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Strategies Some Business Leaders Use to Implement Technological Innovation for Increasing Performance

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Walden University

College of Management and Human Potential

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Judy Wanjiru Muiruri

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Walden University
2025

Abstract

Strategies Some Business Leaders Use to Implement Technological Innovation for

Increasing Performance

by

Judy Wanjiru Muiruri

Research Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

December 2025

Abstract

Incorporating technological innovation is essential for maintaining organizational performance. Company executives in software-as-a-service (SaaS) enterprises who do not incorporate technological innovation risk reduced organizational performance and profitability. Grounded in Rogers' Diffusion of Innovations (DOI), the purpose of this qualitative pragmatic inquiry project was to explore strategies employed by business leaders to effectively implement technological innovation and, in turn, increase organizational performance. The participants consisted of fifteen business leaders who successfully incorporated technological innovation designed to improve organizational performance and profitability. The data collection process incorporated both semi structured interviews combined with a review of publicly available documents about their implementation of innovative technology. The following seven themes emerged from the data collection process: (a) employee adoption and change management; (b) data-driven decision making improves organizational performance; (c) leadership and culture act as catalysts for innovation success; (d) organizational learning and training drive innovation sustainability; (e) customer-centric innovation as a strategic performance lever; (f) scalability and integration challenges; and (g) striking a balance between human-technology integration for sustainable innovation. A key recommendation is that business leaders monitor emerging technologies and cultivate an innovative culture. The implications for positive social change include the potential for business leaders to adopt practices that maintain workforce stability and improve employees' quality of life and economic security.

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Dedication

To my family, whose unwavering love and encouragement has been my compass even when the road was steep, when I missed dinner, movie nights and weekend family time and all you heard was I have to study, Thank you!!! This is not only for me but for all of us– I can and will be more present. This was a road that seemed less travelled, bumpy and an emotional roller coaster and I am grateful to God for seeing me through. I love and appreciate you for all the sacrifices.

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Section 1: Foundation of the Project

Background of the Problem

In the dynamic environment of modern business, it is crucial to remain at the forefront of technical innovation to maintain growth and a competitive edge. Given the dynamic nature of markets and the growing demands of consumers, it has become imperative for business leaders to use technology to improve performance and operational efficiency (Omar et al., 2019). One crucial issue that company executives must address is the alignment of technical investments with the aims and goals of the firm (Allioui & Mourdi, 2023). There is a potential danger for leaders to allocate resources towards solutions that do not effectively provide real benefits or fail to solve significant challenges when there is no evident connection between technological projects and business strategy (Linde et al., 2021).

Business leaders require a deep understanding of recent technologies, their prospective use cases, and the alignment with current systems and procedures. The rapid advancement of technology often results in a cornucopia of alternatives, emphasizing the need for leaders to effectively traverse a wide range of possibilities (Tilman & Jacoby, 2019). Neglecting to evaluate these issues may lead to costly errors and potential negative results (Tilman & Jacoby, 2019). The effective adoption of innovations was hindered by the resistance to change and limited technology literacy among workers, which, in turn, limited their ability to improve performance (Amankwah-Amoah et al., 2021). This entailed both the inability to provide training and development opportunities and the fostering of a culture that promotes continuous learning and flexibility. As organizations

increasingly rely on interconnected systems and accumulate large volumes of sensitive data, it is crucial to strengthen defenses against cyberattacks and ensure compliance with regulatory requirements (Habibzadeh et al., 2019). Leaders must implement processes that facilitate the collection of user input, the monitoring of performance measures, and the adaptation of plans in response to real-world results.

Business Problem Focus and Project Purpose

The specific business problem is that some business leaders lack effective strategies to implement technological innovation which results in a reduction in business performance. Despite the potential advantages of technological breakthroughs, some leaders find it difficult to oversee the intricacies of integrating innovative technologies, aligning them with corporate goals, and ensuring a smooth adoption process (Kafi & Adnan, 2022). The purpose of this qualitative research is to explore the strategies and best practices employed by business leaders to effectively implement technological innovation and, in turn, increase organizational performance. The study's target audience consists of business executives, directors, and senior managers who have effectively used innovative tactics to raise the organization's profit margin during the last 5 years. This research incorporated in-depth interviews that comprehensively explored the methods and practices employed by these leaders. The objective was to provide a comprehensive understanding of the subject, offering actionable recommendations and insights that can enable business leaders to effectively navigate the challenges associated with technological innovation, leading to improved organizational performance and sustained competitiveness in their industry.

Research Question

The central research question for the study is: What effective strategies do some business leaders use to implement technological innovations that improve business performance?

Assumptions and Limitations

Assumptions

An assumption refers to a proposition that is deemed to be valid within the context of study, and how peers acquire and align knowledge, are principal elements in substantiating truth and correctness (Ghauri et al., 2020). The main assumption of this study posits that the implementation of strategies invariably created opportunities to enhance operational efficiency, reduce costs, maximize profits, and improve the quality of products or services, thereby catering to either a new or an expanded market. The second assumption suggested the adoption and longevity of disruptive technologies implemented in enterprises depended on the effectiveness of business executives aligning organizational strategy with innovation. I conducted interviews with top-level, middle-level, and lower-level company executives. The participants had sufficient understanding of the study subject. Lastly, I anticipated that participants would answer interview questions truthfully to ensure the credibility of the study results.

Limitations

According to McCarthy and Muthuri (2018), limitations refer to the faults or defects in a study that arise from factors outside the researcher's direct control. One potential constraint that arose was the challenge of identifying similar phrases and themes

from participants' responses to open-ended questions in cases when individuals are unable to accurately recollect their experiences.

Transition and Summary

Section 1 of this study included the background of the problem, problem statement focus, purpose statement, research question and the assumptions and limitations of the study. In Section 2, it the literature of external and internal variables that influenced the adoption and implementation of strategies in organizations that business leaders may use to improve productivity and profitability. The literature review ensured that the problem statement and research methodology aligned with scholarly, peer-reviewed sources to substantiate the primary research question. The researcher's role, study participants, research methodology and design, population and sampling, ethical considerations, instruments and techniques for data collection, data organization, data analysis, reliability and validity will all be covered in Section 3. In contrast, Section 4 will comprise the results, recommendations, and suggestions for future research. The section will also encompass a discussion of the implications for professional practice, implications for social change, and concluding remarks.

Section 2: The Literature Review

A Review of Professional and Academic Literature

In the ever-evolving realm of contemporary business, executives are continually tasked with leveraging technological advancements to enhance traditional business processes and organizational activities. There is a dearth of scholarly work concerning the methods and approaches that leaders can implement to optimize the utilization of these developments. To compile this study, I utilized various sources to collect the necessary information, including the databases available at Walden University Library such as Academic Search Complete, Emerald Insight, IEEE Xplore Digital Library, SAGE Journals, Scholar Works, Science Direct, Taylor and Francis Online, ProQuest Central, and Google Scholar. Other sources consisted of books obtained from various libraries affiliated with different universities. In this research, 90% of these sources were published during the last 5 years from the current year of authoring this paper. The remaining 10% consisted of seminal work that was used to verify the relevance and application of recent publications. Out of the whole number, 270 sources have undergone peer review, accounting for 90% of the total. Additionally, the literature review included 150 sources, making up almost 50% of the overall number of sources.

The purpose of this literature review is to address the lack of research by analyzing existing academic papers that explore the incorporation and sustainability of disruptive technologies in corporate organizations. The literature study was based on the diffusion of innovations theory, developed by Everett Rogers (Rogers, 1961). This theoretical paradigm provided a valuable viewpoint for examining the uptake and spread

of innovations, particularly disruptive technology, in organizational contexts.

Organizational leaders may accelerate the incorporation of disruptive technologies and efficiently focus on early adopters by understanding the sequence of phases in the acceptance of innovation, ranging from pioneers to stragglers.

The diffusion of ideas theory, developed by Everett Rogers (Rogers, 1961), offers a thorough framework for comprehending the process by which technical ideas are embraced by organizations. This approach delineates five crucial traits, namely relative benefit, compatibility, complexity, trialability, and observability, which have an impact on the pace at which innovations are adopted. (Kim and Chang, 2019) highlighted the significance of relative advantage in facilitating the acceptance and implementation of novel technologies. Research has shown that ideas that provide substantial advantages compared to current solutions are more inclined to be embraced. This is consistent with Rogers's claim that the perceived advantages are crucial for determining the rates at which something is adopted. Hosseini et al. (2020) emphasized that compatibility is a critical aspect in technology adoption. They discovered that technologies that correspond closely with an organization's current beliefs and practices encounter less obstacles in the adoption process. In the same vein, Nguyen, and McGuirk (2022) emphasized the significance of leaders in guaranteeing that innovations align with both the business culture and objectives. According to Bagga et al. (2023), the level of complexity of an invention might discourage its adoption. These researchers found that simplifying technical procedures and offering sufficient training can improve user acceptability. This aligns with Rogers' idea, which suggests that the easier an invention is to comprehend

and use, the faster it will be embraced. Lasrado and Kassem (2021) identified trialability and observability as crucial factors. The researchers observed that enabling workers to engage in limited experimentation with new technologies (trialability) and ensuring that the outcomes are easily observable (observability) increased the rates at which these technologies are adopted.

Organizational culture serves as an intermediary in the connection between leadership and the results of innovation. Hosseini et al. (2020) and Khuong et al. (2022) discovered that fostering a supportive culture amplified the influence of leadership on technical innovation. This highlighted the need to foster a culture that appreciates innovation and ongoing improvement. According to Joseph and Kibera (2019), strategic alignment referred to the process of ensuring that technical efforts are aligned with the firm's objectives. Efficient resource deployment and ensuring that technology is in line with company goals are essential for leveraging the advantages of innovation.

Different viewpoints existed about the influence of corporate culture on technical innovation. According to Kim and Chang (2019), certain cultural forms, such as adhocracy and market cultures, have been associated with enhanced company performance. Zhao et al. (2018) observed a lack of conclusive evidence regarding a direct correlation between corporate culture and financial success. Zhao et al. (2018) proposed that there may be additional elements that influence this connection. Geographical and contextual variations can have an impact. Aboramadan et al. (2020) showed that in a Palestinian setting, organizational culture is a strong predictor of success. Similarly, Joseph and Kibera (2019) examined microfinance firms in Kenya and emphasized the

significance of market culture. These researchers indicated that the influence of culture on innovation and performance might differ depending on geographical and industry contexts.

Technological Innovation and Performance Improvement

Process innovation has been shown to be a crucial element in improving company performance. Cherrafi et al. (2018) claimed that implementing process innovation may improve a company's operational efficiency, customer satisfaction, and financial performance. This highlighted the need for creative methods in achieving corporate success. Muharam et al. (2020) conducted research on Indonesian enterprises and found that process innovation has a favorable and substantial impact on a firm's financial performance. This clear relationship highlights the need to adopt novel methods. Ukpabio et al. (2019) stressed that process innovation significantly affected business performance, particularly in small and medium-sized enterprises (SMEs), underscoring its importance across different organizational scales. The results emphasized the crucial importance of process innovation in enhancing company performance and recommend that organizations focus on innovating their processes to attain long-term success.

Researchers emphasized that market innovation is a crucial aspect in forecasting the success of SMEs. Research conducted by Issau et al. (2021) and Ukpabio et al. (2019) suggested that market innovation has a crucial role in impacting the performance of SMEs, highlighting the benefits of venturing into new markets or sectors. Actively pursuing and capitalizing on new markets or sectors led to improved performance particularly for small and medium-sized manufacturing enterprises. Muharam et al.

(2020) discovered that marketing innovation has a favorable and substantial impact on firm performance in Indonesian companies. The results highlighted the significance of market innovation in boosting SMEs' performance. The authors indicated that investing in new marketing techniques may improve SMEs' performance and competitiveness in the market.

Product innovation plays a pivotal role in providing firms with a competitive edge by improving quality, thereby enhancing performance and market positioning. As product quality is improved through product innovation, Nimfa et al. (2021) asserted that it is fundamental for the competitive advantage of businesses. Research demonstrating the significance of product innovation is corroborated by studies including those by Fenişer et al. (2019), Oduro (2019), and Nimfa et al. (2021). These researchers provided a positive correlation between product innovation and firm performance. In support of this concept, Xie et al. (2019) demonstrated that the introduction of novel products has a favorable effect on both sales growth and corporate income by illustrating the advantages of product innovation. In summary, the results of this study emphasized the significant impact that product innovation has on the performance and competitive advantage of businesses. This implies that allocating resources to the development of innovative products may result in improved overall performance, higher sales figures, and long-term market competitiveness.

Studies show that organizational innovation is a critical component that affects overall sales, organizational learning, skill development, and the success of SMEs. According to Groza et al. (2021), organizational innovation is more important to overall

sales than process and product innovation. In a similar vein, organizational innovation can support strong organizational learning and skills processes, as Zhang et al. (2023) demonstrated. This idea is further supported by Abdilahi et al. (2017), who show that organizational innovation significantly and favorably affects SME performance, especially when it comes to sales volume. Hutahayan (2020) advanced this idea further by proving that organizational innovation enhances performance across the board for the organization, financial growth, customer, and internal procedures, among others. A different perspective is offered by Wijethilake et al. (2018), who contend that there is no meaningfully beneficial correlation between organizational innovation and business performance. Despite this, much of the research highlights the need for businesses to invest in innovative organizational practices to improve productivity and secure long-term success.

The influence of innovation on company performance in Asian-Pacific countries differs, as research indicates a variety of outcomes. Na and Kang (2019) researched manufacturing companies in Indonesia, Malaysia, and Vietnam. They discovered that product innovation has a positive correlation with sales growth, however new operating technologies showed a negative correlation with sales growth. Wadho and Chaudhry (2018) examined textile and clothing firms in Pakistan and shared how product innovation improved labor productivity and its growth. An increase of 10% in innovative sales per worker leads to a greater than 10% rise in labor productivity and labor productivity growth. Xu et al. (2019) discussed how technology affected business performance in the manufacturing industry in China and discovered that it resulted in a

positive outcome. The authors emphasized the diverse and intricate impacts of innovation on business performance in the region, indicating that the influence of innovation is neither uniform nor straightforward but instead depends on the specific form of innovation and the environment in which it is applied. Understanding these impacts can assist companies tailor their innovation strategies to improve their performance and competitiveness in the Asia-Pacific area.

The effect of innovation strategies, specifically technological and product innovations, on business performance across different countries have been widely examined in prior studies. Mmbaga (2020) examined the impact of innovation strategies on Vodacom Tanzania Public Limited Company (PLCs) performance and discovered that technological innovation, marketing strategies, and product innovation significantly enhanced the company's efficacy. Chege et al. (2021) provided a direct correlation between technological innovation and firm performance in Kenya and found it to be statistically significant and positive. Mutie (2018) investigated the impact of technological advancements on the operational effectiveness of governmental entities in Kenya. The findings of this study unveiled a positive and statistically significant connection between the implementation of technological innovation strategies and overall performance. Additionally, a research investigation was conducted by Furst et al. (2017) concerning the importance of technological innovation and its impact on the performance of American-based businesses and captured organizations from France, England, Germany, the United States, and Japan. Their findings suggested that technological advancements have a substantial and favorable impact on the performance of businesses.

The collectively illustrate the significance of innovation, specifically technological and product innovations, in augmenting the performance of businesses in diverse nations. The results highlight the substantial influence that innovation strategies have on the performance of organizations, underscoring the imperative for businesses to maintain competitiveness and enhance their value through innovation.

Innovative Strategic Leadership and Organizational Performance

Witjara et al. (2019) defined strategic innovation as an initiative-taking corporate development strategy that recognized significant growth prospects, speeds up decision-making, and achieved tangible results that were aligned with a future-oriented competitive advantage. The authors claimed that strategic innovation required enterprises to seek lasting competitive advantages and financial performance beyond their current business operations. Mostafa (2020) emphasized the importance of intellectual stimulation in enabling strategic leaders to improve creativity and generate new ideas. Strategic leaders may improve overall performance by using information technology for knowledge management to close the gap between success and failure. Strategic leaders are essential for promoting the growth and cultivation of new ideas, which are vital for strategic advancement in the business. They serve as models in applying information technology, which improves knowledge management performance by aiding knowledge transfer and inventive problem-solving.

The studies highlighted the importance of strategic innovation and intellectual stimulation in enhancing organizational performance and attaining sustained competitive advantage. Strategic innovation aids in recognizing development prospects and making

significant choices, while intellectual stimulation encourages creativity and the production of new ideas, resulting in enhanced organizational performance. The study highlighted the crucial importance of strategic leadership in promoting innovation and knowledge management performance, which are vital for attaining sustained competitive advantage and organizational success. Strategic leaders need to concentrate on creating and executing new solutions for organizational issues to be competitive in the market.

Mohammad (2018) examined the correlation of strategic leadership, strategic thinking, strategic planning, and competitive advantage. The results showed a substantial and positive correlation between strategic leadership and strategic planning, strategic thinking, and competitive advantage. Furthermore, both strategic thinking and strategic planning showed a strong and positive correlation with competitive advantage. The research discovered that the influence of strategic leadership on competitive advantage was moderated by strategic planning and strategic thinking. Mugo and Macharia (2020) conducted research on how technological innovation affects the competitive advantage of telecommunications companies in Kenya. The research assessed technical innovation by examining the advancement of the Global System of Mobile networks, new software and tools, and collaborations and partnerships.

The findings indicated that innovation substantially impacts on the competitive advantage of information technology companies in Kenya. These studies emphasize the crucial importance of strategic leadership, strategic thinking, and strategic planning in attaining a competitive edge. The researchers emphasized the significance of technological innovation in enhancing the competitive edge of companies, especially in

the telecommunications industry in Kenya. Companies that focused on strategic leadership, strategic thinking, strategic planning, and technical innovation are more likely to gain and maintain a competitive edge in their industries.

When leaders exhibit transformational leadership behaviors, they were able to encourage innovation within their organization. Zuraik (2017) introduced a strategic model for innovative leadership that emphasizes transformational leadership that emphasized transformational leadership characteristics used by organizational leaders. The authors emphasized that these behaviors might promote and support creativity within the organization. The researchers discovered that the ambidextrous conduct of team leaders impacted innovation results at the team level. The research focused exclusively on transformational leadership, neglecting other leadership styles that might influence creative leadership. To fill this need, a poll was conducted among top executives at major telecommunications companies in Kenya, irrespective of their leadership approaches. Kisingú (2017) examined how strategic leadership contributes to attaining sustained competitive advantage in private and public institutions in Kenya. The research created a strong connection between strategic leadership and durable competitive advantage in both university types.

The researcher focused only on the direct correlation between strategic leadership and competitive advantage, without considering the impact of technological change. Competitive advantage was assessed by qualitative measures including organizational quality, effectiveness, and responsiveness. The research emphasizes the importance of leadership styles, namely transformational and strategic leadership, in promoting

innovation and attaining sustained competitive advantage within firms. Transformational leadership traits promoted innovation at the corporate level, whereas strategic leadership was associated with competitive advantage in institutions (Shafique & Kalyar, 2018). The authors investigated how various leadership styles and technical innovation contributed to gaining a competitive edge.

The influence of leadership style, particularly transformational leadership, on organizational effectiveness has been studied in previous studies. A significant body of empirical research has examined transformational leadership, which was widely recognized as strongly associated with effectiveness (Bagga et al., 2023; Mulla & Krishnan, 2022). Studies have established a direct link between organizational innovation and transformational leadership, indicating that this kind of leadership has the capacity to enhance performance (Nguyen & Luu, 2019). Consistent research findings highlighted the efficacy of transformational leadership in promoting organizational innovation and success. This leadership style, which involved inspiring and motivating people, fostering a creative atmosphere, and questioning the existing norms, closely aligned with the requirements of contemporary firms seeking a competitive edge. Nguyen and Luu (2019) demonstrated the impact of transformational leaders' skills in expressing a distinct vision, which inspires people to work together towards common objectives. Similarly, Mulla and Krishnan (2022) stressed the importance of these leaders in fostering a culture of ongoing improvement. Organizations seeking to improve their effectiveness must have a thorough understanding of how transformational leadership influences performance.

Transformational leadership promotes the process of organizational learning and creativity, thereby improving organizational performance, particularly in unpredictable and ever-changing environments. According to Nguyen and Luu (2019), transformative leadership was instrumental in enhancing organizational performance. Organizational performance improved when transformational leaders promoted organizational change and increased the alignment of values between new employees and supervisors (Bagga et al., 2023; Mulla & Krishnan, 2022). Multiple studies highlighted the substantial influence that leadership style, particularly transformative leadership, has on organizational success. This leadership style is particularly essential in contemporary, ever-changing workplaces where achieving success relies on cultivating a culture of innovation, organizational learning, and change. Transformational leaders excelled in inspiring and motivating people, fostering a creative atmosphere, and ensuring that company objectives align with employees' values. Organizations that adopt transformational leadership styles were likely to see improved performance and significant achievements in their pursuit of goals. Understanding how transformative leadership influences performance is crucial for businesses seeking to flourish in dynamic contexts.

Organizational Culture and Organizational Performance

Some organizations operated in a more dynamic environment. Organizations operating in dynamic environments proactively pursue methods to improve their performance, frequently through technological advancements and modifications of corporate cultures in response to external influences (Al-Muhrami et al., 2021). Further investigation suggests that a robust organizational culture can enhance a company's value

and competitiveness (Alsamawi et al., 2019b). In fact, firms characterized by robust cultures exhibit superior performance compared to those with feeble ones. Sopiah et al. (2021) identified a noteworthy and favorable influence of corporate culture on the performance of employees in the Islamic finance industry. The significance of corporate culture cannot be overstated in achieving enhanced organizational performance and effectiveness.

Research emphasized the importance of corporate culture in organizational success. Sapta et al. (2021) discovered there was a clear link between employee performance and corporate culture in the banking business in Bali. Furthermore, they observed that corporate culture also has an indirect impact on employee motivation. Joseph and Kibera (2019) conducted a study on administrators in Kenyan microfinance firms and found evidence that corporate culture has a beneficial effect on performance. They highlighted its importance in ensuring long-term competitiveness. The authors emphasized the crucial significance of corporate culture in improving organizational effectiveness, performance, and competitiveness. A robust organizational culture has a direct impact on employee performance and serves as an indirect source of motivation, resulting in overall enhancement of the company. The results emphasize the need to cultivate a resilient and positive culture, especially in rapidly changing circumstances.

Several studies have examined the correlation between organizational culture and business performance, uncovering detailed insights into how various cultural forms influence the success of a company. In their study, Kim and Chang (2019) discovered a correlation between adhocracy, clan, and market cultures and enhanced company

performance. This implied that these cultures enhanced organizational results. Aboramadan et al. (2020) found that organizational culture predicted performance, emphasizing the significant impact of culture on organizational outcomes. Hang et al. (2021) established a noteworthy correlation between corporate culture and firm performance, underscoring the influence of culture on organizational success. Joseph and Kibera (2019) found that market culture strongly predicted market performance and financial leverage, but clan culture did not have the same predictive power. Zhao et al. (2018) found inadequate evidence to support a direct correlation between corporate culture and firm value or financial performance. This implied that the connection between culture and performance may be impacted by other factors. These researchers suggested that some aspects of corporate culture might improve a company's performance. However, the relationship between culture and performance may differ based on cultural dimensions and contextual factors. Organizations should conduct a deliberate evaluation of their culture and verify that it is in line with performance goals to use culture as a helpful instrument in attaining organizational success.

Organizational culture is essential in influencing the connections between different leadership styles, including transformational leadership, and other elements of organizational success. Hosseini et al. (2020) and Ur Rehman et al. (2019) discovered that organizational culture has a mediating role in the connections between transformational leadership and the effectiveness of enterprise resource planning. Additionally, it mediates the linkages between transformational style, organizational learning, and performance. According to Nguyen and McGuirk (2022), cultivating an

innovative culture as a leader may result in favorable emotions and enhanced learning among workers, eventually leading to improved innovation performance. Bagga et al. (2023) and Lasrado and Kassem (2021) found that the connections between transformational leadership and firm results, such as change management and organizational excellence, are influenced by organizational culture. Khuong et al. (2022) discovered empirical proof that culture acts as a mediator in the connection between leadership and company performance. These studies emphasized the intricate relationship between leadership styles, organizational culture, and organizational effectiveness. Organizational culture serves as an intermediary, influencing how leadership affects different results, such as innovation, organizational learning, and overall company success. Leaders and organizations who desire to enhance their performance must recognize the vital importance of comprehending the mediating function of organizational culture in these connections.

Innovation, Product Market Competition, and Organization Performance

In modern business research, the impact of digital innovation on firm performance is a central area of investigation. According to Jung and Shegai (2023), a company's performance is impacted by digital market innovation both directly and indirectly, highlighting the critical role that digital technology plays in determining organizational success. In their research including 83 private enterprises in China, Li et al. (2023) further supported this by proving that environmental and technical variables had a significant impact on company performance. By investigating the connection between digital technology adoption and company performance in Pakistan, Shah et al. (2023)

added to this conversation and highlighted the significance of technical improvements in promoting corporate success. It is evident from the studies that, to improve the performance of an organization, it is essential to adopt technological advancements and embrace digital market innovation.

Ramadani et al. (2019) examined how product innovation influences business performance, with a specific emphasis on transition economies. The researchers showed a positive correlation, suggesting that financial innovation is important for improving business performance in these countries. Cuevas-Vargas et al. (2022) performed empirical research on 220 Mexican enterprises, using Partial Least Squares Structural Equation Modeling to evaluate how company digital financial innovation (DFI) affects firm performance. Their research produced favorable outcomes, emphasizing that DFI has a notable beneficial impact on company performance and highlighted the significance of innovation, particularly financial and digital advances, in enhancing corporate success. Firms, especially those in transition economies or sectors experiencing digital revolution, may benefit from investing in creative processes.

Studies have emphasized the important connection between product market competition (PMC) and organizational success in different situations. Mubeen et al. (2022) did a study with 2502 Chinese enterprises to investigate the influence of PMC on organizational performance. Their research showed that PMC has a beneficial impact on organizational performance, indicating that competition in the product market may enhance businesses' performance. Xuan Ha and Thi Tran (2022) studied how PMC affects business performance by analyzing data from 180 listed firms in Vietnam from

2015 to 2019. The authors used Structural Equation Modeling (SEM) to examine empirical data, uncovering a favorable correlation between PMC and corporate success and investigated how PMC influenced business performance, highlighting the beneficial effect of rivalry in the product market on organizational results. The studies emphasized the significance of product market competitiveness in influencing organizational success. Competition in the product market may motivate enterprises to improve their performance and aim for ongoing improvement. Comprehending the characteristics of product market rivalry was essential for companies aiming to succeed in competitive settings and attain sustainable development.

Bradley and Kolev (2023), Lee et al. (2019), and Yuan et al. (2019), have discovered that the effect of PMC on firm performance (FP) is uncertain, inconsistent, or unclear. This research used company DFI as a mediator to address uncertainty. Organizations were increasingly adopting digitalization and innovation-focused strategies to take advantage of changes in market competitiveness, as emphasized by Liu et al. (2023) and Zhao et al. (2023). Guerrero-Villegas et al. (2018) highlighted the importance of innovation in understanding how market competition impacts corporate production. Kitsios and Kamariotou (2023) propose that the Project Management Committee may improve company performance by stimulating innovation and providing novel goods that meet stakeholder needs. It is essential for firms to comprehend these characteristics to use digital financial innovation effectively to navigate market rivalry and improve overall performance.

On the contrary, certain research indicates that project management committee may result in a deterioration of managerial effectiveness. As an illustration, between 2001 and 2016, Liu et al. (2018) examined the effect of project management committee on the performance of 20,706 Chinese firms. A decrease in firm performance was associated with elevated levels of project management committee. Additionally corporate governance was proposed as a moderating variable in the study, implying that it may alleviate the detrimental consequences of project management committee. Indicating the nuanced nature of this relationship, this study challenges the conventional wisdom that project management committee invariably improves firm performance. Concerning the impact of project management committee on firm performance, the results emphasized the necessity of taking external factors, such as corporate governance, into account. Organizations must therefore implement effective governance practices to meticulously manage the effects of project management committee.

Disruptive Innovation and Organization Performance

The prevalence of artificial intelligence (AI) in contemporary society is on the rise, exerting influence on a multitude of facets of everyday existence. This trend was highlighted by Kulakli and Osmanaj (2020), who note the expansion of AI into various daily activities. The advantages of AI for businesses are underscored by Wirth (2018), who states that it empowers them to monitor data in real-time, perform analysis, and promptly address consumer demands. Verma et al. (2021) emphasized the significance of employing AI to analyze consumer behavior to reshape customer experience and attract and retain clients. AI is anticipated to influence marketing strategies, resulting in

modifications to business models, sales procedures, customer service alternatives, and customer conduct Davenport et al. (2020). The incorporation of AI into routine activities and commercial processes represents a substantial technological progression that carries extensive consequences. AI enabled organizations to optimize operational processes, elevate customer engagements, and acquire significant knowledge regarding consumer behavior. Concerns were raised, however, regarding data privacy, ethical usage, and the possible displacement of human laborers due to the pervasive adoption of AI.

AI technologies provided organizations with several options to change their operations in many sectors throughout digital transformation. Business executives are more often using AI-based decision-making in loan evaluations, credit assessments, and sales projections, as discussed by Al-Surmi et al. (2022) and Lüersmann (2023).

According to a recent Gartner analysis, top executives see analytics and AI as essential tools that may enable firms to not only survive but also prosper during the present crisis, as highlighted by Papagiannidis et al. (2022). Scholarly discussions centered on the difficulties of implementing AI and the necessary skills and competencies required to attain significant strategic results Mikalef & Gupta (2021) and Canhoto and Clear (2020). The research indicated that while AI provides substantial advantages for organizations, such as enhanced decision-making and operational efficiency, there remain obstacles concerning adoption and skill enhancement. Business executives must thoroughly assess these issues and establish ways to surmount them to fully use the promise of AI technology. Developing a common vision and investing in essential skills and

competencies are vital for using AI to drive technical innovation and enhance performance.

The academic literature on information systems and business research reveals a significant surge in the implementation of AI in the industry. Borges et al. (2021) and Benbya et al. (2021) emphasize the exponential growth of AI adoption. Since the 1950s, scholars have been grappling with the conceptualization of AI. While progress in AI research has been steady, the last 15 years have witnessed a notable surge in both theoretical and practical implementations (Chatterjee et al., 2020). Notwithstanding this surge in progress, the extent to which organizations have incorporated AI into their daily operations remains restricted, with numerous entities continuing to explore the feasibility of doing so (Fadler & Legner, 2021; Benbya et al., 2021). To enhance their operational and decision-making processes, organizations have allocated significant resources towards the development of AI and machine learning algorithms (Barnea, 2020).

According to Mishra and Pani (2021) and Amershi et al. (2019), although AI presents certain advantages, it also brings about certain difficulties. Frank et al. (2019) and Krakowski et al. (2023) emphasize that organizations are implementing AI solutions to gain a competitive edge, automate processes, and decrease expenses while simultaneously enhancing productivity. The available evidence indicated that although academicians agreed on the potential of artificial intelligence, many organizations were still in the process of integrating it into their operations. The proliferation of AI implementation is propelled by various elements, including the accessibility of extensive datasets, improved computational processing capacities, and groundbreaking AI

methodologies. Nonetheless, the intricacies of harnessing AI for organizational advantages are emphasized by obstacles pertaining to integration and the requirement for significant financial investments. The incorporation of AI into business operations and decision-making processes signifies a substantial paradigm shift. Notwithstanding the obstacles, enterprises are actively adopting AI to improve their operations and attain a competitive advantage in the marketplace.

Diffusion of Innovations Theory

The conceptual framework for this study is based on Rogers's (1961) diffusion of innovation (DOI) theory. The diffusion of innovations hypothesis explains how new concepts, behaviors, or goods spread among people (Talebian & Mishra, 2018). The innovators, early adopters, early majority, late majority, and laggard are the primary participants in the idea. The ratio of rural to urban residents in a community, the level of education in that society, and the degree of industrialization and development are all factors that influence the pace of innovation dissemination (Talebian & Mishra, 2018). The pace at which a society's citizens embrace an invention will vary amongst various societies.

Rogers's Diffusion of Innovation Theory aims to explain how innovative ideas or innovations are accepted, and it theorizes that innovation's five characteristics influence its adoption: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage is the extent to which an innovation is seen as superior to the concept it supplants (Tortorella et al., 2021). Rogers postulates that innovations with a clear, unambiguous benefit over the prior strategy will be more readily embraced and executed

(Tortorella et al., 2021). When a prospective user perceives no comparable benefit in employing the invention, it will not be adopted. Compatibility was the extent to which an invention aligns with the current values, previous experiences, and requirements of prospective users (Mairura et al., 2016). Robust direct study data suggests that the better the compatibility of an invention, the higher the possibility of its adoption (Mairura et al., 2016). Complexity is the extent to which an invention is judged difficult to comprehend and use.

In addition, Rogers proposed that innovations may be characterized along a continuum of complexity and simplicity, with the caveat that prospective adopters may need to fully comprehend the innovation's significance (Mawaddah et al., 2020). When important stakeholders view innovations as user-friendly, they are more likely to be accepted. The trialability of a new idea is measured by how well it can be evaluated in controlled settings (Mawaddah et al., 2020). Trying out an invention before thoroughly implementing it is more likely to be adopted because of the time, effort, and resources invested in trying out a new idea. Finally, observability refers to how clear the outcomes of an invention are to potential users (Mawaddah et al., 2020). The invention has a better chance of being adopted if it led to tangible benefits that can be seen by all involved.

To better understand how business leaders converted their competitive firms from conventional to technologically innovative businesses, Rogers's DOI conceptual framework is the ideal foundation for this study. Technologically innovative business management strategies are created, shared, and implemented by leaders who alter their companies (Oberer & Erkollar, 2018). With this study, the researcher hoped to

demonstrate how corporate executives' skills and training significantly influenced technical advances and improvements. For the adaptation, transformation, and spread of innovative business management strategies inside competitive business organizations, a thorough knowledge of how business leaders originate, adapt, and learn novel business applications is essential (Nam et al., 2019). Company leaders' compatibility, complexity, trialability, and observability while implementing innovative ideas, processes, goods, or services are the five critical characteristics of competitive business organizations. Business leaders' long-term organizational, industry and cross-industry transformation may result from their learning, adoption, and adaptation of new management knowledge (Moeuf et al., 2018).

Effective management of technology and innovation played a crucial role in determining a company's competitive advantage and overall success. The aforementioned factors contributed to the augmentation of value, promotion of distinctiveness, improvement of efficiency, and cultivation of initiative-taking behavior and inventive thinking. According to Turner et al. (2017), successful strategic innovation management involves the strategic allocation and use of internal resources and talents to effectively navigate the uncertain operational landscape, which was often influenced by fast advancements in technology. This encompassed the capacity to actively pursue novel ideas, carefully choose the most appropriate ones, and efficiently implemented them or get advantages from their implementation. Nevertheless, due to the inherent uncertainty of the operational context, the process of planning might present difficulties, hence requiring the adoption of emergent, prescriptive, exploratory, or determinable strategies

when undertaking technology and innovation endeavors (Chiarelli et al., 2019). It is probable that the advantages arising from technology and innovation will only be transient.

To tackle this difficulty, a range of initiative-taking, active, reactive, and passive innovation strategies may be used. Initiative-taking strategies often prioritize research and the pursuit of first-mover advantage, enabling organizations to establish themselves as frontrunners within the technical industry (Gao et al., 2018). According to Przychodzen et al. (2020), active strategies include the defense of existing technologies and markets, together with an initiative-taking approach to fast adapt to market validation. In contrast, reactive tactics include the replication of established ideas and mostly depend on incremental innovation (Taran et al., 2015). According to Taran et al. (2015), passive innovators adopted a reactive approach waiting for customer demand to trigger changes in their goods or services before implementing any action.

Within the domain of technological advancement, prior scholarly investigations have undertaken significant literature surveys, including evaluations of the involvement of company leaders (Kurzhals et al., 2020; Tariq et al., 2017). It is worth noting that the existing evaluations in this area have often adopted a narrow focus, presenting an opportunity for further expansion that could have substantially enhanced the analytical, predictive, and normative capabilities of this field of study. For example, while several studies include managerial characteristics as one of the numerous antecedents of technological innovation, they often fail to comprehensively analyze the mechanisms via which these characteristics exert their influence (Eggers & Park, 2018). In a similar vein,

several evaluations have offered antiquated and inaccurate synopses of the fundamental characteristics shown by corporate executives, potentially impeding the capacity of researchers to expand upon previous discoveries (Chen et al., 2015).

However, it is important to acknowledge that these studies may not encompass a comprehensive range of research that explicitly examines the association between executive characteristics and technological innovation. Additionally, these studies may not consider other strategic leaders apart from the CEO (Back & Bausch, 2019). It is important to conduct a thorough assessment of strategic leadership and technical innovation to enable researchers to expand upon existing knowledge and identify relevant research inquiries.

Moreover, it is worth noting that the telecommunications industry in Kenya has a remarkable level of competitiveness not just within East Africa but also across the broader African region. This can be attributed to the substantial advancements in products, markets, technologies, and processes, as highlighted by Mann et al. (2015) and Foster et al. (2018). These researchers highlighted the significance of using inventive approaches to sustain a competitive advantage. Similarly scholarly research in the field of global studies highlighted the significance of synchronized innovations in determining the level of market presence achieved by competitors. This phenomenon was particularly evident in regions such as the European Union, where stringent entry criteria necessitate compliance with rigorous standards and the ability to effectively employ innovative strategies (Berne et al., 2019; Zoo et al., 2017). The phenomenon may also be seen in Asia, where the emergence of novel goods has led to the establishment of fiercely

competitive telecommunications industries in nations such as Korea and China (Zhang & Gallagher, 2016). In several African nations, including Nigeria, Uganda, and South Africa, telecommunication businesses have effectively used innovative techniques to establish a significant competitive edge (Wasono & Furinto, 2018). Within this setting, the telecommunications industry in Kenya exhibits similarities to both the global and regional landscapes. It was characterized by a dynamic market environment in which companies used creative techniques to sustain their positions of leadership.

Technological Innovations

Technological innovations include the conceptualization, execution, and operational use of novel concepts that induce alterations in organizational frameworks and procedures, prompted by either competitive circumstances or initiative-taking endeavors aimed at enhancing corporate efficacy. Innovations have the potential to impact organizational structures by exerting influence on both internal and external environments, as well as by targeting new markets and establishing value networks (Christensen, 2018; Yan et al., 2017). Technological innovation served as an embodiment of the modifications occurring within the goods, services, or processes, which often bring about a fundamental transformation inside a business. Business leaders may boost their competitiveness, sustainability, and differentiation by embracing technological advancements. This enabled them to establish connections with diverse internal and external stakeholders (Fernando et al., 2019; Kouhizadeh et al., 2021) via online platforms or web-enhanced technologies.

Business executives globally face growing pressure to incorporate technological advancements to effectively address the intensifying competitive landscape (Khanagha et al., 2018; Tidd & Bessant, 2020). Business executives under significant pressure to incorporate disruptive technologies to provide a sustainable, interactive, and efficient operational framework for the many stakeholders associated with their organizations (Bocken & Geradts, 2020; Perey et al., 2018).

Business Performance and Innovation Strategies

Organizations may use innovative techniques to enhance their market value and gain a competitive edge. According to Karlsson et al. (2018) and Vendrell-Herrero et al. (2018), innovations served as a means of creating value in a company's offerings, contingent upon their usefulness and cost-effectiveness. Verdu-Jover et al. (2018) and Jajja et al. (2017) have also observed that the implementation of strategies pertaining to new technologies and processes enabled a firm to sustain a competitive advantage vis-à-vis its counterparts, thus leading to augmented market value. According to Karlsson et al. (2018), it is posited that organizations have the potential to use innovative techniques to achieve many objectives to include mitigating the risk of product or service rejection after their introduction to consumers, minimizing manufacturing costs, enhancing product quality, and expanding into new markets. The results were of significance for my research as they indicated that the implementation of innovative strategies could lead to increased market value and a stronger competitive position for organizations.

To navigate the uncertainties, present in the market, business executives often use innovative techniques. Organizations could engage in innovation as a strategic approach

to allocating resources to sustain a competitive edge inside the market. Nevertheless, organizations that prioritized innovation strategies and depended on innovation to gain a competitive edge may have encountered difficulties when their rivals embraced or created novel concepts and exerted new market pressures (Rajapathirana & Hui, 2018; Afuah, 2020). To effectively navigate the ever-evolving economy, it is essential for companies to sustain a culture of innovation and continually adapt to emerging pressures. The adoption and execution of innovation initiatives provides several benefits to an organization. The research suggested that it is important for company executives to develop and implement ongoing innovation strategies to effectively navigate market uncertainty and obtain the required competitive edge (Anning-Dorson, 2018; Simons, 2019).

The implementation of innovative techniques has the potential to provide favorable outcomes for corporate performance. The acquisition of information, ideas, interpretations, and insights from external networks played a crucial role in driving innovation strategies and provides firms with a viable avenue for successful innovation, particularly in the absence of a robust entrepreneurial culture (Kohli & Melville, 2019). The significance of innovative strategies in enhancing revenue and maintaining business performance has been endorsed by various scholars. These researchers contend that innovation involves a creative undertaking of introducing novel technologies, designs, or processes into the market (Azar & Ciabuschi, 2017; Ch'ng et al., 2021; Xie et al., 2019). The results indicated that organizations foster an environment conducive to innovation

and used strategic approaches to introduce novel goods and services, potentially influencing their overall company success.

Transition and Summary

In this session, I reviewed the diffusion of innovation theory, the technological innovations and the link between business performance and innovation strategies. In Section 3 of the study, I described the project ethics, nature of the project, population, sampling, participants, data collection activities, interview questions, data organization, analysis techniques and the validity and reliability of the study.

Section 3: Research Project Methodology

The objective of this qualitative pragmatic inquiry was to examine the tactics used to execute technological innovation and enhance performance. The research population comprised precisely managers and senior executives from SaaS companies in the United States. The findings of this study aided in promoting positive societal transformation by equipping business executives with the ability to reduce the likelihood of failures and enhance the success rates of implementing technological innovations and sustaining disruptive innovations in profit-oriented companies, thereby improving overall performance (Nikolaev & Fortin, 2020). Successfully implementing technological innovations and integrating disruptive innovations can have a positive social impact by providing more accessible training and education programs for organizational stakeholders who have limited opportunities to improve performance and generate profits (Tidd & Bessant, 2020).

Project Ethics

The Role of the Researcher

As the researcher, my main responsibility was to gather and analyze data. The collection, transcription, coding, and analysis of participants' responses were done using semi-structured interview questions. The aim was to gather relevant data and present the results in a style that is impartial and logical. Researchers proactively anticipated and resolved ethical predicaments that can occur at various phases of the study process by formulating pertinent research inquiries. I possessed the necessary skills to function as an impartial observer and assessor for this project.

To ensure the integrity and quality of this research, my responsibility was to acquaint myself with the interviewing and data gathering methodologies that were used in the study. Researchers were required to comply with the ethical guidelines specified in the Belmont Protocol Report. The online training program provided by the National Institute of Health (NIH) for safeguarding human participants have been finished, and the guidelines outlined in the Belmont Report and research ethics were followed. To minimize bias and preserve the reliability, practicality, and validity of the final report, the research will undergo a thorough assessment to identify and rectify any logical faults or inaccuracies in the original assumptions.

A researcher must ensure that the research questions were adequate and relevant to the study aims and design (Imran & Almusharraf, 2023). The interview questions were sufficient to address the study issue. Investigators may establish the reasoning behind an interview technique by choosing a study design (Johnson et al., 2020). A standardized interview procedure was created and used as a reference throughout the process of gathering data. Semi-structured interviews were used to gather and analyze data from individuals who are now or have previously encountered the phenomena under investigation (Adeoye-Olatunde & Olenik, 2021). Employing the pragmatic inquiry methodology, I conducted semi-structured interviews that were used to assess the strategy and commercial aspects of incorporating technology breakthroughs. An investigator examined the obtained data using the interview technique to find recurring trends, common themes, and patterns (Tuthill et al., 2020). In this research, the researcher will create and adhere to an interview methodology for conducting the interviews. I

received approval from the Institutional Review Board (IRB) of Walden University to proceed with my research under IRB # 11-20-24-1047591.

Ethical Research

Researchers use the informed consent process in ethical research to defend the rights of study participants, assure compliance with legal processes that do not cause bodily or psychological damage or threats, and prove the validity of the study (Pietilä et al., 2020). The IRB of Walden University determines criteria for doctorate studies and prior to initiating data collecting, all researchers shall comply with the IRB requirements by applying and gaining permission. Obtaining participants' agreement is a crucial aspect of every research project (Hattix, 2018). Prior to their involvement in this research, I provided each participant with an informed consent document and thoroughly explain its contents. Prior to the interview, every participant was required to submit a completed informed consent form. Researchers provide participants with an informed consent form to get their permission. The form includes information pertaining to the study's nature, participants' expectations, risks, and rewards, as well as the researcher's contact details (Yin, 2018). The informed consent form contained a clear statement to the participants that their involvement in the research was entirely optional and that they had the right to withdraw from the study at any point without having to provide a justification and without facing any adverse repercussions (Galbreath, 2018).

Nature of the Project

There are three research approaches that may be used: qualitative, quantitative, and mixed methods (Yin, 2018). Qualitative study is subjective and interpretative in

nature as researchers use narratives to establish social environments for the purpose of exploring phenomena and interpreting meanings (Pietersen, 2018; Tobi & Kampen, 2018). Moreover, a qualitative investigation is characterized by its naturalistic approach, whereby researchers collect information within the authentic context of the study (Daniel, 2018). The qualitative approach is appropriate when the researcher intends to use an investigative process to address *what*, *why*, and *how* aspects of a phenomena in its authentic environment (Yin, 2018). I employed the qualitative research methodology to address the primary research question of this study, which involved investigating the specific phenomenon of how business leaders effectively incorporate technological innovation into their business practices to enhance performance. This approach involved examining what, why, and the how aspects of this process.

For this study, I have evaluated and contemplated many qualitative research approaches, including narrative, phenomenological, ethnographic, and pragmatic inquiry methods. Researchers use the narrative design to get a deeper understanding of participants' experiences by analyzing the facts in a sequential but flexible and interpretative way (Ferreira et al., 2018). I abstained from using narrative design since my focus did not lie in utilizing participants' storytelling to analyze the facts in a sequential but flexible and subjective manner. Phenomenology is the examination of the fundamental or essential significance of individuals lived encounters as an essence or occurrence (Mihas, 2019). I did not use the phenomenological design for this research since my objective does not include comprehending the phenomena from the viewpoint of participants' life experiences. Researchers use the ethnographic approach to investigate

the social and cultural dimensions of the daily existence within a certain culture (De Oliveira & Nogueira, 2017). I chose not to use the ethnographic research approach since my study does not center on the development of cultural themes via extensive engagement with individuals in the field. The case study approach is used to conduct a comprehensive examination of phenomena by using numerous sources of information in an authentic environment (Yin, 2018). I used the pragmatic inquiry methodology to investigate the precise details, reasons, and methods related to a certain phenomenon. In this instance, the focus was on examining techniques for implementing technological innovation to enhance the performance of enterprises.

Population, Sampling, and Participants

Participants

Prior to commencing data collection, it is important for researchers to identify appropriate participants (Moser & Korstjens, 2018). Researchers set participant eligibility criteria that are consistent with the main research topic of a study (Moser & Korstjens, 2018). Participant eligibility criteria refer to the specific parameters established by researchers to assess if individuals are eligible to participate in a research project (Markowitz et al., 2018). Eligible participants are persons who have knowledge and experience relevant to the topic being studied (Westmaas et al., 2018). Nevertheless, researchers encounter many obstacles, such as locating suitable organizations and gaining access to prospective volunteers (Yin, 2018). Due to the original case study's lack of response, this research used a pragmatic inquiry strategy, giving flexibility and practicality in data collecting a top priority (Markowitz et al., 2018).

The research categorized the participants into four groups: top management or key decision makers, senior information technology workers, and directors of training and professional development. To qualify, prospective participants needed to have a minimum of 3 years of proven expertise in integrating technological innovation into their company operations to enhance financial outcomes. To ensure that participants who meet the eligibility criteria are selected, the purposive non-probability sampling technique was employed to randomly select fifteen individuals who possess distinct characteristics, experiences, attitudes, and perceptions regarding the strategies required for implementing technological innovations. Purposeful sampling approaches allow researchers to concentrate on a sample group that has certain features that are of interest and most suitable for investigating the research topics offered in a study (Campbell et al., 2020). Levitt (2021) observed that qualitative investigations frequently choose a limited number of participants based on the richness and diversity of the material they provide about their own experiences of the phenomena under investigation. The selection of these participants was based on their successful history of incorporating technological innovation in their business processes, resulting in improved performance.

To foster an atmosphere where individuals feel comfortable sharing their experiences, it is essential to establish trust and respect towards them (Brown & Danaher, 2019). Trust was cultivated, a strong connection was formed, and participants' expertise and professional background was valued. According to Myers (2019), researchers should consistently be available, open-minded, and prompt in considering proposals for managing participants. The primary strategy for obtaining access to the participants

included reaching out to institutional officials by telephone or email to get permission to conduct research inside their organization.

Population and Sampling

Employing an adequate sample selection approach is crucial for improving the validity of a research study (Marceau et al., 2018). Sampling is a technique that involves choosing a proportion of individuals who accurately reflect the characteristics of the whole population under investigation (Mweshi & Sakyi, 2020). Purposive sampling involves the deliberate selection of individuals who meet certain criteria, as defined by Hossan et al. (2023). Researchers use purposive sampling to get a deep understanding of a phenomena by carefully selecting people who meet certain criteria and are deemed fit for the study (Hossan et al., 2023).

Hennink and Kaiser (2022) argue that researchers consider the data's richness, study purpose, and demographic composition when determining the appropriate sample size. Study participants must possess a high level of expertise and be able to make significant contributions to the researchers' comprehension of the issue being studied (King et al., 2021). Yin (2018) concluded that researchers may achieve data saturation with just two or three subjects. I conducted interviews with participants until I achieved data saturation.

Data saturation occurs when the process of gathering fresh data no longer provides any further knowledge about the issue being studied (Saunders et al., 2018). Researchers may get data saturation by conducting three to five Semi-structured interviews, resulting in the acquisition of data that is comprehensive and in-depth (Fusch

et al., 2018). My intentions were to get comprehensive knowledge that enhanced data saturation by conducting Semi-structured interviews with participants, using open-ended questions.

Researchers need to choose an interview venue that promotes candid and unrestricted conversation with the participants of the research (Gray et al., 2020). Participants experience a positive, relaxing exchange within an interview setting that are accommodating, comfortable, and conducive to normal behavior. This level of positive interaction can enhance the accuracy of the findings and enables researchers to attentively listen and properly record comments (Northcote & Phillips, 2019; Yin, 2018). Fostering a feeling of parity between the researcher and participant may be advantageous in cultivating rapport (Northcote & Phillips, 2019). According to Dauncey et al. (2019), conducting interviews in secluded and tranquil environments improves the researcher-participant interaction and promotes participants' sense of ease. I chose a secluded and tranquil setting to guarantee that research participants did not encounter any sensations of unease or distress, thereby facilitating the development of candid and fruitful conversation.

Data Collection Instruments

Researchers using qualitative methods acknowledge that they are the main tool for their study (Daniel, 2018; Newth, 2018). Researchers gather information for case studies using a variety of methods, such as observations, document analysis, and interviews (Daniel, 2018). Semi-structured interviews with open-ended questions are a common method used by researchers doing qualitative studies to gather data

(DeJonckheere & Vaughn, 2019; Kim & Kim, 2018). Researchers may get insight into study participants' perspectives and experiences on the phenomena they are studying by conducting interviews using open-ended questions (Çinar, 2018). Supplementary questions can be asked by participants by researchers during Semi-structured interviews. These questions may elicit candid answers that provide context and aid in the better understanding and interpretation of participant experiences (Brown & Danaher, 2019; Ronald & Dominguez, 2018).

I used semi-structured interviews, including open-ended questions. Researchers collaborated with participants to get comprehensive and detailed data pertaining to the phenomena being studied (Moser & Korstjens, 2018). Semi-structured interviews facilitated the gathering of comprehensive and detailed data, which may aided researchers in uncovering novel themes during data analysis (Moser & Korstjens, 2018). This interview style enabled researchers to begin the process with predetermined questions while maintaining the flexibility to ask additional clarifying questions. Such an approach supported the collection of rich comprehensive and detailed data (Moser & Korstjens, 2018). I administered semi-structured interviews to research participants and posed additional, clarifying inquiries. This approach enabled me to gather comprehensive and detailed data, which I used to address the main research topic of this study.

Document analysis is a commonly used data gathering approach in qualitative research (Yin, 2018). Documents played a crucial function in enabling the researchers to authenticate and enhance evidence obtained from other sources (Yin, 2018). By combining document analysis with semi-structured interviews, researchers may get a

more comprehensive understanding of the phenomena being studied (Naz et al., 2022). This approach also enhanced the study's rigor by using methodological triangulation (Yin, 2018). Methodological triangulation is the integration of many sources of data while studying the same phenomena (Abdalla et al., 2018). Researchers studied and evaluated many sorts of papers, such as organizational reports, survey data, and financial statements (Yin, 2018). In addition, documents provided valuable support in less obvious yet highly relevant ways such as verifying the correct spelling of names or offering detailed information about specific occurrences (Yin, 2018).

Member checking was a qualitative technique commonly used by researchers to enhance the reliability of their study. It involves inviting participants to review, correct, or provide further explanation for the researcher's interpretations of their interview responses. This technique is aimed at increasing the trustworthiness of the research findings (Daniel, 2018; Iivari, 2018; Roberts & Brown, 2019; Vallack, 2018). Researchers request people to evaluate researchers' analyses of participants' responses to interview questions to verify the precision of researchers' interpretations of participants' answers (Iivari, 2018). To enhance the reliability of the data I acquired during interviews, I used member checking which involved requesting research participants to confirm the correctness of my understanding of their responses to interview questions.

Data Collection Technique

Semi-structured interviews are a commonly used strategy for researchers to get data on participants' experiences on the topic being studied (Farid et al., 2018). Semi-structured interviews provide researchers with the option to ask open-ended questions,

enabling them to gather detailed and profound knowledge regarding the topic under investigation (Purevdorj & Silva, 2018). Researchers may get insight into participants' experiences with the phenomena being studied by analyzing their replies to open-ended questions (Moser & Korstjens, 2018). In addition to conducting semi-structured interviews, researchers often examine organizational documents and artifacts that are relevant to the phenomena being studied. This serves as a supplementary source of evidence (Mihas, 2019). Researchers use various data gathering methods to enhance their comprehension of the phenomena being studied and bolster the rigor of their inquiry via methodological triangulation (Kim & Kim, 2018).

Semi-structured interviews and document analysis as data collecting strategies have both benefits and drawbacks (Oakman et al., 2017). One advantage of conducting Semi-structured interviews was that researchers could investigate phenomena by using open-ended questions, while also obtaining more detailed information by asking participants clarifying questions about their experiences related to the phenomenon being studied (Cox & Soobiah, 2018). Furthermore, throughout the process of conducting interviews, researchers had the opportunity to observe participants' body language and other nonverbal cues (Liff et al., 2017).

Researchers used pilot research when circumstances were conducive to using this method and evaluated the approach before doing a comprehensive investigation. Pilot studies are seen by researchers as reduced-scale iterations of the primary study (Schachtebeck et al., 2018). If research studies employed diverse qualitative data collection methods, such as Semi-structured interviews and analysis of organizational

documents and artifacts, conducting a pilot study is unnecessary. This is especially true because comprehensive pilot studies demand significantly more time and larger sample sizes (Aziz & Khan, 2020). I omitted creating a pilot study because it would have been time-consuming undertaking and not necessary when using diverse data gathering methods, such as conducting Semi-structured interviews and evaluating organizational records and artifacts.

Data Organization and Analysis Techniques

Qualitative research approaches rely on the researcher or interviewer as the main tool for gathering data (Becker, 2019). I performed a qualitative pragmatic inquiry study by using semi-structured interviews and gathering relevant documents and ensured data triangulation and saturation. Data triangulation is a method used by researchers to assure the validity and reliability of the data they gather, analyze, and assess. According to Fofana et al. (2020), the use of triangulation, together with thorough data collection and saturation, will enhance the credibility, validity, and reliability of my work. Saturation of the study happens when the interviewers or researchers notice and identify the recurrence of the replies. Data saturation assumes that there are no more information or data available for the study or phenomena being studied (Hennink & Kaiser, 2022). Fofana et al. (2020) argue that using triangulation, together with thorough data collection and saturation, enhances the authenticity, validity, and reliability of my work. Saturation of the study happens when the interviewers or researchers notice and identify the recurrence of the replies.

I conducted interviews using both phone calls and face-to-face methods. Irrespective of the mode of interview, I diligently fulfilled my responsibilities and duties as an interviewer and ensured the protection and appreciation of the interviewees' responses and their confidentiality (Ross et al., 2018). I maintained the confidentiality of my research participants by securely storing both physical and electronic data, thereby upholding the study's validity, trustworthiness, and dependability. To preserve my participants' anonymity, I employed a numeric coding system assigning identifiers such as participants 1, participant 2, participant 3 et al.

Researchers use research logs to collect data, maintain track of that data, and arrange certain aspects of the study, such dates, times, places, interviewers and interviewees, problems, obstacles, biases, and reflections. In addition to serving as a useful data instrument for data management, a research log may serve as a resource for the researcher's reflexivity (Corlett & Mavin, 2018). To ensure the validity of a qualitative research study, researchers need to always be conscious of their own viewpoints and views, while also accepting their reflexivity. According to Yanto (2023), researchers should acknowledge their own reflexivity, which arises due to their biases stemming from their experiences, beliefs, judgments, and emotions. A reflective journal was an essential instrument for researchers to chronicle the process of data gathering, organization, and analysis. This tool was used to enhance the accuracy of interpreting, analyzing, and reporting the data collected from participants throughout the research. Janak (2022) explained that researchers use a reflective notebook to document their own ideas, opinions, and life experiences in relation to the study, participants, and outcomes.

Reflective journaling served as a means for researchers to maintain a record of their own thoughts and experiences, allowing for introspection and a heightened sense of self-awareness. This practice is essential for researchers to take responsibility for their actions and recognize any biases. Researchers used research logs, reflecting diaries, and labeling systems to meticulously document and organize all data collected during the study process. In addition, I implemented a labeling system to categorize and organize my participation, data, and general information. Creswell (2018) defined the data analysis process in qualitative study design as a methodical but adaptable strategy to collect, organize, analyze, and comprehend the intricacies of the obtained data. The data analysis process delineates the fundamental processes that researchers must follow to identify and conform to the most suitable methodologies for their study.

Data analysis techniques are available for researchers to choose from, including analytic induction, template analysis, and theme analysis. According to Castleberry and Nolen (2018), thematic analysis codes the gathered data into patterns or themes using a mix of deductive and inductive coding, which gives the qualitative data insight and significance. Scholes (2020) discussed how template analysis combined deductive and inductive coding, enabling the researcher to accept new themes that emerge during the gathering and analysis of data while still using an existing template. An approach employed in qualitative research is called analytical induction; however, it places greater emphasis on logical thinking and is more concerned with developing theories and doing empirical or experimental testing (Braun & Clarke, 2022).

For my qualitative research project, I wanted to use either theme analysis or template analysis as the method for analyzing the data. I had several options for software tools such as Excel, NVivo, or Atlas.ti to electronically oversee, categorize, organize, and examine the data I have gathered. Microsoft Excel was a powerful tool that researchers could use to efficiently manage and analyze data. NVivo was a specialized program for qualitative data analysis that was particularly created to oversee, arrange, analyze, detect themes or patterns, and interpret different forms of data. Atlas.ti is a qualitative analysis program that efficiently manages, categorizes, arranges, and examines substantial volumes of textual, graphical, and audio data. Researchers could also use Google's mind mapping feature to efficiently organize material by engaging in brainstorming, problem-solving, note-taking, and digitally categorizing ideas into subtopics. I employed Nvivo for my analysis and had seven themes come up.

Reliability and Validity

Reliability

Reliability in qualitative research, as defined by Rose & Johnson (2020), refers to the consistency of the study's conclusions or findings. Reliability was attained by using precise repetition of data techniques, collecting, and analysis involving diverse individuals, researchers, or phenomena. Researchers used three ways to assure adherence to dependability in qualitative research. The three methodologies or procedures were member checking, peer debriefing, and triangulation. Member checking for dependability was a process like checks and balances, where interviewers assess the participants or interviewees' results to ensure they are reliable and accurate. Peer debriefing facilitates

the discussion and comparison of methodology and outcomes across several researchers. Triangulation was the ultimate method to guarantee dependability in qualitative research. Triangulation was a reliable method in qualitative research as it improves the trustworthiness and validity of the study (Lemon & Hayes, 2020). Triangulation, which derives its name from the prefix "tri" meaning three, involves the use of a minimum of three distinct methodologies, models, sources, or participants. This approach enhanced the quality of the research by adding value and mitigating any assumed biases.

Becker (2019) identified four distinct forms of triangulation: data triangulation, methodological triangulation, investigator/researcher triangulation, and theory triangulation. These several kinds of triangulation are used in research to mitigate or minimize the constraints associated with relying only on a single source or approach. This research was based on a qualitative pragmatic investigation/analysis by using a semi-structured questionnaire for my interviews, as well as employing data triangulation and saturation. Reliability in qualitative research was characterized by the level of dependability. The reliability of qualitative research was ensured by a meticulous and comprehensive interview process, data collecting, and transcription (Yin, 2018).

Validity

Validity in research pertains to the precision of the investigation and guarantees that the outcomes are significant. A well conducted qualitative study had a clearly defined objective, a systematic approach, documented outcomes or discoveries, in-depth conversations, and any supplementary summaries. Together these elements should be regarded as reliable and accurately depict the phenomena under investigation. The

validity of a qualitative research study was determined by the accuracy, precision, and correctness of the measurement or people under examination. Triangulation enhanced the robustness of the research by corroborating the findings, data, methodology, and participant perspective, thereby ensuring the correctness and reliability of the study or phenomena (Becker, 2019).

Makaruk et al. (2022) established that researchers showed validity and credibility to exhibit their expertise with the study. This explanation assumed that researchers would refrain from bias and conduct their data collection in a transparent and honest manner. Ensuring the credibility of the study required both the researchers and participants to communicate openly and truthfully without hesitation or reservation about the results. Credibility also depended on the reliability and transparency of every stage of the research process, including the gathering, analysis and data transfer. Conducting a trustworthy study involved maintaining and cultivating a strong respectful relationship with participants.

Transition and Summary

Section 3 was a presentation of a concise summary of ethical research, which included a quick explanation of the Belmont Report process and responsibilities of the researcher, the use of the qualitative research technique, and the pragmatic inquiry research design, explaining its suitability for the study. I determined the specific group of people I wanted to study, the method I would use to select participants, and the criteria required for eligibility. A comprehensive account of the planned procedures for gathering, organizing and analyzing the data provided. The key concepts related to

reliability in qualitative were clearly defined. In Section 4, the research findings were described, analyzed and organized as distinct themes. I also explained how these findings aligned with the literature review and conceptual framework of the study.

Section 4: Presentation of the Findings

Introduction

The purpose of this qualitative pragmatic study was to explore strategies business leaders use to implement technological innovation to improve organizational performance. The analysis of interviews with fifteen participants produced four major themes that collectively highlight how leaders approached technological change within their organizations. Overall, the findings revealed that successful adoption of innovation depended on deliberate change management practices, the integration of data-driven decision-making, the prioritization of employee learning and adaptability, and the role of visionary leadership in sustaining performance.

Theme 1 focused on change management and employee adoption. Participants consistently emphasized that innovation could not succeed without normalizing change, building trust among employees, and providing clear communication about the purpose of new initiatives. Leaders explained that when staff understood “the why” behind technological change, resistance decreased, and adoption became smoother. Theme 2 highlighted the use of data-driven leadership. Leaders relied heavily on performance metrics, customer insights, and technological data to guide decisions. Participants noted that data-informed strategies helped reduce uncertainty and ensured that innovative efforts remained aligned with organizational goals.

Theme 3 underscored the importance of employee training and organizational learning. Leaders invested in upskilling programs, collaborative knowledge-sharing, and continuous support to equip employees with the skills required to adapt to new

technologies. These efforts strengthened staff confidence, fostered resilience, and created an environment where learning was viewed as part of everyday organizational life.

Theme 4 emphasized leadership vision and strategic commitment. Participants described how leaders' ability to articulate a clear vision for innovation, secure buy-in from stakeholders, and model adaptability shaped organizational performance outcomes.

Visionary leadership was viewed as critical for sustaining momentum and embedding technological change into the company's culture. These themes demonstrate that leaders approach innovation as both a technical and human process. They combine relational strategies with data-driven practices, balance cultural readiness with structural support, and rely on vision and commitment to sustain long-term gains.

Table 1 details the organization of the study's themes.

Table 1

Themes Identified in This Study

| Theme | Theme name | Brief description | Participants | Sample excerpt |
|-------|---|--|------------------------------|--|
| 1 | Change Management and Employee Adoption | Leaders normalized change, built trust, and clarified the purpose of new technologies to reduce resistance and encourage adoption. | P1, P3, P4, P6, P9, P10, P13 | <p>“Most importantly—the why. Why are we doing this?</p> <p>Otherwise, it is just a change for change's sake”</p> <p>(P1).</p> |

| | | | | |
|---|--|--|-------------------------------------|---|
| 2 | Data-Driven Leadership | Leaders relied on performance metrics, customer insights, and technological data to guide innovation and ensure alignment with organizational goals. | P2, P5, P7, P8, P11, P12 | “We look at the data before making any decision; it reduces the risks we take” (P5). |
| 3 | Employee Training and Organizational Learning | Leaders invested in upskilling, collaborative knowledge-sharing, and continuous support to strengthen employee adaptability and resilience. | P3, P4, P6, P8, P10, P12, P13 | “If you don’t train people, they fear the systems. training builds their confidence” (P6). |
| 4 | Leadership Vision and Strategic Commitment | Leaders articulated clear visions, secured stakeholder buy-in, and modeled adaptability to sustain long-term innovation | P1, P2, P5, P7, P9, P11 | “You have to let them know why you’re doing it... then follow through and check adoption” (P2). |

| | | | | |
|---|--|---|-------------------------------|--|
| | | and performance gains. | | |
| 5 | Collaboration and Knowledge Sharing | Leaders fostered cross-team collaboration and open communication channels to enhance problem-solving and accelerate innovation. | P2, P3, P6, P7, P10, P12 | “Innovation succeeds when departments share knowledge openly” (P7). |
| 6 | Resource Allocation and Infrastructure | Leaders emphasized aligning financial, technological, and human resources with innovation priorities to maximize impact. | P1, P4, P5, P8, P11, P13 | “Without proper resources, innovation is just a dream—we must budget for it” (P4). |
| 7 | Customer-Centered Innovation | Leaders designed technological strategies around customer needs, ensuring innovation improved satisfaction | P2, P6, P7, P9, P10, P12, P13 | “Our customers guide us; their feedback shapes every upgrade we roll out” (P9). |

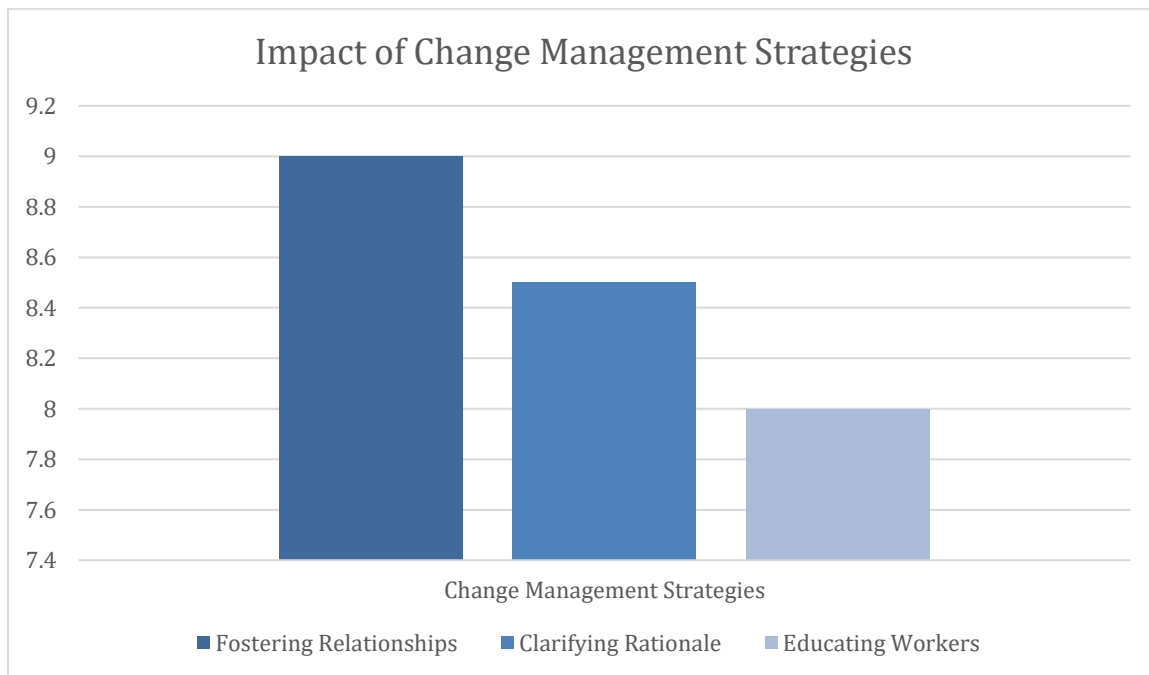
and market
competitiveness.

Theme 1: Change Management and Employee Adoption

Leaders in the SaaS sector described how managing change effectively was central to the successful adoption of technological innovation. They explained that change was treated as a normal part of organizational life, supported with trust and clear communication, employees were more willing to engage with new systems and integrate them into their everyday work.

Participants repeatedly stressed the need to normalize change so that employees did not perceive it as disruptive or threatening. For example, P1 observed that “the capacity of the leader to normalize change as a recurrent issue inside the company is crucial to the success of technology deployment.” Similarly, P13 emphasized that effective change management involved not only technical adjustments but also “communication, staff training and support, and assessment of the effectiveness of change efforts.” Other participants highlighted the importance of fostering strong relationships during periods of transition. P3 explained that “workers are more inclined to embrace new methods and contribute to innovations when they see their contribution as appreciated and valued by leadership.” Several leaders also noted that clarifying the purpose of innovation reduces resistance. As P1 explained, “Most importantly, the why. Why are we doing this? Otherwise, it is just a change for change’s sake.”

These accounts suggested that leaders recognized resistance as a natural response to technological change and deliberately used strategies to reduce its impact. Normalizing change reassured employees that transitions were routine and manageable. Building trust through recognition and support fostered psychological safety, encouraging staff to take risks and learn new systems. Communicating the “why” reframed innovation as purposeful rather than arbitrary, which participants described as critical for gaining buy-in. This theme highlighted how successful innovation was not driven by technology alone but how leaders managed the human side of organizational change. By making transitions both understandable and meaningful, they created conditions for employees to adopt new tools with confidence.

Figure 1*Impact of Change Management Strategies*

Note. This figure illustrates how participant codes were grouped into categories that informed the development of Theme 1. Codes were derived from interview transcripts and analyzed through thematic coding.

The perceived effects of three important management techniques on employee adoption are shown in Figure 1, *Impact of Change Management Strategies*, above. The technique that received the best score was Fostering Relationships, suggesting that establishing relationships based on trust increases employee readiness to accept changes. Participants saw that resistance falls, and staff members feel supported during changes when managers make an investment in open communication and human connection. The clarifying rationale approach had a significant effect, demonstrating that elucidating the "why" behind modifications aids staff in comprehending the need to implement new

procedures. By addressing ambiguities, this openness boosts trust in organizational choices.

Despite a minor decline, educating employees was still essential to educate workers on ongoing change. Initiatives for training increase technical competency, lessen apprehension about the unfamiliar, and provide staff the confidence to interact with new systems and procedures. All three tactics are crucial, but the most effective way to encourage staff adoption is via relationship-building, which is closely followed by providing a clear explanation and organized training. Higher acceptance rates and more seamless team transfers may be ensured by using this data to inform leadership goals when organizing change projects.

Comparison of Theme 1 to the Academic Literature

Effective change management plays a central role in ensuring the successful adoption of technological innovations in organizations. Scholars consistently describe it as a systematic process for helping businesses move from their current practices to preferred ways of working. Within this framework, researchers made an important distinction between incremental change and transformational change. Incremental change refers to gradual adjustments such as modifications to policies, procedures, and work demands that refined the existing systems without fundamentally altering the organizational structure (Waddell et al., 2019). Transformational change, was far more disruptive as it involved shifts in vision, culture, values, and processes that required employees to reorient their assumptions and beliefs about how the organization functions (Oreg & Berson, 2019; Pasmore et al., 2019).

These perspectives emphasize that change management is not only about structural adjustments but also about how individuals and groups experienced the process. Even minor adjustments created uncertainty when employees felt unsupported, while large-scale transformations generated resistance when leaders failed to communicate a compelling purpose. Mansaray (2019) argued that leaders who anticipate these responses and proactively addressed them are more likely to strengthen organizational performance and capacity. Providing clear communication, building trust, and equipping employees with the necessary resources were central to making change less threatening and more meaningful. The literature showed that both incremental and transformational change required leaders to balance technical implementation with human considerations. Change is rarely embraced on its own; it becomes manageable when employees understand its purpose, viewed individual contributions as valued, and felt supported in navigating transitions. These insights provided a foundation for interpreting how leaders in the technology sector described their experiences with managing technological change in this study.

Analysis of Theme 1 Under DOI

The findings revealed that leaders in the technology sector relied heavily on changing management practices to support the adoption of new technologies. Participants described strategies such as normalizing continuous change, building trust with employees, and clearly explaining the purpose of innovation. These practices not only reduced resistance but also encouraged employees to integrate new systems into their everyday work. Rogers' Diffusion of Innovation (DOI) theory provided a useful lens for

understanding these strategies, as it emphasizes how relative advantage, compatibility, complexity, trialability, and observability shape adoption within social systems (Rogers, 2003).

Participants explained that embedding the expectation of continual change into organizational culture was key to reducing employee anxiety. For example, P1 emphasized that “the capacity of the leader to normalize change as a recurrent issue inside the company is crucial to the success of technology deployment.” Similarly, P6 noted that when innovation was framed as routine, employees found it less complex and more aligned with their roles. These perspectives align with DOI’s attributes of compatibility and relative advantage. As Bozkus (2023) observed, innovations that fit with employees’ existing values are more readily accepted, while Raffaelli et al. (2019) found that leaders who model adaptability help integrate new practices into employees’ mental frameworks.

Another important strategy was cultivating trust and interpersonal connections. P3 stated that “workers are more inclined to embrace new methods and contribute to innovations when they see their contribution as appreciated and valued by leadership.” P9 echoed this thought by stressing that transparent communication from trusted leaders encouraged confidence in trying new systems. These findings align with DOI’s emphasis on the role of opinion leaders and social networks in accelerating adoption. Berry and Berry (2018) noted that trust functions as a form of loyalty that makes individuals more willing to follow leaders through transitions.

Participants also highlighted the importance of clarifying the reasoning behind technological changes. P2 explained that employees were more receptive when they understood how innovation supported organizational goals, while P10 observed that outlining tangible benefits “made it easier for staff to experiment and see value in the systems.” These insights reflect DOI’s attributes of trialability and observability. Schneider and Sting (2020) argued that transparency encourages experimentation, and Jacobs et al. (2021) found that visible benefits increase adoption rates.

These findings exhibited that leaders guided employees through the sequential stages of adoption described in DOI: creating knowledge by normalizing change, persuading through trust and credibility, supporting decision-making with transparent reasoning, facilitating implementation by reducing complexity, and confirming adoption by highlighting benefits. By addressing both the technical and human dimensions of change, participants acted as effective change agents. In doing so, they demonstrated that the diffusion of technological innovation in the technology sector depended as much on leadership practices as on the inherent value of the technology itself.

Theme 2: Data-Driven Decision Making Enhances Organizational Performance

Table 2

Theme 2: Data-Driven Leadership

| Theme | Theme name | Brief description | Participants | Sample excerpt |
|-------|------------------------|--|-----------------|---|
| 2 | Data-Driven Leadership | Leaders relied on performance metrics, customer insights, and technological data to reduce | P2, P5, P7, P11 | “We look at the data before making any decision; it |

| Theme | Theme name | Brief description | Participants | Sample excerpt |
|-------|------------|--|--------------|-------------------------------------|
| | | uncertainty and align innovation with organizational goals. | | reduces the risks we take” (P5). |

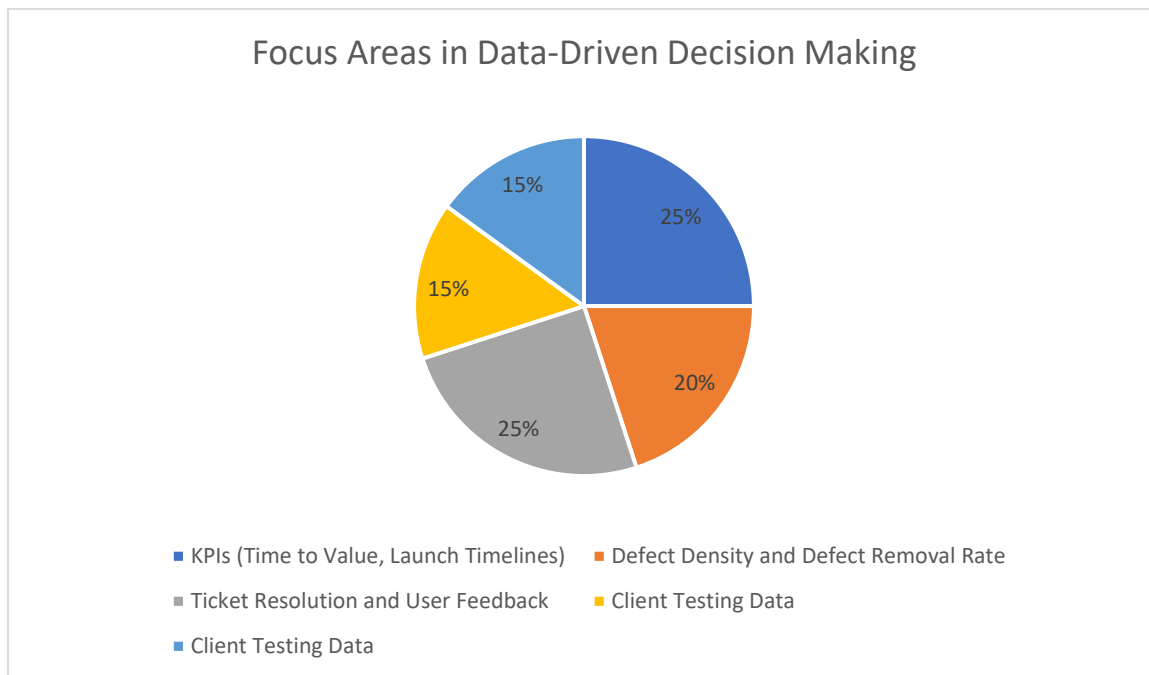
The second theme that emerged from this study was data-driven leadership as shown in table 2 above, where participants emphasized the use of quantifiable metrics, performance dashboards, and systematic tracking tools to guide innovation and strengthen organizational performance. Participants explained that reliable performance metrics provided a foundation for evaluating the success of technological change. P1 highlighted the value of key performance indicators (KPIs), noting, “Using a set of metrics and KPIs is probably the best tools that I have available.” He added that his organization continuously tracks customer outcomes such as time-to-value and product launch timelines to assess the effectiveness of innovation strategies: “We see improvement from that level as well.” Similarly, P2 connected analytics directly to process improvement, explaining that “we use tools like JIRA and Salesforce to track defect density and defect removal rate. That data tells the story, it helps us know whether our process improvements are working or not.” P2 elaborated further that structuring and standardizing the use of JIRA across departments allowed the organization to “slice the data and make meaningful decisions from it,” while also integrating client testing data to validate outcomes. P3 described a comparable experience during the implementation of a new ticketing system. She explained, “There was a huge gap in overall visibility. Reporting allowed us to better gauge the participation level and help with improvement.

Now we can meet the needs of those we serve more effectively and efficiently.”

According to P3, ongoing monitoring of closure rates, resolution times, and user feedback was essential for both staff and clients to benefit from the new system.

These accounts demonstrate that leaders in the technology sector leveraged analytics to create transparency, accountability, and responsiveness within their organizations. Quantitative data such as Key Performance Indicators and defect metrics provided credibility to leadership decisions and reduced reliance on anecdotal feedback. Systematic monitoring allowed organizations to adapt quickly, improve efficiency, and respond to emerging challenges in real time. These practices align with Rogers’ Diffusion of Innovation (DOI) theory, particularly the attributes of relative advantage and observability (Rogers, 2003). By making the outcomes of innovation visible and measurable, leaders-built trust among employees and stakeholders, reinforced the perceived value of new systems, and facilitated wider adoption.

Theme 2 illustrates that data-driven leadership not only guided technological decision-making but also reinforced a culture of evidence-based accountability. By embedding analytics into daily operations, leaders accelerated innovation, improved transparency, and created conditions for sustained performance. These practices provided a natural bridge to Theme 3, which focuses on employee training and organizational learning as mechanisms for strengthening adaptability and resilience during technological change.

Figure 2*Focus Areas on Data-Driven Decision Making*

Note. This figure shows the coding and categorization process that led to Theme 2, highlighting how leaders used data to guide innovative decisions and organizational performance strategies.

Figure 2 illustrates the proportional importance participants placed on different indicators and tools when applying data-driven decision-making to support technological innovation in their firms. Participants highlighted KPIs as the most important tool for evaluating the success of technological transformation efforts. P1 explained that monitoring metrics such as time-to-value and product launch schedules allowed leaders to assess outcomes, ensure alignment with strategic goals, and identify areas requiring process adjustments. Defect tracking through platforms like JIRA and Salesforce was also identified as critical for producing objective data on whether process improvements were lowering errors and enhancing quality. Similarly, P3 emphasized the importance of

tracking ticket closure rates, resolution timelines, and user feedback to measure service effectiveness and identify service gaps or bottlenecks. Several participants also underscored the value of client testing data, noting that it ensured end-user perspectives were incorporated into innovation strategies, while others highlighted asset utilization metrics as a means of improving resource allocation and reducing waste.

The pie chart demonstrates that participants placed the greatest emphasis on KPIs and ticket resolution/user feedback, each accounting for 25% of perceived importance. These measures were viewed as the most reliable for monitoring the results of innovative initiatives and evaluating improvements in service delivery. While asset utilization and client testing data received lower proportions, participants still considered them necessary for building a comprehensive view of organizational performance. Defect tracking, though given moderate weight, was nonetheless seen as vital for ensuring quality and reliability during technological change. Taken together, these findings suggest that leaders valued indicators that not only measured performance but also provided insights into how employees and customers were experiencing the impact of innovation.

Inclusively, Figure 2 reinforces the conclusion that structured, real-time performance measures are essential for guiding technological transformation. By prioritizing KPIs and user-focused indicators, leaders enhanced transparency, directed adaptive strategies, and ensured that innovations achieved their intended outcomes. These insights also connect to Theme 3, which highlights the role of employee training and organizational learning in sustaining data-driven innovation.

Comparison of Theme 2 to Academic Literature

Theme 2 emphasized the role of data-driven leadership in directing innovation and improving organizational performance, a perspective that aligns closely with scholarship on organizational intelligence, digital transformation, and strategic innovation management. Scholars consistently argue that organizations can address consumer needs, market demands, and internal performance gaps more effectively when data analytics is embedded in decision-making processes (Brynjolfsson & McElheran, 2016; Wamba et al., 2017). This literature resonated with participants' emphasis on using tools such as JIRA, Salesforce, and customer behavior dashboards to track KPIs, evaluate new product launches, and improve service delivery. McAfee and Brynjolfsson (2012) similarly demonstrated that firms making data-driven choices outperform their competitors in both productivity and profitability. George et al. (2014) further suggested that cultivating a data-driven culture creates an environment of continuous learning that strengthens employee engagement and fosters innovation outcomes.

Participants also acknowledged the importance of aligning data systems across departments to avoid fragmentation. This concern echoed by Davenport and Harris (2017), who warned that siloed data can limit organizational agility and reduce the effectiveness of business intelligence tools. Gupta et al. (2021) extended this point by noting that successful data-driven decision-making requires robust governance structures and widespread employee data literacy. Access to real-time, role-specific data was another critical factor participants highlighted. Fosso Lottu et al. (2024) reinforced this view, showing that real-time analytics are essential drivers of strategic innovation,

particularly in fast-paced sectors such as telecommunications. Finally, participants' reliance on dashboards and analytics platforms reflects broader research on the importance of feedback loops for organizational learning and continuous improvement (Mikalef et al., 2020).

Literature underscores that data is not simply a technical resource but a strategic asset that promotes accountability, transparency, and resilience. The convergence between participant experiences and academic perspectives highlighted how integrating data into decision-making enables leaders to quantify the effects of innovation, built trust through transparent reporting, and sustained adaptability in dynamic environments. This alignment between participant perspectives and the literature confirmed that data-driven leadership enhances both decision quality and organizational learning. By treating data as a foundation for accountability and continuous improvement, leaders created conditions for sustainable innovation. These insights connect directly to Theme 3, which explored how employee training and organizational learning further supported technological transformation.

Analysis of Theme 2 Under DOI

Rogers' (2003) Diffusion of Innovation (DOI) theory provided a valuable framework for interpreting Theme 2, as it explained how organizations adopted data-driven decision-making systems by emphasizing the relative advantage, compatibility, complexity, trialability, and observability of innovations. Participants identified tools such as JIRA, Salesforce, performance dashboards, and customer analytics platforms as essential for guiding organizational decisions and monitoring innovative outcomes. These

technologies represented innovations that needed to be diffused across teams before their benefits could be fully realized. From a DOI perspective, their relative advantage lay in the ability to enhance decision-making accuracy, speed, and responsiveness to both customer and operational needs. As Badat (2021) observed, adoption is more likely when employees and leaders perceive new systems as superior to prior intuition-based or anecdotal approaches. Compatibility also shaped adoption, as participants explained that dashboards and reporting tools were most effective when aligned with an organizational culture that valued openness and accountability. Conversely, fragmented uses such as inconsistent adoption of JIRA across department created integration challenges that slowed the diffusion process.

Complexity was another factor that influenced adoption. Several participants noted that the technical difficulty of analytics platforms created obstacles for employees who lacked sufficient training or support. DOI addressed this by highlighting trialability and observability as critical facilitators. For example, when participants were able to test data tools in limited settings before full implementation, adoption increased. Likewise, visible benefits such as enhanced reporting and faster defect detection reinforce employees' confidence in the systems. These experiences mirror the sequential stages of adoption described in DOI: knowledge, persuasion, decision, implementation, and confirmation (Dearing & Cox, 2018; Singh et al., 2023).

Viewed through DOI, the role of leaders in this study was to act as change agents who promoted data-driven practices by communicating advantages, reducing uncertainty, and fostering social learning. By providing training, sharing success stories,

and using dashboards collaboratively, they helped employees progress through the stages of adoption. This normalized the use of analytics demonstrated observable improvements in efficiency, customer service, and innovation outcomes. In this way, data-driven systems became integrated into daily routines rather than remaining isolated technical tools. Applying DOI to Theme 2 clarifies how data-driven decision-making spread within organizations and why it proved sustainable. Strategic communication, cultural alignment, and incremental implementation emerged as essential for ensuring adoption. Ultimately, DOI offered a comprehensive framework for understanding how analytics and decision-support systems become embedded in organizational practices, strengthening innovation capacity and improving performance outcomes.

Theme 3: Employee Training and Organizational Learning

Table 3

Theme 3: Employee Training and Organizational Learning

| Theme | Theme name | Brief description | Participants | Sample excerpt |
|-------|---|--|---------------------------|--|
| 3 | Employee Training and Organizational Learning | Leaders emphasized continuous skill development, structured learning opportunities, and knowledge-sharing practices to support employees in adopting technological innovation. | P3, P6, P8, P10, P12, P13 | “If you don’t train people, they fear the systems... training builds their confidence” (P6). |

The third theme highlights that leadership commitment and support are central to the successful adoption and sustainability of technological innovation. Participants consistently emphasized that leaders must demonstrate commitment through visible engagement rather than symbolic endorsement. For example, P1 explained that “leaders should walk the talk and be actively involved in innovation projects to show their commitment.” Similarly, P3 observed that when leaders actively participate in innovation initiatives, employees recognize these efforts as strategic priorities and feel motivated to contribute. P4 added that leadership support was critical for reducing resistance, noting, “When leaders back the innovation with resources and regular communication, employees feel more confident to adopt new technologies.” In addition, P6 emphasized the balance between guidance and autonomy, suggesting that leaders who encouraged experimentation while offering consistent support create an environment where staff felt empowered to innovate.

These accounts reveal that leadership commitment extended beyond verbal advocacy to include tangible behaviors such as resource allocation, consistent communication, and direct involvement in innovation projects. By “walking the talk,” leaders enhanced credibility and strengthened employee confidence in organizational change. Continuous communication and the provision of resources were perceived as clear signals that innovation was not optional but embedded in the organization’s long-term vision. This aligned with the literature on transformational leadership, which highlights that visible engagement and supportive behaviors encourage trust, reduce

uncertainty, and strengthen employees' willingness to adopt new practices (Knezović & Drkić, 2021; Jin et al., 2022). Theme 3 demonstrates that leadership commitment played a catalytic role in embedding innovation within organizational culture. Leaders who modeled active engagement and provided structured support created conditions for sustained technological adoption.

Figure 3

Training and Organizational Learning in Technological Innovation



Note. This figure presents the coding structure that generated Theme 4, reflecting how leaders communicated vision, secured buy-in, and modeled adaptability.

Figure 3 illustrates the relative importance participants assigned to different leadership support activities, showing that sustainable innovation depends on continuous, embedded learning practices rather than one-time interventions. The figure shows that

while structured training such as workshops was viewed as a useful foundation, participants emphasized that ongoing approaches, including coaching, peer learning, and iterative feedback were more effective in sustaining technological adoption. P3, for example, noted that workshops provided employees with baseline skills, but follow-up coaching and peer support were what enabled staff to gain confidence and apply innovations consistently in their work. Participants also agreed that feedback mechanisms created a cycle of learning in which employees could refine practices and adapt to evolving technologies.

These findings suggest that leadership support for training should not be confined to introductory sessions but integrated into organizational routines. By embedding learning into everyday practice, leaders empowered employees to experiment, build competence, and maintain confidence in their ability to use new systems. This interpretation aligned with recent scholarship emphasizing that continuous learning and employee empowerment are critical for embedding innovation into organizational culture (Afsar & Umrani, 2020; Edmondson, 2019). Structured training initiates the process, but long-term reinforcement through coaching and peer learning created the conditions for innovation to flourish beyond the implementation phase. Figure 4 reinforced the conclusion that training is not only a technical activity but a cultural driver of innovation. Leaders who invested in iterative, embedded learning approaches provided employees with the tools and confidence needed to sustain innovation, thereby ensuring that technological adoption extends into long-term organizational practice.

Comparison of Theme 3 to Academic Literature

Theme 3 aligned with a broad body of scholarship on organizational development, human capital theory, and change management, all of which emphasized that continuous learning is essential for successful technological innovation. Participants in this study stressed that both formal training programs and informal, peer-led approaches equipped employees to embrace and apply new technologies effectively. For example, several participants described mentorship, knowledge-sharing, and experiential learning opportunities as central to overcoming resistance and sustaining adoption. These findings reinforce earlier research showing that organizational flexibility and innovation capacity depended heavily on staff development (Martínez-Sánchez et al., 2020; Gahan et al., 2021). The emphasis participants placed on peer learning and role-specific support also reflected Kucharska and Erickson's (2023) knowledge-creation model, which highlighted how dynamic learning interactions helped amplify and internalize both explicit and tacit knowledge.

The literature strongly supported the idea that innovation thrives in organizations where learning is institutionalized. For example, Ghosh et al. (2021) found that firms with robust learning cultures adapt more effectively to technological change, while Kolb's (2014) experiential learning cycle illustrated why participants valued hands-on, role-specific training. By encouraging iterative experimentation, feedback loops, and reflective practice, leaders created conditions for employees to integrate new technologies into daily work. Participants' referenced to microlearning tools, digital platforms, and real-time performance support also mirror current trends in workplace

learning (Loh, 2021), suggesting that organizations that embedded training into everyday tasks achieved higher adoption rates than those relying solely on classroom-based programs. Aguinis (2023) stressed that effective training must be reinforced by management support and aligned with performance systems, a finding echoed in participants' accounts of how coaching, feedback, and teamwork strengthened learning transfer. The evidence and literature confirmed that organizational learning is not merely an add-on to innovative efforts but a critical driver of success. Training and development, whether formal or informal, foster resilience, adaptability, and long-term innovation outcomes. By institutionalizing continuous learning, organizations created cultures that support technological adoption and sustain performance improvements over time.

Analysis of Theme 3 Under DOI

The Diffusion of Innovation (DOI) Theory provided a valuable lens for interpreting Theme 3, which emphasized the role of training and organizational learning in technological adoption. According to Rogers (2003), innovation diffusion is both a technical and a social process that unfolds across five stages: knowledge, persuasion, decision, implementation, and confirmation. Participants in this study reinforced the importance of training in the early and intermediate phases, where employees first acquire knowledge and develop confidence in using new technologies. For example, several participants explained that role-specific and experiential training reduced anxiety and made systems feel more approachable. As P3 described, ongoing peer coaching and feedback “allowed us to build confidence and apply the new tools in real time,”

underscoring DOI's assertion that familiarity lowers perceived complexity (Zosu et al., 2024).

Participants also emphasized that innovations were more readily adopted when employees had the opportunity to test and observe them in practice. Workshops, microlearning, and informal coaching created low-risk spaces where staff could experiment before full-scale adoption. These processes mirror DOI's attributes of trialability and observability, which are essential for influencing attitudes during the persuasion and decision-making stages (Spinnewijn et al., 2024). Peer-led mentoring and internal knowledge-sharing platforms highlighted the role of social networks in spreading innovations, a point Rogers identifies as crucial to adoption.

These findings illustrated how training not only builds technical competence but also functions as a social mechanism for diffusion. Employees were more willing to adopt innovations when they could see tangible benefits such as greater efficiency or faster customer response demonstrated in real work contexts. This aligned with DOI's emphasis on comparative advantage, which strengthens adoption once benefits are visible. Leaders played a critical role by prioritizing training, modeling learning behaviors, and creating psychological safety for experimentation. These actions reflect DOI's concept of change agents, who reduce uncertainty, build trust, and accelerate adoption (Dearing & Cox, 2018). Applying the DOI framework to Theme 3 showed that training is not simply a support function but a strategic driver of innovation. By embedding structured, peer-driven, and experiential learning opportunities, organizations

cultivate the skills, confidence, and cultural readiness necessary for innovations to spread effectively and take root across the firm.

Theme 4: Leadership and Culture as Catalysts for Innovation Success

The fourth theme underscored the central role of leadership and organizational culture in shaping conditions that facilitated technological innovation and enhanced organizational performance. Participants emphasized that leadership was expressed not only through positional authority but also through behaviors that modeled openness, psychological safety, and values conducive to innovation. P1 described authenticity and transparency as key to building trust: “I do not have all the answers, and I let my team know that. We co-create solutions. I think when people feel included in the process, they are more willing to engage with change.” This perspective highlighted the importance of shared problem solving in motivating employee participation during innovation. P2 emphasized emotional intelligence and active listening as essential competencies for managing anxiety associated with technological change, stating, “Leadership must be empathetic. Innovation sometimes causes anxiety. People are more open when they feel heard.” To operationalize these values, P2’s organization introduced formal mechanisms such as regular feedback sessions and anonymous suggestion channels, which provided safe spaces for employees to share concerns and ideas.

Similarly, P3 described a deliberate organizational shift away from directive leadership toward shared leadership structures. She explained, “We moved away from top-down directives to shared leadership. We built agile teams, and leaders became facilitators more than commanders.” This approach improved agility, allowing cross-

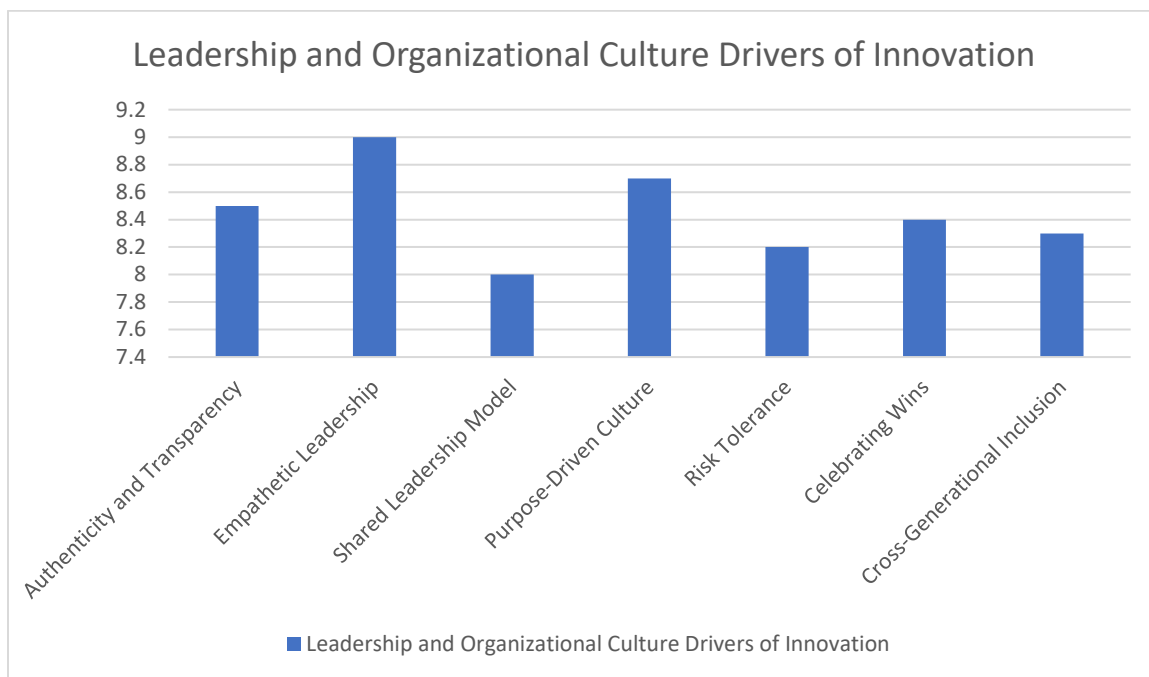
functional teams to adapt quickly to technological challenges and opportunities. P4 also stressed the significance of linking innovation to the organization's broader mission: "Our culture is purpose driven. Innovation is not just for efficiency; it is how we fulfill our mission better. Leaders here talk about the 'why' often." This focus on purpose gave employees a sense of stability during transitions and aligned innovative efforts with organizational values.

These accounts suggested that leadership vision and cultural alignment were critical for embedding innovation into organizational routines. By emphasizing transparency, empathy, shared decision-making, and mission-driven values, leaders created an environment where employees felt safe to experiment, voice concerns, and embrace new technologies. This aligned with research by Schein (2017), who argued that organizational culture provides the context within which innovation thrives, and by Goleman (2013), who highlighted emotional intelligence as a cornerstone of effective leadership during change. Rogers' (2003) Diffusion of Innovation theory also supported these findings, particularly the role of opinion leaders and social influence in shaping adoption. By modeling openness and aligning innovation with purpose, leaders served as credible change agents, reducing uncertainty and reinforcing employee commitment. Theme 4 illustrates that technological innovation was sustained not only through systems and tools but through leadership vision and cultural commitment. Leaders who communicated purpose, demonstrated empathy, and fostered inclusivity created conditions for innovation to thrive. This foundation of trust and alignment connected

directly to Theme 5, which explored how collaboration and knowledge-sharing practices further supported the diffusion of innovation across organizations.

Figure 4

Leadership and Organizational Culture Drivers of Innovation



Note. This figure depicts the categories and codes that shaped Theme 4, emphasizing participants' perspectives on upskilling, collaboration, and continuous learning.

Figure 4 illustrates the proportional importance participants assigned to leadership and cultural behaviors that facilitated technological innovation, highlighting empathy, purpose, and transparency as the most influential practices. The tallest bar in Figure 4 represents Empathetic Leadership, which received the maximum effect score of 9.0. Participants explained that leaders who demonstrated emotional intelligence, engaged in active listening, and created psychological safety were best positioned to

foster innovation, as employees felt supported and understood during periods of transition. Closely following were Purpose-Driven Culture and Authenticity & Transparency, with scores of 8.7 and 8.5, respectively. P4 emphasized that when leaders consistently communicated the purpose behind innovation projects, teams experienced stability and alignment, even in times of disruption. P1 added that authenticity and transparency acknowledging limitations and inviting co-creation made employees feel valued and empowered to contribute to solutions.

Participants also described the importance of celebrating achievements and promoting cross-generational inclusion. Recognizing incremental wins reinforced commitment to innovation, while intentionally integrating perspectives across age groups closed knowledge gaps and strengthened trust. Finally, participants P3 & P1 emphasized Risk Tolerance and Shared Leadership Models, which, though rated slightly lower, were still seen as significant. P3 explained that delegating decision-making authority to agile, cross-functional teams increased responsiveness and reduced fear of failure, creating a culture where experimentation was encouraged.

These findings highlight that innovation in organizations was not only a technical process but also a cultural one. Leaders who embodied empathy, transparency, and purpose-driven communication-built trust and psychological safety, which encouraged employees to engage with innovation. Celebrating progress and promoting inclusion reinforced shared ownership of innovation outcomes, while fostering risk tolerance and distributed leadership empowered employees to experiment and adapt. These practices align with Schein's (2017) assertion that organizational culture shapes

innovation capacity, and with Rogers's (2003) observation that opinion leaders influence adoption by modeling credibility and reducing uncertainty.

Figure 4 reinforces the conclusion that sustainable innovation depends on leadership's ability to cultivate a supportive culture. By combining empathy, purpose, transparency, and inclusivity with a tolerance for experimentation, leaders ensured that technological advancements remained human-centered and widely adopted. These cultural foundations created the conditions for Theme 5, where collaboration and knowledge-sharing practices further advanced the diffusion of innovation.

Comparison of Theme 4 to Academic Literature

Theme 4 highlights the central role of leadership behaviors and organizational culture in driving technological innovation, demonstrating that innovation success depended as much on cultural dynamics as on technical expertise. Participants in this study emphasized that leaders who modeled inclusion, openness, and authenticity fostered environments where employees felt safe to adopt new practices. For example, P1 explained that authenticity created trust and encouraged co-creation, while P2 highlighted empathy and active listening as critical for easing anxieties associated with technological change. These accounts echoed the findings of Saranani et al. (2024), who observed that leadership is the primary mechanism through which organizational culture is shaped during times of technological transition.

Participants underscored the importance of psychological safety and learning-oriented cultures where experimentation and even failure were treated as part of growth. P3 explained that shared leadership allowed employees to engage more actively in

innovation, while P4 linked innovation to the broader mission of the organization, ensuring that change was anchored in purpose. These insights align with Jin et al. (2022), who found that openness and leader support foster employee voice and innovative behavior, and with Knezović and Drkić (2021), who reported a positive association between transformational leadership and innovation performance across organizations.

Taken together, the findings demonstrated that leadership behaviors such as transparency, empathy, and vision directly influence the cultural climate for innovation. Leaders who consistently communicated purpose (P4), fostered trust through transparency (P1), and promoted inclusive practices (P2 and P3) reduced employee resistance and created conditions conducive to creativity. This aligned with Leal D'Avila and De Montreuil Carmona (2025), who emphasized that leaders capable of articulating a compelling vision enhanced innovation in knowledge-intensive sectors, and with Mogaji and Dimingu (2024), who argued that participatory leadership supports co-creation in flexible, cross-functional systems. Literature on innovative climates highlighted that supportive leadership signals to employees that creativity is valued (Xie et al., 2018), a pattern evident in participants' descriptions of feedback sessions, suggestion channels, and recognition of contributions. Theme 4 demonstrated that innovation is not merely a technical process but also a cultural and social one. Leaders who build trust, encourage participation, and maintain a clear organizational purpose help cultivate resilient cultures where innovation can thrive. This conclusion provides a foundation for Theme 5, where the focus shifts to collaboration and knowledge-sharing practices that further sustain technological innovation.

Analysis of Theme 4 Under DOI

Theme 4 can be interpreted through Rogers' (2003) Diffusion of Innovation (DOI) Theory, which explained how innovations spread within social systems and highlighted the roles of leadership and culture in shaping adoption. Participants in this study consistently described leadership as a driving force that reduced uncertainty and encouraged experimentation. For instance, P1 and P4 emphasized that transparency and articulating the rationale for technological change-built trust and lessened resistance. These practices resonate with DOI's persuasive phase, where clear communication and trust are critical for adoption (Laufer et al., 2025). Similarly, participants noted that when leaders fostered psychological safety and collaboration, employees were more inclined to test new tools and propose improvements. This reflects DOI's principle that innovations are more readily adopted when they aligned with existing values and norms (Ribeiro et al., 2018; Treviño et al., 2020).

These findings demonstrate that leaders acted as opinion leaders and change agents, central figures in DOI who influenced others to perceive and adopt new practices (Dearing & Cox, 2018; Thakhathi et al., 2019). By modeling participation, whether through piloting programs, acknowledging employee contributions, or supporting cross-functional teams leaders increased the visibility of innovation's benefits, reinforcing DOI's observability attribute. They also reduced perceived complexity by providing mentorship, training opportunities, and emotional support, thereby making innovations more approachable. This aligned with DOI's assertion that compatibility, simplicity, and visible advantages are essential for sustained adoption. Viewed through the DOI lens,

Theme 4 shows that leadership and culture do not simply provide a backdrop for innovation but actively shape the pace and depth of adoption. Leaders who model openness, create supportive environments, and promote a culture of experimentation enable innovations to diffuse more rapidly and sustainably across the organization. This insight builds a bridge to Theme 5, where collaboration and knowledge-sharing further support the institutionalization of innovation.

Theme 5: Customer-Centric Innovation as a Strategic Performance Lever

Table 5

Theme 5: Customer-Centric Innovation

| Theme | Participant evidence | Sample excerpt from interview | Interpretation |
|-----------------------------|--|--|---|
| Customer-Centric Innovation | P1, P3, P4, P6, P8, P9, P10, P11, P12, P13 | <p>“We track customer feedback as part of the innovation lifecycle. It’s not just post-implementation—we assess ideas early with users.” (P1)</p> <p>“Our customers told us they were frustrated with turnaround times. That feedback became the business case for launching</p> | <p>Leaders engaged customers throughout the innovation cycle by using feedback loops, analytics, co-creation, and inclusivity practices. These strategies improved adoption rates, increased satisfaction, and strengthened customer loyalty by ensuring innovations aligned with real needs rather than assumptions.</p> |

| Theme | Participant evidence | Sample excerpt from interview | Interpretation |
|-------|----------------------|--------------------------------------|----------------|
| | | a new support platform.” (P3) | |

The fifth theme highlights that technological innovation achieves the greatest impact when it is customer-centric, meaning that strategies are grounded in user needs, feedback, and real-world experiences rather than being developed in isolation as shown in Table 5. Participants consistently emphasized the importance of engaging customers throughout the innovative lifecycle. P1 explained, “We track customer feedback as part of the innovation lifecycle. It’s not just post-implementation; we assess ideas early with users.” This proactive engagement allowed leaders to design systems and services that reflected actual customer needs. Similarly, P3 described how dissatisfaction with responsiveness catalyzed a major project: “Our customers told us they were frustrated with turnaround times. That feedback became the business case for launching a new support platform.” P4 reinforced the value of data-driven insights, noting, “We analyze user behavior what features are used, where drop-offs happen. That data helps us refine and personalize services.” Other participants described how customer input balanced automation with human support. For example, P6 observed that while self-service portals empowered users, “we made sure human support remained for complex cases,” ensuring trust and inclusivity.

Additional accounts illustrated customer co-creation and continuous feedback as central to innovation success. P8 reported that clients involved in product testing shaped

features and workflows, while P9 described mapping customer journeys to identify friction points that became opportunities for innovation. Participants also noted the importance of dynamic engagement tools: P10 emphasized investing in real-time feedback systems, and P11 explained that correlating Net Promoter Scores with specific innovations helped measure what resonated with customers. P12 underscored accessibility, stating, “Innovation should not create exclusion,” while P13 highlighted that frontline employees often acted as conduits of customer insights, channeling suggestions upstream.

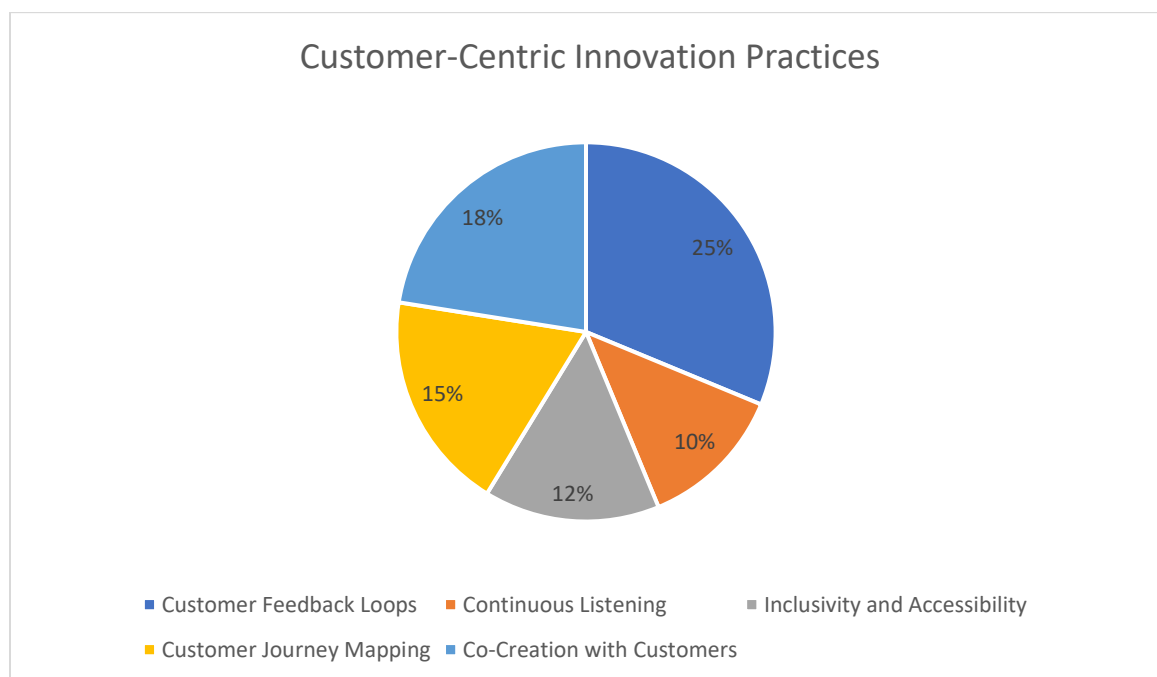
These findings demonstrate that customer-centric innovation enhances adoption, satisfaction, and trust by ensuring that new technologies directly address user pain points. Engaging customers early reduces the risk of misaligned products, while continuous feedback creates iterative improvement loops. Co-creation and inclusivity further strengthen relationships, building loyalty and long-term value. This approach aligned with the broader innovation literature, which emphasizes that customer participation enhanced both the quality and relevance of innovation outcomes (Chesbrough, 2020; Prahalad & Ramaswamy, 2004). Data-driven practices such as behavioral analytics and NPS tracking illustrated how organizations transform subjective feedback into actionable strategies, a trend supported by research on customer-driven digital transformation (Verhoef et al., 2021).

Theme 5 demonstrated that innovation cannot be separated from customer experiences. Leaders who integrated customer feedback into ideation, design, and implementation processes not only enhanced functionality but also built loyalty and

competitiveness. This finding creates a natural bridge to Theme 6, which examines how collaboration and knowledge-sharing complement customer-focused strategies to strengthen innovation outcomes.

Figure 3

Customer-Centric Innovation Practices



Note. This figure outlines the codes and categories that contributed to Theme 5, showing how leaders fostered collaboration across teams to drive innovation.

Figure 5 demonstrates the relative importance participants attributed to specific practices that facilitated customer-centric innovation, underscoring that sustainable technological transformation depended on treating customers as collaborators rather than passive recipients. The largest category in the figure, Customer Feedback Loops (25%), illustrates that participants viewed systematic and continuous feedback collection as the

most essential driver of innovation. Leaders emphasized that engaging customers early and throughout the lifecycle allowed organizations to test ideas, refine features, and validate assumptions with real-world input. User Analytics (20%) followed closely, reflecting the importance of monitoring client behavior to identify which features were most valued, where drop-offs occurred, and how customers interacted with services. P4 explained that analyzing usage patterns allowed teams to personalize offerings and improve adoption rates.

Co-creation with Customers (18%) was also identified as a critical practice, where organizations involved clients in testing and design. P8 described how this approach not only ensured alignment with user needs but also deepened trust and strengthened relationships. Customer Journey Mapping (15%) highlighted the role of identifying pain points across the entire lifecycle from onboarding through renewal as P9 noted, innovations often emerged directly from efforts to resolve sources of customer frustration. Inclusivity and Accessibility (12%) emphasized that innovation must serve all users, including those with diverse abilities and levels of technological proficiency. P12 reinforced this point, stating, “Innovation should not create exclusion.” Finally, Continuous Listening (10%) reflected the importance of maintaining engagement after implementation, with P10 and P11 describing tools that capture real-time feedback and correlate sentiment metrics such as Net Promoter Scores with specific innovations.

The distribution of priorities in Figure 5 highlights that customer-centric innovation requires a balance of structured mechanisms and relational practices. Feedback loops and analytics provided objective data, while co-creation and inclusivity

fostered emotional connection and trust. Together, these practices illustrated that innovation is iterative and adaptive, grounded in customer realities rather than assumptions. The emphasis participants placed on inclusivity also reflected a broader ethical dimension of innovation ensuring that technological advances expand access rather than reinforced exclusion. These findings are consistent with research showing that firms that embed customer voices into the innovation cycle achieve higher satisfaction, adoption, and loyalty (Chesbrough, 2020; Verhoef et al., 2021).

Figure 5 reinforced the study's conclusion that successful technological innovation depends on continuous, dynamic engagement with customers. By combining structured tools such as analytics with relational practices such as co-creation and inclusivity, organizations ensured that innovations remain relevant, widely adopted, and socially responsive. This customer-centered foundation connected directly to Theme 6, which explores how collaboration and knowledge-sharing practices further extend innovation capacity across organizational boundaries.

Comparison of Theme 5 to Academic Literature

Theme 5 highlighted the role of customer-centric innovation in improving organizational performance, aligning with recent research in innovation strategy, service design, and customer experience management. Participants consistently emphasized customizing technological solutions to meet customer requirements, incorporating structured feedback mechanisms, and collaborating with end users to co-create new offerings. These practices reflect the growing scholarly consensus that customer involvement is essential for ensuring the relevance, adoption, and sustainability of

innovation (Wilson et al., 2020). For example, participants P10, P11 described testing prototypes with users and refining services through continuous feedback loops, directly applying what Lewis et al. (2024) described as the “jobs to be done” perspective, in which successful innovations address customers’ core problems in competitive markets.

The findings also corresponded with the principles of design thinking, which prioritized empathy and iterative prototyping to create solutions that are both technically robust and emotionally resonant. Houssaini et al. (2024) noted that design thinking enhanced innovation outcomes by embedding user perspectives throughout the problem-solving process, a pattern evident in participants’ use of journey mapping, customer testing, and satisfaction tracking. Similarly, literature on co-creation supported the observation that active customer participation improves innovation quality and loyalty. Studies by Tran et al. (2023) and Albuquerque and Ferreira (2022) demonstrated that engaging consumers in pilot programs or feedback cycles strengthens perceived value, a finding mirrored in participants’ accounts of user testing and collaborative design processes.

Customer-centric innovation also aligned with scholarship on customer experience (CX) innovation. Participants’ use of analytics tools and Client Relationship Management platforms to monitor customer behavior reflects Hassan et al.’s (2024) observation that digital advancements such as predictive customization, real-time responsiveness, and self-service tools have reshaped customer expectations. This integration of behavioral data with service design illustrated how firms can personalize interactions and improve satisfaction, reinforcing the strategic importance of CX

innovation. The literature further frames customer-centric innovation as a driver of agility and adaptability. Teece (2018) argued that firms capable of sensing and responding to evolving customer needs gain competitive advantage in dynamic environments.

Participants focused on responsiveness, flexibility, and service excellence illustrated this principle in action. Theme 5 demonstrated that embedding customer insights into the innovation process enhanced adoption, fostered loyalty, and strengthened long-term organizational competitiveness.

Analysis of Theme 5 Under DOI

The Diffusion of Innovation (DOI) Theory provided a useful lens for interpreting Theme 5, showing how customer-centric innovation facilitates adoption by aligning with key DOI attributes such as relative advantage, compatibility, trialability, and observability. Participants described that placing customer needs and feedback at the center of technological initiatives enhanced both organizational adoption and customer satisfaction. P1 emphasized that early feedback helped refine systems before implementation, while P3 noted that customer dissatisfaction with response times directly shaped the development of a new support platform. These examples illustrate DOI's concept of relative advantage, in which innovations are more readily adopted when perceived as superior to existing practices (Dearing & Cox, 2018). Similarly, participants such as P6 highlighted that self-service platforms and mobile tools resonated strongly with customer preferences for autonomy and convenience, demonstrating DOI's dimension of compatibility.

Other practices reinforced the importance of trialability and observability. P8 explained how pilot testing with key clients created opportunities to trial innovations in low-risk environments, while P9 used journey mapping to make the benefits of improved processes visible. These iterative cycles of customer feedback reduced uncertainty and made innovation outcomes more tangible, reflecting findings by Thomson et al. (2023) that visible results encourage wider adoption. These accounts show that customer-centric innovations gained traction because they aligned closely with DOI's attributes. Feedback loops enhanced compatibility by embedding tools within existing behaviors, while pilot programs and analytics supported trialability and observability.

Moreover, customer involvement created social proof: as satisfied clients adopted and advocated for innovation, their experiences influenced others in the system, accelerating diffusion. Participants also described the role of leaders and frontline staff as change agents, advocating for customer insights and translating them into actionable innovation strategies. By bridging customer feedback with organizational practice, leaders reduced uncertainty and reinforced adoption pathways across both employees and customers (Owusu-Antwi & Amenuvor, 2023). Viewed through the DOI framework, Theme 5 demonstrated why customer-centric innovations diffuse rapidly and sustainably. By co-creating with users, ensuring alignment with customer values, and making benefits observable, organizations not only enhanced adoption but also built trust and loyalty. This theoretical perspective confirms that customer inclusion is not simply an ethical imperative but also a strategic catalyst for innovative success.

Theme 6: Scalability and Integration Challenges in Technological Innovation

Table 4

Theme 6: Scaling and Integration of Technological Innovations

| Theme | Participant evidence | Sample excerpt from interview | Interpretation |
|--|---------------------------------------|---|--|
| Scaling and Integration of Technological Innovations | P2, P4, P6, P7, P8, P9, P10, P11, P13 | “We use JIRA, but every team uses it differently. There’s no standardized workflow. That creates chaos when you try to generate organization-wide reports or scale solutions.” (P2) | Participants highlighted barriers to scaling and integration such as inconsistent workflows, legacy systems, resource constraints, and cultural misalignments. Successful scaling requires standardized processes, robust technical infrastructure, and parallel investment in leadership, training, and organizational capacity. Without these foundations, innovations risk stalling during integration. |

The sixth theme underscored that while technological innovation can improve efficiency and performance, its long-term success depended on how effectively organizations scale and integrate new tools across systems, teams, and processes. Participants highlighted multiple barriers that arise when moving from localized adoption

to organization-wide integration. P2 described how inconsistent workflows created chaos even when using widely adopted tools such as JIRA: “We use JIRA, but every team uses it differently. There’s no standardized workflow. That creates chaos when you try to generate organization-wide reports or scale solutions. Similarly, P4 emphasized the challenge of merging new platforms with legacy infrastructure, noting, “You want to bring in the best tools, but you realize your older infrastructure cannot manage it.” We had to pause rollouts to upgrade back-end systems first.”

Participants P4 and P7 pointed to difficulties in scaling pilots across the organization. P6 reflected, “We piloted a tool successfully in one department, but when we expanded company-wide, usage dropped. What worked for one team did not work for all.” P7 added that data integration across platforms presented both financial and technical barriers: “Integrating customer data across platforms is tough. You have CRMs, support tools, and email systems with different data structures. Getting them to ‘talk’ is expensive and time-consuming.”

Scaling also requires investments in organizational capacity. P8 explained, “It is not enough to scale tech one must scale leadership, support structures, and training. Otherwise, the innovation breaks under its own weight.” P9 echoed this view, observing that integration exposed deeper cultural and procedural misalignments: “When we tried integrating a new analytics platform, it exposed that teams were not using data the same way. Innovation forced us to confront cultural and structural inconsistencies.” Resource constraints further compounded the challenge, as P10 noted: “We had great ideas, but when we tried scaling, resource limitations held us back whether it was bandwidth,

budget, or staff capability.” Finally, P11 stressed the importance of change management, explaining that “just because a tool works does not mean people will use it. You need alignment across leadership and operations to ensure adoption at scale.” P13 summarized the challenge bluntly: “Integration is the graveyard of innovation. It is where good ideas die if you do not plan for scale.”

These accounts illustrated that integration and scalability challenges extend beyond technical obstacles. Inconsistent workflows, data incompatibility, and legacy infrastructure created structural barriers, while cultural misalignments, resource limitations, and weak change management practices undermined adoption at scale. The findings aligned with research suggesting that innovation success depended on both technological readiness and organizational alignment (Henderson & Clark, 1990; Mikalef et al., 2020). Standardization of workflows and robust data governance emerged as critical enablers, while leadership commitment to building capacity and supporting cultural adaptation was equally important. Without these foundations, even successful pilot programs risk stalling when scaled across the enterprise. Theme 6 therefore demonstrated that scalability and integration are not merely technical challenges but strategic ones. Leaders must anticipate barriers, invest in systems and people simultaneously, and foster cultures that support alignment and agility. Addressing integration proactively ensured that promising innovations do not falter but instead contributed to sustained performance improvement and long-term organizational growth.

Comparison of Theme 6 to Academic Literature

Scalability and integration emerged as a critical challenge in the implementation of technological innovations, with participants highlighting that success relies not only on pilot initiatives but also on the organization's ability to align new systems with existing infrastructures and processes. This observation reflects a broader consensus in the literature that innovation sustainability hinges on effective scaling strategies and integration mechanisms.

Scholars have long emphasized that many technological innovations fail at the scaling stage due to fragmented adoption and poor infrastructure alignment. Lyytinen and Newman (2008) observed that enterprise-level innovations often encountered resistance when they disrupt entrenched routines or clash with legacy systems. Similarly, Van Winden and Van den Buuse (2017) documented how large organizations struggle to scale technologies across departments without standardized workflows. More recent studies confirm that governance frameworks and architectural standards can alleviate integration difficulties by promoting uniformity and cross-functional alignment (Attah et al., 2024).

The participants' experiences resonated strongly with these findings. Reports of inconsistent tool usage, such as divergent JIRA workflows, mirrored the literature on fragmented adoption. Difficulties of merging legacy systems with modern platforms exemplified the hidden costs of technical debt noted by researchers. Participants who emphasized modular rollouts, iterative integration, and training support reflect Salvato and Vassolo's (2018) argument that dynamic capabilities defined the ability to adapt and reconfigure competencies and are essential for successful scaling. Moreover, their

accounts revealed that integration challenges are not solely technical but also organizational, aligning with sociotechnical systems theory, which stressed the need to optimize both social and technical structures simultaneously.

Thus, Theme 6 demonstrated that scalability and integration challenges are not merely operational obstacles but strategic imperatives. Successful innovation depended on aligning technology with organizational processes, ensuring cultural readiness, and instituting governance frameworks that support cross-functional consistency. Scholars have emphasized that many technological innovations failed at the scaling stage due to fragmented adoption and poor infrastructure. Broader consensus aligned that integration and scalability are central to sustaining technological transformation.

Analysis of Theme 6 Under DOI

The Diffusion of Innovation (DOI) Theory provides a valuable lens for understanding the challenges of scaling and integrating technological innovations within organizations. According to DOI, the adoption of new technologies is shaped by perceived attributes such as complexity, compatibility, trialability, and observability, as well as by organizational readiness and leadership support (Rogers, 2003; Amini & Jahanbakhsh Javid, 2023). The findings from this study revealed that scalability and integration barriers often emerged when new technologies conflict with existing processes, infrastructures, or cultural norms.

Participants consistently described difficulties in expanding innovations beyond pilot projects and embedding them into daily operations. For example, inconsistent JIRA workflows, legacy infrastructure, and departmental silos were reported as obstacles to

integration. These experiences aligned with Rogers's (2003) assertion that innovations are less likely to spread when they are incompatible with established systems or routines. Similarly, prior research confirmed that high complexity slowed adoption and created resistance, particularly when integration required technical expertise or organizational restructuring (Call & Herber, 2022). DOI theory also highlighted the role of trialability in easing adoption, and participants who employed staged rollouts or modular pilots reported greater success than those who attempted large-scale deployment at once (Murillo & Robles, 2019). Finally, observability, the extent to which innovation outcomes are visible was identified as a challenge, since leaders and employees often struggled to see immediate benefits from integration efforts across multiple systems.

The participants' insights reinforce DOI's central claim that innovation adoption is as much a social and organizational process as it is a technical one. When new tools are seen as too complex or poorly aligned with existing practices, adoption slows, and integration falters. Conversely, staged rollouts allowed organizations to reduce risk, build confidence, and adapt innovations incrementally, demonstrating the practical value of trialability in diffusion. The limited visibility of results during early scaling also mirrored DOI's emphasis on observability: without clear, measurable benefits, it was difficult for organizations to sustain momentum or secure leadership commitment. Moreover, the absence of strong change agents and cross-functional advocates echoed DOI's recognition of the importance of opinion leaders in driving diffusion (Amini & Jahanbakhsh Javid, 2023). These individuals not only reduced uncertainty but also legitimized innovations by modeling adoption across networks.

Theme 6 demonstrated that integration and scalability challenges are not simply about technology but are deeply tied to cultural, structural, and social dynamics. DOI theory clarified why adoption slows when innovations are perceived as complex, misaligned, or invisible in their benefits, and why success improves when leaders champion change, trialability is prioritized, and communication is consistent. Addressing these factors through alignment of strategy, leadership advocacy, and incremental learning strengthens the environment for diffusion and helps organizations transform pilot innovations into sustainable, system-wide change.

Theme 7: Technology–Human Balance as a Driver of Sustainable Innovation

Table 5

Theme 7: Balancing Technology with Human Capabilities

| Theme | Sample excerpts from interviews | Interpretation |
|--|--|---|
| Balancing Technology with Human Capabilities | <p>“The moment your team feels replaced or devalued by a tool, you lose buy-in.” (P1)</p> <p>“We implemented a self-service IT portal, but we did not remove live support. Some users need that reassurance.” (P3)</p> <p>“People worry about being made redundant when they hear ‘digital transformation.’ We had to be clear</p> | <p>Innovation must empower and respect employees to secure trust and engagement.</p> <p>Hybrid solutions balance efficiency with human reassurance.</p> <p>Clear communication reduces fears of</p> |

| Theme | Sample excerpts from interviews | Interpretation |
|-------|--|---|
| | technology was here to support their work, not replace them.” (P5) | redundancy and encourages adoption. |
| | “We showed how automation would reduce repetitive work and free up time for more strategic tasks. Framing mattered.” (P6) | Framing technology as enabling higher-value work promotes buy-in. |
| | “Even with automation, we always provide a fallback human channel. Customers—and staff—need to feel there is someone who understands them.” (P7) | Maintaining human connection fosters trust in innovation. |
| | “Just because something can be automated does not mean it should be. We had to ask: is this change good for our people and our culture?” (P8) | Ethical considerations are essential in automation decisions. |
| | “We invited team members to assess tools before they were implemented. Their feedback influenced the final solution.” (P10) | Employee involvement strengthens ownership and trust in innovation. |
| | “We once deployed a chatbot without sufficient employee input. It failed. People during rollout creates | Excluding employees |

| Theme | Sample excerpts from interviews | Interpretation |
|-------|--|--|
| | did not trust it, and support staff felt left out.” (P11) | resistance and failure risks. |
| | “Tech cannot replace intuition, empathy, or creative thinking. Our job as leaders is to use technology to unlock those qualities—not suppress them.” (P13) | Leadership must frame technology as an amplifier of human strengths. |

The seventh theme emphasized the importance of balancing technological advancements with human capabilities during the innovation process as shown in Table 6 above. While new technologies can significantly enhance efficiency and organizational performance, participants highlighted that innovation must be implemented in ways that respect, empower, and support employees rather than replace them. Maintaining trust, psychological safety, and meaningful employee engagement emerged as central to successful adoption.

Several participants underscored the risks of employees feeling displaced by technology. For example, Participant 1 cautioned, “The moment your team feels replaced or devalued by a tool, you lose buy-in.” Similarly, Participant 5 noted, “People worry about being made redundant when they hear ‘digital transformation.’ We had to be clear that technology was here to support their work, not replace them.” Participant 3 offered a practical example of balancing efficiency and reassurance by explaining, “We implemented a self-service IT portal, but we did not remove live support. Some users

need that reassurance. So, we layered tech in a way that gave people options.”

Participants also connected automation to opportunities for growth. Participant 6 explained, “We showed how automation would reduce repetitive work and free up time for more strategic tasks. Framing mattered.” Ethical considerations were also raised, with Participant 8 remarking, “Just because something can be automated does not mean it should be. We had to ask: is this change good for our people and our culture?” Finally, multiple participants stressed the importance of employee involvement in decision-making. Participant 10 described inviting team members to test tools before adoption, while Participant 11 warned that excluding staff during the rollout of a chatbot led to distrust and eventual failure.

These findings highlighted that innovation cannot be separated from its human impact. When employees perceived technology as a threat to their roles or values, resistance grows, undermining adoption. Conversely, positioning technology as a complement to human strengths fosters trust, motivation, and buy-in. The responses demonstrated the importance of empathy and communication in framing automation. By presenting innovation as a tool to reduce repetitive tasks and enable higher-value work, leaders increased acceptance and eased anxieties. Participants experiences underlined the ethical dimension of technological adoption: decisions about what to automate are not purely technical but cultural and moral choices that affect employee well-being and organizational values. Importantly, the inclusion of employees in testing and decision-making builds ownership and increases the likelihood of sustained success. This supports the broader view that human-centered innovation requires balancing efficiency with

empowerment and ensuring that technology augments rather than diminishes human contributions.

Theme 7 illustrated that technological innovation must be grounded in respect for human capabilities and experiences. Participants' insights confirmed that buy-in, trust, and ethical alignment are central to adoption, and that innovation thrived when employees are engaged as collaborators rather than passive recipients. By preserving human connection, addressing fears of redundancy, and involving employees in decision-making, organizations created an innovative culture where technology and people reinforced rather than compete.

Comparison of Theme 7 to Academic Literature

Theme 7 emphasizes the importance of balancing technological advancement with human capabilities to foster sustainable innovation. Both the findings from this study and scholarly literature underscore that innovation succeeds when it enhances, rather than replaces, human potential by promoting trust, psychological safety, and ethical application.

Participants consistently described how employee acceptance of new technologies depended on whether innovations were framed as supportive tools rather than replacements. For example, several leaders highlighted the need to provide hybrid solutions, such as combining self-service portals with human support, to ensure employees and customers felt valued and reassured. Others underscored that resistance surfaced when technology disrupted existing roles or cultural norms, but adoption improved when innovations respected established practices and empowered workers.

These findings mirrored the work of Zanello et al. (2016), who argued that compatibility between innovations and organizational systems is central to successful diffusion.

Similarly, literature on responsible innovation highlighted that psychological safety and ethical framing are essential in ensuring employee buy-in (Brougham & Haar, 2018; Stahl et al., 2021).

These findings aligned strongly with Rogers' Diffusion of Innovation (DOI) Theory. DOI highlighted perceived relative advantage, compatibility, and complexity as critical determinants of adoption (Rogers, 2003). In this study, participants viewed innovations more positively when they complemented human work processes and demonstrated clear advantages, such as reducing repetitive tasks or improving service outcomes. Compatibility was particularly salient; innovations that clashed with employee roles or organizational culture triggered resistance, while those that fit existing norms gained faster acceptance. Trialability and observability also played key roles. By allowing employees to test tools in safe, low-risk environments, leaders reduced uncertainty and fostered ownership. Visible benefits, such as efficiency gains or better customer service, further reinforced commitment echoing DOI's emphasis on lowering adoption barriers through experiential learning and observable results (Dearing & Cox, 2018).

The analysis is also supported by sociotechnical systems theory, which emphasizes that effective innovation required the simultaneous optimization of both human and technical subsystems (Sony & Naik, 2020). Participants in this study reported challenges when technology was introduced without sufficient attention to human factors,

reinforcing the need for balanced, people-centered strategies. Davenport and Kirby (2016) argued that augmented intelligence, technologies designed to enhance rather than replace human judgment, represented the most sustainable model for digital transformation. Participant accounts of maintaining human channels, offering choice, and engaging employees in decision-making reflect this principle in practice.

In conclusion, Theme 7 demonstrated that successful technological innovation depended as much on how innovations are framed, perceived, and integrated into human systems as on their technical functionality. By enhancing employee contributions rather than diminishing them, organizations can foster trust, sustain adoption, and achieve long-term performance objectives. This finding aligned with DOI theory and broader scholars on responsible innovation, confirming that technology must serve as a complement to human creativity, empathy, and judgment if it is to deliver meaningful and lasting value.

Analysis of Theme 7 Under DOI

The Diffusion of Innovation (DOI) Theory offers a valuable framework for understanding Theme 7 by balancing technological advancement with human capabilities. This theory emphasized that adoption depended not only on the technical merits of an innovation but also on its alignment with people's beliefs, values, and emotional readiness (Al-Razgan et al., 2021). Innovation succeeds when it is framed as a tool that supported and empowered people, rather than one that replaces or threatens them.

Participants in this study repeatedly stressed the importance of portraying technology as complementary to human work. Several leaders described challenges that

arose when employees perceived automation as undermining their roles or job security. Resistance emerged most strongly when new tools were introduced without communication, reassurance, or employee involvement. Conversely, adoption increased when innovations were designed around human-centered outcomes for example, by engaging employees in decision-making, communicating clearly about the purpose of the tools, and maintaining options for human support alongside digital solutions. These insights reflect DOI's compatibility principle, which suggests that innovations spread more effectively when they aligned with users' prior experiences, cultural norms, and needs.

DOI further highlighted complexity, trialability, and observability as central to adoption. Participants explained that resistance often stemmed from misconceptions or limited exposure to new tools. Leaders reduced this complexity through training, mentoring, and hands-on demonstrations that made innovations more understandable and less intimidating. Trialability emerged as particularly influential, with many participants noting that allowing staff to experiment with technologies in safe, low-pressure environments-built trust and reduced fear of failure. Observability was also critical: when leaders could show tangible benefits such as faster service, lighter workloads, or better decision-making employees were more willing to accept and integrate innovations. These findings align with Al-Razgan et al. (2021), who argued that visible, concrete results accelerated the spread of innovations. Participants identified the role of change agents, leaders or peers who modeled usage, demonstrated empathy, and bridged the technical

and human dimensions of change as essential in building confidence and sustaining adoption.

In summary, applying DOI theory to Theme 7 demonstrated that technological innovation cannot be understood in isolation from human systems. Adoption depended on addressing the emotional, psychological, and ethical context as much as on technical execution. By aligning innovations with employee values, reducing complexity, enabling safe trials, and ensuring visible benefits, leaders can create environments where workers feel like collaborators rather than casualties of change. This integration of empathy and inclusivity into the diffusion process confirms that the human element is a decisive factor in whether innovations succeed or fail.

Applications for Professional Practice

This study's results, which examined the tactics employed by business executives to deploy technological innovation. The research identified many interconnected techniques that, when implemented successfully, can markedly enhance organizational results. The initial application pertained to change management and employee adoption tactics, including coaching, clear communication, and relationship cultivation. Business leaders may enhance professional practice by implementing organized change management programs that equip staff for continuous innovation. By promoting transparent communication and offering explicit justifications for change, leaders may diminish opposition and improve employee engagement with new technology.

The second primary use is data-driven decision-making. Professionals in leadership roles can gain advantages by implementing comprehensive analytics systems that monitor performance metrics, including defect rates, cycle time, and customer satisfaction. These data points not only inform strategy enhancement but also substantiate technical investments. Incorporating both quantitative and qualitative feedback systems guarantees ongoing enhancement and adaptability to the requirements of internal and external stakeholders. The study highlighted the essential importance of strategic leadership and culture in fostering innovation. Professional practice may be improved by fostering genuine leadership styles that emphasize vulnerability, cooperation, and collective learning. Leaders who include teams in decision-making and promote a culture of continuous learning can enhance innovation adoption and organizational resilience.

The fourth application pertained to the equilibrium between technology and human capabilities. Leaders may enhance professional practice by framing technology as an instrument for augmenting rather than supplementing human capabilities. Promoting the ethical and empathic application of artificial intelligence and automation ensures that technologies enhance, rather than undermine, staff roles and customer connections. The study's findings on training and organizational learning underscored the significance of experiential and peer-led learning efforts. Business executives should include informal learning strategies such as podcasts, book clubs, and vendor-led workshops in their professional development programs to maintain knowledge agility in a rapidly evolving digital environment. Through using these insights, executives might enhance their strategy methodology regarding technological innovation. This facilitates enhanced

company performance as well as sustained organizational growth and adaptation in competitive landscapes.

Implications for Social Change

This qualitative study results examined the tactics employed by business executives to deploy technological innovation and improve performance, holding significant implications for positive social change. Based on Rogers's (2003) Diffusion of Innovation Theory, the highlighted techniques facilitate both organizational progress and inclusive socio-economic growth. These strategies encompassed change management, data-driven decision-making, ethical leadership, and digital transformation possess the capacity to revolutionize organizational contributions to social well-being.

Enhancing the Local Workforce with Digital Preparedness

A fundamental implication is the empowerment of the labor force via digital transformation. The research highlighted tactics including coaching, relationship development, and peer-led learning, which correspond with capacity-building frameworks for enhancing worker skills in swiftly evolving sectors (Tari-Keresztes et al., 2021). As technology innovation becomes integral to operations, employees must gain support through clear communication, technical training, and leadership involvement. This enhanced organizational adaptability and mitigated unemployment and underemployment by ensuring that workers-maintained competitiveness in the digital economy (Tilly et al., 2022). Integrating innovation into employee development programs enables firms to enhance human capital generation, a crucial element for

national growth. These approaches may be expanded to other industries, cultivating a digitally proficient, resilient, and adaptive workforce that enhances national production.

Enhancing Innovation Ecosystems Across Sectors

This research further has ramifications for enhancing overarching innovation ecosystem. The results indicated that strategic leadership, cultural alignment, and comprehensive learning may cultivate conditions that promoted enduring innovation. When integrated across sectors, such methods promote knowledge transfer, intersectoral cooperation, and entrepreneurial development, which were crucial factors for attaining SDG 9 (Industry, Innovation, and Infrastructure) and SDG 8 (Decent Work and Economic Growth) (United Nations, 2022). The leadership and innovation strategies delineated in this research aligned with the African Union's Digital Transformation Strategy (2020–2030), which promotes enhanced technology dissemination throughout public and commercial sectors. Leaders, by exemplifying ethical and inclusive innovation practices, provide frameworks that SMEs may embrace, strengthening innovation-driven economies.

Advocating on Ethical and Inclusive Technology Utilization

A significant aspect pertained to the ethical utilization of digital instruments. The results emphasized the necessity of harmonizing automation with empathy, preserving human agency in decision-making, and positioning technology as an enhancement rather than a substitute for human skills. This indicated increasing apprehensions over digital disparity and algorithmic prejudice, especially in emerging economies (UNCTAD, 2021). Integrating artificial intelligence and automation tools in

manners that do not displace employees or marginalize communities fosters a more equal field for innovation. These findings endorsed the appeals made by international entities, like the World Economic Forum (2023), to guarantee that the Fourth Industrial Revolution is human-centric, ethical, and inclusive. Leaders in emerging economies must incorporate social protections into digital transformation programs to preserve vulnerable people while optimizing societal benefits.

Formulating Organizational Values and Ethical Corporate Cultures

The study highlighted real leadership, openness, and internal knowledge-sharing, indicating a wider impact on corporate values. These strategies may transform business culture into one that values transparency, collaborative learning, and responsiveness to stakeholder requirements. Widespread adoption of such cultural shifts fostered a more fair, participative, and trust-oriented work settings (Zolfaghari & Madjdi, 2022). Organizations that emphasized continuous learning, inclusive leadership, and ethical innovation typically exhibited greater resilience and social responsibility (Denison et al., 2020). This enhanced constructive collaboration between business plans and national development agendas, advancing socially responsible capitalism when innovation directly contributed to economic success and social equality.

Guiding Policy and Institutional Advancement

The study's findings can also guided national policy formulation and institutional support initiatives. Policymakers may leverage information on effective innovation tactics to formulate incentives for digital adoption, provide training programs, and aid enterprises executing inclusive innovation. Entities may incorporate these insights into

comprehensive policy frameworks designed to develop a knowledge economy. Through institutionalizing digital leadership development, ethical AI standards, and innovation capacity-building, governments may foster more egalitarian and productive ecosystems. This encapsulates the World Bank's (2020) suggestion for focused initiatives that expedite digital adoption at the company level in Sub-Saharan Africa.

Enhancing Societal Welfare and Community Advancement

Technical innovation executed with clarity, empathy, and strategy profoundly impacts social well-being. Enhanced service delivery, optimized communication, and increased accessibility to digital platforms help mitigate service disparities for marginalized communities. Companies that integrate social responsibility into their innovation initiatives may promote inclusiveness, enhance economic empowerment, and facilitate local development (Lashitew et al., 2020). In a nation such as Kenya, where technology is pivotal for financial inclusion (e.g., M-PESA), strategic innovation transcends business interests and serves as a mechanism for communal advancement. By enhancing digital service delivery, investing in local talent, and endorsing community-oriented projects, companies function as catalysts for structural development, therefore elevating quality of life and social resilience.

Recommendations for Further Research

This qualitative study provided valuable insights into the tactics utilized by business executives to deploy technical innovation and enhance performance. This study, like every research, has certain limitations that should guide future research endeavors. Mitigating these constraints will enhance comprehension and expand the relevance of the

findings across many contexts and sectors. Future scholars are urged to conduct multi-case or comparative studies across various organizations and industries. Broadening geographic and organizational reach may elucidate if analogous innovation tactics are employed across other industries, like banking, healthcare, or manufacturing (Ridder, 2017; Yin, 2018).

A secondary constraint pertains to the sample size. The research utilized data from thirteen individuals in a similar industry, limiting the generalizability of the results. Subsequent study should target a more extensive and diverse sample, encompassing a sample range of executives from various industries. A more extensive sample would facilitate the acquisition of varied viewpoints on innovative strategies and the obstacles faced during implementation (Creswell & Poth, 2018). The study also depended on qualitative data obtained from self-reported experiences, which may increase the risk of recalling bias or socially desired replies. Future research might apply a mixed-methods approach, including quantitative variables such as innovation success indicators, employee engagement ratings, or financial performance assessments. Integrating qualitative insights with quantitative data would augment the study's rigor and provide a more thorough knowledge of the effects of technological innovation (Guetterman et al., 2019; Theofanidis & Fountouki, 2018).

This study did not thoroughly investigate the long-term consequences of innovative initiatives on performance. Future study may utilize a longitudinal approach to investigate the evolution of innovation practices over time and their enduring effects on organizational results. This research would be especially beneficial in rapidly changing

industries, where technological advancements are regular and necessitate ongoing adaptation (Rogers, 2003). Subsequently, more research should investigate the convergence of innovation and social effects, especially with inclusive digital transformation. Examining the impact of innovative initiatives on social justice, workforce empowerment, and access to digital services for marginalized groups would provide essential insights into the larger role of business in societal advancement (Crane et al., 2021; World Bank, 2021). Through addressing these research deficiencies, academics may expand upon this study's findings and provide a more comprehensive, interdisciplinary, and longitudinal view on technological innovation in emerging countries.

Lastly further studies can be conducted on the emerging impacts of artificial intelligence on performance. How are corporations incorporating AI and what are the impacts of this integration on employee performance? AI is relatively a new field of study and there is not a varied data set available to conduct research just yet. The quick development of AI technologies and their increasing influence on economic growth and productivity have created a lot of new research opportunities. For AI systems to continue to be developed and used responsibly, it is essential to identify knowledge gaps and possible topics for additional research. Furthermore, the complexity and wide-ranging effects of AI underscore the need for multidisciplinary cooperation and the necessity of developing new approaches to deal with the opportunities and problems this game-changing technology presents. Future studies should focus on the long-term effects of AI on jobs and the workforce. There is a need for more thorough and long-term study on the

changing character of labor in the AI age, even though several studies have examined the possibility of job displacement owing to AI-driven automation (Arntz et al., 2019; Frank et al., 2019). This entails examining the competences and abilities needed for future employment, the efficacy of reskilling and upskilling initiatives, and the socioeconomic effects of labor market changes brought on by AI (Frank et al., 2019).

It is crucial to make sure that AI systems are developed, implemented, and regulated in a way that fosters equity, openness, and accountability as they grow more widespread and significant (Floridi et al., 2018). To tackle the intricate issues raised by AI governance, multidisciplinary research including specialists from computer science, law, ethics, social sciences, and other pertinent domains is necessary (Cath et al., 2018). Future studies should concentrate on creating useful instruments and policies for putting ethical AI concepts into practice. They should also investigate how various stakeholders, including governments, corporations, and civil society groups, influence AI governance frameworks. Another crucial topic for further study is how AI may worsen already existing disparities and give rise to brand-new kinds of prejudice. Further research is necessary to address important issues including algorithmic bias and the unequal distribution of AI's advantages and hazards among various societal groups (Eubanks, 2018; Noble, 2018). Future studies should look at the causes and workings of algorithmic bias and devise methods to lessen it and encourage more fair results. This might include investigating methods for identifying and addressing bias as well as the institutional and societal elements that support the persistence of bias in AI systems (Mehrabi et al., 2021).

New research techniques and methodologies must be developed due to the continually changing nature of AI technology. The speed and scope of AI developments may be too rapid for traditional research methodologies to keep up with, much alone fully capture their spectrum of effects. To better understand the dynamics of AI systems and their interactions with people and society, future research should investigate the use of innovative approaches, such as simulation studies, extensive online experiments, and participatory research designs (Rahwan et al., 2019). To evaluate the effectiveness, equity, and social impact of AI technologies, it will also be essential to establish new assessment frameworks and metrics (Geburu et al., 2021).

Reflections

During the DBA doctorate research, I thoroughly examined the tactics employed by business executives to deploy technology innovation for enhancing organizational performance. As a qualitative researcher, I remained acutely conscious of the obligation to uphold ethical integrity, methodological rigor, and reflexivity during the study process. Considering my professional history and interest in technological innovation and strategic management, I was aware of the possibility of researcher bias and made intentional measures to alleviate it. To maintain the integrity of the study, I meticulously followed ethical research guidelines, including obtaining IRB permission and assuring freely informed consent from all participants. I chose individuals without any previous personal or professional connections to prevent undue influence or bias. Furthermore, I instituted reflective practices by keeping a research notebook that recorded my observations, cognitive processes, and developing ideas during data collection and analysis. This

facilitated the monitoring of my preconceptions and maintained my critical self-awareness regarding my interpretative function.

One of the most beneficial methodologies employed during the research was member checking, enabling participants to validate the precision of my interpretations of their replies. This approach increased the study's credibility but also strengthened the collaborative essence of qualitative research. I conducted systematic data triangulation by utilizing interview transcripts and organizational papers to verify that the findings were robust and objectively examined. This experience has enhanced my understanding of the intricate role of leadership in influencing innovative results. I discovered that successful technical innovation entails not just the adoption of new technologies, but also the cultivation of a culture characterized by openness, cooperation, and perpetual learning. Engaging with individuals, evaluating extensive qualitative data, and deriving themes enhanced my abilities as a scholar-practitioner. This doctoral path has been very altering. It emphasized the significance of ethical vigilance, methodological transparency, and academic rigor. Beyond a mere research effort, it has constituted a journey of professional development and intellectual enhancement, fostering in me an enduring dedication to conducting significant, ethical, and socially important research.

Conclusion

This qualitative study examined the tactics employed by business executives to deploy technical innovation aimed at enhancing organizational performance. This study, based on Rogers's Diffusion of Innovation (DOI) theory, offered significant insights into how corporate executives manage the intricacies of innovation uptake, employee

engagement, and strategy alignment in a swiftly changing digital landscape. The study, through a thorough thematic analysis of participant responses, identified essential strategies including promoting employee acceptance of change, utilizing data-driven decision-making, advocating for authentic and transformational leadership, and ensuring a balance between technological tools and human abilities. These tactics, analyzed via the framework of DOI theory, illustrated how the acceptance of innovation is affected by perceived relative benefit, compatibility with current systems, simplicity of use, trialability, and visibility of results.

The results strongly corresponded with existing literature and the conceptual framework, confirming that effective innovation encompasses not just technical aspects but also social, cultural, and strategic dimensions. Leaders must advocate for innovation by fostering workplaces that normalize change, promote continuous learning, and value human capital. It also offers pragmatic ideas that other company executives may utilize when aiming to adopt and deploy technological innovations to enhance performance. The study underscores the significance of strategic leadership, workforce preparedness, and ethical innovation in attaining organizational resilience and competitiveness. As industries progress, comprehending and implementing these tactics was crucial for both corporate success and wider social and economic development.

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Appendix A: Introduction Letter

Subject: Invitation to Participate in a Research Study

Dear Participant,

I am conducting a research study titled "Strategies Business Leaders Use to Implement Technological Innovation for Increasing Performance" as part of my doctoral research at Welden University. The purpose of this study is to explore the approaches and practices business leaders use to introduce and manage technological innovation to enhance organizational performance. Your experience and insights as a business leader make you an ideal participant for this study. By sharing your perspectives, you will be contributing to research that aims to provide practical strategies for organizations seeking to remain competitive and adaptable in today's fast-changing technological environment. Participation in this study is voluntary and will involve a semi-structured interview lasting 30 to 45 minutes. All information shared will be kept strictly confidential, and any identifying details will be removed to ensure anonymity in the final report. You may withdraw from the study at any stage without penalty. If you are willing to participate or would like more information, please contact me at [xxx](#). I will be happy to provide additional details and answer any questions you may have. Thank you for considering this invitation to contribute your expertise to a study that may benefit business leaders, organizations, and the wider community.

Sincerely,

Appendix B: Interview Guide

1. What innovative business management methods have you used to enhance technical innovation, performance, and competitiveness?
2. How have you implemented creative business management techniques to increase technical innovation, performance, and competitiveness?
3. What training programs or initiatives have been provided to support the successful adoption of innovative business management practices, leading to better outcomes in technical innovation, performance, and competitiveness?
4. What challenges have you faced while transforming processes or strategies to enable business management innovation methods that improve technical innovation, performance, and competitiveness?
5. How have you addressed business challenges when adopting creative management methods to improve technical innovation, performance, and competitiveness?
6. How do you evaluate the success of the business management techniques you have implemented to enhance technical innovation, performance, and competitiveness?
7. What innovative business management strategies have you explored that did not lead to desired improvements in technical innovation, performance, or competitiveness?
8. What additional insights would you like to share about your approach to designing and implementing new business management methods aimed at boosting technical innovation, performance, and competitiveness?