



УДК 330.341.1:004.8:005.32

## THE SIXTH COMMUNICATION REVOLUTION AS A FACTOR IN THE TRANSFORMATION OF MANAGEMENT AND THE DIGITAL ECONOMY

### ШОСТА КОМУНІКАЦІЙНА РЕВОЛЮЦІЯ ЯК ЧИННИК ТРАНСФОРМАЦІЇ УПРАВЛІННЯ ТА ЦИФРОВОЇ ЕКОНОМІКИ

**Makhanets L.L. / Маханець Л.Л.***s.e.s., as.prof. / к.е.н., доц.*

ORCID ID: 0000-0001-8671-0596

**Filipchuk N.V. / Філіпчук Н.В.***s.e.s., as.prof. / к.е.н., доц.*

ORCID ID: 0000-0003-4615-2301

**Makhanets B.O. / Маханець Б.О.***PhD student / аспірант*

ORCID ID: 0009-0003-5333-1532

Yuriy Fedkovych Chernivtsi National University,

Chernivtsi, Kotsyubynsky, 2, 58002

Чернівецький національний університет

імені Юрія Федьковича, Чернівці, Коцюбинського, 2, 58002

**Abstract.** The paper examines the sixth communication revolution as a new stage in the development of the digital economy, shaped by the integration of artificial intelligence, next-generation networks, and virtual and augmented environments. It is argued that modern communication technologies transform not only the information space, but also organizational structures, business models, and management mechanisms under conditions of uncertainty and rapid technological change. The article aims to analyze the sixth communication revolution theoretically and to identify the role of IT project management as a key tool for organizational adaptation to emerging technological and socio-economic challenges. The study systematizes the main features of this revolution and assesses their impact on economic efficiency, labor productivity, communication processes, and competitiveness. It is concluded that the implementation of artificial intelligence in communication systems requires a shift toward flexible project management approaches, enhanced risk management, and the integration of economic feasibility into strategic decision-making and long-term organizational development.

**Keywords:** sixth communication revolution, digital economy, IT project management, artificial intelligence, digital transformation, innovation management, communication technologies, economic efficiency, flexible management methodologies, organizational competitiveness.

### Introduction.

The history of society's development is closely linked to the evolution of communication technologies. From the invention of language and writing to the advent of the printing press, electronic media, and personal computers, each communication revolution has radically transformed social relations, business models, and the structure of power worldwide. Today, we are witnessing the formation of the sixth communication revolution, which is based on the integration of artificial intelligence,



6G communications, virtual and augmented reality, and neurointerfaces. In a world of rapid technological development and changes in the ways information is created, transmitted, and consumed, there is a need to conceptualize a new phase of communication evolution – the so-called sixth communication revolution. It is characterized by the emergence of intelligent communication systems, hybrid media, and the integration of humans and machines, which is changing traditional models of interaction, media practices, and the information ecosystem.

The sixth communications revolution is not only a technical breakthrough but also a significant sociocultural shift that necessitates a reevaluation of traditional approaches to communication, education, business, and ethics. At its core is artificial intelligence, which is becoming the catalyst for this epochal change, opening new horizons and posing new challenges to modern society.

The purpose of this article is to provide a theoretical understanding of the sixth communication revolution and to justify the role of IT project management as a key tool for organizations to adapt to the new communication, technological, and social conditions of the digital economy.

### **The main text.**

Contemporary scientific approaches (such as Castells, McQuail, and Deuze) indicate that society functions in a networked communication environment in which the managerial aspect plays a decisive role: planning, regulating, and monitoring communication flows. The sixth communication revolution does not simply expand technical capabilities – it changes the very architecture of communication management, shifting from hierarchies to networks, from control to facilitation, and from mass to individualization.

IT project management in the context of the sixth communication revolution goes beyond classical approaches. It is essential to consider the dynamism of technologies, the blurred boundaries between development and implementation, as well as active interaction with users who become co-creators of content and operate within complex ecosystems of the digital economy.

Given the rapid changes in the technological environment, IT project management



is becoming a key factor in the successful adaptation of businesses and organizations to the challenges of the sixth communication revolution. The implementation of innovative solutions, particularly artificial intelligence, requires not only technical expertise but also a deep understanding of project management, encompassing planning, resource coordination, quality control, and risk management.

The use of flexible methodologies (Agile, Scrum, Kanban) is becoming key, as they allow for rapid adaptation to change and ensure the integration of the latest technological solutions. It is also crucial to implement risk management practices that encompass the analysis and mitigation of ethical, security, and sociocultural challenges that arise during the digital transformation process.

Standard IT project management methodologies are evolving to accommodate the new features of rapid change and high uncertainty that characterize the environment of the sixth communication revolution. Effective management of innovative communication technologies, including AI, requires flexible approaches, adaptability, and integration of interdisciplinary knowledge, which significantly increases the chances of achieving strategic goals and competitive advantages.

These transformations in approaches to IT project management are a direct consequence of more profound systemic changes in the communication environment. That is why, for a comprehensive understanding of new management challenges, it is advisable to highlight the key features of the sixth communication revolution that shape the technological and social context of modern IT projects.

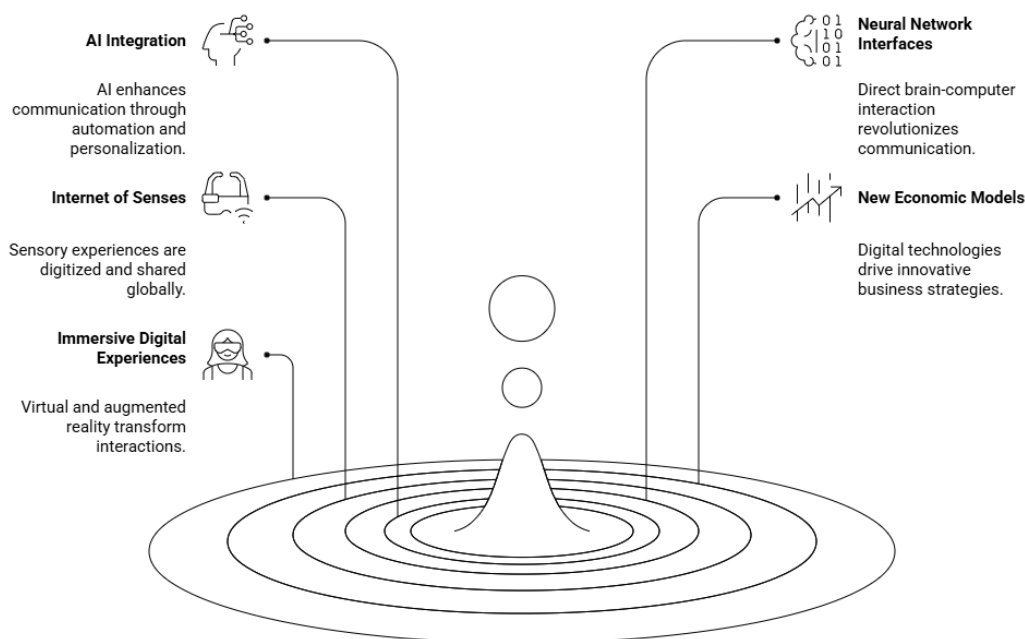
The sixth communication revolution is characterized by the following features (Fig. 1):

- Integration of artificial intelligence into communication – from chatbots and generative models to automated decision-making systems that change the nature of the “human ↔ machine” dialogue.
- Neural network interfaces – experiments by Neuralink and Kernel open up the prospect of direct interaction between the brain and the computer, which could transform education, medicine, and even interpersonal communication.
- Internet of Senses – the development of 6G promises to transmit not only sound



and images, but also tactile and sensory sensations [2].

- VR/AR/MR – create new formats for social interaction, work, and entertainment, forming a “metaverse” as a new space for communication.
- Economic transformation – new business models are emerging, focused on immersive formats of information consumption, interactive advertising, and personalized digital products.



**Figure 1 – Components of the sixth communication revolution**

*Source: Created by the author*

These features are not purely theoretical; they are already being implemented in modern digital technologies and communication solutions that are actively being used in various areas of public life.

Today, we are already seeing the active implementation of generative artificial intelligence (ChatGPT, DALL·E, etc.), which is significantly transforming content creation processes, reducing time and resource barriers, and democratizing access to creative tools. At the same time, neurointerfaces are being developed. Stentrode technology opens up the possibility of controlling a computer with the power of thought for people with paralysis, and the MIT AlterEgo project demonstrates the potential of so-called “silent” communication, which does not require verbal speech.



Another important direction of the sixth communication revolution is the widespread adoption of virtual and augmented reality (VR/AR) technologies, which extend beyond the gaming industry and are actively utilized in medicine, education, marketing, and corporate communications, creating immersive interaction formats.

The further development of the communication environment is linked to the introduction of sixth-generation (6G) networks, which will enable ultra-fast data exchange, the integration of artificial intelligence at the network infrastructure level, the advancement of cloud and edge computing, and the development of new cybersecurity standards. According to forecasts, the commercialization of 6G technologies is expected in 2029–2030 [5].

The large-scale implementation of these technologies extends beyond purely technical innovations, causing profound social transformations that alter user behavior, competency requirements, and the regulatory environment. Technological changes are accompanied by profound social transformations, including a growing need for media literacy, ethical use of artificial intelligence, and improved legal regulation of data and digital content. As a result, artificial intelligence and generative technologies are radically changing the logic of creating and distributing text, images, video, and music, which is already finding practical application in the activities of global platforms, marketing services, and automated PR campaigns (for example, in Booking.com solutions and specialized marketing platforms).

According to Azilen (2025), more than 65% of companies worldwide are already integrating or planning to integrate generative AI into their processes. Among younger generations (Gen Z and millennials), more than 70% of users actively use GenAI for learning, work, or creativity [1]. The generative AI market in the media and entertainment sector is estimated to be \$1.97 billion in 2024, with a forecasted growth to \$20.7 billion by 2034, at an average annual rate of over 26% [2]. In the gaming industry, ~20% of new games on Steam in 2025 are expected to be created using generative AI, which is ~681% more than in 2024 [3]. In the communications sector (PR, marketing), about 75% of professionals already use AI to generate texts and creative content, which is three times more than in 2023 [4].



These statistics confirm that artificial intelligence is no longer just a supporting tool, but is increasingly playing a systemic role in transforming communication processes.

Artificial intelligence is not just a support technology – it is transforming the fundamental foundations of communication, changing the way information is created, transmitted, and perceived. From generative models capable of creating text, images, and even audio, to complex analytical systems that help make decisions based on big data, AI is shaping a new paradigm for human interaction with information.

In the context of the communication revolution, AI adapts media content to meet the individual needs of users, creating a personalized information space. This opens up enormous opportunities for businesses: advertising campaigns become more effective, and users receive a more relevant experience with less time spent. At the same time, the spread of AI in communications is turning consumers into active co-creators of content, blurring the traditional boundaries between authors and audiences.

One of the most significant trends is the proliferation of generative AI: platforms such as ChatGPT, DALL-E, and MidJourney are revolutionizing the creative industry by streamlining the process of creating text, graphics, music, and video. Given the growing accessibility of these technologies, an increasing number of users can influence the media space, creating new forms of communication that were previously only available to professionals.

The role of AI in transforming professional communication spheres is also difficult to overestimate. The automation of routine tasks in PR, marketing, and journalism allows specialists to focus on strategic aspects. The analysis of large volumes of social media and the rapid identification of trends provide tools for responding accurately to public demands.

As the functional capabilities of artificial intelligence expand, so does the range of risks associated with its use in the communications sphere. The development of AI creates new challenges. Ethical issues in the use of artificial intelligence are becoming increasingly critical, including the recognition of fake news, the manipulation of consciousness through created content, and the violation of user privacy. Solving these



problems requires the active participation not only of technology companies, but also of legislators, the academic community, and civil society. Particular attention should be paid to ensuring the transparency of algorithms, data quality control, and copyright compliance.

The integration of AI into virtual and augmented realities creates unique opportunities for direct interaction in “metaverses.” AI agents can act as conversation partners, content curators, and collaborators in learning or work, significantly expanding the tools for communication and collaboration.

Another promising area is the development of emotional AI capable of analyzing and responding to a person's emotional state, which opens up new horizons in psychotherapy, customer support, and personalized communications. This level of integration with human emotions sets new standards in building trust between humans and machines.

In terms of business, companies that quickly adapt to the capabilities of AI gain significant market advantages. They can offer highly personalized products and services, manage communication processes more effectively, and respond rapidly to changes in consumer preferences. For educational institutions, the use of AI in communications opens up new forms of learning tailored to the individual needs of students. It enables the development of interactive and immersive educational environments.

It is impossible to highlight the role of artificial intelligence in the sixth communication revolution without considering security aspects. The reliability of algorithms, protection against cyber threats, and data control issues are becoming increasingly important. In this context, the creation of ethical norms and standards is a crucial step toward ensuring the harmonious development of new forms of communication.

Artificial intelligence is not just a tool, but a catalyst for change in the global communication system. It creates new opportunities for cooperation, creativity, and mutual understanding, but at the same time, it poses complex questions that society must address. The ability of organizations, educational institutions, and society as a



whole to adapt and responsibly implement AI will determine success in the sixth communication revolution.

So, the sixth communication revolution is already unfolding: it is transforming speech and writing into just one of the tools of interaction, gradually introducing direct communication through algorithms, sensors, and neural signals. This presents significant opportunities for business and education, but also creates challenges in terms of ethics, copyright, trust, and ensuring equal access to technology.

### **Conclusions.**

The sixth communication revolution is still in its infancy, but its signs are already evident. It is changing perceptions of the limits of human communication and creating the conditions for the emergence of “hybrid communication” between people, machines, and virtual environments. Its significance lies not only in technological progress but also in the profound sociocultural changes that will determine the development of humanity in the coming decades.

The study examined the primary characteristics and prerequisites for the emergence of the sixth communication revolution as a new stage in the evolution of communication in the digital economy. The impact of integrating artificial intelligence, virtual and augmented environments, next-generation networks, and intelligent communication systems on the transformation of communication processes, business models, and organizational management mechanisms was analyzed.

It is argued that communication in the digital economy, particularly in IT project management, is evolving into a strategic resource and a significant source of added value, altering the economic logic of organizations and their approaches to consumer interaction.

It has been established that the sixth communication revolution presents significant opportunities for enhancing the competitiveness of organizations, while also introducing new requirements for strategic management, the development of digital competencies, and the establishment of responsible models for utilizing innovative technologies. Thus, research into the sixth communication revolution is relevant from the perspective of management and economics and is essential for



understanding the further development of global communications in the digital environment.

### References:

1. Key Generative AI Statistics and Trends for 2025 URL: <https://www.sequencr.ai/insights/key-generative-ai-statistics-and-trends-for-2025>.
2. Generative AI in Media and Entertainment Market Report 2025-2034: Growth Driven by Cloud Adoption and AI Content Creation; Regulatory Hurdles and Talent Shortages Pose Challenges. URL: <https://www.globenewswire.com/news-release/2025/06/18/3101670/28124/en/Generative-AI-in-Media-and-Entertainment-Market-Report-2025-2034-Growth-Driven-by-Cloud-Adoption-and-AI-Content-Creation-Regulatory-Hurdles-and-Talent-Shortages-Pose-Challenges.html>.
3. 1 in 5 Steam games released in 2025 use generative AI, up nearly 700% year-on-year – 7,818 titles disclose genAI asset usage, 7% of the entire Steam library. URL: <https://www.tomshardware.com/video-games/pc-gaming/1-in-5-steam-games-released-in-2025-use-generative-ai-up-nearly-700-percent-year-on-year-7-818-titles-disclose-genai-asset-usage-7-percent-of-entire-steam-library>.
4. Generative AI: 75% of marketers are already using it or actively considering it. URL: <https://econsultancy.com/generative-ai-adoption-marketing>.
5. The 6G status now. URL: <https://www.fierce-network.com/wireless/6g-status-now>.

***Анотація.** У статті розглядається феномен шостої комунікаційної революції як новий етап розвитку цифрової економіки, який формується під впливом інтеграції штучного інтелекту, мереж нового покоління, віртуальних і доповнених середовищ та інтелектуальних комунікаційних систем. Стверджується, що сучасні комунікаційні технології трансформують не тільки інформаційне середовище, а й економічну логіку організацій, бізнес-моделі та механізми управління в умовах високої динаміки та невизначеності.*

*Метою статті є теоретичне осмислення шостої комунікаційної революції та визначення ролі управління IT-проектами як ключового інструменту управління для адаптації організацій до нових технологічних і соціально-економічних викликів цифрової економіки. У дослідженні систематизовано основні особливості шостої комунікаційної революції та проаналізовано їх вплив на економічну ефективність, продуктивність праці, трансформацію комунікаційних процесів та конкурентоспроможність організацій.*

*Встановлено, що впровадження штучного інтелекту в сферу комунікацій вимагає трансформації традиційних підходів до управління проектами, а саме переходу до гнучких*



методологій, посилення управління ризиками та інтеграції економічної доцільності інновацій у стратегічну систему управління. Зроблено висновок, що шоста комунікаційна революція відкриває значні можливості для підвищення ефективності управління та розвитку цифрової економіки, а також підкреслює необхідність розробки відповідальних та економічно обґрунтованих моделей управління цифровими трансформаціями.

**Ключові слова:** шоста комунікаційна революція, цифрова економіка, управління IT-проектами, штучний інтелект, цифрова трансформація, управління інноваціями, комунікаційні технології, економічна ефективність, гнучкі методології управління, конкурентоспроможність організацій.

The article was sent: 26/12/2025

© Makhanets L.L.

© Filipchuk N.V.

© Makhanets B.O.