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Responsible AI maturity model in the strategic management of corporate social responsibility of enterprises

Abstract. The object of the study is the processes of integrating artificial intelligence (AI) into the strategic management of corporate social responsibility (CSR) of enterprises amidst digital transformation, the spread of ESG approaches, and rising ethical challenges, particularly in unstable and wartime conditions.

Problem Statement. Modern enterprises are actively implementing AI technologies, necessitating their alignment with social, environmental, and ethical responsibility principles. At the same time, existing management approaches are fragmented: technological aspects of AI are considered separately from CSR concepts, creating a methodological gap between digitalization and strategic CSR management. This complicates transparency, accountability, and the ethics of AI use, while limiting the potential for long-term competitive advantages.

Unresolved aspects of the problem. Comprehensive approaches to forming models that integrate AI maturity levels, Responsible AI principles, quantitative efficiency evaluation systems, and adaptive feedback mechanisms remain underdeveloped, especially under high uncertainty.

Purpose of the article. The study aims to theoretically substantiate and develop a Responsible AI maturity model within the strategic CSR management system, establish approaches for evaluating its effectiveness based on Key Performance Indicators (KPIs), and develop practical implementation recommendations.

Presentation of the main material. The article proposes an original AI integration maturity model featuring five development levels (from reactive to transformational), a built-in Responsible AI ethical control mechanism, a Key Performance Indicator system (I_{CSR} , A_{AI} , M_{ESG} , S_{index}), and a cyclic implementation algorithm. Methods used include systems analysis, modeling, comparative analysis, and quantitative assessment. The model was tested on enterprises of various scales.

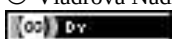
Conclusions. The developed model provides comprehensive, adaptive, and ethically oriented AI integration into CSR management, enhancing decision-making efficiency and transparency. It serves as a tool for strategic planning and Responsible AI maturity diagnostics.

Keywords: *artificial intelligence, Responsible AI, corporate social responsibility, maturity model, ESG strategies, digital transformation, social impact.*

Formulas: -; fig.: 1; tabl.: 3; Bibl.: 16.

JEL Classification: M14, O33, L21, Q56

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Introduction. The modern business world is undergoing a profound digital transformation in which artificial intelligence (AI) is evolving from a supplementary automation tool into a strategic driver of enterprise development. According to PwC (2026) estimates [16], the global economic contribution of AI could reach \$15.7 trillion by 2030, and already in 2025-2026, most large companies are transitioning from experimental technology use to its systemic strategic implementation in management [9]. Simultaneously, corporate social responsibility (CSR) is transforming from a voluntary practice into an integral element of strategic management, integrated with ESG principles (Environmental, Social, Governance).

The relevance of the research is driven by a combination of interconnected challenges.

First, the rapid spread of AI is accompanied by a range of ethical, social, and environmental risks, including algorithmic bias, model opacity (the "black box effect"), significant energy consumption of data centers, potential job displacement, and data privacy threats.

According to Deloitte (2025) data, only 42% of companies possess mature Responsible AI practices, while the majority continue to face regulatory and reputational risks [6].

Second, there is growing pressure from stakeholders - investors, consumers, and society - to ensure not only economic efficiency but also proven social and environmental responsibility, which is reflected in the proliferation of ESG reporting and ratings.

In Ukraine, these global trends take on a particular urgency. In wartime and post-war conditions, CSR is turning into a vital tool for social stability, support for defense capabilities, assistance to internally displaced persons, infrastructure restoration, and the environmental rehabilitation of territories. At the same time, Ukrainian businesses experience an acute shortage of modern management tools that would allow for the effective combination of AI implementation with the principles of responsible business conduct.

Despite a significant number of scientific works dedicated to CSR (Carroll; Freeman) [4] and artificial intelligence (Kaplan & Haenlein [11]; Brynjolfsson & McAfee [2]), comprehensive studies revealing the mechanisms of their systemic integration remain limited. Existing AI maturity models (Gartner AI Maturity Model, Deloitte Responsible AI Framework) focus primarily on technological readiness or adherence to general ethical principles and almost do not account for the specifics of strategic CSR management, especially under conditions of high uncertainty and socio-economic turbulence. The lack of an adapted, comprehensive model that combines AI maturity levels, Responsible AI mechanisms, a system of quantitative indicators, and adaptive feedback forms a significant scientific and practical gap.

Thus, the need to develop a conceptual model that ensures the effective and ethical integration of artificial intelligence into the strategic management of corporate social responsibility of enterprises determines the relevance, purpose, and objectives of this research.

Literature Review. The theoretical foundations of corporate social responsibility (CSR) were laid in the fundamental works of foreign and domestic scholars. A. Carroll's pyramidal model [5] is considered a classic, structuring CSR into four levels: economic, legal, ethical, and philanthropic. R. Freeman, in stakeholder theory [7], substantiated the need to balance the interests of all stakeholders to create long-term shared value. These approaches remain foundational; however, modern research increasingly integrates them with the ESG concept, transforming CSR into a strategic tool for sustainable development and reputation risk management.

In the context of digital transformation, the interaction between artificial intelligence and corporate social responsibility becomes particularly relevant. Over the past five years, there has been a rapid increase in the number of publications on this topic. Gartner (2025) [8] proposed an AI maturity model that evaluates organizations across five levels - from basic to transformational. However, this model remains primarily technology-oriented and does not sufficiently account for the socio-ethical aspects of CSR. Deloitte, in its Responsible AI Maturity Framework (2025), pays significant attention to ethical practices and principles of transparency, fairness, and accountability, yet focuses more on risk management than on the strategic integration of AI into ESG strategies.

McKinsey & Company (2025) [12], in its annual report «The State of AI», notes that companies achieving a high level of Responsible AI maturity demonstrate 30-45% better ESG performance compared to others. Simultaneously, the authors emphasize that only 19% of organizations have fully integrated AI ethical principles into their corporate strategies. PwC (2026), in the study "AI Business Predictions" [9], indicates that 61% of companies have moved from Responsible AI policies to their practical implementation, but the majority still lack clear mechanisms for measuring the social impact of such initiatives.

Empirical studies in recent years confirm the potential of artificial intelligence to enhance CSR efficiency. Wang et al. (2026) [1], based on an analysis of data from 500 large companies, proved that the implementation of Responsible AI positively affects the quality of ESG reporting, reduces reputational risks, and contributes to market capitalization growth. Xiao et al. (2025) [11] identified a statistically significant positive correlation between the use of AI in environmental monitoring and the reduction of CO₂ emissions, as well as an improvement in social indicators due to personalized interaction with stakeholders.

Domestic scholars are also actively researching these issues. D.T. Irnazarov, R.O. Kozub, and P.V. Puzyriova (2024) [10] analyzed the impact of artificial intelligence on corporate social responsibility processes in the context of Ukraine and noted AI's significant potential for forecasting social risks and optimizing charitable programs. S. Bohuslavska (2024) [3] and other Ukrainian authors emphasize that under wartime conditions, CSR takes on a new meaning, and digital technologies become critically important for its effective implementation.

A comparative analysis of existing maturity models (Gartner, Deloitte, IBM, Microsoft Responsible AI Standard) shows that they have certain drawbacks: fragmentation, weak integration with CSR/ESG, a lack of clear quantitative KPIs for social impact, and insufficient adaptability to the high-uncertainty conditions characteristic of transition economies.

Thus, despite significant scientific interest in separate aspects of the topic, a comprehensive approach remains underdeveloped. Such an approach should combine AI integration maturity levels, a built-in ethical control mechanism (Responsible AI), a quantitative performance evaluation system, and a cyclic adaptive mechanism oriented toward the strategic management of CSR in conditions of digital transformation and socio-economic turbulence.

Purpose, objectives and research methods. The purpose of the study is to theoretically substantiate and develop a Responsible AI maturity model within the strategic management system of corporate social responsibility (CSR) of enterprises, as well as to formulate approaches for evaluating its effectiveness based on a system of Key Performance Indicators (KPIs) and develop practical implementation recommendations.

To achieve the set goal, the following objectives were defined:

- to analyze the theoretical foundations of corporate social responsibility and modern approaches to its strategic management;
- to investigate the role and capabilities of artificial intelligence as a tool for transforming CSR strategies, and to identify the key risks and ethical challenges of its application;
- to develop the author's conceptual Responsible AI maturity model in strategic CSR management, including maturity levels, a built-in ethical mechanism, and a system of quantitative assessment indicators;
- to form a practical cyclic algorithm for the implementation of the proposed model;
- to test the developed model and algorithm using examples of enterprises of various scales (Ukrainian and international) and evaluate its practical suitability.

The study is based on a comprehensive application of general scientific and special methods, ensuring the consistency, validity, and reliability of the results.

The abstract-logical method was used for the theoretical generalization of scientific approaches to understanding the essence of CSR, AI, and Responsible AI, as well as for formulating conclusions and defining scientific novelty. Methods of analysis and synthesis were applied to

decompose complex phenomena (CSR structures, AI functions, risks) into separate elements and subsequently combine them into a unified conceptual model.

The systems approach allowed for the consideration of CSR strategy management as an integrated system including economic, social, environmental, and technological components, and to substantiate the place and role of artificial intelligence within this system. The modeling method became central to the development of the author's conceptual Responsible AI maturity model, its levels, and the seven-stage cyclic implementation algorithm.

The comparative analysis method was used to contrast existing AI maturity models (Gartner, Deloitte, etc.) with the author's developed model, and to compare the level of AI integration in CSR at Ukrainian and global enterprises. Empirical methods and quantitative analysis were utilized to calculate the proposed KPIs (I_{CSR} , A_{AI} , M_{ESG} , S_{index}) and to test the model using real company data. Finally, the generalization method was applied to formulate theoretical conclusions, practical recommendations, and to identify prospects for further research.

The information base of the study consists of official sustainability reports of companies (Microsoft, Google, Kyivstar, Nova Poshta, etc.) for 2025-2026, scientific publications in professional journals, analytical reports from Gartner, Deloitte, PwC, and McKinsey, as well as regulatory documents of Ukraine and the EU in the field of artificial intelligence.

The combination of theoretical and empirical methods ensured the comprehensiveness of the research and the possibility of developing not only a theoretical model but also a practically oriented tool for enterprises.

Research results. The primary scientific result of the research is the developed conceptual Responsible AI maturity model within the strategic management of corporate social responsibility (CSR) of enterprises. The model is systemic, hierarchical, and adaptive in nature, designed for a comprehensive assessment of the current level of AI integration into CSR strategies, as well as for ensuring a gradual, controlled transition of the enterprise to higher maturity levels.

The model (Fig. 1) is built around three key interconnected blocks that form a closed adaptive cycle:

1. Resource Block: Forms the information environment of the enterprise. It covers internal data (financial, HR, operational), external data (stakeholder information, regulatory requirements, socio-environmental indicators), the development level of digital infrastructure, and the regulatory framework. This block determines the resource capabilities and constraints for the effective use of AI in CSR management.

2. Analytical Block: Serves as the core of the model and is based on modern artificial intelligence technologies. It provides for the collection and processing of large datasets, forecasting ESG trends, identifying potential risks, scenario modeling, performing sentiment analysis of stakeholder feedback, and generating evidence-based management recommendations. It is in this block that raw data is transformed into valuable analytical information for decision-making.

3. Management Block: Includes decision-making processes, the implementation of specific CSR initiatives, monitoring their effectiveness, and the operational adjustment of strategies based on received analytical data and recommendations. This block ensures the transition from analysis to real action and practical results.

The distinctive features of the proposed model, which ensure its scientific novelty and practical value compared to existing developments, include:

- Built-in Responsible AI mechanism (ethical filter): This automatically checks all AI recommendations and decisions for compliance with key principles: transparency, fairness, non-discrimination, accountability, and personal data protection. This significantly reduces the ethical and reputational risks of AI application.
- Cyclic feedback loop: Ensures the continuous retraining of AI models based on the real results of implemented CSR initiatives, increasing the accuracy of forecasts and the adaptability of the system over time.

- Five-level maturity system for AI integration in CSR (Reactive, Formative, Managed, Optimized, Transformational): Enables an objective diagnosis of the enterprise's current state and clearly defines directions for its further development.
- Original quantitative performance evaluation system: Based on four key indicators (I_{CSR} , A_{AI} , M_{ESG} , S_{index}), which allows for measuring the level of Responsible AI integration and its impact on the enterprise's social effect both qualitatively and quantitatively.

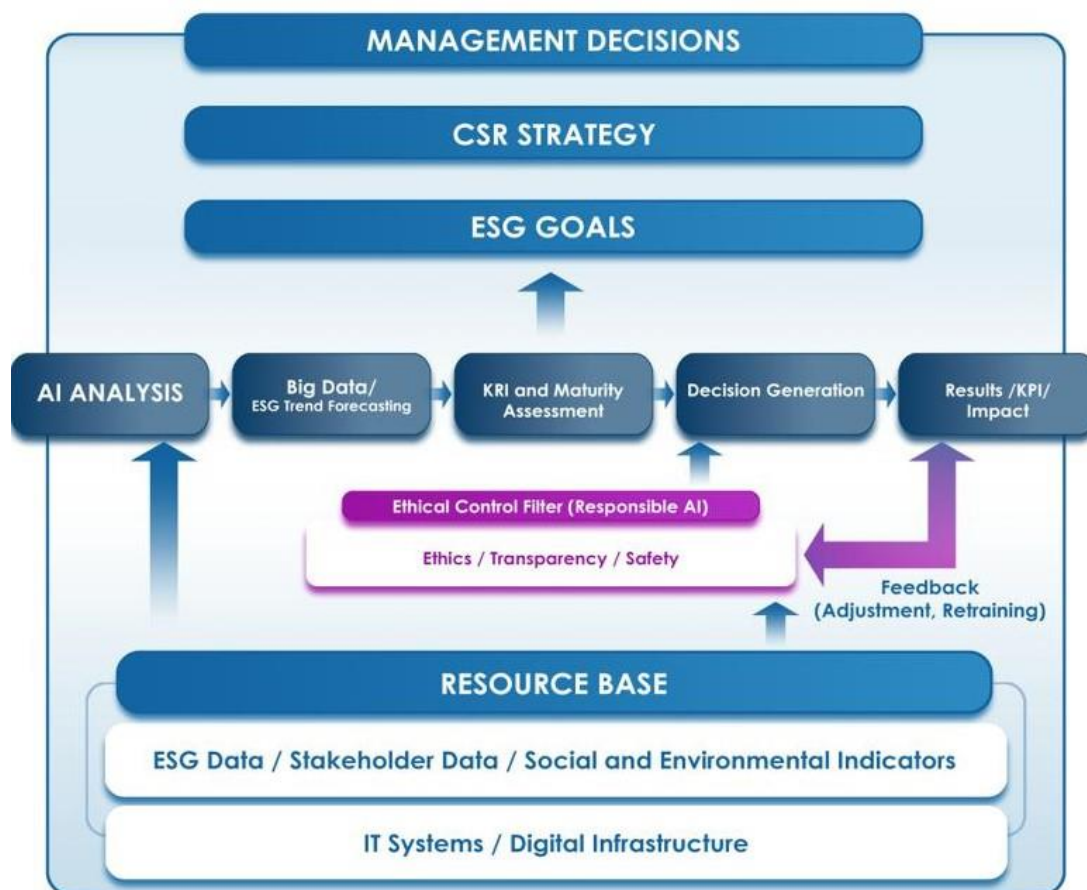


Figure 1. Conceptual model of Responsible AI maturity in strategic management of corporate social responsibility of enterprises

Source: prepared by the authors

The proposed model functions as a closed adaptive process, in which the final management decision always rests with the human, while artificial intelligence acts as a powerful analytical and advisory tool operating under ethical control.

As a result of the conducted research, an original conceptual model of Responsible AI maturity in the strategic management of corporate social responsibility of enterprises has been developed. This model is a key scientific result of the work and represents a holistic system reflecting the relationship between the enterprise's resource base, the analytical potential of artificial intelligence, and the management decision-making process in the field of CSR.

The model is systemic in nature and differs from existing developments in its comprehensive approach. It integrates resource, analytical, and management components into a single decision-making system. Unlike well-known maturity models (Gartner AI Maturity Model and Deloitte Responsible AI Framework), the author's model is specifically oriented toward the

sphere of corporate social responsibility, accounts for ESG requirements, and is adapted to the conditions of digital transformation and socio-economic turbulence.

The model functions as a cyclic adaptive management system:

- At the first stage, the information environment of the enterprise is formed.
- Next, analytical data processing occurs using AI technologies, including forecasting ESG trends, evaluating key indicators, and determining the current maturity level.
- After decisions pass through the Responsible AI filter, substantiated variants of management decisions are formulated.
- The final stage involves the implementation of decisions, assessment of their effectiveness, and returning information into the cycle for further model refinement.

Particular importance in the model is given to the quantitative assessment of the level of AI integration. For this purpose, an original system of Key Performance Indicators (KPIs) has been developed, allowing not only for the diagnosis of the current state but also for monitoring the dynamics of the enterprise's development (Table 1).

Table 1. KPI system for integrating Responsible AI into corporate CSR strategies

Metric Name	Calculation Formula	Variable Explanation	Economic Essence and Expected Effect
CSR Intensity (I_{CSR})	$I_{CSR} = \sum_{i=1}^n P_i$	P_i - number of implemented projects (initiatives) during the reporting period T (year)	Reflects the scale of resource involvement and reputational capitalization.
Automation Share (A_{AI})	$A_{AI} = \frac{Pr_{AI}}{Pr_{total}} * 100\%$	Pr_{AI} - processes using AI; Pr_{total} - total number of CSR processes	Cost optimization, error reduction, and increased operational speed.
Analytical Maturity (M_{ESG})	$M_{ESG} = \sum_{j=1}^m w_j * k_j$	k_j - presence of a function (0/1); w_j - complexity weight (from 0.1 for descriptive to 0.5 for proactive)	Transition from reactive response to proactive risk management.
Social Effect Index (S_{index})	$S_{index} = \sum (\alpha B, \beta V, \gamma S)$	B - coverage; V - created value; S - stakeholder satisfaction; α, β, γ - weight coefficients	Quantitative expression of the contribution to creating Shared Value.

Note*1: The parameter k_j is an indicator of the presence of a corresponding analytical AI function in the enterprise, where the value 1 is assigned if the tool is regularly used in CSR management practice, and 0 - if it is absent or fragmented.

Note*2: The weighting factors for M_{ESG} (w_j) and S_{index} (α, β, γ) are determined by expert means or by the hierarchy method, based on the strategic priorities of the enterprise. For a balanced model, $\beta=0.4$ (priority of real value created) is recommended.

Note*3: The calculation of the Social Effect Index (S_{index}) is considered valid only if the formed decisions pass through the Responsible AI filter (ethics, transparency, absence of algorithmic bias). In case of ethical violations, the S_{index} value is subject to adjustment using a penalty coefficient n_{po} .

Джерело: побудовано авторами

Source: prepared by the authors

Based on the developed KPI system, a detailed characterization of the five maturity levels of Responsible AI integration has been formulated. Each level reflects a certain stage of system development - from minimal (reactive) use of artificial intelligence to full transformation, where AI becomes a strategic driver of social innovation and a key element of the enterprise's business model [6]. The transition between levels occurs gradually and depends on the degree of CSR process automation, the depth of AI analytical capabilities, the quality of ethical control, and the achieved social impact. The proposed threshold values for the KPIs are indicative in nature but are based on the generalization of modern digital transformation practices, ESG management, and empirical data from leading companies [3]. A detailed characterization of the five Responsible AI maturity levels is presented in Table 2.

Table 2. Maturity levels of Responsible AI in the strategic management of CSR of enterprises

Maturity Level	I _{CSR}	A _{AI} , %	M _{ESG}	S _{index} , %	Main Level Characteristic
1. Reactive	< 5	< 10	0-0,8	0-19	Fragmented use of AI, reaction only to external pressure
2. Formative	5-10	10-50	0,9-2,0	20-39	Pilot projects, first attempts at systemic AI application
3. Managed	11-20	51-75	2,1-3,5	40-59	Systemic application of AI in ESG reporting, monitoring, and HR
4. Optimized	> 20	76-99	3,6-4,4	60-79	Predictive analytics, active optimization of CSR initiatives
5. Transformational	> 30	100	4,5-5,0	80-100	Full strategic integration, AI-driven social innovation

Source: prepared by the authors

For the practical implementation of the proposed Responsible AI maturity model, a seven-stage cyclic algorithm for its integration into the strategic management system of corporate social responsibility (CSR) of enterprises has been developed. The algorithm is iterative and built on the principle of continuous improvement, ensuring its adaptability to changes in the internal and external environment.

1. Stage One: A comprehensive diagnosis of the enterprise's current maturity level is conducted, involving an assessment of the digital infrastructure state, data availability and quality, the level of AI integration into business processes, and the compliance of existing practices with Responsible AI principles.

2. Stage Two: Involves defining strategic goals for AI integration into CSR and selecting relevant tools and technologies that correspond to the specifics of the enterprise's activities.

3. Stage Three (Pilot Implementation): Focused on testing selected solutions in a controlled environment, allowing for risk minimization and performance evaluation prior to large-scale application.

4. Stage Four: Involves personnel training, the formation of digital competencies, and the transformation of organizational culture with an emphasis on the ethical use of artificial intelligence technologies.

5. Stage Five: Consists of scaling successful practices across the entire organization, accompanied by the integration of AI into key business processes and CSR strategies.

6. Stage Six: Continuous monitoring and auditing of AI systems' functioning are carried out, including an assessment of their impact on social, environmental, and governance indicators.

7. Stage Seven (Final): Involves strategy adjustment, model updates, and the launch of a new cycle iteration, taking into account the results obtained and changes in the external environment.

This algorithmic structure ensures a controlled and gradual transition of the enterprise to higher levels of Responsible AI maturity while maintaining principles of transparency, accountability, and ethics.

Practical testing of the developed model and implementation algorithm was carried out at enterprises of various scales, ownership forms, and levels of digital maturity, which allowed for verifying its universality and adaptability under different operating conditions. The sample included both large companies with developed digital infrastructure and small and medium-sized enterprises at the initial stages of digital transformation.

The evaluation was performed based on the calculation of the proposed key performance indicators (I_{CSR}, A_{AI}, M_{ESG}, S_{index}) which allowed not only for determining the current maturity level of the enterprises but also for identifying the correlation between the level of AI integration and the effectiveness of CSR strategy implementation. The KPI calculation results and maturity level identification are systematized and presented in Table 3, providing a visual comparison of the studied enterprises and confirming the practical applicability of the proposed approach.

The testing of the developed model (Table 3) confirmed its practical value and universality in the context of strategic management of corporate social responsibility (CSR) of enterprises.

Based on the results of the analysis, a clear positive correlation was established between the level of Responsible AI maturity and the social effect index (S_{index}).

Table 3. Results of testing the Responsible AI maturity model (2025-2026)

Enterprise	Maturity Level	I_{CSR}	A_{AI} , %	M_{ESG}	S_{index} , %
OST LTD LLC	Reactive	3	5	0,1	12
«Nova Poshta»	Formative	18	35	1,8	32
«Kyivstar»	Managed	18	65	2,9	52
Google	Optimized	28	92	4,1	78
Microsoft	Transformational	42	100	4,8	98

Source: calculated and compiled by the author based on data from official company reports for 2025-2026: Nova Poshta novaposhta.ua/csr/, Kyivstar kyivstar.ua/about/responsibility, Google Sustainability Report 2025 sustainability.google, Microsoft Environmental Sustainability Report 2025 microsoft.com/corporate-responsibility [18]; [14]; [9]; [13]; [8].

In particular, enterprises that have reached the optimized and transformational maturity levels demonstrate significantly higher performance in implementing CSR strategies, an increased level of non-financial reporting transparency, and growth in trust from key stakeholders. At the same time, companies at the initial stages of artificial intelligence integration are characterized by fragmented approaches to CSR and limited use of the analytical capabilities of digital technologies.

The results obtained indicate that the implementation of the proposed Responsible AI maturity model ensures not only an increase in operational efficiency but also forms a systemic approach to managing the enterprise's social impact. This allows for the integration of sustainable development principles into the business strategy at a qualitatively new level.

Thus, the proposed model can be effectively applied by enterprises of various scales as a tool for diagnostics, planning, and optimization of digital transformation processes in the field of corporate social responsibility.

Discussion. The analysis of empirical results suggests a positive relationship between Responsible AI maturity levels and the Social Effect Index (S_{index}), indicating that higher levels of AI integration are associated with improved CSR performance outcomes.

Enterprises operating at the optimized and transformational maturity levels tend to demonstrate stronger ESG performance, higher transparency of non-financial reporting, and increased stakeholder trust. In contrast, organizations at the initial stages of AI adoption are characterized by fragmented CSR practices and limited use of advanced analytical capabilities.

These findings highlight that Responsible AI implementation contributes not only to operational improvements but also to the formation of a more systemic and structured approach to managing corporate social impact. This, in turn, supports the integration of sustainable development principles into corporate strategy.

However, the study has limitations related to sample size and variability of open ESG reporting data. Future research should focus on sectoral adaptation of the model and integration of generative AI technologies into CSR management systems.

Conclusions. The study developed a conceptual Responsible AI maturity model for integrating artificial intelligence into corporate social responsibility management. The model provides a structured framework combining maturity levels, a KPI-based evaluation system, and a cyclic implementation algorithm.

The theoretical contribution lies in integrating artificial intelligence with CSR strategy through a unified management and analytical framework.

The practical significance of the model is its applicability for diagnosing AI maturity levels and improving the effectiveness of CSR strategies.

The proposed approach supports the transition of enterprises from fragmented AI usage to its systematic and ethically governed integration into corporate governance.

Future research should focus on empirical validation, KPI refinement, and industry-specific adaptation of the model.

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Declaration on the use of artificial intelligence

During the preparation of this article, the Gemini artificial intelligence tool was used to edit and improve the translation, including checking grammar, style, and the accuracy of wording. The concept, content, scientific novelty, and research results belong to the authors.. The final version of the article was reviewed, revised, and edited by the authors.

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Модель зрілості відповідального штучного інтелекту у стратегічному управлінні корпоративною соціальною відповідальністю підприємств

Анотація. Об'єктом дослідження є процеси інтеграції штучного інтелекту (ШІ) у стратегічне управління корпоративною соціальною відповідальністю (КСВ) підприємств в умовах цифрової трансформації, поширення ESG-підходів та зростання етичних викликів, зокрема в умовах нестабільності та воєнного часу.

Постановка проблеми. Сучасні підприємства активно впроваджують технології ШІ, що зумовлює необхідність їх узгодження з принципами соціальної, екологічної та етичної відповідальності. Водночас існуючі підходи до управління характеризуються фрагментарністю: технологічні аспекти ШІ розглядаються відокремлено від концепцій КСВ, що формує методологічний розрив між процесами цифровізації та стратегічного управління соціальною відповідальністю. Це ускладнює забезпечення прозорості, підзвітності та етичності використання ШІ, а також обмежує можливості формування довгострокових конкурентних переваг.

Нерозв'язані аспекти. Недостатньо розробленими залишаються комплексні підходи до формування моделей, що забезпечують інтеграцію рівнів зрілості застосування ШІ, принципів Responsible AI, систем кількісного оцінювання ефективності та механізми адаптивного зворотного зв'язку, особливо в умовах високої невизначеності.

Мета статті. Метою дослідження є теоретичне обґрунтування та розроблення моделі зрілості Responsible AI у системі стратегічного управління корпоративною соціальною відповідальністю підприємств, а також формування підходів до оцінювання її ефективності на основі системи ключових показників (KPI) та розроблення практичних рекомендацій щодо впровадження.

Основний матеріал. У статті запропоновано авторську модель зрілості інтеграції ШІ, що включає п'ять рівнів розвитку (від реактивного до трансформаційного), вбудований механізм етичного контролю Responsible AI, систему ключових показників ефективності (I_{CSR} , A_{AI} , M_{ESG} , S_{index}) та циклічний алгоритм впровадження. Використано методи системного аналізу, моделювання, порівняльного аналізу та кількісної оцінки. Проведено апробацію моделі на прикладах підприємств різного масштабу.

Висновки. Розроблена модель забезпечує комплексну, адаптивну та етично орієнтовану інтеграцію ШІ в управління КСВ, сприяє підвищенню ефективності управлінських рішень, рівня прозорості діяльності підприємств та може бути використана як інструмент стратегічного планування і діагностики зрілості Responsible AI.

Ключові слова: штучний інтелект, Responsible AI, корпоративна соціальна відповідальність, модель зрілості, ESG-стратегії, цифрова трансформація, соціальний ефект.

Формули: -; рис.: 1; табл.: 3; бібл.: 16.

JEL Classification: M14, O33, L21, Q56

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Конфлікт інтересів: автори повідомляють про відсутність конфлікту інтересів

Декларація про використання штучного інтелекту

Під час підготовки цієї статті було використано інструменти штучного інтелекту Gemini для редагування та вдосконалення перекладу — перевірки граматики, стилістики й коректності формулювань. Задум, зміст, наукова новизна та результати дослідження належать авторам. Остаточний текст статті був перевірений, опрацьований та відредагований авторам.