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Transformations of Managerial Leadership in the Era of Generative AI in Decision Making, Accountability, and Strategic Capability Development

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ABSTRACT

The rapid advancement of generative artificial intelligence (generative AI) has significantly transformed how organizations manage information, develop strategic alternatives, and support managerial decision-making, shifting leadership responsibilities from information gathering toward directing, evaluating, and integrating AI-generated outputs. This transformation raises critical questions concerning the boundaries of human and machine authority, accountability for AI-assisted decisions, and the strategic capabilities required for responsible AI integration. This study aimed to examine the transformation of managerial leadership in AI-assisted decision-making, identify key dimensions of managerial accountability, and synthesize the strategic capabilities necessary for responsible technology integration. A qualitative approach employing an integrative literature review was adopted, drawing on peer-reviewed journal articles, academic books, and official documents published primarily between 2020 and 2026. The selected literature was analyzed through thematic coding and critical comparative analysis. The findings indicated that managerial leadership evolved around three interrelated functions: directing, evaluating, and integrating AI-generated outputs, rather than simply experiencing a reduction in responsibilities through automation. Managerial accountability encompassed four dimensions: clear allocation of responsibility, transparency and traceability, meaningful human oversight, and risk management. These dimensions provided a conceptual basis for maintaining human accountability in AI-assisted decision-making. Furthermore, five strategic capabilities were identified as central to responsible AI integration: AI literacy, knowledge integration, governance capabilities, strategic adaptability, and organizational learning. The study concluded that managerial leadership transformation in the era of generative AI depended not merely on technological adoption but also on the integration of human judgment, robust accountability mechanisms, and adaptive strategic capabilities. These findings contributed to a conceptual framework for responsible AI governance and sustainable organizational adaptation.

INTRODUCTION

The development of generative artificial intelligence (generative AI) has brought significant changes to how organizations manage information, conduct operational activities, and formulate managerial decisions. Unlike AI approaches primarily focused on prediction, classification, or pattern recognition, generative AI enables users to generate text, summarize

documents, formulate alternative solutions, develop ideas, and analyze various business problems through natural language instructions. The adoption of this technology offers opportunities for organizations to accelerate information processing and improve productivity in knowledge-intensive activities.

Research conducted by Noy & Zhang, (2023), published in the journal Science, demonstrated that using ChatGPT in an experiment involving 453 professionals improved productivity in writing-related tasks, reducing average completion time by 40% and increasing output quality by 18%. Although these findings cannot be directly generalized to all managerial activities, they demonstrate the potential of generative AI to support tasks requiring information processing and the development of alternative solutions. In business environments characterized by market fluctuations, uncertainty, and increasing information complexity, these capabilities are particularly relevant to strategic planning, evaluating alternatives, and developing decision recommendations. However, the benefits of generative AI depend not only on technological sophistication but also on an organization's ability to integrate the technology into its operational processes and strategic objectives.

The adoption of generative AI has also contributed to changes in managerial leadership roles. Managers are no longer responsible solely for gathering information, preparing reports, and making decisions based on their expertise; they must also guide technology utilization, formulate appropriate questions, evaluate the reliability of AI-generated outputs, and assess the relevance of AI recommendations to organizational contexts. (Shrestha et al., 2019) explained that AI-assisted organizational decision-making can follow several configurations, ranging from delegating decisions to AI systems to combining human and AI judgments through sequential or integrated processes. Their framework illustrates that AI adoption involves restructuring decision-making authority and organizational processes rather than merely introducing additional digital tools.

Similarly, Raisch & Krakowski, (2021) introduced the automation–augmentation paradox, emphasizing that technological substitution of human tasks and technological enhancement of human capabilities are interconnected processes. In the context of generative AI, managers must determine which activities can be supported or automated while maintaining appropriate human involvement in decisions requiring contextual understanding, ethical judgment, and organizational accountability. Therefore, managerial leadership transformation extends beyond proficiency in operating AI applications to include managing human–AI collaboration and establishing appropriate boundaries of decision-making authority.

In addition to creating opportunities for greater efficiency, generative AI introduces accountability challenges that require careful consideration in organizational management. Generative AI systems can produce inaccurate yet convincing information, generate contextually inappropriate recommendations, reproduce biases embedded in training data, and make it difficult for users to trace the reasoning underlying particular outputs. When such recommendations inform organizational policies, supplier selection, investment planning, performance evaluations, or resource allocation, errors extend beyond technical limitations and may undermine decision quality and stakeholder trust.

Autio et al. (2024), in the Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile published by the National Institute of Standards and Technology (NIST), identified risks specific to or amplified by generative AI and proposed risk management measures throughout the AI system life cycle. Meanwhile, Grote, Parker, and Crowston (2024) emphasized the importance of aligning decision-making control with accountability among stakeholders involved in AI development and deployment. This perspective is particularly relevant because organizational responsibility cannot simply be transferred to AI systems when managerial decisions rely on AI-generated recommendations.

Leaders and organizations must establish risk-proportionate human oversight, maintain documentation of decision-making processes, clarify the allocation of authority, and implement corrective mechanisms when AI-generated outputs are inaccurate or produce unintended consequences. Accordingly, accountability in generative AI-assisted decision-making should be understood as an integral component of organizational governance rather than merely a matter of technical compliance.

The ability to respond effectively to these transformations is closely associated with organizational strategic capabilities, particularly the capacity to integrate technological resources, human expertise, organizational learning, and strategic adaptation. The dynamic capabilities perspective developed by Teece, (2007) explains that organizational competitiveness in changing environments depends on the ability to sense opportunities and threats, seize opportunities through strategic decisions and resource allocation, and transform or reconfigure organizational resources and competencies.

In the context of generative AI, sensing opportunities involves understanding organizational needs and identifying potential AI applications. Seizing opportunities is reflected in selecting appropriate use cases, allocating investments, and establishing governance mechanisms, while organizational transformation involves redesigning workflows, developing employee competencies, and learning from technology implementation and evaluation. Consequently, generative AI adoption does not automatically generate strategic advantages unless organizations possess leadership capabilities that can guide transformation and align technological applications with long-term objectives. Leaders must develop AI literacy, critical evaluation skills, risk management competencies, cross-functional coordination, and the ability to foster an organizational learning culture. These capabilities enable organizations to leverage AI while preserving professional expertise, tacit knowledge, organizational values, and stakeholder interests. Thus, generative AI should be understood as a strategic resource whose organizational value depends on managerial capabilities and the effective orchestration of technological and human resources.

Examining managerial leadership transformation in the era of generative AI is essential for understanding the relationships among technological adoption, organizational decision-making, accountability, and strategic adaptation. Although previous studies have investigated AI-assisted decision-making, automation, risk management, and dynamic capabilities, further conceptual synthesis is needed to clarify how these dimensions interact within managerial leadership practices. Accordingly, this study examined leadership transformation through three interconnected dimensions: decision-making, accountability, and strategic capability development. This approach sought to explain how organizational leaders could integrate generative AI responsibly while supporting sustainable organizational adaptation.

The central research problem arose from the need to clarify the relationship between generative AI adoption and changes in managerial leadership practices. First, using AI to generate alternatives and decision recommendations raises questions about the boundaries between human and machine authority, particularly when decisions involve uncertainty, contextual judgment, and strategic consequences. Second, reliance on AI-generated outputs requires clearly defined responsibilities for information verification, final decision-making, process documentation, and error management. Third, effective generative AI integration requires leadership capabilities extending beyond technical proficiency to include AI literacy, critical evaluation, change management, organizational learning, and strategic alignment. Fourth, the relationships among leadership transformation, decision-making quality, accountability, and strategic capabilities require systematic examination through an evidence-based synthesis of existing literature. These issues therefore necessitate a structured review and mapping of relevant publications to establish the study's contribution based on

documented scholarly evidence rather than assumptions about the absence of previous research.

The research gaps addressed in this study encompassed three interconnected dimensions. Conceptually, the study examined the extent to which existing literature on AI-assisted leadership and organizational decision-making has integrated considerations of accountability and strategic capability development. For example, Shrestha et al. (2019) provided a framework for understanding human–AI decision-making structures, whereas Grote et al. (2024) examined the alignment between control and accountability. These perspectives, together with the dynamic capabilities framework, provided a foundation for further conceptual integration without assuming that their relationships had been entirely overlooked in previous research. From a theoretical perspective, the study investigated how managerial leadership and dynamic capabilities could complement one another in explaining how leaders identify opportunities for generative AI adoption, determine appropriate applications, manage associated risks, and reconfigure organizational resources. From a practical perspective, the study examined how managers could balance technological efficiency with human validation, clearly allocated responsibilities, and strategic objectives. Thus, the research gap concerned the need for an integrated conceptual synthesis that clarified the relationships among these dimensions based on a structured examination of relevant literature.

Based on the identified background and research gaps, this study addressed three primary research questions. First, how does generative AI transform managerial leadership roles in organizational decision-making? Second, how can managerial accountability be conceptualized and maintained in decision-making processes involving generative AI? Third, what strategic capabilities are required for leaders to integrate generative AI effectively and responsibly into organizational practices?

This study aimed to analyze the transformation of managerial leadership roles in generative AI-assisted decision-making, identify relevant dimensions of managerial accountability, and synthesize the strategic capabilities required for responsible organizational integration of generative AI. Additionally, the study sought to develop a conceptual framework connecting managerial leadership, decision-making, accountability, and strategic capabilities to inform future research and the development of management practices.

Theoretically, this study sought to contribute to the literature by integrating managerial leadership perspectives with the dynamic capabilities framework to explain organizational transformation in the era of generative AI. This integration aimed to clarify how leadership responsibilities related to directing technology utilization, maintaining decision-making accountability, and strengthening organizational adaptability could be understood within a unified conceptual framework. Practically, the study sought to provide a foundation for organizations to develop relevant leadership competencies, establish clear boundaries of authority between human decision-makers and AI systems, implement output validation and decision documentation mechanisms, and strengthen organizational learning to support responsible AI adoption. Accordingly, this study positioned generative AI not as a replacement for managerial leadership but as a technological resource whose strategic value depends on the quality of human judgment, effective governance, and continuous organizational adaptation.

METHOD

This study employed a qualitative approach using an integrative literature review to identify, compare, evaluate, and synthesize previous research on managerial leadership transformation in the era of generative artificial intelligence (generative AI), particularly concerning decision-making, accountability, and organizational strategic capability

development. This approach facilitated an in-depth examination of theoretical perspectives, conceptual relationships, and empirical findings relevant to the research objectives (Sugiyono, 2022; Sari et al., 2025).

The integrative literature review design was adopted to examine the interconnected dimensions of managerial leadership, AI-assisted decision-making, AI governance and accountability, and organizational strategic capabilities. The review focused on identifying conceptual relationships, contrasting theoretical perspectives, and synthesizing existing findings to develop an integrated conceptual framework. The units of analysis comprised peer-reviewed journal articles, academic books, and relevant official documents. The study relied exclusively on secondary literature and did not involve primary data collection.

Secondary data were obtained from relevant scientific publications identified through Google Scholar, Garuda, and academic databases, including Scopus and Web of Science, where accessible. Additional sources were identified through ScienceDirect, SpringerLink, Emerald Insight, and Wiley Online Library. Academic books and official institutional documents addressing artificial intelligence, digital transformation, technology governance, and organizational accountability were also considered to strengthen the theoretical foundation and contextual relevance of the review.

The literature search employed Indonesian and English keywords, including "generative AI," "generative artificial intelligence," "managerial leadership," "strategic leadership," "decision-making," "AI accountability," "AI governance," "human oversight," "dynamic capabilities," and "strategic capabilities." These terms were combined using the Boolean operators AND and OR to identify publications addressing the relationships among generative AI, leadership transformation, organizational decision-making, accountability, and strategic capability development.

The literature search primarily covered publications from 2020 to 2026 to capture recent developments in generative AI adoption and organizational management. Earlier publications were included when they provided foundational theoretical contributions to leadership, decision-making, governance, or dynamic capabilities. Source selection emphasized relevance to the research objectives and conceptual significance rather than publication date alone (Sari et al., 2025).

Literature selection followed predefined inclusion and exclusion criteria. Publications were included if they addressed at least one of the study's central themes: managerial leadership transformation, generative AI-assisted decision-making, AI accountability and governance, or organizational strategic capability development. Eligible sources included scholarly journal articles, academic books, and official documents with identifiable authorship and publication information. Publications in Indonesian and English were considered. Sources lacking verifiable bibliographic information, substantive relevance, or sufficient analytical content were excluded.

The literature selection process involved identifying relevant publications, removing duplicates, screening titles and abstracts, assessing full-text eligibility, and selecting sources for analysis. Full-text assessments considered thematic relevance, methodological clarity, and theoretical or empirical contributions. Publications meeting the inclusion criteria were retained for data extraction and synthesis.

The selection process was documented by recording the number of publications identified, duplicate records removed, sources excluded during screening, and reasons for exclusion following full-text assessment. Where applicable, the selection process was presented using a flow diagram informed by PRISMA 2020 reporting principles. However, the study retained its integrative literature review design rather than adopting a systematic literature review methodology. The final number of included publications was determined by the documented search and screening results.

Data were analyzed using thematic analysis to identify recurring concepts, theoretical relationships, and differences across the selected literature (Sugiyono, 2022). Relevant information was extracted from each publication, including authorship, publication year, research objectives, theoretical foundations, methodological approaches, principal findings, limitations, and relevance to the study's research questions.

The extracted information was coded according to concepts related to managerial leadership transformation, AI-assisted decision-making, human accountability, oversight mechanisms, and organizational strategic capabilities. Related codes were subsequently grouped into broader themes, including changes in managerial responsibilities, human oversight and accountability, and the development of capabilities required for responsible generative AI integration.

A critical comparative analysis was conducted to identify similarities, differences, inconsistencies, and limitations across the reviewed publications. The resulting themes were synthesized to establish conceptual relationships among managerial leadership, AI-assisted decision-making, accountability, and strategic capabilities. This synthesis informed the development of a conceptual framework explaining the potential transformation of managerial leadership through generative AI integration. Interpretations directly supported by the reviewed literature were distinguished from conceptual propositions developed through the synthesis.

The trustworthiness of the review was strengthened through source credibility assessment, consistent application of selection criteria, systematic documentation of extracted information, and cross-source comparison. Contradictory findings were examined rather than excluded solely because they differed from prevailing interpretations. Conceptual conclusions were traced to their supporting publications to maintain transparency and analytical consistency. These procedures supported the credibility, dependability, and traceability of the literature synthesis (Sugiyono, 2022).

RESULTS AND DISCUSSION

Overview of the Literature Analyzed

The literature on managerial leadership transformation in the era of Generative Artificial Intelligence (Generative AI) shows the intersection between strategic management studies, decision-making, human and technology collaboration, and organizational governance. Generative AI is not only understood as an instrument for automating work, but also as a technology that has the potential to change the way managers access information, evaluate alternatives, coordinate knowledge, and develop organizational capabilities. However, these benefits do not appear automatically because they are influenced by the characteristics of tasks, user capabilities, information quality, and supervisory mechanisms implemented by the organization.

Raisch and Krakowski (2021) explain the relationship between automation and augmentation through the perspective of the automation–augmentation paradox. Automation refers to the transfer of task execution to technology, while augmentation emphasizes human and technological collaboration to improve task completion capabilities. The two processes do not always stand alone, but can occur simultaneously and create tension in organizational management. This perspective is relevant to explain why the application of Generative AI requires a change in managerial roles, not just the addition of digital tools.

The research of Noy and Zhang (2023) provides experimental evidence that the use of ChatGPT can increase productivity in professional writing tasks. Experiments on 453 highly educated professionals showed that the group that used ChatGPT completed tasks on average 40% faster and produced an 18% improved quality of output compared to the unassisted condition. However, the findings were limited to the context of the writing tasks being studied

and could not be directly generalized into evidence that all managerial decisions would improve in quality with the use of Generative AI.

Table 1. Characteristics of Relevant Literature

Aspects	Overview of the literature
Number of articles	The final number has not been determined because the recording of search, duplication, and selection results has not been carried out completely.
Year of publication	Sources cover the foundations of older strategic management theories and more cutting-edge AI research, especially the 2021–2026 publications.
Field of study	Digital leadership, strategic management, decision-making, human–AI interaction, AI governance, and organizational capabilities.
Research approach	Conceptual articles, literature reviews, experimental research, quantitative research, as well as risk management framework documents.
Dominant focus	The relationship between automation and augmentation, AI support for knowledge work, human–AI collaboration, risk control, and capability development.
Indonesian context	Research on AI literacy, employee agility, strategic capabilities, and AI adoption in Indonesian organizations is becoming available.
Initial gap	The integration between leadership transformation, Generative AI-assisted decision accountability, and strategic capability development still needs to be tested and synthesized in a more targeted manner.

These sources show that the study of AI in management uses a variety of approaches. Conceptual articles help explain theoretical mechanisms, while experimental research provides evidence on human performance when using AI on specific tasks. Organizational research complements both approaches by examining how literacy, work structure, and adaptability relate to the use of technology.

In the Indonesian context, Pranaputra, Suryadi, Disman, and Askolani (2026) examined the relationship between AI literacy, employee agility, and strategic capabilities in 350 employees of organizations that adopted AI. The reported results show a positive relationship between AI literacy and employee agility as well as between employee agility and strategic capabilities. These findings provide a contextual foothold for the discussion of organizational capabilities in Indonesia, but do not directly prove the causal relationship between Generative AI and leadership transformation because the focus of the research is broader on AI adoption.

Thus, the initial literature pattern leads to three interrelated problems. First, how managers change the way decisions are made when recommendations can be generated by AI. Second, how organizations maintain accountability when decisions use technology outputs. Third, how literacy, governance, and learning are developed so that the use of AI produces sustainable strategic value. These three issues are the basis for organizing the next discussion theme.

Transformational Managerial Leadership in Decision Making

The transformation of managerial leadership in the era of Generative AI can be understood as a change in the way leaders manage information, build assessments, and direct decision-making processes. In conventional management patterns, managers are often at the center of information gathering, problem interpretation, and the determination of alternative course of action. While Generative AI can help summarize documents, draft scenarios, generate ideas, and compare a number of alternatives, some of those activities can be done with the support of technology. This change does not mean that the manager's role is losing relevance, but that the source of managerial contribution is shifting from simply generating information to being able to evaluate, integrate, and use information strategically.

Raisch and Krakowski (2021) emphasize that automation and augmentation need to be managed as two interrelated tendencies. In managerial practice, AI can take over routine work such as compiling report summaries or organizing information, while strengthening managers' ability to formulate alternative decisions. However, if organizations place too much emphasis on automation, there is a risk that human judgment and contextual understanding will be underutilized. Conversely, if AI is only treated as an add-on tool without changing work processes, opportunities to improve productivity and analysis quality may not be optimally utilized.

The change in roles can be explained through three main functions. First, the manager acts as a director, i.e. determining the problem that needs to be solved, formulating goals, and providing relevant context to the AI. Second, the manager acts as an evaluator, which is to check the consistency, relevance, and feasibility of AI outputs before use. Third, the manager acts as an integrator, i.e. connecting technology recommendations with professional experience, internal knowledge of the organization, stakeholder needs, and strategic priorities. These three functions are conceptual synthesiss of the literature, not role classifications that have been proven through field research in this study.

The importance of such division of functions is seen in Hao, Demir, and Eyers (2024) research on collaborative decision-making between humans and Generative AI. Their quasi-experimental research indicates that Generative AI can help reduce cognitive burden and support information processing in certain situations, but its use also presents the risk of overdependence and limitations of contextual creativity. The authors emphasize the need for collaboration that pays attention to transparency, accountability, and inclusivity. Thus, AI recommendations are more appropriately positioned as inputs for assessment than as a substitute for managerial assessment.

The limits of technological capabilities also need to be considered. Dell'Acqua and his colleagues (2023) developed the concept of the jagged technological frontier to explain that AI capabilities are uneven on all types of tasks. Their field experiments involved 758 knowledge workers and showed that GPT-4's assistance can improve performance on certain tasks, while on tasks beyond the limits of technological capabilities, the use of AI can lead to worse decisions. The research has the status of a working paper on a referenced source, so the findings and publication status need to be re-examined when the final corpus is compiled. Nevertheless, the results are relevant to show that the difficulty level of seemingly similar tasks does not necessarily reflect the ability of AI to complete the task accurately.

In strategic decision-making, such capability limits mean that managers must examine not only the quality of the presentation of the AI's answers, but also the basic correctness of the information, the suitability of the assumptions, and its relevance to the conditions of the organization. AI can produce a seemingly convincing analysis without guaranteeing that each claim is true or that the suggested alternatives match the organization's objectives. Therefore, decisions related to large investments, strategy changes, employee evaluations, safety, and compliance require a level of verification that is proportional to the consequences of their mistakes.

The change in the role of managers also does not take place without obstacles. Mahmud, Islam, Ahmed, and Smolander (2022), through a systematic review of 80 empirical studies on algorithm aversion, showed that acceptance of algorithmic recommendations is influenced by technological factors, individuals, tasks, and broader contexts. This means that managers can overly reject AI recommendations even though they are potentially useful, or overtrust them without adequate examination. Both tendencies can reduce the quality of decisions.

Based on this synthesis, the role of managers tends to evolve towards more strategic functions, not just decreases. However, these developments do not automatically occur simply

because organizations provide Generative AI technology. Change requires the ability to formulate problems, assess evidence, manage risk, and determine when AI recommendations need to be accepted, changed, or rejected. Managerial excellence is increasingly seen in the ability to connect AI's computational capacity with human responsibility, ethical considerations, and contextual knowledge.

Managerial Accountability in the Use of Generative AI

Accountability is a fundamental issue when Generative AI is used in an organization's decision-making process. The use of technology can speed up analysis, but it does not eliminate the obligation to explain the reasons for decisions, assess impacts, and take responsibility for their implementation. Therefore, the application of AI needs to distinguish between its use as an analytical tool and its use as the basis for decisions received without examination. These differences determine the extent to which the organization retains substantive control over the decisions taken.

In the dimension of decision accountability, responsibility should not simply be transferred to the AI system. AI does not replace the formal responsibility of officials or managers who have the authority to make organizational decisions. If managers use AI outputs as considerations, they still need to understand the reasons for selecting alternatives, examine their compatibility with the organization's goals, and document the considerations underlying the final decision. The level of responsibility of each party needs to be adjusted to its authority, involvement, and role in the development, procurement, operation, and oversight of the system.

The next dimension is transparency and traceability. Organizations need to be able to trace how information is used, what outputs are considered, what checks are conducted, and who approves the final decision. For high-risk decisions, documentation can include the purpose of using AI, the data sources used or verified, important assumptions, the results of the examination, changes to the initial recommendations, and the reasons for the final decision. This kind of documentation is not just an administrative procedure, but a mechanism to support auditing, error evaluation, and organizational learning.

Autio and colleagues (2024), in the Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile published by the National Institute of Standards and Technology (NIST), outline the specific risks of Generative AI and the actions that can be considered to manage them throughout the technology lifecycle. The document covers approaches to identifying, mapping, measuring, and managing risks. In an organizational context, this framework can be used to complement management theory with more operational governance procedures, rather than to replace leadership or accountability theories.

Human oversight is the third dimension that connects formal responsibility to decision-making practices. Oversight is not enough to be realized through administrative approval after AI recommendations are generated. Managers need to have the ability and opportunity to examine outputs, ask critical questions, ask for evidence, and reject inappropriate recommendations. If an organization requires the use of AI but does not provide the time, competence, or authority to conduct the examination, human oversight can potentially become a mere formality.

Alon-Barkat and Busuioc (2023) discuss the phenomenon of automation bias and selective adherence in public sector decision-making. Their study shows the importance of understanding how decision-makers receive or follow algorithmic suggestions. The relevance for management is that the presence of humans in the decision-making process does not by itself guarantee independent judgment. Managers can remain the signatories to decisions, but substantively only follow technological recommendations.

The fourth dimension relates to risk management, especially erroneous outputs, bias, information leaks, privacy violations, and uses outside of established purposes. Organizations need to establish risk classifications based on data sensitivity and the consequences of decisions. The use of AI to encapsulate insensitive internal documents, for example, does not have to have the same level of oversight as the use of AI to screen job candidates or make recommendations that affect an individual's rights. Proportionate controls can include access restrictions, fact verification, bias checks, tiered consents, and prohibitions on entering confidential data into services that the organization does not approve of.

Thus, managerial accountability in the era of Generative AI is a combination of clarity of responsibility, process traceability, human supervision, and risk management. Technology can help generate recommendations, but organizations still need a clear authority structure and mechanisms to account for the results of decisions. The quality of governance is the link between the efficiency of using AI and trust in organizational decisions.

Developing Strategic Capabilities of the Organization

The development of strategic capabilities is an important aspect of managerial transformation because the benefits of Generative AI are not only determined by technological capabilities, but also by the organization's ability to integrate them into business processes. The dynamic capabilities perspective provides a theoretical foundation for understanding the process. Teece (2007) explains that dynamic capabilities are concerned with an organization's ability to identify opportunities and threats, capitalize on opportunities, and reconfigure resources to maintain performance in a changing environment. In the context of Generative AI, this perspective helps explain why technology ownership does not necessarily result in a competitive advantage without changes in organizational competencies, processes, and settings.

The first capability is AI literacy. This literacy includes an understanding of how Generative AI works, the types of tasks that can be assisted, output limitations, risks of use, and principles of responsible utilization. For managers, AI literacy does not necessarily mean the ability to develop models technically. More relevant skills are understanding when technology is worth using, what information is needed, how to check the results, and when decisions need to be returned to human judgment. This literacy is the foundation so that managers do not just follow technology trends, but are able to connect their use to organizational needs.

The relevance of AI literacy in the Indonesian context can be seen in the research of Pranaputra and his colleagues (2026). Based on an analysis of 350 employees in organizations that adopted AI, the study reported a positive relationship between AI literacy and employee agility, as well as a positive relationship between employee agility and strategic capabilities. Their mediation analysis also showed that employee agility plays a partial mediator in the relationship between AI literacy and strategic capabilities. The findings support the argument that knowledge about AI needs to be translated into the ability to act and adapt in order to contribute to strategic goals. However, these results still need to be interpreted according to the context of the sample, variables, and design of the original research.

The second capability is knowledge integration. Generative AI outputs need to be combined with managerial experience, organizational data, employee knowledge, and an understanding of the business environment. This integration is important because AI can generate useful information without having access to the entire organizational context. Managers who are able to integrate various knowledge sources can evaluate whether AI recommendations are relevant to market conditions, resource capacity, organizational culture, and stakeholder interests. Thus, the strategic value of technology emerges through the process of merging knowledge, not just the production of large amounts of information.

The third capability is governance. Organizations need to develop AI use policies, responsibility sharing, verification standards, data access control, and incident reporting mechanisms. Governance should also include the establishment of permissible uses, uses that require special approvals, as well as prohibited uses. The NIST framework (Autio et al., 2024) can help organizations develop structured risk management, while management theory explains why the organization's oversight, authority, and culture determine the effectiveness of its implementation. In other words, governance does not solely serve to limit innovation, but to allow the use of AI to thrive within acceptable risk limits.

The fourth capability is strategic adaptation. Organizations need to be able to identify areas that will benefit significantly from Generative AI, determine investment priorities, adjust workflows, and allocate resources proportionately. These capabilities require periodic evaluations of output quality, process efficiency, implementation costs, and suitability for strategic objectives. Organizations should not consider all functions need to adopt AI with the same intensity. Usage choices need to consider task characteristics, information sensitivity, error consequences, and the organization's ability to oversee.

The fifth capability is organizational learning. Generative AI implementations generate experiences that need to be evaluated and translated into process improvements. Organizations can document AI output errors, identify failure patterns, update usage guidelines, and improve employee training based on actual experience. This learning also allows organizations to change policies as technology, business needs, or risks evolve. Without a learning mechanism, similar mistakes can recur and organizations run the risk of relying on procedures that are no longer appropriate.

These five capabilities are analytical categories compiled based on a synthesis of the literature, rather than five factors that have been empirically proven as a single standard model. The relationship between the five needs to be further tested. Nonetheless, this synthesis suggests that strategic capabilities can be understood as integrated capabilities that include knowledge, integration, control, adaptation, and learning. The perspective of dynamic capabilities helps explain how technological resources can be transformed into organizational capabilities that are more difficult to replicate, but these advantages remain dependent on implementation and competitive context.

Integration of Leadership, Decision-Making and Accountability

A synthesis of the literature suggests that managerial leadership, AI-assisted decision-making, accountability, and strategic capabilities need to be understood as a series of processes that influence each other. Leadership defines the purpose of using AI, assessment standards, and limits of authority. Decision-making becomes a space where AI recommendations are integrated with human judgment. Accountability provides a mechanism to ensure that the process and outcome of decisions can be examined. Meanwhile, strategic capabilities allow organizations to develop, adjust, and maintain AI use practices that fit long-term needs.

First, leadership quality influences how AI is used in organizational decisions through the setting of work goals and norms. Managers who emphasize accuracy, learning, and openness to evaluation can encourage the use of AI as a means of expanding alternatives and testing assumptions. In contrast, leadership that only assesses success based on speed can encourage the acceptance of AI outputs without adequate examination. This relationship is a theoretical proposition consistent with the perspective of the automation and augmentation paradox, but the magnitude of leadership's influence on decision quality still requires empirical testing.

Second, accountability becomes a mechanism that connects the use of technology to organizational responsibility. When decisions use AI, clarity about who is reviewing, approving, and responsible helps prevent the formation of a gap between formal authority and

substantive control. Human oversight also needs to be supported by access to information and the authority to reject recommendations. Without these conditions, manager involvement can potentially become just a formal procedure that does not guarantee the quality of decisions.

Third, strategic capabilities support the sustainability of transformation. AI literacy helps managers understand technology, knowledge integration helps assess the relevance of recommendations, governance controls risk, and organizational learning provides the basis for improving practices. These capabilities allow organizations to adapt the way AI is used as needs and environmental conditions change. In the framework of dynamic capabilities, this process can be understood through the ability to identify opportunities, take advantage of opportunities, and reconfigure organizational resources (Teece, 2007).

The relationships between components are also reciprocal. Leadership can encourage capability development, but mature organizational capabilities can also strengthen leadership qualities by providing better information, clear procedures, and consistent evaluation mechanisms. Similarly, accountability systems can limit the risks of using AI while generating knowledge of errors and effective practices. That knowledge can then be used to improve policies, training, and subsequent strategic decisions.

Based on these relationships, the study's main conceptual contribution is to place leadership transformation not as a direct result of the availability of Generative AI, but rather as an organizational process that relies on the integration of human judgment, accountability mechanisms, and the development of strategic capabilities. This argument avoids two overly simplistic assumptions, namely that AI automatically improves the quality of management or that human oversight is always sufficient to guarantee the right decisions. The expected outcome depends on how the technology is used, how responsibilities are shared, and how the organization learns from its application.

Development of the Conceptual Framework

Based on the synthesis of the literature, the initial conceptual framework of the research can be built by placing managerial leadership transformation as a guide to the use of Generative AI, AI-assisted decision-making as a core process, accountability and governance as a control mechanism, and strategic capability development as a process that supports the sustainability of transformation.

The framework does not assume that the relationship between variables has been empirically proven. Instead, it is an initial proposition derived from the automation and augmentation literature, human–AI collaboration research, Generative AI risk management frameworks, and dynamic capabilities perspectives.

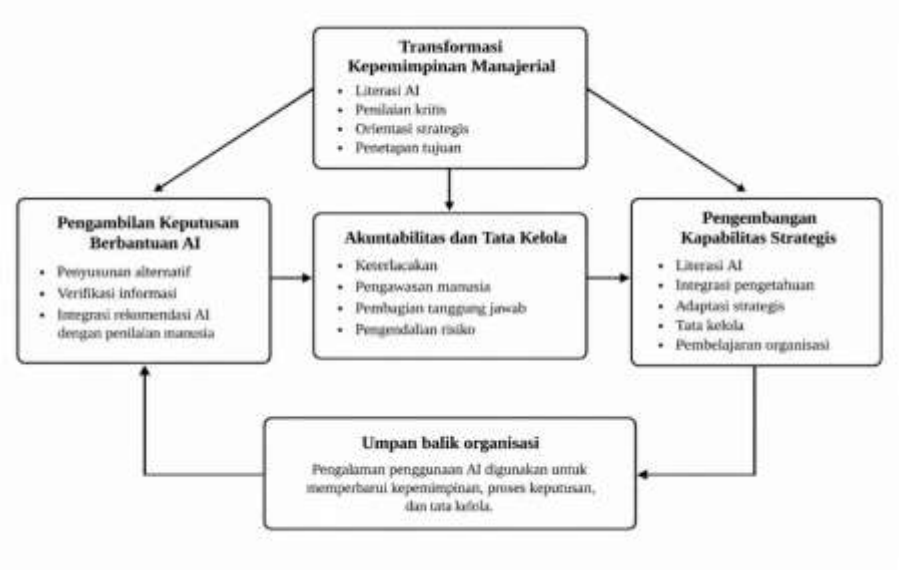


Figure 1. The initial conceptual framework of managerial leadership transformation in the Generative AI era.
(Source: conceptual synthesis based on Raisch and Krakowski (2021), Hao et al. (2024), Autio et al. (2024), and Teece (2007).

The framework places leadership as a director, not the sole determinant of success. AI-assisted decision-making becomes a process that connects managerial goals to execution, while accountability and governance ensure that the process remains examineable. Strategic capabilities then support the organization's ability to implement the use of AI consistently and adaptively. Feedback suggests that evolving capabilities can improve leaders' ability to strategize and manage technology.

Based on this framework, three initial propositions can be proposed. First, leadership transformation marked by AI literacy and critical assessment is expected to support the quality of AI-assisted decision-making if technology recommendations are adequately verified. Second, clarity of accountability and governance quality are expected to strengthen the relationship between AI use and accountable organizational decisions. Third, organizational strategic capabilities and learning are expected to support the sustainability of AI use while strengthening managerial ability to adapt technology to organizational needs.

These three propositions need to be treated as conceptual hypotheses for further research. The actual relationship can be influenced by the industrial sector, the level of decision risk, digital maturity, data quality, and organizational characteristics. Therefore, the final framework needs to be adjusted to the results of the selection and analysis of the literature that are systematically documented.

Theoretical and Managerial Implications

Theoretically, this discussion expands the understanding of managerial leadership by placing Generative AI as a technology that transforms the division of tasks, the assessment process, and the relationship between human knowledge and machine-generated information. The automation–augmentation paradox perspective of Raisch and Krakowski (2021) shows that automation and human empowerment cannot always be separated. Implicitly, leadership theory in the context of AI needs to pay attention to the manager's ability to manage the tension between technological efficiency and the need to maintain human judgment. Leaders are not only judged based on the success of adopting AI, but also on their ability to determine appropriate use, supervise results, and account for decisions.

The next theoretical implication is the need to link the study of AI-assisted decision-making with the perspective of dynamic capabilities. Teece (2007) emphasizes the ability of organizations to identify opportunities, take advantage of them, and reconfigure resources. In the context of Generative AI, the process can be applied to explain how organizations recognize opportunities for the use of AI, select appropriate implementations, and adjust work structures and competencies for the technology to provide strategic value. The integration of these two perspectives results in the view that leadership and organizational capabilities are not stand-alone factors. Leadership directs capability development, while the capabilities that are formed provide resources and mechanisms that help leaders make better decisions.

In addition, accountability can be placed as a governance mechanism that links AI-assisted decisions to organizational consequences. The NIST framework helps operationalize risk management, while management theory provides a basis for explaining the division of authority, responsibility, and control. Thus, the conceptual contribution that can be developed does not simply bring together the three research themes, but rather explains how leadership, decision-making, governance, and strategic capabilities form a system that influences each other.

From a managerial perspective, organizations need to set limits on the use of Generative AI based on the level of risk and consequences of the decision. Uses for summaries or idea searches can have different procedures than they are for use for investment decisions, employee assessments, or confidential information management. The policy needs to mention the permitted uses, consent requirements, verification obligations, as well as the conditions when the decision must be fully or specifically reviewed by the authorities.

Leaders also need to develop AI literacy as well as critical thinking skills. Training does not focus enough on the technique of creating commands or prompts, but needs to include fact evaluation, bias recognition, data protection, understanding the limits of AI capabilities, and assessing the suitability of results with the organizational context. Research by Noy and Zhang (2023) shows that increased productivity can occur in certain tasks, while research on the jagged technological frontier reminds that these benefits do not apply uniformly to all tasks. Therefore, training should be accompanied by performance evaluation in the actual context of the job.

Furthermore, organizations need to clearly define the responsibility for verification decisions and procedures. Any decision involving AI needs to have a responsible party, a proportionate vetting mechanism, and adequate documentation. An evaluation of AI implementation should also not only measure the number of users or time savings, but also include the quality of decisions, error rates, policy compliance, information protection, and contribution to strategic goals. This approach helps organizations avoid the notion that technology adoption alone demonstrates the success of digital transformation.

Advanced Research Gap

Based on the initial literature that has been discussed, one of the gaps worth examining is the limitations of integration between leadership transformation, Generative AI-assisted decision accountability, and the development of strategic capabilities within a single testable framework. The available literature provides a foundation for each relationship, but evidence that directly tests the entirety of those mechanisms still needs to be identified through systematic tracing. Therefore, these gaps represent a potential direction of research, not a conclusion that there has never been research that addresses such integration.

The next gap relates to the context of the study. Experimental evidence on the productivity of Generative AI and human–AI collaboration provides information about the benefits and limitations of technology on specific tasks. However, these results do not automatically apply to all sectors, types of decisions, or organizational structures. Further research needs to test whether the same mechanisms apply to the public sector, manufacturing, financial services, education, healthcare, and micro, small, and medium enterprises. Differences in regulation, data sensitivity, complexity of work, and level of digital maturity have the potential to influence the relationship between AI use and decision quality.

In the Indonesian context, empirical research can examine the role of AI literacy, strategic orientation of leaders, governance quality, and organizational learning on the quality of AI-assisted decisions. The research of Pranaputra and his colleagues (2026) can be a foothold for developing the variables of AI literacy, employee agility, and strategic capabilities, but these constructs need to be adapted to the focus of Generative AI and managerial accountability. Testing can be conducted through surveys at various levels of management, organizational case studies, or mixed methods that combine quantitative measurement with in-depth interviews.

Another gap relates to the measurement of accountability and the quality of human supervision. The existence of AI policies does not necessarily indicate that oversight is effective. Future research will need to distinguish between formal oversight and substantive oversight, for example by measuring the extent to which managers actually examine outputs, conduct verification, consider alternatives, and use authority to reject improper

recommendations. Longitudinal research is also needed to find out whether the use of AI improves managerial capabilities in the long term or actually leads to dependence on technology.

Finally, the reciprocal relationship between leadership and strategic capabilities needs to be further tested. Some conceptual models place leadership as an initial factor driving AI adoption, but experience using technology can also strengthen literacy, change decision-making styles, and reshape leadership practices. Longitudinal designs, field experiments, or cross-organizational comparative studies can help test the direction of the relationship.

Overall, this synthesis of the early literature suggests that the transformation of managerial leadership in the era of Generative AI needs to be understood as a change in work systems and organizational capabilities, rather than solely as the application of new technologies. The role of managers is evolving towards a director and evaluator of AI use, accountability ensures that decisions remain accountable, and strategic capabilities allow organizations to learn and adapt. However, the strength of these relationships still needs to be tested through a selection of systematically documented literature and empirical research that pays attention to differences in organizational contexts.

CONCLUSION

The transformation of managerial leadership in the era of generative artificial intelligence (generative AI) indicated that managerial responsibilities were not merely diminished by automation but evolved toward more strategic functions involving the direction, evaluation, and integration of AI-generated recommendations with human judgment in organizational decision-making. Based on the literature synthesis, the effective integration of generative AI depended on leaders' ability to recognize technological capabilities and limitations, verify AI-generated information, consider organizational contexts, and maintain accountability for resulting decisions. Accordingly, transparency, decision-process traceability, meaningful human oversight, and risk management emerged as essential dimensions of responsible AI governance. Furthermore, developing strategic capabilities, including AI literacy, knowledge integration, governance competencies, strategic adaptability, and organizational learning, was identified as critical to generating sustainable organizational value from AI adoption. The integration of managerial leadership, AI-assisted decision-making, accountability mechanisms, and strategic capabilities therefore provided a conceptual foundation for adaptive and responsible leadership transformation. Nevertheless, because this study relied on an integrative literature review, the proposed relationships among these dimensions remained conceptual and required further empirical validation. Future research should examine these relationships across different industries, organizational contexts, and managerial levels, particularly within Indonesian organizations, to assess their implications for decision-making quality, organizational accountability, and strategic performance.

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AUTHOR CONTRIBUTIONS

The author fully contributes to the formulation of the main idea, the collection of library data, the analysis and interpretation of the primary text of the character, and the preparation of the manuscript. All authors have agreed on the final version of the manuscript

GENERATIVE AI STATEMENT

The author states that generative artificial intelligence (AI) was used in the preparation of this manuscript. The author acknowledges the use of generative AI to help improve language clarity and improve the grammatical structure of the manuscript. The use is done in compliance with the applicable ethical guidelines regarding the use and disclosure of generative AI in scientific research. Each author has made substantial intellectual contributions to this work. The entire manuscript content has been carefully reviewed to ensure its accuracy, and the author is solely responsible for the integrity and final content of the manuscript.

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