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Digital Platforms for Assessing Leadership Personnel: Opportunities for Improving Efficiency and Associated Risks

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Abstract: This article examines the theoretical, methodological and practical aspects of digitalizing the assessment, selection and appointment of leadership personnel in the civil service and executive authorities of Uzbekistan. The study analyzes the advantages and risks of selecting candidates through the unified electronic database of the Civil Service Development Agency (hrm.argos.uz), artificial intelligence (AI) algorithms and Big Data analytics. Using systems analysis, comparative analysis, multi-criteria decision analysis (MCDA) and expert assessment, the views of Western, CIS and national management scholars are compared, and World Bank and national statistical data are discussed. The results indicate that digital platforms substantially shorten selection time, reduce administrative costs and limit the influence of subjective factors, while at the same time creating new risks of algorithmic bias, personal data leakage and cyberattacks. The author proposes a Digital Assessment Efficiency and Security Index (DAESI) that combines assessment accuracy, post-appointment performance, time and financial costs, and cyber and algorithmic risks into a single integral indicator, together with a five-stage architecture of AI-assisted selection and a risk management model. The article concludes with recommendations on introducing explainable AI, strengthening information security, establishing a digital appeal mechanism and developing the data literacy of managers.

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1. Introduction

In modern public administration and strategic management, digital human resource management (Digital HRM) has become a key factor in ensuring organizational effectiveness. The Republic of Uzbekistan is implementing large-scale reforms aimed at modernizing the civil service and building personnel policy on the principles of openness, meritocracy and impartiality. In accordance with Presidential Decrees No. PF-5843 and No. PF-243, a system has been introduced for filling positions in state bodies and organizations through transparent competitions and for assessing candidates' professional competencies with digital tools.

The unified electronic platforms hrm.argos.uz and vacancy.argos.uz launched by the Civil Service Development Agency (ARGOS) have made it possible to create a single database of managerial and professional staff, publish vacancies and automatically shortlist candidates. However, while the widespread introduction of assessment systems based on artificial intelligence (AI) and Big Data analytics sharply reduces subjective factors and corruption risks, it also gives rise to algorithmic bias, personal data leakage and cybersecurity threats.

The aim of this study is to substantiate the opportunities for improving the efficiency of digital platforms in the assessment and selection of leadership personnel and to develop management mechanisms for the quantitative and qualitative control of the associated data security risks.

Different theoretical and methodological approaches to introducing digital platforms in public administration and HR management have emerged in global and national scholarship.

Nobel laureate Herbert Simon, in his theory of bounded rationality, showed that managerial decision-making is constrained by limited information and by the limited capacity of the human mind to process it [1]. From this perspective, automated information systems can serve as decision support systems that reduce managers' subjective errors and help them make more rational decisions [1].

Peter Drucker, a founder of modern management, advanced the principle of management by objectives (MBO) for evaluating managers [2]. Following this logic, a manager's effectiveness should be determined not by time spent at work or administrative status, but by measurable results – key performance indicators (KPIs) – which in the digital era can be recorded through digital monitoring. Digital platforms thus become an important instrument for objectively assessing the extent to which a manager creates public value.

Michael Armstrong, a leading expert on HR management and the competency-based approach, considers the integration of digital HR platforms at the level of strategic human resource management (Strategic HRM) [3]. According to Armstrong, algorithmic and digital assessment systems make it possible to evaluate not only a candidate's formal résumé but also to predict future behavior and competency fit through predictive analytics.

The views of Western scholars suggest that digital platforms and AI algorithms are powerful tools for eliminating subjectivity and improving organizational effectiveness in leadership assessment. However, these approaches treat algorithmic errors and data security as secondary factors. The Western concept is oriented mainly toward market economies and private-sector management and does not fully capture the bureaucratic and institutional risks of the civil service.

Russian HR scholar A. Ya. Kibanov emphasizes the need for a systemic approach to digital personnel assessment. In his view, electronic platforms reduce the cost and time of staff appraisal by 40–50%, but the effectiveness of the system depends on the quality of the input data [4].

Russian psychologist and HR expert T. Yu. Bazarov advances the concept of the digital assessment center. He notes that remote and algorithmic assessment platforms provide high accuracy in evaluating leadership qualities but cannot fully capture a candidate's stress resistance and situational behavior [5].

A. K. Baimenov, a Kazakh public administration scholar and head of the Astana Civil Service Hub, has studied the digitalization of personnel policy and the introduction of meritocratic principles in Central Asia. He argues that digital platforms (such as Kazakhstan's e-Kyzmet system) are a key safeguard against nepotism and subjective factors in the civil service [6].

Kyrgyz scholar K. S. Rysbekov examines the use of digital platforms to reduce bureaucracy and monitor personnel in public administration. In his opinion, digital systems help address staff shortages in small, resource-constrained government agencies [7].

Georgian public administration expert L. Mikeladze summarizes Georgia's experience of anti-corruption and digital reforms, concluding that the open digital selection of managers is one of the most effective means of increasing public trust in state institutions [8].

Estonian e-governance scholar T. Tamm, drawing on the e-Estonia experience, has studied data security and the integration of digital identification (e-ID) in the digital assessment of managers. Tamm shows that the use of cybersecurity and blockchain technologies in AI-based assessment can minimize the risk of data falsification [9].

The views of scholars from the CIS and neighboring countries indicate that digital HR platforms are a tool of institutional transformation for post-Soviet public administration systems. Openness, anti-corruption and cybersecurity are central to the views of Baimenov, Mikeladze and Tamm. However, as Kibanov and Bazarov note, relying solely on digital systems and ignoring candidates' personal and interpersonal qualities may lead to strategic errors in management decisions.

Among national scholars, Academician Q. Kh. Abdurakhmonov has studied the impact of digital platforms on labor productivity within the concept of human resource management and human capital development. According to Abdurakhmonov, digital assessment systems in the civil service are an innovative mechanism for accurately assessing staff potential, forming a personnel reserve and encouraging professional growth [10].

Academician S. S. Gulyamov has analyzed the introduction of the digital economy and AI technologies into management systems. He emphasizes that selecting managers with Big Data and machine learning algorithms significantly increases the speed and quality of decision-making in public administration, but that such systems must be closely linked to the national cybersecurity framework [11].

Professor N. Q. Zokirova has studied work motivation and competency assessment methods in the civil service. She substantiates the need to integrate psychometric tests, KPIs and 360-degree feedback into a single platform for the digital assessment of managers [12].

Studies by national scholars have created a solid doctrinal basis for digitalizing the civil service and assessing staff potential in Uzbekistan. However, the algorithmic risks arising from the use of *hrm.argos.uz* and AI systems, the mathematical weights of assessment criteria and data protection issues have not yet been fully studied as a single integrated model.

2. Materials and Methods

The study employed systems and logical analysis, comparative legal analysis, economic and statistical analysis, algorithmic modelling and expert assessment. The ratio of efficiency to risk in digital platforms for leadership assessment was analyzed using multi-criteria decision analysis (MCDA) and cybersecurity indexing. The information base comprised regulatory acts of the Republic of Uzbekistan on the civil service, World Bank GovTech data, and data of the Statistics Agency and ARGOS.

3. Results

An analysis of the World Bank's GovTech Maturity Index (GTMI) and public sector performance data shows that in countries that have fully digitalized the selection and assessment of managers, government effectiveness scores (Worldwide Governance Indicators, WGI) are on average 22–28% higher [13]. According to World Bank reports for 2025–2026, in countries using centralized digital HR platforms the time required for staff selection has fallen from 60 to 12 days, and the administrative costs of competitions have been reduced by 45%.

According to the Statistics Agency under the President of the Republic of Uzbekistan and ARGOS, more than 150,000 electronic profiles of civil servants were created through *hrm.argos.uz* in 2025–2026, and open competitions were held for more than 35,000 vacant managerial and specialist positions [14]. Statistical analysis showed that the KPIs of managers selected through the digital platform during their first year were 18.5% higher than those of managers appointed in the traditional way, and the number of complaints about competitions decreased 3.2-fold [15].

National statistics and cybersecurity center data indicate the presence of data security and algorithmic risks on digital platforms. In 2025, the number of cyberattacks and unauthorized access attempts against the HR information systems of government agencies increased by 12%. This calls for protecting candidates' personal and psychometric data, ensuring the transparency of AI algorithms (explainable AI) and applying multi-level protection against cyber threats.

To calculate the integral efficiency of assessing managers on digital platforms, the author proposes the Digital Assessment Efficiency and Security Index (DAESI):

$$DAESI = \frac{A \times S_{KPI}}{C_t \times C_f} \times (1 - R_{cyber} - R_{bias}), \quad (1)$$

where:

A – coefficient of accuracy and objectivity of assessment and shortlisting (0 to 1);

S_{KPI} – post-appointment KPI performance of the selected manager (0 to 1);

C_t – index of time spent on the competition and assessment (normalized, 0.1 to 1);

C_f – organizational and financial costs of the competition (normalized, 0.1 to 1);

R_{cyber} – coefficient of data leakage and cybersecurity risk;

R_{bias} – risk of bias in AI models and algorithms (algorithmic error), with $R_{cyber} + R_{bias} < 1$.

A higher DAESI value indicates a more efficient and secure assessment process. The conceptual architecture of digital assessment and AI screening is presented in Table 1, the risk management model in Table 2, and a comparison of traditional and digital assessment systems in Table 3.

Table 1. Conceptual architecture of digital assessment and AI screening of leadership personnel

Stage	Systems and algorithms involved	Indicators and outputs
Stage 1: Data collection	Integration with hrm.argos.uz, electronic diplomas and electronic employment records	Candidate's digital profile and verification ID
Stage 2: AI screening	Automatic competency filtering using AI	Job profile match index (LMI)
Stage 3: Testing and assessment	Psychometric AI diagnostics, KPI and case study analysis	Competency rating score
Stage 4: Cyber filter	Data security and automatic identity verification	Assessment of R_{cyber} and R_{bias} risks
Stage 5: Appointment	Identification of top candidates based on the integral DAESI	Appointment of the most suitable manager

Table 2. Risk management model for digital assessment platforms

Risk type	Sources and factors	Management and mitigation tools
Cyber threats	DDoS attacks, unauthorized database access	Blockchain-based encryption, Zero Trust architecture
Algorithmic error	Improperly trained AI models, discrimination	Explainable AI (XAI) and expert audit
Confidentiality	Leakage of personal and psychometric data	End-to-end encryption, ISO/IEC 27001 standards
Administrative risk	Entry of false data into the platform	Automatic API verification against state registers

Table 3. Comparative analysis of traditional and digital assessment systems for leadership personnel

Assessment criterion	Traditional assessment	Digital platforms (hrm.argos.uz + AI)
Duration of competition	45–60 days	7–12 days
Influence of subjective factors	High (human factor, commission members)	Minimal (algorithmic, impartial assessment)
Coverage of competencies	Biography and formal documents	Multidimensional competencies and psychometrics
Cost level	High (paperwork and logistics)	Low (savings of up to 70%)
Data security risk	Loss of physical documents	Cyberattacks and algorithmic errors

4. Discussion

The results show that the transition to digital platforms for assessing managers is an irreversible and positive process for public administration and strategic management. The use of hrm.argos.uz and AI systems helps to remove nepotism and bureaucratic barriers from the candidate selection process.

At the same time, digital platforms cannot be handed over entirely and autonomously to artificial intelligence. Given the existence of algorithmic errors and cyber risks, the human-in-the-loop AI concept is preferable: the digital platform shortlists and ranks candidates, but responsibility for the final decision remains with the expert commission and the head of the organization. These findings are consistent with the views of Kibanov and Bazarov on the limits of algorithmic assessment and with the emphasis of Baimenov and Tamm on transparency and data security.

5. Conclusion

Based on the results of the study, the following recommendations are proposed for improving the digital assessment and selection of managers in central and regional executive authorities: Introduce an explainable AI module and a multi-criteria assessment (DAESI) module within the hrm.argos.uz platform of the Civil Service Development Agency. The module should transparently show which algorithm produced the scores and ratings assigned to candidates. Make the introduction of blockchain technologies and ISO/IEC 27001 information security standards mandatory in order to protect managers' psychometric and personal data from cyber threats, and store databases within the national cybersecurity perimeter. Create a transparent digital mechanism allowing candidates for managerial positions to appeal and file complaints about algorithmic assessment results. This will prevent qualified candidates from being excluded because of algorithmic errors. Establish a system of regular training for heads of executive authorities and HR specialists in digital literacy and data-driven management, enabling them to use the analytics provided by digital platforms correctly in strategic decision-making.

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