https://cyberleninka.ru/article/n/primenenie-iskusstvennogo-intellekta-v-biznes-sfere-sovremennoe-sostoyanie-i-perspektivy (дата обращения: 08.11.2024).

2. *Абламейко, С.В.* Искусственный интеллект в Беларуси: история развития и некоторые результаты / С.В. Абламейко // Первая выставка-форум IT-академграда «Искусственный интеллект в Беларуси» : сб. докл Минск, 13–14 окт. 2022 г. – Минск : ОИПИ НАН Беларуси, 2022. – С. 6–13. – URL: http://uiip.bas-net.by/1-forum-it-a/it-a-forum-report.pdf (дата обращения: 08.11.2024).

3. Искусственный интеллект в цифрах и фактах // РБК Тренды. – URL: https://trends.rbc.ru/trends/industry/657963559a79474dd4bc9b88 (дата обращения: 09.11.2024).

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TOOLS FOR DIGITALIZATION OF THE ECONOMY IN THE INFORMATION SPACE

Инструментарий цифровизации экономики в условиях информационного пространства

Objective: Analyze how tools like cloud computing and AI reshape industries and government services, identifying both benefits and challenges of this transformation.

Outcomes: A clearer picture of digital transformation's potential, informing strategies to leverage benefits and minimize risks.

Digital transformation has become an integral part of the modern economy. Information technologies penetrate all spheres of society, changing traditional business models and creating new opportunities for development. This article examines the main tools used for the digital transformation of the economy and their role in the information space. The Fourth Industrial Revolution is a new stage of technological development, characterized by the convergence of physical, digital, and biological systems. It is radically changing the economy and society, similar to how the agrarian and two previous industrial revolutions did. These technologies, combined into digital platforms, create a new economy based on shared consumption and personalization.

The digital economy is based on nine cross-cutting digital technologies. The primary ones are: cloud technologies, distributed computing, big data, artificial intelligence, and the Internet of Things. Secondary, but equally important technologies include: digital platforms, digital twins, augmented and virtual reality, additive manufacturing, robotics, and cognitive technologies.

Cloud technologies offer computing power and IT services online, allowing companies to cut costs and enhance flexibility. Distributed computing spreads workloads across

multiple computers, useful for solving complex issues like blockchain. Big data involves large datasets for informed decision-making, while artificial intelligence enables systems to learn and make decisions for automation and data analysis. The Internet of Things connects devices for data exchange, leading to intelligent systems. Digital platforms foster interactions among market participants and innovative business models. Digital twins are virtual models for process optimization. Augmented and virtual reality create interactive applications. Additive manufacturing (3D printing) builds complex objects layer by layer, and robotics focuses on automated devices. Cognitive technologies simulate human thought.

Digital transformation impacts all economic sectors, with industries adopting intelligent sensors and cloud technologies; agriculture using automation; and retail enhancing e-commerce and personalization. The energy sector is moving to smart grids. Digital governments use technology for efficient public service access through unified portals and electronic identification. E-businesses have progressed to AI and blockchain-integrated systems. Electronic commerce covers B2B and B2C models, with key components like electronic data interchange and online marketplaces. Electronic payment systems facilitate transactions using bank cards and digital wallets.

Digital transformation tools create new business models based on data, artificial intelligence and network effects. They improve the customer experience, optimize business processes and open up new markets. However, there are challenges related to cybersecurity, the digital divide, and changes in the labor market. In conclusion, digital transformation is a key trend that requires a balanced approach to the challenges and risks associated with the introduction of new technologies.

References

1. Digital innovation management: reinventing innovation management research in a digital world / S. Nambisan, K. Lyytinen, A. Majchrzak, M. Song // MIS Quarterly. – 2017. – № 41. – P. 223–238.

2. Digital Economy: 2023: Brief Statistical Digest / G.I. Abdrakhmanova, S.A. Vasilkovskiy, K.O. Vishnevskiy [et al.]. – Moscow : Higher School of Economics, 2023.

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ARTIFICIAL INTELLIGENCE IN THE JUDICIAL SYSTEM

Искусственный интеллект в судебной системе

The result of the development and improvement of computing machines is the appearance of foundations for the creation and training of artificial intelligence (AI).