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# AI competencies in strategic management in the public sector

**Oleksii Dzydzyguri**
*Sumy State University, Sumy*

***Abstract.*** *The paper explores the development of AI competencies among civil servants in the context of global digital transformation. It compares international frameworks (OECD, EU, G20) with Ukrainian initiatives, focusing on typologies of AI literacy, institutional training models, managerial adaptability, and ethical constraints of algorithmic governance. Findings underline the importance of differentiated training strategies for various levels of public administration to strengthen human capital in the public sector.*
***Keywords:*** *artificial intelligence, public administration, competencies, digital transformation, training strategies.*

The intensive spread of artificial intelligence (AI) technologies in public administration is shaping a new logic for the functioning of the public sector. Whereas previously the focus was on automating and digitizing procedures, the emphasis is now on the competence of civil servants who can work with algorithmic solutions, understand their capabilities and risks, and balance efficiency and ethics. Global practice confirms that human capital is becoming the central element of digital transformation, while technology is only a tool [1; 2]. According to the OECD (2024), most member countries of the organization are experiencing a gap between the potential of AI tools and the ability of the public sector to integrate them into practice [6]. This imbalance manifests in two areas: at the operational level, through a shortage of analysts, IT architects, and security experts; and at the strategic level, a lack of a coherent digital vision among the managerial elite [3]. As a result, governments often implement AI in a piecemeal manner, limiting its potential for systemic transformation [4]. International experience shows that EU, G20, and OECD countries actively shape policies for developing AI competencies. In particular, the European Commission's programs include a digital competencies framework (DigComp 2.2, 2022) covering both technical and ethical aspects of digital technologies [6]. Some countries (e.g., Estonia, Finland, Canada) are investing in training platforms for civil servants, offering differentiated courses depending on the position level [2]. This allows for flexible professional development–from basic digital literacy to specialized AI analytics [5].

Particular attention is paid to the ethics of algorithmic governance in international discourse. Issues of transparency, accountability, non-discrimination, and personal data protection are becoming the cornerstones of new governance standards [7]. Introducing codes of ethics for public servants who use AI is necessary to build public trust in public sector digital innovations [8].

In the Ukrainian context, the issue of developing AI competencies remains highly relevant. Despite the existence of strategic documents in digitalization, the system for

improving the qualifications of civil servants is fragmented and lacks a comprehensive approach [9]. Existing programs primarily focus on basic IT skills, while AI uses strategic and ethical aspects are neglected. This creates the risk of Ukraine lagging behind international trends and limits its opportunities for integration into the European digital space [1].

**Table 1.** Typology of AI competencies of civil servants.

| Competency | Contents | Expected result |
|---|---|---|
| Technical | Data analytics, working with algorithms, and cybersecurity | Improving the efficiency of management processes |
| Management | Strategic vision, adaptability, risk management | Digital transformation of public authorities |
| Ethical | Transparency, accountability, non-discrimination, data protection | Building public trust in digital governance |

*Source: compiled by the author based on [1-9].*

The typology of AI competencies proposed in the study covers three interrelated blocks (Table 1). The first is technical skills, which include the ability to analyze data, work with algorithms, and evaluate their effectiveness [5]. The second is managerial abilities, including strategic vision, the ability to adapt to rapid change, and decision-making considering digital risks [4]. The third is ethical guidelines that shape a culture of algorithmic responsibility and ensure the protection of public interests [7]. For Ukraine, the key barriers to developing AI competencies are limited human resources, the lack of a differentiated training system for different categories of civil servants, and low awareness among managers of the strategic implications of algorithmic governance [9]. Overcoming these barriers is only possible if a comprehensive policy for developing human capital in the public sector is developed [3]. In this context, it seems appropriate to create a national AI literacy framework for civil servants that will define standards and levels of competence [6]. An important step is forming a network of digital training centers integrated into the professional development system, offering programs of varying complexity, from basic to specialized [8]. In addition, it is necessary to introduce the principle of lifelong learning in the public sector, ensuring the continuous updating of employees' knowledge and skills in line with the pace of technological development [2].

Thus, developing AI competencies among civil servants is a strategic task determining Ukraine's capacity for digital maturity and effective public administration. Combining technical, managerial, and ethical dimensions in training programs will help build public trust, improve the quality of management decisions, and strengthen Ukraine's position in the global digital environment.

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## Organizational and economic foundations for the development of niche cooperation in Ukraine

**Ruslan Chata**
*National University of Water and Environmental Engineering, Rivne*
https://orcid.org/0009-0007-8207-9320

***Abstract.*** *The organizational and economic foundations for the development of niche cooperation in Ukraine have been substantiated. A distinctive feature of this development is the balance between the number of small and large landowners. The digitization of agribusiness is a positive tool for the development of cooperation.*
***Keywords:*** *nonprofit cooperatives, digitization, quality, economy.*

## Організаційно-економічні засади розвитку нішевої кооперації в Україні

**Руслан Чата**
*Національний університет водного господарства та природокористування, м. Рівне*
https://orcid.org/0009-0007-8207-9320

***Анотація.*** *Обґрунтовано організаційні та економічні засади розвитку нішевих кооперативів в Україні. Особливістю такого розвитку є баланс між кількістю дрібних і великих землевласників. Цифровізація агробізнесу є позитивним інструментом розвитку кооперативів.*
***Ключові слова:*** *нішеві кооперативи, діджиталізація, якість, економіка.*