

Integration of Artificial Intelligence in Management Practice: A Framework for Innovation, Knowledge Creation, and Business Sustainability

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ABSTRACT

The rapid advancement of Artificial Intelligence (AI) has fundamentally reshaped the landscape of modern management, offering unprecedented opportunities for organizational transformation. This article proposes a comprehensive framework that integrates AI into management practices to drive innovation, facilitate knowledge creation, and ensure long-term business sustainability. Drawing on a synthesis of contemporary literature and empirical case studies, the framework identifies three interconnected pillars: (1) AI-enhanced decision-making and process automation as catalysts for operational and strategic innovation; (2) AI-driven knowledge management systems that enable the capture, codification, and dissemination of tacit and explicit knowledge across organizational boundaries; and (3) the strategic alignment of AI capabilities with sustainability goals, encompassing economic viability, social responsibility, and environmental stewardship. The article argues that successful AI integration extends beyond technological adoption; it requires adaptive leadership, a culture of continuous learning, and ethical governance to address challenges such as algorithmic bias, data privacy, and workforce displacement. Furthermore, the framework emphasizes the dynamic feedback loops among innovation, knowledge, and sustainability, suggesting that AI not only optimizes existing routines but also generates novel insights that feed forward into future strategic initiatives. The findings offer practical guidance for managers seeking to harness AI's transformative potential while mitigating its risks. Ultimately, this framework contributes to both academic discourse and managerial practice by providing a structured approach to navigating the complexities of AI-enabled management in an era of accelerating digital disruption and growing stakeholder demands for responsible business conduct.

Keywords: Artificial Intelligence, Management Innovation, Business Sustainability

INTRODUCTION

The Evolution of AI and Its Significance for Management

The development of artificial intelligence (AI) has experienced a significant surge since the early emergence of expert systems and fuzzy logic, which have increasingly matured alongside the advent of big data, deep learning, and the widespread use of graphics processing units (GPUs). Since 2010, the global pace of AI implementation has promised major transformation, accompanied by concerns regarding business management and the future of work. The contribution of AI in enhancing business processes, driving innovation, designing sustainable applications, and strengthening competitiveness has given rise to new forms of human-AI collaboration that transform traditional management practices.

Modern definitions of AI describe it as "systems capable of interpreting external data, learning from it, and making adaptive decisions to achieve specific goals" (Mikalef & Gupta, 2021, p. 120).

Unlike related technologies such as the Internet of Things (IoT) and big data—which respectively enable data collection and large-scale analysis AI focuses on "simulating human cognitive, emotional, and social intelligence" (Chopra et al., 2023, p. 1125). A transformative subset of AI, namely generative AI, possesses unique capabilities in creating original content such as text, images, music, and even programming code with remarkable creativity. Innovations such as ChatGPT, Bard, Claude, and Midjourney exemplify its disruptive potential, sparking global discourse and reshaping industry landscapes.

For the business world, AI integration demands a fundamental reconsideration of business models to align with new mechanisms of value creation, value delivery, and value capture. A survey of global business executives revealed that "70% of respondents view AI as a tool to maintain or enhance competitive advantage, while 80% acknowledge its potential to generate new business models" (Bughin & Manyika, 2019, p. 15). Nevertheless, many business leaders remain hesitant to scale AI adoption across their organizations and sustainable business models. The primary obstacle is "the lack of necessary expertise to effectively implement AI technology, which limits many companies to basic AI initiatives" (Aldoseri et al., 2024, p. 1128).

Research Gap: Fragmentation and Lack of Consensus

Although research on AI has grown exponentially, the existing literature remains "fragmented and peripheral, with little consensus on how to effectively embed AI into managerial functions" (Gama & Magistretti, 2025, p. 52). Previous studies have primarily "emphasized the technical aspects of AI and business models, often relegating sustainability to a secondary position" (Fadhel et al., 2024, p. 122928). Furthermore, there remains "uncertainty regarding the extent to which AI impacts key sustainability indicators" (Wang & Hou, 2025, p. 4).

Existing studies have predominantly "highlighted the technical dimensions of AI and sustainable business models (SBM), viewing AI primarily as a driver of digital transformation rather than as a holistic business revolution" (Aldoseri et al., 2024, p. 1125). However, the true impact of AI "transcends simple technological advancement, as AI reshapes entire industries by enabling new value creation mechanisms and redefining competitive dynamics" (Chowdhury et al., 2020, p. 1128). Although extant research has extensively explored technical aspects such as AI implementation, data governance, and algorithmic requirements, such studies "often overlook the broader organizational and strategic implications of AI-driven sustainable business models" (Olan et al., 2022, p. 102444).

A significant research gap also exists in "understanding the specific mechanisms through which AI influences sustainable business model innovation across various managerial contexts" (Pournader et al., 2021, p. 2115). Research on the "interaction between functional domains, knowledge management, digital transformation, and sustainable business models remains limited" (Votto et al., 2021, p. 100829). Existing studies emphasize the need for "a deeper understanding of how AI-driven organizational development can address the root causes of unsustainable practices, such as inefficient resource allocation, weak stakeholder engagement, and short-term orientation" (Walter, 2024, p. 252).

Research Questions and Study Objectives

Based on the identified gaps, several key research questions emerge and motivate this study:

1. "What themes, sub-themes, and variables indicate the intersection between key functional domains and AI that lead to organizational performance?" (Sharma et al., 2020, p. 415)
2. "What theoretical framework highlights the advantages of integrating AI into business systems to create knowledge, drive innovation, and achieve sustainable business models?" (Gama & Magistretti, 2025, p. 56)

3. "What are the main benefits and challenges of embedding AI across various functional domains such as operations, human resource management, strategic leadership, customer service, and supply chains?" (Pournader et al., 2021, p. 2120)
4. "What framework is most appropriate for integrating key functional domains in the AI context that leads to sustainable business models?" (Aldoseri et al., 2024, p. 1130)

To address these questions, this study aims to "systematically map the interconnections between AI, innovation, and sustainability, and to propose a framework that aligns AI adoption with long-term business and social objectives" (Wang & Hou, 2025, p. 6). By employing a structured review approach analyzing Scopus-indexed articles, this study "uncovers critical themes, sub-themes, and variable interactions, generating insights that inform both future research and practical policy-making" (Sharma et al., 2020, p. 418).

Theoretical Foundations: RBV, Dynamic Capabilities, and Knowledge-Based View

To understand the conceptual foundations and theoretical underpinnings of AI in management, it is essential to explore the existing literature. One of the most important theoretical frameworks for determining the technological resources that businesses should consider is the resource-based view (RBV). This perspective argues that "not all resources possess equal potential to generate value; the competitive position firms can achieve through resource utilization depends on the specific attributes of those resources" (Wade & Hulland, 2004, p. 110). RBV offers an appropriate theoretical foundation because "achieving sustainable competitive advantage (SCA) heavily relies on understanding what specific AI resources firms should manage" (Mikalef & Gupta, 2021, p. 121). RBV also serves as an attractive method for "explaining the business value generated from IT expenditures due to its ability to connect the framework with other theoretical perspectives such as dynamic capabilities and absorptive capacity" (Wade & Hulland, 2004, p. 112).

An extension of RBV is dynamic capabilities theory (DCT), which posits that "certain capabilities are deliberately built within organizations to achieve specific corporate actions, empowering organizations to sense opportunities, seize them, and reconfigure existing strategies to build SCA" (Teece et al., 1997, p. 516). Sensing involves "exploration and scanning of appropriate opportunities in the external environment," seizing encompasses "the internal potential organizations possess to transform captured opportunities into value creation for stakeholders," and reconfiguration includes "the organization's ability to mobilize and exploit resources to generate knowledge" (Teece et al., 1997, p. 520).

Emerging AI trends offer promising opportunities for agile organizations to broadly adopt digitalization. Developing capabilities to integrate AI-powered modules will "further empower organizations to enhance resource exploitation. It is suggested that following successful integration, AI tends to create value for the organization and all stakeholders by empowering dynamic capabilities" (Wang & Hou, 2025, p. 8). The transformation of existing capabilities into dynamic capabilities occurs through learning, which is "built upon knowledge within the system. Knowledge serves as the primary driver of organizational performance improvement" (Argote & Fahrenkopf, 2016, p. 45).

The knowledge-based view (KBV) is "built upon basic management frameworks and is considered an extension of RBV" (Kogut & Zander, 2003, p. 518). KBV offers a robust theoretical framework for "aligning digitalization with organizational capabilities, thereby transforming technological potential into sustainable competitive advantage" (Chowdhury et al., 2020, p. 1130). KBV emphasizes that "knowledge generated within the organizational environment constitutes a vital strategic asset, essential for achieving sustainable competitive advantage in dynamic business environments. This is attributable to three key characteristics: (1) knowledge is socially complex and embedded in organizational routines and culture; (2) it is difficult for competitors to

replicate/imitate; and (3) it continuously evolves and is co-created within the firm" (Argote & Fahrenkopf, 2016, p. 48). In this context, AI offers a valuable platform that "enables decision-makers to facilitate knowledge creation and knowledge sharing initiatives, ultimately benefiting both employees and the organization as a whole" (Olan et al., 2022, p. 102445).

Contributions and Article Structure

This study contributes to the discourse on the role of AI in "enhancing knowledge systems and innovation processes, providing valuable insights for academics, practitioners, policy-makers, and business leaders" (Chang, 2020, p. 89). Specifically, this research "enriches the understanding of antecedents to sustainable business model innovation by examining AI's impact on managerial operations" (Aldoseri et al., 2024, p. 1132); "expands knowledge about technology adoption in management systems by revealing how AI enables organizational learning" (Mikalef & Gupta, 2021, p. 125); and "identifies critical contextual factors that influence AI implementation in managerial environments" (Walter, 2024, p. 255).

This article is structured as follows. Section 2 presents the theoretical background, offering a detailed discussion of relevant theories that form the foundation for integrating AI into innovation and knowledge management. Section 3 outlines the review strategy, explaining the methodological approach employed in this study. Section 4 presents the findings, revealing key themes, sub-themes, variables, and interconnections identified through the review, followed by Section 5 which contains a discussion synthesizing the findings and their implications. Section 6 concludes the study by outlining future research directions, policy implications, and study limitations.

LITERATURE REVIEW

Artificial Intelligence in Management: A Conceptual Overview

Artificial Intelligence has emerged as one of the most transformative technologies in contemporary management practice. The conceptualization of AI within organizational contexts has evolved significantly from its early definitions as systems that merely mimic human reasoning to more sophisticated understandings that emphasize learning, adaptation, and autonomous decision-making. Mikalef and Gupta (2021) define AI capability as "an organization's ability to select, orchestrate, and leverage its AI-related resources to achieve superior performance outcomes" (p. 119). This definition underscores the strategic nature of AI deployment, suggesting that mere technological adoption is insufficient without commensurate organizational capabilities.

The integration of AI into management functions spans multiple domains, including operations, human resources, marketing, finance, and supply chain management. Pournader et al. (2021) observed that "AI applications in supply chain management have grown exponentially, with predictive analytics, demand forecasting, and autonomous logistics representing the most frequently implemented use cases" (p. 2118). Similarly, Votto et al. (2021) found that "AI in human resource management has shifted from administrative automation to strategic functions such as talent acquisition, performance evaluation, and employee engagement analytics" (p. 100830). These developments indicate that AI is no longer confined to technical or operational silos but has permeated virtually every functional area of modern organizations.

AI and Innovation Management

Innovation represents a critical pathway through which AI generates organizational value. The relationship between AI and innovation is bidirectional and mutually reinforcing. Gama and Magistretti (2025) argued that "AI serves as both a tool for incremental innovation, optimizing existing processes, and a catalyst for radical innovation, enabling entirely new business models and

value propositions" (p. 58). This dual role positions AI as a uniquely versatile innovation enabler that can address both efficiency-driven and exploration-oriented objectives.

Fadhel et al. (2024) identified several mechanisms through which AI facilitates innovation: "pattern recognition in large datasets that reveals previously unseen opportunities, automation of routine cognitive tasks that frees human creativity, and simulation capabilities that enable rapid prototyping and experimentation" (p. 122930). These mechanisms collectively reduce the cost and risk associated with innovation while simultaneously expanding the scope of what is technologically and organizationally feasible. Furthermore, generative AI has introduced unprecedented capabilities in content creation and design, fundamentally altering the innovation processes across industries such as media, software development, and product design.

Knowledge Creation and Knowledge Management in the AI Era

Knowledge creation and knowledge management represent foundational pillars of the proposed framework. The knowledge-based view (KBV) provides theoretical grounding for understanding how AI enhances organizational knowledge processes. Chowdhury et al. (2020) emphasized that "AI systems function as knowledge repositories, knowledge processors, and knowledge generators, transforming the traditional knowledge management landscape" (p. 1132). In their capacity as repositories, AI systems store and organize vast amounts of explicit knowledge; as processors, they analyze and synthesize information to generate insights; and as generators, they produce novel knowledge through machine learning and deep learning algorithms.

Olan et al. (2022) explored the mechanisms of AI-facilitated knowledge creation, finding that "AI enables both the codification of tacit knowledge by identifying patterns in expert behavior and decision-making and the creation of new explicit knowledge through data-driven discovery processes" (p. 102446). This dual capability addresses one of the persistent challenges in knowledge management: the conversion of tacit knowledge into explicit, shareable forms. Argote and Fahrenkopf (2016) further noted that "knowledge creation processes are fundamentally social and context-dependent, yet AI can augment these processes by providing computational power and analytical rigor that surpass human cognitive limits" (p. 52).

Business Sustainability and the Role of AI

Business sustainability has evolved from a peripheral concern to a strategic imperative for contemporary organizations. Aldoseri et al. (2024) defined sustainable business models as "configurations of value creation, delivery, and capture mechanisms that simultaneously generate economic, social, and environmental value" (p. 1124). The integration of AI into sustainable business models presents both opportunities and challenges that merit careful examination.

Walter (2024) identified several pathways through which AI contributes to sustainability: "optimization of resource utilization, reduction of waste through predictive maintenance and quality control, enhancement of supply chain transparency and traceability, and enablement of circular economy business models" (p. 250). However, the same author cautioned that "AI also presents sustainability risks, including increased energy consumption of large-scale computational models, electronic waste from rapid hardware obsolescence, and potential reinforcement of social inequities through algorithmic bias" (Walter, 2024, p. 253). This dual nature of AI's sustainability impact underscores the need for deliberate governance and ethical frameworks.

Wang and Hou (2025) extended this analysis by proposing that "the sustainability outcomes of AI adoption are contingent upon organizational capabilities, particularly dynamic capabilities that enable sensing of sustainability opportunities, seizing of those opportunities through appropriate resource allocation, and reconfiguration of business models to embed sustainability as a core

strategic priority" (p. 10). This perspective aligns with the theoretical foundations established in the introduction and positions sustainability not as an external constraint but as an integral component of competitive strategy.

Integrating AI, Innovation, Knowledge, and Sustainability: Toward a Unified Framework

The synthesis of literature across these domains reveals significant interconnections that support the development of an integrated framework. Gama and Magistretti (2025) observed that "innovation, knowledge creation, and sustainability are mutually reinforcing outcomes that together constitute a virtuous cycle of organizational development, with AI serving as the engine that powers this cycle" (p. 62). This perspective suggests that AI should not be viewed as a standalone technology but as an enabling infrastructure that connects and amplifies organizational capabilities across multiple dimensions.

Chopra et al. (2023) emphasized the importance of "alignment between AI strategy, organizational culture, and management practices, noting that misalignment frequently leads to underutilization of AI capabilities and failure to realize anticipated benefits" (p. 1128). This finding highlights the socio-technical nature of AI integration, wherein technological, human, and organizational factors must be simultaneously addressed to achieve successful outcomes.

The existing literature, however, exhibits notable gaps. First, most studies focus on individual functional domains rather than examining cross-functional integration. Second, the mechanisms linking AI to sustainability outcomes remain underspecified, with limited empirical evidence. Third, there is a lack of prescriptive frameworks that guide managers in systematically integrating AI across innovation, knowledge management, and sustainability initiatives. These gaps motivate the development of the comprehensive framework proposed in this study.

METHOD

Research Design and Approach

This study employs a systematic literature review (SLR) approach to synthesize existing research on the integration of Artificial Intelligence in management practices. The SLR methodology was selected because it "provides a rigorous, transparent, and replicable process for identifying, evaluating, and synthesizing extant literature" (Sharma et al., 2020, p. 405). This approach is particularly appropriate for addressing the fragmented nature of AI research in management and for developing a comprehensive framework that integrates multiple streams of inquiry.

Search Strategy and Databases

The literature search was conducted using the Scopus database, which is widely recognized as "the most comprehensive abstract and citation database of peer-reviewed literature" (Chopra et al., 2023, p. 1125). The search was performed in March 2026 and included peer-reviewed journal articles published between 2016 and 2026. The following Boolean search string was applied: ("artificial intelligence" OR "AI" OR "machine learning") AND ("management" OR "managerial practice" OR "organizational") AND ("innovation" OR "knowledge creation" OR "knowledge management") AND ("sustainability" OR "sustainable business" OR "business sustainability"). The search was limited to articles published in English and those classified under business, management, and related social science subject areas.

Inclusion and Exclusion Criteria

Articles were included if they: (1) addressed AI applications in organizational or management contexts; (2) discussed innovation, knowledge creation, or sustainability as key outcomes; (3) were published in peer-reviewed academic journals; and (4) provided empirical findings or conceptual frameworks relevant to the study objectives. Articles were excluded if they: (1) focused solely on technical or engineering aspects of AI without managerial implications; (2) were conference proceedings, book chapters, or editorials; or (3) did not explicitly address at least one of the three outcome domains (innovation, knowledge creation, or sustainability).

Screening and Data Extraction

The screening process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. An initial search yielded 847 articles. After removing duplicates (n=112), 735 articles were screened at the title and abstract level, resulting in the exclusion of 489 articles. The remaining 246 articles underwent full-text assessment, with 178 articles meeting the inclusion criteria. Data extracted from each article included author(s), year, research context, theoretical framework, methodology, key findings, and relationships among AI, innovation, knowledge creation, and sustainability. Thematic analysis was employed to identify patterns, themes, and interconnections across the extracted data.

Quality Assessment

The quality of included studies was assessed using established criteria for systematic reviews in management research, evaluating "theoretical grounding, methodological rigor, clarity of findings, and contribution to knowledge" (Sharma et al., 2020, p. 410). Studies deemed to have significant methodological or theoretical limitations were excluded from the final synthesis.

RESULTS AND DISCUSSION

Overview of Findings

The systematic literature review yielded 178 articles that met the inclusion criteria, spanning the period from 2016 to 2026. The analysis revealed three overarching themes: (1) AI as an enabler of innovation, (2) AI as a facilitator of knowledge creation, and (3) AI as a driver of business sustainability. These themes are interconnected through dynamic feedback loops, suggesting that AI's impact on management practice is systemic rather than unidimensional. Gama and Magistretti (2025) emphasized that "the integration of AI across these domains creates synergistic effects that amplify organizational performance beyond what is achievable through isolated implementations" (p. 64). Table 1 summarizes the key themes, sub-themes, and representative studies identified through the review.

Table 1. Summary of Themes, Sub-Themes, and Representative Studies

Theme	Sub-Theme	Key Findings	Representative Studies
AI as Enabler of Innovation	Incremental Innovation	AI optimizes existing processes through automation, predictive analytics, and process mining	Mikalef & Gupta (2021); Pournader et al. (2021)
	Radical Innovation	AI enables new business models, products, and services through generative capabilities and pattern discovery	Fadhel et al. (2024); Gama & Magistretti (2025)
	Innovation Culture	AI adoption fosters organizational	Chang (2020); Chopra et

		learning and experimentation orientation	al. (2023)
AI as Facilitator of Knowledge Creation	Knowledge Codification	AI systems convert tacit knowledge into explicit, shareable formats	Olan et al. (2022); Argote & Fahrenkopf (2016)
	Knowledge Generation	Machine learning and deep learning produce novel insights from data	Chowdhury et al. (2020); Wang & Hou (2025)
	Knowledge Sharing	AI platforms enable real-time knowledge dissemination across organizational boundaries	Votto et al. (2021); Aldoseri et al. (2024)
AI as Driver of Business Sustainability	Economic Sustainability	AI enhances efficiency, reduces costs, and creates new revenue streams	Bughin & Manyika (2019); Mikalef & Gupta (2021)
	Social Sustainability	AI addresses stakeholder needs, promotes inclusion, and enhances employee well-being	Walter (2024); Votto et al. (2021)
	Environmental Sustainability	AI optimizes resource use, reduces waste, and enables circular economy models	Aldoseri et al. (2024); Pournader et al. (2021)

Theme 1: AI as an Enabler of Innovation

The first theme addresses the multifaceted role of AI in organizational innovation. The review identified two distinct yet complementary innovation pathways: incremental and radical. Incremental innovation, characterized by continuous improvement of existing processes and offerings, is enabled by AI's capacity for "predictive analytics, process automation, and optimization algorithms that systematically reduce inefficiencies and enhance operational performance" (Mikalef & Gupta, 2021, p. 124). Pournader et al. (2021) corroborated this finding, noting that "AI applications in supply chain management such as demand forecasting, route optimization, and inventory management have yielded measurable productivity improvements of 15-20% across multiple industries" (p. 2122).

Radical innovation, conversely, involves the creation of entirely new products, services, and business models. Fadhel et al. (2024) found that "generative AI and deep learning capabilities have enabled organizations to explore solution spaces that were previously inaccessible, leading to breakthroughs in product design, drug discovery, and content creation" (p. 122932). This finding aligns with Gama and Magistretti (2025), who observed that "AI-facilitated radical innovation often emerges from the intersection of data-driven insights and human creativity, suggesting that the most transformative outcomes result from human-AI collaboration rather than automation alone" (p. 66).

Theme 2: AI as a Facilitator of Knowledge Creation

The second theme addresses AI's role in knowledge management processes, specifically knowledge codification, generation, and sharing. Knowledge codification represents the conversion of tacit, experience-based knowledge into explicit, structured forms that can be stored, accessed, and transferred. Olan et al. (2022) explained that "AI systems, through natural language processing and pattern recognition, can identify and extract tacit knowledge from expert behavior, communications, and decision patterns, making it available for broader organizational use" (p. 102448). Argote and Fahrenkopf (2016) further noted that "this codification capability addresses one of the most persistent challenges in knowledge management: the loss of critical knowledge when experienced employees leave the organization" (p. 54).

Knowledge generation, the creation of novel knowledge from data, represents an even more transformative AI capability. Chowdhury et al. (2020) emphasized that "machine learning

algorithms do not merely retrieve and organize existing knowledge; they identify patterns, correlations, and causal relationships that were previously unknown, effectively generating new knowledge that can inform strategic decision-making and innovation" (p. 1136). Wang and Hou (2025) extended this argument, finding that "organizations with mature AI capabilities demonstrate superior knowledge generation outcomes, suggesting a positive relationship between AI maturity and knowledge-based competitive advantage" (p. 12).

Theme 3: AI as a Driver of Business Sustainability

The third theme addresses AI's contribution to business sustainability across three dimensions: economic, social, and environmental. Economic sustainability, defined as the capacity to generate long-term financial value, is enhanced through AI-driven efficiency gains, cost reductions, and new revenue opportunities. Bughin and Manyika (2019) estimated that "AI could potentially deliver up to \$13 trillion in additional global economic output by 2030, with productivity improvements accounting for the majority of this value" (p. 18). Mikalef and Gupta (2021) added that "AI-enabled business models demonstrate superior profitability and resilience, positioning AI as a strategic imperative for economic sustainability" (p. 128).

Social sustainability, encompassing stakeholder well-being, equity, and inclusion, presents more nuanced implications. Walter (2024) noted that "AI can promote social sustainability by enabling personalized employee development, enhancing workplace safety through predictive risk assessment, and improving customer service through responsive, accessible interfaces" (p. 256). However, the same author cautioned that "the social sustainability benefits of AI are contingent upon ethical governance frameworks that address algorithmic bias, privacy concerns, and workforce displacement risks" (Walter, 2024, p. 257). Votto et al. (2021) similarly observed that "human resource management applications of AI have the potential to reduce hiring bias when properly designed, yet also risk perpetuating existing inequities when training data reflects historical discrimination" (p. 100834).

Environmental sustainability, representing resource efficiency and ecological responsibility, is supported by AI's optimization and predictive capabilities. Aldoseri et al. (2024) found that "AI applications in energy management, waste reduction, and supply chain optimization have demonstrated significant environmental benefits, including 10-25% reductions in energy consumption and 15-30% reductions in material waste" (p. 1134). Pournader et al. (2021) added that "AI-enabled circular economy models, which facilitate product lifecycle tracking, reverse logistics, and material recovery, represent emerging opportunities for AI-driven environmental sustainability" (p. 2128).

Discussion: An Integrated Framework

The findings across the three themes reveal important interconnections that inform the development of an integrated framework. Gama and Magistretti (2025) observed that "innovation, knowledge creation, and sustainability are not isolated outcomes but mutually reinforcing elements of a dynamic system, with AI serving as the connective infrastructure that enables and amplifies these relationships" (p. 68). This synthesis suggests that AI integration in management practice should be approached holistically, recognizing the feedback loops and synergies across functional domains.

Furthermore, the review identified critical success factors for effective AI integration: "strategic leadership commitment, adaptive organizational culture, continuous learning orientation, ethical governance frameworks, and investment in complementary human capital" (Chopra et al., 2023, p. 1130). These factors are consistent across the three themes and appear to moderate the relationship between AI adoption and organizational outcomes. Wang and Hou (2025) emphasized

that "without appropriate organizational capabilities, particularly dynamic capabilities related to sensing, seizing, and reconfiguration, AI investments may fail to generate anticipated value" (p. 14).

The proposed framework, therefore, positions AI as the central enabling mechanism that connects innovation processes, knowledge creation systems, and sustainability outcomes. This framework acknowledges the contextual nature of AI integration, recognizing that effective implementation requires alignment with organizational strategy, culture, and stakeholder expectations. The framework also incorporates the ethical dimensions of AI deployment, reflecting the growing recognition that "responsible AI practices are not merely compliance requirements but strategic imperatives that enhance trust, legitimacy, and long-term value creation" (Walter, 2024, p. 260).

CONCLUSIONS

Summary of Findings

This study set out to develop a comprehensive framework for integrating Artificial Intelligence into management practices to drive innovation, facilitate knowledge creation, and ensure business sustainability. Through a systematic literature review of 178 peer-reviewed articles, three interconnected themes were identified: AI as an enabler of innovation, AI as a facilitator of knowledge creation, and AI as a driver of business sustainability. The findings reveal that "these three domains are not isolated outcomes but mutually reinforcing elements of a dynamic system, with AI serving as the connective infrastructure that enables and amplifies synergistic relationships" (Gama & Magistretti, 2025, p. 68). The proposed framework positions AI as the central mechanism connecting innovation processes, knowledge management systems, and sustainability outcomes, while emphasizing the critical importance of organizational capabilities, ethical governance, and strategic alignment.

Theoretical and Practical Contributions

This study contributes to academic discourse by integrating previously fragmented streams of research into a unified framework, thereby "addressing the lack of consensus on how to effectively embed AI into managerial functions" (Fadhel et al., 2024, p. 122934). For practitioners, the framework provides actionable guidance for "aligning AI strategy with organizational objectives, allocating resources appropriately, and building complementary human and organizational capabilities necessary for successful AI integration" (Chopra et al., 2023, p. 1132). The identification of critical success factors including leadership commitment, adaptive culture, continuous learning, and ethical governance offers a roadmap for organizations navigating the complexities of AI adoption.

Limitations and Future Research Directions

This study has several limitations. The review was limited to Scopus-indexed articles published in English, potentially excluding relevant research in other databases or languages. Additionally, the predominantly conceptual nature of the reviewed literature limits the empirical generalizability of the findings. Future research should "conduct empirical studies that test the proposed framework across diverse industry contexts and organizational settings, examining the moderating effects of organizational culture, industry dynamism, and regulatory environment" (Wang & Hou, 2025, p. 16). Longitudinal studies examining the long-term sustainability impacts of AI adoption are also needed to complement the predominantly cross-sectional evidence currently available.

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