Executive AI Background and Corporate Strategy: A Survey

Abstract

This survey paper examines the transformative role of artificial intelligence (AI) in executive functions and corporate strategy, highlighting the integration of AI expertise by top-level executives to drive innovation, enhance decision-making, and improve business management. The paper explores the significance of AI in reshaping leadership dynamics, emphasizing the need for AI governance frameworks to address ethical considerations and cultural barriers. It underscores the importance of developing AI competencies among executives, focusing on data-driven strategic planning and AI-driven innovation across various sectors. The survey identifies challenges such as the lack of understanding of AI functionalities and organizational readiness for AI adoption, while also highlighting opportunities for enhancing strategic planning and operational efficiency. Key themes include the role of AI in supply chain management, marketing, and human resources, with a focus on user-centric design and ethical deployment. The survey advocates for continuous learning and the development of standardized frameworks for AI integration, emphasizing the need for responsible AI governance to ensure alignment with organizational values and societal norms. Future research directions include exploring AI's impact on strategic decision-making, enhancing explainability, and addressing the socio-political dimensions of AI governance. By addressing these areas, organizations can effectively harness AI technologies for competitive advantage and sustainable growth in the digital age.

1 Introduction

1.1 Significance of AI in Executive Roles

The integration of artificial intelligence (AI) into executive roles is fundamentally reshaping corporate leadership, necessitating specialized positions like the Chief AI Officer (CAIO) to adeptly navigate the complexities of AI-driven strategic decision-making and governance. This transformation not only enhances competitive advantage but also compels a reevaluation of business models and governance structures to leverage AI's potential across various industries, thus redefining modern management [1, 2, 3]. AI significantly enhances business processes and redefines management theories, streamlining operations and improving efficiency. Consequently, comprehensive AI governance frameworks are essential for organizations to address existing knowledge gaps and navigate the challenges of AI integration.

AI's influence extends beyond operational improvements, prompting industry-wide disruptions that challenge traditional business models. These disruptions compel executives to reassess managerial roles and decision-making processes, leveraging AI to create new value propositions and sustain competitive advantages. Moreover, the strategic integration of AI is crucial for maintaining a competitive edge in the digital era, facilitating data-driven planning and enhancing decision-making capabilities. The emergence of the smart economy further demands innovative strategies for resilience and adaptability [4].

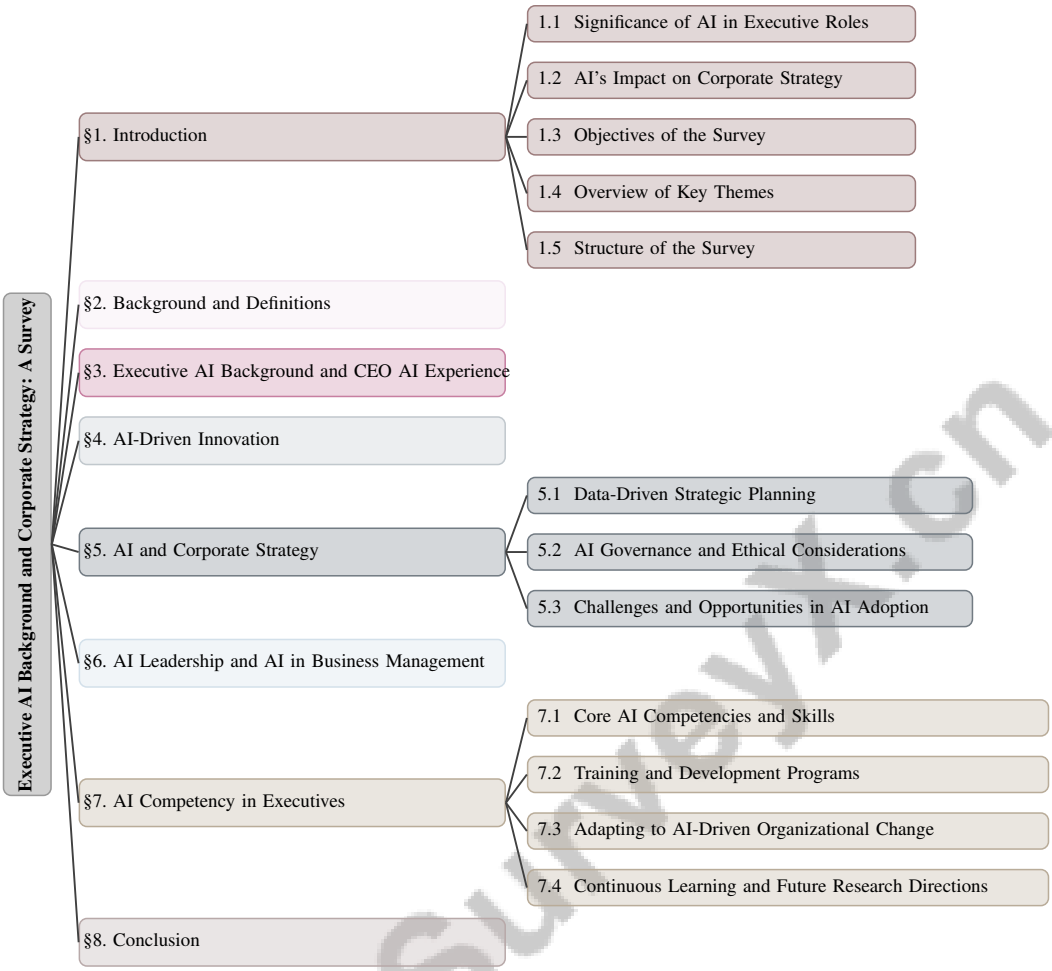

Figure 1: chapter structure

Despite its advantages, AI adoption in executive roles presents challenges, including ethical considerations and cultural barriers that hinder widespread integration. Current AI ethics guidelines often lack diverse representation, necessitating a cultural shift within organizations to responsibly harness AI's capabilities. Executives must understand AI technology limitations to ensure effective application in business contexts [5]. Furthermore, the survey addresses the imperative for organizations to elucidate the behavior of black-box AI systems in light of legal and ethical requirements [6].

AI's role in strategic decision-making and business development underscores its growing importance, as leaders utilize AI to drive innovation and navigate complex landscapes [7]. Advocating for a Human-Centered AI (HCAI) approach, which prioritizes user control and understanding, aligns with the need for responsible AI usage within organizations. This highlights the CEO's role in guiding ethical AI deployment to safeguard brand reputation and societal impact [8, 9].

The evolving AI landscape in executive roles necessitates a deep understanding of its capabilities and limitations, along with the development of competencies to integrate AI effectively into corporate strategies. As organizations increasingly adopt AI, executives face the challenge of leading sustainable growth and innovation while ensuring responsible technology deployment. This alignment of AI initiatives with corporate values, management of ethical considerations, and adaptation of business models is critical for harnessing AI's potential while mitigating risks to brand reputation and societal impact. The emergence of roles like the Chief AI Officer emphasizes the need for strategic oversight in AI integration, positioning organizations to thrive in the digital economy [3, 1, 10].

AI-generated, for reference only.

1.2 AI's Impact on Corporate Strategy

Artificial intelligence (AI) is fundamentally transforming corporate strategy by reshaping executive-level decision-making processes. Organizations aiming to become data-driven must integrate AI technologies, leveraging data network effects to create substantial user value, particularly within multi-sided platforms. This is particularly evident in strategic marketing, where AI facilitates innovative business model development that captures emerging opportunities, especially in health tech. AI's capability to analyze vast datasets and identify trends equips businesses to anticipate, adapt, and thrive in volatile conditions [4].

Generative AI has the potential to reshape decision-making, knowledge management, customer service, and human resource management (HRM), redefining strategic priorities [11]. However, the inability to precisely identify how AI and machine learning (ML) might inadvertently destroy business value leads to managerial hesitation in adopting these technologies [12]. This hesitance underscores the necessity for a comprehensive understanding of AI's capabilities and limitations, alongside the competencies required for future business leaders in an AI-driven world [1].

The strategic integration of AI spans various industries, including e-commerce, where AI enhances personalization and optimization, thereby influencing corporate strategy and decision-making processes [13]. The rapid development of AI introduces challenges in decision-making, organizational design, and leadership roles, necessitating a reevaluation of existing business models and practices [14]. The intersection of AI technology and hiring practices raises concerns regarding privacy and employment laws, emphasizing the need for careful consideration of ethical implications in strategic planning [15].

Organizational practices and cultural shifts are vital for effective AI implementation, aligning business and IT strategies to enhance performance and address adoption challenges. In sensitive areas like hiring, criminal justice, and healthcare, AI's influence on decision-making requires a robust governance framework that emphasizes safety, security, and ethical considerations. As AI continues to shape corporate strategy, executives must navigate these complexities to drive growth and maintain competitive advantage, addressing knowledge gaps related to strategy execution, operational optimization, and innovation [16].

The fragmented understanding of how organizations can effectively govern their use of AI technologies to align with ethical principles and legal requirements remains a core issue [17]. The proposed regulatory model emphasizes the need for public interest to guide AI governance, influencing corporate strategy and decision-making processes [18]. Additionally, advocating for a shift from autonomy-first designs to systems that empower users enhances their control over technology [19]. AI's integration into HR functions, such as recruitment and performance management, also requires ethical alignment with company values to avoid unintended consequences like bias and privacy violations. The limited understanding and adoption of AI technologies by communication professionals further complicate strategic integration, impacting both their work and the profession at large [20].

AI's influence on corporate strategy necessitates the development of global norms and policies to ensure its beneficial use, particularly in high-risk scenarios [21]. The interaction between AI and human workers affects corporate strategy, especially regarding managing fears and performance evaluations [22]. However, the lack of transparency in black-box AI systems complicates stakeholders' understanding of decision-making processes, posing significant challenges to strategic implementation [6]. Addressing these challenges requires a nuanced approach to AI governance that incorporates ethical principles into decision-making frameworks [23].

1.3 Objectives of the Survey

The primary objectives of this survey are to elucidate the transformative role of artificial intelligence (AI) in executive functions and corporate strategy, focusing on the challenges and opportunities that arise during this integration. It aims to identify critical success factors enabling certain organizations to excel in AI deployment while others encounter significant barriers [4]. By examining these disparities, the survey seeks to uncover enablers and pitfalls associated with AI implementation, providing valuable insights into the dynamics of AI adoption [7].

A significant focus is placed on the evolving landscape of management functions influenced by AI, including strategic planning, marketing, product design, and human resources. The survey aims to provide actionable recommendations for effectively integrating data and AI into business processes to enhance predictive capabilities and improve decision-making frameworks. This integration is essential for organizations leveraging advanced methodologies such as machine learning, predictive analytics, and natural language processing to optimize operations, foster innovation, and gain a competitive edge in today's dynamic market. Additionally, the survey addresses critical challenges associated with AI adoption, including ethical considerations and the need for robust governance frameworks, thus offering a comprehensive approach to ensuring responsible and effective implementation of data-driven strategies [2, 24, 16, 25]. This exploration includes the potential establishment of roles like the Chief Artificial Intelligence Officer (CAIO), crucial for navigating the complexities of AI integration.

Furthermore, the survey captures leaders' perspectives on the challenges of AI implementation, particularly in dynamic sectors such as healthcare, where resource orchestration and governance are pivotal. It aims to provide insights into how managers perceive and engage with AI technologies by analyzing AI's impact on business strategy, management risks, and workforce dynamics. This exploration is critical, as integrating AI into business and IT strategies presents significant opportunities for value creation alongside complex challenges that organizations must navigate to align with the demands of digital transformation. It also addresses the need for effective resource orchestration and governance in the strategic implementation of AI, as highlighted in recent literature [2, 26]. Through these objectives, the survey aspires to deepen understanding of AI's transformative potential in reshaping executive roles and corporate strategy.

1.4 Overview of Key Themes

This survey paper explores pivotal themes at the intersection of artificial intelligence (AI) and executive roles, focusing on corporate strategy and governance. A central theme is AI's transformative impact on operational models, highlighting the challenges and opportunities presented by digital transformation [7]. This encompasses the necessity for novel leadership approaches to navigate AI integration complexities and leverage its potential for enhancing business processes and strategic decision-making.

Another key theme is AI governance, specifically analyzing the landscape surrounding AI technologies such as Anthropic's Claude. This includes identifying potential threats and proposing mitigation strategies to ensure responsible AI development and deployment [27]. The survey emphasizes the importance of robust governance frameworks that align with ethical principles and legal requirements, safeguarding organizational integrity and public interest.

Additionally, the paper examines AI's role in reshaping executive functions, focusing on AI-driven innovation, leadership styles, and competency development among top-level executives. This article investigates AI's transformative impact on key management functions, including strategic planning, marketing, and human resources. It underscores the necessity for organizations to integrate AI technologies effectively to enhance decision-making processes and optimize performance in these areas. By reviewing recent literature and case studies, the article provides actionable insights on leveraging AI to create competitive advantages and improve operational efficiencies in an increasingly digital landscape [2, 26, 25, 28, 14].

The survey aims for an in-depth analysis of AI's transformative effects on corporate strategy and executive roles. By exploring themes such as AI integration into business models, alignment with organizational strategies, and the emergence of specialized roles like the Chief AI Officer, the survey illuminates the complexities of AI adoption. It addresses both the opportunities for value creation and the challenges organizations face in leveraging AI for sustainable growth and competitive advantage in the rapidly evolving digital landscape. Through this comprehensive approach, the survey offers critical insights into the dynamics of AI implementation and its implications for enhancing organizational performance and decision-making processes [2, 3, 28, 29, 1].

1.5 Structure of the Survey

This survey is meticulously structured to conduct an in-depth examination of AI integration into executive roles and corporate strategy. It addresses previously outlined objectives by exploring the

critical role of specialized leadership, such as the Chief AI Officer (CAIO), in managing AI's impact on organizational operations and innovation. The survey analyzes necessary organizational resources, including non-technical skills and governance strategies, essential for successfully implementing AI initiatives within the C-suite, thereby providing a comprehensive understanding of AI leadership's strategic implications in today's competitive landscape [25, 3]. The paper begins with an **Introduction** that establishes the significance of AI in executive roles, highlights its impact on corporate strategy, and outlines the primary objectives and key themes of the survey.

Following the introduction, the section on **Background and Definitions** provides a detailed explanation of core concepts such as Executive AI Background, CEO AI Experience, and AI-Driven Innovation. This foundational understanding is crucial for comprehending subsequent analyses and discussions.

The survey then delves into **Executive AI Background and CEO AI Experience**, exploring AI expertise among top executives and its influence on leadership styles and decision-making processes. This section includes discussions on integrating AI expertise in leadership and examines how AI experience informs executives' decision-making.

The focus then shifts to **AI-Driven Innovation**, analyzing how AI fuels innovation and transforms strategic decision-making processes. This examination highlights advanced methodologies like machine learning, predictive analytics, and natural language processing, which enable businesses to optimize operations and enhance competitive advantage. The discussion also addresses strategies organizations employ to leverage AI for new developments while navigating challenges such as ethical considerations, data quality, and varying levels of AI readiness. By aligning AI implementation with strategic goals, companies can harness its full potential for sustainable growth and innovation in the digital era [2, 16]. This includes an analysis of processes and strategies that utilize AI for developing new products, services, or business models.

The **AI and Corporate Strategy** section examines AI's integration into corporate strategy and its role in strategic planning, competitive analysis, and market positioning. It discusses data-driven planning, AI governance, and ethical considerations, as well as the challenges and opportunities in AI adoption.

In the section on **AI Leadership and AI in Business Management**, the paper discusses AI's role in shaping leadership and management practices, highlighting how AI tools transform management functions such as HR, operations, and customer relations.

The survey delves into the critical theme of **AI Competency in Executives**, providing an in-depth analysis of essential competencies and skills executives must cultivate to leverage AI technologies effectively. This includes understanding AI's strategic integration within corporate frameworks, the necessity of specialized leadership roles like the Chief AI Officer, and the importance of developing both technical and non-technical organizational resources—such as human skills, leadership capabilities, and a culture of innovation—to maximize AI adoption benefits across various business functions [25, 26, 3]. This includes discussions on core AI competencies, training and development programs, and strategies for adapting to AI-driven organizational change.

Finally, the **Conclusion** summarizes the key findings of the survey, reflecting on the implications of AI integration in executive roles and corporate strategy while discussing future research directions. Each section is designed to contribute to a comprehensive understanding of AI's transformative role in executive functions and corporate strategy, aligning with the overall objectives of the survey.The following sections are organized as shown in Figure 1.

2 Background and Definitions

2.1 Core Concepts

The integration of artificial intelligence (AI) into executive roles and corporate strategy demands a comprehensive grasp of key concepts, including Executive AI Background, AI Leadership, and AI Competency in Executives. These concepts are crucial for transforming executive functions and enhancing strategic decision-making through AI technologies, which provide data-driven insights, boost operational efficiency, and foster innovation in dynamic business environments [2, 3, 29, 30, 16].

Executive AI Background involves the stages of AI integration within organizations, such as data governance, management, AI strategy formulation, and operational execution. This foundation equips

executives to adeptly navigate AI deployment complexities and leverage AI capabilities for strategic advantages. Creating value through AI, particularly via data network effects, highlights the need for robust data management and strategic alignment [7]. Additionally, addressing risks associated with AI and machine learning (ML) that may impact the integrity of inputs, processes, and outcomes is essential, necessitating comprehensive risk management frameworks [22].

AI Leadership emphasizes the strategic incorporation of AI into leadership roles, highlighting the digital competencies necessary for effectively utilizing AI technologies. This includes developing AI prompt engineering skills across domains such as entrepreneurship, art, science, and healthcare [3]. In strategic marketing decision-making, AI applications aim to enhance decision quality rather than replace human judgment, underscoring the importance of human-AI collaboration [9]. The evolving nature of managerial tasks and decision-making due to AI advancements necessitates frameworks that categorize these changes and assist leaders in adapting to new technological landscapes [31].

AI Competency in Executives refers to the essential skills and knowledge required for leaders to implement AI technologies effectively within their organizations. This includes integrating AI capabilities with business and IT strategies, fostering adaptive transformation, and responsible AI governance [32]. Understanding AI ethics is critical, requiring the incorporation of ethical considerations into AI system design to ensure responsible deployment [23]. Furthermore, the legal and ethical implications of AI in hiring, such as candidate privacy and the legality of AI-derived insights, highlight the need for structured frameworks to guide ethical AI deployment [33].

The challenges and barriers perceived by leaders in implementing AI systems underscore the importance of these core concepts, emphasizing the need for effective leadership and strategic alignment in AI adoption. A framework categorizing the explainability of AI systems into dimensions such as model, goals, training data, input data, output data, and environment further stresses the necessity of comprehensively understanding and managing AI systems [6]. Mastery of these core concepts is vital for executives to navigate the complexities of AI integration, ensuring they harness AI technologies for competitive advantage and organizational growth.

2.2 Relevance in Modern Business

The integration of artificial intelligence (AI) into modern business environments is increasingly crucial as organizations seek to leverage technological advancements for competitive advantage. AI's relevance is particularly evident in its transformative impact across sectors, notably in e-commerce, where it meets consumer demands and enhances technological capabilities. The integration of AI into business processes addresses complex challenges such as data labeling, the need for extensive training datasets, and the critical requirements for explainability and generalizability in AI outcomes. These factors are essential for mitigating biases in data and algorithms, ensuring ethical and effective AI deployment. Organizations must also navigate issues related to data quality, ethical considerations, and varying levels of AI readiness, necessitating robust governance frameworks and interdisciplinary collaboration to fully exploit AI's potential for driving strategic insights and enhancing decision-making in a competitive landscape [24, 28, 16].

AI's influence extends beyond operational efficiencies, reshaping the fundamental tasks of general managers and requiring a reevaluation of management strategies [9]. This transformation calls for a holistic approach to AI governance that encompasses technology, stakeholder engagement, regulatory frameworks, and organizational processes [21]. The adoption of Human-Centered AI (HCAI) practices is increasingly vital in modern business contexts, emphasizing ethical AI deployment to ensure responsible and beneficial outcomes [23].

In human resources, AI's relevance is underscored by its potential to revolutionize HRM processes, providing a framework for organizations to enhance efficiency and effectiveness [34]. However, challenges persist due to insufficient understanding of AI's capabilities among HR professionals and the ethical implications of its use in talent management [32]. The absence of individual competencies, varying levels of organizational competency, and unclear responsibilities hinder effective AI implementation, necessitating a strategic focus on competency development and clear role definitions.

Organizations face unprecedented challenges, including market volatility, resource scarcity, and the need for sustainable growth, exacerbated by rapid technological change [4]. The ethical implications of AI in digital technologies are critical for understanding their societal impact, highlighting the necessity for robust ethical frameworks to guide AI deployment [23].

The relevance of AI in modern business environments is multifaceted, encompassing strategic, operational, and ethical dimensions. As businesses increasingly adopt AI technologies, understanding the intricacies of AI integration is crucial for effectively shaping corporate strategies and fostering organizational growth. A comprehensive grasp of AI's transformative potential illuminates the dynamics of its adoption and highlights the challenges and opportunities associated with developing new business models and competitive advantages. Successful AI implementation requires strategic alignment with organizational goals, effective governance, and specialized leadership roles, such as the Chief AI Officer, to navigate this evolving landscape. Ultimately, leveraging AI can drive significant business value and enhance digital transformation efforts across various sectors [2, 29, 3].

3 Executive AI Background and CEO AI Experience

The integration of artificial intelligence (AI) into executive roles is crucial for enhancing organizational effectiveness and strategic decision-making. This section explores the relationship between AI expertise and leadership, highlighting how executives can leverage AI to improve operational efficiency, drive innovation, and gain a competitive edge. As illustrated in Figure 2, the hierarchical structure of AI integration in executive roles emphasizes key areas such as leadership adaptation, decision-making processes, leadership styles, and relevant case studies. This figure underscores the significance of AI expertise in enhancing strategic decision-making and operational efficiency while also addressing challenges like ethical considerations and interdisciplinary collaboration. The subsequent subsection focuses on incorporating AI expertise into leadership, particularly in human resource management and decision-making processes, to foster an agile organizational environment.

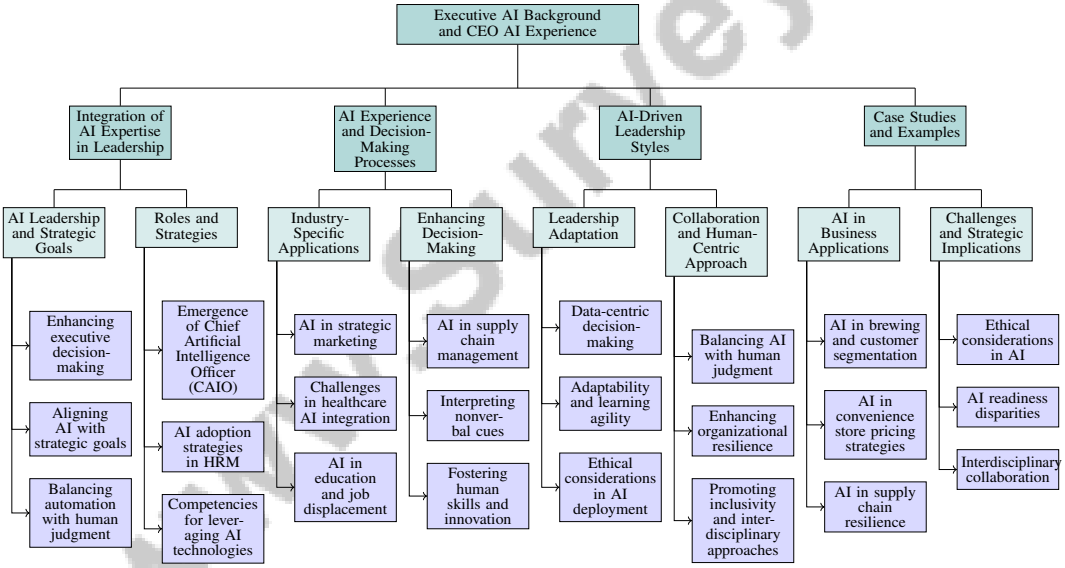

Figure 2: This figure illustrates the hierarchical structure of AI integration in executive roles, highlighting key areas such as leadership adaptation, decision-making processes, leadership styles, and case studies. It emphasizes the significance of AI expertise in enhancing strategic decision-making, operational efficiency, and fostering a competitive edge while addressing challenges like ethical considerations and interdisciplinary collaboration.

3.1 Integration of AI Expertise in Leadership

Incorporating AI expertise into leadership roles is vital for enhancing executive decision-making and organizational performance. AI's ability to process extensive data significantly influences strategic outcomes and user value [7]. A comprehensive approach to AI integration across human resource management (HRM) aligns AI initiatives with strategic goals, embedding AI technologies effectively into organizational processes [34]. Effective AI leadership requires balancing automation with human judgment, especially in ethically sensitive decisions [5]. This balance ensures human oversight in AI implementation, emphasizing the role of human agency and societal implications of AI decision-

making [22]. Trust and communication are essential for successful AI-human interactions, facilitating AI expertise integration into leadership.

The emergence of roles like the Chief Artificial Intelligence Officer (CAIO) exemplifies the evolving AI leadership landscape, enhancing organizational adaptability in a digital future. Tailored AI adoption strategies foster trust and acceptance among managers, particularly in HRM, impacting recruitment, employee development, and performance management [7]. Comprehensive frameworks guide AI expertise integration in these areas [34]. Integrating AI expertise into leadership involves addressing external conditions, internal capacities for strategic change management, and transforming professional roles. As AI reshapes leadership dynamics, executives must develop competencies to leverage AI technologies effectively, ensuring competitiveness and agility in a rapidly changing environment. The rise of specialized roles like the CAIO underscores the need for strategic oversight in AI governance and implementation, while leaders must understand AI's technological implications and its effects on business models, organizational culture, and ethical considerations [1, 26, 3, 10].

3.2 AI Experience and Decision-Making Processes

Incorporating AI into executive decision-making processes is crucial for shaping strategic outcomes across industries. In strategic marketing, AI enhances decision quality by providing data-driven insights and innovative solutions to market challenges [28]. However, further research is needed to fully understand AI's integration implications. Executives in healthcare face challenges in leveraging AI due to complex real-world data and misaligned expectations between technologists and healthcare professionals [35]. Developing AI systems capable of processing and interpreting complex datasets is essential for informed decision-making and operational efficiency. In education, AI experience addresses issues such as job displacement and quality maintenance, illustrating AI's transformative potential in strategic decision-making [8].

In supply chain management (SCM), AI integration presents challenges and opportunities for enhancing operational efficiency and decision-making [36]. AI-driven models optimize supply chain processes by analyzing large datasets and identifying patterns that inform strategic decisions. However, legacy firms often struggle with transitioning to AI-driven models due to complexities and cultural resistance, necessitating a strategic approach to AI integration [7]. AI experience also enhances decision-making by enabling executives to interpret nonverbal cues and behavioral patterns, improving interpersonal interactions and leadership effectiveness [5]. This capability is valuable in coaching and leadership development, where understanding subtle cues significantly influences decision-making.

Integrating AI into decision-making processes requires executives to cultivate diverse competencies beyond technical skills. As organizations strive for a competitive edge in the digital era, specialized leadership, such as the CAIO, becomes essential for managing AI strategy, governance, and organizational change. Fostering a culture that emphasizes human skills, team coordination, and innovation is vital for realizing AI's full potential, ensuring organizations derive meaningful value from these technologies [25, 3].

3.3 AI-Driven Leadership Styles

AI's rise is reshaping leadership styles, prompting organizations to reassess traditional frameworks and adopt strategies that leverage AI capabilities. This shift is crucial for developing new business models and competitive advantages in the digital era, as organizations face integration challenges. Successful AI implementation requires technical resources and a focus on human skills, leadership, and organizational culture. Leaders must prioritize education and competency development within teams to navigate AI adoption complexities and maximize benefits [2, 20, 30, 25].

AI-driven leadership emphasizes a data-centric approach, where decision-making is informed by data analysis and predictive insights. This shift enhances executives' ability to make informed decisions, optimize resource allocation, and anticipate market trends, driving organizational growth and competitiveness. Adaptability and learning agility are hallmarks of AI-driven leadership, as leaders continuously update knowledge and skills to keep pace with technological advancements [8]. This dynamic environment fosters continuous improvement and innovation, encouraging leaders to experiment with AI technologies and explore new business models. Ethical considerations are

paramount, as leaders ensure responsible AI deployment that aligns with organizational values and societal norms [23].

As illustrated in Figure 3, the key components of AI-Driven Leadership Styles include AI implementation, a data-centric approach, and collaboration and inclusivity, which are essential elements for leveraging AI technologies in leadership. AI-driven leadership styles prioritize collaboration and inclusivity, recognizing the value of diverse perspectives and interdisciplinary approaches in leveraging AI technologies [31]. This collaborative approach extends to human-AI interactions, where leaders balance AI's strengths with human judgment and creativity, fostering an environment where AI augments human capabilities rather than replaces them [9]. By adopting a human-centered AI approach, leaders enhance organizational resilience and adaptability, ensuring AI technologies empower employees and drive positive outcomes [8].

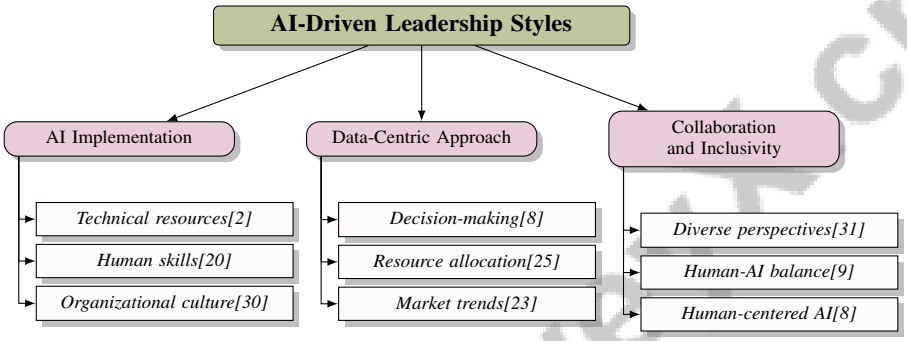

Figure 3: This figure illustrates the key components of AI-Driven Leadership Styles, highlighting AI implementation, a data-centric approach, and collaboration and inclusivity as essential elements for leveraging AI technologies in leadership.

3.4 Case Studies and Examples

Various real-world case studies exemplify AI's integration into executive functions, demonstrating its significant impact on enhancing executive performance and strategic decision-making. A brewing firm leverages AI for accurate forecasting and improved customer segmentation, analyzing extensive datasets to anticipate market trends and consumer preferences, optimizing production and marketing strategies [28]. Similarly, a convenience store chain employs AI in pricing strategies, dynamically adjusting prices based on real-time demand fluctuations, enhancing customer satisfaction and maximizing revenue [28].

In supply chain management, Singh's empirical analysis highlights AI's role in enhancing supply chain resilience, with professionals reporting significant improvements in operational efficiency and risk management due to AI integration. By utilizing AI for predictive analytics and demand forecasting, organizations mitigate supply chain disruptions and optimize inventory management, enhancing resilience and adaptability in volatile markets [37]. These case studies illustrate AI's profound impact on executive leadership, demonstrating how a robust understanding of AI enhances strategic decision-making and drives organizational performance. Integrating AI into business and IT strategies unlocks competitive advantages and improves value creation. The research underscores the necessity for specialized leadership roles, such as the CAIO, to effectively manage AI integration and governance, enabling organizations to navigate digital transformation complexities and harness AI's full potential for sustainable growth and innovation. Moreover, the studies highlight challenges, including ethical considerations and disparities in AI readiness, emphasizing aligning AI initiatives with strategic goals and fostering interdisciplinary collaboration for successful implementation [2, 3, 25, 29, 16]. As AI technologies evolve, executives must proactively explore innovative AI applications to sustain competitive advantage and drive organizational growth.

4 AI-Driven Innovation

4.1 Processes and Strategies

Integrating artificial intelligence (AI) into organizational processes is crucial for fostering innovation and developing new products, services, and business models. AI technologies, including machine learning, natural language processing, and robotics, enhance supply chain processes by improving demand forecasting, inventory management, and logistics optimization, thus increasing resilience and efficiency [36]. In strategic marketing, AI provides data-driven insights to refine decision quality and optimize strategies, employing technologies like voice and image recognition and decision-making algorithms to facilitate personalized marketing experiences, enhancing consumer engagement and brand loyalty [28].

AI's transformative potential extends to manufacturing, supporting smart manufacturing and advanced robotics through predictive maintenance and risk assessment, optimizing production workflows, and minimizing downtime [38]. Integrating AI into information systems enables real-time data processing and adaptive decision-making, essential for maintaining a competitive edge in dynamic markets. AI frameworks in supply chain management categorize existing research on AI's role in enhancing resilience, focusing on risk management, sustainable logistics, and decision-making models [39].

Adopting Human-Centered AI (HCAI) principles ensures AI systems are reliable, safe, and trustworthy, aligning with human values and enhancing user experiences [19]. Prioritizing ethical considerations is crucial for developing AI systems that align with organizational goals and societal norms, enabling organizations to create innovative products, services, and business models that drive growth and competitive advantage.

4.2 AI-Driven Digital Twins and Smart Manufacturing

AI has revolutionized digital twin technologies and smart manufacturing, driving innovation and reshaping traditional processes. Digital twins, virtual replicas of physical assets or processes, leverage AI for real-time data analytics, predictive maintenance, and enhanced decision-making capabilities, optimizing production processes and improving efficiency [38]. AI-driven digital twins allow for real-time monitoring and analysis, facilitating proactive maintenance and minimizing disruptions in critical industries like aerospace, automotive, and energy [40].

In smart manufacturing, AI technologies such as machine learning, robotics, and the Internet of Things (IoT) play a crucial role in fostering innovation and sustainability. AI-powered systems enable real-time monitoring and control of production processes, allowing for dynamic adjustments and optimization [41]. This integration supports advanced manufacturing techniques, including additive manufacturing and autonomous production lines, enhancing flexibility and responsiveness to market demands.

AI integration in smart manufacturing promotes sustainable development by optimizing energy consumption, reducing waste, and minimizing environmental impact [38]. AI-driven solutions facilitate sustainable practices, such as closed-loop supply chains and circular economy models, yielding long-term environmental and economic benefits. The synergy between AI, digital twins, and smart manufacturing signifies a major advancement in the industry, fostering innovation and competitive advantage, enhancing operational efficiency, sustainability, and resilience [36, 40, 42].

4.3 AI and Business Model Innovation

Integrating AI into business models is transforming industry practices across sectors by redefining traditional models through data-driven insights, optimizing operations, and creating new value propositions. Manufacturing firms leverage AI capabilities to enhance competitive edge and drive growth [43]. AI's impact on business model innovation is evident in enhancing supply chain resilience and performance, especially following disruptions from pandemics and crises, improving the ability to anticipate and respond to disruptions [44].

AI facilitates the development of new products and services by identifying emerging trends and customer preferences, enabling personalized offerings that enhance engagement and loyalty. This data-centric approach allows organizations to capitalize on new revenue streams, diversify market presence, and improve operational efficiency, fostering sustainable competitive advantage in a digital

economy [43, 42, 29, 24, 16]. AI integration promotes sustainable practices by optimizing resource allocation, minimizing waste, and reducing environmental impact, supporting long-term competitive advantages [2, 16, 43].

AI serves as a catalyst for business model innovation, enabling organizations to transform industry practices and achieve competitive advantages. Addressing modern market challenges, enhancing operational efficiency, and creating innovative solutions unlock new growth avenues and reshape industry standards. To fully realize these benefits, companies must navigate complex issues related to resource orchestration, governance, and aligning AI with existing business and IT strategies [45, 2, 29, 42].

5 AI and Corporate Strategy

5.1 Data-Driven Strategic Planning

The integration of artificial intelligence (AI) into strategic planning enhances decision-making and operational efficiency across sectors by automating processes and analyzing vast datasets. This data-driven approach informs strategic decisions, optimizes resource allocation, and anticipates market trends, improving performance and competitiveness [7]. AI's role in strategic planning is evident in its ability to enhance platform value through data-driven learning and network effects. By focusing on interdependencies within industrial ecosystems, organizations leverage AI to achieve strategic flexibility [4]. This involves innovative and routine AI deployment, crucial for navigating complex market environments and capitalizing on emerging opportunities.

In supply chain management, AI-driven predictive maintenance and decision support systems enhance operational efficiency and resilience. Advanced AI technologies streamline decision-making and mitigate risks associated with disruptions, optimizing resource allocation. As AI adoption increases, organizations address challenges like data privacy and the need for skilled personnel [44, 36, 41]. In human resource management (HRM), AI enhances entrepreneurial performance and employer reputation by aligning HR strategies with organizational objectives, improving human capital management. Successful AI implementation requires technical resources and non-technical capabilities, such as leadership and innovation culture, to maximize AI's value [32, 3, 25, 22, 34].

AI plays a multifaceted role in strategic planning by enhancing decision-making through machine learning and predictive analytics, optimizing resource utilization, and fostering adaptability to market changes. This positions AI as a key driver of competitive advantage while necessitating ethical considerations, data quality, and organizational readiness for responsible implementation [3, 28, 29, 24, 16]. Organizations integrating AI into strategic frameworks can achieve better outcomes and maintain a competitive edge in a dynamic business environment.

5.2 AI Governance and Ethical Considerations

Integrating AI into corporate strategy requires a governance framework that addresses ethical considerations and ensures responsible deployment. As AI capabilities advance, regulatory frameworks often lag, leading to ethical concerns and potential misuse [46]. A significant challenge in AI governance is the lack of transparency in data usage policies and biases in AI outputs, necessitating context-sensitive ethical frameworks. The European Union's Ethics Guidelines for Trustworthy AI emphasize transparency, accountability, and fairness [47]. Successful companies underscore leadership involvement and structured governance in AI integration, with executive oversight playing a critical role in ethical AI deployment [24].

Establishing robust governance frameworks aligned with ethical principles and legal requirements is essential for safeguarding organizational integrity and public interest. The complexities of implementing AI to enhance business value require interdisciplinary dialogue and practical frameworks addressing ethical concerns. Future work should focus on integrating AI into management practices while ensuring ethical standards and human oversight [14]. Although AI offers innovative recruitment approaches, it poses ethical and legal challenges that necessitate public discourse and regulatory consideration [15]. Challenges in integrating AI into corporate strategy include ethical concerns, data quality issues, and disparities in organizational readiness [16]. Additionally, limited understanding of AI governance (AIG) and uncertainty regarding the effectiveness of ethical principles complicate

these efforts [17]. Ethical AI is not just regulatory but a fundamental aspect of sustainable business practices [10].

Organizations must adopt a structured approach to identify and address potential ethical issues associated with AI technologies, leading to better decision-making and value creation [12]. This approach should include accountability mechanisms that ensure responsible AI governance and ethical alignment with company values [48]. Prioritizing ethical considerations is crucial for fostering trust and maintaining a competitive edge in a complex business environment.

5.3 Challenges and Opportunities in AI Adoption

Integrating AI into corporate strategy presents challenges and opportunities, particularly in aligning AI initiatives with organizational objectives. A significant challenge is the lack of understanding among top management regarding AI functionalities, crucial for effective alignment with corporate goals. This gap often results in insufficient leadership support, impeding AI deployment [45]. Many organizations are unprepared to integrate advanced AI technologies, highlighting readiness issues [31]. Cultural and structural barriers within organizations complicate AI adoption, especially in sectors like manufacturing, where entrenched practices hinder innovation [43]. These barriers obstruct interdisciplinary collaboration, essential for realizing AI-driven innovation. Ethical concerns, data privacy issues, and the digital divide between enterprises further pose challenges, potentially hindering AI adoption [4]. The unpredictability of AI advancements and the potential for a competitive arms race complicate the strategic landscape [21].

In supply chain management (SCM), AI adoption presents challenges and opportunities. Key obstacles include data privacy concerns, ethical considerations, and the need for skilled personnel to implement AI solutions effectively [36]. Despite these challenges, integrating AI into SCM is crucial for mitigating risks and enhancing resilience, particularly in the context of disruptions like COVID-19 [39]. AI-driven innovation holds the potential to enhance supply chain resilience (SCRes) and performance (SCP), particularly in navigating supply chain dynamism complexities [44]. The external environment, including legal and regulatory frameworks, presents additional challenges for AI adoption, particularly in sectors like healthcare, where strategic change management and transformation of professional roles are essential [49]. Data privacy and security concerns are paramount when integrating AI with cloud computing technologies, necessitating new skill sets and presenting complexities in merging new technologies with existing systems [42].

Despite these challenges, AI adoption offers substantial opportunities for organizations to enhance strategic planning, optimize operations, and drive innovation. By leveraging AI capabilities, businesses can achieve greater efficiency, improve decision-making processes, and unlock new value propositions that align with corporate objectives [25]. Addressing issues of explainability, generalizability, and inherent biases remains crucial, as these factors can lead to negative societal impacts and hinder AI's transformative potential [50]. As organizations increasingly embrace AI within the framework of Industry 4.0, addressing key challenges—such as developing a robust AI business case, securing top management support, effectively utilizing data, acquiring AI talent, and ensuring compatibility with existing systems—is essential. Overcoming these obstacles is crucial for organizations to fully leverage AI capabilities, create significant business value, and achieve sustainable growth in a rapidly evolving digital landscape [2, 30, 45, 42].

6 AI Leadership and AI in Business Management

6.1 Transformation of Management Functions through AI

AI is revolutionizing management functions, particularly in human resources (HR), operations, and customer relations, by enhancing efficiency, productivity, and innovation. Despite widespread AI adoption in HR, organizations often struggle to fully capitalize on its potential due to insufficient focus on complementary resources such as human skills, leadership, and an innovation-driven culture. AI enhances decision-making accuracy and accelerates HR processes like recruitment and performance management, contributing to business transformation and entrepreneurial success. Effective communication and support mechanisms are essential for fostering collaboration between human workers and AI systems, thereby maintaining performance standards [2, 25, 22, 32]. In HR,

AI technologies enhance recruitment and training by reducing biases and improving decision-making capabilities.

In operations, AI-driven tools like digital twins and generative AI significantly boost productivity, quality, and sustainability in manufacturing processes. These technologies improve organizational agility, decision-making speed, and innovation, positively impacting business performance. Leadership support is crucial for facilitating technology adoption and aligning AI initiatives with strategic goals [31].

AI also transforms customer relations through recommendation systems that provide hyper-personalized interactions and automated services, significantly enhancing customer experiences [13]. This transformation necessitates new skills and roles within marketing teams to leverage AI for competitive advantage and improved customer engagement [9].

Evaluations of AI tools across industries such as retail, finance, and healthcare reveal their impact on decision-making and operational efficiency, underscoring AI's transformative potential in various management functions [14]. However, challenges arise from operational failures in sectors like healthcare and employment, necessitating robust frameworks for ethical AI governance. Research emphasizes the importance of explainability in AI systems, leading to better practices for managing AI applications [6].

AI technologies are reshaping management functions by driving operational efficiency, optimizing resource allocation, and enhancing customer experiences. This transformation is further facilitated by the integration of AI with cloud computing and digital transformation initiatives, creating innovative business models and competitive advantages across industries. As organizations leverage these technologies, they streamline processes and unlock new avenues for growth and value creation, reshaping their strategic landscape [2, 29, 42]. To navigate the complexities of AI adoption and achieve sustainable growth, organizations must develop the necessary competencies and resources, ensuring alignment with human values and societal norms.

6.2 AI in Marketing and Customer Experience

AI is transforming marketing strategies and enhancing customer experiences by facilitating personalized, efficient, and effective interactions between businesses and consumers. Technologies such as machine learning and natural language processing enable the analysis of vast datasets, providing marketers with deeper insights into consumer behavior and preferences [13]. This capability allows organizations to tailor marketing efforts to individual customer needs, resulting in targeted advertising and higher conversion rates.

AI-driven recommendation systems exemplify how AI enhances customer experiences by delivering personalized product suggestions and content recommendations. These systems analyze customer data, such as purchase history and browsing behavior, to provide relevant and timely recommendations, increasing customer satisfaction and loyalty [13]. Additionally, AI-powered chatbots and virtual assistants offer automated customer support, delivering quick and accurate responses to inquiries and improving overall service efficiency.

The integration of AI into marketing strategies also enables dynamic pricing models, where prices adjust in real time based on demand fluctuations and market conditions. This approach optimizes revenue while enhancing customer satisfaction through competitive pricing and personalized promotions [28]. Furthermore, AI's ability to analyze social media data and sentiment allows marketers to monitor brand perception and engage with customers more effectively, fostering stronger relationships and brand loyalty.

Despite the advantages, the adoption of AI in marketing and customer experience presents challenges, particularly regarding ethical considerations such as data privacy and security. Organizations must invest in developing the necessary skills and competencies within their marketing teams to leverage AI technologies effectively and align them with strategic goals [9].

AI is transforming the marketing landscape by enabling more personalized and efficient interactions between businesses and consumers. As organizations increasingly incorporate AI into their marketing strategies, they face a complex array of challenges associated with AI adoption. Effectively utilizing AI-driven insights is crucial for enhancing customer experiences and fostering sustainable business growth. A strategic approach that addresses the operational and ethical complexities of AI implemen-

tation is vital to ensure alignment with organizational goals and deliver tangible value. By navigating these intricacies, businesses can leverage AI's transformative potential to optimize decision-making processes, improve marketing effectiveness, and maintain a competitive edge in the rapidly evolving digital marketplace [2, 51, 28, 16, 45].

6.3 AI in Supply Chain and Operational Strategies

AI integration into supply chain management (SCM) and operational strategies is a transformative force that enhances efficiency, transparency, and resilience. AI technologies optimize procurement strategies and improve supply chain resilience by providing real-time data analytics, predictive insights, and enhanced decision-making capabilities [37]. These advancements enable organizations to anticipate and respond to disruptions more effectively, ensuring operational continuity and adaptability in a rapidly changing market environment.

AI-enhanced resilient information systems are crucial for improving supply chain management, facilitating better resource allocation, demand forecasting, and logistics optimization [38]. Utilizing AI-driven insights allows organizations to optimize supply chain processes, reduce operational risks, and enhance overall resilience, contributing to effective strategic planning and execution [52]. The development of adaptive capabilities and collaboration within the supply chain are essential for enhancing supply chain resilience (SCRes), showcasing how AI tools can transform supply chain management and drive significant improvements in responsiveness [44].

Despite these benefits, integrating AI into SCM presents challenges, particularly regarding the nuances of human judgment in decision-making. Over-reliance on AI raises ethical concerns about bias and transparency, necessitating a balanced approach that incorporates human oversight and ethical considerations [1]. Organizations must navigate these complexities to ensure responsible deployment of AI technologies in alignment with strategic goals.

AI's integration into SCM is expected to drive significant improvements in supply chain resilience and responsiveness, enabling organizations to enhance efficiency and optimize operations [36]. Communication professionals must also enhance their understanding of AI and recognize the importance of leadership in its implementation, as effective AI integration requires strategic alignment and executive oversight [20].

AI's role in supply chain and operational strategies is multifaceted, encompassing improved decision-making processes, optimized resource utilization, and enhanced strategic flexibility. As organizations continue to integrate AI technologies into their supply chain frameworks, they can achieve better outcomes and maintain a competitive edge in an increasingly dynamic and complex business landscape [41].

6.4 AI Capabilities and User-Centric Design

Integrating AI capabilities into business management is crucial for enhancing decision-making processes and optimizing operational efficiency. AI's evolution in marketing analytics illustrates its transformative impact, enabling organizations to leverage predictive insights for more informed decision-making [28]. This evolution underscores the need for adapting managerial skill sets to effectively harness AI technologies, as AI increasingly takes over traditional prediction tasks and facilitates strategic data-sharing alliances [26].

The convergence of AI, cloud computing, and digital transformation amplifies organizational efficiency and customer satisfaction, highlighting the strategic importance of implementing AI-driven solutions [42]. By integrating these technologies, businesses achieve higher operational efficiency and deliver enhanced customer experiences, ultimately driving competitive advantage and growth.

User-centric design is vital in AI integration, ensuring that AI systems focus on enhancing user experiences and meeting customer needs. This approach emphasizes understanding user behavior and preferences, allowing organizations to tailor offerings and improve customer satisfaction. Ethical considerations surrounding AI deployment are critical, necessitating a multidisciplinary approach to ensure responsible implementation that aligns with organizational values and societal norms [53].

7 AI Competency in Executives

7.1 Core AI Competencies and Skills

The integration of artificial intelligence (AI) into executive roles requires a robust skill set to lead effectively in the digital age. Key competencies include fostering innovation and digital proficiency, especially in areas like supply chain management where AI enhances efficiency and resilience [36]. Executives must thoroughly understand AI technologies to optimize operations, improve decision-making, and manage risks [25]. A human-centered design approach is crucial, ensuring AI systems align with human values and are ethically implemented [19, 4]. Establishing ethical guidelines and regulatory frameworks, particularly in sensitive domains like HR, is essential to ensure fairness and transparency [32].

Understanding AI governance and its socio-political implications is vital for executives managing AI adoption complexities [21]. Addressing psychological barriers and trust issues during AI integration is crucial, requiring a focus on embedding ethics into design practices and overcoming challenges in ethical implementation [23]. Executives must ensure alignment with strategic goals across managerial levels [9]. In HRM, AI enhances effectiveness through automation, highlighting the importance of understanding AI applications [34]. The REsCUE method offers interpretable outputs that improve leadership effectiveness by focusing on observation and interpretation [5].

Effective leadership in AI requires comprehensive knowledge of AI technologies, integration capabilities, and ethical frameworks. As AI adoption grows to maintain competitive advantages and drive innovation, executives must develop competencies in ethical leadership, governance, and AI-employee integration strategies. These skills are critical for navigating AI adoption complexities, enhancing business performance, and safeguarding brand reputation and societal well-being. By focusing on technical and non-technical resources, including organizational culture and an innovation mindset, leaders can position their companies for sustainable growth in the digital landscape [3, 25, 29, 10, 45].

7.2 Training and Development Programs

Training and development programs are crucial for enhancing AI competencies among leaders, equipping them with skills to navigate AI integration complexities and drive growth. These programs focus on understanding AI technologies, fostering a culture of continuous learning, and promoting ethical AI practices. Enhancing digital literacy and competencies is vital for leaders to harness AI technologies and optimize processes [25]. Programs include workshops, seminars, and hands-on training in machine learning, data analytics, and natural language processing, bridging the knowledge gap and ensuring leaders are well-versed in AI advancements and applications [32].

Training emphasizes ethical AI deployment, encouraging integration of ethical guidelines into strategic frameworks, which is critical for responsible AI use aligned with organizational values and societal norms [23]. By prioritizing ethical practices, leaders can mitigate risks and enhance trust in AI systems, driving sustainable growth and competitive advantage. Collaborative learning approaches in these programs foster an environment for sharing insights and best practices, promoting a culture of innovation and adaptability [4].

Roles like Chief AI Officer (CAIO) highlight the need for specialized leadership to oversee AI strategies and governance, ensuring competitive advantage through AI. Continuous learning and ethical considerations prepare leaders to navigate AI adoption complexities and drive success [25, 30, 3].

7.3 Adapting to AI-Driven Organizational Change

Integrating artificial intelligence (AI) into organizational processes requires strategic management of transitions and adaptation to changes. Organizations must address the skills gap in data literacy among leaders to navigate AI-driven change [24]. Training programs that enhance data literacy and digital competencies enable leaders to harness AI technologies and optimize processes. Legal frameworks aligned with ethical principles are essential for responsible AI deployment, emphasizing transparency, accountability, and fairness [47]. Inclusive governance frameworks promote equitable technology access and enhance public trust [46].

Managing the transition to AI-supported roles involves training and involving lower-level managers [9]. Strategies should facilitate AI integration into workflows, emphasizing collaboration and communication to mitigate resistance [34]. This fosters a culture of innovation and adaptability, ensuring organizational agility in a rapidly evolving technological landscape. Adapting to AI-driven change involves addressing the skills gap, developing inclusive governance frameworks, and managing transitions to AI-supported roles. Strategic AI integration into business and IT frameworks enhances efficiencies and fosters innovation, aligning with digital transformation efforts for sustainable growth and competitive advantage. Recognizing AI implementation challenges—such as the need for top management support, effective data utilization, and cultivating AI talent—empowers organizations to navigate obstacles and maximize AI value [45, 2, 29, 42].

7.4 Continuous Learning and Future Research Directions

The rapid evolution of artificial intelligence (AI) necessitates continuous learning and adaptation to harness its transformative potential effectively. Continuous learning maintains a competitive edge by developing AI competencies, enabling leaders and employees to navigate AI integration complexities. Lifelong learning is essential for updating skills and knowledge in response to technological advancements. Organizations must prioritize inclusive frameworks incorporating diverse perspectives and accountability mechanisms for AI applications [48].

Future research should focus on standardized frameworks for AI integration, especially in digital twin (DT) technologies, to enhance real-time capabilities in manufacturing systems. Exploring AI's interplay with collective intelligence and empirical studies on data network effects will provide insights into AI's impact on organizational processes. Research should examine AI in strategic decision-making, change management requirements, and strategic partnerships facilitating AI-driven transformations [2, 54].

Dynamic and inclusive governance frameworks are crucial for adapting to evolving ethical standards and societal values in AI. Future research should investigate these frameworks' effectiveness in real-world applications, focusing on stakeholder dynamics and organizational AI governance processes. Enhancing transfer learning, improving explainability, and developing robust methods to mitigate bias in AI systems are critical areas for future exploration, ensuring responsible AI deployment aligned with organizational values and societal norms [39].

Emerging trends in AI adoption and evolving roles of employees in AI-driven environments warrant further investigation, focusing on continuous learning and adaptation. Broader organizational strategy dimensions, including operational and financial strategies, should be examined to understand AI's evolving role across industries. Future research should explore AI's practical implications in communication management, focusing on technology adoption models and AI technologies' actual usage [20]. These research directions will help organizations navigate AI integration complexities, fostering innovation and achieving sustainable growth in the digital age.

8 Conclusion

The integration of artificial intelligence (AI) into executive roles and corporate strategy represents a profound evolution in organizational dynamics, enhancing both decision-making precision and operational efficiency. This survey highlights AI's capacity to drive business growth by aligning its capabilities with strategic goals, thereby optimizing resource allocation and improving operational outcomes. It underscores the necessity of hybrid decision-making frameworks that blend AI's analytical prowess with human intuition and ethical judgment, prompting a reexamination of traditional management practices.

The critical role of the Chief AI Officer emerges as a key finding, guiding organizations in leveraging AI for operational excellence, innovation, and regulatory adherence. AI's transformative impact is particularly pronounced in supply chain management, where AI-driven insights bolster resilience, reduce costs, and promote sustainability despite implementation challenges. The survey highlights AI's strategic importance in enhancing supply chain resilience and performance, underscoring its long-term value.

Moreover, the survey emphasizes the need for robust regulatory frameworks to address the ethical implications of AI integration in executive roles and corporate strategy. Responsible AI deployment

is vital for building trust with employees and consumers, fostering a virtuous cycle that enhances brand reputation and societal benefits. However, the tendency to prioritize business outcomes over ethical considerations presents challenges, necessitating future efforts to develop practical tools for ethical assessment and to explore the socio-political dimensions of AI governance.

Future research should focus on establishing performance evaluation frameworks that incorporate both human and AI contributions, reflecting on the implications of AI integration. Additionally, the development of AI tools tailored for specific aspects of human resource management and addressing ethical concerns surrounding AI use are critical areas for exploration. Expanding sample sizes, examining AI adoption across diverse cultural contexts, and investigating the long-term impacts of AI adoption on organizational performance are also vital. Empirical studies on modular AI system designs to enhance explainability and fostering continuous dialogue among stakeholders to address ethical considerations are essential for responsible AI deployment.

References

[1] Jordi Canals. The evolving role of general managers in the age of ai. In *The Future of Management in an AI World: Redefining Purpose and Strategy in the Fourth Industrial Revolution*, pages 37–64. Springer, 2019.

[2] Nikolaos-Alexandros Perifanis and Fotis Kitsios. Investigating the influence of artificial intelligence on business value in the digital era of strategy: A literature review. *Information*, 14(2):85, 2023.

[3] Marc Schmitt. Strategic integration of artificial intelligence in the c-suite: The role of the chief ai officer, 2024.

[4] Mohanna Hassanzadeh Moghadam Pasha. Harnessing artificial intelligence to build agile and resilient business ecosystems for the smart economy of the future. *Journal of Business and Future Economy*, 1(2):31–40, 2024.

[5] Riku Arakawa and Hiromu Yakura. Human-ai communication for human-human communication: Applying interpretable unsupervised anomaly detection to executive coaching. *arXiv preprint arXiv:2206.10987*, 2022.

[6] Aleksandre Asatiani, Pekka Malo, Per Rådberg Nagbøl, Esko Penttinen, Tapani Rinta-Kahila, and Antti Salovaara. Challenges of explaining the behavior of black-box ai systems. *MIS Quarterly Executive*, 19(4):259–278, 2020.

[7] Marco Iansiti and Karim R Lakhani. *Competing in the age of AI: Strategy and leadership when algorithms and networks run the world*. Harvard Business Press, 2020.

[8] Babu George and Ontario Wooden. Managing the strategic transformation of higher education through artificial intelligence. *Administrative Sciences*, 13(9):196, 2023.

[9] Vegard Kolbjørnsrud, Richard Amico, and Robert J Thomas. Partnering with ai: how organizations can win over skeptical managers. *Strategy & Leadership*, 45(1):37–43, 2017.

[10] Roger Burkhardt, Nicolas Hohn, and Chris Wigley. Leading your organization to responsible ai. *McKinsey Analytics*, pages 1–8, 2019.

[11] Pawel Korzynski, Grzegorz Mazurek, Andreas Altmann, Joanna Ejdys, Ruta Kazlauskaite, Joanna Paliszkiewicz, Krzysztof Wach, and Ewa Ziemba. Generative artificial intelligence as a new context for management theories: analysis of chatgpt. *Central European Management Journal*, 31(1):3–13, 2023.

[12] Ana Isabel Canhoto and Fintan Clear. Artificial intelligence and machine learning as business tools: A framework for diagnosing value destruction potential. *Business Horizons*, 63(2):183–193, 2020.

[13] Ransome Epie Bawack, Samuel Fosso Wamba, Kevin Daniel André Carillo, and Shahriar Akter. Artificial intelligence in e-commerce: a bibliometric study and literature review. *Electronic markets*, 32(1):297–338, 2022.

[14] Dario Gil, Stacy Hobson, Aleksandra Mojsilović, Ruchir Puri, and John R Smith. Ai for management: An overview. *The future of management in an AI world: Redefining purpose and strategy in the fourth industrial revolution*, pages 3–19, 2019.

[15] Ben Dattner, Tomas Chamorro-Premuzic, Richard Buchband, and Lucinda Schettler. The legal and ethical implications of using ai in hiring. *Harvard Business Review*, 25:1–7, 2019.

[16] Mohaimenul Islam Jowarder Rafiul Azim Jowarder. Ai-driven strategic insights: Enhancing decision-making processes in business development. 2024.

[17] Teemu Birkstedt, Matti Minkkinen, Anushree Tandon, and Matti Mäntymäki. Ai governance: themes, knowledge gaps and future agendas. *Internet Research*, 33(7):133–167, 2023.

[18] Alan Dignam. Artificial intelligence, tech corporate governance and the public interest regulatory response. *Cambridge Journal of Regions, Economy and Society*, 13(1):37–54, 2020.

[19] Ben Shneiderman. *Human-centered AI*. Oxford University Press, 2022.

[20] Ansgar Zerfass, Jens Hagelstein, and Ralph Tench. Artificial intelligence in communication management: a cross-national study on adoption and knowledge, impact, challenges and risks. *Journal of Communication Management*, 24(4):377–389, 2020.

[21] Allan Dafoe. Ai governance: a research agenda. *Governance of AI Program, Future of Humanity Institute, University of Oxford: Oxford, UK*, 1442:1443, 2018.

[22] Ahmad Arslan, Cary Cooper, Zaheer Khan, Ismail Golgeci, and Imran Ali. Artificial intelligence and human workers interaction at team level: a conceptual assessment of the challenges and potential hrm strategies. *International Journal of Manpower*, 43(1):75–88, 2022.

[23] Jessica Morley, Libby Kinsey, Anat Elhalal, Francesca Garcia, Marta Ziosi, and Luciano Floridi. Operationalising ai ethics: barriers, enablers and next steps. *AI & SOCIETY*, pages 1–13, 2023.

[24] Ulla Kruhse-Lehtonen and Dirk Hofmann. How to define and execute your data and ai strategy. *Harvard Data Science Review*, 2(3), 2020.

[25] Soumyadeb Chowdhury, Prasanta Dey, Sian Joel-Edgar, Sudeshna Bhattacharya, Oscar Rodriguez-Espindola, Amelie Abadie, and Linh Truong. Unlocking the value of artificial intelligence in human resource management through ai capability framework. *Human resource management review*, 33(1):100899, 2023.

[26] David Kiron. What managers need to know about artificial intelligence. *MIT sloan management review*, 2017.

[27] Ai governance and accountability.

[28] Merlin Stone, Eleni Aravopoulou, Yuksel Ekinci, Geraint Evans, Matt Hobbs, Ashraf Labib, Paul Laughlin, Jon Machtynger, and Liz Machtynger. Artificial intelligence (ai) in strategic marketing decision-making: a research agenda. *The Bottom Line*, 33(2):183–200, 2020.

[29] Fotis Kitsios and Maria Kamariotou. Artificial intelligence and business strategy towards digital transformation: A research agenda. *Sustainability*, 13(4):2025, 2021.

[30] Pawel Korzynski, Grzegorz Mazurek, Pamela Krzypkowska, and Artur Kurasinski. Artificial intelligence prompt engineering as a new digital competence: Analysis of generative ai technologies such as chatgpt. *Entrepreneurial Business and Economics Review*, 11(3):25–37, 2023.

[31] Sheshadri Chatterjee, Nripendra P Rana, Yogesh K Dwivedi, and Abdullah M Baabdullah. Understanding ai adoption in manufacturing and production firms using an integrated tam-toe model. *Technological Forecasting and Social Change*, 170:120880, 2021.

[32] Dewi Sri Surya Wuisan, Richard Andre Sunardjo, Qurotul Aini, Natasya Aprila Yusuf, and Untung Rahardja. Integrating artificial intelligence in human resource management: A smartpls approach for entrepreneurial success. *Aptisi Transactions on Technopreneurship (ATT)*, 5(3):334–345, 2023.

[33] Asian journal of law and society.

[34] Qiong Jia, Yue Guo, Rong Li, Yurong Li, and Yuwei Chen. A conceptual artificial intelligence application framework in human resource management. 2018.

[35] Steve Lohr. What ever happened to ibm's watson. *The New York Times*, 16(7):21, 2021.

[36] N Eyo-Udo. Leveraging artificial intelligence for enhanced supply chain optimization. *Open Access Research Journal of Multidisciplinary Studies*, 7(2):001–015, 2024.

[37] Rohit Kumar Singh, Sachin Modgil, and Adam Shore. Building artificial intelligence enabled resilient supply chain: a multi-method approach. *Journal of Enterprise Information Management*, 37(2):414–436, 2024.

[38] Shivam Gupta, Sachin Modgil, Regis Meissonier, and Yogesh K Dwivedi. Artificial intelligence and information system resilience to cope with supply chain disruption. *IEEE Transactions on Engineering Management*, 2021.

[39] Farheen Naz, Anil Kumar, Abhijit Majumdar, and Rohit Agrawal. Is artificial intelligence an enabler of supply chain resiliency post covid-19? an exploratory state-of-the-art review for future research. *Operations Management Research*, 15(1):378–398, 2022.

[40] Ziqi Huang, Yang Shen, Jiayi Li, Marcel Fey, and Christian Brecher. A survey on ai-driven digital twins in industry 4.0: Smart manufacturing and advanced robotics. *Sensors*, 21(19):6340, 2021.

[41] Rachid Ejjami and Khaoula Boussalham. Resilient supply chains in industry 5.0: Leveraging ai for predictive maintenance and risk mitigation. *International Journal For Multidisciplinary Research*, 6(4), 2024.

[42] Surendra Mohan DevaraJ. Cloud, ai, and digital transformation: A winning combination. *International Journal Of Computer Engineering And Technology (Ijcet)*, 15(5):1020–1032, 2024.

[43] Thommie Burström, Vinit Parida, Tom Lahti, and Joakim Wincent. Ai-enabled business-model innovation and transformation in industrial ecosystems: A framework, model and outline for further research. *Journal of Business Research*, 127:85–95, 2021.

[44] Amine Belhadi, Venkatesh Mani, Sachin S Kamble, Syed Abdul Rehman Khan, and Surabhi Verma. Artificial intelligence-driven innovation for enhancing supply chain resilience and performance under the effect of supply chain dynamism: an empirical investigation. *Annals of Operations Research*, 333(2):627–652, 2024.

[45] Sulaiman Abdallah Alsheibani, Yen Cheung, Chris H Messom, and Mazoon Alhosni. Winning ai strategy: Six-steps to create value from artificial intelligence. In *AMCIS*, volume 11, 2020.

[46] Joseph R Biden. Executive order on the safe, secure, and trustworthy development and use of artificial intelligence. 2023.

[47] Eleanore Hickman and Martin Petrin. Trustworthy ai and corporate governance: the eu's ethics guidelines for trustworthy artificial intelligence from a company law perspective. *European Business Organization Law Review*, 22:593–625, 2021.

[48] Merve Hickok. Lessons learned from ai ethics principles for future actions. *AI and Ethics*, 1(1):41–47, 2021.

[49] Lena Petersson, Ingrid Larsson, Jens M Nygren, Per Nilsen, Margit Neher, Julie E Reed, Daniel Tyskbo, and Petra Svedberg. Challenges to implementing artificial intelligence in healthcare: a qualitative interview study with healthcare leaders in sweden. *BMC Health Services Research*, 22(1):850, 2022.

[50] January 2018.

[51] Krystyna Jarek and Grzegorz Mazurek. Marketing and artificial intelligence. *Central European Business Review*, 8(2), 2019.

[52] Tim Fountaine, Brian McCarthy, and Tamim Saleh. Building the ai-powered organization. *Harvard business review*, 97(4):62–73, 2019.

[53] Josef Baker-Brunnbauer. Management perspective of ethics in artificial intelligence. *AI and Ethics*, 1(2):173–181, 2021.

[54] Robert Wayne Gregory, Ola Henfridsson, Evgeny Kaganer, and Harris Kyriakou. The role of artificial intelligence and data network effects for creating user value. *Academy of management review*, 46(3):534–551, 2021.

Disclaimer:

SurveyX is an AI-powered system designed to automate the generation of surveys. While it aims to produce high-quality, coherent, and comprehensive surveys with accurate citations, the final output is derived from the AI's synthesis of pre-processed materials, which may contain limitations or inaccuracies. As such, the generated content should not be used for academic publication or formal submissions and must be independently reviewed and verified. The developers of SurveyX do not assume responsibility for any errors or consequences arising from the use of the generated surveys.