

**APPLICATION OF ARTIFICIAL INTELLIGENCE IN PLANNING OR ANALYSIS  
AT THE ENTERPRISE  
(ЗАСТОСУВАННЯ ШТУЧНОГО ІНТЕЛЕКТУ У ПЛАНУВАННІ АБО АНАЛІЗІ  
НА ПІДПРИЄМСТВІ)**

*У дослідженні розглянуто сучасні тенденції використання штучного інтелекту в умовах організації аналізування та планування діяльності підприємства. Представлено умови та сфери застосування штучного інтелекту у бізнес-процесах компаній, коли відстежуються поступові зміни попиту та стратегічні можливості бізнес-моделей. Доведено, що можливості повномасштабного застосування штучного інтелекту на пряму пов'язано з автоматизацією збору та аналізу даних при прийнятті та реалізації рішень.*

**Ключові слова:** штучний інтелект, аналіз, планування, бізнес структури, автоматизація, управлінські рішення

*The study examines the current trends in the use of artificial intelligence in the context of the organization of analysis and planning of the enterprise's activities. The conditions and areas of application of artificial intelligence in the business processes of companies are presented when gradual changes in demand and strategic possibilities of business models are monitored. It has been proven that the possibilities of full-scale application of artificial intelligence are directly related to the automation of data collection and analysis when making and implementing decisions.*

**Key words:** artificial intelligence, analysis, planning, business structures, automation, management solutions

Modern business development in almost all spheres of the business world is directly linked to the spread of artificial intelligence. In turn, the introduction of new technologies encourages business structures to adapt to new projects and increase the productivity of business processes [1].

Artificial intelligence has been the focus of attention of scientists and practitioners since the 1950s. It can be represented as "the ability of a system to interpret external data appropriately, to gain knowledge from such data, and to use it to achieve specific goals and objectives in the form of flexible adaptation" [2]. Over time, due to both the availability of a large amount of data and the ability to improve algorithms and increase the power of computers, artificial intelligence has been fragmented and unbalanced in various industries. Today, AI-based systems are becoming more efficient thanks to the latest technological advances, more affordable in terms of financial investment and global application to solve business problems, and make strategic decisions faster and more successfully.

Most often, intelligent systems are used in unstructured environments to solve non-standard tasks, which reduces the degree of uncertainty in decision-making. Early studies show that artificial intelligence, by accumulating expert knowledge and operating organizational actions, was used as a support system. Modern results of using artificial intelligence demonstrate its value in its ability to autonomously analyze various types of data, access tacit knowledge, and analyze and create this new knowledge [3, 4].

Over the last decade, artificial intelligence has been actively implemented in business processes of companies. The areas of its use can vary: sales forecasting, when artificial intelligence can take into account both historical and real-time data, including internal and external, economic and environmental, microeconomic and macroeconomic data, etc; **pricing**, when algorithms search for the ideal price, determine the reaction of consumers to price changes in certain scenarios, and reduce consumer surplus; forecasting and defining a customer profile, using communication and sales triggers, to determine and evaluate, through dynamic profiling, which sales approach was most

successful and what event it is associated with; **service** automation: neuro-linguistic programming algorithms help to reduce the risk of lost applications and poorly performed work; increase efficiency, staff productivity, reduce operational risks and optimize customer service; fraud detection: due to a systematic data-driven approach, manipulative chat patterns can be automatically recognized, such as frequency and time of posting, network of followers, content and tone; content creation: algorithms use interesting information based on publicly available Internet data to create texts in real time that are almost indistinguishable from texts written by humans; media planning: algorithm-based technology platforms collect a variety of relevant active and reactive data points for evaluation, which allows subjective and self-interested planning to be empirically verified; Conversational commerce - developments in the field of computer linguistics make it possible for customers to communicate with the company's systems both orally and in writing; customer feedback - classic market research uses extensive tools: focus groups, customer surveys, panels, etc. For a deeper understanding, the data obtained should be compared with other data, such as claims, sales, or customer satisfaction; recommendations - allow you to summarize personal recommendations of customers and create additional incentives for purchases. In addition, the software allows for more efficient integration of the workflow by developing instructions for staff, intelligent systems improve logistics processes and facilitate a quick response to certain problems.

Big data is often associated with the use of analytics, which consists of a variety of intelligent methods for identifying and predicting relationships. However, "the use of big data is not only a technical problem, but also requires the coordination of analytical capabilities of the company's strategy, and the comparison of all interconnected organizational and human resources." [5].

In the transition to a semi-automated management format, the growing degree of automation of data collection and analysis in decision-making and implementation is crucial. Data, analytics, and artificial intelligence facilitate the creation and implementation of new business processes and models. Artificial intelligence allows us to track gradual changes in demand and simplify the transformation of strategic opportunities into business model elements. Studies at the intersection of artificial intelligence and strategic management show that traditional approaches to strategy development in the era of algorithm-based solutions are more original for the traditional business environment. Scientists attribute to artificial intelligence the potential to increase the diversity of organizational knowledge integrated into the strategy development process [1].

Based on the results of the above, it can be concluded that artificial intelligence contributes to effective, following the needs of business entities, use at various stages of the strategic process. It is about monitoring and analyzing the situation, developing the basis of strategies and plans, strategic choices and control. In the future, the possibilities for the full-scale application of artificial intelligence will increase significantly, covering the network interaction of all links in the technological cycle of the final product, the formalization of production processes and their mathematical description, as well as the creation of appropriate software algorithms.

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