

# Inclusive Design in AI-Driven Leadership: Implementation and Challenges in Small Businesses

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## Abstract

This study explores AI-driven leadership support systems in marketing, employee recruitment, and workplace diversity management. It emphasizes inclusive design approaches to enable leaders from diverse backgrounds to utilize these systems effectively in globalizing small businesses. The study explores the current state of AI applications in leadership support through an analysis of interviews with different leaders from various sectors, inclusive design principles in technology, problems faced by diverse leaders during internationalization, and incorporation of impact assessment into inclusive, comprehensive designs. The methodology follows a case study approach using interviews as the main data collection medium. The results indicate a rapidly changing environment for AI-driven leadership support systems with various applications across different areas. Language barriers, cultural differences, and differences in communication styles are some of the challenges faced by small business owners who want to expand their market worldwide. The findings also demonstrate how such challenges can be tackled through AI system designs characterized by multilingual support and cultural sensitiveness. The recommendations from leaders further highlight the transformative potential of AI-driven leadership support systems in promoting inclusivity, driving innovation, and empowering businesses to navigate complex challenges in a rapidly evolving digital landscape.

**Keywords:** AI-driven Leadership, Inclusive Design, Challenges & Implementation.

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## 1. INTRODUCTION

Inclusive design has recently become a guiding principle, underlining the need for products and systems that cater to all users regardless of their background, ability, or demographics (Mikus et al., 2021; Soni et al., 2020). The question of inclusivity comes up at this point when AI is taking hold in many spheres of business operations, thus calling us to reflect on how these technologies can be used to empower diverse leaders (Lamirande, 2022; Luck, 2018). This examination is driven by the recognition that AI-powered leadership support systems can reinforce or break down barriers between various groups. That is why agile adaptation and flexibility are essential in small businesses across borders, calling for understanding and embedding inclusive design principles into AI systems (Lin et al., 2022).

This exploration seeks to bridge the gap between theory and practice by incorporating a holistic approach towards technology application among firms through an analysis of how inclusive design principles can be incorporated in AI-based leadership support systems. By tailoring our efforts toward leaders from varying backgrounds, we hope to lay the groundwork necessary for an AI-dominated future where diversity drives efficiency and decision-making processes instead of inclusion, catalyzing equitable distribution. Through this journey, the authors also highlight the intricacies behind AI designing, leadership issues globally, and where they cross each other. These insights come from business leaders' viewpoints, while others are learned from experiences gained across different geographical locations, emulating global business practices. Furthermore, the research question is not limited to a theoretical underpinning. However, it facilitates a dialogue that drives the development of AI-driven leadership toward a more inclusive and sustainable future as we uncover intricacies. Introducing artificial intelligence (AI) into leadership support systems represents a strategic rather than merely technological decision in an era where small businesses are going global (Collins et al., 2021). The stakes are high, and what happens in these boardrooms has implications for many nations, cultures, communities, and peoples (Huang & Peissl, 2023).

The recognition that inclusive AI-driven leadership support systems can bridge gaps and break barriers is at the heart of this study. Its significance lies in the ability to create frameworks for leadership that resonate with the diverse experiences and perspectives of leaders from different backgrounds (Rožman et al., 2023; Moro-Visconti et al., 2023; Gerpott & Quaquebeke, 2023). Industries must mine their human capital for all its worth as they strive toward innovation and sustainable growth, which is why inclusive design principles in AI provide a way to unlock this potential (Ghamrawi et al., 2023). On the other hand, today's industry practices are still grappling with how to align technological advances with the human aspect of leadership (Richter et al., 2019). The research addresses this concern head-on, acknowledging that technology should not separate or intensify existing inequalities (Chan, 2023). Alternatively, it should be a force that unifies leaders regardless of their cultural, ethnic, or gender orientation (Mikalef & Gupta, 2021). Hence, there is significance in aligning business practices with a conception of leadership that is not only technologically savvy but is also socially aware and inclusive (Soni et al., 2020). Additionally, globalization has necessitated an intricate understanding of various markets, consumer behaviors, and cultural sensitivities by businesses (Zeng et al., 2020). According to Henneborn (2023), inclusive design in AI-driven leadership support systems is a strategic tool for dealing with such complexities. It becomes a competitive advantage, enabling enterprises to tap into the full range of talents and insights available through diverse management forms (Rožman et al., 2023).

Given this pretext, the research gap can be highlighted as a limited understanding of the intersection between technology and inclusivity, providing practical guidance to industrialists who wish to expand globally while being sensitive to different cultures. The current paper illuminates the intersection between technology and inclusivity, providing practical guidance to industrialists who wish to expand globally while being sensitive to different cultures. Therefore, it marks a critical point in our understanding of leadership when AI reigns supreme in the market, forcing industries to think beyond traditions toward a technology-enabled future that involves it not only as a tool but also as an accomplice on its path toward more inclusive, fairer and sustainable global business environments.

This study aims to explore inclusive design principles and their seamless integration within AI-driven leadership support systems. The primary objective lies in contributing towards the advancement of leadership technologies that guarantee accessibility and efficacy for leaders hailing from diverse backgrounds. It pertains specifically to small businesses endeavoring expansion on a global scale. The specific objectives are as follows:

- To explore established frameworks and principles concerning inclusive design, which can be effectively implemented in AI-powered leadership support systems.

- To investigate strategies that facilitate implementing inclusive design principles into AI-driven leadership support systems deployed by small businesses during their global expansions.

To achieve the objectives, the study is guided by the following research question:

**RQ:** How can inclusive design principles be integrated into AI-driven leadership support systems to ensure accessibility and effectiveness for leaders with diverse backgrounds in small businesses expanding globally?

## 2. LITERATURE REVIEW

The morphology of leadership can be changed to be more adaptive by the infusion of artificial intelligence, which makes leaders stick to their preliminary insights and dynamically adjust to new environments with the help of AI systems, which act as responsive allies (Peifer et al., 2022; Fullan et al., 2023). This adaptability is critical, especially in today's rapidly changing business environment, where agility means success (Jones, 2018). The following sections present a brief overview of the literature and theoretical background.

### 2.1 Current Landscape of AI-Driven Leadership Support Systems

An AI-driven leadership support system incorporates machine learning algorithms, natural language processing (NLP), and predictive analytics, resulting in a sophisticated amalgamation of technologies (Shah et al., 2022; Mikalef et al., 2023). For instance, supervised and unsupervised models enable the system to learn and adapt based on historical data (Rozman et al., 2023). In addition, NLP enables leaders to use natural language when addressing the system, resulting in a more intuitive user experience (Faqih & Miah, 2023). On the other hand, these systems are characterized by their ability to do real-time data analysis (Olan et al., 2023). Krishnan (2022) further highlighted that leaders can access information continuously, allowing them to make on-time decisions. Thus, the support systems go beyond just presenting data alone and help leaders identify patterns and trends that can give a holistic view of how business is doing (Al-Walal et al., 2021). Simulating scenarios adds a layer of foresight, allowing leaders to evaluate the effects before making any important decisions (Ghamrawi et al., 2023).

Moreover, AI infusion influences leadership style transformation, leading to its becoming more adaptive (Heukamp, 2020). Therefore, leaders no longer have to rely only on historical insights but adjust themselves as the environment changes. Such systems work as responsive allies since they provide actionable insights when uncertainties occur, which helps leaders navigate through such times smoothly (Li et al., 2022). This characteristic makes it even more important today that businesses are fast-paced; hence, agility equates to success. Despite its transformative potential, numerous challenges are associated with implementing AI-driven leadership support systems (Neher et al., 2023). For instance, ethics should be considered when using AI responsibly for responsible reasons because questions about biases in algorithms used and transparency during decision-making ought further scrutiny. Additionally, security measures are required to protect sensitive information accessed or processed by these systems due to data privacy concerns (Gerpott & Quaquebeke, 2023). Hence, balancing technological progress and ethical concerns becomes crucial as the landscape develops (Rozman et al., 2023). On the other hand, responsible AI adoption calls for clear guidelines, transparent decision-making processes, and proactive efforts to address bias. Ethical AI practices must be put in place by companies to develop trust with their users, stakeholders, and society at large.

### 2.2 Inclusive Design Principles in Technology

Discussing AI tools and related tools calls for inclusive design principles rooted in universal design, to make products usable by diverse people (Luck, 2018). For instance, when designing AI-driven leadership support systems, one should create interfaces catering to different levels of technological expertise. Therefore, regardless of a leader's technical background, they should be able to utilize these systems fully (Julia et al., 2023). Consequently, this inclusion is primarily

achieved through natural language processing and helps leaders as NLP allows them to speak or write, depending on their preference (Li et al., 2023; Moro-Visconti et al., 2023; Gerpott & Quaquebeke, 2023). As this process is done naturally, it becomes more accessible and user-friendly, which means the AI system can understand it better (Mahmood, 2018). Considering this, inclusive design acknowledges cultural diversity as a significant aspect of itself (Brinkley & Huff, 2020). Thus, AI algorithms must be trained on diverse datasets so there will be no biases and fair decisions. Moreover, leadership styles differ significantly due to various cultural nuances influencing decision-making processes (Peifer et al., 2022; Fullan et al., 2023). Henceforth, inclusive designs should draw from these cultural features so that leaders worldwide could similarly benefit from AI-driven systems (Zallio & Clarkson, 2021).

Additionally, inclusive design goes beyond promoting accessibility to create an all-inclusive leadership support ecosystem (Julia et al., 2023). This entails recognizing any biases that may have occurred during the development and training of artificial intelligence machines. It points out that having many perspectives in both the design stage and implementation enables the creation of AI-driven solutions that genuinely identify with and serve the diverse needs of leaders across the globe (Brown & Wyatt, 2020). Here, we encounter a complex relationship between advanced technologies within the contemporary AI-driven leadership support systems landscape and the commitment to responsible and inclusive design (Tuurnas & Perikangas, 2023). Ismailov and Chiu (2022) further highlighted that understanding the intricacies of such systems, the problems they present, and the ethical aspects that surround their implementation is vital for any organization seeking to exploit their transformative potential while at the same time ensuring a fair and inclusive digital future (Rožman et al., 2023; Moro-Visconti et al., 2023; Gerpott & Quaquebeke, 2023; Peifer et al., 2022; Fullan et al., 2023).

### **2.3 Challenges Faced by Diverse Leaders in Small Businesses Expanding Globally**

Challenges are a considerable part of the business landscape, and when businesses expand globally, cultural diversity complicates decision-making (Fiorella & Salvatore, 2023). AI-backed leadership support systems and diversity management software can recognize and deeply understand cultural nuances (Szlavi et al., 2021). This goes beyond language translation because it involves understanding the leadership style's context across cultures, communication preferences, and business etiquette (Gamage et al., 2020). According to Ponomareva et al., (2022), decisions made by people from diverse backgrounds may be challenging to adapt to. AI offer shas the potential to offer subtle instructions that respect and incorporate these dissimilarities (Kossi, 2019). International expansion frequently involves dealing with many languages. The AI systems need strong multilingual capabilities, including advanced natural language processing that can help make seamless communications possible (Barbar et al., 2019). It is more than simple translation; it entails understanding different languages' idioms to ensure accurate and contextually relevant interactions occur (Adam & Alarifi, 2021). With this pretext, it is without a doubt that leaders are expanding internationally often face a labyrinth of regulatory structures. Compliance has become a major concern, from labor laws to data protection regulations (Dorda, 2020). By keeping them up-to-date on laws applicable abroad for their industry through real-time updates as one of its features or automated checks on regulatory compliance trends, AI-powered support systems can be helpful for leaders (Kyove et al., 2021). Tools such as automated compliance checks or identifying regulatory trends will help leaders conform to widely varying legal environments (Nguyen et al., 2021). Still, operational issues arise when managing remote teams from various time zones and cultures across the globe (Lazarova et al., 2023). AI-driven leadership support systems can shed light on cross-cultural team dynamics so that leaders can learn how to create cooperation among team members (Böhm et al., 2022). It highlights that leaders can use real-time data analysis for operational optimization, quickly resolving any bottlenecks to maintain the efficient functioning of international teams.

### **2.4 Integration Strategies and Impact Assessment**

Technology integration strategies usually involve systematic incorporation of various components or systems to enhance functionality or efficiency, followed by rigorous impact assessment to evaluate their effectiveness and repercussions within a given context. According to Bharadiya

(2023), proper strategic alignment of AI integration with the firm's overall business objectives is essential. Leaders need to identify areas where AI would bring in the highest value (Chen et al., 2022). Sjödin et al., (2021) also stated that the integration strategy should be aligned with the organization's broad goals, whether improving data analytics for market expansion or bettering decision support for global strategy development. Successful incorporation of AI heavily relies on change management. Leaders should communicate to their teams about the positive aspects of technology adoption while addressing any associated fears or uncertainty (Nelson, 2019). Training programs should be tailored to ensure that employees know how these new technologies function and feel comfortable using them in their daily routines.

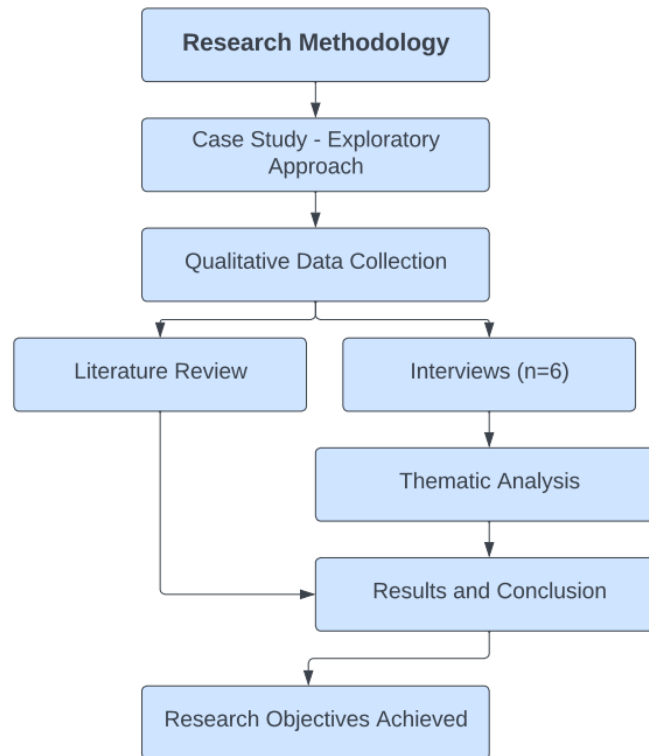
Similarly, the study by Janković and Curovic (2023) stated that data governance is critical in the AI landscape and organizations must implement strong mechanisms to guarantee data quality, security, and privacy. In order to comply with these regulations, organizations must establish frameworks for collecting, storing, and using data (Stahl et al., 2023). Data governance becomes integral to successful integration because AI systems rely heavily on accurate and relevant information (Shah et al., 2023). This further relates to AI and technology integration ethics because they include potential biases within artificial intelligence algorithms, which leaders must address to ensure fairness and transparency (Chintalapati & Pandey, 2021). Ethical AI practices involve actively mitigating design biases during training stages and continuously monitoring and fine-tuning algorithms to avoid unforeseen outcomes. After implementation, an ongoing evaluation is necessary to analyze how AI has impacted decision-making processes and overall business performance (Kulkov, 2021). This entails collecting user feedback, assessing the system's effectiveness in achieving its objectives, and identifying areas for improvement. Additionally, it involves regular impact assessments to ensure that the integration stays focused on the business goals and is responsive to emerging organizational needs (Hu et al., 2023). Therefore, nuanced responses are required for these complicated challenges faced by various world leaders in expansion, and AI-backed leadership support systems play a central role in addressing these complexities (Rana et al., 2021). Consequently, integration strategies must be carefully planned in conformance with business objectives, effective change management, robust data governance, and ethical concerns (Ahmad, 2023). As highlighted by various studies, the future may see AI monitoring and evaluation throughout organizations that abide by ethics and diversity in an expanding global community where AI can no longer only enhance decision-making.

However, amidst the potential benefits lie significant challenges and considerations. While the review navigates the evolving landscape in the context of AI integration in organizations, there is a need to explore the current stance of leaders illustrating AI's potential to enhance adaptability and responsiveness in today's dynamic business environment. As leaders seek to harness AI's transformative power, ethical considerations, inclusive design principles, and strategic alignment emerge as critical focal points.

### **3. METHODOLOGY**

The selected research design adopts an exploratory approach, deemed suitable for its in-depth examination of the integration of inclusive design principles in AI-driven leadership support systems (Scapens, 1990; Priya, 2020). The research uses a qualitative methodology to delve into industry experts' nuanced experiences and perceptions (Makri & Neely, 2021; Mahmood, 2018). Employing semi-structured interviews enables the capture of rich, context-specific insights where unexpected themes may emerge, emphasizing depth over breadth in qualitative exploration. The research methodology, depicted in Figure 1, is primarily rooted in the constructivist philosophy, acknowledging individuals' active construction of knowledge based on experiences and perceptions (DeJonckheere & Vaughn, 2019). This philosophy underscores the significance of understanding social contexts and multiple realities in shaping knowledge, particularly pertinent in examining the intersection of technology and human context within AI-driven leadership (Mbaka & Isiramen, 2021).

The study employs purposive sampling to gather insights from six diverse participants, selected based on their expertise and involvement in AI technologies and inclusivity promotion. Data collection entails semi-structured interviews tailored to the research objectives, ensuring an open-ended conversational approach. Ethical considerations are paramount throughout the study, ensuring informed consent, confidentiality, participant autonomy, and sensitivity toward cultural diversity. Reflexive thematic analysis guides the systematic examination of interview data, fostering a collaborative and ethical approach to deriving meaningful insights while safeguarding against stereotypes and ensuring responsible reporting.



**FIGURE 1:** Research Methodology.

This methodology helped acknowledge leaders' diverse perspectives in small businesses going global and allowed for examining socially constructed meanings and the dynamic interplay between technology and human context (Dennick, 2016; Kivunja & Kuyini, 2017; Kaushik & Walsh, 2019).

### 3.1 Research Design and Approach

The selected research design is exploratory (Makri & Neely, 2021; Mahmood, 2018). An exploratory approach was considered appropriate because it allowed for a detailed topic examination. The research utilizes a qualitative approach, ideal for investigating industry experts' nuanced experiences and perceptions of integrating inclusive design principles. Employing semi-structured interviews allows for capturing rich, context-specific insights where unexpected themes may emerge (DeJonckheere & Vaughn, 2019). Depth rather than breadth characterizes this qualitative approach, whose focus is unveiling the intricate layers of thought and practice at the intersection of AI-driven leadership and inclusivity (Mbaka & Isiramen, 2021).

### 3.2 Sampling

The study involved purposive sampling because of the need for expert insights to achieve the research objectives (Campbell et al., 2020). Six participants (n=6) from varied backgrounds with proven expertise were chosen to enrich diverse perspectives about integrating inclusive design

principles. Leadership track record, Involvement in the development or use of AI technologies, and desire to promote inclusiveness within the business.

### **3.3 Data Collection**

Interviews constituted the primary data collection tool for this study and the interview frame was tailored to this study's objectives after the literature review (Rožman et al., 2023; Moro-Visconti et al., 2023; Gerpott & Quaquebeke, 2023; Peifer et al., 2022; Fullan et al., 2023; Chintalapati & Pandey, 2021; Shah et al., 2022; Mikalef et al., 2023). The guide had open-ended questions that sought detailed responses from practitioners regarding their views, experiences, feelings, and perceptions on inclusive design principles in AI-driven leadership support systems (see *APPENDIX A*).

The overall format of the interview ensured a conversation-like approach, allowing the participants to express their detailed ideas while at the same time focusing only on the central issues for answering research questions.

#### ***Interview Preparation***

The interviews were conducted via Google Meet and Zoom based on the participant's preference, and each interview lasted 55-60 minutes. The Interviews were conducted with the following participants:

- CEO ESirius – Marketing Management (ESirius, 2023)
- COO Superlab – Tech Company (Superlab, 2023)
- Founder Limitless Learners – Neurodivergent Community (LimitlessLearners, 2023)
- CEO Infyntrix – AI driven Employee Recruitment (Infyntrix, 2023)
- Founder Scottish Ethnic Minority Autistics – Inclusion and Diversity Management (SEMA, 2023)
- Director AI Masaar – Community Development (AIMasaar, 2023)

Once the consent forms were signed, the interview session was recorded and then analyzed for the purpose of this study. All participants were informed about the nature and purpose of the study before the session. Before beginning the interviews, they were given a brief on the context of the study and asked to reaffirm if they still wanted to continue. Once the participants were comfortable, the interview session began.

### **3.4 Data Analysis**

Following a systematic and collaborative process, the semi-structured interviews were subjected to thematic analysis (Byrne, 2021; Warner & Groarke, 2022; Richardson et al., 2023). It began with extensive familiarization of the interview data, followed by initial coding to generate codes inductively to capture emerging patterns (Braun & Clarke, 2019). The analysis process was iterative, involving constant comparisons to refine codes into potential themes that grew organically from the raw data. Throughout the study, the approach was reflexive, where the authors engaged in self-reflection by openly addressing their assumptions and biases. Then, the themes were reviewed further and defined accurately, giving them greater validity and reliability. Finally, these themes were mapped out coherently to create a well-rounded narrative that captured issues around AI-driven leadership support systems and inclusivity among leaders.

### **3.5 Ethical Considerations**

Ethical considerations were considered throughout the study (Rossman & Rallis, 2010; Khalil et al., 2021). Consent forms were signed by those taking part after giving them complete information about what these studies entailed so that they may give their informed consent willingly as required by human subject research guidelines. To enhance confidentiality measures to safeguard data, it was ensured that their identities were not disclosed and relevant details redacted during transcription. Furthermore, participants knew they were free to withdraw at any point without any fear of victimization, thus promoting their autonomy. Sensitivity towards the interviewee's feelings was emphasized by maintaining a supportive and respectful environment.

In each stage, the reflexive thematic analysis followed ethical considerations. As a result, themes were validated by being assessed and agreed upon or corrected by those whose stories informed the interpretations drawn from them.

All findings were presented accurately and ethically to ensure responsible reporting of insights gained. Further, it is essential to recognize that diverse cultural experiences are considered when analyzing this in order not to continue or repeat stereotypes of specific people or cultures.

#### 4. ANALYSIS AND RESULTS

The emergence of themes and codes from the six interviews followed a structured and systematic process to extract meaningful insights regarding AI-driven leadership support systems and inclusive design principles. The initial transcript analysis and thematic coding, as presented in Table 1, began with a thorough review of each document to identify significant subjects and general concepts discussed by each interviewee. Thematic codes were then established based on the substantive content of each transcript, providing an organizational framework for grouping information into broader themes. Within each thematic code, a detailed selection process singled out critical information to distill discussions into focused, succinct statements capturing the essence of the theme.

This process involved structuring the information in a table format and systematically arranging thematic codes under their corresponding transcript codes. Each row represented a separate thematic unit, while columns indicated transcript code, theme code, and key points related to that theme. Coherence and consistency were paramount throughout the analysis to ensure that every extracted point tied skillfully with its respective thematic code, contributing to a cohesive whole denoting more expansive subject areas covered within the documents. The final presentation of organized information in table format during the analysis phase aimed to provide a clear and concise overview of major themes and significant points across different transcripts. This structured approach facilitated easy referencing and a more profound comprehension of multifaceted insights provided during the interviews.

Table 1 presents the transcript codes as T1, T2 ... T6, which refer to the interview transcript number. These numbers follow the same order the conducted interviews. The thematic codes were generated and assigned based on the recurring patterns and topics during the interviews, and the main points present a summary of the discussion during the interviews.

Transcript Code	Thematic Code	Main Points
T1, T4, T6	AI in Leadership Support	Exploration of AI-driven leadership support systems for tailored support, decision-making, and streamlined operations.
T1, T5, T6	Global Expansion Challenges	Challenges faced due to racialized neurodivergent background, growth to comprehensive platform, and recent online Learning Management System (LMS) development.
T1, T5	Challenges in AI Leadership Support	Potential challenges for leaders with diverse backgrounds include biases, language barriers, and cultural interpretations.
T1, T4, T5	Inclusive Design in AI Systems	Importance of inclusivity, lack of representation in AI design impacting biases, critical features for inclusivity.
T1, T5	Cultural Sensitivity in AI Design	Integration of cultural sensitivity in data collection, algorithm training, and system interfaces.



T1, T6	Impact of Inclusive Design	Positive impact on fairness, reduction of biases, and acceptance of AI systems by leaders from diverse backgrounds.
T2, T4, T5	Leadership in Tech Company	Diverse background, establishing Esirius with positive leadership ethos, global team, emphasis on "you attract what you think."
T2, T6	AI in Marketing Management	Familiarity with AI-driven tools like Slack, Trello, and ClickUp, potential benefits for efficiency and employee quality of life.
T2, T6	Cultural Sensitivity in AI Design	Inclusivity is prioritized in the Source platform, accommodating diverse educational backgrounds and multilingual support.
T2, T3	Impact of Inclusive Design	Positive impact on user satisfaction, customization, and inclusivity in G-tech management system.
T3, T5, T6	AI in Tech Company Operations	Intimate familiarity with AI-driven leadership support systems strategic implementation in project management and collaboration.
T3, T6	Cultural Sensitivity in AI Design	Importance of embedding cultural sensitivity in design principles, examples from projects in Germany and Switzerland.
T3, T4, T5	Inclusive Design in AI Systems	Inclusive design priority at Superlab, examples from Source platform, emphasizing simplicity and multilingual support.
T1, T2, T3, T4, T5, T6	Recommendations and Conclusion	

**TABLE 1:** Thematic Analysis – Transcript and Thematic Coding.

#### 4.1 Thematic Analysis – Generating Themes

Several recurring themes emerged during the interviews, reflecting the depth and complexity of discussions surrounding AI-driven leadership support systems and inclusive design principles. These themes were carefully selected based on their significance in elucidating the challenges, strategies, impact, and recommendations associated with integrating inclusivity within AI-powered leadership frameworks. The decision to add these themes stems from their salience in capturing the multifaceted nature of the discourse, encompassing foundational frameworks and principles, implementation challenges, proactive strategies, global expansion considerations, overall impact and effectiveness, and actionable recommendations for leaders and businesses. Each theme offers unique insights into the intersection of AI and inclusivity, shedding light on crucial considerations for fostering equitable and effective leadership paradigms in diverse organizational contexts as presented below.

Additionally, the technologies discussed in the interviews encompass a wide range of tools and platforms to enhance leadership support systems, particularly those driven by AI. From marketing management to community development, leaders highlighted the integration of diverse technologies tailored to their specific needs. These include AI-driven platforms like Slack, Trello, and ClickUp, utilized by marketing management leaders such as ESirius to streamline operational efficiency and improve employee quality of life. Additionally, COOs like those from Superlab emphasized the strategic implementation of AI-driven systems in project management and team collaboration, spanning industries like health tech, fintech, edtech, and logistics. Moreover, Laura James, the Founder of SEMA (Scottish Ethnic, Minority Autistics), shed light on the utilization of technology to address the overlooked needs of Scottish Autistics of Colour, advocating for inclusive systems rooted in community empowerment. As such, the discussions underscored the importance of technology in driving operational efficiency and fostering inclusivity and addressing diverse cultural contexts within leadership support systems.

### **Theme 1: Frameworks and Principles for Inclusive Design**

The first theme discusses frameworks and established principles about inclusive design related to AI-Powered Leadership Support Systems. Every leader spoken to provides some insights into their journey and experience, which helps to understand the role of AI in leadership support and the principles for inclusive design. In these journeys, Limitless Learners, infyntrix and ESirius, leaders of education and marketing management, and SEMA and AI Masaar leaders of inclusivity respectively, emphasized the importance of good governance. For instance, one COO of Superlab, a tech solutions provider, spoke about using an artificial intelligence system in project management and team collaboration. These leadership stories give insight into the need for effective leadership within small businesses and how its integration with AI can enhance support.

All six participants discussed how inclusive design was crucial in creating accessible leadership and cohesive leadership support systems. The Founder from Limitless Learners mainly talked about going beyond mainstream schooling through their vision of improving learning opportunities while emphasizing inclusivity when addressing diverse learning needs. ESirius explained how they integrated Slack, Trello, and ClickUp, among other similar tools that leverage artificial intelligence. Furthermore, although they have yet to implement AI-powered leadership support systems, the head acknowledges that such technology may help improve efficiency at work or even employees' quality of life. Also mentioned were obstacles faced by different leaders trying to access or use such technologies. *Additionally*, Superlab spoke about its undertakings within health tech, fintech, edtech; and logistics. The remote company model is built upon diversity and innovation, where team members are found worldwide according to the COO. However, inclusive designs such as the Source platform which takes into account diverse user backgrounds were used in their projects.

### **Theme 2: Challenges in Implementing Inclusive Design**

The second theme of this report looks at the challenges faced by leaders mostly from different backgrounds when implementing inclusive design principles within AI-driven leadership support systems. Limitless Learners narrated how a neurodivergent teacher struggled to get a permanent job in local schools. This personal experience underscores the interplay between multiple identities and barriers that may exist in traditional workplaces. It is also suggested that AI-driven leadership support systems should consider various biases against people with different characteristics. ESirius shared their experiences about an AI-driven leadership support system that could have adapted into various leadership styles of a multicultural team. These challenges were due to bias existing within the algorithms of this system, thus requiring AI systems to be adaptable and culturally sensitive. For instance, Superlab once encountered problems over non-inclusion, which hindered user adoption during construction machinery tracking for a US-based company. Such an example revealed the importance of a broad user base and tailor-made AI systems for different needs.

### **Theme 3: Strategies for Implementing Inclusive Design**

The third theme covers the respondents' strategies or recommendations to fully implement inclusive design principles that apply to artificial intelligence-powered leadership support systems. The theme highlights proactive measures that leaders can adopt to ensure inclusivity. These include but are not limited to ensuring cultural sensitivity in AI design through varied data representation, continuous monitoring for biases, multilingual capabilities, and customization options (Limitless Learners). These measures address diverse learning needs among students/leaders and are derived from inclusive design principles. For example, ESirius also emphasized the need for diversity in design teams and regular training on cultural sensitivity. The leaders saw the customization options as essential, given that different societies had their leadership styles. This led to a discussion on integrating cultural sensitivity into the design of AI through interactions with diverse teams, region-based customization, user training, and working closely with local experts, (Superlab). This includes a number of activities such as involving final users who represent various cultures during the designing or applying continuous feedback loops, according to the COO.

Also discussed by Superlab are the benefits arising from using inclusive designs which include maintaining conducive work environment, attraction towards recruiting a broad range of talents and a better decision making process. These benefits resonate with overall advantages any organization gains from being inclusive. The fourth theme explains how small businesses integrate inclusivity principles within their global expansion efforts considering relevant challenges and cultural aspects. Limitless Learners analyzed their challenges during international expansions regarding diverse legal frameworks and variable technology levels. This highlights how inclusive design is important when dealing with complex issues associated with global businesses. ESirius mentioned cases where cultural barriers hindered adopting AI-driven leadership support systems. They noted that it was necessary to prioritize inclusive designs while introducing these systems for efficient global scaling up. Superlab looked at designing an artificial intelligence system based on principles that respect culture. The COO adds that there should also be customizations along regional lines that make the system feel more like home to people from diverse cultures.

#### **Theme 4: Overall Impact and Effectiveness**

The fourth theme describes the overall impact and effectiveness of inclusively designing AI-driven leadership support systems. Here, a good illustration is given by Limitless Learners who demonstrated how inclusive designs can enhance user commitment, satisfaction and adaptability. Inclusive design is thus seen as a catalyst for innovation, driving positive organizational cultures. Further, ESirius pointed out that it creates favorable conditions for making decisions, building organizational cultures, and improving the well-being of employees. The CEO explained how AI would highly contribute to creating a conducive work environment. Superlab also revealed better user satisfaction, higher adoption rates, and increased system efficiency as some of the positive effects of inclusive designs. So, inclusive design is seen as an essential element of success and competitiveness in AI-driven systems.

#### **Theme 5: Recommendations for Leaders and Businesses**

The final theme is about leaders' recommendations on improving the accessibility and efficiency of AI-based leadership support systems for individuals with different backgrounds. Limitless Learners advised the use of Quantum Inclusivity Integration (QII), Experience-Driven Design Sprints (EDDS), Holistic Adaptive Learning (HAL), and Neuro-Linguistic Feedback Loops (NLFL). These recommendations are aimed at leveraging advances in AI to anticipate and accommodate changing cultural, linguistic, and cognitive landscapes. ESirius recommended continuous training programs, awareness campaigns, diverse user advisory groups, regular diversity audits on algorithmic models, and a user-friendly interface that can be customized. This will ensure that all employees benefit equally from AI-driven systems and create a more inclusive environment. Superlab reiterated the need for continuous training, diverse user advisory groups, regular audits for biases, and a user-friendly interface. The COO suggested the creation of Conscious Tech Inclusion (CTI) Certification to ensure AI systems contribute positively towards social welfare.

The thematization sheds light on the challenges, strategies, and impacts of integrating inclusive design principles into AI-driven leadership support systems. Together, these recommendations build up a comprehensive understanding of what is involved in making such support accessible for small firms with globally diverse leadership backgrounds. In line with this argument, the themes highlight work done to eliminate biases in terms of cultural awareness by designing AI-focused systems that foster inclusivity instead. Their recommendations embody a forward-thinking attitude considering ever-changing technological dynamics and emerging markets worldwide. Ultimately, this research provides significant viewpoints that can assist today's leaders and businesses in adopting appropriate strategies for using AI in global expansion while ensuring inclusiveness in their leadership support programs.

Table 2 summarizes the themes and related codes, providing a cohesive framework for understanding the rich tapestry of discussions surrounding AI-driven leadership support systems and inclusive design principles. Thematic analysis facilitated the generation of themes, each

shedding light on distinct aspects of AI-driven leadership support systems and inclusive design principles. These themes included frameworks and principles for inclusive design, implementation challenges, implementation strategies, integration of inclusive design in small business global expansion, overall impact and effectiveness, and recommendations for leaders and businesses. Each theme encapsulated valuable insights from the interviews, offering comprehensive perspectives on the complexities and opportunities inherent in integrating inclusive design principles within AI-driven leadership support systems.

Theme	Codes
Theme 1: Frameworks and Principles for Inclusive Design	T1: AI in Leadership Support T1: Inclusive Design in AI Systems T2: AI in Marketing Management T2: Inclusive Design in AI Systems T3: Inclusive Design in AI Systems T4: Inclusive Design in AI Systems
Theme 2: Challenges in Implementing Inclusive Design	T1, T2, T3, T4, T5, T6: Challenges in AI Leadership Support
Theme 3: Strategies for Implementing Inclusive Design	T1: Inclusive Design in AI Systems T1: Cultural Sensitivity in AI Design T2: Inclusive Design in AI Systems T2, T5: Cultural Sensitivity in AI Design T3: Inclusive Design in AI Systems
Theme 4: Integration of Inclusive Design in Small Business Global Expansion	T1: Global Expansion Challenges T1, T5, T6: Global Business Context and Cultural Considerations
Theme 5: Overall Impact and Effectiveness	T1, T2, T3: Impact of Inclusive Design T3, T5, T6: Inclusive Design in AI Systems
Theme 6: Recommendations for Leaders and Businesses	T1, T2, T3, T4, T5, T6: Recommendations and Conclusion

**TABLE 2:** Thematic Analysis – Generated Themes.

The insights gleaned from the CEOs regarding AI integration and the technology used and drive innovation underscore a multifaceted approach to leveraging technological advancements for leadership support systems. Across diverse industries, leaders like ESirius emphasized the pivotal role of AI-driven platforms such as Slack, Trello, and ClickUp in enhancing operational efficiency and employee well-being. Their testimonies elucidated how AI-powered tools streamline project management and team collaboration, optimizing workflows and fostering a conducive work environment. Additionally, COOs from companies like Superlab highlighted the strategic integration of AI across sectors like health tech, fintech, edtech, and logistics, underscoring its transformative impact on diverse business operations. By embracing AI-driven solutions, these leaders not only drive innovation but also prioritize inclusivity, acknowledging the importance of creating systems that cater to the unique needs of diverse teams and user bases.

Furthermore, the discussions with Laura James, the Founder of SEMA, shed light on the transformative potential of technology in addressing overlooked needs within marginalized communities. Through initiatives focused on Scottish Autistics of Colour, SEMA exemplifies the power of technology in advocating for inclusivity and community empowerment. By leveraging AI-

driven systems tailored to their specific demographic, SEMA exemplifies how technology can be harnessed to bridge societal gaps and foster holistic empowerment. The insights from these CEOs collectively highlight the dynamic role of AI in driving organizational success and societal change, emphasizing the importance of integrating technology with a nuanced understanding of diverse cultural contexts and community needs.

## 5. DISCUSSION – Key Insights

The evolution of inclusive design as a vital concept underscores the need for technological solutions that cater to diverse users irrespective of background, ability, or demographics. This gains more importance as artificial intelligence (AI) continues to be integrated into various aspects of business, especially leadership support systems. The research findings are consistent with prevailing industry practices and help explain how AI-driven leadership support systems operate today. In line with a growing trend within the industry regarding positive leadership and management, ESirius's interview reflects on such aspects as its guiding principle. Many organizations understand that to have a positive organizational culture, they must have inclusive leadership strategies. ESirius's "You attract what you think" illustrates how important it is for leaders' values to be congruent with those of inclusion.

Above all else, Superlab's observations indicate that industries rely increasingly on AI decision-making and project management systems. Acknowledging cultural nuances about the language use challenge is similar to an attempt by industry players toward culturally sensitive AI applications. Superlab's stress on customization within AI systems echoes the current move by the industry towards user-centered design, where flexibility is paramount. The Superlab interview also highlights the importance of involving diverse end-users in the design and testing phases, aligning with industry best practices for user-centric design. The acknowledgment that users do not adopt the technology due to a lack of inclusivity in AI systems shows us experiences from our industries, highlighting how crucial inclusivity is towards acceptance and satisfaction among users.

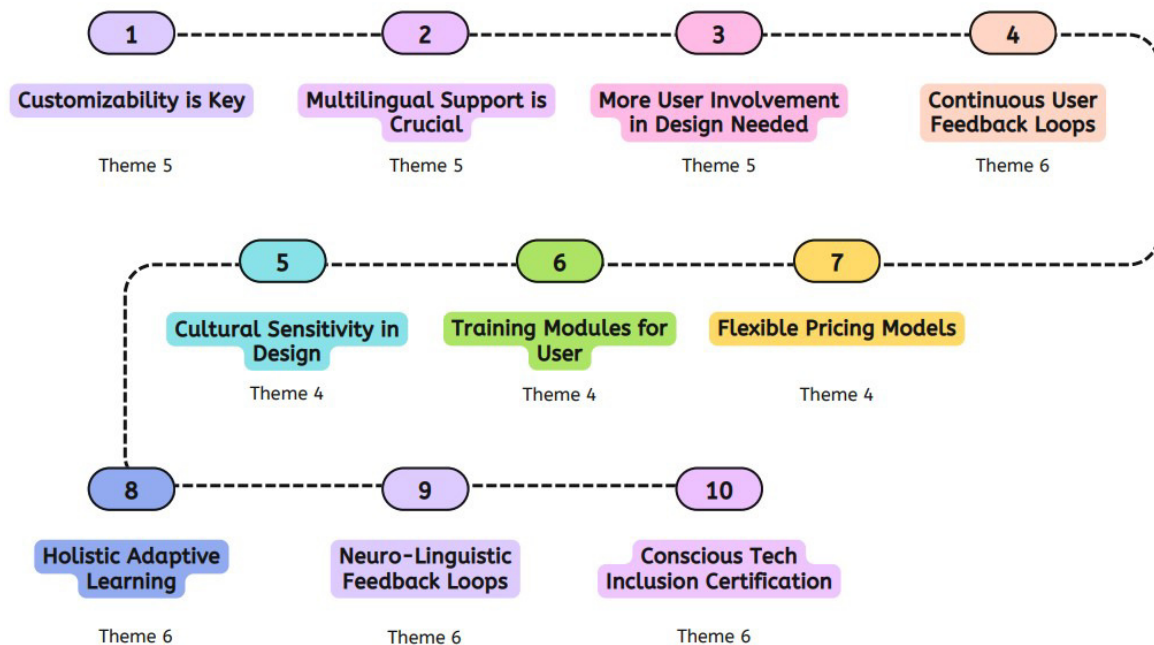
The importance of cultural sensitivity and linguistic diversity in designing AI-driven leadership support systems is underscored in these interviews. ESirius's recognition of challenges related to cultural nuances that affect algorithmic biases and Superlab's focus on accommodating different communication styles demonstrate the importance of context-specific AI systems. This reflects the industry's call for AI systems that break language barriers and bridge cultural divides. The need for customizability emerges as a running theme whereby Infitrix, ESirius and Superlab insist on having AI systems that can be personalized per individual preferences. This concurs with the current industry trend towards user-centric design, where customization features improve user satisfaction with the system. In this respect, Superlab, Infitrix and Almasar advocates for involving several end-users during the design and testing stages, an industry practice aimed at ensuring inclusivity. Additionally, continuous monitoring for biases plus regular audits of algorithms are emphasized in both interviews. ESirius's acknowledgment that leaders with diverse backgrounds face difficulty, especially regarding algorithmic biases, is consistent with the concern in our field about accidental bias within AI systems. The need for periodic reviews by Superlab speaks to responding to technological changes, which implies an ongoing state of inclusiveness.

According to ESirius, global success requires leadership support, just like what other organizations in this field acknowledge regarding the impact of management on corporate culture. The emphasis placed on positive leadership and creating a working environment goes hand in hand with industry trends promoting inclusive principles for leadership. The findings from these interviews may greatly assist in enhancing inclusive design in AI-driven leadership support systems within the sector. Superlab introduced a new concept, Conscious Tech Inclusion (CTI) Certification,, which could be adopted within industries. Such certification can serve as a yardstick to ensure that artificial intelligence systems actively contribute to societal well-being. It signifies an increased focus on ethics in artificial intelligence throughout the industry and may set an

example for inclusive design principles in leadership support systems. These two interviews emphasize user training and continuous feedback loops, which could be incorporated into industrial routines through comprehensive training programs and feedback mechanisms. This ensures that users know how to use AI-driven systems and continue feeding it with information irrespective of their backgrounds.

The results show a need for guidelines involving leaders with diverse backgrounds in the design process. This can be integrated into industry practices by establishing frameworks that encourage collaboration between AI designers and leaders from various cultural contexts. As suggested by Superlab, regular training programs on cultural nuances for AI designers can become a standard practice to ensure a nuanced understanding of diverse leadership cultures.

Figure 2 presents the key insights obtained from the interviews with business leaders. As apparent, aspects like conscious tech inclusion certificates, neuro-linguistic feedback loops, and holistic, adaptive learning are some of the key aspects that can support AI-driven leadership. It has the potential to empower businesses and all related stakeholders fully.



**FIGURE 2:** Key Insights from Thematic Analysis.

Similar to our results and discussion, the literature review also highlighted the transformative role of artificial intelligence (AI) in shaping adaptive leadership (Moro-Visconti et al., 2023; Gerpott & Quaakebeke, 2023). By integrating machine learning algorithms, natural language processing, and predictive analytics, AI-driven leadership support systems offer leaders the ability to navigate dynamic environments with agility and foresight. This adaptability is particularly critical in today's rapidly evolving business landscape, where success hinges on swiftly responding to change. AI systems provide real-time data analysis and simulate scenarios, empowering leaders to make informed decisions amidst uncertainty.

Expanding globally presents leaders with multifaceted challenges, from navigating regulatory frameworks to managing remote teams across different time zones and cultures. AI-powered support systems offer solutions by providing multilingual capabilities, automated compliance checks, and insights into cross-cultural team dynamics. Through real-time data analysis, leaders can optimize operations and maintain the efficient functioning of international teams, thereby enhancing organizational performance on a global scale. It further highlights the importance of

integrating insights from industry practices into developing AI-driven leadership support systems. Customizability, continuous monitoring for biases, and positive leadership principles emerge as key themes, reflecting industry trends toward user-centric design and ethical AI adoption as highlighted by the leaders from SEMA and Almasar. Moreover, incorporating guidelines for collaboration between AI designers and leaders from diverse cultural backgrounds, organizations can foster inclusive design practices and promote a nuanced understanding of global leadership cultures. Conscious Tech Inclusion (CTI) Certification also highlights the industry's commitment to ethical AI deployment and societal well-being. Through comprehensive training programs and feedback mechanisms, organizations can empower users to utilize AI-driven systems and contribute to ongoing improvements effectively. These insights underscore the transformative potential of AI-driven leadership support systems in empowering businesses and stakeholders to navigate complex challenges and embrace inclusive practices in a rapidly evolving digital landscape.

## **6. CONCLUSION AND RECOMMENDATION**

In conclusion, this paper has explored integrating inclusive design principles into AI-driven leadership support systems for small businesses expanding globally. The insights from interviews are a platform for rethinking the future of technology and leadership. The narratives from ESirius, Almasar, SEMA and Superlab provide essential links between theory and practice that will be useful for making AI accessible and valuable to leaders with different backgrounds. The significance of this study lies in its contextualization within the current technological era, where AI is not merely a tool but a transformative force shaping the dynamics of leadership. Aligning the findings with industry practices shows that the themes identified in this research are relevant to the field. An emphasis on culture sensitivity, user customization, continuous monitoring biases, and positive leadership demonstrates that contemporary firms have moved towards more inclusive and adaptive artificial intelligence systems.

For instance, ESirius's emphasis on positive leadership and organizational culture corresponds to industry awareness that leaders shape work environments. Implications of these findings further evidence this; they provide ways of fostering positive organizational cultures via artificial intelligence supported by leaders. Superlab's emphasis on customization features, regular audits for biases, and the proposed Conscious Tech Inclusion (CTI) Certification introduce novel concepts that can significantly influence the future trajectory of AI in leadership. On one side, customization as a theme portrays a shift from collective to individual preferences where companies look into systems that adapt based on personal interests rather than unique leadership styles. If adopted, CTI Certification may serve as an ethical and inclusive AI benchmark, leading to responsible AI development discussions.

### **6.1 Future Research Direction**

This study provides valuable insights and opens up several opportunities for further exploration. Another possible line is researching deeper designs that enhance AI-based supporting platforms for inclusive leaders' diversity sensitiveness. Developing an improved understanding of how some designs could be used to develop AI-based interfaces resonating with various cultural contexts or communication styles would make AI systems more inclusive.

Another aspect for future research would be to conduct longitudinal studies that examine the long-term effects and outcomes of inclusive AI systems on organizational performance and employee satisfaction. For instance, when organizations expand globally, they invest in technology, and it is essential to understand the impact of inclusive design on their success. In this case, there are longitudinal studies to understand the implications of businesses adopting such strategies.

Additionally, future research could focus on the scalability of inclusive AI systems for small businesses. Scaling these principles across different business stages and resources will help

make findings more useful in practice because today's study has analyzed them in various contexts.

Lastly, examining the intersectionality of diversity within leadership, considering factors such as gender, ethnicity, and age simultaneously, would contribute to a more comprehensive understanding of inclusive design in AI-driven leadership support systems. The approach recognizes that an individual can have multiple aspects of diversity at once, with AI systems being sensitive to these intersections.

## **6.2 Limitations**

It is imperative to acknowledge the limitations of this study to provide a balanced perspective on its findings. First, this research was limited to two interviews; while rich in content, a larger sample size would give a broader view of challenges faced by leaders in small firms. On top of that, reliance on qualitative information creates subjectivity that could be avoided if those with other types, like quantitative ones, were included too. Despite researchers trying to limit this potential bias by aligning with existing literature, using numeric measurements might have given a clearer perspective about how common or otherwise pervasive such design is in AI-supported leadership programs.

Also, the fact that this study focuses only on global expansion among small businesses may limit its transferability to more giant corporations or those that operate under specific industries. Future research should consider variations in adoption and influence caused by the size of business enterprises and sectors due to location differences. Therefore, this study contributes to understanding the relationship between inclusive design principles and AI-driven leadership support systems. On the other hand, ESirius and Superlab's insights align with existing industry practices and provide practical implications of inclusiveness in changing technologies for leadership. As a result, there is a pressing need for future studies about future research, such as examining the scalability of such principles, their long-term effects, and intersectionality to ensure that AI remains a driver of positive transformation and fair innovation.

## **6.3. Academic and Practical Relevance**

This study's academic and practical relevance lies in its investigation of AI-driven leadership support systems and their implications for diverse organizational contexts. Academically, the study contributes to the existing literature by offering insights into the intersection of artificial intelligence and leadership practices, particularly in marketing, employee recruitment, and workplace diversity management. By examining the current state of AI applications in leadership support through qualitative interviews and thematic analysis, the study fills gaps in understanding regarding the implementation and impact of AI technologies in diverse business settings. Moreover, the study's methodological approach, which includes a case study design and increased participant diversity, enhances the robustness of the findings and contributes to methodological advancements in AI research. This academic rigor ensures that the study's conclusions are grounded in empirical evidence and can serve as a valuable reference for future scholarly inquiry into AI-driven leadership support systems.

Practically, the study offers actionable insights for organizational leaders and decision-makers seeking to leverage AI technologies to enhance leadership effectiveness, promote inclusivity, and navigate global business challenges. By identifying key challenges such as language barriers and cultural differences, the study provides practical recommendations for designing AI systems that are culturally sensitive, linguistically inclusive, and adaptable to diverse communication styles. Furthermore, the study underscores the transformative potential of AI-driven leadership support systems in driving innovation, empowering businesses to navigate complex challenges, and fostering inclusive organizational cultures. The implications derived from the study's findings can inform strategic decision-making processes within organizations, guiding the adoption and implementation of AI technologies in ways that align with organizational values, goals, and stakeholder needs.



In conclusion, this study's academic and practical relevance lies in its contribution to advancing knowledge in the field of AI-driven leadership support systems and its potential to inform organizational practices, policies, and strategies to enhance leadership effectiveness and promote inclusivity in diverse organizational contexts.

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## APPENDIX A – Interview Frame

1. Could you tell us about your background and experience as a small business leader expanding globally?
2. What is the role of leadership support in the success of small businesses worldwide?
3. Are you familiar with AI-driven leadership support systems, and have you ever used or implemented any in person?
4. In your view, what difficulties do leaders from various backgrounds face when accessing and using AI leadership support systems?
5. Is there an occurrence that can help shed light on the availability and efficiency of these programs to leaders from different backgrounds?
6. How has inclusivity been addressed or needs to be improved in the design of current AI-driven leadership support systems?
7. According to your understanding, Which specific features would make AI-driven leadership support systems more inclusive for leaders across cultures,
8. Can you provide examples of inclusive design principles that have been successfully implemented in non-AI contexts and could be adapted to AI-driven leadership support systems?
9. What do you think about the leadership support system's UI design and interaction design regarding the diversity of communication preferences or style related to the user interface, considering uniqueness and cultural importance? Please give an example.
10. From your perspective, have any instances where a lack of inclusivity in AI-driven systems resulted in unintended consequences or challenges for diverse leaders? If so, please share them.
11. In your opinion, how important is it for AI-driven leadership support systems to be customizable for individual needs and preferences, especially for leaders from different backgrounds?
12. If businesses are expanding globally, how can small businesses integrate their culture into their designs to make their leadership support system meaningful to leaders from other cultural backgrounds?
13. In developing AI-driven leadership support systems, what training or educational components should be incorporated to make them more accessible and understandable to diverse leaders?
14. Should inclusive design involve user-end test groups that are demographically diverse? If yes, which strategies will make user involvement effective?
15. What is required by AI developers and organizations to ensure continuing inclusivity as technology develops? Should some mechanisms or practices require regular reviews and updates to maintain an inclusive AI environment?
16. Has using AI-driven leadership support systems in a global business context ever posed any cultural or language-related barriers?
17. When small businesses expand globally, must they adopt AI-driven leadership support systems based on inclusive design principles first?
18. How can the incorporation of inclusive design principles into AI-driven leadership support systems enhance the overall effectiveness of such systems?
19. What are some suggested best practices or strategies to ensure that AI-driven leadership support systems are usable by leaders from different backgrounds?
20. Why should small businesses adopt an inclusive approach when designing their AI-powered leadership support system?
21. In what ways can leaders and decision-makers advocate for and facilitate the integration of inclusive design principles in their companies' AI-based systems?
22. Are there any concerns about integrating inclusive design principles into AI-driven leadership support systems? How can these concerns be resolved?
23. What advice would you give other leaders and firms that aim to improve the accessibility and efficiency of AI-driven leadership support systems for individuals from varied backgrounds based on your experience?