

**THREAT RIGIDITY AND THE ROLE OF LEADERSHIP AND ORGANIZATIONAL  
CHANGE IN ARTIFICIAL INTELLIGENCE ADOPTION IN TECHNOLOGY  
COMPANIES**

A dissertation submitted by

**NICOLE DILLON GOLDBERG**

June 2025

to

THE UNIVERSITY OF ARIZONA GLOBAL CAMPUS

Upon the recommendation of the Faculty and the approval of the Board of Trustees, this  
Applied Doctoral Study is hereby accepted in partial fulfillment of the requirements for the  
degree of

DOCTOR OF PHILOSOPHY in ORGANIZATIONAL DEVELOPMENT AND LEADERSHIP

Approved by:

A handwritten signature in black ink, appearing to read "Dennis Darlak, Ph.D.", written over a horizontal line.

Dennis Darlak, Ph.D.  
Committee Chair

Committee Member:  
Jennifer Newmann, Ph.D.

Copyright © by  
Nicole Dillon Goldberg  
2025

NDG I certify that I am the original author of this manuscript.  
(See the full Responsible Use of Artificial Intelligence Guidance outlined in the Research Resource Center.)

Threat Rigidity and the Role of Leadership and Organizational Change in Artificial Intelligence  
Adoption in Technology Companies

by

Nicole Dillon Goldberg

**Abstract**

The integration of artificial intelligence (AI) within technology companies presents both transformative opportunities and considerable organizational challenges. This qualitative study examined how leadership and change management practices influence AI adoption, with particular attention to threat rigidity. Threat rigidity refers to the organizational tendency to respond defensively to perceived threats which can limit adaptability and innovation. The purpose of the study was to understand how mid-level leaders in technology firms navigate AI implementation and address employee resistance, offering insights into effective leadership during digital transformation. The study was grounded in transformational leadership theory and organizational change theory and utilized a basic interpretive qualitative methodology. Data were collected through semi-structured interviews with 12 mid-level leaders who had direct experience managing AI-related initiatives. Thematic analysis was conducted using NVivo software to identify consistent patterns and themes across participant responses.

Results indicated that transformational leadership behaviors, including articulating a clear vision, providing individualized support, and fostering intellectual engagement, played a vital role in reducing threat rigidity and enhancing organizational adaptability. Participants also highlighted the importance of effective change management strategies such as transparent communication,

investment in employee training, and inclusive decision-making processes. These practices helped build trust and created a culture more open to technological innovation. The findings contribute to the existing body of knowledge by illustrating how leadership style, organizational culture, and structural readiness collectively influence the success of AI adoption efforts. Practical implications include the importance of developing transformational leadership capabilities, implementing ethical AI governance frameworks, and nurturing adaptive workplace cultures that support innovation. These insights offer a strategic framework for organizations seeking to integrate AI technologies while minimizing disruption and maximizing long-term value.

*Keywords:* artificial intelligence, leadership, change management, threat rigidity, transformational leadership, organizational change, AI adoption

## TABLE OF CONTENTS

CHAPTER I: INTRODUCTION .....	1
Background of Study.....	1
Statement of Problem.....	3
Purpose of the Study .....	4
Importance of the Study .....	6
Theoretical Framework .....	7
Research Questions .....	11
Overview of Research Design.....	12
Definition of Terms .....	15
Assumptions, Limitations, and Delimitations .....	16
Assumptions .....	16
Limitations .....	17
Delimitations .....	18
Summary .....	19
CHAPTER II: REVIEW OF THE LITERATURE .....	21
Search Strategy.....	22
Search Engines and Databases .....	22
Search Terms.....	23
Identifying Seminal Works.....	24
Citation Analysis.....	24
Review of Comprehensive Literature Reviews.....	25
Leadership Theory .....	25

Cross-Disciplinary Exploration .....	26
Focus on Practical Applications .....	26
Time Frame for Sources .....	26
Focusing on Empirical Research.....	27
The Current Landscape of Artificial Intelligence Adoption in the Technology Sector.....	28
Leadership Competencies and Challenges in Artificial Intelligence Implementation.....	33
Leadership Competencies for Artificial Intelligence Integration .....	35
Technological Literacy.....	36
Ethical Decision-Making.....	36
Adaptive Thinking.....	38
Cross-Functional Collaboration.....	39
Challenges in Artificial Intelligence Implementation .....	40
Organizational Dynamics .....	41
Resistance to Change .....	41
Resource Allocation .....	43
Skill Gaps .....	44
Ethical Considerations.....	45
The Current Landscape of Artificial Intelligence Adoption in the Technology Sector.....	46
Threat Rigidity and Its Impact on Artificial Intelligence Adoption .....	48
Transformational Leadership in Mitigating Artificial Intelligence-Related Challenges ...	50
Summary .....	58
CHAPTER III: METHOD.....	62
Research Design.....	64
Population and Sample.....	65

Purposeful & Snowball Sampling .....	66
Sample Size .....	66
Inclusion Criteria for Participants.....	67
Recruitment Process.....	67
Use of Professional Networks .....	67
LinkedIn as a Recruitment Tool.....	67
Data Collection.....	68
Semi-structured Interviews .....	68
Informed Consent Process.....	68
Interview Procedures .....	69
Data Analysis .....	70
Thematic Analysis Approach .....	70
Braun and Clarke’s Six-Phase Approach .....	70
Use of NVIVO Software for Coding and Analysis.....	71
Process for Identifying Themes and Patterns .....	73
Trustworthiness and Credibility .....	74
Ensuring Validity and Reliability .....	74
Member Checking.....	75
Audit Trail.....	75
Ethical Considerations.....	76
Protection of Participants’ Rights and Privacy.....	76
Data Storage and Confidentiality Measures .....	76
Institutional Review Board (IRB) Approval .....	77
Researcher’s Role and Reflexivity .....	77

Limitations of the Methodology .....	79
Strategies for Mitigating Limitations .....	80
Summary .....	81
CHAPTER IV: RESULTS .....	83
Participants .....	83
Demographics.....	85
Data Collection.....	86
Data Analysis .....	87
Results.....	90
Research Question 1: How do Leaders in Tech Companies Perceive the Challenges Associated with Implementing AI? .....	90
Theme 1: Organizational Resistance .....	90
Theme 2: Ethical Considerations.....	92
Theme 3: Skill Gaps.....	93
Research Question 2: How do Leaders in Tech Companies Navigate the Challenges Associated with Artificial Intelligence Implementation? .....	97
Theme 4: Change Management Strategies .....	98
Theme 5: Employee Engagement.....	100
Theme 6: Strategic Vision.....	101
Research Question 3: How do Leaders Perceive the Opportunities of Artificial Intelligence Adoption and Strategize to Maximize Benefits While Addressing Associated Challenges?.....	103
Theme 7: AI-Driven Innovation.....	104

Theme 8: Leadership Adaptability .....	105
Theme 9: Competitive Advantage.....	106
Summary .....	110
CHAPTER V: DISCUSSION .....	112
Restatement of Research Questions .....	112
Interpretation of Findings .....	115
Leadership Style Matters.....	115
Change Management Strategies Are Crucial.....	117
Technological Literacy and Adaptive Thinking Drive Success .....	119
Culture and Trust Shape Outcomes.....	121
Limitations of the Study .....	123
Implication for Theory .....	124
Leadership Style and Threat Rigidity.....	124
Change Management Practices .....	126
Technological Literacy and Adaptive Thinking.....	127
Cultural Readiness and Trust.....	129
Implications for Practice.....	131
Recommendations for Future Research .....	134
Conclusion.....	136
REFERENCES.....	138
APPENDICES.....	148

## LIST OF TABLES

Table 1: Participant Demographics .....	86
Table 2: Developed Themes (Example from Research Question 1) .....	89
Table 3: Challenges Identified in AI Implementation .....	95
Table 4: Opportunities Identified in Artificial Intelligence Adoption.....	108
Table 5: Summary of Themes Related to Research Questions 1–3 .....	110

**LIST OF APPENDICES**

APPENDIX A: Interview Guide .....148

APPENDIX B: Data Collection Form.....151

APPENDIX C: Informed Consent Form to Participate in a Research Study .....155

## **CHAPTER I: INTRODUCTION**

In the rapidly evolving landscape of the technology sector, the integration of artificial intelligence (AI) has emerged as a pivotal factor for maintaining competitive advantage and driving innovation. However, adopting AI technologies is often challenging, particularly in leadership and change management. This study explored the critical role that leadership plays in facilitating or hindering the successful implementation of AI in technology companies, focusing on threat rigidity—an organizational response to perceived threats that can stifle innovation and adaptation. By examining the experiences and strategies of mid-level leaders involved in AI projects, this research provided valuable insights into the competencies and approaches that can mitigate resistance to change and promote a more agile and resilient organizational culture. Through a qualitative lens, the study contributes to the broader understanding of how leadership and organizational dynamics intersect to shape the future of technology adoption.

### **Background of Study**

Artificial intelligence is increasingly pivotal in transforming industries by enhancing automation, decision-making, and efficiency (Bloomberg, 2023; Wamba-Taguimdje et al., 2020). Particularly within the technology sector, AI adoption is not merely a trend but a crucial component for maintaining competitiveness and fostering innovation (Doorsamy et al., 2020). Despite the recognized benefits, the integration of AI in organizations, especially within tech companies, encounters significant challenges. AI is increasingly pivotal in transforming industries by enhancing automation, decision-making, and efficiency (Benbya et al., 2021; Wamba-Taguimdje et al., 2020). These challenges are often exacerbated by leadership effectiveness and organizational change management issues,

particularly under conditions of perceived threat, a phenomenon known as threat rigidity (Dwivedi et al., 2022; Raisch & Krakowski, 2021).

Threat rigidity refers to the tendency of organizations to become inflexible in their decision-making processes when faced with perceived threats, which can inhibit their ability to adapt and innovate (Chowdhury et al., 2023; Shrestha et al., 2019). This rigidity can manifest in various ways, such as resistance to new ideas, reluctance to embrace change, and an overall decline in organizational agility (Palinkas et al., 2013; Shrestha et al., 2019). The implications of threat rigidity are particularly pronounced in the context of AI adoption, where organizations may struggle to implement innovative technologies due to entrenched mindsets and established practices (Farkas, 2013; Gmyrek et al., 2023).

Leadership plays a critical role in navigating these challenges. Transformational leadership, characterized by the ability to inspire and motivate employees towards a shared vision, has been shown to foster a culture of innovation and adaptability (Kurup & Gupta, 2022). Leaders who embrace transformational styles can effectively counteract the effects of threat rigidity by promoting open communication, encouraging risk-taking, and facilitating collaborative problem-solving (Chukwuma et al., 2023; Mariani et al., 2023). In contrast, transactional leadership, which focuses on maintaining the status quo and managing through established protocols, may exacerbate rigidity and hinder the adoption of AI technologies (Keding, 2021; Smith et al., 2022). Organizational culture and leadership interplay is vital in shaping the response to AI integration. A culture that values learning, experimentation, and flexibility can mitigate the adverse effects of threat rigidity and enhance the organization's capacity to adapt to technological changes (Borges et al., 2022; Haefner et al., 2021). Conversely, a culture resistant to change can lead to increased rigidity,

making it challenging for organizations to leverage AI effectively (Glikson & Woolley, 2020; Kim et al., 2022).

The successful implementation of AI technologies also hinges on the competencies of mid-level leaders, who often serve as the bridge between upper management and frontline employees. These leaders must possess a deep understanding of both the technical aspects of AI and the human factors that influence its adoption (Barnham, 2015; Jiang, 2024). By fostering an environment of trust and collaboration, mid-level leaders can help alleviate fears associated with AI, thereby reducing resistance to change and promoting a more agile organizational culture (Boon et al., 2023; Chen et al., 2015).

This study explored these dynamics through qualitative research, focusing on the experiences and strategies of mid-level leaders involved in AI projects. By examining their insights, the research identified best practices and competencies that can facilitate successful AI adoption while addressing the challenges posed by threat rigidity (Danila & Aciu, 2023; Priyadarshinee et al., 2017). Ultimately, this research contributes to the broader understanding of how leadership and organizational dynamics intersect to shape the future of technology adoption, particularly in the context of AI (Dicce & Ewers, 2020).

### **Statement of Problem**

The general problem is that many tech organizations face challenges in adopting AI technologies, partially due to limitations in leadership's ability to effectively manage and integrate these innovations. Research highlights that leadership plays a crucial role in driving technological adoption, yet there is a lack of clarity on how leadership competencies and strategies directly influence AI adoption (Kurup & Gupta, 2022). One

specific challenge is “threat rigidity,” where organizations exhibit resistance to change when perceiving new technologies as disruptive or threatening (Xue, 2022). Such resistance can impede an organization’s ability to fully embrace and benefit from AI, potentially resulting in missed opportunities for innovation and growth.

The specific problem is that some leaders lack the necessary competencies and understanding of AI technologies, coupled with apprehensions about the implications of these innovations. This can result in leadership approaches that inadvertently reinforce threat rigidity, obstructing successful AI adoption and utilization (Kurup & Gupta, 2022). This study addressed this gap by examining how various leadership styles and change management practices impact AI adoption in tech organizations.

### **Purpose of the Study**

The purpose of this basic interpretive qualitative study was to explore and understand how leadership and organizational change management practices influence the adoption of AI within technology companies, with a specific focus on mitigating threat rigidity during the transition. Threat rigidity, defined as defensive reactions to perceived threats that result in increased organizational resistance to change, poses a significant barrier to adopting transformative technologies like AI (Sohn & Lee, 2020).

This study was guided by research questions designed to examine the intersection of leadership styles, organizational strategies, and their roles in reducing threat rigidity. Specifically, the study uncovered how mid-level leaders perceive their role in fostering a culture of adaptability, how they address resistance to AI, and the strategies they employ to align employees with the organization’s AI vision. These questions

are directly tied to the study's purpose by identifying actionable insights into leadership practices that enable smoother transitions and reduce resistance to technological change.

To achieve this, the study employed semi-structured interviews with mid-level leaders who have been actively involved in AI implementation efforts. Mid-level leaders are uniquely positioned to influence organizational culture and decision-making processes, bridging the strategic objectives of upper management with the operational realities of front-line employees. The study focused on understanding how their leadership styles - whether transformational, transactional, or situational, affect employees' openness to change and mitigate the psychological and organizational barriers associated with threat rigidity.

Key areas of investigation included:

1. Leadership Style: How different leadership approaches influence employee perceptions of AI and whether these approaches foster or mitigate resistance.
2. Change Management Practices: Strategies leaders use to communicate the benefits of AI adoption, address concerns, and build trust among employees.
3. Threat Rigidity Mitigation: Specific practices leaders implement to reduce defensive reactions to AI and encourage a culture of innovation.

Additionally, this study examined organizational factors such as communication practices, decision-making frameworks, and cultural readiness for AI adoption. For example, organizational cultures that prioritize learning and innovation may be better equipped to navigate the challenges posed by AI adoption. Conversely, organizations with rigid hierarchical structures may require distinct leadership interventions to overcome resistance and foster adaptability.

By analyzing these dynamics, the research provided a holistic understanding of the leadership and organizational strategies that promote successful AI adoption. The findings contribute to the broader literature on organizational change management and technology adoption, offering actionable recommendations for leaders navigating similar transitions. Ultimately, this study empowers organizations to approach AI adoption as a transformative opportunity, leveraging leadership competencies to build resilience and adaptability in an increasingly technology-driven landscape.

### **Importance of the Study**

Bloomberg's forecasted growth of AI adoption in tech organizations highlights the need to understand the specific factors influencing the successful integration of AI technologies, mainly focusing on the roles of leadership and organizational change capability and their critical importance in driving success (Bloomberg, 2023). While the importance of leadership in driving innovation and organizational change is recognized, there is a pressing need for a thorough investigation into how leaders conduct organizational change management in the context of AI adoption (Smith et al., 2022). It is imperative to explore the change management methods and approaches of leaders in the context of AI adoption. This research builds on existing knowledge of the factors influencing the successful integration of AI technologies in organizations, particularly concerning leadership and organizational change. Kurup and Gupta (2022) stressed the pivotal role of leadership in driving innovation and organizational change, underscoring the necessity for research on how leadership impacts change management in AI environments.

Leadership in any change management scenario is vital to organizational success (Gorran Farkas, 2013). The implementation of AI may be no different. Chen et al.

(2015) and Priyadarshinee et al. (2017) suggested that leadership's commitment to AI adaptation initiatives is vital because these decision-makers drive the business strategy. The influence of leaders can impact the outcome of AI adoption (Lemos et al., 2022). By exploring the experiences of leaders, organizations can better navigate the challenges associated with change and AI adoption. Understanding the experiences of effective leadership in AI adoption and the importance of change management and leadership can significantly enhance organizations' ability to leverage AI technologies effectively (Hubbart, 2023).

### **Theoretical Framework**

The theoretical framework guiding this study is rooted in the integration of transformational leadership theory and organizational change theory, both of which offer a robust foundation for examining the leadership dynamics in adopting AI technologies within technology companies. Transformational leadership theory, initially articulated by Bass and Avolio (1994), states that effective leaders inspire and motivate employees to exceed expectations through a compelling vision, intellectual stimulation, and individualized support. These qualities are particularly salient in contexts involving complex technological changes, such as AI integration. Leaders who adopt transformational approaches can mitigate resistance to change by fostering a culture of innovation, agility, and openness, which is critical for navigating the uncertainties and challenges inherent in AI adoption (Albert, 2023; Bozkus, 2024).

Organizational change theory complements this by providing a lens to understand the structured approaches and adaptive strategies organizations deploy to manage transitions under conditions of uncertainty or perceived threat. This theory underscores the importance of flexible

organizational structures, effective communication, and stakeholder engagement in facilitating successful change processes (Kurup & Gupta, 2022; Sirkin et al., 2005). In the context of AI adoption, Organizational change theory helps explain how structured change management practices can alleviate the phenomenon of threat rigidity, where organizations respond to perceived threats with rigidity and reduced adaptability (Staw et al., 1981).

The integration of transformational leadership theory and organizational change theory offers a robust framework for understanding how leadership behaviors and organizational dynamics converge to impact the adoption of AI technologies.

Transformational leadership, with its focus on visionary guidance and supportive engagement, plays a pivotal role in alleviating employee concerns while promoting a culture of innovation and continuous learning. Transformational leadership attributes, such as intellectual stimulation and individualized consideration, enable leaders to effectively address AI implementation's technical and ethical complexities (Glikson & Woolley, 2020; Smith et al., 2022). Concurrently, Organizational change theory underscores the importance of structured change processes and adaptive strategies, emphasizing the significance of organizational frameworks and effective communication in facilitating technological transitions (Bass & Avolio, 1994; Staw et al., 1981). Additionally, adaptive change management practices, including stakeholder engagement and iterative implementation strategies, have been identified as key factors in overcoming resistance and ensuring sustainable AI integration (Benbya et al., 2021; Parekh, 2024).

Together, transformational leadership theory and organizational change theory offer complementary lenses through which to understand the leadership and organizational dynamics

essential for the successful adoption of AI in modern enterprises. transformational leadership theory, as outlined by Bass and Avolio (1994), emphasizes the human dimension of leadership and highlights the role of leaders in inspiring, motivating, and empowering their teams. In the context of AI adoption, transformational leaders are pivotal in fostering an environment where employees are not only open to technological change but are also motivated to actively engage with and innovate around new AI-driven solutions. These leaders can inspire a shared vision of the future, helping to align AI implementation with broader organizational goals, and instill confidence in employees that the transition to AI is a positive, forward-thinking move for the organization.

On the other hand, organizational change theory, as articulated by Sirkin et al. (2005), addresses the structural and procedural aspects of implementing large-scale changes such as AI adoption. Organizational change theory provides critical insights into the strategies, systems, and processes that organizations must develop in order to integrate AI technologies effectively. It emphasizes the need for clear change management practices, strategic planning, and communication to ensure the transition is smooth and the new AI systems align with the company's overall mission. While leadership may inspire and motivate, it is the systematic change processes outlined in organizational change theory that ensure AI integration occurs efficiently and sustainably.

Together, these two frameworks create a holistic approach to AI adoption. Transformational leadership can cultivate a culture that is receptive to change, while organizational change theory offers the tactical roadmap to implement that change. For example, transformational leaders might promote AI as a tool for enhancing

employee productivity and creating a competitive edge, while simultaneously leveraging Organizational Change strategies to ensure proper training, technology infrastructure, and process redesign are in place to support the AI integration. The interplay between the human-centric leadership style of Transformational Leadership and the structural considerations of organizational change theory ensures that both the people and the processes are adequately addressed in the AI adoption journey.

By integrating these frameworks, leaders can better navigate the complexities of AI adoption, particularly in overcoming resistance to change. Resistance often stems from fear of job displacement, uncertainty about new technologies, and a lack of understanding about their potential benefits. Transformational leaders, with their ability to communicate a compelling vision and provide individualized support, play a critical role in addressing these fears and fostering a culture of openness and adaptability (Bozkus, 2024). Simultaneously, organizational change theory highlights the need for structured approaches, such as stakeholder engagement, iterative implementation, and effective communication, to build trust and align organizational efforts (Kurup & Gupta, 2022).

These frameworks also provide insights into fostering resilience, an essential competency for organizations operating in the rapidly evolving technology sector. Resilience involves not only adapting to technological disruptions but also thriving amidst them. Transformational leaders contribute to resilience by promoting continuous learning, intellectual stimulation, and collaboration, which empower employees to embrace change as an opportunity rather than a threat (Smith et al., 2022). On the structural side, organizational change theory underscores the importance of agility and flexible organizational frameworks that can quickly respond to technological advancements while maintaining operational stability (Staw et al., 1981).

This integrated perspective drives innovation, a critical goal of AI adoption.

Transformational leaders encourage risk-taking and creative problem-solving, enabling teams to explore novel applications of AI (Glikson & Woolley, 2020). Organizational change theory further supports innovation by advocating for cross-functional collaboration and resource allocation that align technological initiatives with strategic objectives (Benbya et al., 2021). By addressing both human and structural dimensions, transformational leadership theory and organizational change theory collectively equip organizations to navigate the challenges and seize the opportunities associated with AI adoption. These frameworks not only mitigate resistance and enhance resilience but also foster an environment where innovation can thrive, ensuring sustainable growth and competitive advantage in the technology sector.

### **Research Questions**

The research questions guided the study of the interactions between leadership and change management within the specific context of AI implementation in tech organizations. By examining these questions through a qualitative lens, the study uncovered valuable insights into the dynamics during organizational change processes influenced by AI adoption. The present study explored the following:

- RQ1: How do leaders in tech companies perceive the challenges associated with implementing artificial intelligence (AI)?
- RQ2: How do leaders in tech companies navigate the challenges associated with implementing artificial intelligence (AI)?
- RQ3: How do leaders perceive the opportunities of artificial intelligence (AI) adoption and strategize to maximize benefits while addressing associated challenges?

## Overview of Research Design

Qualitative research methods provide a deeper understanding of more complex issues, leveraging an approach that is more subjective or interpretative (Barnham, 2015). A qualitative research study designed to answer the research questions provides a more in-depth understanding of the experiences of leadership in AI adoption, and the importance of change management and leadership can significantly enhance organizations' ability to leverage AI technologies effectively. Interpretive research is used to interpret and make meaning of subjective experiences. Such research uncovered successes and challenges, offering valuable insights for organizations.

Qualitative research designs explore and understand the essence of human experiences and the underlying meanings individuals attribute to those experiences. Qualitative research is descriptive, focusing on providing a rich and detailed description of a specific phenomenon or experience (Heitner & Sherman, 2014). It acknowledges the subjectivity of human experiences and aims to understand these experiences from the participant's perspective (Merriam & Tisdell, 2016). This basic interpretive qualitative study involved small, purposefully selected samples. Twelve mid-level managers with experience in AI implementations in tech organizations were chosen to capture a diverse perspective. This qualitative study employed purposeful sampling to select participants, a method widely used in qualitative research (Palinkas et al., 2013). The participant selection process involved leveraging the researcher's professional network and the initial leaders sampled to identify additional leaders who met the study's criteria and were willing to participate (Boddy, 2016). Utilizing professional networking platforms such as LinkedIn allowed the researcher access to a vast pool of candidates that can be identified by their roles, corporate affiliation, and experience (Dicce & Ewers, 2020). This iterative process

continued until data saturation was reached, indicating that no new themes or insights emerged from further identification of leaders (Palinkas et al., 2013).

The research methodology utilized a qualitative approach with semi-structured interviews as the primary data collection method, offering a flexible yet focused way to gather in-depth insights from leaders within organizations implementing AI (Merriam & Tisdell, 2016). These interviews were particularly well-suited for capturing nuanced perceptions of leadership practices, change management strategies, and the impact of threat rigidity on organizational decision-making processes. By creating a structured framework with open-ended questions, semi-structured interviews allowed participants to articulate their experiences while enabling the researcher to probe deeper into specific areas as needed (Creswell & Poth, 2017).

Before data collection, all participants received detailed information about the study's objectives, procedures, and potential risks to ensure fully informed consent, adhering to ethical guidelines (Hennink et al., 2011). This step was critical for fostering trust and encouraging candid participation, which is essential for generating meaningful qualitative data. The informed consent process highlighted participants' rights, including their ability to withdraw from the study at any time without consequence.

The interviews explored several core dimensions: leaders' perceptions of the challenges posed by AI adoption, their strategies for navigating organizational change, and the specific ways in which perceived threats influenced their behavior and decision-making. Particular attention was paid to understanding how leadership practices interact with factors such as organizational culture, employee resistance, and resource allocation in shaping AI implementation outcomes (Benbya et al., 2021; Kurup & Gupta, 2022). This

exploration contributed to a broader understanding of the dynamics between leadership and organizational resilience in the context of disruptive technologies.

To analyze the data, the study incorporated thematic analysis, following Braun and Clarke's (2006) six-phase approach. This method systematically identified, organized, and interpreted patterns within qualitative data, enabling the researcher to uncover themes related to leadership impact, change management, and the phenomenon of threat rigidity. The phases include familiarizing oneself with the data, generating initial codes, identifying potential themes, reviewing and refining these themes, defining and naming them, and producing a comprehensive report. This structured approach ensured a thorough and reliable analysis of the rich dataset obtained from the interviews.

NVIVO software further enhanced the analytical process by providing tools for efficient coding, data organization, and visualization, thus enabling a more systematic and detailed exploration of the themes (Bazeley & Jackson, 2013). For instance, NVIVO's advanced search and query capabilities assisted in identifying connections and patterns that might otherwise be overlooked, while its visualization tools helped present findings in a clear and impactful manner. Ultimately, the thematic analysis served as a robust framework for addressing the study's research questions, offering critical insights into how leadership behaviors influence the processes and outcomes of AI adoption. By examining these interactions, the study provided a comprehensive understanding of the role of leadership in fostering innovation and adaptability in the face of technological challenges. These findings not only contribute to the theoretical understanding of leadership and organizational change but also offer practical recommendations for enhancing AI implementation practices in the technology sector.

## Definition of Terms

*Artificial intelligence (AI)* refers to the simulation of human intelligence processes by machines, particularly computer systems (Danila & Aciu, 2023). These processes include learning (the acquisition of information and rules for using it), reasoning (using rules to reach approximate or definite conclusions), and self-correction. Artificial intelligence is applied in various fields, including natural language processing, speech recognition, and machine vision.

*Organizational change theory* examines how organizations evolve by adapting to internal and external influences. It emphasizes the role of leadership in guiding transformation, fostering innovation, and aligning the organization with its strategic goals (Bass & Avolio, 1994).

*Technology organizations* include companies that focus on the research, development, or distribution of technology-based goods and services (Wolf & Terrell, 2016).

*Threat rigidity* is a psychological and organizational response to perceived threats, characterized by a restriction in information processing, a reliance on well-learned or dominant responses, and a reduction in flexibility. In the context of organizations, this phenomenon can lead to resistance to change, particularly during the implementation of new technologies or processes (Barnett & Pratt, 2000).

*Transformational leadership* involves shaping followers' attitudes and beliefs while fostering a sense of purpose and challenge through collaboration. It emphasizes the significance of rising above personal self-interest to prioritize the well-being of the group or organization (Bass & Avolio, 1994).

*Leadership competency* encompasses the skills, behaviors, and attributes that contribute to effective leadership (Sejera & Bocarnea, 2022). In the context of this study, it specifically

refers to a leader's ability to guide an organization through the adoption of AI technologies, including understanding technological implications, fostering a culture of innovation, and managing change effectively.

*Organizational change management* involves the structured approach and application of knowledge, tools, and resources to effect change within an organization. It aims to help individuals and teams transition from a current state to a desired future state, minimizing resistance and maximizing engagement and acceptance (Haidar, 2006).

### **Assumptions, Limitations, and Delimitations**

The following assumptions, limitations, and delimitations help frame the scope and context of the study, providing clarity on what the research addressed and acknowledging the constraints that may have affected the study's outcomes and interpretations.

#### **Assumptions**

- **Participant honesty:** It is assumed that participants in the study provided honest and accurate responses during interviews and data collection, reflecting their genuine perceptions and experiences.
- **Generalizability of findings:** The study assumes that the findings from the sampled tech companies and their leaders can be reasonably generalized to other similar organizations in the technology sector facing similar challenges with AI adoption.
- **Consistency in Understanding:** All participants are assumed to have a consistent understanding of key terms such as AI, threat rigidity, and leadership competency, as defined in this study.
- **Contextual Similarities Across Organizations:** While the study focused on a select group of tech companies, it is assumed that the organizational dynamics, challenges related to artificial intelligence adoption, and leadership strategies employed in these companies

share enough similarities to provide insights that can be applicable to other companies in the tech sector,

especially those that are similarly positioned in terms of their stage of AI adoption.

- **AI as a Strategic Imperative for Technology Companies:** It is assumed that AI is increasingly seen as a strategic necessity for technology companies to maintain competitiveness and relevance in their respective markets. Given the growing emphasis on AI technologies in driving innovation, enhancing efficiency, and providing new capabilities, it is assumed that the companies included in the study view AI adoption as essential to their long-term success. This assumption supports the idea that organizations will be actively pursuing AI integration to remain competitive, which in turn shapes their leadership strategies and organizational change efforts.

### **Limitations**

- **Sample Size and Diversity:** The study's findings are based on a limited number of interviews with leaders from select technology companies. This limitation may affect the breadth of perspectives captured, potentially limiting the generalizability of the findings to a broader population of organizations or industries. While the focus on mid-level leaders provided valuable insights, it may exclude perspectives from other key stakeholders, such as front-line employees or senior executives, who also play critical roles in AI adoption.
- **Subjectivity of Qualitative Data:** The qualitative nature of the study inherently involves interpretation, which introduces the potential for subjectivity in data analysis. Researcher bias may influence how interview responses were coded, categorized, and interpreted, even with the application of established qualitative methodologies. To mitigate this risk, the study employed strategies such as member checking, peer debriefing, and maintaining an audit trail to enhance credibility and reduce the influence of personal biases on the findings.
- **Researcher Bias in Data Interpretation:** As the primary instrument for data collection and

analysis, the researcher's perspectives and preconceptions may have inadvertently shaped the interpretation of findings. This could have led to emphasizing certain themes over others or framing conclusions in ways that align with prior expectations. To address this, reflexivity was an integral part of the research

process. The researcher regularly documented and critically examined their assumptions, biases, and

decision-making processes throughout the study to ensure transparency and rigor.

- **Rapid Technological Changes:** The fast-paced nature of AI development and implementation may render the study's findings less applicable over time as new technologies and organizational strategies emerge. Consequently, the study's conclusions are interpreted as reflecting the specific context and period in which the research was conducted, rather than as universally enduring insights.

### **Delimitations**

- **Focus on Technology Sector:** This study was confined to the technology sector and does not explore AI adoption in other industries. This delimitation helped maintain a focused investigation on a specific sector but limits the applicability of findings to other fields.
- **Leadership Levels Examined:** The study specifically examined mid-level leaders involved in AI implementation, excluding insights from entry-level employees, senior executives, or other stakeholders who might have different perspectives on AI adoption and leadership challenge
- **Geographical Scope:** The study was limited to organizations within the United States, affecting the cultural and regulatory diversity of the sample. This delimitation was set to ensure a more manageable and consistent dataset but may limit the global applicability of the findings.

### **Summary**

The challenge of preparing leaders to effectively adopt AI technologies in the technology sector is multifaceted, requiring a deep understanding of both leadership competencies and organizational dynamics. Chapter I introduced the critical issues surrounding AI integration, emphasizing the role of leadership in navigating the complexities of technological innovation, organizational agility, and resilience in the face of change. It

highlights the importance of addressing barriers such as threat rigidity, resistance to change,

and the skill gaps that impede successful AI adoption.

The chapter establishes the theoretical foundation of the study, integrating Transformational leadership theory and organizational change theory to provide a comprehensive lens through which the researcher examined these challenges. These frameworks underscore the interplay between visionary leadership, structured change management, and the cultivation of organizational cultures that embrace innovation and adaptability.

By posing targeted research questions, the study uncovered insights into how mid-level leaders perceive and address the challenges of AI implementation, as well as the strategies they employ to maximize opportunities while mitigating risks. The subsequent Literature Review in Chapter II delves deeper into these issues, exploring the current state of AI adoption, the specific challenges leaders encounter, and the progression of leadership development within the technology sector. This foundation is essential for making

informed predictions and formulating practical recommendations to enhance leadership effectiveness and organizational preparedness for future technological advancements.

## CHAPTER II: REVIEW OF THE LITERATURE

The purpose of this chapter is to provide a comprehensive review of the existing literature on leadership dynamics in AI adoption within technology companies, with a particular focus on the challenges of threat rigidity and organizational change management. This literature review builds upon the foundation laid in Chapter I, expanding on the theoretical frameworks and key concepts introduced earlier to offer a deeper understanding of the complex interplay between leadership, AI implementation, and organizational behavior.

This chapter is organized into five key sections that systematically explore the various facets of the research topic:

1. The current landscape of AI adoption in the technology sector
2. Leadership competencies and challenges in the context of AI implementation
3. Organizational change management strategies for AI integration
4. The phenomenon of threat rigidity and its impact on AI adoption
5. The role of transformational leadership in mitigating resistance to AI-driven change

By examining these areas, this literature review contextualized the research questions posed in Chapter I:

- RQ1: How do leaders in tech companies perceive the challenges associated with implementing artificial intelligence (AI)?
- RQ2: How do leaders in tech companies navigate the challenges associated with implementing artificial intelligence (AI)?
- RQ3: How do leaders perceive the opportunities of artificial intelligence (AI) adoption and strategize to maximize benefits while addressing associated

challenges?

The review synthesized findings from recent studies, identifying gaps in current knowledge and highlighting areas where further research is needed. This comprehensive analysis provided a solid theoretical foundation for the present study's exploration of leadership dynamics in AI adoption within technology companies, setting the stage for the methodology and subsequent findings presented in later chapters.

### **Search Strategy**

The search strategy for this literature review encompassed a multi-faceted approach to ensure comprehensive coverage of relevant sources. Primary databases utilized included Web of Science, Scopus, IEEE Xplore, and Google Scholar. Key search terms combined concepts related to “AI,” “leadership,” “tech companies,” “threat rigidity,” “organizational change management,” “transformational leadership theory,” and “organizational change theory.” Citation analysis was conducted on highly cited articles to identify seminal works and reference lists manually screened. Additionally, targeted searches were performed for influential theories in the fields of leadership and organizational behavior. Given the rapidly evolving nature of AI technology and its impact on business, the primary focus was on literature published within the last five years (2019-2024). However, this timeframe was extended for foundational leadership and organizational change theories.

### **Search Engines and Databases**

The following academic databases and search engines were utilized:

- Google Scholar
- JSTOR

- ProQuest
- IEEE Xplore
- ACM Digital Library
- ScienceDirect
- EBSCO Host

### **Search Terms**

Key search terms and their combinations included:

- “Artificial Intelligence” AND “leadership”
- “AI adoption” AND “tech companies”
- “Organizational change” AND “technology implementation”
- “Threat rigidity” AND “innovation”
- “Transformational leadership” AND “artificial intelligence”
- “Change management” AND “artificial intelligence”
- “Leadership competencies” AND “artificial intelligence integration”
- “Digital transformation” AND “leadership challenges”
- “AI implementation” AND “organizational resistance”
- “Technology adoption” AND “employee attitudes”
- “Adaptive leadership” AND “AI integration”
- “Cognitive biases” AND “AI decision-making”
- “Ethical leadership” AND “AI governance”
- “Organizational learning” AND “AI adoption”
- “Change readiness” AND “artificial intelligence”
- “Leadership agility” AND “technological disruption”

- “AI strategy” AND “executive leadership”
- “Technological change” AND “organizational culture”
- “Innovation leadership” AND “AI implementation”
- “Knowledge management” AND “AI adoption”
- “Organizational resilience” AND “AI integration”
- “Leadership development” AND “AI era”
- “Human-AI collaboration” AND “leadership roles”
- “Technological anxiety” AND “change management”
- “AI literacy” AND “leadership competencies”
- “Transformational Leadership” AND “Artificial Intelligence”
- “Organizational change theory” AND “Artificial Intelligence”

### **Identifying Seminal Works**

To establish a robust theoretical foundation for this study, it was crucial to identify and analyze historically significant works and seminal theories in the fields of leadership, organizational change, and AI adoption. The following strategies were employed to ensure a comprehensive review of the most influential and relevant literature: **Citation Analysis**

A systematic citation analysis was conducted to track highly cited papers in the fields of transformational leadership, organizational change management, and AI implementation. This process involved:

- Utilizing academic databases such as Web of Science, Scopus, and Google Scholar to identify articles with high citation counts.

- Analyzing citation patterns to determine which works have had the most significant impact on the field over time.
- Examining the context in which these works are cited to understand their relevance to the current study.

### **Review of Comprehensive Literature Reviews**

Recent comprehensive literature reviews in the relevant fields were thoroughly examined.

This approach offered several benefits:

- Providing an overview of the current state of knowledge in the field.
- Identifying key themes and debates within the literature.
- Highlighting gaps in existing research that this study can address.

Special attention was given to meta-analyses and systematic reviews published in high-impact journals within the last five years.

### **Leadership Theory**

This study conducted a detailed review of leadership theories, specifically focusing on organizational change theory and transformational leadership, and their relevance to the adoption of AI in tech companies. This examination served several key purposes:

- Assessing the relevance and application of leadership theories in driving AI adoption and organizational transformation within the tech sector.
- Identifying the specific leadership traits that facilitate or hinder successful AI integration, with a focus on transformational leadership's role in fostering a culture of innovation.
- Pinpointing gaps in existing research related to leadership strategies in AI adoption, providing a foundation for future inquiry.

Particular attention was given to recent empirical studies and theoretical advancements published in high-impact journals over the past five years.

### **Cross-Disciplinary Exploration**

Given the interdisciplinary nature of this study, seminal works from related fields were also considered, including:

- Organizational psychology
- Innovation management
- Technology acceptance models
- Cognitive science (particularly in relation to AI)

This cross-disciplinary approach provided a more comprehensive understanding of the complex interplay between leadership, organizational dynamics, and technological innovation.

### **Focus on Practical Applications**

While theoretical works are crucial, this review prioritized seminal studies demonstrating practical application of theories in organizational settings. This includes:

- Case studies of successful AI implementations in technology companies.
- Empirical studies that test the effectiveness of different leadership approaches in managing technological change.
- Longitudinal studies that track the impact of leadership strategies on organizational outcomes over time.

### **Time Frame for Sources**

The selection of appropriate time frames for literature sources was crucial to ensure the relevance and currency of the research while also acknowledging the historical context and

foundational works in the field. For this study, the primary focus was on sources published within the last five years (2019-2024). This timeframe was chosen to capture the most current trends, challenges, and innovations in AI adoption and leadership practices, reflecting the rapidly evolving nature of AI technologies and their impact on organizational structures.

A narrower time frame of 2-3 years (2021-2024) was prioritized for topics directly related to AI implementation. This approach was necessary due to the exponential growth and development in AI capabilities and applications, which necessitate capturing rapidly changing best practices in AI integration within organizations. Additionally, emerging ethical considerations and regulatory frameworks surrounding AI use further justified this focused timeframe.

Recognizing the importance of theoretical foundations and landmark studies, there was no strict date limitation for seminal works in leadership theory, organizational change, and technology adoption. These foundational studies are included based on their continued relevance and influence on current thinking, regardless of their publication date. To provide context for the evolution of ideas and practices, select studies from 2015-2018 were also included if they represented significant shifts in thinking about AI adoption or leadership in technological contexts.

### **Focusing on Empirical Research**

A systematic approach has been employed to identify empirical research closely resembling the current study, utilizing specific criteria to ensure relevance and depth. The first criterion focused on qualitative studies examining leadership within technology companies, as these contexts provide unique insights into leadership dynamics in environments characterized

by rapid technological change. Additionally, research that explored the challenges and strategies associated with AI adoption was prioritized, allowing for a nuanced understanding of the barriers organizations face and how leadership can facilitate successful integration. Furthermore, studies investigating organizational change in the context of technological innovation were included to shed light on how leadership practices influence change management processes during AI implementation.

Preference was given to peer-reviewed journal articles to ensure the academic rigor of the sources; however, relevant conference proceedings and industry reports are also considered to capture emerging trends and practical insights from the field. This multi-faceted search strategy ensured a comprehensive review of both theoretical foundations and current empirical findings relevant to the research questions. By synthesizing insights from various sources, this approach provided a solid basis for understanding how leadership and organizational dynamics intersect to shape the adoption of AI in technology companies. Ultimately, focusing on empirical research enriched the study's findings and contributed to developing best practices for navigating the complexities of AI integration in organizational settings.

### **The Current Landscape of AI Adoption in the Technology Sector**

The current landscape of AI adoption in the technology sector has undergone significant transformation in recent years, with the tech industry leading the charge in both innovation and implementation. This rapid evolution has not only reshaped the competitive landscape but also redefined the very nature of technological advancement. The technology sector has witnessed an unprecedented surge in AI adoption, with longitudinal data revealing a remarkable upward trajectory. According to McKinsey & Company (2023), corporate AI adoption has more than doubled since 2017, with the tech sector

consistently outpacing other industries in both adoption rates and investment. This exponential growth is unsurprising, given that the technology sector is at the forefront of AI innovation and application development. The motivations driving AI adoption in the technology sector are multifaceted: operational efficiency, innovation acceleration, and financial performance enhancement.

AI is being leveraged across various functions within tech companies, with the most prevalent applications including product development, marketing and sales, and IT operations. In product development, AI-driven algorithms streamline the design process and enable rapid prototyping. For marketing and sales, predictive analytics and personalization engines are optimizing customer acquisition and retention strategies. In IT operations, AI-powered systems enhance network security, automate routine tasks, and improve system performance. Chen et al. (2015) highlight how big data analytics and AI are being utilized to optimize supply chain management and create substantial value within technology companies. Integrating AI into core business processes is not merely a trend but a fundamental shift in how technology firms operate and compete. The widespread adoption of AI across these various functions demonstrates the technology sector's commitment to leveraging AI as a transformative force in its operations and strategies.

The economic ramifications of AI adoption in the technology sector are profound and far-reaching. Gmyrek et al.'s 2023 report projects that AI could contribute up to \$15.7 trillion to the global economy by 2030, with the technology sector playing a pivotal role in this growth. This staggering figure underscores the transformative potential of AI not just for individual companies but for the broader economic landscape.

Bloomberg (2023) further corroborates this outlook, forecasting that the generative AI market alone could reach \$1.3 trillion by 2032. This projection highlights the immense economic opportunities that lie ahead for tech companies at the forefront of AI innovation and adoption. The potential for AI to drive such significant economic growth has led to increased investment and focus on AI development within the technology sector as companies seek to capitalize on these opportunities and maintain their competitive edge.

Despite the overall upward trend, AI adoption is not uniform across the technology sector. Kurup and Gupta (2022) identify several key factors influencing organizational AI adoption, including technological infrastructure, organizational culture, and leadership support. The existing IT architecture and data management capabilities of a company play a crucial role in determining its readiness for AI implementation. Organizational culture, particularly the openness to innovation and willingness to embrace change, significantly impacts a company's ability to integrate AI technologies successfully. The commitment of top management to AI initiatives and their vision for AI integration is also a critical factor in driving adoption. These findings suggest that even within the technology sector, there are varying degrees of AI implementation and success. Larger technology companies with more substantial resources tend to be further along in developing and executing comprehensive AI strategies compared to smaller organizations, highlighting the importance of resource availability in AI adoption.

The adoption of AI technologies brings forth a new set of challenges that technology companies must navigate. Chowdhury et al. (2023) identified key leadership

competencies necessary for successful AI integration, including technological literacy, ethical decision-making, and adaptive thinking. This underscores the need for a holistic approach to AI adoption that goes beyond mere technological implementation. Ethical considerations have also come to the forefront of AI adoption discussions. Glikson and Woolley (2020) emphasize the growing importance of ethical leadership in AI adoption, highlighting the need for leaders to balance innovation with responsible AI use. This includes addressing concerns related to data privacy, algorithmic bias, and the societal impact of AI technologies. Algorithmic bias occurs when systematic errors in machine learning algorithms produce unfair or discriminatory outcomes, often reflecting or reinforcing existing socioeconomic, racial, and gender biases. As AI capabilities become more advanced and pervasive, technology companies must grapple with these ethical considerations to ensure the responsible development and deployment of AI systems.

The technology sector is more advanced in AI adoption. Yet there is still significant room for growth and maturation of AI capabilities across the industry (Bloomberg, 2023). Mariani et al. (2023) note that AI adoption rates and strategies vary considerably even within the tech sector, influenced by factors such as company size, market focus, and technological specialization. As AI capabilities continue to advance rapidly, the technology sector will likely remain at the forefront of innovation and adoption, shaping the future of AI applications across industries. However, several challenges persist, including data privacy and security concerns, regulatory compliance issues, talent acquisition difficulties, and the need for ethical AI development frameworks. Addressing these challenges will be crucial for the

continued growth and success of AI adoption in the technology sector. Companies that can effectively navigate these challenges while leveraging the benefits of AI are likely to gain a significant competitive advantage in the evolving technological landscape.

The integration of AI technologies necessitates significant organizational changes within tech companies. Parekh (2024) explores the role of leadership in organizational adaptation to disruptive technologies like AI. Their research highlights the importance of ambidextrous leadership styles that can balance the exploration of new AI opportunities with the exploitation of existing competencies. This balance is crucial for technology companies seeking to innovate with AI while maintaining their core business strengths. Bozkus (2024) further elaborates on the organizational change and leadership strategies required in technology firms navigating the AI landscape. They emphasize the need for structural flexibility, adapting organizational structures to facilitate AI integration. Cross-functional collaboration is also highlighted as a key factor, fostering interdepartmental cooperation to leverage AI capabilities fully. Additionally, implementing continuous learning programs to upskill employees and develop AI competencies across the organization is a critical component of successful AI adoption strategies.

The landscape for AI in the technology sector is dynamic and continually evolving (Bloomberg, 2023). As AI capabilities mature and new applications emerge, technology companies must remain agile and adaptive. The successful integration of AI goes beyond technological implementation, requiring a holistic approach that addresses organizational, ethical, and leadership challenges. Future

research should focus on several key areas to further understand and optimize AI adoption in the technology sector. These areas include examining the long-term impacts of AI adoption on organizational performance and innovation in the tech sector, identifying best practices for ethical AI development and deployment within technology companies, developing strategies for effective change management and organizational adaptation in AI-driven tech environments, and exploring the role of AI in shaping competitive dynamics and industry structure within the technology sector. As the AI landscape evolves, continued research is crucial to understand how technology companies can optimize their AI adoption approaches, maximize the value created through AI integration, and address the associated challenges and ethical considerations.

**Leadership Competencies and Challenges in AI Implementation**

The implementation of AI technologies in organizations introduces distinct and often unprecedented challenges for leaders, particularly in the technology sector (Doorsamy et al., 2020; Kurup & Gupta, 2022). AI is rapidly reshaping business landscapes by transforming operations, decision-making, and innovation capabilities. Consequently, leaders must develop a range of specific competencies and adopt targeted strategies to successfully navigate the complexities of AI integration (Bloomberg, 2023; Wamba-Taguimdje et al., 2020). These challenges extend beyond technical implementation to include cultural, ethical, and workforce-related issues that demand agile and visionary leadership.

Key leadership competencies for successful AI adoption include technological literacy, adaptive thinking, ethical decision-making, and cross-functional

collaboration (Chowdhury et al., 2023). Technological literacy is critical, as leaders must possess a foundational understanding of AI to make informed decisions and effectively guide their teams (Smith et al., 2022). Adaptive thinking, which enables leaders to respond to rapid technological advancements and shifting market demands, is equally important for fostering organizational resilience (Raisch & Krakowski, 2021). Ethical decision-making is also paramount, given the potential risks of AI, such as data privacy concerns and algorithmic bias, requiring leaders to balance innovation with responsibility (Glikson & Woolley, 2020). Additionally, cross-functional collaboration is essential for aligning AI initiatives with organizational goals, requiring leaders to bridge gaps between technical and non-technical teams (Bozkus, 2024).

The challenges leaders face during AI implementation are multifaceted and often interrelated. Organizational resistance to change, driven by fear of job displacement or a lack of understanding of AI's potential, is a significant hurdle (Kurup & Gupta, 2022). Leaders must address these concerns through clear communication, inclusive decision-making, and fostering a culture of learning and innovation (Benbya et al., 2021).

Resource allocation is another challenge, as AI projects demand substantial investments in technology, training, and talent, requiring leaders to prioritize initiatives strategically (Borges et al., 2022). Furthermore, skill gaps within the workforce present additional obstacles, necessitating the development of robust upskilling and reskilling programs (Parekh, 2024).

This literature review examined these leadership competencies and challenges in greater depth, exploring how they intersect to influence the outcomes of AI implementation. By synthesizing insights from recent research, this review highlights the critical

role of leadership in shaping organizational readiness and success in adopting AI technologies, providing a foundation for identifying best practices and strategies to overcome barriers (Smith et al., 2022; Xue, 2022).

### **Leadership Competencies for AI Integration**

Successful AI adoption requires leaders to possess a combination of technical expertise, change management skills, and the ability to navigate complex organizational dynamics (Bozkus, 2024). As AI technologies evolve at an unprecedented pace, leaders must continuously develop and adapt their competencies to guide their organizations effectively through the implementation process. This involves not only understanding the technical aspects of AI, such as data analytics, machine learning, and algorithmic decision-making, but also mastering the art of managing transitions, fostering collaboration, and addressing resistance to change. Peifer et al. (2022) highlight that as AI technologies become increasingly integrated into core business operations, the importance of change management and the ability to manage complexity will only grow.

Leaders must anticipate the multifaceted challenges that AI implementation brings, including ethical considerations, workforce skill gaps, and the alignment of AI projects with organizational goals. Effective leaders create a culture of adaptability and innovation, empowering employees through upskilling initiatives, transparent communication, and the establishment of a shared vision for AI's role within the organization. By combining technical literacy with strong leadership capabilities, such as decision-making agility and emotional intelligence, leaders can navigate the dynamic landscape of AI adoption and position their organizations for sustained success in an AI-driven future.

## **Technological Literacy**

Leaders must cultivate a robust understanding of AI technologies to make informed decisions, provide effective guidance to their teams, and align AI initiatives with organizational objectives (Chowdhury et al., 2023). This foundational knowledge equips leaders to evaluate the potential impact of AI on processes, productivity, and innovation, enabling them to identify strategic opportunities and address risks associated with its implementation. Mariani et al. (2023) emphasize that staying informed about the latest developments in AI and their practical applications is critical for maintaining a competitive edge, requiring leaders to commit to continuous learning and quickly adapt strategies to technological changes. While technical literacy, such as understanding machine learning algorithms and data analytics, is valuable, Peifer et al. (2022) argue that leaders must go beyond the mechanics of AI to understand its broader implications, including ethical concerns, workforce dynamics, and organizational integration. This holistic perspective allows leaders to make decisions that balance technological innovation with human-centered values, fostering trust and engagement within their teams. By integrating technical expertise with strategic foresight and the ability to translate AI potential into actionable goals, leaders can effectively navigate the complexities of its adoption, positioning their organizations for sustainable growth and innovation in a rapidly evolving technological landscape.

## **Ethical Decision-Making**

AI implementation consistently raises significant ethical concerns, including issues related to privacy, algorithmic bias, transparency, and potential job displacement, which can have profound social and organizational implications (Glikson &

Woolley, 2020). These challenges demand that leaders responsibly navigate the ethical complexities of AI, embedding ethical considerations into every stage of their AI strategies. For instance, ensuring data privacy and protecting user information must be prioritized to maintain public trust, while addressing algorithmic bias is critical to avoiding unintended discrimination in decision-making processes. Leaders must also proactively address workforce concerns, such as job displacement, by promoting upskilling initiatives and emphasizing the role of AI as a tool for augmentation rather than replacement.

The growing importance of ethical leadership in AI adoption underscores the need for leaders to develop advanced ethical decision-making skills. Glikson and Woolley (2020) argue that leaders must not only understand the ethical risks associated with AI but also foster a culture of accountability and transparency to mitigate these risks effectively. Moss et al. (2021) further emphasize the importance of algorithmic impact assessments as a key tool for ensuring responsible AI implementation. These assessments allow leaders to evaluate the societal, organizational, and individual impacts of AI systems, guiding the development of solutions that align with ethical standards.

Leaders must work toward creating robust governance frameworks that institutionalize ethical practices in AI deployment. This involves collaborating with cross-functional teams, including legal, technical, and human resource experts, to establish policies and protocols for ethical AI use. Such frameworks should include mechanisms for regular audits, stakeholder feedback, and adaptive updates to address emerging ethical concerns. By taking a proactive and comprehensive approach to ethical leadership, organizations can

safeguard against potential risks and enhance their reputation and trustworthiness in the rapidly evolving landscape of AI technologies.

### **Adaptive Thinking**

Corporate cultures that prioritize adaptive thinking are significantly more conducive to the successful implementation and integration of AI technologies (Peifer et al., 2022). Adaptive thinking involves the ability to respond flexibly and strategically to changing circumstances, making it a critical attribute in the dynamic landscape of AI.

The rapid evolution of AI technologies necessitates leaders who can make swift, informed decisions while anticipating the broader implications of these advancements on organizational goals, workforce dynamics, and competitive positioning (Raisch & Krakowski, 2021).

This capacity for adaptability enables leaders to effectively address the “automation-augmentation paradox,” which highlights the balance between leveraging AI for efficiency and preserving opportunities for human creativity and problem-solving (Raisch & Krakowski, 2021). By fostering a culture that values innovation and continuous learning, organizations can position AI as a complement to human capabilities rather than a replacement. This approach not only maximizes the potential of AI but also alleviates concerns about job displacement, creating a more collaborative and forward-thinking environment (Glikson & Woolley, 2020).

Adaptive thinking supports cross-functional collaboration, a key component of successful AI integration. Leaders who encourage open communication and interdepartmental teamwork can better align AI initiatives with organizational objectives while addressing potential resistance or knowledge gaps. Peifer et al. (2022)

emphasize that organizations with adaptive cultures are more likely to embrace iterative processes, enabling them to refine AI systems continuously in response to feedback and emerging trends. Fostering a corporate culture that values adaptive thinking equips organizations with the resilience and agility needed to thrive in an AI-driven world. Such cultures not only support the seamless integration of advanced technologies but also empower employees to contribute meaningfully, ensuring a harmonious balance between technological innovation and human ingenuity.

### **Cross-Functional Collaboration**

AI projects typically require collaboration across multiple departments within an organization, as their implementation impacts various functions such as IT, operations, marketing, and human resources (Chowdhury et al., 2023). Leaders play a crucial role in fostering cross-functional collaboration to ensure the successful integration of AI technologies and their alignment with organizational goals (Chowdhury et al., 2023). Effective collaboration is essential not only for technical deployment but also for addressing organizational challenges such as change management, resource allocation, and employee adaptation to new workflows. To facilitate this level of collaboration, leaders must possess strong communication skills and the ability to bridge the gap between technical and non-technical teams. Clear, consistent communication helps demystify AI concepts for non-technical stakeholders, ensuring that all departments understand the technology's potential benefits and limitations (Raisch & Krakowski, 2021). Conversely, leaders must also ensure that technical teams are attuned to the business needs and strategic objectives driving AI adoption, fostering a shared sense of purpose across all functions (Peifer et al., 2022).

In addition to communication, leaders must create structures and processes that support collaboration. This includes forming cross-functional teams to oversee AI projects, establishing regular channels for feedback and updates, and promoting a culture of transparency and inclusivity (Bozkus, 2024). For example, involving representatives from multiple departments in the early stages of AI implementation can help identify potential bottlenecks or integration challenges, reducing the risk of misalignment and resistance. Leaders can leverage digital tools and platforms to enhance collaboration.

Technologies such as project management software, collaborative dashboards, and data-sharing systems can streamline communication and improve coordination between teams, ensuring that AI projects remain on track (Moss et al., 2021). By fostering a collaborative environment and bridging functional silos, leaders can not only enhance the efficiency of AI integration but also ensure that the technology delivers value across the entire organization.

### **Challenges in AI Implementation**

The adoption of AI technologies presents organizations with transformative opportunities, but it also introduces a range of challenges that leaders must navigate to ensure successful implementation. These challenges span organizational dynamics, workforce adaptation, resource allocation, skill gaps, and ethical considerations, each of which demands tailored strategies and leadership competencies. AI projects often require a restructuring of established processes and the alignment of diverse functions within the organization, which can lead to resistance and uncertainty among employees (Benbya et al., 2021). Leaders must address these concerns by fostering a culture of collaboration, innovation,

and trust, ensuring that AI initiatives are seamlessly integrated with organizational objectives.

### **Organizational Dynamics**

Leaders are tasked with managing the complex interplay of organizational culture, structure, and established processes to integrate AI seamlessly (Benbya et al., 2021). This often involves overcoming resistance to change, a common barrier fueled by employees' fears of job displacement or uncertainty about how AI will impact their roles. Resistance can also stem from a lack of understanding or mistrust of AI technologies, making education and transparency critical components of the adoption process. To address these challenges, leaders must employ robust communication strategies that clearly articulate the benefits of AI while addressing potential concerns. Additionally, implementing well-designed change management practices can help ease the transition by fostering trust, encouraging participation, and promoting a culture that is receptive to innovation (Albert, 2023). Through these efforts, leaders can align organizational elements with strategic goals, ensuring that AI technologies are not only integrated successfully but also embraced as a catalyst for growth and transformation.

### **Resistance to Change**

Employees may resist AI initiatives due to fear of job displacement, lack of understanding about the technology, or uncertainty regarding its impact on their roles and the broader organization. Such resistance can manifest as skepticism, disengagement, or even active opposition to AI implementation efforts. Leaders play a critical role in addressing these concerns through strategic communication and effective change management practices. Bozkus (2024) highlights that transformational leaders are particularly adept at

fostering a sense of urgency around AI adoption while simultaneously creating a supportive environment that enables employees to adapt. This dual approach helps mitigate anxiety and resistance, empowering employees to embrace technological change rather than fear it.

One effective strategy involves transparent communication about the purpose and benefits of AI adoption. Leaders should clearly articulate how AI will enhance organizational efficiency and create opportunities for employees rather than solely focusing on cost-cutting or automation (Benbya et al., 2021). Moreover, providing tailored support and resources, such as training programs and upskilling opportunities, can help employees build confidence in their ability to work with AI technologies (Kurup & Gupta, 2022). These efforts are crucial for creating a workforce that views AI as a tool for empowerment rather than a threat to job security.

In addition to addressing individual concerns, leaders must foster a culture of collaboration and innovation that values employee contributions to the AI adoption process. Encouraging cross-functional teams to work on AI initiatives and soliciting feedback from employees at all levels can enhance buy-in and reduce resistance.

As Mariani et al. (2023) emphasize, empowering employees to participate in shaping AI integration strategies alleviates fears and leverages their expertise to identify potential challenges and solutions. Ultimately, leaders who balance urgency with empathy can drive successful AI adoption by aligning organizational goals with employee needs. By addressing resistance proactively and providing the necessary tools for adaptation, transformational leaders can foster a resilient and agile workforce prepared to navigate the complexities of technological change (Parekh, 2024).

## **Resource Allocation**

AI projects are inherently resource-intensive, demanding substantial investments in cutting-edge technology, skilled talent, and comprehensive training programs. Leaders must carefully balance allocating financial, human, and technological resources to support AI initiatives while ensuring the stability and efficiency of other business operations (Benbya et al., 2021; Borges et al., 2022). This balancing act is particularly challenging in dynamic environments where competing priorities and limited resources often necessitate difficult decision-making.

To achieve this balance, leaders must align AI initiatives with the organization's overarching business strategies, ensuring that AI projects contribute directly to long-term goals and deliver measurable value (Kurup & Gupta, 2022).

Effective resource allocation involves identifying high-impact areas for AI deployment, such as automating routine processes or enhancing customer engagement, while strategically phasing investments to mitigate financial strain. Additionally, prioritizing projects that align with the organization's core competencies and competitive advantages can maximize the return on investment and ensure sustainable growth.

Addressing resource-related challenges requires fostering cross-functional collaboration to leverage existing expertise and infrastructure. Leaders should engage diverse teams to identify synergies across departments, optimizing the use of resources and minimizing redundancies. Building partnerships with external stakeholders, such as technology providers and academic institutions, can also help organizations access additional resources and expertise to accelerate AI adoption (Doorsamy et al., 2020; Parekh, 2024). By strategically managing resources, leaders can navigate the complexities of AI implementation and

position their organizations for long-term success in an increasingly AI-driven business landscape.

### **Skill Gaps**

The rapid development of AI often surpasses the existing skill sets within organizations, creating a significant challenge for workforce preparedness. Leaders are tasked with identifying these skill gaps and implementing strategic training programs to upskill their workforce effectively. As Parekh (2024) emphasizes, providing employees with the necessary skills ensures they can work competently with AI technologies, fostering a more adaptable and empowered workforce. This approach also helps alleviate fears of job displacement, a common concern associated with AI integration, and promotes a more positive organizational attitude toward its adoption.

Chang (2024) highlights the importance of aligning training programs with both organizational goals and individual career aspirations to maximize engagement and effectiveness. By tailoring these programs to the unique needs of employees, leaders can enhance learning outcomes and bridge the gap between existing competencies and the demands of AI technologies. This includes offering specialized workshops, on-the-job training, and certifications in areas such as data analytics, machine learning, and AI ethics.

Upskilling initiatives are essential for alleviating resistance to AI adoption by directly addressing the concerns and fears employees may have regarding technological changes. These initiatives focus on equipping employees with the knowledge and skills necessary to thrive in an AI-driven work environment, thereby reducing uncertainty and boosting confidence. Bozkus (2024) highlights the importance of transformational leadership in

fostering a culture of continuous learning, where employees are empowered and supported in their professional growth. This leadership approach creates an atmosphere in which employees feel both valued and well-prepared to navigate the challenges of an AI-integrated workplace. Leaders can achieve this by fostering open communication, emphasizing the long-term benefits of AI for both individuals and the organization, and providing consistent opportunities for professional development.

Incorporating continuous learning programs not only addresses skill gaps but also cultivates a culture of innovation and resilience. Kurup and Gupta (2022) argue that organizations that prioritize workforce development in the context of AI adoption are better positioned to maintain a competitive edge. These programs empower employees to adapt to evolving technological landscapes, ensuring that both individuals and organizations thrive amidst rapid advancements in AI capabilities.

### **Ethical Considerations**

Glikson and Woolley (2020) highlight that leaders must navigate the ethical implications of AI adoption, ensuring that innovation is balanced with responsible use and consideration of potential societal impacts. This involves developing governance frameworks, conducting algorithmic impact assessments, and collaborating with external stakeholders to ensure AI implementations align with societal values and expectations (Moss et al., 2021).

The successful implementation of AI technologies requires leaders to develop a robust set of competencies and navigate complex challenges. Leaders can effectively guide their organizations through the complexities of AI adoption by focusing on technological literacy, ethical decision-making, adaptive thinking, and cross-functional

collaboration (Chowdhury et al., 2023). Additionally, addressing challenges related to organizational dynamics, resistance to change, resource allocation, skill gaps, and ethical considerations is crucial for realizing the full potential of AI while mitigating associated risks.

As AI continues to evolve and reshape business landscapes, the role of leadership in guiding organizations through this technological revolution becomes increasingly critical (Bloomberg, 2023; Wamba-Taguimdje et al., 2020). Leaders must balance innovation with responsible implementation, fostering a culture that embraces AI while addressing the concerns and needs of their workforce (Kurup & Gupta, 2022; Smith et al., 2022). By developing the necessary competencies and strategies to navigate these challenges, leaders can effectively position their organizations to harness AI technologies' transformative power (Doorsamy et al., 2020; Xue, 2022;).

### **The Current Landscape of AI Adoption in the Technology Sector**

In recent years, the technology sector has been at the forefront of AI adoption and implementation. The rapid growth in AI adoption is evident when examining longitudinal data (Kristensen, 2021). McKinsey & Company (2023) reports that AI adoption has more than doubled since 2017, with the tech sector leading in both adoption rates and investment. This high adoption rate is unsurprising because the technology sector is pioneering many AI innovations and applications.

The motivations driving AI adoption in the technology sector include the ability to reduce costs, accelerate development cycles, and increase profitability. AI is being leveraged across various functions, with the most common applications including product development, marketing and sales, and IT operations (Fontaine et al., 2020).

For example, Borges et al. (2022) highlight how big data analytics and AI are being used to optimize supply chain management and create value within technology companies.

The economic impact of AI adoption is significant. Gmyrek et al.'s 2023 report estimates that AI could contribute up to \$15.7 trillion to the global economy by 2030, with the technology sector playing a pivotal role in this growth. This underscores the importance of AI adoption not just for individual companies, but for the broader economic landscape (Gmyrek et al., 2023).

However, AI adoption is not uniform across the sector. Dwivedi et al. (2022) identify several factors influencing organizational AI adoption, including technological infrastructure, organizational culture, and leadership support. This suggests that even within the technology sector, there are varying degrees of AI implementation and success. Larger technology companies with more resources tend to be further along in developing and executing comprehensive AI strategies compared to smaller organizations.

The adoption of AI technologies also brings new challenges. Benbya et al. (2021) identified key leadership competencies necessary for successful AI integration, including technological literacy, ethical decision-making, and adaptive thinking.

Additionally, Moss et al. (2021) highlighted the growing importance of ethical leadership in AI adoption, emphasizing the need for leaders to balance innovation with responsible AI use.

Looking ahead, as AI capabilities continue to advance rapidly, the technology sector is likely to remain at the forefront of innovation and adoption, shaping the future of AI applications across industries (Mou, 2019). However, challenges

remain around data privacy, security, regulatory compliance, and the need for specialized AI talent.

While the technology sector leads in AI adoption, there is still significant room for growth and maturation of AI capabilities across the industry. As the landscape evolves, continued research is needed to understand how technology companies can optimize their AI adoption approaches and maximize the value created through AI integration, while addressing the associated challenges and ethical considerations (Keding, 2021; Kim et al., 2022; Mariani et al., 2023).

### **Threat Rigidity and Its Impact on AI Adoption**

Threat rigidity theory, first proposed by Staw et al. (1981), offers valuable insights into organizational behavior when faced with disruptive technologies like AI. This theory suggests that organizations tend to respond to perceived threats by restricting information processing, constricting control, and conserving resources. In the context of AI adoption, these responses can significantly hinder an organization's ability to implement and leverage AI technologies effectively.

When organizations perceive AI as a threat rather than an opportunity, several threat rigidity effects can emerge. These include information restriction, where organizations may limit the flow of information about AI capabilities and potential impacts, leading to an incomplete understanding of AI technologies and their potential benefits. Additionally, decision-making processes related to AI adoption may become more centralized, potentially resulting in less effective AI strategies (Ghemawat & McGahan, 2021). Organizations might also

hesitate to allocate sufficient resources for AI projects, viewing them as risky investments rather than strategic necessities.

The impact of threat rigidity on AI adoption can be profound and multifaceted. Organizations experiencing threat rigidity may postpone or avoid AI adoption altogether, potentially losing competitive advantages in their industry. Employees and management may resist AI-driven changes due to fears of job displacement or loss of control, hindering smooth implementation (Jiang, 2024). Even when AI is adopted, threat rigidity can lead to a limited application of its capabilities, preventing organizations from realizing its full potential.

Organizations can adopt several strategies to implement AI while addressing threat rigidity successfully. Leadership can play a crucial role in reframing AI adoption from a threat to an opportunity for growth and innovation (Albert, 2023). Fostering a culture of continuous learning and experimentation can help organizations become more adaptable and less rigid in their approach to AI. Clear and open communication about AI initiatives can help reduce uncertainty and mitigate threat perceptions among employees (Boon et al., 2023).

Jiang (2024) suggest that proactive leadership can help overcome threat rigidity responses by promoting a positive vision of AI integration. They also note that organizational structure plays a role in how threat rigidity manifests, with more flexible structures generally being better equipped to adapt to AI technologies.

While threat rigidity presents significant challenges to AI adoption, organizations that can recognize and address these rigid responses are better positioned to implement AI technologies successfully. By fostering flexibility, promoting

learning, and reframing AI as an opportunity rather than a threat, organizations can navigate the complexities of AI adoption more effectively, ultimately leveraging AI to enhance their competitive position in an increasingly technology-driven business landscape (Raisch & Krakowski, 2021).

### **Transformational Leadership in Mitigating AI-Related Challenges**

The integration of AI in organizations presents unique challenges that require effective leadership to navigate successfully (Haefner et al., 2021). Transformational leadership has emerged as a crucial approach in addressing these AI-related challenges, offering a framework for guiding organizations through the complexities of technological change. Albert (2023) argues that transformational leaders are particularly effective in navigating the intricacies of AI adoption, as they can articulate a compelling vision for integration while addressing the concerns and needs of their workforce. This ability to balance technological advancement with human factors is crucial in mitigating potential resistance and fostering a culture of innovation.

Transformational leadership qualities are uniquely suited to address AI implementation challenges. These leaders possess attributes that align well with the demands of AI adoption, including inspiring and motivating followers, fostering intellectual stimulation, and providing individualized consideration (Sapna, 2016). In the context of AI implementation, these qualities translate into several key advantages:

1. **Vision and Inspiration:** Transformational leaders can articulate a compelling vision for how AI will enhance the organization's capabilities and contribute to its long-term success, helping to alleviate fears and uncertainties associated with AI adoption (Bass & Riggio, 2006; Wamba-Taguimdje et al., 2020).

By communicating a clear and inspiring vision, these leaders can create a sense of purpose and direction that motivates employees to embrace AI- driven changes.

2. Intellectual Stimulation: By encouraging innovative thinking and problem-solving, transformational leaders can help their teams overcome technical and organizational challenges associated with AI implementation (Lemos et al., 2022; Smith et al., 2022). This approach fosters a culture of continuous learning and adaptation, which is crucial for successful AI integration.
3. Individualized Consideration: Recognizing that AI adoption affects different employees in various ways, transformational leaders can provide personalized support and guidance, addressing individual concerns and development needs (Bass & Riggio, 2006; Doorsamy et al., 2020). This tailored approach helps to build trust and commitment among team members, facilitating a smoother transition to AI -enhanced work processes.

Transformational leaders employ specific strategies to inspire and motivate during AI transitions. Bozkus (2024) emphasize that these leaders are adept at creating a sense of urgency around AI adoption while simultaneously providing necessary support and resources for their teams to adapt. Some key strategies include:

1. Communicating a Clear and Compelling Vision: Articulating how AI aligns with the organization's mission and values, helping employees see the bigger picture and their role in it (Bass & Riggio, 2006; Kurup & Gupta, 2022). Transformational leaders can effectively communicate the strategic importance of

AI adoption, linking it to the company's long-term goals and competitive advantage (Tyson & Sauers, 2021).

2. **Fostering a Learning Culture:** Emphasizing continuous learning and skill development, creating an environment where employees feel empowered to adapt to AI-driven changes (Lemos et al., 2022; Parekh, 2024). By promoting a culture of continuous improvement and adaptability, leaders can help their teams develop the necessary skills to work alongside AI technologies effectively.
3. **Leading by Example:** Demonstrating a willingness to learn about AI technologies and their applications, inspiring teams to embrace new technologies and working methods (Bass & Riggio, 2006; Smith et al., 2022). When leaders actively engage with AI technologies and showcase their learning journey, they encourage employees to follow suit and embrace the change.
4. **Celebrating Small Wins:** Recognizing and celebrating incremental successes in AI implementation to maintain momentum and motivation throughout the transition process (Bass & Riggio, 2006; Wamba-Taguimdje et al., 2020). By acknowledging progress and milestones, leaders can reinforce positive behaviors and build confidence in the AI adoption process.
5. **Addressing Concerns Openly:** Creating forums for open dialogue about AI-related concerns to address fears and misconceptions proactively (Bloomberg, 2023; Doorsamy et al., 2020). Transparent communication and active listening can help leaders identify and address potential resistance to AI adoption, fostering trust and collaboration within the organization.

The role of transformational leadership in AI adoption extends beyond these strategies. Benbya et al. (2021) highlight the importance of transformational leaders in shaping organizational structures and processes to support AI integration.

These leaders play a crucial role in:

1. **Redesigning Organizational Structures:** Transformational leaders can facilitate the creation of cross-functional teams and flatten hierarchies to promote agility and innovation in AI projects (Bass & Riggio, 2006; Kurup & Gupta, 2022).
2. **Aligning Incentives:** By adjusting reward systems to encourage AI adoption and innovation, transformational leaders can motivate employees to engage with new technologies actively (Bass & Riggio, 2006; Lemos et al., 2022).
3. **Promoting Ethical AI Use:** Transformational leaders are instrumental in developing and enforcing ethical guidelines for AI implementation, ensuring responsible use of the technology (Glikson & Woolley, 2020).
4. **Bridging the Skills Gap:** Through strategic workforce planning and investment in training programs, transformational leaders can address the skills gap often associated with AI adoption (Borges et al., 2022).

Several case studies further demonstrate the significant impact of transformational leadership on the successful adoption and integration of AI within organizations. A prominent example is the leadership of Satya Nadella, the CEO of Microsoft, who has played a pivotal role in transforming the company's approach to AI. Since taking over as CEO, Nadella has reshaped Microsoft's culture and strategic vision,

positioning AI at the core of its product lines and operations. His leadership style, grounded in transformational principles, emphasizes empathy, continuous learning, and a growth mindset—values that have been instrumental in the company’s shift toward an AI-first strategy (Shrestha et al., 2019; Westerman, 2020). Nadella’s focus on empathy has helped foster an inclusive culture that values collaboration and innovation, which has been essential for overcoming resistance to change and ensuring employee buy-in for AI initiatives (Kanter, 2012).

Under Nadella’s direction, Microsoft has made significant investments in AI research and development, embedding AI technologies across its product offerings, from cloud services to productivity tools such as Microsoft Office and LinkedIn. Nadella’s commitment to AI has driven technological innovation and shifted the company’s internal culture, encouraging employees to embrace AI as a tool for empowerment rather than a threat to job security. His emphasis on continuous learning, particularly in areas such as data science and machine learning, has facilitated the upskilling of the workforce, ensuring that employees remain adaptable to the fast-paced advancements in AI (Dufva & Kallio, 2019; Huang & Rust, 2021). This culture of learning and adaptation has allowed Microsoft to remain at the forefront of AI innovation, positioning it as one of the leading tech companies in AI-driven solutions (Brynjolfsson & McAfee, 2014).

Moreover, Nadella’s transformational leadership has been integral in aligning Microsoft’s AI strategy with broader social goals, such as ethical AI development and the responsible use of technology. His approach has promoted transparency in AI development, advocating for fairness, accountability, and the elimination of

bias in AI systems (Binns, 2018; Westerman, 2020). This leadership focus on ethical AI has helped Microsoft not only capitalize on AI advancements but also ensure that these innovations are aligned with societal values and concerns. By leveraging transformational leadership principles, Nadella has demonstrated how leaders can effectively drive AI adoption in ways that enhance organizational capabilities, foster a culture of innovation, and address the broader societal implications of emerging technologies.

Another prominent example of transformational leadership in the tech sector is Sundar Pichai, the CEO of Alphabet (Google's parent company). Under Pichai's leadership, Google has continued to innovate, particularly in the integration of AI across its products and services, from search algorithms to cloud computing and self-driving car technology.

Pichai's transformational leadership style, characterized by his vision, humility, and commitment to fostering a culture of inclusion and innovation, has been integral to Google's AI-focused strategy.

Pichai's leadership emphasizes a long-term vision of using AI to solve complex global problems, such as improving healthcare outcomes, addressing climate change, and enhancing the accessibility of information (Zengler, 2017). He has spearheaded Google's AI strategy with the belief that AI will be a transformative technology in the same way the internet and mobile technology have been in the past. His visionary approach has led to the integration of AI across various Google products, including Google Assistant, Google Photos, and Google Search, which rely heavily on AI to offer personalized and efficient user experiences.

Furthermore, Pichai's ability to inspire and empower his teams has fostered a culture of continuous learning and innovation. Google has invested significantly in AI research and development, and under Pichai, the company has shifted toward creating AI systems that prioritize ethical considerations and are built to serve the greater good of society (Gershgorn, 2018). He has repeatedly emphasized the importance of responsible AI, ensuring that it is deployed in a way that minimizes biases and addresses potential ethical issues, such as privacy concerns and algorithmic discrimination. This focus on both innovation and responsibility aligns with the principles of transformational leadership, as it encourages employees to align their efforts with a vision of societal improvement while fostering a culture of collaboration and ethical accountability.

Pichai's transformational leadership style also emphasizes humility and empathy, which has contributed to Google's focus on creating a supportive and inclusive work environment. This approach has been crucial in attracting top talent in the AI field, as employees are drawn to companies led by leaders who are committed to both technological innovation and social responsibility. His leadership has allowed Google to maintain its position as a global leader in AI while focusing on the ethical deployment of technology.

These case studies demonstrate how transformational leaders can effectively guide their organizations through the complexities of AI adoption by inspiring a shared vision, fostering a culture of innovation and learning, and addressing the human aspects of technological change. However, it is important to note that transformational leadership in AI adoption is not without challenges. Raisch and Krakowski (2021) highlight the automation-augmentation paradox that leaders must navigate. This paradox refers to the tension between leveraging AI for efficiency gains (automation) and using it to

enhance or augment human capabilities. Transformational leaders must balance these two approaches to ensure that AI implementation enhances rather than replaces human contributions.

The ethical implications of AI adoption present another significant challenge for transformational leaders. Moss et al. (2021) emphasize the importance of algorithmic impact assessments in ensuring responsible AI implementation. Transformational leaders must consider the immediate benefits of AI and its long-term societal impacts. This requires a broader perspective that goes beyond organizational boundaries and considers the ethical implications of AI on stakeholders, customers, and society at large.

In addressing these challenges, transformational leaders can leverage their ability to inspire and motivate to create a culture of responsible AI use. This involves:

1. **Fostering Ethical Awareness:** Educating employees about the ethical implications of AI and encouraging them to consider these issues in their work (Danila & Aciu, 2023; Wamba-Taguimdje et al., 2020).
2. **Promoting Transparency:** Ensuring that AI decision-making processes are transparent and explainable to build trust among employees and stakeholders (Bloomberg, 2023; Doorsamy et al., 2020).
3. **Encouraging Diverse Perspectives:** Involving a diverse range of voices in AI development and implementation to mitigate bias and ensure inclusive solutions (Kurup & Gupta, 2022; Xue, 2022).

4. Continuous Evaluation: Implementing ongoing assessment mechanisms to monitor the impact of AI solutions and make necessary adjustments (Lemos et al., 2022; Smith et al., 2022).

Transformational leadership offers a powerful framework for addressing the challenges associated with AI adoption in organizations (Bass & Avolio, 1994).

Transformational leaders can significantly mitigate the risks and maximize the benefits of AI implementation by inspiring a shared vision, fostering innovation, addressing skill gaps, and navigating ethical concerns. As AI continues to reshape the business landscape, the role of transformational leadership in guiding organizations through this technological revolution becomes increasingly critical (Raisch & Krakowski, 2021). The ability of leaders to balance innovation with responsible implementation, foster a culture of continuous learning, and address the human aspects of technological change will be key to realizing the full potential of AI while ensuring its ethical and beneficial use in organizations and society at large.

### **Summary**

This literature review explored the complex landscape of leadership dynamics in AI adoption within tech companies, focusing on threat rigidity and organizational change management challenges. The review addressed the study's research questions by examining current literature on leadership perceptions, navigation strategies, and approaches to maximizing AI benefits while addressing associated challenges.

Key findings from the literature review included:

1. The rapid adoption of AI in the technology sector is creating significant leadership challenges, requiring a blend of technical expertise and change management skills (Albert, 2023; Bozkus, 2024).
2. Successful AI implementation demands specific leadership competencies, including technological literacy, adaptive decision-making, ethical reasoning, and cross-functional collaboration (Albert, 2023).
3. Organizational change management strategies are crucial for effective AI integration, with emphasis on stakeholder engagement, clear communication, continuous training, and iterative implementation processes (Smith et al., 2022).
4. The phenomenon of threat rigidity can significantly impede AI adoption, leading to increased centralization, reduced information processing, and resource conservation (Chukwuma et al, 2023; Jiang, 2024; Staw et al., 1981).
5. Transformational leadership emerges as a promising approach to mitigate AI-related challenges, fostering a learning organization culture and addressing employee concerns (Sapna, 2016; Sejera & Bocarnea, 2022).

This study contributes to the existing literature by addressing the gap in understanding how leaders in tech companies perceive and navigate the specific challenges associated with AI implementation. While previous research has focused on general organizational change or broad AI adoption trends, this study explored leadership dynamics in the context of AI-driven transformation within the tech sector.

The literature review supported the choice of a qualitative methodology for this study. The complex nature of leadership perceptions and strategies in AI adoption, as highlighted by Bozkus (2024) and Albert (2023), suggests that an in-depth, exploratory approach is necessary to capture the nuanced experiences of tech leaders. Merriam and Tisdell (2016) argue that qualitative research is particularly suited to understanding how people interpret their experiences and construct their worlds. This aligns with this study's focus on leadership perceptions and strategies.

Further, the need to explore the contextual factors influencing AI adoption decisions, as emphasized by Jiang (2024), supported the use of qualitative methods. Barnham (2015) notes that qualitative research allows for a deeper understanding of the underlying motivations and attitudes that shape behavior, which is crucial for examining how leaders navigate the challenges of AI implementation. The literature also suggested that the rapidly evolving nature of AI technology and its impact on organizations require a flexible research approach. Qualitative methods, as described by Braun and Clarke (2006), offer the adaptability needed to explore emerging themes and unexpected insights that may arise during the research process.

This literature review has established a solid foundation for understanding the leadership dynamics in AI adoption within tech companies. It has identified key themes and gaps in current knowledge, reinforcing the need for a qualitative exploration of how leaders perceive and navigate the challenges associated with implementing AI. The findings highlighted the rapid evolution of AI technologies and their growing significance in the tech sector, as well as the unique challenges leaders face in this context, including technical complexities and organizational resistance.

The review emphasized the critical role of leadership in managing these challenges, particularly in addressing threat rigidity, a phenomenon where perceived threats hinder adaptability and innovation. By examining the experiences and strategies of mid-level leaders involved in AI projects, this research provided valuable insights into the competencies and approaches that can mitigate resistance to change and foster a more agile organizational culture.

Chapter III builds upon this foundation by detailing the specific qualitative methodology chosen to address the research questions. This chapter outlines the rationale for selecting a basic interpretive qualitative approach, describes the participant selection process, and explains data collection methods such as semi-structured interviews. Additionally, it discusses data analysis techniques, including thematic analysis, and outlines measures to ensure trustworthiness and ethical considerations. By employing this comprehensive methodology, the study fills identified gaps in the literature and contributes new insights into leadership dynamics in AI adoption, ultimately enhancing organizations' ability to leverage these transformative technologies effectively.

## **CHAPTER III: METHOD**

This basic interpretive qualitative study explored how leadership and organizational change management practices impact AI adoption in technology companies, with a particular focus on mitigating threat rigidity. By examining the experiences and strategies of mid-level leaders involved in AI implementation across various tech firms, this research provided a nuanced understanding of leadership dynamics in the context of AI adoption.

### **Research Questions**

This study addressed the following research questions:

- RQ1: How do leaders in tech companies perceive the challenges associated with implementing artificial intelligence (AI)?
- RQ2: How do leaders in tech companies navigate the challenges associated with implementing artificial intelligence (AI)?
- RQ3: How do leaders perceive the opportunities of artificial intelligence (AI) adoption and strategize to maximize benefits while addressing associated challenges?

### **Methodology**

A qualitative approach was selected for this study because of its capacity to uncover deep insights into complex, multifaceted phenomena through a subjective and interpretative lens. Unlike quantitative methods, which often rely on numerical data and statistical analysis, qualitative research excels in exploring the meanings, perceptions, and experiences of individuals within specific contexts. This makes it particularly well-suited for examining the intricate dynamics of leadership in AI adoption, where personal perspectives, organizational culture, and change management strategies interplay significantly (Barnham,

2015).

Leadership in AI implementation involves navigating challenges such as technological complexities, workforce adaptation, and ethical considerations. Qualitative research allows for a detailed exploration of how leaders perceive and respond to these challenges, offering rich, descriptive insights into their strategies, motivations, and decision-making processes. By focusing on the lived experiences of mid-level leaders, this study captured the subtleties of leadership behavior and organizational change, elements that may not be fully understood through quantitative measures alone (Merriam & Tisdell, 2016).

Furthermore, qualitative methods were particularly valuable for investigating how leaders interpret the role of change management in facilitating AI adoption. Change management is a multifaceted process that includes overcoming resistance, fostering innovation, and ensuring alignment between AI initiatives and organizational goals.

Qualitative approaches enabled the researcher to delve into these layers of complexity, identifying themes and patterns that illuminate the practices and competencies most critical to effective leadership (Heitner & Sherman, 2014).

This study employed a basic interpretive qualitative design to examine the interplay between leadership and change management in AI implementation. Through semi-structured interviews, participants shared their experiences in depth, providing valuable narratives about the challenges and opportunities they encountered. This approach not only highlighted individual perspectives but also revealed broader organizational dynamics and trends that influence AI adoption (Creswell & Poth, 2017).

By leveraging a qualitative framework, the study also addressed the relational and contextual factors that shape leadership effectiveness. For example, qualitative research can uncover how organizational culture, team dynamics, and external pressures interact to impact

leadership decisions during AI integration. This holistic view was essential for understanding how leaders can optimize change processes and enhance organizational readiness for technological transformation (Benbya et al., 2021).

Ultimately, the choice of a qualitative methodology reflects the study's objective to provide a comprehensive and nuanced understanding of leadership in AI adoption. This approach was not only aligned with the complexity of the research topic but also contributed significantly to the broader discourse on leadership, change management, and technological innovation in contemporary organizations. The interpretive nature of this qualitative study allowed for the uncovering of successes and challenges, offering valuable insights for organizations. By focusing on the subjective experiences of mid-level managers involved in AI implementations, this research design explores and understands the essence of human experiences and the underlying meanings individuals attribute to those experiences in the context of AI adoption and organizational change.

This research approach acknowledged the subjectivity of human experiences to understand these experiences from the participants' perspectives, providing rich and detailed descriptions of the specific phenomena surrounding leadership and AI adoption in technology companies. Through this qualitative lens, the study contributes to the broader understanding of how leadership and organizational dynamics intersect to shape the future of AI and technology adoption.

## **Research Design**

Qualitative research methods enabled a comprehensive exploration of complex issues, leveraging an interpretative approach that emphasizes subjective experiences (Heitner & Sherman, 2014). This basic interpretive qualitative study involved semi-structured interviews

with 12 mid-level managers who possess experience in AI implementations within tech organizations. Purposeful sampling and snowball sampling methods are widely recognized in qualitative research for capturing diverse perspectives (Palinkas et al., 2013). The participant selection process utilized information from professional networks, including LinkedIn, to identify additional leaders who meet the study's criteria and are willing to participate (Dicce & Ewers, 2020). Snowball sampling allowed the researcher to leverage early key participants to refer additional participants. (Merriam & Tisdell, 2016). The researcher used diligence to ensure that participants were selected from outside of the researcher's direct professional network. This iterative process continued until data saturation was achieved, indicating that no new themes or insights emerged from further participant identification (Palinkas et al., 2013). The research methodology employed semi-structured interviews to gather rich insights from leaders regarding their perceptions of leadership, change management practices, and the impact of threat rigidity on decision-making processes. These interviews explored how leadership behavior is influenced by perceived threats posed by new technologies and how various factors moderate this relationship. Thematic analysis was conducted on the interview data to identify patterns and themes related to leadership impact, change management, and threat rigidity. Utilizing Braun and Clarke's (2006) six-phase approach provided a systematic method for analyzing qualitative data. NVIVO software aided in coding, organizing, and visualizing qualitative data, streamlining the thematic analysis process.

### **Population and Sample**

The target population for this study consisted of mid-level managers in technology companies who are directly involved in implementing AI technologies. This demographic was critical as these leaders play a pivotal role in navigating the complexities

associated with AI adoption, including addressing challenges related to leadership competencies and change management practices. By focusing on mid-level managers, the study captured insights from individuals who are actively engaged in decision-making processes and possess firsthand experience with the nuances of AI integration within their organizations.

### ***Purposeful and Snowball Sampling***

Qualitative research typically relies on a small purposive sample of participants providing information supporting the phenomena under study (Magyari, 2015). The method of choice for most qualitative research, purposeful sampling, focuses the sample on those who can offer the most learning to allow the researcher to understand, discover, and gain valuable insight (Merriam & Tisdell, 2016). The study employed a purposeful sampling strategy, which is a common method in qualitative research used to select participants based on specific characteristics relevant to the research questions (Palinkas et al., 2013). This approach allowed for the selection of individuals who can provide rich, detailed information about their experiences and perceptions regarding AI adoption and leadership dynamics. To bolster the sampling, snowball sampling was utilized to leverage early research participants to refer additional participants to the study based on industry connections and affiliations. (Merriam & Tisdell, 2016)

### ***Sample Size***

The sample size for this study consisted of 12 mid-level managers. This number was deemed sufficient to achieve data saturation, where no new themes or insights emerge from additional interviews (Palinkas et al., 2013). A smaller sample size is appropriate for qualitative

research, as it facilitates in-depth exploration of participants' experiences without overwhelming the analysis process.

### ***Inclusion Criteria for Participants***

Participants met the following inclusion criteria:

- Currently hold a mid-level management position in business operations within a technology company.
- Have direct experience with AI implementation projects.
- Demonstrate involvement in leadership or change management practices related to AI adoption.
- Willing to participate in semi-structured interviews and share insights about their experiences.

### ***Recruitment Process***

The recruitment process leveraged professional networks, allowing access to participants who met the study's criteria. Utilizing connections within the technology sector facilitated trust and encouraged participation among individuals who may be more inclined to share their experiences with someone within their professional circle (Dicce & Ewers, 2020).

LinkedIn served as a key recruitment tool for identifying additional participants. This platform allowed for targeted searches based on job titles, industries, and specific skills related to AI implementation (Boddy, 2016). By utilizing LinkedIn, the researcher effectively reached a diverse pool of mid-level managers across various technology firms,

ensuring that the sample reflects a range of experiences and perspectives relevant to the study's focus.

## **Procedure**

### ***Development of the Interview Protocol***

The interview protocol was carefully developed to ensure that it aligned with the research questions and objectives of the study. The protocol consisted of open-ended questions designed to elicit detailed responses from participants regarding their experiences with AI implementation, leadership challenges, and change management practices (Appendix A). Questions were formulated to explore the participants' perceptions of the challenges and opportunities associated with AI adoption and their strategies for navigating these complexities (Merriam & Tisdell, 2016). A data collection form was created as a tool on which to document responses during the semi-structured interviews (Appendix B).

Before the main data collection phase, a pilot test of the interview questions was conducted with a small group of mid-level managers who were not part of the study sample. This pilot testing helped refine the questions for clarity and relevance, ensuring that they effectively capture the necessary information (Creswell & Poth, 2017). Feedback from these preliminary interviews was used to make necessary adjustments to the interview protocol.

### ***Informed Consent Process***

The informed consent process was a critical ethical consideration in this study. Participants were provided with comprehensive information about the research purpose, procedures, potential risks, and benefits before participating in the interviews. They were also informed about their right to withdraw from the study at any time without any consequences (Hennink et al., 2011). Consent forms were distributed and collected before conducting

interviews to ensure that all participants understood their rights and responsibilities within the research context (Appendix C).

### ***Interview Procedures***

Interviews were scheduled at times convenient for participants, accommodating their work commitments and availability. Each interview lasted approximately 45 minutes to an hour and was conducted via video conferencing to accommodate schedules and logistical considerations. The semi-structured format allowed for flexibility in exploring topics that may arise during discussions while ensuring that all relevant areas are covered (Creswell & Poth, 2017).

With participants' consent, all interviews were recorded using audio recording devices to ensure accurate responses were captured. These recordings were then transcribed verbatim for analysis purposes. Transcription accuracy was crucial for maintaining the integrity of participants' responses and enabling a thorough thematic analysis of the data (Braun & Clarke, 2006). Transcripts were anonymized to protect participant confidentiality and stored securely throughout the research process. Any direct identifiers (e.g., names, addresses, phone numbers, or emails) were removed from the transcripts to ensure anonymity. This includes the participant's personal details and any information that might lead to indirect identification (e.g., job titles, specific locations, or unique experiences). If participants mentioned specific organizations, locations, or other distinguishing contextual information that could compromise anonymity, it was necessary to generalize or remove these details. Through the use of a coding system, participants were labeled rather than using any direct identifiers. This coding system was stored separately from the actual transcripts, ensuring that the data could not be re-linked to the individuals without access to the master codebook.

This structured approach to data collection through semi-structured interviews offered rich qualitative insights into how leadership influences AI adoption in technology companies while addressing the challenges posed by threat rigidity. By focusing on mid-level managers' experiences, this study contributes valuable knowledge regarding effective leadership practices in the context of organizational change and technological advancement.

### **Data Analysis**

The data analysis for this study utilized a thematic analysis approach, following Braun and Clarke's six-phase framework. This method was particularly effective for interpreting qualitative data, allowing for the identification of patterns and themes that emerge from participants' experiences and perceptions regarding leadership and AI adoption.

#### **Thematic Analysis Approach**

Thematic analysis is a qualitative analytic method that involves identifying, analyzing, and reporting patterns or themes within data. It provides flexibility in analyzing qualitative data and allows researchers to interpret various aspects of the research topic (Braun & Clarke, 2006). This approach was well-suited for this study as it facilitated a comprehensive understanding of the subjective experiences of mid-level managers involved in AI implementation, focusing on how leadership dynamics influence organizational change.

#### ***Braun and Clarke's Six-Phase Approach***

Braun and Clarke (2006) outline a systematic six-phase process for conducting thematic analysis:

1. **Familiarization with the Data:** This initial phase involved immersing oneself in the data by reading and re-reading transcripts to understand the content.

2. **Generating Initial Codes:** In this phase, the researcher systematically coded the data by identifying features relevant to the research questions. Each code represented a meaningful aspect of the data related to leadership practices and AI adoption. Braun & Clarke (2006) acknowledge that researchers can combine both inductive and deductive approaches in thematic analysis. As such, the researcher began with theory-driven (deductive) codes based on existing literature or conceptual frameworks but remained open to inductive coding to allow unexpected themes to emerge from the data.
3. **Searching for Themes:** After coding the data, the researcher collated codes into potential themes, grouping related codes to form broader categories that capture significant aspects of the data.
4. **Reviewing Themes:** This phase involved refining themes by checking if they accurately represent the coded data and align with the overall dataset. Themes were split, combined, or discarded based on their relevance.
5. **Defining and Naming Themes:** Once themes were finalized, they were clearly defined and named to convey their essence. This step ensured that each theme is distinct and captures a specific aspect of the research focus.
6. **Producing the Report:** The final phase involved writing up the analysis in a coherent narrative that contextualizes themes within existing literature and addresses the research questions.

### ***Use of NVIVO Software for Coding and Analysis***

NVIVO software served as a critical tool in this study's coding and analysis process, providing robust capabilities for organizing, coding, and interpreting qualitative data.

Recognized for its efficiency in handling complex datasets, NVIVO was particularly well-suited for qualitative research that involves large volumes of textual and multimedia data (Bazeley & Jackson, 2013). Its intuitive interface and versatile features allowed the researcher to manage and explore rich data sources, making it an indispensable resource for studies requiring thematic analysis, such as this one.

One of the key strengths of NVIVO was its ability to process and organize diverse data types, including text transcripts, audio recordings, and video files. This capability was essential for the study's semi-structured interview data, which was transcribed and systematically coded using the software. NVIVO facilitated the segmentation of data into meaningful units, allowing the researcher to assign codes that aligned with predefined themes or emergent patterns. The software's flexibility ensured that even subtle nuances in participant responses could be captured and analyzed effectively (Bazeley & Jackson, 2013).

Another significant feature of NVIVO was its capacity for advanced queries and data visualization. The software's query tools enabled the researcher to identify patterns, compare themes across different subsets of data and explore relationships among codes. For instance, in this study, NVIVO helped uncover how leadership behaviors and change management strategies vary across participants and organizational contexts. Its visualization tools, such as cluster maps and thematic charts, aided in illustrating the interconnectedness of themes, providing a clear and compelling representation of the data (Edhlund & McDougall, 2019).

In addition to its analytical capabilities, NVIVO enhanced the rigor and transparency of the research process by maintaining a detailed audit trail. The software documented every coding decision and thematic categorization, allowing the researcher to trace and justify analytical steps. This audit trail ensured that the study adheres to the highest standards of qualitative research,

providing a clear methodological framework that supports the validity and reliability of the findings (Silver & Lewins, 2014).

Ultimately, NVIVO's integration into the research process enabled a systematic and thorough analysis of the interview data, facilitating the identification of meaningful patterns and themes. By leveraging the software's powerful tools, the study produced detailed and insightful findings that address the research questions and contribute significantly to understanding leadership and change management in the context of AI adoption.

### ***Process for Identifying Themes and Patterns***

Identifying themes and patterns occurred through a rigorous coding process facilitated by NVIVO. As initial codes were generated from interview transcripts, recurring ideas or concepts were highlighted to form potential themes. The researcher paid particular attention to patterns that emerged regarding leadership behaviors, challenges faced during AI adoption, and strategies employed by mid-level managers to navigate these challenges. This analysis was framed through the theoretical lens of organizational change leadership and transformational leadership, allowing for a deeper exploration of how leadership practices shape AI adoption processes in tech companies. Organizational change leadership theories guided the identification of strategies and behaviors that support or hinder the transformation process, while transformational leadership was used to examine how leaders inspire, motivate, and engage their teams during times of technological disruption. Once potential themes were identified, they were reviewed against the dataset to ensure they accurately reflect participants' experiences. This iterative process allowed for continuous refinement of themes until a clear picture emerged regarding how leadership influences AI adoption in technology companies. The integration of these leadership theories helped to

contextualize the findings within broader organizational change frameworks, highlighting the role of leadership in fostering a culture that supports successful technological transformation.

This structured approach to data analysis uncovered valuable insights into the interplay between leadership dynamics and AI adoption processes within technology organizations. By employing thematic analysis grounded in Braun and Clarke's framework and utilizing NVIVO software for coding, this study contributes meaningful findings that can inform best practices for effective leadership in navigating technological change.

### **Trustworthiness and Credibility**

Ensuring the trustworthiness and credibility of qualitative research was essential for establishing the validity and reliability of findings. This study employed several strategies to enhance the rigor of the research process, including member checking, peer debriefing, and maintaining an audit trail.

### **Ensuring Validity and Reliability**

To enhance the validity and reliability of the research findings, the study implemented multiple strategies:

By using triangulation, gathering data from multiple participants with varied experiences in AI implementation, the study offered a comprehensive understanding of the phenomenon under investigation. This approach allowed for cross-verification of data across different sources.

The researcher engaged in reflexive practices throughout the study to acknowledge personal biases and perspectives that may influence data interpretation.

Maintaining a reflexive journal helped document thoughts and assumptions during the research process.

## **Member Checking**

Member checking was employed as a key strategy to enhance credibility. After data analysis, participants were invited to review their interview transcripts and preliminary findings to confirm that their perspectives had been accurately represented (Creswell & Poth, 2017). This process allowed participants to provide feedback on the interpretations made by the researcher, ensuring that their voices are authentically captured in the study. Any discrepancies or misunderstandings identified during this phase were addressed to improve the accuracy of the findings.

## **Audit Trail**

An audit trail was maintained throughout the research process to ensure transparency and accountability. This documentation included detailed records of all research activities, such as interview protocols, consent forms, data collection methods, coding processes, and analytical decisions made throughout the study (Merriam & Tisdell, 2016). By keeping a comprehensive audit trail, other researchers can follow the decision-making process and assess how conclusions were drawn from the data. This practice strengthens trustworthiness and allows for replication of the study in future research endeavors.

These strategies for ensuring trustworthiness and credibility—member checking, peer debriefing, and maintaining an audit trail—collectively contributed to a robust qualitative research design. By implementing these practices, this study provided reliable insights into how leadership influences AI adoption in technology companies while addressing challenges related to threat rigidity.

## **Ethical Considerations**

Ensuring ethical integrity throughout the research process was paramount to protect participants and uphold the credibility of the study. This section outlines the key ethical considerations that were addressed, including the protection of participants' rights and privacy, data storage and confidentiality measures, and obtaining Institutional Review Board (IRB) approval.

### **Protection of Participants' Rights and Privacy**

Protecting participants' rights and privacy is a fundamental ethical obligation in qualitative research (APA, 2017). Participants were informed about their rights to confidentiality, anonymity, and voluntary participation. Prior to data collection, participants received a comprehensive explanation of the study's purpose, procedures, potential risks, and benefits. They were also be informed that they can withdraw from the study at any time without facing any consequences (Hennink et al., 2011). Informed consent forms were provided to ensure that participants understand their rights and agree to participate willingly.

### **Data Storage and Confidentiality Measures**

All data collected during the study was securely stored to maintain confidentiality. Digital recordings of interviews were stored on password-protected devices, and transcripts were anonymized to remove any identifying information. All interview transcripts, audio recordings, and any other data were stored in an encrypted format. Encryption ensures that if unauthorized individuals access the files, the data will remain unreadable without the proper decryption key. Secure, password-protected systems with end-to-end encryption were used for storing research data. Access to data was restricted to the researcher and authorized personnel involved in the study. Additionally, data was retained for a specified period following the completion of the

research, after which it will be securely destroyed to protect participants' privacy (Merriam & Tisdell, 2016).

### **Institutional Review Board (IRB) Approval**

Before commencing the research, approval from an Institutional Review Board (IRB Approval Number: 25-017-UAGC) was obtained to ensure that the study adheres to ethical standards for research involving human subjects. The IRB review process involved evaluating the study's design, potential risks to participants, informed consent procedures, and measures taken to protect participants' rights (Creswell & Poth, 2017). By securing IRB approval, the researcher demonstrated a commitment to conducting ethical research that prioritizes participant welfare.

These ethical considerations—protecting participants' rights and privacy, data storage and confidentiality measures, and obtaining IRB approval—were essential to this study's framework. By addressing these aspects rigorously, the research upheld ethical standards while exploring how leadership influences AI adoption in technology companies. **Researcher's Role and Reflexivity**

The researcher's background can significantly influence the research process and outcomes. As a professional with experience in organizational development and leadership, the researcher brings a wealth of knowledge regarding leadership dynamics and change management practices, particularly in the context of technology adoption. This background may lead to an inherent bias toward viewing leadership as a critical factor in successful AI implementation. Additionally, familiarity with mid-level managers' challenges in technology firms may shape the researcher's expectations and interpretations of participants' responses. To mitigate these potential biases, it was essential for the researcher to engage in ongoing self-reflection throughout the study, acknowledging personal beliefs and experiences that may

influence data interpretation (Mehra, 2002). By recognizing these biases, the researcher took steps to minimize their impact on the research findings.

To ensure objectivity throughout the research process, several strategies were implemented:

1. **Reflexive Journaling:** The researcher maintained a reflexive journal to document thoughts, feelings, and assumptions that arise during data collection and analysis. This practice encouraged critical self-reflection and helps identify any biases that may affect interpretations (Creswell & Poth, 2017). Regularly reviewing this journal allowed the researcher to remain aware of personal influences on the research process.
2. **Bracketing:** The researcher employed bracketing techniques to set aside preconceived notions and expectations before engaging with participants. This involved consciously suspending judgment about participants' experiences to approach interviews with an open mind (Tufford & Newman, 2012). By doing so, the researcher focused on participants' perspectives without imposing personal interpretations prematurely.
3. **Member Checking:** As previously discussed in the trustworthiness section, member checking was utilized to enhance credibility and objectivity. By allowing participants to review their transcripts and preliminary findings, the researcher ensures that interpretations accurately reflect participants' viewpoints (Creswell & Poth, 2017). This feedback loop not only validated findings but also helped identify any biases in how data has been interpreted.
4. **Peer Debriefing:** Engaging in peer debriefing sessions with colleagues or fellow researchers provided opportunities for constructive feedback on the research process

and findings (Lincoln & Guba, 1985). These discussions helped uncover blind spots or biases that the researcher may not have recognized independently.

By employing these strategies for maintaining objectivity, the researcher enhanced the credibility of the study while ensuring that participants' voices are authentically represented. Recognizing and addressing potential biases is essential for producing robust qualitative research that contributes valuable insights into how leadership influences AI adoption in technology companies.

### **Limitations of the Methodology**

While the chosen qualitative methodology provided valuable insights into the impact of leadership on AI adoption, it is essential to acknowledge its potential limitations. This section outlines the weaknesses inherent in the selected approach and discusses strategies for mitigating these limitations.

1. **Limited Generalizability:** One of the primary limitations of qualitative research is its restricted generalizability. The findings from this study, which focused on a small sample of 12 mid-level managers, may not be representative of all technology companies or leadership styles within the industry. As a result, while the insights gained may be rich and detailed, they may not apply universally across different organizational contexts or sectors.
2. **Subjectivity in Data Interpretation:** Qualitative research relies heavily on the researcher's interpretations of participants' responses. This subjectivity can introduce bias, potentially influencing how data is analyzed and reported. The researcher's background and perspectives may shape the understanding of themes and patterns, which could lead to a skewed representation of participants' experiences.

3. **Potential for Response Bias:** Participants may have provided socially desirable responses during interviews, particularly when discussing their leadership practices or organizational challenges. This tendency could result in an incomplete or inaccurate portrayal of their true experiences and perceptions regarding AI adoption.
4. **Time Constraints:** The qualitative nature of this study required significant time investment for data collection and analysis. The time constraints associated with conducting interviews and analyzing qualitative data limit the depth of exploration for some themes or issues that arise during the research process.

### **Strategies for Mitigating Limitations**

1. **Diverse Sampling:** To address concerns about generalizability, efforts were made to select participants from a variety of technology companies with differing organizational structures, sizes, and cultures. This diversity helped capture a broader range of experiences and perspectives related to AI adoption, enhancing the applicability of findings to other contexts within the technology sector.
2. **Reflexivity Practices:** The researcher engaged in reflexive practices throughout the study to acknowledge personal biases and assumptions that may influence data interpretation. Maintaining a reflexive journal facilitated ongoing self-awareness and critical reflection on how these biases might affect the analysis (Mehra, 2002).
3. **Member Checking:** Implementing member checking enhanced credibility by allowing participants to review their transcripts and preliminary findings for accuracy (Creswell & Poth, 2017). This process helps ensure that participants' voices are authentically represented and that any misinterpretations are corrected before final analysis.

4. **Triangulation:** To strengthen the validity of findings, triangulation was employed by incorporating multiple data sources or perspectives where possible (Denzin, 2012). This included comparing insights from different participants or integrating relevant literature to contextualize findings within existing research.
5. **Thorough Documentation:** Keeping an audit trail throughout the research process provided transparency regarding decisions made during data collection and analysis (Merriam & Tisdell, 2016). This documentation helped mitigate concerns about subjectivity by allowing others to follow the rationale behind analytical choices.

By recognizing these limitations and implementing strategies to address them, this study enhances its overall rigor and contributes meaningful insights into how leadership influences AI adoption in technology companies while navigating challenges related to threat rigidity.

### **Summary**

This study employed a qualitative methodology to explore the influence of leadership and organizational change management practices on the adoption of AI in technology companies, particularly focusing on mitigating threat rigidity. The research provided a nuanced understanding of the dynamics between leadership and technological adoption by utilizing semi-structured interviews with mid-level managers involved in AI implementation.

The methodological approach was grounded in a basic interpretive qualitative study design, which is particularly suited for examining complex issues through the lens of participants' experiences. The study involved purposeful sampling of 12 mid-level managers from various tech firms, ensuring a diverse representation of perspectives related to artificial

intelligence adoption. Data was collected through semi-structured interviews, allowing for rich, detailed insights into participants' perceptions and strategies regarding leadership and change management in the context of AI integration. Thematic analysis, following Braun and Clarke's six-phase framework, was employed to identify patterns and themes within the qualitative data, facilitating a deeper understanding of how leadership influences organizational responses to technological challenges.

The chosen methodological approach aligned closely with the research purpose of understanding how leadership impacts AI adoption while addressing the challenges posed by threat rigidity. By focusing on mid-level leaders' experiences, the study uncovered key competencies and strategies that facilitate successful AI integration within organizations. This qualitative lens not only addressed the specific research questions but also contributed to broader discussions about effective leadership practices in navigating technological change. The insights gained from this research may inform best practices for managing organizational transitions and enhancing resilience in the face of emerging technological challenges.

## **CHAPTER IV: RESULTS**

This chapter presents the results of the study on leadership and organizational change in AI adoption within technology companies. The purpose of this chapter is to analyze the collected data and provide findings that align with the overarching research questions. The chapter is organized into sections detailing the sample characteristics, data collection process, data analysis methods, and findings.

The data in this chapter provides a comprehensive understanding of how mid-level leaders navigate the complexities of AI adoption. The analysis draws connections between leadership approaches, organizational culture, and the strategic decisions that influence AI implementation outcomes. By examining participant insights through thematic analysis, this chapter uncovered both commonalities and variances in leadership strategies, highlighting patterns that contribute to effective change management in the context of emerging technologies.

### **Participants**

Participants in this study were selected through purposeful and snowball sampling methods, ensuring representation from mid-level leaders in technology companies involved in AI implementation. The sample consisted of 12 mid-level managers with direct experience in AI projects. Purposeful sampling targeted individuals with a demonstrated history of guiding or influencing AI adoption efforts, ensuring that participants possessed relevant experience and could provide deep insights into leadership challenges and strategies. Snowball sampling extended the reach to include additional participants with relevant insights, leveraging professional networks and referrals to identify

individuals who might not have been initially considered but who played instrumental roles in AI-driven transformations within their organizations.

The inclusion criteria focused on mid-level managers who had direct involvement in AI initiatives, such as overseeing AI project implementation, managing cross-functional teams, or facilitating change management processes related to AI adoption. This ensured that the study captured a diverse range of perspectives on leadership in AI implementation. Furthermore, participants came from organizations of varying sizes, including small startups, mid-sized enterprises, and large multinational corporations, allowing for comparisons in AI adoption experiences across different operational scales.

To ensure diversity in leadership perspectives, efforts were made to include participants from various industry sub-sectors within the technology field, including software development, hardware manufacturing, fintech, health tech, and cybersecurity. This broad representation provided insights into how AI adoption challenges and leadership approaches varied across different technological domains. Additionally, participants had varying levels of AI experience, ranging from first-time AI adopters navigating the complexities of emerging technologies to seasoned leaders with extensive backgrounds in implementing AI-driven solutions.

The final sample size of 12 participants ensured data saturation, meaning no new themes emerged after the final interviews. Data saturation was determined by continuously assessing interview transcripts to identify recurring patterns and confirming that additional interviews did not yield novel insights. This supports the robustness of the data and provides confidence that the findings accurately reflect a broad range of leadership perspectives. By achieving saturation, the

study ensures reliability in its thematic analysis and strengthens the applicability of the insights derived from participant experiences.

## **Demographics**

Participants represented various technology firms, differing in company size, job roles, and years of experience. This diverse representation provides a rich foundation for understanding how leadership strategies and organizational culture influence AI adoption across different contexts. The following demographic characteristics were noted (Table 1):

- **Job Roles:** Participants spanned roles that intersect technology deployment and organizational change, including Operations Managers, Implementation Leads, IT Leaders, and Change Management Leaders. Each role contributed a unique viewpoint, from operational oversight to change facilitation.
- **Experience:** Participants' professional tenure ranged from 3 to 20 years, reflecting a balance of emerging leaders and seasoned managers with extensive change leadership backgrounds. This mix enriched the dataset with both innovative approaches and lessons learned from prior technology transitions.
- **Company Size:** Participants worked in diverse organizational environments, from small startups to complex, multinational firms. This range enabled comparisons between AI adoption experiences in lean, fast-moving companies and larger, more structured organizations.

**Table 1***Participant Demographics*

<b>Job Role</b>	<b>Years of Experience</b>	<b>Company Size</b>
Program Management Lead	5-10 Years	Small Business
Implementation Lead	3-5 Years	Medium Enterprise
Change Management Lead	10-15 Years	Large Multinational
Senior Manager	3-5 Years	Medium Enterprise
Operations Manager	3-5 Years	Large Multinational
Operations Manager II	5-10 Years	Large Multinational
Technical Manager	15-20 Years	Medium Enterprise
IT Manager	10-15 Years	Large Multinational
Program Leader	5-10 Years	Large Multinational
NPI Lead	3-5 Years	Medium Enterprise
Manager	5-10 Years	Large Multinational
Support Manager	3-5 Years	Small Business

The variety in job roles, tenure, and organizational size offers a comprehensive view of leadership practices in differing operational landscapes. Startups often emphasized agility and rapid iteration, while larger firms balanced AI innovation with operational stability and governance.

**Data Collection**

Data collection was conducted through semi-structured interviews with mid-level leaders. Each interview lasted approximately 30 minutes, allowing for an in-depth exploration of

leadership experiences, challenges, and strategies. Interviews were conducted virtually to accommodate participants across different geographic locations and ensure convenience.

Interviews were recorded, transcribed verbatim, and stored securely to maintain confidentiality. Anonymity was preserved through coded identifiers rather than participant names. The data collection process followed the procedures outlined in Chapter III, with NVivo software utilized for transcription analysis and coding. No significant deviations from the planned methodology occurred. The semi-structured format enabled flexibility, allowing the interviewer to probe deeper into emerging themes while maintaining consistency with the core research questions. This approach fostered rich, contextual narratives, capturing both strategic viewpoints and personal reflections on AI leadership.

### **Data Analysis**

Data analysis followed Braun and Clarke's (2006) six-phase thematic analysis, ensuring systematic identification of themes. NVivo software was used for coding, enabling efficient theme extraction and data organization. This method ensured transparency and rigor, aligning with qualitative research best practices.

The analysis process involved the following stages:

1. **Familiarization with Data:** Repeatedly reviewing transcripts allowed the researcher to become immersed in the data, noting initial observations and patterns.
2. **Generating Initial Codes:** Open coding was applied to identify key ideas line-by-line, capturing recurring concepts and unique perspectives.
3. **Searching for Themes:** Selective coding grouped similar codes into overarching categories, highlighting connections between participant experiences.

4. Reviewing Themes: Themes were refined to ensure they accurately reflected the dataset with attention to internal coherence and distinctions between themes.
5. Defining and Naming Themes: Final themes were clearly articulated, reflecting both the essence of the data and their relevance to the research questions.
6. Producing the Report: Findings were synthesized into a structured narrative, supported by representative quotes and data visualizations.

Three levels of coding were employed:

- Open Coding: Initial line-by-line coding to identify key ideas—this phase yielded a broad range of codes reflecting leadership strategies, organizational dynamics, and personal leadership philosophies.
- Selective Coding: Grouping open codes into categories—related codes were clustered into preliminary themes, such as ‘overcoming resistance,’ ‘ethical considerations,’ and ‘building AI readiness.’
- Theoretical Coding: Identifying overarching themes and relationships—this final stage integrated categories into broader narratives about leadership efficacy, change resilience, and the interplay between technology and organizational culture.

The combination of manual coding and NVivo software ensured a balance between human interpretation and computational efficiency. This hybrid approach strengthened the credibility of the findings, enabling nuanced insights while maintaining analytic consistency. By following this structured, multi-level approach, the study identified robust, interconnected themes that illuminate the complex realities of leading AI-driven change (Table 2). Subsequent sections delve into these findings, illustrating how leadership strategies, organizational

dynamics, and individual mindsets converge to influence AI adoption outcomes.

**Table 2**

*Developed Themes (Example from Research Question 1)*

<b>Theme</b>	<b>Supporting Quote</b>	<b>Participant (P)</b>
Organizational Resistance	“Employees worry that AI will make their roles obsolete, leading to reluctance in adoption.” (P4)	P4
	“AI implementation has been met with skepticism due to a lack of clarity on its benefits.” (P3)	P3
	“By openly discussing AI deployment timelines and gathering employee input, resistance has been lower.” (P8)	P8
	“The lack of transparency in AI decision-making increases fear and resistance among employees.” (P6)	P6
	“Without proper change management, employees see AI as a threat rather than an enabler.” (P9)	P9
Ethical Considerations	“Organizations need frameworks to ensure AI is used responsibly and fairly.” (P9)	P9
	“There are concerns about AI-driven decision-making reinforcing biases in hiring and promotions.” (P5)	P5
	“Leaders must establish clear ethical guidelines to prevent misuse of AI technologies.” (P6)	P6
	“AI’s ability to process vast amounts of data raises concerns about privacy and surveillance.” (P11)	P11
	“Bias in AI models can lead to unintended discrimination, requiring human oversight in decision-making.” (P12)	P12
Skills	“Many people managers struggle with AI concepts, which slows down integration efforts.” (P10)	P10
	“Employees lack the necessary AI literacy, making it difficult to fully leverage its potential.” (P2)	P2
	“Organizations must invest in AI training to bridge the skill gap.” (P7)	P7
	“Technical teams often have AI expertise, but business units struggle to understand how to apply it effectively.” (P1)	P1
	“A structured learning approach, including mentorship and hands-on AI training, is needed to upskill employees.”	P3

## **Results**

This section presents the findings of the study, organized according to the three research questions. The results are based on a thematic analysis of interviews conducted with 12 participants, focusing on their experiences and perspectives regarding AI-driven change management in organizational settings. The findings are supported by representative quotes from the participants. The discussion explores the overarching themes that emerged from the data, providing insight into the factors influencing AI adoption and resistance. Any differing or unexpected responses are also considered to provide a well-rounded understanding of the findings.

### **Research Question 1: How do Leaders in Tech Companies Perceive the Challenges Associated with Implementing AI?**

Research Question 1 explored the perceptions of leaders in tech companies regarding the challenges of implementing AI. Interview questions 3, 4, 7, 8, 11, 13, 14, 17, 25, and 26 were directly applied to Research Question 1, and the responses were used to form the analysis. The analysis revealed three main themes: organizational resistance, ethical considerations, and skill gaps.

#### ***Theme 1: Organizational Resistance***

One of the most prevalent themes emerging from the data was organizational resistance which can be defined as the collective hesitation or pushback from individuals or groups within an organization in response to changes, especially those perceived as threatening to job roles, professional identity, or organizational norms. This resistance was often triggered by the introduction of AI technologies and the uncertainty they bring.

Leaders consistently reported that fear of job displacement and the ambiguity surrounding AI-driven automation were major hurdles to adoption. As one participant noted, “Employees worry that AI will make their roles obsolete, leading to reluctance in adoption” (P4). This fear was particularly prominent in positions involving repetitive, process-driven tasks associated with roles most susceptible to automation. Another leader added, “Without proper change management, employees see AI as a threat rather than an enabler” (P9), emphasizing the importance of framing and communication during implementation.

Resistance was not limited to job loss anxiety. Many employees also expressed concern about the perceived devaluation of their expertise and the lack of transparency in AI systems. As one leader explained, “The lack of transparency in AI decision-making increases fear and resistance among employees” (P6). This lack of clarity compounded existing skepticism, particularly in organizations where communication about AI strategies was insufficient. “AI implementation has been met with skepticism due to a lack of clarity on its benefits” (P3), another participant shared, highlighting a consistent pattern of mistrust and confusion.

To counter these challenges, effective leaders employed proactive communication strategies aimed at reframing the narrative. They positioned AI not as a replacement for human effort, but as a tool for augmenting capabilities. By automating low-value tasks, employees are empowered to focus on strategic responsibilities. A critical component of this shift was involving employees early in the process. “By openly discussing AI deployment timelines and gathering employee input, resistance has been lower” (P8), one leader stated, underscoring the value of transparency and inclusivity. This collaborative, transparent approach aligns with change management literature such as Kotter’s (1996) emphasis on stakeholder

engagement and short-term wins. Leaders who demonstrated openness, empathy, and a clear vision were more successful in shifting employee perceptions, reducing resistance, and building a culture receptive to AI as a value-adding tool rather than a disruptive threat. ***Theme 2: Ethical Considerations***

Ethical concerns emerged as another dominant theme. Leaders expressed apprehension about data privacy, algorithmic bias, and transparency, particularly in customer-facing applications and industries that rely on sensitive data, such as healthcare and finance. One participant cautioned, “AI’s ability to process vast amounts of data raises concerns about privacy and surveillance” (P11), a sentiment echoed across multiple interviews. The potential for AI systems to inadvertently reinforce social biases or misuse personal data was a pressing concern, particularly in hiring and promotion contexts. “There are concerns about AI- driven decision-making reinforcing biases in hiring and promotions” (P5), another leader explained, drawing attention to the real-world implications of unchecked algorithmic decision- making.

Beyond legal and regulatory compliance, leaders acknowledged the moral responsibility of ensuring AI systems were fair, explainable, and aligned with organizational values. “Organizations need frameworks to ensure AI is used responsibly and fairly” (P9), emphasized one participant, underscoring the need for systemic safeguards. This included the development of ethical governance practices that went beyond basic audits. Leaders who prioritized ethical oversight during AI adoption took deliberate steps to address these risks. Many established cross-functional ethics committees to oversee AI model development, ensuring that diverse perspectives were incorporated into decision-making. Human oversight was seen as essential: “Bias in AI models can lead to unintended

discrimination, requiring human oversight in decision-making” (P12), noted one leader. These cross-disciplinary checks helped mitigate unintended harm while reinforcing internal trust.

Transparency was also a recurring theme among leaders who successfully navigated ethical challenges. Leaders who promoted open dialogue about AI’s limitations and potential biases cultivated greater trust among employees and external stakeholders. As one leader emphasized, “Leaders must establish clear ethical guidelines to prevent misuse of AI technologies” (P6), highlighting the proactive role leadership must play in shaping responsible innovation. This approach mirrors the principles of ethical leadership outlined by Brown et al. (2005), emphasizing fairness, accountability, and moral stewardship as essential leadership competencies. By embedding ethical considerations into every stage of AI deployment, these leaders helped their organizations build not just smarter systems, but more trustworthy and inclusive ones.

### ***Theme 3: Skill Gaps***

A significant skills gap within the workforce was another consistently cited challenge. Leaders identified a disconnect between the skills employees currently possess and the competencies required to engage effectively with AI technologies. This gap was particularly pronounced among mid-level managers and operational staff. As one participant noted, “Many people managers struggle with AI concepts, which slows down integration efforts” (P10). Others echoed similar concerns about broader workforce preparedness. “Employees lack the necessary AI literacy, making it difficult to fully leverage its potential” (P2), shared another leader, underscoring the foundational nature of this challenge.

This disparity was especially apparent between technical and business units. “Technical teams often have AI expertise, but business units struggle to understand how to apply it

effectively” (P1), explained one participant, highlighting the need for cross-functional education and alignment. Leaders recognized that without an upskilled workforce, the potential benefits of AI would remain largely untapped. In response, forward-thinking leaders prioritized education and training as core elements of their AI adoption strategies. “Organizations must invest in AI training to bridge the skill gap” (P7), one leader asserted. Upskilling initiatives ranged from in-house training programs and AI literacy workshops to external partnerships with academic institutions and technology providers. Leaders who achieved the greatest success in narrowing the skills gap cited a “learn-as-you-implement” approach, blending practical exposure to AI projects with structured learning opportunities. This real-time, experiential learning model empowered employees to build AI competencies while contributing to live implementations, reinforcing a sense of ownership and reducing apprehension.

Importantly, leaders emphasized the need for comprehensive, structured development programs. “A structured learning approach, including mentorship and hands-on AI training, is needed to upskill employees” (P3), explained one participant, emphasizing that one-off workshops were insufficient. Instead, organizations needed sustained and multifaceted learning paths that addressed both technical and strategic competencies. Upskilling efforts were not limited to technical skills alone. Building digital fluency and the ability to interpret, adapt to, and leverage AI outputs was cited by several participants as equally important. For instance, leaders in marketing functions highlighted the need for employees to understand AI- driven insights (e.g., predictive analytics, customer segmentation) and translate them into actionable strategies. This blended approach to skill development, balancing technical

knowledge with strategic thinking, enabled employees to feel more confident and capable in AI-enhanced environments.

Ultimately, the findings show that leaders who proactively addressed organizational resistance, ethical considerations, and workforce skill gaps were better equipped to drive successful AI adoption (Table 3). These leaders not only mitigated potential barriers but also fostered a culture that viewed AI as an opportunity for growth, innovation, and long-term competitive advantage.

**Table 3**

*Challenges Identified in AI Implementation*

<b>Challenge</b>	<b>Percentage of Participants Mentioning</b>
Organizational Resistance	83%
Ethical Concerns	75%
Skill Gaps	75%

Leaders acknowledged that resistance to AI adoption often stemmed from misinformation or a fundamental lack of understanding of AI’s capabilities and limitations.

Many employees, particularly those outside of technical roles, misunderstood what AI could and could not do. As one leader explained, “There was a widespread belief that AI was going to replace everyone’s job overnight. People didn’t understand that it’s more of a tool” (P12). Others echoed similar concerns, pointing out that exaggerated expectations or fears often led to hesitation. “The problem wasn’t just fear, it was confusion and most people didn’t have a clarity on what AI was actually being used for” (P3).

To address these concerns, several organizations initiated targeted education campaigns aimed at clarifying AI's purpose, functionality, and intended role within the company. These campaigns included interactive workshops, town hall meetings, and internal communication strategies designed to dispel myths and demonstrate practical applications of AI. "Once we started showing how AI could help with routine reporting and free up time, people started to see the upside" (P9), said one leader. Some companies also developed AI literacy modules as part of their internal learning programs. As another participant shared, "We didn't assume everyone needed to become an engineer, but we did expect a baseline understanding, and we built that into our onboarding and training" (P1).

Ethical considerations emerged as a nuanced and multifaceted challenge. Leaders emphasized the importance of continuous oversight, especially in sensitive areas like customer interactions, financial risk assessment, and recruitment. Participant 1 provided an observation that reflected the sentiment shared by many: "We had to be very careful about how AI was used in hiring as people were rightly concerned about fairness and bias" (P1). Privacy was another top concern, particularly in relation to data handling and consent. "Employees and customers all want to know their data isn't being used in some black box algorithm with zero accountability" (P2). To address these issues, many companies established ethics review boards or committees. "We set up a standing committee to review all AI use cases before they went live as part of our risk management and compliance strategy" (P10). A few firms even engaged external auditors to validate the fairness and robustness of their AI models. "Bringing in outside experts gave our team confidence that we were doing this the right way—not just fast, but fair" (P2).

Skill gaps were also a pervasive challenge, especially in organizations that lacked formal AI training infrastructure or internal expertise. Leaders frequently mentioned

that the pace of technological advancement had outdone employee readiness. “Our staff was eager to learn, but we hadn’t equipped them with the tools or time to get comfortable with AI” (P2). Business teams, in particular, struggled to apply AI concepts to real-world problems. One participant explained, “They understood that AI could help, but didn’t know how to translate insights into action—it became a communication issue as much as a skills issue” (P3). To address these challenges, companies employed a range of strategies. Some brought in AI consultants for immediate support while others focused on building internal capabilities through structured programs. “We created an AI learning pathway that combined e-learning, peer mentoring, and hands-on projects—it made a huge difference in adoption rates” (P7). Collaborations with online platforms and universities also provided scalable training solutions.

Ultimately, leaders recognized that overcoming resistance, addressing ethical risks, and closing capability gaps were not separate initiatives but deeply interconnected pillars of successful AI adoption. Organizations that invested in inclusive education, ethical oversight, and long-term workforce development were better equipped to deploy AI technologies in a way that built trust, ensured fairness, and generated sustainable value. As one leader concluded, “AI success isn’t just technical—it’s an organizational shift” (P1).

## **Research Question 2: How do Leaders in Tech Companies Navigate the Challenges Associated with AI Implementation?**

Research Question 2 explored the challenges of AI resistance and the leadership approaches used to manage the resistance. Questions 4, 6, 8, and 10 explored leadership approaches, communication strategies, and specific practices that help reduce resistance and

foster adaptability, aligning closely with the objectives of Research Question 2. This analysis revealed three main themes: change management strategies, employee engagement, and strategic vision.

#### ***Theme 4: Change Management Strategies***

Leaders acknowledged that successful AI implementation requires a deliberate, structured change management approach to counteract resistance, align stakeholders, and most importantly, build trust. Trust emerged as a central enabler of organizational readiness. Leaders emphasized that employees were more willing to engage with AI initiatives when they trusted leadership's intentions, transparency, and commitment to supporting them through change. As one leader explained, "When people knew what was coming and why, they were much more willing to engage" (P6). This supports Kotter's (1996) model which identifies building urgency and forming guiding coalitions as essential to gaining buy-in during transformational change.

Transparency extended beyond communicating timelines and strategic goals. Effective leaders made a concerted effort to translate complex AI concepts into relatable terms, framing the technology as a support tool rather than a replacement. "We stopped talking about algorithms and started talking about how AI could help cut down on repetitive tasks—that's when change efforts started to become meaningful" (P8). This practice of simplifying and contextualizing technological change is aligned with Glikson and Woolley (2020) who emphasize that clarity and cognitive framing are essential to fostering psychological safety in technology-enabled environments. Leaders who succeeded in this area created psychological safety, a condition where employees felt safe to ask questions, express concerns, and experiment with new tools, key factors in building both trust and engagement (Edmondson, 1999; Goleman, 1995).

To maintain this trust and sustain momentum, leaders created multiple channels for open dialogue. Town halls, Q&A sessions, and small team discussions gave employees safe spaces to voice concerns and gain clarity. “Our best move was scheduling monthly sessions—just 30 minutes for people to talk openly and ask questions” (P3). These interactions went beyond information delivery; they were listening opportunities that signaled to employees that leadership valued their perspectives and was committed to co-owning the transformation. This approach reinforces Beer and Nohria’s (2000) concept of E and O theories of change, where emotional commitment (O) is as crucial as economic incentives (E) to driving successful transitions.

Training and support were also key components in establishing credibility and trustworthiness during change. Leaders who paired communication with actionable skill development saw measurable improvements in employee confidence. “People were hesitant at first, but once they saw there was training and support, the anxiety dropped and engagement increased” (P7). These findings are supported by Smith et al. (2022) who argue that workforce upskilling is not only a technical necessity but a psychological lever for reducing resistance. Training programs were not generic; they were strategically designed to meet employees where they were. “We designed our curriculum around real use cases so employees could see the connection to their work” (P1), explained one leader, demonstrating that contextual relevance further boosted buy-in.

Importantly, leaders understood that trust must be continuously earned, not assumed. This was evident in how they built iterative feedback loops into the training and change management process. “We treated AI training like a product—we iterated based on feedback” (P8), noted one participant. This agile mindset allowed for real-time adjustments and communicated that the change process was being shaped in collaboration with employees, not imposed on them. “The

training feedback loop was critical to foster a collaborative and inclusive environment that brought users along a journey” (P2), added another, reinforcing the link between collaboration, trust, and long-term engagement.

In summary, the study highlights that structured change management strategies rooted in transparency, two-way communication, skill-building, and responsive feedback mechanisms are critical to fostering trust. When employees felt informed, supported, and included, they were significantly more open to AI adoption and more willing to invest in the organization’s evolving technological future. These findings align with broader change leadership literature which consistently emphasizes the importance of inclusive, iterative, and emotionally intelligent change processes (Heifetz et al., 2009; Kotter, 1996; Raisch & Krakowski, 2021).

#### ***Theme 5: Employee Engagement***

A recurring theme across successful AI implementations was employee engagement. Leaders who actively involved employees in decision-making processes, rather than imposing top-down mandates, cultivated greater acceptance and ownership of artificial intelligence initiatives. “By keeping employees involved in the AI transition, we reduced resistance and protectiveness” (P1). These leaders sought input from various departments and hierarchical levels, recognizing that frontline employees often possessed unique, operational insights that could improve AI integration. Employees who felt their voices mattered were more likely to support and champion AI initiatives, reducing passive and active resistance.

Some leaders implemented cross-functional AI steering committees composed of representatives from technical teams, operational units, and frontline staff. These committees collaborated on AI strategy, identified potential roadblocks, and

co-created solutions, fostering a sense of shared responsibility. Leaders also empowered employees to test AI solutions through pilot projects, granting them hands-on involvement in shaping the technology's role within their day-to-day workflows. Participants noted that this "co-creation" approach, where employees became participants rather than passive recipients, nurtured a more positive and proactive AI adoption culture.

Communication was also recognized by nearly all participants as a central driver of engagement. One participant shared that "Clear communication on AI's benefits helped gain organizational buy-in" (P2), underscoring the importance of clarity in aligning employees with the broader goals of AI implementation. Another noted, "AI can help personalize communication, ensuring that employees receive the information they need in a way that resonates with them" (P11), suggesting that even the technology itself could be leveraged to enhance internal communications and reduce resistance. Leaders emphasized recognition and reward systems to sustain engagement. Acknowledging and celebrating early successes, whether a team streamlined a process using AI or uncovered new insights, reinforced the value of employee contributions. Leaders cited that embedding recognition into the AI journey not only motivated their workforce but also amplified momentum, encouraging others to embrace AI opportunities.

### ***Theme 6: Strategic Vision***

Effective leaders understood that AI adoption could not exist in a vacuum. It needed to align seamlessly with the organization's broader strategic objectives. As one participant noted, "Companies have to start by identifying how AI can contribute to the organization's overall objectives" (P4). Leaders who articulated a compelling, forward-looking vision connected AI implementation to tangible business goals, such as

improving customer experience, accelerating product innovation, or enhancing operational efficiency. This strategic alignment helped employees view AI as a vital enabler of the company's long-term success rather than a disruptive, standalone initiative.

“Leaders must develop a compelling change vision that's aligned to the company's core values and long-term goals” (P2), reinforcing the importance of aligning technology with purpose.

Leaders emphasized the importance of setting clear, measurable milestones to track progress and ensure efforts remained aligned with the overarching vision. They balanced quick wins like automating administrative tasks with more transformative, long-term projects, such as developing predictive analytics capabilities. This dual approach maintained momentum, showing employees that AI could deliver immediate value while also laying the groundwork for sustained competitive advantage. “The integration of AI requires a fundamental shift in strategy and a clear vision” (P10), one leader observed, highlighting the depth of transformation required to succeed.

Leaders cited the importance of adapting their strategic vision as AI technologies evolved. They monitored industry trends, competitor movements, and technological advancements, ensuring their AI initiatives remained relevant and forward-focused. “With AI, there are no reference points. It's all about driving change” (P1), a sentiment that encapsulated the experimental and forward-leaning mindset necessary for strategic clarity in an emerging field. Leaders who maintained a growth mindset, treating AI adoption as an iterative, evolving journey rather than a one-time project, fostered a culture of continuous improvement. This adaptability proved crucial, particularly in fast-changing tech sectors, where rigid strategies often fell short.

Ultimately, the findings suggest that leaders who combined transparent change management strategies, active employee engagement, and a clear, adaptable strategic vision were best positioned to navigate the complexities of AI implementation. These leaders not only mitigated resistance but also cultivated an empowered workforce aligned with the organization's AI-driven future.

**Expanded Findings.** Change management strategies were pivotal in promoting AI adoption. Leaders consistently mentioned creating AI task forces composed of both management and frontline employees to ensure diverse perspectives were represented. Employee engagement was further enhanced by recognizing early adopters as internal champions who could mentor others, fostering a culture of peer-led learning. Strategic vision was critical in sustaining momentum. Leaders who connected AI adoption to broader business objectives, such as improved customer experience or faster product delivery, observed greater enthusiasm and commitment across teams.

### **Research Question 3: How do Leaders Perceive the Opportunities of AI Adoption and Strategize to Maximize Benefits While Addressing Associated Challenges?**

Research Question 3 explored how organizational culture influences the adoption of AI and the mitigation of threat rigidity. Questions 7, 9, 11, and 13 uncovered the interplay between organizational culture and AI adoption, focusing on how cultural dynamics either facilitate or obstruct innovation and adaptability in the face of technological change, aligning closely with the objectives of Research Question 3. This analysis revealed three main themes: AI-driven innovation, leadership adaptivity, and competitive advantage.

### ***Theme 7: AI-Driven Innovation***

Leaders overwhelmingly recognized AI's transformative potential in driving innovation across operations, product development, and customer engagement. Many described AI not merely as a tool for automation but as a catalyst for rethinking entire processes and uncovering new opportunities. For example, leaders in data-intensive industries, such as fintech and healthcare, noted that AI-powered analytics enabled faster, more accurate insights, allowing teams to pivot strategies in near-real-time. This capability accelerated decision-making, optimized resource allocation, and unlocked opportunities that were previously hidden within complex datasets. As one participant shared, "AI is revolutionizing innovation management. It has improved our decision-making and drastically reduced turnaround time to ideate and innovate" (P8).

Beyond operational improvements, leaders highlighted AI's role in enhancing creativity and innovation. In product development, AI was leveraged to analyze market trends, predict customer preferences, and simulate product performance before physical prototypes were built, reducing costs and accelerating time-to-market. One participant shared, "Our AI-driven inventory system cut waste significantly in under six months" (P5), showcasing a tangible example of how AI fueled process improvement and innovation. Another emphasized, "AI helps us stay ahead of industry changes and make technology our differentiator" (P9), reflecting AI's role in reinforcing organizational agility and competitiveness.

Leaders also pointed to AI's role in customer engagement, where personalized recommendations, chatbots, and sentiment analysis helped their companies deliver more targeted, meaningful experiences. "Leveraging an innovative AI strategy has led to

increased customer satisfaction, loyalty, and engagement” (P3), one leader explained, underscoring AI’s potential to create lasting value. These innovations created a competitive differentiation, reinforcing the view that AI is not just about efficiency but about creating new value.

Successful leaders emphasized that fostering a culture of innovation was essential for maximizing AI’s potential. They encouraged teams to experiment with AI tools, even in non-traditional areas, fostering an environment where calculated risks and learning from failure were normalized. This approach aligns with Edmondson’s (1999) concept of psychological safety, where innovation thrives in cultures that embrace experimentation and iterative learning.

### ***Theme 8: Leadership Adaptability***

A recurring theme among successful leaders was the emphasis on adaptability, both in leadership style and strategic direction. Leaders acknowledged that AI technologies evolve rapidly, often outpacing initial implementation plans. As a result, rigid, top-down leadership approaches proved ineffective. Instead, leaders who embraced a learning-oriented mindset, continually updating their understanding of AI’s capabilities and limitations, were better equipped to guide their organizations through ongoing change. As one participant noted, “Leaders must foster a culture of adaptability and readiness for the evolving landscape” (P2), underscoring the need for agility in both mindset and execution.

Adaptive leaders demonstrated flexibility not only in strategy but also in team management. They prioritized cross-functional collaboration, ensuring that AI expertise was not siloed within technical teams. For example, leaders facilitated partnerships between data scientists, operations managers, and customer service teams to co-develop artificial

intelligence applications that balanced technical feasibility with practical, user-centered insights. This adaptability also extended to resource management. “Leaders need to champion AI initiatives, communicate the importance, and allocate resources to drive successful integration” (P1), one leader emphasized, pointing to the critical role of advocacy and investment in organizational success. Several participants shared that leadership adaptability was a key factor in managing setbacks. Rather than viewing implementation challenges as failures, adaptable leaders framed them as opportunities to learn and pivot. One participant reflected, “Leadership adaptability helped us recover quickly from AI project setbacks” (P7), highlighting the importance of resilience and flexibility in navigating uncertainty and keeping momentum.

Crucially, adaptable leaders modeled a continuous learning culture. They engaged in their own professional development, attending AI-focused industry events, collaborating with AI experts, and staying current with emerging technologies. By embodying this learning mindset, leaders set an example, reinforcing the expectation that employees should also pursue continuous skill enhancement. This leadership behavior supports Heifetz et al.’s (2009) concept of adaptive leadership which emphasizes diagnosing changing environments and adjusting strategies to stay aligned with evolving realities.

### ***Theme 9: Competitive Advantage***

Leaders consistently framed AI adoption as a means to secure and sustain competitive advantage. They highlighted that early adopters of AI technologies gained an edge by automating routine processes, reducing operational costs, and reallocating human capital to higher-value tasks. As one participant emphasized, “AI has translated into tangible benefits including a reduction in operating costs” (P1). Others reinforced this perspective by stating, “AI is a necessity and a competitive advantage” (P4), positioning

AI not as an optional tool but as a strategic imperative. More significantly, leaders recognized that AI-driven insights enabled faster, data-informed decision-making, allowing organizations to anticipate market shifts, respond to customer needs more precisely, and outmaneuver competitors. One participant explained, “While our competitors are relying on traditional methods, AI has put us ahead” (P6), illustrating the growing divide between early adopters and those slower to evolve.

In customer-centric industries, leaders noted that AI-powered personalization strategies enhanced brand loyalty and increased lifetime customer value. Retail leaders, for example, described how predictive analytics refined product recommendations and dynamic pricing models, directly impacting revenue growth. Similarly, leaders in logistics and manufacturing observed that AI-driven demand forecasting and predictive maintenance minimized downtime and improved supply chain resilience, key differentiators in cost-sensitive markets. Importantly, leaders acknowledged that competitive advantage through AI was not guaranteed. They noted that technology alone was not enough. Success depended on aligning AI initiatives with long-term business objectives and cultivating a workforce capable of leveraging AI insights. “AI implementation is no longer a strategic experiment but is core to helping us deliver on our organizational strategy” (P5), one participant emphasized, underscoring the shift from exploratory to essential.

To sustain the advantage, leaders integrated AI capabilities into core business strategies, ensuring that AI wasn’t treated as a one-off project but as a continuous, evolving resource. They also recognized the importance of ethical leadership in maintaining trust both internally and with customers. Leaders who prioritized transparency about

AI's role and limitations cultivated stronger, more resilient stakeholder relationships which further solidified their competitive positioning.

In summary, the findings demonstrate that leaders perceive AI as a transformative force capable of driving innovation, enhancing adaptability, and securing competitive advantage (Table 4). However, the most successful leaders approached AI adoption strategically, fostering a culture of experimentation, promoting continuous learning, and embedding AI capabilities into long-term business objectives. This balanced approach not only maximized AI's immediate benefits but also positioned organizations to sustain and expand their competitive edge in an increasingly competitive economy.

AI-driven innovation was particularly evident in automation and data analytics. Leaders reported reduced turnaround times and enhanced accuracy in forecasting and resource planning. One leader noted, "Our AI-driven inventory system cut waste significantly in under six months" (P5).

**Table 4**

*Opportunities Identified in AI Adoption*

<b>Opportunity</b>	<b>Percentage of Participants Mentioning</b>
Process Optimization	85%
Enhanced Decision-Making	90%
Competitive Advantage	80%

Leadership adaptability emerged as a key differentiator. Leaders who fostered a mindset of continuous experimentation and learning were more successful in navigating artificial intelligence's evolving landscape. This adaptability often translated into quicker recovery from setbacks and faster iteration of AI models.

Competitive advantage was consistently linked to early AI adoption. Leaders cited improved speed-to-market and personalized customer experiences as significant competitive gains. One participant commented, "While our competitors are relying on traditional methods, AI has put us ahead."

This study found that while AI adoption poses multifaceted challenges, (e.g., organizational resistance, skill gaps, and ethical considerations) effective leadership strategies (e.g., transparent communication, employee involvement, and strategic planning) can facilitate a smoother transition. Leaders who demonstrated adaptability, fostered cross-functional collaboration, and aligned AI initiatives with overarching business objectives were more successful in navigating these challenges.

One key insight from the data is that leadership in AI adoption is not merely about managing technology. It requires a balanced approach that integrates technical understanding with human-centered leadership practices. Leaders who cultivated a culture of trust, continuous learning, and openness to innovation observed greater acceptance of AI technologies. Organizations that proactively addressed ethical concerns and bias in AI models gained higher credibility among employees, fostering a more resilient change environment.

Additionally, the study highlighted that leadership adaptability and strategic foresight are crucial. Leaders who embraced a flexible, learning-oriented mindset including pivoting strategies

in response to challenges, reported more sustained AI implementation success. This adaptability was particularly evident in how leaders balanced the need for operational stability with the pursuit of innovation. Furthermore, competitive advantage emerged not just as a result of AI adoption but as a desired leadership outcome. Leaders who positioned AI as a tool for enhancing customer experiences, optimizing internal processes, and enabling data-driven decision-making secured early wins, reinforcing organizational buy-in.

### **Summary**

Chapter IV presented the results of the study, offering a comprehensive analysis of the sample characteristics, data collection procedures, data analysis methods, and key findings. The analysis uncovered robust, interconnected themes that reflect the realities of leading AI-driven change (Table 5).

**Table 5**

*Summary of Themes Related to Research Questions 1–3*

<b>Research Question</b>	<b>Theme</b>
Research Question 1	Theme 1: Organizational Resistance
	Theme 2: Ethical Considerations
	Theme 3: Skill Gaps
Research Question 2	Theme 4: Change Management Strategies
	Theme 5: Employee Engagement
	Theme 6: Strategic Vision
Research Question 3	Theme 7: AI Innovation
	Theme 8: Leadership Adaptability
	Theme 9: Competitive Advantage

Key findings include:

1. Leadership plays a pivotal role. Effective AI adoption hinges on leadership strategies that prioritize communication, employee involvement, and long-term strategic vision.
2. Ethical and skill considerations are essential factors. Addressing ethical concerns and bridging skill gaps are non-negotiable elements of sustainable AI implementation.
3. Adaptability and resilience are essential leadership characteristics. Leaders who embraced change as an iterative process rather than a one-time event fostered a more resilient organizational culture.
4. Cross-functional collaboration is key. Collaboration across departments—from IT to operations and HR—emerged as a significant factor in breaking down silos and enhancing AI integration.
5. Innovation delivers a competitive edge. Organizations that positioned AI as a core enabler of innovation rather than a standalone initiative achieved faster, more sustainable results.

The analysis provided deeper insights into leadership strategies and practical examples from participants, showcasing a diverse range of approaches to managing AI adoption. The next chapter, Chapter V, synthesizes these findings, discusses their broader implications, and provides actionable recommendations for future research and leadership practice in AI-driven environments.

## CHAPTER V: DISCUSSION

The research questions outlined in this study remain central to understanding the interplay between leadership and AI adoption. A more nuanced reflection on how mid-level leaders perceive these challenges, navigate organizational resistance, and strategize for sustainable AI integration further highlights the importance of their role. For example, leaders' ability to balance technical implementation with human dynamics can influence long-term success.

The purpose of this qualitative study was to explore how leadership and organizational change management practices influence the adoption of AI within technology companies, focusing on mitigating threat rigidity during the transition. This chapter interprets the findings, connects them to the literature, outlines practical implications, and suggests directions for future research.

### Restatement of Research Questions

The study addressed the following research questions:

- RQ1: How do leaders in tech companies perceive the challenges associated with implementing artificial intelligence (AI)?
- RQ2: How do leaders in tech companies navigate the challenges associated with implementing artificial intelligence (AI)?
- RQ3: How do leaders perceive the opportunities of artificial intelligence (AI) adoption and strategize to maximize benefits while addressing associated challenges?

While leaders' perspectives on AI adoption varied based on their company size, industry sector, and prior experience with AI, several key themes emerged. Leaders consistently identified workforce resistance, ethical concerns, and the

complexity of integrating AI into existing workflows as primary challenges. Many noted that employees often feared job displacement and skill obsolescence, contributing to hesitancy in embracing AI-driven changes.

Expanding on this, it became clear that the nature of these challenges is deeply rooted in organizational culture and leadership style. Leaders who approached AI adoption from a top-down, directive style often encountered more resistance than those who embraced participative leadership approaches. Those who prioritized transparency by communicating the rationale for AI adoption, potential impacts, and long-term benefits were more successful in fostering buy-in. Leaders who involved employees in the change process sought their input on AI implementation strategies and addressed fears proactively created a more adaptive, resilient workforce.

Moreover, ethical considerations emerged as a pivotal theme. Leaders voiced concerns about ensuring AI systems operated transparently and without bias, particularly in data-driven sectors like healthcare and finance. Effective leaders navigated these challenges by collaborating with cross-functional teams, including data scientists, ethicists, and legal experts, to establish clear governance frameworks. This collaboration not only safeguarded the organization from potential reputational damage but also fostered trust among employees and customers alike.

To address workforce resistance, leaders emphasized the importance of ongoing employee training and phased implementation strategies. Upskilling initiatives, designed to equip employees with AI-related competencies, were most effective when coupled with leadership messaging that framed AI as an enabler of human performance rather than a replacement for human jobs. Leaders who positioned AI as a tool to augment decision-making,

automate routine tasks, and create space for higher-value work saw greater engagement and optimism among their teams.

Cross-functional collaboration emerged as another critical strategy for navigating AI adoption challenges. Leaders who facilitated dialogue between technical teams (e.g., AI engineers) and operational staff (e.g., sales, customer service) achieved smoother implementations. These collaborations helped ensure that AI solutions were tailored to real-world business needs, reducing friction and promoting faster adoption.

Despite these challenges, leaders acknowledged AI's transformative potential in driving efficiency, innovation, and competitive advantage. However, they stressed the need to balance automation with human oversight, promote cross-functional collaboration, and ensure that AI adoption aligns with organizational values and culture.

Leaders who anchored AI initiatives in their company's core mission and values such as improving customer experience or enhancing product quality reported higher levels of employee engagement and sustained performance improvements.

These findings provide valuable insights into how leadership and change management practices influence the success of AI adoption, shaping the future of technology-driven organizations. The study underscores the essential role of leadership not only in facilitating technological integration but also in shaping organizational mindsets, fostering innovation, and ensuring ethical responsibility remains at the forefront of AI strategy.

## **Interpretation of Findings**

The study identified several recurring themes across the data, particularly around leadership agility, communication strategies, and the mitigation of threat rigidity. Leaders who demonstrated flexibility and empathy were able to foster greater employee buy-in. An expanded discussion on this can examine how specific leadership behaviors—such as participative decision-making and transparent messaging—enabled smoother transitions.

### **Leadership Style Matters**

This study found that transformational leadership—characterized by vision, inspiration, intellectual stimulation, and individualized consideration—was critical in mitigating threat rigidity and cultivating a culture receptive to AI adoption. Unlike transactional leadership which emphasizes control, compliance, and short-term outputs, transformational leaders inspire a shared sense of purpose and future-oriented thinking which is essential in navigating the ambiguity of emerging technologies (Bass & Riggio, 2006; Kurup & Gupta, 2022).

Transformational leaders in this study set a clear and compelling vision for AI integration by linking the technology to broader organizational goals such as customer experience, product innovation, and operational efficiency. This alignment helped employees see AI not as a threat to their roles, but as an opportunity to streamline processes, increase value, and build new skills. Leaders actively reframed the narrative of AI from one of job displacement to human augmentation, positioning it as a tool to enhance human capabilities rather than replace them (Albert, 2023; Benbya et al., 2021). Through consistent communication and transparency around the purpose, benefits, and expected impact of AI, they reduced ambiguity which is often a trigger for organizational resistance.

Importantly, transformational leaders demonstrated individualized consideration by addressing employee concerns personally and empathetically. They held open forums, town halls, and one-on-one conversations to listen to fears, answer questions, and tailor support to specific team needs. This personalized engagement helped to ease anxieties around job security and skill redundancy while encouraging proactive involvement in AI initiatives. This approach reflects the principles outlined by Bass and Avolio (1994) who emphasized the importance of relational trust and leader–employee alignment during change.

In addition to vision and empathy, emotional intelligence emerged as a key attribute of effective AI change leaders. Leaders who were attuned to their own emotions and those of others created psychologically safe environments where experimentation, dialogue, and learning were normalized (Edmondson, 1999; Goleman, 1995). This emotional intelligence, coupled with a growth mindset, enabled leaders to foster resilience and engagement at all levels of the organization. As Glikson and Woolley (2020) note, emotionally intelligent leadership is particularly valuable in complex, technology-driven change efforts as it promotes adaptability and interpersonal connection during times of uncertainty.

Further, transformational leaders reinforced a culture of learning and innovation, often modeling it themselves by engaging in AI-related upskilling and seeking insights from internal and external experts. This behavior not only demonstrated commitment but also set an example, encouraging employees to take ownership of their learning and engage more meaningfully with AI systems. Conversely, in organizations where transformational leadership was absent, the study observed a tendency to default to transactional leadership approaches which prioritized short-term efficiency over long-term adaptability. This resulted in rigid structures, control leadership, and increased employee resistance, precursors of threat rigidity (

Raisch & Krakowski, 2021; Staw et al., 1981). Without leaders who could articulate a meaningful vision, empower teams, and nurture trust, AI implementation risked becoming a top-down, compliance-driven initiative rather than a catalyst for strategic transformation (Jiang, 2024; Smith et al., 2022). In sum, the findings underscore that leadership style matters immensely. Transformational leaders, through their vision, emotional intelligence, and ability to foster inclusive, resilient cultures, were better equipped to lead organizations through the complexity of AI integration, ultimately turning uncertainty into opportunity.

### **Change Management Strategies Are Crucial**

The findings underscored that structured, intentional change management strategies were critical to the success of AI integration. Leaders who implemented proactive and transparent approaches were more effective in reducing resistance and fostering organizational alignment. Drawing from Kotter's (1996) eight-step change model, the most successful leaders created a sense of urgency by clearly communicating the implications of not adapting to AI advancements while also building guiding coalitions made up of cross-functional stakeholders who could champion the change across departments.

A key component of these strategies was consistent, multi-channel communication. Leaders demystified AI by breaking down complex concepts into accessible language, highlighting tangible use cases, and regularly updating employees on progress and impact. This clarity reduced fear and speculation. As one participant noted, "Clear communication on AI's benefits helped gain organizational buy-in" (P2). Leaders also embraced AI-powered communication tools to personalize messaging, ensuring that information reached employees in ways that resonated with their roles and learning styles (P11).

Change management efforts were further strengthened through early and inclusive stakeholder engagement. Leaders invited feedback from across hierarchical levels and functional areas, recognizing that frontline employees had unique insights into operational realities. This inclusion created a sense of co-ownership, a finding that aligns with Kotter's emphasis on broad-based empowerment. "By keeping employees involved in the AI transition, we reduced resistance and protectiveness" (P1), one leader shared, emphasizing how engagement mitigated fear and built momentum. The study also identified iterative implementation as a successful change strategy. Rather than pursuing sweeping, top-down deployments, effective leaders adopted phased rollouts, allowing time to test, refine, and adjust AI systems based on feedback. These cycles promoted organizational learning and minimized disruption. Leaders created feedback loops through listening sessions, pulse surveys, and pilot projects, giving employees agency in shaping AI's role in their workflows.

Effective change managers anticipated emotional and psychological resistance. They addressed this by reframing AI not as a job-replacement threat but as a tool to offload mundane tasks and enable more meaningful, high-value work. Leaders actively countered narratives of displacement by reinforcing the human-AI partnership model. This strategy reflects Beer and Nohria's (2000) dual approach to change which calls for balancing economic outcomes (e.g., efficiency and innovation) with emotional support and inclusion to maintain morale and trust.

Overall, the findings illustrate that successful AI change management requires more than technical planning. It demands thoughtful leadership grounded in communication, inclusion, emotional intelligence, and continuous learning. When executed well,

change strategies not only accelerate adoption but also cultivate a workforce that is resilient, adaptable, and engaged in the organization’s AI-driven future.

### **Technological Literacy and Adaptive Thinking Drive Success**

A key insight from the study was that successful AI adoption depends not only on technical infrastructure but also on the technological fluency and adaptive capacity of leaders. In AI-driven environments, leaders who demonstrated technological literacy—including foundational knowledge of data analytics, machine learning, automation, and system integration—were better equipped to make informed decisions, evaluate risk, and engage credibly with technical teams. Several participants emphasized that this knowledge was a critical enabler of collaboration across functions. One noted, “Technical teams often have AI expertise, but business units struggle to understand how to apply it effectively” (P1), illustrating the challenge of bridging domain and technical perspectives. Another added, “Employees lack the necessary AI literacy, making it difficult to fully leverage its potential” (P2), a reflection of how the leader’s own understanding often sets the tone for organizational readiness.

Technological literacy also helped leaders translate complex AI concepts into practical strategies, contextualizing them in a way that resonated with stakeholders across departments. For example, leaders who could articulate the operational value of AI tools—such as predictive analytics for customer targeting or automation for improving workflow efficiency—were better positioned to gain buy-in from both technical and non-technical teams. “Organizations must invest in AI training to bridge the skill gap” (P7), one leader advised, reinforcing the importance of building knowledge across all levels, starting with leadership. These capabilities not only enhanced strategic alignment but also fostered trust, especially during early implementation stages when skepticism and uncertainty were high.

However, the study found that technological expertise alone was insufficient. Leaders also needed to demonstrate adaptive thinking and the cognitive flexibility to shift perspectives, strategies, and behaviors in response to rapidly changing contexts. This capability proved essential when AI projects required iteration, encountered unexpected obstacles, or challenged traditional business models. Adaptive leaders did not adhere rigidly to initial plans but rather viewed setbacks as learning opportunities. This approach aligns with Heifetz et al.'s (2009) framework of adaptive leadership which emphasizes the importance of continuous diagnosis and real-time adjustment in response to complex, evolving challenges.

The interplay between technological literacy and adaptive thinking emerged as a defining feature of effective AI leadership. Leaders who lacked one of these competencies often faced greater challenges. For instance, some technically proficient leaders were unable to pivot when their AI implementation strategies fell short, demonstrating inflexibility that stalled innovation. Conversely, leaders with strong adaptive mindsets but insufficient technical understanding sometimes made poorly informed decisions or overly relied on technical experts without fully grasping the implications. As one participant observed, "Many people managers struggle with AI concepts, which slows down integration efforts" (P10), highlighting how skill gaps can delay progress even when strategic agility is present.

This finding reinforces the argument that both competencies must be integrated into future leadership development. Organizations preparing for sustained AI integration should embed technological literacy and adaptive thinking into their executive training programs, mentorship structures, and performance development plans. By cultivating leaders who can both understand and adapt to AI systems, companies will be better positioned to

navigate technological disruption, leverage innovation, and drive strategic transformation in increasingly complex environments (Kurup & Gupta, 2022; Smith et al., 2022).

### **Culture and Trust Shape Outcomes**

The study found that organizational culture and trust significantly influenced AI adoption outcomes. Companies that fostered a culture of continuous learning, agility, and collaboration experienced more effective AI integration. Leaders played a central role in shaping this culture by promoting psychological safety, creating an environment where employees felt comfortable sharing ideas, voicing concerns, and experimenting with AI technologies without fear of failure.

Trust emerged as a multifaceted factor. First, leaders who modeled transparency by openly discussing the potential benefits and challenges of AI fostered credibility and trust. This supports Covey's (2006) assertion that trust accelerates performance by enabling faster, more effective collaboration. Leaders who encouraged innovation and celebrated small wins even when experiments failed, reinforced a growth mindset within their teams. This reflects Edmondson's (1999) work on learning-oriented cultures which suggests that organizations that embrace failure as part of the innovation process achieve more sustainable outcomes.

The study revealed that leaders who actively fostered cross-functional collaboration played a pivotal role in advancing AI adoption. By engaging representatives from technical teams, operational units, and frontline staff in AI planning and execution, these leaders helped break down organizational silos, enabling interdisciplinary problem-solving and more holistic integration of AI technologies. As one participant explained, "Our AI steering committee brought in voices from across the organization—it wasn't just IT

driving the conversation” (P5). This inclusive structure ensured that AI initiatives reflected diverse operational realities, increasing their relevance and adoption. Cross-functional involvement cultivated a sense of shared ownership which significantly reduced resistance. Employees who were given a seat at the table early in the process felt more invested in the outcome. “By keeping employees involved in the AI transition, we reduced resistance and protectiveness” (P1), noted one leader. This finding aligns with Kotter’s (1996) emphasis on broad-based empowerment and also echoes Edmondson’s (1999) research on psychological safety where inclusive dialogue and mutual respect contribute to stronger engagement and trust.

Embedding collaboration within AI initiatives not only enriched decision-making but also reinforced a trust-driven culture, positioning organizations to adapt more swiftly to evolving technologies. “The training feedback loop was critical to foster a collaborative and inclusive environment that brought users along a journey” (P2), shared another leader. Through co-creation and continuous communication, these leaders cultivated internal alignment, allowing AI systems to be deployed with greater speed, accuracy, and organizational support. This collaborative infrastructure laid the groundwork for long-term value creation as teams became more agile, informed, and unified in navigating the complexities of AI transformation.

In summary, the study’s key findings reinforce that successful AI adoption hinges on leadership style, effective change management, technological literacy, adaptive thinking, and a culture grounded in trust and continuous learning. Each component is interconnected, forming a cohesive framework for navigating the complexities of AI integration. Leaders who embody these characteristics and strategies are better

equipped to mitigate threat rigidity, drive innovation, and position their organizations for sustained success in an AI-driven future.

### **Limitations of the Study**

While this study provides valuable insights, several limitations must be acknowledged. First, the sample size and scope were restricted to a select group of mid-level leaders in technology companies. This focus allowed for an in-depth exploration of leadership behaviors and organizational dynamics within this specific context; however, it limits the generalizability of the findings to other industries or leadership levels. Future research could expand to include senior executives, frontline employees, or leaders from diverse industries to enhance the applicability of results.

The qualitative nature of this study, particularly the use of thematic analysis, introduces an element of subjectivity. While the analysis yielded rich, nuanced insights into leadership practices and AI adoption, the interpretive process relies on the researcher's perspective to identify and categorize themes. Efforts were made to ensure credibility through member checking and maintaining an audit trail, but the potential for bias remains inherent in qualitative research. Future studies might incorporate mixed methods approaches, combining qualitative insights with quantitative data to enhance reliability and triangulate findings.

Finally, the rapid technological advancement in AI presents a limitation in the longevity of this study's findings. AI technologies are evolving at an unprecedented pace. Strategies and leadership practices that are effective today may require adaptation or reinvention in the near future. This dynamic landscape underscores the importance of ongoing research to capture emerging trends, evolving leadership competencies, and the shifting organizational challenges associated with AI adoption. Studies that

track leadership approaches over time could provide valuable insights into how companies sustain AI integration and adapt to new technological disruptions.

### **Implication for Theory**

#### **Leadership Style and Threat Rigidity**

The findings strongly align with transformational leadership theory (Bass & Avolio, 1994), emphasizing the critical role leaders play in shaping how employees perceive and respond to AI-driven change. Transformational leaders, through vision, inspiration, and authentic engagement, cultivate a shared sense of purpose and confidence among their teams. This emotional and strategic alignment reduces the defensive behaviors associated with threat rigidity, such as resistance, avoidance, or centralized control. In contrast to transactional leaders who focus on maintaining the status quo through rewards, compliance, and penalties, transformational leaders create a forward-looking environment that encourages adaptability and innovation.

This study builds on the work of Mariani et al. (2023) which found that transformational leadership styles mitigate the psychological impact of perceived threats by fostering psychological safety, innovative thinking, and calculated risk-taking. In particular, leaders in this study employed intellectual stimulation, a hallmark of transformational leadership, to encourage employees to challenge assumptions about AI. One participant shared, “We encouraged teams to reimagine their workflows—AI wasn’t just an IT upgrade, it was a chance to rethink how we deliver value” (P4). This shift in mindset helped employees view AI not as a source of disruption, but as a gateway to professional growth and continuous improvement.

Participants also embodied inspirational motivation, using compelling narratives to position AI as a tool for long-term success. Several leaders described how they linked AI to their organization’s mission, showing how automation and

predictive tools could enhance, not replace, human contributions. “Leaders must develop a compelling change vision that’s aligned to the company’s core values and long-term goals” (P2), noted one participant. This vision-setting created emotional engagement, a key factor in lowering resistance and reinforcing collective buy-in.

Leaders who demonstrated individualized consideration—taking time to personally support and coach employees through the transition—further disrupted threat rigidity by validating employee concerns while encouraging personal development. “When employees saw they could actually use the tools to make better decisions, it inspired more curiosity and openness” (P9). These personalized efforts reassured employees that they had a meaningful role in the AI transformation process, counteracting feelings of exclusion.

This study also confirms that emotional intelligence (Goleman, 1995) is central to transformational leadership during AI adoption. Leaders who modeled empathy, transparency, and responsiveness helped foster trust and psychological safety. For example, one leader emphasized, “People were hesitant at first, but once they saw there was training and support, the anxiety dropped and engagement increased” (P7). This speaks directly to the capacity of emotionally intelligent leaders to regulate emotional climates within their teams, making change less threatening and more participatory.

Additionally, this research extends the foundational work of Staw et al. (1981) on threat rigidity, showing that the presence of transformational leadership characteristics, including vision, inspiration, intellectual stimulation, and empathy, can disrupt rigid responses and promote organizational agility. Leaders who consistently embodied these traits demonstrated an ability to guide their organizations through complexity, fostering both resilience and innovation. The study reinforces that transformational leadership is not just beneficial, but essential for

counteracting the rigidity and fear that often accompany AI-driven disruption. Leaders who can inspire, support, and challenge their teams are far more likely to lead successful, adaptive, and human-centered AI transformations.

### **Change Management Practices**

The data underscores the importance of structured, intentional change processes, reinforcing key principles from organizational change theory (Sirkin et al., 2005). Leaders who implemented clear and consistent communication strategies helped mitigate confusion, anxiety, and misinformation throughout the AI implementation journey. As one leader noted, “When people knew what was coming and why, they were much more willing to engage” (P6), highlighting that transparency builds psychological safety and trust—core tenets in driving change readiness. This finding closely aligns with Kotter’s (1996) eight-step change model which emphasizes the importance of communicating a compelling vision and celebrating early wins to maintain momentum.

Importantly, leaders who engaged employees as active participants in the transformation, rather than treating them as passive recipients, achieved significantly greater success in reducing resistance. One participant explained, “By keeping employees involved in the AI transition, we reduced resistance and protectiveness” (P1), illustrating how shared ownership fosters alignment. This approach aligns with Lewin’s (1947) change management model which frames change as a three-stage process: unfreezing existing mindsets, moving toward new behaviors, and refreezing those behaviors within organizational culture. Leaders who made intentional space for involvement and co-creation helped employees navigate this transition more smoothly.

The use of consistent feedback loops was another key enabler of adaptive change. Several leaders reported that they structured regular check-ins, post-training surveys, and iterative testing

cycles into their AI rollouts. “We treated AI training like a product—we iterated based on feedback” (P8), one participant shared. This iterative approach reflects Argyris’ (1977) concept of double-loop learning in which organizations learn not just from outcomes, but from questioning underlying assumptions. By engaging in continuous adaptation, teams were able to refine AI processes in real-time, improving the functionality and boosting employee confidence.

The study also revealed that leaders who prioritized cross-functional collaboration helped bridge the divide between technical and non-technical teams. “Our AI steering committee brought in voices from across the organization—it wasn’t just IT driving the conversation” (P5). This collaborative structure disrupted siloed thinking and fostered a culture of co-ownership. These findings support Bozkus’ (2024) research on the importance of inclusive team structures in managing digital transformation and also reinforce Beer and Nohria’s (2000) assertion that successful change requires a balance between top-down strategic direction and bottom-up engagement. By involving employees at multiple levels, especially during the design and pilot stages, leaders created a more unified, invested, and agile organizational response to AI-driven change.

### **Technological Literacy and Adaptive Thinking**

Consistent with Chowdhury et al.’s (2023) assertion, the study found that technological literacy among leaders significantly influenced AI adoption outcomes. Leaders with a foundational understanding of AI systems, including data analytics, machine learning, and automation, were better positioned to make informed decisions, anticipate implementation challenges, and communicate more credibly with technical teams. As one participant noted, “Many people managers struggle with AI concepts, which slows down integration efforts” (P10).

This gap not only affected decision-making but also reduced leaders' ability to build trust and influence cross-functional buy-in.

Conversely, leaders who demonstrated basic fluency in AI principles could bridge the communication divide between IT and business functions. "Organizations must invest in AI training to bridge the skill gap," emphasized another leader (P7), suggesting that leadership competency in technology is not optional, but strategic. "Technical teams often have AI expertise, but business units struggle to understand how to apply it effectively" (P1), further illustrating how technologically literate leaders acted as translators, connecting innovation to implementation and guiding teams through change with clarity and confidence.

Equally important was the presence of adaptive thinking. Leaders who demonstrated cognitive flexibility, the ability to revise strategies, shift perspectives, and embrace feedback, navigated AI adoption more smoothly, echoing Raisch and Krakowski's (2021) findings on leadership agility. This adaptability aligns with Heifetz et al.'s (2009) concept of adaptive leadership in which leaders diagnose complex, evolving challenges and adjust their responses accordingly. For example, one participant described how adaptability allowed their team to respond quickly to AI rollout issues: "Leadership adaptability helped us recover quickly from AI project setbacks" (P7), reinforcing that successful change is not just technical but deeply relational and iterative.

The study also highlighted the interplay between technological literacy and adaptive thinking, showing that possessing one without the other often limited effectiveness. Leaders who had strong technical understanding but adhered rigidly to fixed plans struggled to pivot when AI projects encountered resistance or unexpected limitations. In contrast, those who embraced an adaptive mindset without technical grounding were at risk of making

misinformed decisions or deferring too heavily to technical staff without grasping the implications. As one participant stated, “Employees lack the necessary AI literacy, making it difficult to fully leverage its potential” (P2), suggesting that the gap begins at the top and trickles downward.

This evidence reinforces the conclusion that leadership development programs must integrate both competencies—technological literacy and adaptive thinking—to prepare future leaders for AI-driven transformation. Leaders who can navigate complexity, communicate across disciplines, and shift approaches dynamically will be far better positioned to lead sustainable, human-centered AI adoption.

### **Cultural Readiness and Trust**

The findings validate Glikson & Woolley’s (2020) research on psychological safety, highlighting that trust-building is critical for fostering a culture of AI adoption. Leaders who cultivated environments where employees felt heard, supported, and empowered saw significantly more proactive engagement in AI initiatives. As one participant noted, “Our best move was scheduling monthly sessions—just 30 minutes for people to talk openly and ask questions” (P3). This type of open dialogue not only built transparency but also reinforced a culture of psychological safety that encouraged employees to share concerns and ideas without fear of judgment or reprisal. Leaders who invested time in listening and engaging created the foundation for sustained engagement and trust. This finding aligns with Glikson and Woolley’s (2020) assertion that trust and psychological safety are foundational to successful organizational change, particularly in complex and uncertain environments like AI adoption.

Trust emerged as a multi-dimensional factor in AI adoption. First, leaders who modeled transparency by sharing both the potential benefits and challenges of AI initiatives built credibility and trust across their teams. One leader explained, “We were open about the limitations of AI—saying what it could and could not do— so employees didn’t feel misled or scared” (P6). This approach aligns with Covey’s (2006) emphasis on trust as a performance accelerator, highlighting that when leaders are forthright and clear about the challenges of AI adoption, employees are more likely to feel aligned with and invested in the change process. Transparency removed the fear of the unknown which is often a significant barrier to AI acceptance.

Leaders who encouraged experimentation, even when it led to failure, strengthened psychological safety and contributed to a learning-oriented culture. As Edmondson (1999) suggests, fostering a safe space for experimentation, even at the risk of failure, enables organizations to evolve and innovate without fear of punitive consequences. One leader shared, “We encouraged teams to fail fast, learn from it, and adapt. That approach allowed us to iterate quickly without punishing mistakes” (P8). By normalizing failure as part of the learning process, leaders created an environment where employees were not only more open to engaging with AI but also more willing to take ownership of AI-driven projects.

The study also found that symbolic leadership, where leaders visibly engaged with AI projects alongside their teams, significantly strengthened trust and buy-in. Leaders who participated in AI-related learning sessions tested new tools firsthand and openly acknowledged challenges demonstrated commitment and shared responsibility. One participant highlighted, “Leaders being in the trenches with us—testing out the tools and facing challenges together—set a powerful example. It made us feel like we were all part of the journey, not just

following orders” (P5). This approach supports Kouzes and Posner’s (2017) model of exemplary leadership, particularly the principle of “Model the Way,” which emphasizes that leaders who demonstrate the behaviors they wish to see in their teams create a strong precedent for engagement, resilience, and commitment. By modeling active participation, leaders reinforced their role as enablers, helping to break down barriers and drive collective ownership of AI projects.

In summary, the study reinforces the importance of trust as a multifaceted component of AI adoption. Leaders who demonstrate transparency, encourage experimentation, and model involvement set the foundation for psychological safety and foster a culture where employees feel supported and empowered to engage with AI transformation. These findings align with established leadership models, such as Kouzes and Posner’s (2017) and Edmondson’s (1999), while contributing new insights into the critical role of cultural readiness and trust in AI-driven change processes.

### **Implications for Practice**

Leadership development must evolve to meet the demands of AI integration. Transformational leadership capabilities should be at the forefront of training programs, equipping leaders with the skills to inspire, guide, and support their teams through technological upheaval. This includes fostering technological literacy, enabling leaders to bridge the gap between strategy and execution while confidently communicating the role of AI in achieving organizational goals. Adaptive thinking should be embedded into leadership education and training, ensuring leaders are prepared to pivot and recalibrate strategies as AI technology evolves.

Leaders must be equipped with advanced emotional intelligence competencies to build trust and psychological safety (Edmondson, 1999; Goleman, 1995). Emotional intelligence supports individualized consideration, a key component of transformational leadership (Bass & Avolio, 1994), which helps leaders tailor their approach to meet the diverse emotional and developmental needs of their employees. This personalization fosters deeper engagement and resilience which is crucial during AI transitions. Beyond emotional intelligence, cultivating empathy and social awareness is essential. Leaders who demonstrate genuine concern for their employees' well-being, acknowledging fears of job displacement and skill redundancy, can proactively address concerns, fostering a sense of security and loyalty. This approach supports ongoing change, turning initial resistance into collaboration and commitment.

Structured change management processes are essential. Companies should prioritize iterative, phased AI rollouts that allow for continuous feedback, course correction, and stakeholder alignment. Communication must remain transparent and consistent, ensuring employees stay informed, engaged, and committed to the process. Kotter's (1996) eight-step change model emphasizes the importance of generating early wins to build momentum and reinforce the belief that AI adoption is achievable and beneficial as validated by this study's findings. Furthermore, incorporating Prosci's ADKAR model (Hiatt, 2006), which focuses on Awareness, Desire, Knowledge, Ability, and Reinforcement, can help leaders structure their change management strategies around individual and organizational needs, ensuring that employees move through the emotional and practical stages of change at a sustainable pace.

Cross-functional collaboration is another critical element. As Bozkus (2024) and Beer and Nohria (2000) suggest, leaders should create interdisciplinary AI task

forces, integrating employees from various departments to bridge knowledge gaps and foster a shared sense of ownership. This approach minimizes siloed thinking and promotes a more unified, innovation-focused culture. These cross-functional teams should also include ethical oversight roles to ensure AI implementation aligns with organizational values and societal expectations, promoting fairness, transparency, and accountability in AI-driven decision-making.

Cultural transformation is pivotal to sustaining AI success long-term. Organizations must foster a culture of continuous learning where upskilling and cross-functional collaboration become routine. Schein (2010) emphasizes that cultural norms must evolve to support new technologies with leaders acting as role models for continuous learning and adaptability. This includes encouraging employees to embrace experimentation, even when outcomes are uncertain, reinforcing Edmondson's (1999) research on psychological safety and innovation. To strengthen this, leaders can champion "learning ecosystems," environments that blend formal training with on-the-job learning, mentorship programs, and peer knowledge-sharing forums. This approach ensures that learning is not a one-time initiative but an ongoing, dynamic process aligned with emerging AI advancements.

Additionally, organizations must address potential ethical concerns surrounding AI adoption, promoting transparent leadership and well-defined ethical decision-making frameworks (Glikson & Woolley, 2020). Ethical leadership, as defined by Brown et al. (2005), ensures that AI systems are implemented responsibly, balancing technological innovation with fairness, privacy, and inclusivity. Leaders must proactively confront issues such as algorithmic bias, data privacy, and the unintended consequences of AI-driven decisions.

To support this, the study found that leaders who established formal, multidisciplinary structures to guide AI deployment experienced fewer ethical missteps and greater employee trust. One participant shared, “We created a cross-functional committee to review our AI projects—legal, HR, engineering, and frontline reps all had a seat. It kept us accountable and helped surface risks early” (P6). This supports the recommendation to establish an Artificial Intelligence Ethics Committee, composed of diverse voices across departments, including legal, operations, and employee representatives. Such a committee can provide ongoing oversight and ethical guidance, ensuring that AI initiatives stay aligned with core values, organizational goals, and stakeholder expectations.

Finally, to embed these leadership strategies into training, organizational structures, and cultural norms, companies should integrate leadership development with performance management systems. Leaders who demonstrate adaptability, emotional intelligence, and ethical decision-making in AI initiatives should be recognized and rewarded, reinforcing the behaviors essential for successful AI adoption. This alignment ensures that leadership development, change management, and cultural transformation support long-term success in an AI-driven future, positioning the organization to remain competitive, resilient, and ethically responsible in an increasingly technology-centric landscape.

### **Recommendations for Future Research**

While this study contributes to understanding leadership’s role in AI adoption, several areas warrant further exploration. One key recommendation is conducting broader industry comparisons to determine whether leadership strategies and organizational dynamics observed in technology companies hold true in other sectors. Industries such as healthcare, manufacturing, finance, and retail are increasingly integrating AI

technologies but may face distinct cultural, operational, and ethical challenges that influence leadership approaches. Comparative studies could uncover industry-specific nuances, helping to identify whether transformational leadership remains universally effective or if other leadership styles emerge as more suitable in different contexts.

Additional studies are essential to track leadership strategies and organizational outcomes over time. AI adoption is not a one-time event but an evolving process requiring continuous adaptation. A longitudinal approach could provide deeper insights into how leadership strategies shift as organizations move from initial AI implementation to long-term integration and optimization. Such studies could reveal which leadership behaviors sustain momentum, overcome resistance, and foster enduring cultural transformation. Additional data could highlight how leaders themselves adapt and whether they refine their approaches, develop new competencies, or experience leadership fatigue offering a richer understanding of leadership resilience and agility.

Finally, future research should incorporate employee perspectives to capture a more holistic view of AI adoption. This study focused on leadership insights, but understanding how frontline employees perceive leadership approaches during AI implementation is equally vital. Employees are at the forefront of adopting and operationalizing AI tools, and their buy-in is crucial to achieving long-term success. Research exploring employees' trust in leadership, openness to AI-driven change, and perceptions of psychological safety could uncover disconnects between leadership intentions and workforce experiences. Such studies could inform leadership training programs, ensuring that leaders not only strategize effectively but also foster engagement, trust, and empowerment among those most directly impacted by AI adoption.

## **Conclusion**

This study underscores that effective leadership, adaptive change management, and cultural readiness are pivotal in navigating AI adoption while mitigating the effects of threat rigidity. Transformational leadership emerged as a powerful force, fostering innovation, resilience, and openness to change - all essential elements for organizations to harness the full potential of AI technologies. Leaders who demonstrated vision, intellectual stimulation, and individualized consideration created environments where employees viewed AI as an opportunity for growth rather than a disruptive threat. This leadership style, combined with structured, transparent change management practices, proved crucial in reducing resistance and promoting organizational agility.

The findings also highlight that technological literacy and adaptive thinking are no longer optional skills for leaders but core competencies. As AI technologies evolve rapidly, leaders must stay informed and flexible, continually recalibrating strategies to align with emerging advancements. Without these capabilities, organizations risk falling behind or mismanaging AI implementation, leading to lost competitive advantage or internal discord. Fostering a culture of trust, collaboration, and psychological safety is imperative for sustainable AI integration. Organizations that cultivate continuous learning, embrace cross-functional collaboration, and encourage innovation even in the face of failure are better positioned to adapt to AI's evolving landscape. Leaders play a critical role in shaping this culture, modeling transparency, and promoting ethical AI use, ensuring that employees feel empowered, valued, and engaged.

While this study focused on mid-level technology leaders, its implications extend beyond the tech sector. As AI becomes more pervasive across industries, the need for

effective, adaptive, and empathetic leadership will only intensify. Future research should explore how these leadership strategies translate into other sectors facing AI-driven transformations, investigating whether the dynamics of threat rigidity, change management, and cultural readiness remain consistent or evolve based on industry-specific factors.

Ultimately, this study contributes to the growing body of knowledge on leadership and AI adoption, offering practical insights for organizations seeking to navigate the complexities of technological change. By embracing transformational leadership, fostering trust and adaptability, and prioritizing continuous learning, organizations can not only mitigate the challenges of AI integration but also unlock unprecedented opportunities for innovation, competitiveness, and long-term success.

## REFERENCES

- Albert, R. L. (2023). Leadership in the era of AI: Strategies for success in a rapidly changing landscape. *International Journal of Advanced Engineering Technologies and Innovations*, 1(2), 307–328. <https://ijaeti.com/index.php/Journal/article/view/212>
- American Psychological Association. (2017, January 1). *Ethical principles of psychologists and code of conduct: Standard 9: Assessment*. <https://www.apa.org/ethics/code>
- Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55(5), 115–125.
- Barnett, C. K., & Pratt, M. G. (2000). From threat-rigidity to flexibility. *Journal of Organizational Change Management*, 13(1), 74. <http://dx.doi.org/10.1108/09534810010310258>
- Barnham, C. (2015). Quantitative and qualitative research: Perceptual foundations. *International Journal of Market Research*, 57(6), 837–854. <https://doi.org/10.2501/IJMR-2015-070>
- Bass, B. M., & Avolio, B. J. (1994). Transformational leadership and organizational culture. *The International Journal of Public Administration*, 17(3–4), 541–554. <https://doi.org/10.1080/01900699408524907>
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates.
- Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVIVO*. SAGE.
- Benbya, H., Pachidi, S., & Jarvenpaa, S. (2021). Special issue editorial: Artificial intelligence in organizations: Implications for information systems research. *Journal of the Association for Information Systems*, 22(2), 281–303. <https://doi.org/10.17705/1jais.00662>
- Beer, M., & Nohria, N. (2000). *Cracking the code of change*. Harvard Business

- Binns, R. (2018). *Fairness in machine learning: Lessons from political philosophy*. Proceedings of the 2018 Conference on Fairness, Accountability and Transparency, 149-159. <https://doi.org/10.1145/3287560.3287583>
- Bloomberg. (2023, June 1). *Generative AI to become a \$1.3 trillion market by 2032, research finds*. <https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds/>
- Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research*, 19(4), 426-432. <https://doi.org/10.1108/qmr-06-2016-0053>
- Boon, J., Wynen, J., & Verhoest, K. (2023). Do reputational threats influence the rigidity of US agencies? A dynamic panel data approach. *Public Administration Review*, 83(6), 1798– 1812. <https://doi.org/10.1111/puar.13732>
- Borges, A. F., Laurindo, F. J., Spínola, M. M., Gonçalves, R. F., & Mattos, C. A. (2022). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions. *International Journal of Information Management*, 57, 102225. <https://doi.org/10.1016/j.ijinfomgt.2020.102225>
- Bozkus, K. (2024). Organizational culture change and technology: Navigating the digital transformation. In M. Sarfraz & W. Ul Hassan Shah (Eds.), *Organizational culture: Cultural change and technology* (pp. 1–79). IntechOpen. <https://doi.org/10.5772/intechopen.112903>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior*

*and Human Decision Processes*, 97(2), 117–

134. <https://doi.org/10.1016/j.obhdp.2005.03.002>

- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company.
- Chang, J. (2024). *Exploring the effectiveness of AI in project risk management: What project managers do to facilitate the changes* (Order No. 31285094) [Doctoral dissertation, Purdue University]. ProQuest Dissertations & Theses Global.  
<https://www.proquest.com/dissertations-theses/exploring-effectiveness-ai-project-risk/docview/3122640579/se-2>
- Chen, D., Preston, D., & Swink, M. (2015). How the use of big data analytics affects value creation in supply chain management. *Journal of Management Information Systems*, 32(4), 4–39. <https://doi.org/10.1080/07421222.2015.1138364>
- Chowdhury, S., Dey, P., Joel-Edgar, S., Bhattacharya, S., Rodriguez-Espindola, O., Abadie, A., & Truong, L. (2023). Unlocking the value of artificial intelligence in human resource management through AI capability framework. *Human Resource Management Review*, 33(1), 100899. <https://doi.org/10.1016/j.hrmr.2022.100899>
- Chukwuma, N., Govender, L., & Onwubu, S. C. (2023). Role of change leadership styles on cognitive rigidity at selected automobile dealerships in Durban, South Africa. *International Journal of Research in Business and Social Science*, 12(1), 121–133.  
<https://doi.org/10.20525/ijrbs.v12i1.2304>
- Covey, S. M. R. (2006). *The speed of trust: The one thing that changes everything*. Free Press.
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Danila, A., & Aciu, L. E. (2023). *The implementation of artificial intelligence for real-time*

- estimation of an induction machine's flux model parameters from acquired data*. 17th International Conference on Engineering of Modern Electric Systems (EMES), Oradea, Romania. <https://doi.org/10.1109/EMES58375.2023.10171757>
- Denzin, N. K. (2012). Triangulation 2.0. *Journal of mixed methods research*, 6(2), 80-88.
- Dicce, R. P., & Ewers, M. C. (2020). Becoming Linked In: Leveraging professional networks for elite surveys and interviews. *Geographical Review*, 110(1/2), 160–171. <https://doi.org/10.1111/gere.12346>
- Doorsamy, W., Paul, B. S., & Marwala, T. (Eds.). (2020). *The disruptive fourth industrial revolution: Technology, society and beyond* (1st ed.). Springer Nature.
- Dufva, M., & Kallio, J. (2019). *Online foresight platforms as sources of organizational learning*. *Technological Forecasting and Social Change*, 140, 229–239. <https://doi.org/10.1016/j.techfore.2018.12.006>
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Williams, M. D. (2022). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy. *International Journal of Information Management*, 57, 101994. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
- Edhlund, B. M., & McDougall, A. G. (2019). *NVivo 12 essentials: Your guide to the leading qualitative data analysis software*. Form & Kunskap AB.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>
- Fountaine, T., McCarthy, B., & Saleh, T. (2020). Building the AI-powered organization. *Harvard Business Review*, 98(4), 62-73. [https://wuyuansheng.com/doc/Databricks-AI-Powered-Org\\_Article-Licensing-July21-1.pdf](https://wuyuansheng.com/doc/Databricks-AI-Powered-Org_Article-Licensing-July21-1.pdf)

Gershgorn, D. (2018, February 27). Sundar Pichai's leadership in shaping Google's AI future.

*Wired*. <https://www.wired.com/2018/02/sundar-pichais-leadership-shaping-googles-ai-future/>

Ghemawat, P., & McGahan, A. M. (2021). Threat rigidity and organizational change: How firms respond to external shocks. *Strategic Management Journal*, 42(8), 1426-1452.

[https://wuyuanheng.com/doc/Databricks-AI-Powered-Org\\_Article-Licensing-July21-1.pdf](https://wuyuanheng.com/doc/Databricks-AI-Powered-Org_Article-Licensing-July21-1.pdf)

Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research. *Academy of Management Annals*, 14(2), 627-660.

<https://doi.org/10.5465/annals.2018.0057>

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.

Gmyrek, P., Berg, J., & Bescond, D. (2023, August 21). *Generative AI and jobs: A global analysis of potential effects on job quantity and quality*, [ILO Working Paper 96].

International Labor Office, Geneva. <https://dx.doi.org/10.2139/ssrn.4584219>

Gorran Farkas, M. (2013). Building and sustaining a culture of assessment: Best practices for change leadership. *Reference Services Review*, 41(1), 13–31.

<https://doi.org/10.1108/00907321311300857>

Haidar E. (2006). Leadership and management of change. *Journal of Community Nursing*, 20(4), 13–17.

[https://www.researchgate.net/publication/236178065\\_Leadership\\_and\\_Management\\_of\\_Change](https://www.researchgate.net/publication/236178065_Leadership_and_Management_of_Change)

Haefner, N., Wincent, J., Parida, V., & Gassmann, O. (2021). Artificial intelligence and

- innovation management: A review, framework, and research agenda. *Technological Forecasting and Social Change*, 162, 120392.  
<https://doi.org/10.1016/j.techfore.2020.120392>
- Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press.
- Heitner, K. L., & Sherman, K. C. (2014). *Dissertation field guide*. Bridgepoint Education.
- Hennink, M., Hutter, I., & Bailey, A. (2011). *Qualitative research methods*. SAGE.
- Hiatt, J. (2006). *ADKAR: A model for change in business, government, and our community*. Prosci Learning Center Publications.
- Huang, M.-H., & Rust, R. T. (2021). *Artificial intelligence in service*. *Journal of Service Research*, 24(1), 3–20. <https://doi.org/10.1177/1094670520902266>
- Hubbart, J. A. (2023). Organizational change: The challenge of change aversion. *Administrative Sciences*, 13(7), 162. <https://doi.org/10.3390/admsci13070162>
- IBM. (n.d.). *Algorithmic bias*. IBM. <https://www.ibm.com/think/topics/algorithmic-bias>
- Jiang, L. (2024). Rethinking job insecurity research: Challenging the homogeneous, linear, and negative effects of job insecurity. *Applied Psychology*, 73(4), 2013-2020.  
<https://doi.org/10.1111/apps.12534>
- Kanter, R. M. (2012). *How great companies think differently*. *Harvard Business Review*, 90(11), 66–78.
- Keding, C. (2021). Understanding the interplay of artificial intelligence and strategic management: Four decades of research in review. *Management Review Quarterly*, 71(1), 91-134. <https://doi.org/10.1007/s11301-020-00181-x>
- Kim, T., Park, Y., & Kim, W. (2022, August 7). *The impact of artificial intelligence on firm performance* [Conference presentation]. Portland International Conference on

Management of Engineering and Technology, Portland, OR.

<https://doi.org/10.23919/PICMET53225.2022.9882634>

Kotter, J. P. (1996). *Leading change*. Harvard Business School Press.

Kouzes, J. M., & Posner, B. Z. (2017). *The leadership challenge: How to make extraordinary things happen in organizations* (6th ed.). Jossey-Bass.

Kristensen, T. S. (2021). *Artificial intelligence*. Bentham Science Publishers.

Kurup, S., & Gupta, V. (2022). Factors influencing the AI adoption in organizations. *Metamorphosis: A Journal of Management Research*, 21(2), 129–139.

<https://doi.org/10.1177/09726225221124035>

Lemos, S. I., Ferreira, F. A., Zopounidis, C., Galariotis, E., & Ferreira, N. C. (2022). Artificial intelligence and change management in small and medium-sized enterprises: an analysis of dynamics within adaptation initiatives. *Annals of Operations Research*, 1-27.

Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change. *Human Relations*, 1(1), 5–41. <https://doi.org/10.1177/001872674700100103>

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.

Magni, F. (2021). *Three essays on artificial intelligence and creativity in organizations* (Publication No. 31575459) [Doctoral dissertation, Hong Kong University of Science and Technology]. ProQuest Dissertations & Theses Global.

<https://www.proquest.com/dissertations-theses/three-essays-on-artificial-intelligence/docview/3122661643/se-2>

Magyari, R. F. (2015). *Mindful-leadership's contribution to Corporate Social Responsibility objectives: A qualitative study* (Order No. 3742832) [Doctoral dissertation, Capella

University]. ProQuest Dissertations & Theses Global.

Mariani, M., Machado, I., Magrelli, V., & Dwivedi, Y. (2023). Artificial intelligence in innovation research: A systematic review, conceptual framework, and future research directions.

*Technovation*, 122, Article 102513. <https://doi.org/10.1016/j.technovation.2022.102623>

Mehra, B. (2002). Bias in qualitative research: Voices from an online classroom. *The Qualitative Report*, 7(1), 1–19.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed). Jossey-Bass.

McKinsey & Company. (2023). *The state of AI in 2023: Generative AI's breakout year*.

<https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year>

Moss, E., Watkins, E. A., Singh, R., Elish, M. C., & Metcalf, J. (2021). *Assembling accountability: Algorithmic impact assessment for the public interest*. Data & Society.

<https://datasociety.net/library/assembling-accountability-algorithmic-impact-assessment-for-the-public-interest/>

Mou, X. (2019). Artificial intelligence: Investment trends and selected industry uses.

*International Finance Corporation*, 8(2), 311-320.

<https://documents1.worldbank.org/curated/zh/617511573040599056/pdf/Artificial-Intelligence-Investment-Trends-and-Selected-Industry-Uses.pdf>

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2013).

Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544. <https://doi.org/10.1007/s10488-013-0528-y>

Parekh, R. (2024). The future of business leadership: Navigating technological disruption.

- Management Science Research Archives*, 1(4), 35-46.  
<https://managementscienceresearcharchives.com/index.php/Journal/article/view/22>
- Peifer, Y., Jeske, T., & Hille, S. (2022). Artificial intelligence and its impact on leaders and leadership. *Procedia Computer Science*, 200, 1024–1030.
- Priyadarshinee, P., Raut, R., Jha, M., & Gardas, B. (2017). Understanding and predicting the determinants of cloud computing adoption: A two staged hybrid SEM-Neural networks approach. *Computers in Human Behavior*, 76, 341–362.  
<https://doi.org/10.1016/j.chb.2017.07.027>
- Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation-augmentation paradox. *Academy of Management Review*, 46(1), 192-210.  
<https://doi.org/10.5465/amr.2018.0072>
- Sapna, R. (2016). The influence of transformational leadership and organizational culture on learning organization: A comparative analysis of the IT sector. *Journal of Administrative and Business Studies*, 2(3), 121–130. <https://doi.org/10.20474/jabs-2.3.3>
- Schein, E. H. (2010). *Organizational Culture and Leadership* (4th ed.). San Francisco, CA: Jossey-Bass.
- Sejera, S. G., & Bocarnea, M. (2022). The nature of leadership in artificial intelligence environments: Reconceptualizing human and machine collaboration. *Review of International Comparative Management*, 23(2), 264–283.  
<https://www.rmci.ase.ro/no23vol2/05.pdf>
- Shrestha, Y. R., Ben-Menahem, S. M., & von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. *California Management Review*, 61(4), 66-83. <https://doi.org/10.1177/0008125619862257>
- Silver, C., & Lewins, A. (2014). *Using software in qualitative research: A step-by-step*

- guide* (2nd ed.). SAGE Publications.
- Sirkin, H. L., Keenan, P., & Jackson, A. (2005). The hard side of change management. *Harvard Business Review*, 83(10), 108–118. <https://hbr.org/2005/10/the-hard-side-of-change-management>
- Smith, T. G., Norasi, H., Herbst, K. M., Kendrick, M. L., Curry, T. B., Grantcharov, T. P., Palter, V. N., Hallbeck, M. S., & Cleary, S. P. (2022). Creating a practical transformational change management model for novel artificial intelligence-enabled technology implementation in the operating room. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, 6(6), 584–596. <https://doi.org/10.1016/j.mayocpiqo.2022.09.004>
- Sohn, D., & Lee, S. (2020). Organizational resistance to technological change: A study on the role of organizational culture and leadership. *Technology Analysis & Strategic Management*, 32(7), 786–797. <https://doi.org/10.1080/09537325.2020.1813662>
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26(4), 501–524. <https://doi.org/10.2307/2392337>
- Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work*, 11(1), 80–96.
- Tyson, M. M., & Sauers, N. J. (2021). School leaders' adoption and implementation of artificial intelligence. *Journal of Educational Administration*, 59(3), 271–285. <https://doi.org/10.1108/jea-10-2020-0221>
- Wamba-Taguimdje, S. L., Wamba, S. F., Kamdjoug, J. R. K., & Wanko, C. E. T. (2020). Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893–1924. <https://doi.org/10.1108/BPMJ-07-2019-0293>

- Westerman, G. (2020). *Digital transformation: A new imperative for leadership*. MIT Sloan Management Review. <https://sloanreview.mit.edu>
- Wilson, H. J., & Daugherty, P. R. (2018). Collaborative intelligence: Humans and AI are joining forces. *Harvard Business Review*, 96(4), 114-123.  
<https://hometownhealthonline.com/wp-content/uploads/2019/02/ai2-R1804J-PDF-ENG.pdf>
- Wolf, M., & Terrell, D. (2016). *The high-tech industry: What is it and why it matters to our economic future*. U.S. Bureau of Labor Statistics. <https://www.bls.gov/opub/btn/volume-5/pdf/the-high-tech-industry-what-is-it-and-why-it-matters-to-our-economic-future.pdf>
- Xue, G. (2022). The power dynamics of crisis decision-making teams: A test of the threat-rigidity thesis. *Social Behavior and Personality: An International Journal*, 50(9), 1-10.
- Zengler, T. (2017). Sundar Pichai's transformational leadership at Google. *Harvard Business Review*. <https://hbr.org>

## Appendix A

### Interview Guide

#### 1. Background and R&D Involvement

- Can you describe your current role and responsibilities within the organization?
- Follow-up: How long have you been in this position, and what has been your experience with AI projects?
- What motivated your organization to adopt AI technologies?
- Follow-up: Were there specific challenges or opportunities that prompted this decision?
- How would you characterize the overall organizational culture regarding innovation and technology adoption? Follow-up: Can you provide examples of how this culture has influenced AI initiatives?

#### 2. Leadership and Change Management

- In your view, what role does leadership play in the successful implementation of AI?
- Follow-up: Can you share specific examples of leadership actions that have facilitated or hindered AI adoption?
- How do you perceive your leadership style in relation to managing change within your team? Follow-up: What strategies do you employ to encourage your team to embrace AI technologies? 6. Have you encountered resistance to AI adoption from your team or other stakeholders? If so, how did you address it?
- Follow-up: What factors do you believe contributed to this resistance?

#### 3. Threat Rigidity and Organizational Dynamics

- Can you describe a situation where your organization faced perceived threats during the AI adoption process?

- Follow-up: How did these threats affect decision-making and innovation within your team?
- What strategies do you believe are effective in mitigating threat rigidity within your organization?
- Follow-up: How do you foster a culture of adaptability and resilience in the face of challenges?
- How do you balance the need for stability with the need for innovation when implementing AI technologies?
- Follow-up: Can you provide examples of how this balance has been achieved in your organization?

#### 4. Competencies & Skills

- What competencies do you believe are essential for leaders involved in AI projects?
- Follow-up: How do you develop these competencies within yourself and your team?
- In your experience, how important is collaboration between different departments (e.g., IT, operations, HR) in the successful implementation of AI?
- Follow-up: Can you share examples of cross-departmental collaboration that have positively impacted AI initiatives?

#### 5. Future Perspectives

- Looking ahead, what do you see as the biggest challenges and opportunities for AI adoption in your organization?
- Follow-up: How do you plan to address these challenges as a leader?
- What advice would you give to other leaders facing similar challenges in AI adoption?
- Follow-up: Are there any best practices or lessons learned that you would like to share?

## 6. Closing Reflections

- Is there anything else you would like to add regarding the role of leadership in AI adoption and the impact of organizational dynamics?
- Follow-up: Are there specific resources or support systems that you believe would enhance leadership effectiveness in this context?

## Appendix B

### Data Collection Form

1. Title of the Study:

2. Participant Information:

- Participant ID: [ ] (To maintain anonymity)
- Name (Optional): [ ]
- Role in Company: [ ]
- Industry Sector: [ ]
- Date of Interview: [DD/MM/YYYY]

3. Interview Details:

- Interviewer Name: [ ]
- Location of Interview: [ ]
- Duration of Interview: [ ]

4. Key Themes Identified:

- Theme 1: [ ]
- Theme 2: [ ]
- Additional Themes: [ ]

5. Observations and Insights:

- Non-verbal Cues: Describe any notable non-verbal behavior.
- Significant Quotes: List any key quotes from the participant.
- Interviewer's Reflections: Initial interpretations or noteworthy points

6. Follow-up Actions:

- Points for Clarification: List any areas needing further clarification.

- Potential Leads for Further Interviews: [ ]

## 7. Ethical Considerations:

- Informed Consent Obtained: [Yes/No]
- Confidentiality Measures: Anonymization of Data: Each participant is assigned a unique ID or pseudonym. This ensures that their identities are not disclosed in research notes, analyses, or publications. Personal identifiers are removed or altered in all collected data.
- Secure Data Storage: All collected data, both electronic and physical, are stored in secure, password-protected locations. Access to this data is strictly limited to authorized research team members.
- Confidential Handling of Information: All information shared by participants during interviews is treated as confidential. Only aggregated or anonymized data are used for analysis and reporting purposes.
- Ethical Compliance: Procedures for maintaining confidentiality are by the ethical guidelines set by the American Psychological Association and have been approved by the Institutional Review Board (IRB).
- Data Transfer Security: Any data transfer within the research team is conducted through secure, encrypted channels to prevent unauthorized access.
- Informed Consent: Participants are informed about the confidentiality measures during the consent process. They are assured that their participation is confidential and that their data will be handled with utmost care to maintain privacy.

## 8. Data Management:

- Encrypted Digital Files: All electronic data, including audio recordings of interviews, transcriptions, and analysis notes, are stored in encrypted files.

- **Password-Protected Computers and Devices:** These files are kept on password-protected computers and devices, accessible only to the authorized research team members.
- **Secure Cloud Storage:** A backup of all electronic data is maintained in a secure, encrypted cloud storage service. This ensures data protection against physical damage or loss.
- **Access Control:** Access to these electronic files is controlled through secure login credentials regularly updated for added security.
- **Physical Data Storage:** Any physical documents, such as consent forms or printouts of interview notes, are stored in locked filing cabinets in a secure location. **Restricted Access:** These physical storage areas are restricted to authorized personnel only. **Access to electronic and physical data is strictly limited to the research team members needing it for analysis.**
- **Audit Trails:** Records of who accessed the data and when are maintained to monitor and manage data access.
- **Defined Retention Period:** Data is stored securely for a period defined by the institutional guidelines or the research protocol, after which it will be securely deleted or anonymized.
- **Compliance with Regulations: Adherence to Legal and Ethical Standards:** All data storage methods comply with relevant data protection laws and ethical guidelines, ensuring the confidentiality and integrity of the participant data.

#### 9. Data Processing:

- **Post-interview,** the analysis identifies patterns, themes, and insights corresponding to the research questions.



## **Appendix C**

### **Informed Consent Form to Participate in a Research Study**

**Title of Study:** Threat Rigidity and the Role of Leadership and Organizational Change in Artificial Intelligence Adoption in Technology Companies

**Researcher:** Nicole Dillon Goldberg

**Institution:** University of Arizona Global Campus

Thank you for considering participation in this study about the challenges and strategies related to AI adoption in technology companies. This study is being conducted to understand the role of leadership and organizational change. Your participation is invaluable in contributing to this area of research.

#### **Purpose of the Study and the Nature of Your Participation**

The purpose of this study is to better understand how leadership, particularly mid-level leaders, navigates the challenges associated with AI adoption. We are specifically interested in how leadership can help overcome resistance to change (threat rigidity) and foster a more adaptive, agile, and innovative organizational culture. By interviewing leaders like you, the study aims to identify best practices and competencies that can facilitate the successful integration of AI technologies. Your involvement will entail participating in a semi-structured interview, during which you will be asked about your experiences. The interview will take approximately 30–45 minutes and will be audio-recorded for accuracy in transcription. All recordings will be non-identifiable by your name. Demographic data will also be collected for aggregate reporting only.

#### **Voluntary Participation and Withdrawal**

Your participation in this study is completely voluntary. There is no financial incentive for participation. You have the right to withdraw from the study at any point without any penalty, and you may choose not to answer any specific question(s).

### **Confidentiality**

The confidentiality of your information will be maintained throughout the study. Data will be stored in a secure manner, accessible only to the research team. All participants will be assigned pseudonyms in transcripts and reports. After the study, all data will be stored securely for a specified period and then destroyed.

### **Risks and Benefits**

There are minimal risks in participating in this study, like those encountered in everyday life. While there may not be direct benefits to you, your participation will contribute valuable insights to the field of SME R&D investment.

### **Results Sharing**

The results of this study will be included in a dissertation manuscript, which will be made publicly available upon completion.

### **Right of Refusal/Withdrawal**

To withdraw, please get in touch with the researcher via email or phone, followed by a written notice of withdrawal.

### **Contact Information**

For questions about the study, contact Nicole Dillon Goldberg at [nicole.goldberg@student.uagc.edu](mailto:nicole.goldberg@student.uagc.edu) or (925) 389-8089. For concerns about your rights as a participant, contact Dr. Dennis Darlak at [Dennis.Darlak@faculty.uagc.edu](mailto:Dennis.Darlak@faculty.uagc.edu).

### **Consent**

By signing below, you confirm that you are over 21, voluntarily agree to participate, and have understood the information provided. You acknowledge that your questions have been answered satisfactorily.

**Audio Recording Consent:**

\_\_\_ Yes, I agree to be audio-recorded.

\_\_\_ No, I do not agree to be audio-recorded.

Participant's Name (Printed):

Signature:

Date:

Researcher's Name Nicole Dillon Goldberg Signature:

Date:

IRB Approval Number: 25-017-UAGC

IRB Expiration Date: 03/27/2026

ProQuest Number: 32164664

INFORMATION TO ALL USERS

The quality and completeness of this reproduction is dependent on the quality and completeness of the copy made available to ProQuest.



Distributed by  
ProQuest LLC a part of Clarivate ( 2025).  
Copyright of the Dissertation is held by the Author unless otherwise noted.

This work is protected against unauthorized copying under Title 17,  
United States Code and other applicable copyright laws.

This work may be used in accordance with the terms of the Creative Commons license  
or other rights statement, as indicated in the copyright statement or in the metadata  
associated with this work. Unless otherwise specified in the copyright statement  
or the metadata, all rights are reserved by the copyright holder.

ProQuest LLC  
789 East Eisenhower Parkway  
Ann Arbor, MI 48108 USA