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MECHANISMS FOR USING ARTIFICIAL INTELLIGENCE IN THE PREPARATION OF MANAGEMENT DECISIONS IN PUBLIC ADMINISTRATION

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ABSTRACT

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The relevance of the study is determined by the transition of public administration from electronic services and digital registers to algorithmically supported procedures of data analysis, forecasting, risk detection and preparation of managerial alternatives. Artificial intelligence can strengthen the analytical capacity of public authorities; however, in the public sector its use cannot be assessed only through speed and productivity, because a public management decision must comply with legality, accountability, transparency, non-discrimination, personal data protection, appealability and the personal responsibility of a public official. The purpose of the article is to substantiate mechanisms for using artificial intelligence in the preparation of management decisions in public administration and to develop a risk-oriented model for its institutional implementation based on legal admissibility, data quality, human control, documentation, audit and post-implementation monitoring. The methodological basis of the study combines systemic, institutional, comparative legal, logical-analytical and content-analytical approaches. The source base includes documents of the OECD, the European Union, the Council of Europe, UNESCO and NIST, Ukrainian regulatory and strategic acts, materials of the Ministry of Digital Transformation of Ukraine, as well as recent academic studies on artificial intelligence in the public sector, algorithmic accountability, explainability, automated decision-making and public sector competences. The article systematizes the functions of artificial intelligence in decision preparation, identifies the main risks of algorithmisation, characterizes international and Ukrainian regulatory guidelines, and proposes a step-by-step mechanism for using artificial intelligence in a public authority. It is substantiated that the most defensible model for public administration is one in which artificial intelligence performs analytical, predictive and auxiliary functions, whereas the final authoritative decision, its reasoning and responsibility for consequences remain with an authorized public official. The practical significance of the article lies in forming an applied framework for designing, assessing and auditing AI solutions in Ukraine's GovTech environment.



KEYWORDS

artificial intelligence, public administration, management decision, algorithmic accountability, human control, transparency, data audit, GovTech, digital transformation.



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Механізми використання штучного інтелекту в системі підготовки управлінських рішень у публічному управлінні

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-248X/2026.5.10 Отримана: 04.04.2026 р. Прийнята: 06.05.2026 р. Опублікована: 11.05.2026 р. Авторське право © 2026  автора Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0). 	Актуальність дослідження визначається переходом публічного управління від електронних сервісів і цифрових реєстрів до алгоритмічно підтриманих процедур аналізу даних, прогнозування, виявлення ризиків і підготовки управлінських альтернатив. Штучний інтелект здатний підвищувати аналітичну спроможність органів влади, однак у державному секторі його використання не може оцінюватися лише за критеріями швидкості й продуктивності, оскільки управлінське рішення має відповідати вимогам законності, підзвітності, прозорості, недискримінації, захисту персональних даних, можливості оскарження та персональної відповідальності посадової особи. Метою статті є обґрунтування механізмів використання штучного інтелекту в системі підготовки управлінських рішень у публічному управлінні та розроблення ризик-орієнтованої моделі його інституційного впровадження на засадах правової допустимості, якості даних, людського контролю, документування, аудиту й післяпроектного моніторингу. Методологічну основу дослідження становлять системний, інституційний, порівняльно-правовий, логіко-аналітичний і контент-аналітичний підходи. Джерельну базу формують документи ОЕСР, Європейського Союзу, Ради Європи, ЮНЕСКО, NIST, нормативно-стратегічні акти України, матеріали Міністерства цифрової трансформації України, а також сучасні академічні праці з проблематики штучного інтелекту в публічному секторі, алгоритмічної підзвітності, пояснюваності, автоматизованого ухвалення рішень і компетентностей державних службовців. У статті систематизовано функції штучного інтелекту в підготовці управлінського рішення, визначено основні ризики алгоритмізації, охарактеризовано міжнародні та українські регуляторні орієнтири, запропоновано поетапний механізм використання штучного інтелекту в органі публічної влади. Обґрунтовано, що найбільш захищеною для публічного управління є модель, у якій штучний інтелект виконує аналітичну, прогностичну та допоміжну функції, тоді як остаточне владне рішення, його мотивування та відповідальність за наслідки залишаються за уповноваженою посадовою особою. Практичне значення статті полягає у формуванні прикладної рамки для проектування, оцінювання та аудиту AI-рішень у GovTech-середовищі України. КЛЮЧОВІ СЛОВА штучний інтелект, публічне управління, управлінське рішення, алгоритмічна підзвітність, людський контроль, прозорість, аудит даних, GovTech, цифрова трансформація.

1. Introduction

Artificial intelligence is gradually moving from the periphery of digital transformation to the core of modern public administration. Its use is no longer limited to chatbots, automated communication, or auxiliary processing of requests. Governments use such systems to analyze large data sets, support services, detect fraud, predict workloads, monitor risks and prepare management alternatives [1]. For the public sector, such a technological change has a dual nature: it strengthens the analytical capacity of government bodies, but at the same time increases the requirements for transparency, explainability, control and accountability.

International regulatory guidelines of recent years consider artificial intelligence in public administration as a socio-technical system capable of influencing the rights, interests and behavior of citizens. EU Regulation 2024/1689 establishes a risk-based approach to AI systems, providing for enhanced requirements for high-risk systems, including risk management, data quality, technical documentation, transparency, human oversight, accuracy, reliability and cybersecurity [2]. The 2024 Council of Europe Framework Convention shifts the emphasis to the compliance of the life cycle of AI systems with human rights, democracy and the rule of law [3]. The UNESCO Recommendation on the Ethics of Artificial Intelligence and the NIST AI RMF framework further fix the importance of human control, transparency, fairness, risk management and trust in such systems [4; 5].

The Ukrainian context forms a separate research framework. The concept of artificial intelligence development in Ukraine has identified this technology as one of the priority areas of scientific and technological development [6]. The Strategy for Digital Development of Innovation Activity of Ukraine until 2030 established a broader framework for innovation policy, development of digital markets, infrastructure and public governance of innovations [7]. The White Paper on Regulation of Artificial Intelligence in Ukraine proposed a phased approach to preparing regulation, focused on voluntary instruments, self-regulation, recommendations, sandbox and further approximation to the European model [8]. The Single Window of Initiatives of the Ministry of Digital Transformation of Ukraine brings together documents, recommendations and tools for the responsible use of artificial intelligence, and the Sandbox pilot project creates a controlled environment for testing high-tech solutions [9–11].

Under such conditions, the scientific problem shifts from a general justification of the benefits of artificial intelligence to determining the conditions for its institutionally controlled use in the public sector. The fundamental question becomes how to institutionally integrate artificial intelligence into the system of preparing a management decision so that it enhances analytics, forecasting and risk identification, but does not dilute government responsibility, does not create hidden discretion, does not worsen the legal protection of the individual and does not transform an automated result into an actual decision without proper human review.

Within the framework of this article, the preparation of a management decision is considered as a sequence of actions of a public authority that precede the final expression of the will of the government: defining the problem, collecting and verifying data, analyzing the situation, predicting consequences, forming alternatives, assessing risks, preparing a draft decision, documenting the grounds and monitoring implementation. At this stage, artificial intelligence can have the greatest practical value, as it helps to process complex information flows without giving the algorithm the status of an independent subject of authoritative decision-making.

2. Literature Review

The current international literature and regulatory documents demonstrate a notable shift from the general rhetoric of digitalization to the analysis of the institutional conditions for the responsible use of artificial intelligence in the public sector. The OECD report on governance with artificial intelligence shows that governments use such systems to automate processes, improve services, support management decisions and detect fraud, but the practical effect depends on the quality of data, transparency, trust, competencies and the ability of public institutions to manage risks [1]. The European regulatory framework adds to this logic a legal differentiation of risk: the higher the impact of the system on the rights, security and life opportunities of an individual, the stricter the requirements for its use should be [2]. The Council of Europe, UNESCO and NIST develop a similar line, where artificial intelligence is treated as a system that requires management throughout its full life cycle, including the stages of design, launch, use, audit and correction [3–5].

The Ukrainian regulatory and strategic block is also gradually shifting from the conceptual recognition of the priority of artificial intelligence to the creation of applied tools for regulatory preparation. The concept of artificial intelligence development outlines the basic directions of state policy, but does not yet provide a procedural mechanism for the use of such systems in government bodies [6]. The Strategy for the Digital Development of Innovative Activities until 2030 considers digital technologies as an element of the state's innovative capacity [7]. The White Paper of the Ministry of Digital Affairs proposes a phased approach to regulation, where at the first stage extra-legislative instruments, recommendations and piloting prevail, and at the next stage a move towards a special law harmonized with EU law is envisaged [8]. The AI Unit and Sandbox document system form a practical infrastructure for consultations, testing and sectoral recommendations, but they require further transfer to the organizational regulations of specific government bodies [9–11]. Empirical studies of the use of artificial intelligence in the public sector show that real practice is still uneven. K. van Nordt and J. Misuraka, having analyzed 250 cases of the use of artificial intelligence in the governance of EU countries, prove that the greatest use is for improving the provision of public services and internal management, while direct support for policy formation or decision-making occurs much less often [12]. This conclusion is important for the topic of this article, as it shows the caution of states regarding algorithmic interference in managerial discretion. G. de Bruyn, M. Warnier and M. Janssen analyze explanatory artificial intelligence and prove that the explanation of algorithmic output in the public sector is not reduced to a technical interpretation of the model, since managerial problems often have conflicting values, incomplete facts and ambiguous criteria of justice [13]. I. Mergel, G. Dickinson, J. Stenwall and M. Gasco further emphasize that the implementation of artificial intelligence in the public sector depends not only on technological readiness, but also on organizational structures, management processes, staff skills and political expectations [14].

A separate body of literature concerns accountability and responsibility for decisions prepared with the involvement of algorithmic systems. F. Gualdi and A. Cordella proposed the concept of intertwined accountability, in which responsibility does not disappear, but is complicated by the interaction of the official, the organization, the developer, the data, the model and the regulatory environment [15]. Later, A. Cordella and F. Gualdi showed that algorithmic formalization changes administrative processes, standardizes actions, narrows or redistributes discretion and can affect the very logic of public administration [16]. S. Grimmelikhuizen experimentally proved that the accessibility and explainability of an algorithmic decision affect the perception of trust in automated decision-making, but this effect depends on the context and type of administrative case [17]. Y.-C. Chen, M. J. An and Y.-F. Wang systematize the impact of artificial intelligence on public values and show that along with efficiency, innovation and speed, challenges arise for fairness, transparency, professional responsibility and trust in public institutions [18].

Further development of the discussion is connected with multilevel analysis of artificial intelligence in public administration. J. I. Criado, R. Sandoval-Almasán and H. R. Gil-García propose to consider artificial intelligence in public administration through macro-, meso- and micro-levels: political and regulatory conditions, organizational models of implementation and behavior of officials and citizens [19]. A. Rizk and I. Lindgren analyze automated decision-making as a change in the space of interaction between officials and citizens, where efficiency, fairness, transparency, privacy, standardization and discretion conflict [20]. The JRC report on AI governance competencies and practices in the public sector confirms that effective use of such systems requires a combination of technical, managerial, legal, ethical, operational and communication competencies [21].

Studies on the behavioural effects of algorithmisation clarify the limits of simplistic notions of human control. N. Aoki, T. Tatsumi, G. Naruse and K. Maeda show that the type of explanation of an algorithmic decision can influence perceptions of accuracy, fairness and trustworthiness, but there is no universal format for explanation for all administrative contexts [22]. F. Selten, M. Robeer and S. Grimmelikhuizen argue that officials tend to trust AI recommendations more when they confirm their prior professional judgement, which creates the risk of automation confirmation rather than independent verification [23]. G. Wang, Y. Guo, W. Zhang, S. Xie, and C. Chen compare the perception of rule-based and data-driven algorithms in public affairs and show that the type of algorithm affects the assessment of its fairness and acceptability [24]. In the Ukrainian scientific field, O. Orlov emphasizes the technical, procedural, and organizational opacity of automated decisions and links algorithmic transparency with digital ethics and non-discrimination in public administration [25].

The available literature already sufficiently reveals the potential of artificial intelligence for the public sector, regulatory principles, risks of opacity, the problem of accountability, behavioral effects of human control, and the importance of competencies. An integrated model that transfers these provisions into the internal cycle of preparing a management decision by a specific public authority remains less developed. The outlined gap determines the research focus of the article.

3. Problem Statement

The purpose of the article is to substantiate the mechanisms for using artificial intelligence in the system of preparing management decisions in public administration and to develop a risk-oriented model of its institutional implementation on the basis of legal admissibility, data quality, human control, documentation, audit and post-project monitoring.

To achieve the goal, the following tasks have been defined:

1. To delimit the permissible functions of artificial intelligence in the system of preparing management decisions;
2. To systematize the key risks of algorithmization of the management process in the public sector;
3. To characterize international and Ukrainian regulatory and institutional guidelines for the use of artificial intelligence by government bodies;
4. To propose a phased mechanism for introducing artificial intelligence into the process of preparing a management decision;
5. To identify indicators by which the readiness, controllability and effectiveness of the use of artificial intelligence in a public authority can be assessed.

4. Methods and Materials

The study is analytical and synthetic in nature and is based on a combination of systemic, institutional, comparative legal, logical-analytical and content-analytical approaches. The systemic approach was used to consider the preparation of a management decision as a sequence of interrelated actions: problem definition, data collection, analytical processing, forecasting, generation of alternatives, risk assessment, documentation and control. The institutional approach made it possible to identify the subjects responsible for the launch, use, supervision, audit and correction of AI solutions in the public sector. The comparative legal method was used to compare the European risk-oriented regulatory model, international ethical and management frameworks and the Ukrainian phased approach to the formation of artificial intelligence regulation. The logical-analytical approach was used for the author's systematization of functions, risks, safeguards and performance indicators. Content analysis was applied to regulatory acts, strategic documents, recommendations, reports of international organizations and modern academic works.

The source base of the study is the OECD report on governance with artificial intelligence, EU Regulation 2024/1689, the Council of Europe Framework Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law, UNESCO Recommendation on the Ethics of Artificial Intelligence, NIST AI Risk Management Framework, regulatory and strategic acts of Ukraine in the field of artificial intelligence and digital innovation development, the White Paper on the Regulation of Artificial Intelligence in Ukraine, materials of the AI Unit of the Ministry of Digital Transformation of Ukraine, the resolution of the Cabinet of Ministers of Ukraine on the implementation of the Sandbox pilot project, as well as academic works on the issues of artificial intelligence in the public sector, explainability, algorithmic accountability, automated decision-making, public values and competencies of civil servants. The combination of these sources made it possible to combine the normative, institutional, managerial, ethical and applied levels of analysis.

5. Results and Discussion

The key prerequisite for building an effective mechanism for using artificial intelligence is the delineation of its roles in the system for preparing a management decision. In the public sector, an algorithmic system can perform auxiliary information, analytical, predictive or procedural-sorting functions, but the legal weight of these functions is significantly different. The least risky applications

are those where artificial intelligence works with data sets and does not directly affect the rights of a specific person. The highest level of risk occurs when the result of the model is used to classify an applicant, allocate resources, determine priorities, assign an inspection or prepare a draft individual administrative decision [1; 2; 20].

Table 1. Functions of artificial intelligence in the system of preparing management decisions

Function	Typical application	Management effect	Risk level	Condition of acceptable use
Information retrieval	Search for relevant documents, classification of applications, generalization of text arrays	Reduction of the time of primary information processing	Low or moderate	Verification of sources, limitation of use of personal data, human verification of the result
Analytical	Identification of trends, anomalies, recurring problems, territorial or sectoral imbalances	Improvement of the quality of diagnostics of the management problem	Moderate	Transparency of the methodology, data verification, documentation of the logic of interpretation
Predictive	Forecast of service load, budgetary needs, risks of non-implementation of programs	Support of planning and early response	Moderate or high	Data quality assessment, model validation, regular comparison of the forecast with actual results
Support for the selection of alternatives	Scenario formation, comparison of action options, preliminary ranking of political or administrative options	Expansion of the analytical base of management choice	High	Mandatory human review, explanation of criteria, recording of motives for the final choice
Procedural sorting	Prioritization of applications, selection of cases for verification, preliminary classification of applicants or objects	Increase of operational manageability of processes	High	Non-discrimination verification, right to review, control of false positives
Influence on individual decision	Scoring, automated recommendation on provision or refusal of service, allocation of public resources	Direct impact on the rights and interests of the individual	Highest	Enhanced control regime, explainability, documentation of the role of the system, possibility of appeal, prohibition of hidden automation

Source: [1; 2; 12; 20; 21].

Table 1 demonstrates the different managerial weight of AI functions in the decision-making process. For example, in the field of social support, AI can be used to pre-identify applications with an increased risk of error, data duplication, or the need for additional verification. In this case, the algorithmic result should not automatically determine the provision or refusal of a service, but should serve as a signal for the official. The final decision requires verification of data sources, fixation of motives, and the ability to review and document the role of the algorithmic system in preparing the conclusion. In the system for preparing management decisions, the fundamental importance is not the fact of using the algorithm itself, but the place of its result in the management cycle. If the result is used as auxiliary analytical material, the main task is the quality of the data and correct interpretation. If the result affects an individual decision, an increased regime of legal, ethical, and procedural control is required. This logic corresponds to the risk-based model of the EU, the OECD approach to artificial intelligence in governance and the conclusions of studies on automated decision-making in public administration [1; 2; 20].

A management error when using artificial intelligence often consists in the fact that the government agency implements a tool on a technological basis, but does not determine the legal role of its result. For public administration, such uncertainty is critical. The algorithm recommendation may remain only an analytical reference, but may actually turn into a decision of power if an official mechanically transfers it to an administrative act. The first element of the organizational mechanism

should be the classification of the function of artificial intelligence by the level of influence on the management decision.

The second block of results concerns the risks of algorithmization. In the public sector, these risks are not only technical, but also procedural, organizational, legal and social in nature. An opaque model may give a formally accurate but legally unacceptable result; a qualitative model may work on incomplete or distorted data; a well-documented system may be used in an organization where it is not clear who is responsible for checking the result. Therefore, it is advisable to consider the risks of artificial intelligence as an interconnected system, rather than as a list of individual technical defects [13–18; 22–25].

Table 2. Risks of algorithmization of management decision-making and management safeguards

Risk group	Risk content	Possible consequence for public administration	Safety device
Technical Opacity	Model complexity, limited explainability, unclear weight of features	Inability to justify the result to a citizen, court or control body	Selection of explainable models for high-risk processes, technical documentation, independent expertise
Data Risk	Incomplete, outdated, unrepresentative or biased data	Discriminatory effects, erroneous forecasts, distorted prioritization	Data audit, representativeness assessment, sensitive feature check, regular update of data sets
Procedural Opacity	Uncertainty about at what stage and with what legal weight the model output is used	Hidden transfer of algorithmic result into a management decision	Description of the system's role in the process regulations, recording the AI contribution in the case materials
Organizational Blurring of Accountability	Unclear division of roles between the authority, the official, the developer, the provider and the data administrator	Difficulty in establishing responsibility for an error or damage	Responsibility matrix, appointment of the process owner, contractual requirements for the supplier
Automation Displacement	Tendency of the official to uncritically accept the system's recommendation	Formal human control without real verification	Independent review protocols, mandatory motivation for rejection or acceptance of the recommendation
Legal Risk	Breach of the requirements of legality, proportionality, non-discrimination, protection of personal data or the right to appeal	Appealing decisions, loss of trust, legal uncertainty	Legal admissibility assessment, rights impact assessment, decision review mechanism
Cybersecurity and Integrity Risk	Data manipulation, unauthorized access, attacks on the model or its output	Undermining the credibility of management information	Access control, action logging, vulnerability testing, fallback procedures
Reputational and Trust Risk	Unclear understanding of the logic of the automated process for citizens	Perception of the decision as opaque or unfair	Public explanation of the limits of AI use, clear messages for users, available appeal channels

Source: [2; 5; 13–18; 22–25].

Table 2 reflects a key feature of AI risks in public administration: the technical quality of the system does not yet guarantee managerial legitimacy. Even an accurate model may be unacceptable if its result is not explained, is used outside the scope of authority, relies on unsuitable data, or does not provide for review. The mechanism for using artificial intelligence should be built not around abstract technological efficiency, but around the controllability of each transition from data to analytical conclusion, from conclusion to recommendation, from recommendation to draft decision, and from draft decision to final government act. The regulatory and institutional framework for the use of artificial

intelligence in public administration is formed at the intersection of international, European, and national sources. The OECD sets a governance framework for the responsible use of AI in governance, the EU establishes a legal regime for risk-based regulation, the Council of Europe links the life cycle of AI systems to human rights and the rule of law, UNESCO forms an ethical framework, NIST offers a practical logic for risk management, and Ukrainian documents outline a phased model of approximation to European regulation [1–11]. For a public authority, these sources form a set of requirements for the internal management process.

Table 3. Regulatory and institutional guidelines for the use of artificial intelligence in public administration

Source / Frame	Key Emphasis	Significance for Preparing a Management Decision
OECD	Using AI to improve governance, subject to risk management, transparency, data quality and capacity of public institutions	The preparation of the solution should include verification of data, the role of the model, the competences of personnel and trust in the result
EU Regulation 2024/1689	Risk-based approach, high-risk systems, data requirements, transparency, human oversight, documentation and post-market monitoring	AI solutions in the government should be classified by the level of impact on the rights and interests of the individual
Council of Europe Framework Convention	Compliance of the life cycle of AI systems with human rights, democracy and the rule of law	The process of preparing the solution should include an assessment of the impact on rights, accountability and controllability
UNESCO Recommendation	Ethics, transparency, fairness, human control, non-discrimination	The use of AI should be compatible with public values, not only with efficiency criteria
NIST AI RMF	Governance, mapping, measurement and management of AI risks	The government can use the framework as a practical protocol for risk assessment before launching and during the operation of the system
Concept of AI Development in Ukraine	Recognition of AI as a priority area of technological development	Creates a strategic basis, but requires procedural detail at the government level
Strategy of Digital Innovation Development until 2030	Development of digital innovation, markets, infrastructure and public administration through innovative activities	Identifies the national context for the implementation of AI solutions in GovTech
White Paper of the Ministry of Digital Affairs	Step-by-step regulation, voluntary tools, recommendations, sandbox, further approximation to the AI Act	Provides a transitional model in which governments can prepare for the future legal regime even before the adoption of a special law
AI Unit and Sandbox	Practical documents, recommendations, testing of high-tech solutions in a controlled environment	Allows the formation of prototypes of procedures for the responsible use of AI in specific organizational processes

Source: [1–11].

Table 3 shows that the regulatory logic of using artificial intelligence in public administration already has a fairly clear common denominator. These include risk-based, data quality control, transparency of the system's role, human oversight, documentation, accountability, reviewability, and post-launch monitoring. For Ukraine, the peculiarity is that the special law on artificial intelligence has not yet formed a complete procedural system, but authorities can already use international and European guidelines as the basis for internal regulations, technical specifications, procurement requirements, and protocols for using AI solutions. On this basis, it is advisable to build the mechanism for using artificial intelligence in the system for preparing a management decision as a sequence of stages, where each subsequent stage is allowed only after fixing the previous one. Such a model prevents a situation where a government body first purchases or implements a technological product, and only then tries to determine its legal role, the limits of autonomy, and responsible persons. For public administration, the correct sequence should be the opposite: first, the management task, legal

admissibility, and risk are determined, then the data and model are verified, and then the order of human review, documentation, and control is established.

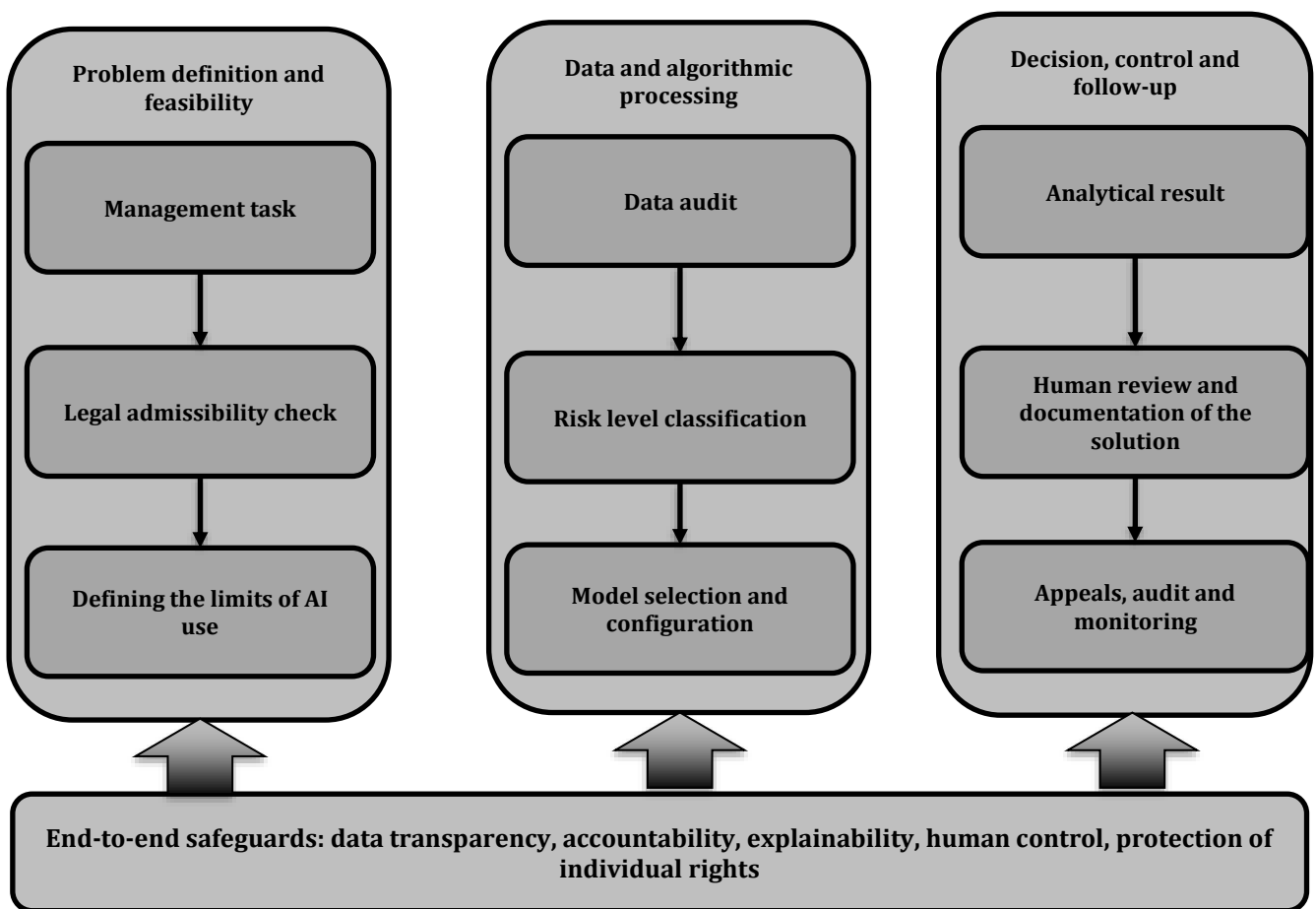


Figure 1. End-to-end model of using artificial intelligence in the management decision preparation system

Source: Completed by author.

The model shown in Fig. 1 captures artificial intelligence as an element of decision-making within the framework of human control and job responsibility. At the stage of defining the management task, the authority must clearly describe the problem, the type of solution, the scope of data, the expected result and the limits of the system's use. At the stage of legal admissibility, it is checked whether the relevant function can be supported by artificial intelligence without violating the requirements of legality, non-discrimination, protection of personal data and procedural guarantees. The data audit should cover sources, completeness, relevance, representativeness, risk of bias, update procedure and access. The risk classification determines the control regime: the greater the impact of the system on the rights and interests of the individual, the stricter the requirements for explainability, human review, documentation and appeal should be.

The choice or configuration of the model cannot be a purely technical decision of the IT department or supplier. For a public authority, it should include checking the model's compliance with the management task, the permissible level of error, the method of explaining the result, logging of actions, data storage mode and cybersecurity requirements. The analytical result of the system should be submitted to the official in the format of a reasoned recommendation or assessment with fixing the reliability limits. Human review should be meaningful: the authorized person should understand the data sources, the general logic of the result, the reliability limits and the risks of error. The documentation of the decision should record whether artificial intelligence was used, at what stage, what result was obtained, how it was checked and why the final decision was made in this version. A separate place in the model is occupied by the after-action. The life cycle of using artificial intelligence continues after the decision is made. Appeal channels, internal audit, periodic quality control of results, analysis of false positives, control of discriminatory effects and revision of the model based on the

results of practical application are required. This approach is consistent with the logic of the life cycle of artificial intelligence systems, laid down in international and European documents [2–5].

The applied value of the model lies in the possibility of its operationalization through a system of indicators. Without indicators, the government body will not be able to assess whether the use of artificial intelligence is controlled, legitimate and effective. Indicators should cover not only the performance of the system, but also the quality of data, transparency of the process, the presence of human review, the frequency of errors, the number of reviews, audit results and the impact on trust in the management decision.

Table 4. Indicators of readiness and effectiveness of the use of artificial intelligence in a public authority

Evaluation block	Indicator	What it shows	Verification source
Legal Admissibility	Availability of a written assessment of the admissibility of using AI for a specific process	Are the legal limits of the system's application defined before launch	Internal opinion, regulations, legal expertise
Data Quality	Proportion of datasets that have been audited for completeness, relevance, and bias	How reliable is the model's information base	Data audit report, technical documentation
Risk Classification	Presence of a risk category for each AI decision	Is a proportional control regime established	AI solution register, risk map
Human Review	Proportion of decisions that record a meaningful review of the model result by an official	Is human control not reduced to a formality	Case materials, action log, official records
Explainability	Presence of a clear explanation of the role of AI for the official and the recipient of the decision	Can the result be interpreted and verified	User message, explanatory note, system interface
Documentation	Proportion of processes that record the contribution of AI to the preparation of the decision	Is it possible to restore the logic of the decision preparation during control or judicial review	Logging, protocols, administrative case materials
Appeals	Presence of a procedure for reviewing a decision prepared using AI	Does the individual have a real channel of protection against an erroneous or discriminatory result	Complaint handling regulations, review statistics
Audit and Monitoring	Periodicity of checking the accuracy, errors, bias, and compliance of the model with the initial task	Is control maintained after the system is launched	Audit reports, control samples, incident reports
Organizational Responsibility	Presence of a matrix of responsibility for data, model, result, and final decision	Can those responsible for the error or violation be identified	Job instructions, contracts, internal policies

Source: [1–5; 14; 18; 21].

Table 4 translates the proposed model into a measurable format. It can be used as a basis for an internal checklist of a government agency, a technical task for the development or procurement of an AI solution, an audit of an implemented system, or a preliminary assessment of readiness for launch. The difference between these indicators and purely technological indicators is that they assess the legal and managerial quality of the process along with the accuracy and speed of the model.

For Ukrainian government agencies, the proposed approach has several practical implications. First, the implementation of artificial intelligence should begin not with the procurement of a software product, but with a description of the management task, data, risks, and legal boundaries. Second, it is advisable to keep AI solutions in a separate register of the government agency, which indicates its function, responsible unit, data type, risk level, human review mode, and the date of the last audit. Third, the terms of reference for the development or acquisition of the system should include requirements for explainability, logging, data protection, bias testing, emergency shutdown, and independent verification. Fourth, officials who use the model output should undergo not only technical training, but also training on the legal, ethical, and procedural boundaries of algorithmic support.

The Ukrainian model of AI regulation is in a transitional stage, combining the risks of fragmented implementation with the opportunity to form a practice of responsible use before the adoption of a special law. The risk is that AI solutions can be implemented fragmentarily, without unified internal standards and proper documentation. The opportunity is that the transitional period allows for the formation of a practice of responsible use before the adoption of a special law. The White Paper, AI Unit and Sandbox documents create a platform for piloting, but the real quality of implementation will depend on whether these frameworks are transferred to government regulations, job descriptions, supplier contracts, audit protocols and procedures for interacting with citizens [8–11].

A comparative analysis of international approaches shows the limitations of mechanically transferring European or American frameworks to Ukrainian public administration. Ukraine has its own limitations: different quality of government data, uneven digital capabilities of government bodies, military risks, increased cybersecurity requirements, personnel restrictions, the need for rapid management response and parallel adaptation to EU law. Therefore, Ukraine needs to combine the regulatory orientation on the AI Act with practical risk management tools that can work at the level of a specific government body right now.

In the scientific dimension, the proposed model clarifies the boundary between an automated solution and a solution prepared using artificial intelligence. For public administration, this boundary is fundamental. If the system only helps to identify risk, summarize data or generate alternatives, it is an element of analytical support. If its result determines the content of an individual decision or is not actually reviewed by a person, a different legal regime and significantly higher requirements for control arise. The central criterion should be the actual impact of the technology on the manifestation of managerial will.

The practical value of the proposed design lies in the fact that it can be applied to various areas of public administration: social policy, tax administration, state supervision, local government, appeal management, resource allocation, forecasting the load on services and detecting anomalies in public data. In each of these areas, the data set and the level of risk will be different, but the basic logic should remain constant: legal admissibility, data quality, risk classification, human review, documentation, appeal, audit and monitoring.

6. Conclusions

It has been established that the most justified model of using artificial intelligence in public administration is its application as a tool for preparing a management decision, provided that the final expression of the will of the government remains with the authorized official or body. Artificial intelligence can enhance information search, analytical data processing, forecasting, anomaly detection, scenario formation and preliminary assessment of alternatives. The final decision of the government, its motivation and responsibility for the consequences should remain with the authorized person or body of public authority.

The key risks of algorithmization of the preparation of management decisions are systematized. They include technical opacity, low quality or bias of data, procedural uncertainty of the role of the algorithm, organizational blurring of responsibility, automation displacement, legal risks, cyber threats and loss of trust in public institutions. It is proven that neutralizing these risks requires a combination of technical testing, data auditing, procedural certainty, organizational responsibility, legal guarantees, and meaningful human control.

International and Ukrainian regulatory and institutional guidelines for the use of artificial intelligence are characterized. The OECD, the European Union, the Council of Europe, UNESCO, and NIST form a common logic of risk-oriented, transparent, accountable, and controlled use of artificial intelligence. The Ukrainian framework, represented by the Concept of Artificial Intelligence Development, the Strategy for Digital Development of Innovative Activities, the White Paper of the Ministry of Digital Affairs, and the documents AI Unit and Sandbox, creates the basis for phased implementation, but requires operationalization at the level of specific management processes.

A phased mechanism for the use of artificial intelligence in the system for preparing a management decision is proposed. It includes defining a management task, checking legal admissibility, data audit, risk classification, selecting or configuring a model, obtaining an analytical result, human review, documenting the final decision, the possibility of appeal, audit and continuous monitoring. Such

a design prevents two risks: decorative use of artificial intelligence without a management effect and hidden automation of a government decision without proper control.

The practical significance of the results lies in the formation of an applied framework for internal management of AI solutions, which public authorities of Ukraine can use before adopting special legislation or sectoral regulations. Such a framework is suitable for preparing technical tasks, assessing readiness for launch, auditing implemented systems, training officials, documenting the role of the algorithmic system and developing procedures for reviewing and appealing decisions. Further research should be directed at sectoral adaptation of the proposed model for social policy, tax administration, state supervision, local government and public investment management.

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