



DOI: [10.58423/2786-6742/2026-13-115-127](https://doi.org/10.58423/2786-6742/2026-13-115-127)
УДК 658.012.4:004.8

Olena ZAIKA

PhD of the Department of Finance, Banking and Insurance
State University of Biotechnology
Kharkiv, Ukraine

ORCID ID: [0000-0002-7921-3273](https://orcid.org/0000-0002-7921-3273)

e-mail: alyona.zayika1998@gmail.com
(Corresponding author)

Liliia KHARCHEVNIKOVA

PhD in Economics, associate professor
State Biotechnological University
Kharkiv, Ukraine

ORCID ID: [0000-0002-8035-126X](https://orcid.org/0000-0002-8035-126X)

THE USE OF ARTIFICIAL INTELLIGENCE IN BUSINESS MANAGEMENT

Анотація. *Розвиток цифрових технологій зумовлює зростання ролі інформаційних систем, здатних забезпечувати обробку значних масивів даних та підготовку аналітичної інформації для управління підприємством. Важливе місце в цьому процесі належить технологіям штучного інтелекту, які забезпечують комплексне опрацювання інформації, прогнозування економічних показників діяльності підприємств та інформаційну підтримку процесу ухвалення рішень. Метою дослідження є узагальнення сучасних наукових напрацювань щодо використання технологій штучного інтелекту в управлінні бізнесом та визначення особливостей їх застосування при реалізації основних функцій управління. Методичну основу дослідження становлять монографічний метод, метод порівняння, а також методи аналізу і синтезу, застосування яких дало змогу опрацювати наукові джерела з окресленої проблематики, зіставити погляди вітчизняних і зарубіжних авторів, узагальнити теоретичні положення та впорядкувати основні напрями використання технологій штучного інтелекту в управлінні бізнесом. У статті проаналізовано результати наукових досліджень, присвячених застосуванню технологій штучного інтелекту в економічній діяльності підприємств. На основі аналізу наукової літератури узагальнено напрями використання технологій штучного інтелекту у сфері управління бізнесом та визначено їх роль у формуванні інформаційної бази для прийняття управлінських рішень. У ході дослідження здійснено систематизацію використання технологій штучного інтелекту у реалізації основних функцій управління, зокрема аналізу, планування, організації, мотивації та контролю. Показано, що застосування інтелектуальних інформаційних систем забезпечує можливість опрацювання значних обсягів економічної інформації, побудови аналітичних моделей та прогнозування змін економічних показників. Наукова новизна одержаних результатів полягає в упорядкуванні напрямів використання технологій штучного інтелекту в управлінні бізнесом відповідно до основних функцій управління, що дало змогу цілісніше визначити місце інтелектуальних інформаційних систем у сучасній управлінській діяльності. Обґрунтовано, що інтеграція технологій*



This is an Open Access article distributed under the terms of the [Creative Commons CC BY-NC 4.0](https://creativecommons.org/licenses/by-nc/4.0/)



штучного інтелекту у систему управління бізнесом сприяє удосконаленню інформаційного забезпечення управлінської діяльності, розширює можливості економічного аналізу та створює умови для покращення обґрунтованості управлінських рішень. Отримані результати дозволяють поглибити наукові напрацювання щодо ролі інтелектуальних інформаційних систем у сучасному управлінні та визначити напрями подальших досліджень використання технологій штучного інтелекту в економічній діяльності. Практична цінність дослідження полягає у можливості використання узагальнених положень при вдосконаленні інформаційного забезпечення управлінської діяльності підприємств, підготовці управлінських рішень, а також у викладанні економічних і управлінських дисциплін.

Ключові слова: управління бізнесом; управлінські рішення; функції управління; цифрові технології; штучний інтелект.

JEL Classification: M15, O33, D83, L25.

Absztrakt. A digitális technológiák fejlődése növeli azon információs rendszerek szerepét, amelyek képesek nagy mennyiségű adat feldolgozására és a vállalatirányításhoz szükséges analitikai információk előállítására. Ebben a folyamatban kiemelt jelentőséggel bírnak a mesterséges intelligencia technológiái, amelyek biztosítják az információk komplex feldolgozását, a vállalati gazdasági mutatók előrejelzését, valamint a döntéshozatali folyamat információs támogatását. A kutatás célja a mesterséges intelligencia technológiáinak üzleti menedzsmentben történő alkalmazására vonatkozó modern tudományos eredmények összegzése, valamint alkalmazásuk sajátosságainak meghatározása az alapvető vezetési funkciók megvalósítása során. A kutatás módszertani alapját a monografikus módszer, az összehasonlító módszer, valamint az elemzés és a szintézis módszerei képezik, amelyek alkalmazása lehetővé tette a témához kapcsolódó tudományos források feldolgozását, a hazai és külföldi szerzők nézeteinek összevetését, az elméleti megközelítések általánosítását, valamint a mesterséges intelligencia technológiáinak üzleti menedzsmentben történő felhasználási irányainak rendszerezését. A tanulmány elemzi azokat a tudományos kutatási eredményeket, amelyek a mesterséges intelligencia technológiáinak vállalati gazdasági tevékenységben való alkalmazásával foglalkoznak. A szakirodalom elemzése alapján összegzésre kerültek a mesterséges intelligencia alkalmazásának fő területei az üzleti menedzsmentben, valamint meghatározásra került azok szerepe a vezetői döntéshozatal információs bázisának kialakításában. A kutatás során rendszerezésre került a mesterséges intelligencia technológiáinak alkalmazása az alapvető vezetési funkciók, különösen az elemzés, a tervezés, a szervezés, a motiváció és az ellenőrzés, megvalósítása során. Bemutatásra kerül, hogy az intelligens információs rendszerek alkalmazása lehetővé teszi jelentős mennyiségű gazdasági információ feldolgozását, analitikai modellek kialakítását, valamint a gazdasági mutatók változásainak előrejelzését. Az eredmények tudományos újdonsága a mesterséges intelligencia technológiáinak üzleti menedzsmentben történő felhasználási irányainak rendszerezésében rejlik az alapvető vezetési funkciók szerint, ami lehetővé tette az intelligens információs rendszerek helyének átfogóbb meghatározását a modern vezetői tevékenységben. Megalapozásra került, hogy a mesterséges intelligencia technológiáinak az üzleti menedzsment rendszerébe történő integrációja hozzájárul a vezetési tevékenység információs támogatásának fejlesztéséhez, bővíti a gazdasági elemzés lehetőségeit, és feltételeket teremt a vezetői döntések megalapozottságának javításához. Az elért eredmények lehetővé teszik az intelligens információs rendszerek modern menedzsmentben betöltött szerepére vonatkozó tudományos kutatások elmélyítését, valamint a mesterséges intelligencia technológiáinak gazdasági tevékenységben történő alkalmazásával kapcsolatos további kutatási irányok meghatározását. A kutatás gyakorlati értéke abban áll, hogy az összegzett megállapítások felhasználhatók a vállalati vezetési tevékenység információs támogatásának fejlesztésében, a vezetői döntések előkészítésében, valamint gazdasági és menedzsmenttárgyak oktatásában.

Kulcsszavak: üzleti menedzsment; vezetői döntések; vezetési funkciók; digitális technológiák; mesterséges intelligencia.



Abstract. *The development of digital technologies is increasing the role of information systems capable of processing large volumes of data and generating analytical information for business management. Artificial intelligence technologies play a key role in this process, enabling comprehensive data processing, forecasting economic performance indicators, and providing information support for decision-making. The study aims to summarize current research on the use of artificial intelligence technologies in business management and to identify the specific features of their application in the implementation of key management functions. The methodology includes the literature review, the comparative method, as well as methods of analysis and synthesis, which allowed the authors to review scientific sources on the outlined issues, compare the views of domestic and foreign authors, generalize theoretical provisions, and systematize the main directions of using artificial intelligence technologies in business management. The article analyzes the results of scientific research devoted to the application of artificial intelligence technologies in the economic activities of enterprises. Based on an analysis of the scientific literature, the directions of artificial intelligence technology use in the field of business management are summarized, and their role in forming the information base for managerial decision-making is determined. The study systematizes the use of artificial intelligence technologies in performing core management functions, including analysis, planning, organization, motivation, and control. It demonstrates that the application of intelligent information systems enables the processing of large volumes of economic data, the construction of analytical models, and the forecasting of changes in economic indicators. The study contributes by systematizing the areas of application of artificial intelligence technologies in business management in accordance with the main management functions, which made it possible to more comprehensively define the role of intelligent information systems in modern management practices. The findings indicate that the integration of artificial intelligence technologies into the business management system contributes to improving information support for management activities, expands the possibilities of economic analysis, and creates conditions for improving the soundness of managerial decisions. The results provide a deeper scientific understanding of the role of intelligent information systems in modern management and identify directions for further research on the use of artificial intelligence technologies in economic activity. The study has practical implications for improving information support for enterprise management activities, facilitating managerial decision-making, and enhancing the teaching of economic and management disciplines.*

Keywords: *business management; management decisions; management functions; digital technologies; artificial intelligence.*

Problem description. In the context of the digital economy, the use of artificial intelligence technologies plays a crucial role in business management, as they enable the processing of large datasets, expand the capabilities of economic analysis, and enhance the soundness of management decisions. The proliferation of machine learning algorithms, analytical platforms, and intelligent information processing systems is driving significant changes in how businesses operate, particularly in the areas of financial analysis, marketing research, human resources management, and economic forecasting.

At the same time, despite the active implementation of artificial intelligence technologies across various sectors of the economy, their application in business management requires deeper scientific understanding, as it involves changes in the nature of managerial work, the procedures for processing economic information, and the methods for preparing management decisions. Under these circumstances, it is relevant to study the possibilities and characteristics of using artificial intelligence



technologies in business management in order to deepen scientific understanding of their role in the development of modern management practices.

Literature review. The use of artificial intelligence in business management is a topical issue in contemporary science, and the reviewed sources allow us to identify several areas of scholarly inquiry into this subject. First and foremost, in scientific works [1-4], artificial intelligence is characterized as a universal digital technology, the use of which is associated with the processing of large data sets, the performance of cognitive operations, and changes in the nature of labor in the economy. Thus, E. Brynjolfsson and T. Mitchell [1] focus on the capabilities of machine learning in performing tasks previously associated with human intellectual labor. S. Raisch and S. Krakowski [2] shift the discussion to the realm of management and highlight the contradictory combination of automation and human involvement in the decision-making process. Y. K. Dwivedi and co-authors [3] emphasize the interdisciplinary nature of artificial intelligence research, while I. Enholm, E. Papagiannidis, P. Mikalef, and J. Krogstie [4] link its use to the creation of economic value for businesses. Thus, some authors focus primarily on the technological capabilities of artificial intelligence, while others evaluate it through the lens of its role in the management system and its economic impact on the enterprise.

A separate group consists of studies that explore the use of artificial intelligence in specific areas of management. In the works of A. Di Vaio, R. Palladino, R. Hassan, and O. Escobar [5], T. H. Davenport, A. Guha, D. Grewal, and T. Bressgott [6], and M.-H. Huang and R. Rust [7], the focus is on marketing activities, the service sector, the organization of enterprises' economic activities, and the connection between intelligent systems and management improvement. The content of these publications indicates that artificial intelligence is interpreted here primarily through its applied use in specific fields of activity. Such a research orientation has undeniable cognitive value, but does not provide a comprehensive understanding of the role of artificial intelligence within the system of management functions.

Among the sources reviewed, studies [8-10] stand out, focusing on financial management and decision support based on analytical data processing. In the studies by N. S. Asatova and G. Mazhiyeva [8], M. Kumar, M. Gupta, and D. Kumar [9], and A.-N. Olar, R. Bilti, T.-F. Cilan, and C.-M. Rusu [10] highlight the possibilities of using intelligent algorithms for analyzing financial indicators, forecasting performance results, and preparing conclusions for management. At the same time, these works are predominantly focused on the financial sector, which is why generalizations regarding business management as a whole are presented in a fragmented manner.

Another line of research is represented by works [11-14], in which artificial intelligence is linked to innovation, knowledge management, human resources, and modern forms of management organization. K. Raina, G. D. Sharma, B. Taheri, D. Dev, and S. Chavriya [11] examine artificial intelligence in relation to innovation and knowledge management. R. Machucho and D. Ortiz [12] highlight its role in business development. D. Vrontis and co-authors [13] investigate the application of intelligent



technologies in human resources management, while M. Urbanovič and co-authors [14] analyze their significance for decision-making in management. An analysis of these publications shows that they broaden the scientific understanding of the areas of application for artificial intelligence; however, its analytical, organizational, human resources, and predictive roles within the management system are not sufficiently clarified.

Studies [15-17] in which the use of artificial intelligence is linked to the digital transformation of enterprises' economic activities and information support for management are also of scientific interest. V. Tewari [15] focuses on the use of intelligent systems in modern management, T. Weng [16] focuses on the deeper integration of artificial intelligence into business management, while V. Rodchenko and O. Nesterenko [17] focus on the combination of analytical systems with decision support in enterprise operations. Although these works are oriented toward a broader understanding of the role of artificial intelligence in management, they predominantly cover specific areas of its application, while generalizations based on management functions are limited.

Among domestic studies, publications [18-21] devoted to e-commerce, digital transformation, and the use of artificial intelligence for decision support in small and medium-sized businesses are noteworthy. In the works of O. V. Bulakh [18], N. E. Krasnostanova and M. O. Mikhlyaev [19], A. Pivnyuk [20], and R. I. Chaus [21], the topic is explored primarily through the applied capabilities of intelligent systems in specific types of economic activity. The research by Ukrainian scholars has an applied focus and demonstrates the current state of artificial intelligence use in business; however, generalizations at the level of management functions are also insufficiently explored in these works.

Thus, an analysis of scientific sources provides grounds for asserting that the use of artificial intelligence in business management occupies an important place in contemporary research. At the same time, the scientific literature is dominated either by a general review of the technological capabilities of artificial intelligence or by coverage of its application in specific areas of enterprise activity; consequently, the question of the role of artificial intelligence in the implementation of core management functions remains insufficiently explored, which necessitates further study of this issue.

Goals of the article. The purpose of this article is to examine the characteristics of artificial intelligence in business management and to summarize contemporary scientific approaches to its application in the managerial decision-making process. Achieving this objective involves analyzing scientific works on the use of artificial intelligence technologies in economic activity, summarizing the main areas of their application in business management, and identifying opportunities for their use in modern management practice.

Methods and methodology. The methodological basis of the study consists of the monographic method, the comparative method, as well as methods of analysis and



synthesis, the application of which made it possible to review scientific sources on the outlined issues, compare the views of domestic and foreign authors, generalize theoretical provisions, and systematize the main directions of using artificial intelligence technologies in business management.

Main research results. The rapid development of information technology is driving the adoption of artificial intelligence systems across various sectors of economic activity, which is changing the nature of management. The use of machine learning algorithms, analytical platforms, and digital data processing systems enhances the accuracy of economic analysis, thereby facilitating well-informed decision-making by management and improving the organization of economic activities.

The use of artificial intelligence in business management is linked to the ability to process large amounts of data and generate analytical forecasts regarding the development of economic indicators. A. Axinte [22] notes that the application of artificial intelligence technologies in the field of economic activity facilitates the automation of information processing, the analysis of market trends, and the support of managerial decision-making based on comprehensive data processing. A similar view is expressed by S. Makridakis [23], who emphasizes that the development of artificial intelligence technologies significantly influences economic activity and enterprise management, as modern information systems are capable of performing complex analytical tasks that previously required significant human resources.

A review of scientific literature has shown that the use of intelligent information systems is changing the nature of managerial work. In the article by M. H. Jarrahi [24], it is noted that the combination of intelligent systems with human analytical activity contributes to improving the quality of management decisions, since digital systems ensure rapid processing of information and the identification of patterns in economic data sets. Similar conclusions are found in a study on the impact of artificial intelligence on the productivity and quality of business research [25], which emphasizes that intelligent information systems expand the capabilities of analytical calculations and the study of economic processes.

Scientific sources also note that the application of artificial intelligence technologies in the field of management is linked to the development of intelligent analytical systems capable of performing complex calculations and generating recommendations for managing economic activities. Thus, the work by A.-N. Olar, R. Bilți, T.-F. Cilan, and C.-M. Rusu [10] notes that the use of artificial intelligence systems in financial management allows for the analysis of large volumes of economic data and the formulation of analytical conclusions regarding the financial performance indicators of an enterprise. In a similar vein, M. Kumar, M. Gupta, and D. Kumar [9] examine the impact of artificial intelligence technologies on financial resource management. N. S. Asatova and G. Mazhiyeva [8] also link the use of artificial intelligence to the improvement of financial management and the forecasting of performance results.

In the context of modern management, the integration of intelligent information



systems into various areas of economic activity is of great importance. In particular, M. Urbanovič and co-authors [14] emphasize the importance of artificial intelligence technologies for preparing management decisions. D. Vrontis and co-authors [13] link their application to human resources management and demonstrate the importance of intelligent systems for analyzing human resources. R. Hasan, R. Mishra, and Y. K. Dwivedi [26] focus on the use of artificial intelligence in international business, where new opportunities for management, coordination, and decision-making in complex operating conditions converge.

In contemporary scientific literature, a separate group consists of works in which the use of artificial intelligence is considered in connection with the digital transformation of business operations and the improvement of overall management. Thus, according to V. Tewari [15], the application of intelligent systems in modern management contributes to the improvement of information processing and the enhancement of the effectiveness of organizational management activities. T. Weng [16] shares a similar view, noting that the integration of artificial intelligence into the economic management system creates the conditions for the development of new methods of information analysis and managerial decision-making. In the work of A. Shevchuk [27], the use of artificial intelligence is linked to the optimization of management at the enterprise, which further confirms the importance of digital technologies for the organization of management and decision-making.

An important area of research on the use of artificial intelligence technologies is their application in the field of digital transformation of economic activity. In particular, the work by V. Rodchenko and O. Nesterenko [17] proposes a conceptual model for the use of artificial intelligence in enterprise operations, which involves combining analytical data processing systems with management decision support systems. Similar conclusions are found in the study by R. I. Chaus [21], which notes that the use of artificial intelligence technologies contributes to the digital transformation of economic activity and creates new opportunities for the development of business management. In publications by Ukrainian authors [18–20], attention is also focused on the applied use of intelligent information systems in entrepreneurial activity, e-commerce, and work with small and medium-sized businesses.

A synthesis of scientific works provides grounds for asserting that in contemporary research, the use of artificial intelligence is examined from several perspectives. The first relates to the consideration of artificial intelligence as a means of analytical data processing, forecasting, and decision support [8-10; 22-25].

The second concerns its use in human resources management, organizational management, coordination, and international business [13-16; 26; 27].

The third focuses on the digital transformation of economic activity and the integration of intelligent systems into business operations [17; 18; 20; 21]. Thus, the scientific literature predominantly covers specific areas of artificial intelligence application, while its integration within a comprehensive business management system requires further systematization.

To systematize the areas of application of artificial intelligence in business management, it is advisable to summarize the main areas of application of intelligent information systems in various spheres of a company's economic activity (Table 1).

The use of artificial intelligence technologies in modern economic activity is characterised by a wide range of applications and influences the nature of business management, expanding the possibilities for the analytical processing of economic information.

The prevalence of descriptions of individual areas of artificial intelligence application necessitates their further systematisation within the framework of business management.

Table 1

The application of artificial intelligence technologies in economic activity based on the findings of recent scientific research

Authors	Research area	The nature of artificial intelligence applications
Axinte A.	Economic activity	Processing large volumes of economic data and supporting management decisions
Chui M., Manyika J., Miremadi M.	Organisation of economic activity	Automation of analytical and routine tasks
Jarrahi M. H.	Management activities	Combining human analytical capabilities with the capabilities of intelligent systems
Olar A.-N., Bilți R., Cilan T.-F., Rusu C.-M.	Financial management	Analysis of financial data and formulation of analytical conclusions
Tewari V.	General business management	Use of intelligent systems for analytical management support
Urbanovič M., Holubčík M.	Management decisions	Comprehensive processing of economic information
Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., Trichina, E.	Human resources management	Analysis of HR data using digital systems
Weng T.	Integration of AI into management	Use of digital information analysis systems
Rodchenko V., Nesterenko O.	Digital transformation of businesses	Integration of data analysis systems with management decisions
Chaus R.	Digitalisation of economic activity	Use of intelligent information systems in business operations

Source: compiled by the authors on the basis of [10; 13-17; 21; 22; 24]

Based on the sources reviewed, it is appropriate to propose the author's classification of areas of application for artificial intelligence technologies in business management (Table 2).

A summary of the areas outlined above shows that artificial intelligence is used as a component of management information systems, contributing to the analysis of a company's performance, forecasting, coordination of management activities, human resources management and control.



The integration of artificial intelligence technologies into management activities expands the possibilities for automated processing of data from various sources, the generation of analytical indicators, and the assessment of economic performance. The use of machine learning algorithms creates conditions for identifying patterns in data sets and forecasting changes in economic indicators based on prior information. As a result, the accuracy of analytical assessments increases and the information base for management decision-making is improved.

Digital decision-support technologies also play a significant role in business management, enabling the analysis of potential management decisions, the assessment of their likely consequences, and the formulation of recommendations. Consequently, the use of artificial intelligence technologies facilitates more informed decision-making and enhances the quality of economic information utilisation in business management.

Table 2

Classification of areas of application for artificial intelligence technologies in business management

Area of application	Applications of artificial intelligence	Significance for management
Analytical and diagnostic	Processing large volumes of economic data, identifying patterns in the data, and building analytical models	Enables a more accurate assessment of the company's condition and changes in its economic indicators
Forecasting and planning	Forecasting changes in economic indicators, modelling development scenarios, and assessing potential outcomes	Enhances the soundness of forward-looking forecasts and decisions
Organisational and coordination	Integration of information systems, automated processing of data from various sources, and coordination of information flows	Helps streamline management processes and reduce the time spent processing information
Human resources and management	Analysis of HR data, performance evaluation, preparation of materials for HR decisions	Strengthens the information base for human resources management
Control and monitoring	Automated monitoring of indicators, identification of deviations, generation of change notifications	Facilitates the timely identification of deviations and improves control in management

Source: developed by the authors

In this regard, it is advisable to provide a more detailed overview of the role of artificial intelligence in the implementation of key business management functions, which allows for the identification of the specific features of using intelligent information systems at various stages of management activity (Table 3).

The classification presented in Table 3 summarises the role of artificial intelligence in the performance of business management functions and confirms that intelligent information systems are widely used in analysis, planning, organisation, motivation and control.

An important feature of such use is the combination of data from various sources, which expands the possibilities of economic analysis and facilitates a more comprehensive consideration of changes in business operations. Under these conditions, the work of management personnel focuses primarily on evaluating the conclusions drawn and determining the appropriateness of their use in business management.

For enterprises in Ukraine, the use of artificial intelligence technologies should be concentrated in those areas of management where rapid reassessment of the situation, reallocation of resources and timely revision of decisions are of decisive importance. Under these conditions, the greatest value lies in intelligent systems that enable forecasting of demand, revenue and expenditure; selection of options for capacity allocation and restoration; control of stocks and supplies; determination of operating modes under limited energy supply; and support for staffing decisions in the event of changes to the workforce and remote working arrangements.

Table 3

The application of artificial intelligence technologies in business management

Management function	Use of artificial intelligence	Significance for management
Analysis	Processing large volumes of economic data, identifying patterns in financial, production and market indicators	Provides the information basis for management decision-making and improves the accuracy of economic assessments
Planning	Forecasting changes in economic indicators based on the analysis of large data sets, modelling possible scenarios for economic development	Ensures more informed management decision-making and improves the accuracy of forecasts
Organisation	Integration of information systems, automated processing of data from various information sources, coordination of information flows	Facilitates the streamlining of information processes and improves the quality of information support for management
Motivation	Analysis of information on employee performance, evaluation of work results, formulation of recommendations for staff incentives	Enables a more objective assessment of performance and improves the incentive system
Control	Automated monitoring of economic indicators, identification of deviations in financial and production indicators	Facilitates the timely identification of deviations and improves the accuracy of performance evaluation

Source: compiled by the authors based on [10;13-17; 21; 22; 24-27]

The use of such systems in customer relations, financial planning and business risk assessment is also of practical interest, since in today's environment artificial intelligence is significant primarily as a means of maintaining the manageability of an enterprise in the face of sudden changes in circumstances, when it is important to adjust management decisions in a timely manner based on the continuous processing of information.



Conclusions and prospects for further research. This study has made it possible to summarise current academic research on the use of artificial intelligence technologies in business management and to establish that their application is most often associated with the processing of large volumes of economic data, forecasting of business performance indicators, the preparation of management decisions, human resources management, and the digital transformation of economic activity. Based on a review of foreign and domestic publications, it has been established that the scientific literature predominantly covers specific areas of artificial intelligence application, whilst its role in the implementation of management functions remains under-explored.

During the study, the areas of application of intelligent information systems in business management were summarised, an author's classification of these systems by functional purpose was developed, and the use of artificial intelligence in the implementation of key management functions was systematised. On this basis, the analytical-diagnostic, prognostic-planning, organisational-coordination, human resources management, and control-monitoring areas of application of artificial intelligence technologies have been identified. This generalisation has demonstrated that intelligent systems play not a supporting but a system-forming role in modern enterprise management, as they ensure the processing of information, the preparation of conclusions, and the timely adjustment of management decisions.

The scientific novelty of the results obtained lies in the systematisation of the areas of application of artificial intelligence technologies in business management in accordance with management functions and in the identification of their functional groups based on the analysed scientific sources. This has made it possible to specify the role of artificial intelligence within the enterprise management system and to present its application as a coherent set of management decisions related to analysis, planning, organisation, motivation and control.

The practical significance of the results obtained lies in the fact that the proposed generalisations can be used when selecting areas for the implementation of artificial intelligence in enterprises, preparing decisions regarding the digital modernisation of management activities, improving human resources management, inventory control, energy consumption assessment, financial planning and maintaining business continuity under unstable economic conditions.

For Ukrainian enterprises, it is advisable to focus such technologies on those management areas where the speed of decision-making, resource reallocation, supply control, organising work under limited energy supply and maintaining enterprise manageability are of decisive importance.

Prospects for further research should be linked to the development of a methodology for assessing the feasibility of using artificial intelligence technologies in specific management functions, determining the conditions for their implementation in enterprises of various types, and studying the impact of intelligent systems on the quality of management decisions and the organisation of the enterprise's operations.



Funding. The authors did not receive any funding for this study.

Conflict of interest. The authors declare that they have no conflict of interest.

Declaration on the use of AI. The authors did not use artificial intelligence tools in the preparation of the manuscript.

References

1. Brynjolfsson, E., & Mitchell, T. (2017). What can machine learning do? Workforce implications. *Science*, 358(6370), 1530-1534. <https://doi.org/10.1126/science.aap8062>
2. Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation augmentation paradox. *Academy of Management Review*, 46(1), 192-210. <https://doi.org/10.5465/amr.2018.0072>
3. Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., ... Williams, M. D. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, (57), Article 101994. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
4. Enholm, I., Papagiannidis, E., Mikalef, P., & Krogstie, J. (2022). Artificial intelligence and business value: A literature review. *Information Systems Frontiers*, (24), 1709-1734. <https://doi.org/10.1007/s10796-021-10186-w>
5. Di Vaio, A., Palladino, R., Hassan, R., & Escobar, O. (2020). Artificial intelligence and business models in the sustainable development goals perspective. *Journal of Business Research*, (121), 283-292. <https://doi.org/10.1016/j.jbusres.2020.08.019>
6. Davenport, T. H., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24-42. <https://doi.org/10.1007/s11747-019-00696-0>
7. Huang, M.-H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, 21(2), 155-172. <https://doi.org/10.1177/1094670517752459>
8. Asatova, N. S., & Mazhiyeva, G. (2025). Public finance management using artificial intelligence. *Journal of Economic Research & Business Administration*, (153), 130-144. <https://doi.org/10.26577/be202515339>
9. Kumar, M., Gupta, M., & Kumar, D. (2026). A study of the impact of artificial intelligence on financial management. *EPRA International Journal of Multidisciplinary Research*, (969). <https://doi.org/10.36713/epra25600>
10. Olar, A.-N., Bilti, R., Cilan, T.-F., & Rusu, C.-M. (2025). The influence of artificial intelligence on financial management decision. *Journal of Financial Studies*, (10), 346-361. <https://doi.org/10.55654/JFS.2025.10.SP.23>
11. Raina, K., Sharma, G. D., Taheri, B., Dev, D., & Chavriya, S. (2025). Artificial intelligence-driven management: Bridging innovation, knowledge creation, and sustainable business practices. *Journal of Innovation & Knowledge*, Article 100860. <https://doi.org/10.1016/j.jik.2025.100860>
12. Machucho, R., & Ortiz, D. (2025). The impacts of artificial intelligence on business innovation: A comprehensive review of applications, organizational challenges, and ethical considerations. *Systems*, 13(4), Article 264. <https://doi.org/10.3390/systems13040264>
13. Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: A systematic review. *The International Journal of Human Resource Management*, 33(6), 1237-



1266. <https://doi.org/10.1080/09585192.2020.1871398>
14. Urbanovič, M., & Holubčík, M. (2026). Artificial intelligence in managerial decision-making for sustainable business models: A systematic literature review. *Systems*, 14(3), Article 245. <https://doi.org/10.3390/systems14030245>
15. Tewari, V. (2026). Artificial intelligence enabled embedded systems for modern management. *ICTACT Journal on Microelectronics*, (11), 2227–2231. <https://doi.org/10.21917/ijme.2026.0374>
16. Weng, T. (2025). Theory and practice of deep integration of artificial intelligence and business management. *Proceedings of Business and Economic Studies*, (8), 133-139. <https://doi.org/10.26689/pbes.v8i8.13359>
17. Rodchenko, V., & Nesterenko, O. (2025). Conceptual model of implementation of artificial intelligence in the business activity of the enterprise. *Acta Academiae Beregsasiensis. Economics*, 1(10), 516-531. <https://doi.org/10.58423/2786-6742/2025-10-516-531> [in Ukrainian]
18. Bulakh, O. V. (2023). Global impact of artificial intelligence and machine learning on the effectiveness of e-commerce. *Biznes Inform*, (8), 114-121. <https://doi.org/10.32983/2222-4459-2023-8-114-121> [in Ukrainian]
19. Krasnostanova, N. E., & Mikhliaiev, M. O. (2025). Artificial intelligence as a tool for supporting managerial decision-making in the strategic planning of small and medium-sized businesses in Ukraine. *Biznes Inform*, (9), 70-77. <https://doi.org/10.32983/2222-4459-2025-9-70-77> [in Ukrainian]
20. Pivniuk, A. (2024). The use of artificial intelligence in modern business activity. *Naukovi zapysky Tavriiskoho natsionalnoho universytetu imeni V. I. Vernadskoho. Seriya: Ekonomika i upravlinnia*, 35(74), 69-73. <https://doi.org/10.32782/2523-4803/74-4-12> [in Ukrainian]
21. Chaus, R. I. (2024). The influence of artificial intelligence on the digital transformation of business. *Ekonomika i upravlinnia*, (3), 24-31. <https://doi.org/10.36919/2312-7872.3.2024.24> [in Ukrainian]
22. Axinte, A. (2024). Using artificial intelligence in business. *European Financial Resilience and Regulation*, 29-36. <https://doi.org/10.47743/eufire-2024-1-3>
23. Makridakis, S. (2017). The forthcoming artificial intelligence (AI) revolution: Its impact on society and firms. *Futures*, (90), 46-60. <https://doi.org/10.1016/j.futures.2017.03.006>
24. Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, 61(4), 577-586. <https://doi.org/10.1016/j.bushor.2018.03.007>
25. How does artificial intelligence shape the productivity and quality of business research? (2025). *Discover Artificial Intelligence*, (5). <https://doi.org/10.1007/s43621-025-01480-7>
26. Hasan, R., Mishra, R., & Dwivedi, Y. K. (2024). Managing artificial intelligence in international business: Opportunities and challenges. *Thunderbird International Business Review*, 66(3). <https://doi.org/10.1002/tie.22369>
27. Shevchuk, A. (2025). Optimization of business process management using innovative methods, in particular artificial intelligence. *Ekonomika, finansy, upravlinnia: aktualni problemy nauky ta praktychnoi diialnosti*, (2), 46-59. <https://doi.org/10.37128/2411-4413-2025-2-3> [in Ukrainian]

Отримано:	17.04.2026	Beérkezett:	2026.04.17	Received:	17.04.2026
Прийнято до друку:	30.04.2026	Elfogadva:	2026.04.30	Accepted:	30.04.2026
Опубліковано:	29.05.2026	Megjelent:	2026.05.29	Published:	29.05.2026