity, including "Rozetka" having a mobile application

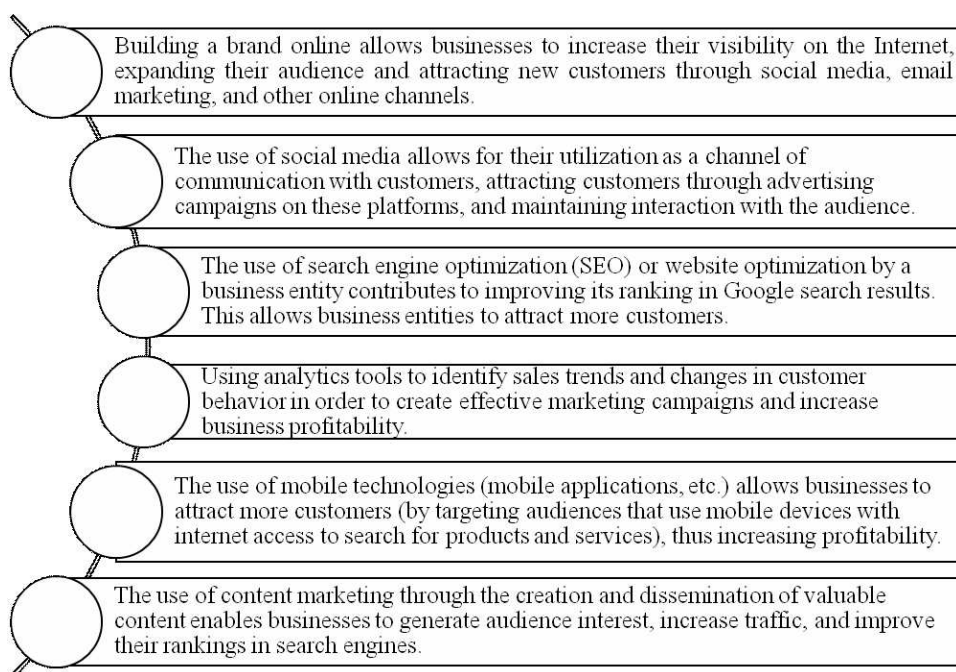


Fig. 2. Characteristics of the role of technology and digital marketing software in the innovative development of Ukrainian businesses

Source: formed based on [2; 3; 5].

allowing customers to make purchases from their mobile devices, posting news, promotions, and information about its products on social media platforms such as Facebook, Instagram, Twitter, YouTube, and LinkedIn). In addition, the business entity utilizes Google Analytics, Adobe Analytics, or other analytics tools to measure the effectiveness of their campaigns and identify trends in customer behavior. In conclusion, "Rozetka" has become one of the leaders in the Ukrainian e-commerce market. Besides "Rozetka," there are other successful examples of using digital marketing strategies by entities such as "Nova Poshta," PUMB Bank Ukraine, "Ecoffier Ukraine," etc., which have changed their businesses and attracted more customers. Therefore, it can be stated that the existing experience confirms the significant role of digital

marketing strategies and their contribution to shaping the market direction of innovative development (aimed at the marketing and sales processes).

E-commerce, or the process of buying and selling goods and services using internet-based technology rather than physical trade, currently provides businesses with the ability to attract new customers and expand their operations. In particular, this digital process involves the use of technologies and software products in the following areas: displaying goods and services on a website or specialized platform; receiving and processing orders; payment transactions; delivery of goods and providing after-sales service. The characterization of the role of e-commerce technologies and software products in the innovative development of Ukrainian businesses is systematized in Figure 3.

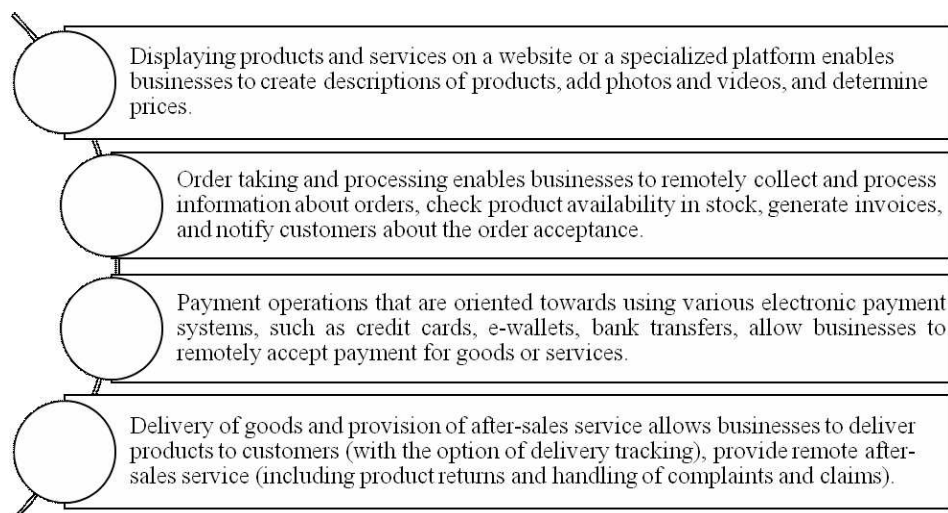


Fig. 3. Characteristics of the role of e-commerce technologies and software products in the innovative development of Ukrainian business

Source: formed based on [3; 5].

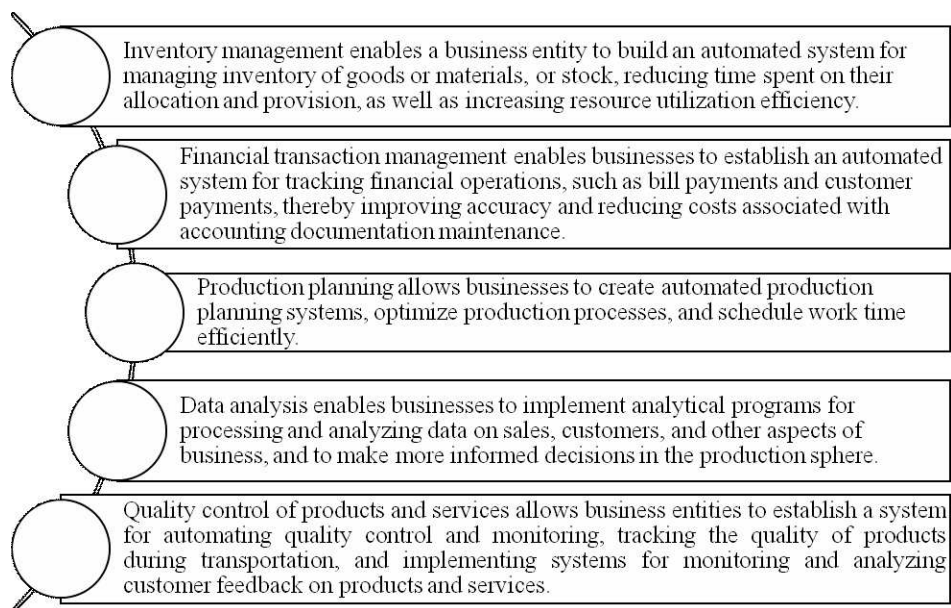


Fig. 4. Characterization of the role of automation technology and software products in the innovative development of Ukrainian businesses

Source: formed based on [3,4; 5].

Evidence that e-commerce can be a powerful tool for the innovative development of Ukrainian businesses is demonstrated by the experience of a number of entities, among which are not only online retailers like Rozetka.ua, but also other entities such as Epicentr K, Comfy, and others. In particular, these entities are developing new electronic platforms and creating unique online delivery and after-sales service offerings (for example, Epicentr K has developed the "Epicentr 24" platform, which offers a wide range of products from construction materials to electronics, while Comfy offers its own delivery service "Comfy express" with the ability to deliver goods within 2-3 hours [3]).

Thus, it can be concluded that the existing experience confirms the significant role of e-commerce technologies and software products in promoting innovative

development associated with digital transformation of business and its processes. In fact, currently, business entities have the opportunity to attract new customers from around the world and work in online mode without the need for a physical store or office.

Automation of business processes currently allows businesses to ensure the automatic execution of routine tasks and focus on the most important tasks that ensure increased competitiveness and business development (including strategic planning, development of new products and services, and improving customer service). In particular, this digital process involves the use of technologies and software products in areas such as inventory and supply chain management, financial transaction tracking, production planning, quality control of products and services, and so on. The role of these automation

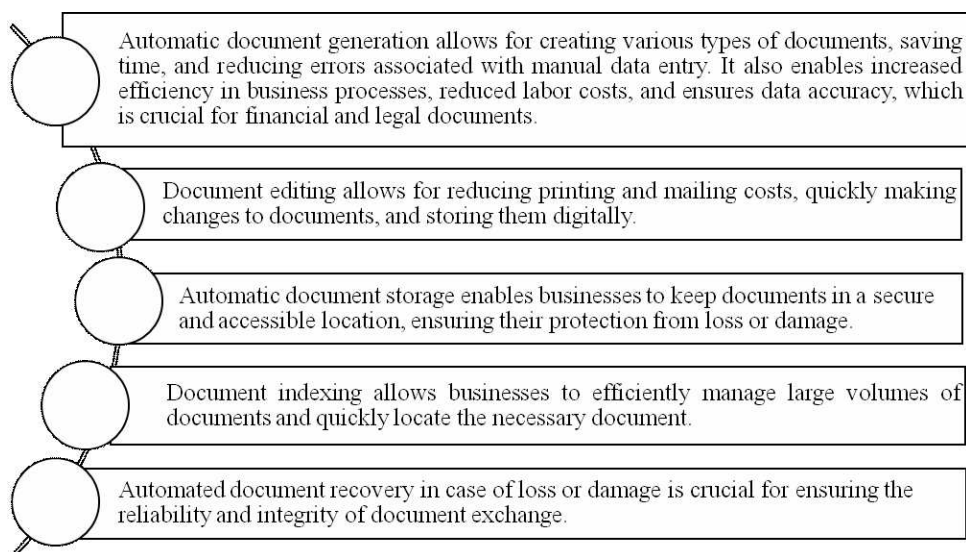


Fig. 5. Characterization of the role of the outlined electronic document management technologies and software products in the innovative development of Ukrainian business

Source: formed based on [3, 5].

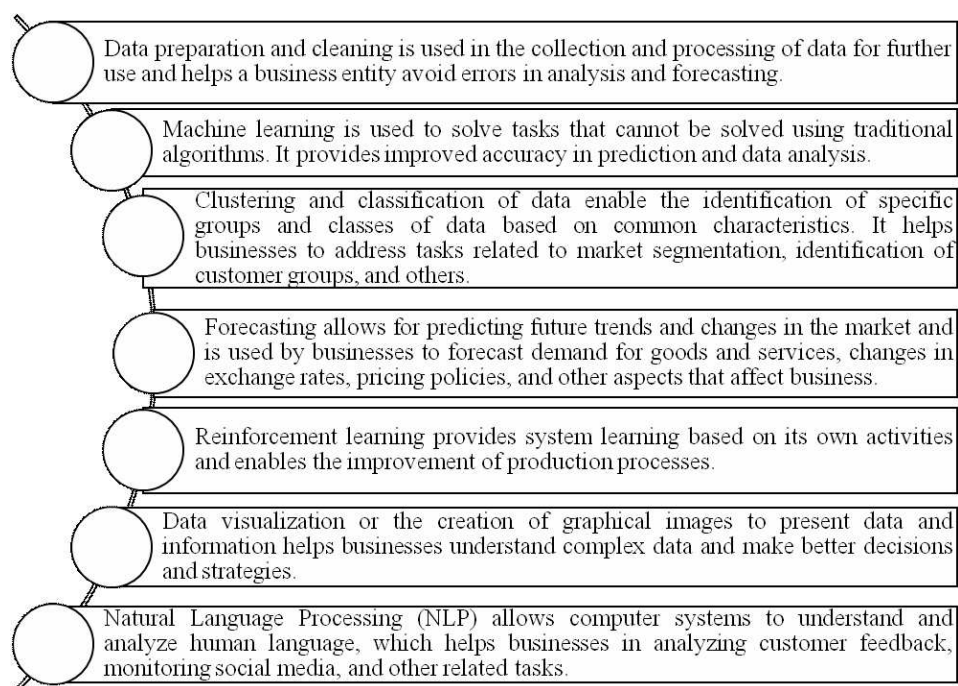


Fig. 6. Characterization of the role of the data analysis and artificial intelligence technologies and software products in the innovative development of Ukrainian businesses

Source: formed based on [3, 5, 4].

technologies and software products in innovative development of Ukrainian business is outlined and summarized in Figure 4.

The experience of automating processes in the innovative development of Ukrainian business is quite diverse. For example, the online retailer Rozetka.ua uses automated inventory management systems (to ensure fast processing and shipping of orders) and an automated monitoring and analysis system of customer feedback on products and services (to understand how to improve service quality and refine products). Another example of a business successfully utilizing process automation in its operations is the network of electronics and home appliances stores, Comfy. This business entity uses inventory management systems that allow them to track the amount of goods in stock in real-time and forecast the need for the upcoming periods.

Therefore, it can be stated that the available experience confirms the significant role of automation technologies and software products in the formation of innovation development associated with the process-oriented direction of innovation development.

Electronic document management or the process of transferring documents in electronic form between different participants of a business process allows businesses to speed up document flow, reduce costs of their processing, and ensure higher reliability and confidentiality of information exchange. In particular, such a digital process includes the use of technologies and software products in the following areas: automatic generation of documents (or creation of various types of documents, such as invoices, contracts, and waybills, using software), editing documents (or the process of making changes to existing documents using software), storing documents on a server or cloud storage, indexing

documents (providing metadata, information about the document that helps classify and find it, for each document stored in electronic form), and document recovery. The described directions are carried out in electronic form. The role of the outlined technologies and software products of electronic document flow in the innovative development of Ukrainian business is characterized and systematized in Fig. 5.

One example of using electronic document management in Ukrainian business is the company "PJSC Ukrtelecom", in particular its created system of electronic document management "EDoc", which allows customers to sign and send invoices online. In addition, the system provides storage of documents on Ukrtelecom servers and allows receiving notifications about the account status. Thus, it can be stated that the existing experience confirms the significant role of automation technologies and software products in business innovation development in terms of productivity and process orientation.

Data analysis and artificial intelligence involve the use of machine learning algorithms and other tools for analyzing data and predicting market trends. In particular, such a digital process involves the use of technologies and software products in areas such as data preparation and cleansing; machine learning; data clustering and classification; prediction; reinforcement learning; natural language processing and data visualization. The characterization of the role of the outlined technologies and software products related to data analysis and artificial intelligence in the innovative development of Ukrainian business is systematized in Figure 6. In fact, the technologies and software products under the outlined directions allow businesses to make more informed decisions, thus

improving the efficiency of achieving a certain goal or solving a problem.

One example of the use of data analysis and artificial intelligence by Ukrainian businesses is the use of machine learning to improve the recruitment and selection process for sales consultants in the electronics and home appliances retail chain Comfy (including the use of machine learning algorithms to analyze resumes and assess candidate suitability) [1]. Among other examples of using data analysis and artificial intelligence by Profit-M LLC and Ukr Lit Prom LLC is the forecasting of demand for goods and services (used for forming an annual production program and compiling an annual procurement plan). Thus, it can be concluded that the available experience confirms the significant role of data analysis and artificial intelligence technologies and software products in promoting innovation in various directions (including optimizing decision-making processes, reducing costs, product-oriented innovative development, etc.).

CONCLUSIONS FROM THIS STUDY AND PROSPECTS FOR FURTHER EXPLORATION IN THIS AREA

The study has shown that digital processes in business should be identified as processes that depend on the use of digital technologies and various software products. They allow for the automation, optimization, and acceleration of revenue generation and development of new products and services, effectively ensuring innovation in development. Specification of the outlined position has allowed to draw the following conclusions:

1. The main types of digital processes in the innovative development of Ukrainian businesses include: digital marketing strategies, e-commerce, process automation (automating routine tasks), electronic document management, data analysis, and artificial intelligence.
2. The comprehensive listing of the above basic digital processes not only helps businesses solve important tasks, but also shapes the main directions of innovation in the development of Ukrainian business. Under these conditions, innovation in business development can be interpreted as a collective category that depends on the format of using digital technologies and software products.
3. Overall, the use of digital processes is an integral part of business innovation that can lead to significant growth in profit and the development of new products and services. However, to succeed in this direction, it is necessary to ensure constant support and development of the relevant technologies and software products that form the basis of the digital infrastructure, as well as to develop skills and knowledge of digital technologies among business people.

PERSPECTIVES FOR FURTHER RESEARCH IN THIS AREA

The study of digital processes is a complex direction that forms the basis for further research into the impact of digital processes on business effectiveness. The effectiveness of digital processes in business can be evaluated using various indicators, such as increased

profits, reduced costs, improved quality of products and services, improved customer satisfaction, increased competitiveness, and so on.

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