

*Muzychenko A.O.,
student,*

*Supervisor: Vyshnevskya M.O.,
associate professor,*

Kyiv National University of Technologies and Design,

MODERN TOOLS FOR CREATING AUTOMATED INFORMATION SYSTEMS

Rapid digital transformation across various industries has necessitated the development of more efficient, scalable and intelligent systems. Automated information systems (AIS) are at the forefront of this change, acting as the backbone of organizations seeking to streamline operations, improve decision-making and minimize human intervention. For the system to work optimally, it relies on a range of modern tools and technologies, including advances in artificial intelligence (AI), machine learning (ML), cloud computing, blockchain and the internet of things (IoT). Each tool contributes uniquely to the automation process, facilitating everything from data analysis and systems integration to predictive analytics and real-time decision making (Choquehuanca-Sánchez et al., 2024).

The importance of these technologies lies not only in their individual capabilities, but also in the way they are integrated to create a robust, intelligent and scalable AIS. The role of these modern tools goes beyond technical efficiency to become catalysts for business innovation, improving the performance of the overall information system and enabling new levels of automation. This paper examines the latest tools used to build AIS and analyzes their impact on system development, their contribution to efficiency and scalability, and the challenges faced during implementation (Collins et al., 2021). It also examines the future trajectory of AIS technology and how emerging trends will shape the next generation of automation systems.

The integration of different technologies in automation information systems (AIS) plays a crucial role in improving the functionality and effectiveness of these systems. Recent research has highlighted that new technologies such as artificial

intelligence (AI), cloud computing and machine learning can significantly improve the functionality of AIS. For example, AI facilitates intelligent process automation and predictive analytics, enabling organizations to make data-driven decisions quickly and efficiently (Stoykova & Shakev, 2023).

Cloud-based solutions are becoming increasingly popular for AIS deployments due to their scalability and accessibility. These solutions allow organizations to leverage powerful computing resources without significant upfront investment. The ability to integrate these technologies results in more robust systems that can adapt to changing business needs and environments, improving overall decision-making and operational efficiency.

The adoption and integration of modern tools in automated information systems (AIS) face major challenges that hinder their efficiency and scalability. Data security has become a top priority with increasing reliance on cloud computing and IoT. Information leaks and unauthorized access can put sensitive information at risk and lead to serious financial and reputational damage. Furthermore, interoperability is a challenge, especially for organizations using a mix of legacy and new technologies. Ensuring effective integration between different systems is essential for smooth business operations, but remains a common obstacle.

Another key issue is the need for skilled human resources. The rapid pace of technological advancement requires personnel skilled in the use and management of the latest tools. The lack of trained experts in areas such as artificial intelligence and machine learning can delay implementation and reduce the effectiveness of the system.

These challenges can have a significant impact on the overall performance of the AIS. Data security issues can lead to system downtime and loss of trust, while interoperability issues can lead to increased operational costs and inefficiency. Furthermore, without qualified personnel, organizations may not be able to fully utilize the capabilities of modern tools, limiting the scalability of information systems (Voynarenko et al., 2017). The Automated Information Systems (AIS) landscape is

evolving rapidly due to advances in technology and the increasing need for organizations to adapt to changing market conditions. One of the key trends is the increasing integration of artificial intelligence (AI) and machine learning (ML) into AIS to enhance data processing capabilities and enable real-time decision making. These technologies facilitate predictive analytics and enable companies to anticipate trends and proactively optimize their operations.

Another emerging trend is the proliferation of cloud computing solutions that provide scalability and flexibility for AIS deployment. Companies are increasingly using hybrid cloud environments to balance performance and cost efficiency.

In addition, data security and privacy concerns are growing, requiring AIS to develop more advanced security measures. As regulations evolve, organizations must ensure compliance while protecting sensitive information. Overall, the future of AIS will be characterized by increased automation, advanced analytical capabilities and a focus on security and compliance.

References:

1. Choquehuanca-Sánchez, A. M., Kuzimoto-Saldaña, K. D., Muñoz-Huanca, J. R., Requena-Manrique, D. G., Trejo-Lozano, R. A., Vasquez-Martinez, J. I., Zenzain-Gara, E. G., & Marín Rodríguez, W. J. (2024). Emerging technologies in information systems project management. *EAI Endorsed Transactions on Scalable Information Systems*, 11(4), 1-13. <https://doi.org/10.4108/eetsis.4632>
2. Collins, C., Dennehy, D., Conboy, K., & Mikalef, K. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. *Information Systems Journal*, 32(8), 1232-1255. <https://doi.org/10.1016/j.ijinfomgt.2021.102383>
3. Stoykova, S., & Shakev, N. (2023). Artificial intelligence for management information systems: Opportunities, challenges, and future directions. *Algorithms*, 16(8), 357. <https://doi.org/10.3390/a16080357>
4. Voynarenko, M., Dzhuliy, L., Kuzmina, O., & Yanchuk, T. (2017).

Managing the development of innovation business processes with automated information systems. Proceedings of the International Conference on Engineering and Social Sciences (ESSUIR) [66227].
<https://essuir.sumdu.edu.ua/handle/123456789/66227>

*Svyshchuk O.D.,
student,
Supervisor: Vyshnevskya M.O.,
associate professor,
Kyiv National University of Technologies and Design*

USING SOCIAL MEDIA AS A PROJECT MANAGEMENT TOOL FOR DIGITAL ARTISTS

In the digital age, social media platforms have evolved far beyond their original purpose as spaces for social interaction. For digital artists, these platforms now serve as invaluable tools for not only promoting their work but also managing the complex tasks associated with project execution. From organizing timelines and facilitating communication to tracking progress and engaging with stakeholders, social media has become an essential component in the project management toolkit for contemporary artists. This paper explores how digital artists can utilize social media platforms to streamline their project management processes and highlights the benefits and challenges of this approach.

Integrating social media into project management practices is relatively recent, but it has already transformed how digital artists operate. Traditionally, artists had to rely on formal project management software and traditional communication channels to coordinate their work and collaborations. Today, social media platforms such as Instagram, Facebook, and TikTok offer a more dynamic and flexible alternative, enabling artists to manage every stage of their project from concept to completion. Through these platforms, artists can document their creative process, receive real-time feedback from peers and audiences, and adjust their strategies based on evolving project goals (Yang, 2024) (Sheresheva, 2024).