Article

Sustainability-Embedded Leadership for Successful Change Management

Susan Akinwalere [1], Kirk Chang [1,*] and Salim Barbhuiya [2]

1 Royal Docks School of Business and Law, University of East London, 1 Salway Road, London E15 1NF, UK; s.akinwalere@uel.ac.uk
2 School of Architecture Computing and Engineering, University of East London, University Way, London E16 2RD, UK; s.barbhuiya@uel.ac.uk
* Correspondence: k.chang@uel.ac.uk

Abstract

Drawing on Daniel Goleman's leadership paradigm as well as critically engaging with the Authentic Leadership and Complexity Leadership theories, this article explores how leadership drives change management, specifically in the context of advancing organizational sustainability. While change management has been widely examined in areas such as technology adoption and restructuring, there is less clarity on how to lead change that directly supports sustainability goals. Therefore, the current research addresses the gap by focusing on leadership strategies that effectively embed sustainability into leadership practices. Using a theory triangulation method, we built an analytic framework that integrates theoretical and empirical perspectives to better understand how sustainability-embedded leadership can support change management for the best possible outcome. Research data are gathered from respected academic sources including ProQuest, JSTOR, and Google Scholar. Research findings reveal that leaders who tailor their leadership to specific situations are more effective at advancing organizational sustainability than those who rely on a single type of leadership. We also create a contrast table to demonstrate the characteristics of eight leadership types, with a focus on how each can contribute to organizational performance and sustainability. The table serves as a managerial guide for aligning leadership strategies with sustainability objectives. The current research contributes to the intersection of leadership and sustainability by identifying how different leadership types affect an organization's ability to adopt and implement sustainable practices. By clarifying the strengths and limitations of each approach, the current research enhances the understanding of how situation-oriented leadership can support sustainability goals. The findings also have practical implications for how organizations design and implement change management policies aimed at long-term environmental, social, and economic sustainability. Limitations and future research directions are discussed.

Keywords: change management; employee engagement; leadership; organizational change; sustainability; sustainable goals

1. Introduction

Human beings are a social species that relies on leaders and followers to cooperate, survive, and thrive. Leaders guide and influence followers toward a common goal, encouraging collaboration and comradeship; to be exact, good leaders bring vision, hope, and sustainability to the group, organization, and society, whereas bad leaders behave

in an opposite way [1]. Scholars have proposed various theories to clarify the imperativeness of leaders, explaining how leaders can motivate and inspire their followers to maximize the performance potential for sustainability; for instance, successful leaders cultivate an environment conducive to achievement by promoting open communication and teamwork among their team members—*see full review in* [2]. Following this line of research, the concept of sustainability-embedded leadership is gradually emerging as being effective, aiming to support individuals, teams, and the organization to achieve the best possible outcomes to enhance sustainability [3]. By definition, sustainability-embedded leadership refers to a leadership approach that integrates sustainability principles, which are environmental, social, and economic, into core leadership practices, decision-making, and organizational change efforts. It emphasizes adaptive, emotionally intelligent, and ethically grounded leadership that aligns style, context, and values to foster long-term organizational sustainability and system-wide transformation through collaborative, situational, and values-driven action [1].

Sustainability-embedded leadership is considered effective and crucial for an organization to thrive amidst the challenges posed by rapid economic growth [4,5]. Leaders are responsible for steering the organization through periods of change, setting ambitious goals, and implementing effective organizational sustainability strategies to achieve those goals. Moreover, sustainability-embedded leaders cultivate a positive organizational culture and inspire their employees by providing substantial benefits, including healthcare, worker compensation, and paid leave. Skilled leaders leverage their expertise to manage uncertainty and alleviate employees' concerns during transitions. Ultimately, a leader's influence can shape the organization's direction and success, driving it to achieving new sustainable heights through both strategic vision and employee motivation.

It is sensible to infer from the aforementioned literature that sustainability-embedded leadership is imperative to successful change management and organizational sustainability. For instance, sustainability-embedded leaders are found to guide, support, and engage their organization through change, ensuring that change initiatives achieve short-term success and contribute to the organization's long-term sustainability [4]. Change often involves navigating uncertainty. Sustainability-embedded leaders demonstrate adaptive leadership by being flexible, open to new ideas, and responsive to evolving circumstances, which is crucial for sustaining change in a dynamic environment. Leaders help build organizational resilience by preparing the organization to withstand and thrive during change, contributing to long-term sustainability [5].

From a more functional standpoint, we continue the aforementioned studies by suggesting that sustainability--embedded leadership in change implementation involves the adoption of one or more leadership strategies. Our proposition is: these strategies may act independently or collaboratively, at various times, to varying extents, and in different sequences, employing specific leadership styles, subject to the nature and duration of the change. Following the same logic, we also propose that sustainability-embedded leadership is crucial in achieving positive outcomes and organizational sustainability, during change implementation.

More specifically, some scholars have claimed that organizational change initiatives fail due to inadequate leadership, with failure rates up to 70% [6–8]. This high rate of failure has sustained interest in identifying factors that can reduce failure rates and enhance the success of organizational change. Myriads of researchers and consulting firms have developed various change management models aimed at increasing the success rate of these initiatives [9]. Despite the development of these models, there remains a critical need to thoroughly understand the role of leadership and what constitutes sustainability-embedded leadership in successfully managing organizational change to achieve sustainability.

In view of what has preceded, our aim in the current research is to fulfill the knowledge gap by conducting a review of the existing literature on leadership and change management. We are keen to initiate a discussion that can lay the groundwork for future research and exploration into ways sustainability-embedded leadership practices can achieve meaningful outcomes in facilitating and enhancing organizational sustainability. This research, therefore, stands out for its originality by addressing a critical gap in the leadership and change management literature: how multiple, distinct leadership theories can be synthesized to enable the successful embedding of sustainability into organizational practices. Unlike previous research which often treats leadership or sustainability in isolation, this work employs a rigorous Theory Triangulation Method (TTM), drawing upon Goleman's emotional intelligence leadership, Authentic Leadership Theory, and Complexity Leadership Theory. This triangulated approach allows for the construction of a new analytic framework that captures the interplay between leadership style, situational context, and sustainability outcomes [10]. Specifically, this research contributes a comprehensive managerial guide that maps eight leadership types to their unique roles in driving organizational sustainability, moving beyond generic recommendations to actionable insights. Through detailing how situationally adaptive leadership improves effective, values-driven change and linking these mechanisms to sustainable development goals, this research uniquely advances both theoretical understanding and practical application in the field.

2. Methodological Note

To accomplish the research aim, we have gathered literature on leadership, change management, sustainable goals, organizational sustainability, and cognate themes from well-regarded database portals. To build a framework for further data analysis and interpretation, we apply the Theory Triangulation Method (TTM) [11] by conducting an examination of the concerned themes through multiple theories; simply put, we examine the similarities and differences across different theoretical and empirical perspectives, and then create a unified analytic framework that encompasses the essential elements of each theory (see Figure 1 for an example). By considering various perspectives, employing different analytical approaches, and posing diverse questions, TTM helps provide a comprehensive evaluation and critical analysis of the concerned themes [11], such as leadership, change management, and organizational sustainability in the current research.

While the Theory Triangulation Method (TTM) enhances analytical robustness by integrating multiple theoretical frameworks, it is not without limitations. TTM's reliance on synthesizing perspectives can sometimes result in conceptual ambiguity, particularly if the theories employed possess conflicting assumptions or distinct ontological foundations. Moreover, excessive breadth may dilute depth, as triangulation often privileges consensus over critical investigation of outlier findings or minority perspectives. There is also a risk of researcher bias in theory selection, potentially skewing analysis toward dominant paradigms. Finally, TTM's qualitative emphasis may limit replicability and make generalization of results more challenging compared to single-framework approaches, warranting careful interpretation of findings.
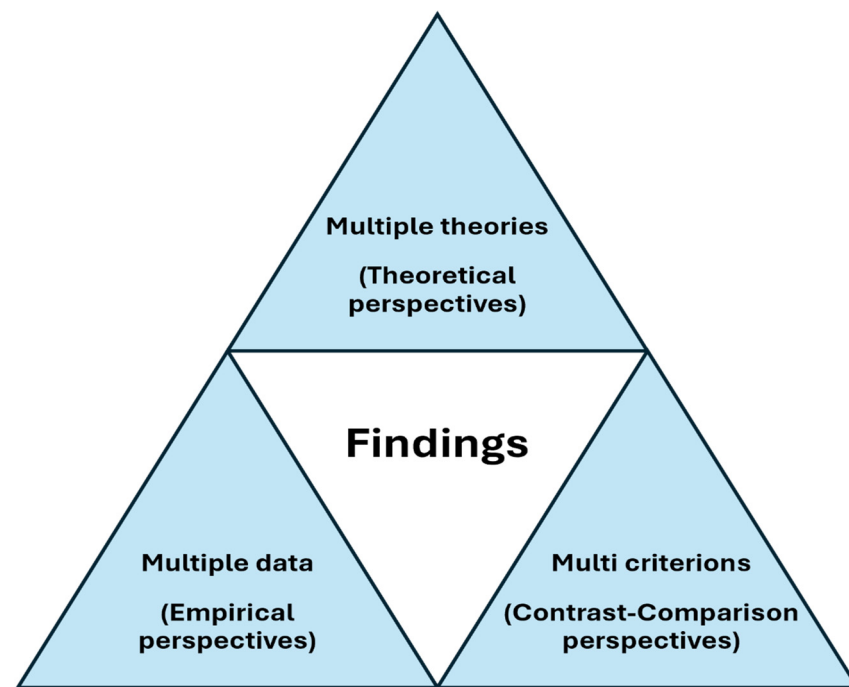
Figure 1. Sample TTM (Source: Authors' own work).

2.1. Screening Process

To refine our literature selection on sustainability-embedded leadership and its role in effective change management, we applied stricter inclusion and exclusion criteria. We focused exclusively on peer-reviewed, original research articles published in English to maintain academic quality and consistency. The review covered both open access and subscription-based journals, including titles like *International Journal of Organizational Behaviour & Management Perspectives*, *Leadership Quarterly*, and *Research in Organizational Change and Development*, among others, to capture diverse interdisciplinary insights. To clarify and enhance the credibility of the TTM concept adopted here, the selection of theories for triangulation, namely Goleman's emotionally intelligent leadership, as well as contrasting frameworks such as complexity leadership and authentic leadership, was not conducted arbitrarily but guided by explicit, a priori criteria: (1) the theory's prominence in recent peer-reviewed literature on leadership and change management; (2) demonstrated relevance to sustainability-embedded organizational change; and (3) empirical support for each framework's efficacy in driving meaningful change outcomes outcomes.

Literature was sourced systematically from ProQuest, JSTOR, and Google Scholar. The use of Google Scholar is justified in this research because its inclusion of non-peer-reviewed material allows access to a broader range of current reports, white papers, policy documents, and emerging scholarship, thereby supporting a more comprehensive and nuanced review of leadership and sustainability literature than traditional, peer-reviewed-only databases. These portals are recognized by major research bodies for their reliability and breadth and by the UK Research and Innovation and thus selected for the current research—*see similar strategy in* [12]. Article inclusion was based on relevance, citation frequency, and focus on empirical or theoretical contributions to leadership within sustainable change management.

2.2. Selection of Articles

A structured keyword search guided our review, following the approach outlined by [12]. Keywords included: *sustainability*, *leadership*, *change management*, *employee engagement*, *employee performance*, *sustainable goals*, *ethics*, and *organizational change*. We did not set publication date restrictions, allowing us to include research from the earliest available studies up to July

2025. The initial search produced 145 unique articles. After screening for direct relevance to the sustainability–leadership link, we retained a smaller subset. We then applied backward and forward citation tracking to strengthen the selection process, resulting in a final list of 120 articles, as summarized in Table 1. As seen in Table 1, since our initial screening was based on abstracts, we excluded any articles whose abstracts did not engage directly with sustainability and leadership themes, giving us a total of 80 publications. After further review, we removed 30 more articles due to lack of relevance, narrowing the pool to 50 publications. A full-text screening then confirmed 43 articles that met all criteria, each published between 1999 and 2025 in academic journals.

Table 1. Review stages with the total number of sources at each stage.

Stage	Description	Number
Identification	Initial results	145
Further search	Forward and backward search technique	120
First screening	Irrelevant abstracts	80
Second screening	After abstract read	50
Third screening	After full-text read	43

Source: The table is compiled by the authors.

2.3. Coding

During source review, extracted data were subjected to open coding, with recurring concepts, such as emotional intelligence, sustainability-embedded leadership, organizational change, employee engagement, employee performance, and sustainability, were identified as candidate themes. These themes were then mapped against the selected theories, allowing systematic comparison of areas of overlap, distinction, and potential integration. Throughout this process, regular cross-checks were performed to ensure consistency in coding, and any discrepancies were resolved through consensus among researchers. This robust approach to theory triangulation ensures that the analytical framework is both comprehensive and critically engaged, supporting nuanced conclusions about the interplay between various leadership paradigms and the advancement of sustainability-centered change management. We break this down as follows:

We used a multi-step qualitative coding process to analyze the literature and identify key themes related to the interaction between sustainability and leadership. The first step involved documenting core details for each article, including the publication source, research methodology, industry context, and main theoretical frameworks. We also noted how each article connected sustainability and leadership, along with any practical implications discussed. Next, we applied the Theory Triangulation Method (TTM) to examine how sustainability and leadership concepts were approached, drawing on frameworks such as Daniel Goleman's leadership theories, Complexity Leadership Theory (CLT), and Authentic Leadership Theory (ALT). This helped us trace patterns across theoretical models, frameworks, outcomes, and phenomena. We categorized recurring themes and relationships found in the studies. To maintain consistency and accuracy, we refined our coding scheme through an iterative review process. Each article was systematically analyzed to ensure the extracted information was clearly organized and meaningful for the study's objectives.

For analytical synthesis, the TTM image was constructed to visually organize the distinct attributes and implications of the findings for sustainable leadership practices, which facilitated the identification of converging concepts and points of theoretical relevance as seen in Figure 1. Figure 1 visually encapsulates the application of the Theory Triangulation Method (TTM) as the foundation for the research's analytical framework on sustainability-embedded leadership in change management. The figure demonstrates how multiple theoretical lenses are systematically juxtaposed and synthesized to deliver a more robust

and comprehensive evaluation of leadership effectiveness within the sustainability context. By illustrating the stepwise process of integrating diverse theoretical perspectives, Figure 1 clarifies the methodological approach taken to cross-examine, compare, and unify essential elements of each framework, ultimately leading to the creation of a cohesive analytic model. This visual not only reinforces the transparency and rigor of the research design but also aids the reader's understanding of how combining different leadership theories generates a multidimensional perspective, thereby strengthening both the interpretive depth and practical utility of the study's findings on change management for sustainability [13].

The Theory Triangulation Method (TTM) framework's components are relevant to this research in the sense that, after sourcing leadership literature from ProQuest, JSTOR, and Google Scholar, the researchers applied TTM by systematically comparing similarities and differences across Goleman's emotional intelligence paradigm, complexity leadership, and authentic leadership, as visually depicted in Figure 1. Key themes, such as adaptive flexibility, distributed leadership, and authenticity, were extracted and then mapped onto the analysis of how various leadership strategies impact organizational sustainability. The resulting contrast table of eight leadership types directly reflects this methodological integration, serving both as a synthesis of the theoretical perspectives and as a managerial guide for implementing context-appropriate, sustainability-focused leadership strategies. Thus, each step of the TTM, from theory selection, literature review, theme coding, to the table's construction, is operationalized and explicitly connected to the study's major empirical and practical conclusions.

2.4. Institutional Research Ethics Guidelines

Moreover, we have followed institutional research ethics guidelines for the secondary data collection, ensuring that individual names, source identifiers, and organizational titles are anonymized, except where required for originality and copyright considerations. The data that support the findings of this article are also available from the corresponding author upon reasonable request after the article has been published.

3. The Perspective

The current section analyses and critically discusses extant leadership theories in line with Daniel Goleman's leadership paradigm, aiming to clarify what makes for a sustainability-embedded leadership. Goleman's paradigm is vital in discussing sustainability-embedded leadership because it highlights the importance of personal and interpersonal skills in leadership success—see *leadership paradigm* [14]. Goleman's paradigm goes beyond traditional leadership traits like technical skills or cognitive intelligence, emphasizing that leaders with high emotional intelligence are more capable of fostering productive relationships, managing stress, achieving sustainability-driven goals, and motivating teams. This section scrutinizes the link between sustainability-embedded leadership and change management by analyzing how sustainability-embedded leadership motivates individuals to embrace and drive change toward sustainability. Finally, this section also explores the evolving role of leadership in managing change, with recommendations made for achieving organizational sustainability.

3.1. Existing Theories of Leadership

There is extensive literature on common leadership styles and how to choose the most effective one, whether it be transactional, transformational, bureaucratic, or laissez-faire. However, leadership involves much more than just giving orders or delegating tasks. It is a complex combination of skills, traits, and strategies that can greatly impact an organization's sustainability, success, and the well-being of its members, particularly in times

of change. Goleman has explored the intricacies of leadership in depth by identifying six distinct leadership styles, emphasizing that sustainability-embedded leadership involves recognizing that different situations may require different approaches [14].

Visionary leaders contribute to sustainability by clearly articulating a future that is grounded in purpose and long-term benefit. Their strength lies in answering the essential question of direction: "Where are we going?" When the vision centers on sustainability goals such as aligning business strategies with the UN Sustainable Development Goals (SDGs), these leaders can mobilize collective energy and focus. They provide a unifying narrative that connects day-to-day work with broader environmental and social outcomes. By making sustainability a core part of the organizational vision, they help individuals see their contributions as part of a greater mission outcome. This not only motivates action but also sustains engagement through periods of change, when clarity of purpose becomes most critical. For example, during transitions to green technologies or shifts in supply chain practices, visionary leaders can stabilize uncertainty by keeping the long-term sustainable outcome front and center. This ensures that sustainability is not treated as a side initiative but as the destination of the organization's trajectory [15].

Coaching leaders, on the other hand, invest deeply in people. Their impact on sustainability comes from fostering continuous learning and long-term skill development. By focusing on mentorship and personal growth, they prepare teams to be adaptable and resilient—qualities essential for sustainable innovation. In the context of sustainability, this might mean nurturing skills related to renewable energy, data-driven environmental analysis, or sustainable operations. These leaders take the time to understand the unique strengths and challenges of their team members, offering support that is personal and constructive. This tailored guidance not only enhances performance but also embeds sustainability in the culture by promoting growth mindsets. Over time, this creates a workforce that is better equipped to lead green initiatives, adapt to regulatory shifts, and think critically about ethical decision-making. The emphasis on development over quick wins makes coaching leadership particularly suited for sustainability, where long-term success often depends on building capabilities that do not produce immediate returns.

Affiliative leaders contribute by creating cohesive, emotionally intelligent teams that function well under pressure and uncertainty. Sustainability work is inherently collaborative and often involves navigating differing priorities, values, and perspectives. Affiliative leaders smooth this path by fostering trust, empathy, and mutual respect within teams. When morale dips or conflict arises, these leaders work to restore harmony, creating environments where people feel safe to speak, question, and challenge assumptions—key conditions for sustainability-driven innovation. A psychologically safe workplace is more likely to support employee-led green initiatives, admit when practices are falling short, and push for systemic changes that require group cohesion. By prioritizing relationship-building and emotional well-being, affiliative leaders ensure that sustainability is embedded not just in strategy but in everyday team dynamics. This strengthens the social fabric of organizations, which is essential for enduring sustainability initiatives that must outlast short-term pressures.

Democratic leadership is integral to sustainability due to its emphasis on participatory decision-making and the integration of diverse stakeholder perspectives. Democratic leaders foster a culture of inclusive dialogue, ensuring that employees at all levels have a voice in shaping sustainability strategies and actions. This leadership style not only enhances the quality and legitimacy of decisions by tapping the collective intelligence of the workforce, but also strengthens employee buy-in and accountability for sustainability outcomes. Democratic leaders encourage open forums, collaborative workshops, and feedback mechanisms that capture a broad spectrum of ideas, leading to innovative solutions for complex

sustainability challenges [13]. By valuing employee input, they imbue team members with a sense of ownership over both process and results, motivating proactive contributions to environmental stewardship, social equity, and sustainable economic growth.

Pacesetting leaders offer a different but still valuable contribution to sustainability by modeling excellence and setting ambitious standards. These leaders push their teams to achieve high performance, often by demonstrating what is possible through their own efforts. In sustainability-focused organizations, a pacesetting leader might drive aggressive timelines for reducing emissions, eliminating waste, or hitting ethical sourcing targets. When balanced with support and realism, this can accelerate progress and create a culture that values action over rhetoric. However, pacesetting leadership must be calibrated carefully in sustainability contexts. Unrealistic expectations or lack of emotional awareness can lead to burnout, undermining the long-term nature of sustainable work. Used judiciously, though, pacesetting leadership can raise the bar for what is expected and demonstrate that sustainability does not mean compromising on performance or quality; it means excelling with responsibility [15].

Authoritative leadership, while often associated with rigidity, also has a strategic role in sustainability, especially in urgent or high-stakes scenarios. In times of crisis or when rapid alignment is required, authoritative leaders can make swift, decisive moves to implement sustainability mandates, address regulatory risks, or correct unethical practices. Their clarity and confidence can cut through inertia or confusion, particularly in organizations that are struggling to shift from legacy practices to more sustainable models. The key is moderation; used too often, this style can suppress innovation and create resistance [4]. But when deployed in the right context, like responding to environmental compliance failures or steering the organization through a significant sustainability audit, it ensures that action is taken without delay, and that the commitment to sustainable standards is upheld with authority.

In line with Goleman's paradigm, ref. [16] stress that charismatic leaders play a crucial role in facilitating organizational sustainability by leveraging their personal appeal, vision, and ability to inspire and motivate others. They create a strong organizational culture, drive change, and foster innovation, all of which are essential for long-term sustainability. Organizational sustainability often requires change, whether it is adopting new technologies, shifting to more sustainable business practices, or rethinking strategies. Charismatic leaders are effective change agents. They encourage creativity and innovation, allowing the organization to adapt and evolve in a rapidly changing environment. This adaptability is essential for long-term sustainable survival and success. Sustainability is closely tied to ethical practices and social responsibility [17]. Charismatic leaders often set high ethical standards and serve as role models for integrity and social responsibility. By fostering an environment that values ethics and sustainability, charismatic leaders help ensure that the organization's practices align with its long-term sustainability goals [17].

AI-empowered leadership enhances leadership capabilities, decision-making, and management practices within organizations by using AI tools and technologies, and is essential in navigating the complex landscape of sustainability. Leaders who strategically implement AI can guide their organizations toward more sustainable practices, achieve regulatory compliance, drive innovation, and create a positive impact on society and the environment [18]. This requires a vision, investment in AI talent and technology, and a commitment to integrating sustainability into every facet of the organization. By harnessing artificial intelligence, these leaders can identify inefficiencies, monitor sustainability indicators in real-time, and facilitate informed scenario planning. This enables them to make proactive interventions that support regulatory compliance, reduce resource consumption, and drive innovation in sustainable business models. According to [19], this approach can

revolutionize leadership by offering predictive analytics and decision-support systems that enhance strategic planning and execution, especially regarding employee recruitment and talent acquisition. Implementing a balanced AI-human approach can augment human intelligence by providing virtual assistants, recommendation systems, and scenario planning tools that help leaders visualize potential sustainable outcomes and make better choices.

Table 2 below serves as a central analytical device that operationalizes the typology of leadership styles examined, directly linking theoretical constructs to their pragmatic implications for sustainability-embedded change management. By systematically contrasting eight principal leadership styles: visionary, coaching, affiliative, democratic, pacesetting, authoritative, charismatic, and AI-empowered, across key criteria related to both organizational performance and sustainability outcomes, the table provides an explicit framework for assessing how each style either advances or constrains sustainable change. This advances current understanding in several dimensions.

First, it moves beyond the frequent dichotomy of "effective versus ineffective" leadership by illustrating the nuanced ways in which specific styles can support or undermine long-term sustainability, depending on context, intensity, and sequencing. For example, while visionary and coaching styles are shown to foster long-term capability building and cultural buy-in essential for sustainable transformation, pacesetting and authoritative styles may deliver short-term results but risk exhaustion and reduced innovation if overapplied [20].

Table 2. Leader types and leadership strategies (sustainability included).

Leaders (Types)	Characteristics (e.g., Managerial Styles)	Advantages (e.g., Merits, Opportunities)	Disadvantages (e.g., Drawback, Constraint)	Best Used in (e.g., Strategies, Applications)
Visionary leaders	Provides a clear vision of the future, inspires team toward long-term sustainability goals.	High team motivation and alignment with long-term sustainability goals, encourages creativity.	Can neglect short-term needs, relies heavily on the leader's vision, potential for disconnect.	Startups, organizations undergoing significant change, strategic planning.
Coaching leaders	Focuses on personal and sustainable professional development of team members, encourages learning.	High employee satisfaction, personal growth, sustainable and strong team relationships.	Time-consuming, may not be effective in high-pressure situations, requires skilled leaders.	Skill-building environments, educational institutions, talent development.
Affiliative leaders	Emphasizes empathy, relationship-building, and sustainable collaboration.	Fosters a positive supportive work environment, resulting in increased morale and sustainable job satisfaction.	Not always effective in high-pressure or crisis situations where quick decision-making is needed.	Teams needing emotional healing or recovery after conflicts or stressful events.
Democratic leaders	Encourages team input, sustainable decisions made collectively or by majority vote.	High team engagement, fosters creativity, encourages collaboration and sustainability.	Slower decision-making, potential for conflict, can be inefficient.	Creative industries, collaborative environments, education.
Pacesetting leaders	Often leads by example, demonstrating a sustainable and strong work ethic and a commitment to high standards.	Can inspire high-performing team members to excel and exceed expectations.	Can lead to burnout and high stress levels among team members if overused.	Situations where team members are highly skilled, self-motivated, and require minimal supervision.

Table 2. *Cont.*

Leaders (Types)	Characteristics (e.g., Managerial Styles)	Advantages (e.g., Merits, Opportunities)	Disadvantages (e.g., Drawback, Constraint)	Best Used in (e.g., Strategies, Applications)
Authoritative leaders	Centralized decision-making, leader has complete control.	Quick decision-making, clear direction, good in crisis situations.	Lack of team input, potential for low morale, discourages creativity.	Military, crisis management, high-stakes situations.
Charismatic leaders	Leader inspires and motivates through personal charisma and persuasive skills.	High team motivation, strong influence, effective in driving change and sustainability.	Over-dependence on the leader, may lack sustainability, risk of narcissism or manipulation.	Startups, political movements, crisis situations.
AI-empowered leaders	Automates repetitive tasks and processes, allowing leaders to concentrate on strategic and sustainable activities.	Increases efficiency by automating routine tasks, reducing human error, and sustainably optimizing resource allocation.	Requires significant investment in technology, training, and infrastructure.	Companies undergoing digital transformation or seeking to innovate through technology.

(Source: Authors' own work).

Second, the table's side-by-side format, integrated with the analytic discussion, enables scholars and practitioners to directly compare the trade-offs and complementarities among styles, thereby supporting a contingent approach to leadership selection as endorsed by this manuscript's theoretical triangulation. Furthermore, by including emergent forms such as AI-empowered leadership, the typology addresses contemporary and future challenges, acknowledging technological disruption as both a risk and a strategic asset for sustainability.

Finally, the typology creates a bridge between leadership theory and practical change management by identifying style-specific levers and limitations for embedding sustainability objectives. This structured, comparative view informs actionable policy and leadership development decisions, moving the debate beyond abstract advocacy for "good leadership" toward a nuanced, evidence-based alignment of leadership practice with sustainability goals, and thus significantly enriches the empirical and conceptual rigor of the analytical framework presented in this article.

3.2. Critical Engagement with Contrasting Leadership Theories

While Daniel Goleman's emotionally intelligent leadership paradigm offers a robust lens for understanding leadership in the context of sustainability-embedded change management, a deeper theoretical framing is achieved by situating Goleman's approach in critical dialogue with alternative leadership theories, notably Complexity Leadership Theory and Authentic Leadership Theory. Goleman's framework, widely cited for its practical utility, highlights the importance of six situational leadership styles which are visionary, coaching, affiliative, democratic, pacesetting, and authoritative, with each rooted in the leader's emotional intelligence and ability to calibrate their approach to dynamic organizational circumstances [16]. Emotional intelligence, as argued by Goleman and extended by subsequent research, equips leaders to foster trust, manage conflict, and inspire motivation, all of which are pivotal for navigating the uncertainties of organizational change and advancing sustainability initiatives. However, while Goleman's model emphasizes individual adaptability and the leader's capacity to align styles with organizational needs, it largely centers on the leader as a purposeful agent, shaping outcomes through intentional influence and personal skill [3].

Contrastingly, Complexity Leadership Theory (CLT) emerges from the premise that modern organizations are not merely machines guided by top-down direction, but complex adaptive systems that self-organize in response to evolving internal and external pressures [21]. From the CLT perspective, leadership resides not solely in the actions of designated individuals but is distributed throughout the organization, emerging from interactions among agents, teams, and networks. Leaders, therefore, serve less as controllers and more as facilitators or enablers, catalyzing adaptive capacity, fostering conditions for emergence, and nurturing informal dynamics that drive collective intelligence. This view challenges Goleman's implicit assumption that leadership effectiveness is chiefly a matter of the individual's emotional and interpersonal acumen; instead, CLT posits that leadership is a social and relational property, manifesting through the dynamic interplay of multiple actors embedded in complex systems [22]. For sustainability-embedded change management, this theoretical expansion is vital: it foregrounds how leaders must not only motivate and engage, as Goleman prescribes, but also orchestrate contexts in which innovation, learning, and emergent practices thrive despite unpredictability. Complexity leadership thus underlines the limitations of a purely style-based, leader-centric approach and calls attention to the adaptive, network-oriented strategies necessary for deep, system-level sustainable transformation.

Authentic Leadership Theory (ALT) provides another compelling counterpoint by shifting analytical focus from style and adaptability to the moral and existential foundations of leadership practice. ALT argues that leadership effectiveness and sustainability outcomes are contingent upon the leader's self-awareness, relational transparency, and sustained alignment with deeply-held ethical values. In contrast to Goleman's instrumental focus on emotional intelligence as a functional asset, ALT asserts that only leaders who consistently embody authenticity, acting in ways congruent with their internal beliefs and open dialogue, will earn the trust required to mobilize enduring, value-based organizational change [23]. This perspective is particularly resonant in the context of sustainability, where competing interests and ethical dilemmas abound. Authentic leaders legitimize change initiatives not merely by deploying the "right" style or managing relationships artfully, but by persuading stakeholders that change is grounded in a genuine moral commitment to environmental stewardship, social responsibility, and organizational integrity. Moreover, ALT underscores the transformative influence of moral modeling: leaders who disclose their values, admit their limitations, and foreground the ethical rationale for change foster cultures of openness, psychological safety, and engaged followership, which are critical precursors to sustainability success.

Synthesizing these theories with Goleman's paradigm materially enriches the analytical depth of the change management framework presented in this research. While Goleman's approach captures the need for situational flexibility and emotional acuity, CLT compels the analyst to attend to the broader systemic conditions and distributed agency that underpin effective, large-scale change. ALT, in turn, highlights the non-negotiable requirement of ethical authenticity, trust-building, and transparent communication, characteristics essential for the legitimacy and acceptance of sustainability-driven transformation. By triangulating these perspectives, the article resists the temptation of mono-paradigmatic explanation and instead articulates a multilevel, multidimensional understanding of leadership in sustainability contexts [24]. Leaders, accordingly, must not simply shift styles in response to immediate cues, but serve as sensemakers in complexity, architects of emergent change, and steadfast role models of the sustainability values they wish to see embedded within their organizations.

As seen in Figure 2 below, building on the comparative analysis of leadership theories and their implications for sustainability outcomes, this research proposes a novel integrative

model, namely the '*the Sustainability-Embedded Adaptive Leadership Framework (SEALF)*'. The SEALF Venn diagram illustrates how adaptive style, systemic emergence, and sustained authenticity collectively intersect to drive sustainability-embedded organizational change and enduring positive impact. The SEALF synthesizes the strengths of Goleman's emotional intelligence-based situational leadership, Complexity Leadership Theory's emphasis on emergent, distributed agency, and Authentic Leadership Theory's focus on moral self-awareness and values alignment. The framework posits that in dynamic, sustainability-oriented environments, leadership effectiveness does not derive from the application of any single style or paradigm but from the leader's ability to fluidly move across three interconnected domains: adaptive style deployment, enabling of systemic emergence, and sustained authenticity. First, SEALF suggests leaders must assess contextual needs through emotionally intelligent sensing, deploying the appropriate leadership style (e.g., visionary, democratic, coaching) in response to specific sustainability challenges while remaining attuned to team and stakeholder sentiment. Second, the leader's role extends beyond direct influence to cultivating networks that facilitate emergent solutions and distributed problem-solving [25], reflecting Complexity Leadership's insight that innovation often arises from informal interactions and adaptive processes rather than top-down control. Finally, SEALF anchors these activities in a foundation of authenticity: leaders must communicate openly about their sustainability intentions, model ethical conduct, and build trust through consistency between words and actions. The intersection of these three domains produces an iterative, feedback-driven process by which leaders, teams, and organizations continuously adapt and co-evolve in pursuit of sustainability outcomes. This original framework offers both a conceptual map and a practical guide for cultivating the kind of leadership that aligns short-term change management success with enduring, system-wide sustainability objectives.
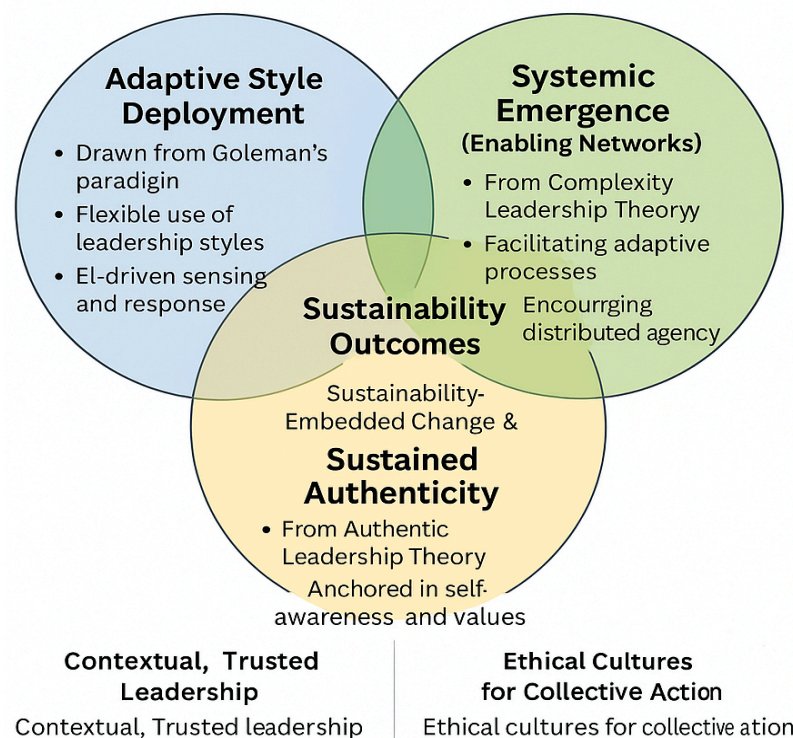

Figure 2. The SEALF Venn diagram (Source: Authors' own work).

3.3. What Makes for Sustainability-Embedded Leadership?

Leadership is a form of power that enables an individual to influence or transform the values, beliefs, behaviors, and attitudes of others [26]. A person with strong leadership skills acts as an exemplary role model for their employees, as a leader who effectively achieves significant results earns the trust and admiration of their team. This, in turn, can lead to organizational sustainability, and a transformation in the employees' values, beliefs, behaviors, and attitudes, as they tend to emulate the leader, highlighting the adage that imitation is the sincerest form of flattery [27]. Ref. [28] also supports this perspective, highlighting that leaders with strong leadership capabilities possess the ability to influence others to achieve the organization's goals and objectives.

Sustainability-embedded leaders are recognized for their ability to provide clear direction, which fosters commitment and teamwork to achieve organizational sustainable goals and objectives [26]. Successful leaders typically possess a well-defined vision, enabling them to identify and overcome obstacles that may hinder progress. This capability allows them to implement necessary changes effectively, thereby improving the company's sustainability and adaptability in a dynamic business environment.

According to [29], leadership is a process where leaders use their skills and knowledge to guide their team toward goals that align with the organization's objectives. Furthermore, sustainability-embedded leadership is marked by essential traits such as passion, consistency, trust, and vision, qualities that are vital for building employee trust and achieving organizational sustainability. Ref. [30] argue that sustainability-embedded leaders have a clear, compelling vision for the future. They set a strategic direction and help others understand and commit to the long-term sustainable objectives, which enables them to articulate ideas clearly, listen actively, and provide constructive feedback, while bridging gaps and ensuring alignment within teams. Simply put, trustworthiness and honesty are critical for leadership as integrity builds trust and credibility, fostering a culture of accountability, ethical behavior, and sustainability.

Selecting the appropriate leadership style is vital, as sustainability-embedded leadership involves more than just adopting various personas. It requires a deep understanding of each style's unique dynamics and strategically applying them to the specific context. Following this logic, the constructs of efficacy and efficiency are incorporated into the analysis and discussion below.

On the one hand, sustainability-embedded leaders are adaptable, able to transition between styles effortlessly, guided by emotional intelligence and a strong commitment to steering their teams toward sustainability. The efficacy of a leadership style is influenced not only by the leader's preferences but also by the context in which it is used. Efficacy in leadership refers to the capacity of a leader to produce a desired or intended result. It is about the ability to achieve goals, inspire followers, and drive the organization or team toward sustainable success. The focus is on the effectiveness of a leader in achieving outcomes, motivating the team, and making strategic decisions.

Efficiency, on the other hand, in leadership, is about the ability of a leader to achieve sustainable goals with the least amount of resources, time, and effort. It involves optimizing processes, minimizing waste, and ensuring that the organization runs smoothly. The focus is on how well a leader manages resources (e.g., time, people, money) to achieve goals without unnecessary waste [31]. Therefore, skilled leaders understand the importance of adapting their approach to fit the specific circumstances they face. Following this line of research, we now turn to discuss how sustainability-embedded leadership can be achieved in managing change.

3.4. Sustainability-Embedded Leadership in Change Management

Change has always been a challenge for organizations, just as it has been a constant in human life. People often find change difficult because it disrupts their routines and pushes them out of their comfort zones, creating discomfort as they adapt to new behaviors [32]. For example, a worker who is used to starting work at 9 a.m. might struggle if their supervisor suddenly requires them to start at 7 a.m., as they would need to break the ingrained habit of waking up later. Similarly, within an organization, if employees are accustomed to completing tasks in a specific order, such as from A to Z, altering this sequence to Z to A can be challenging for everyone to adjust to quickly.

Change management within an organization is a strategy for guiding change at both organizational and individual levels, with each adapting in its own manner and at its own pace; when executed effectively, it enables an organization to capitalize on opportunities for gaining a competitive edge and achieving long-term sustainability [15]. As seen in Figure 3, below, the change management process includes three key stages: adapting to change, managing the change, and implementing the change. The first stage, adapting to change, assesses individual readiness and willingness to embrace the change, while the second stage focuses on managing and integrating the change into daily operations. Finally, the third stage, effecting the change, ensures that the change is sustained and becomes a natural part of organizational life [2].
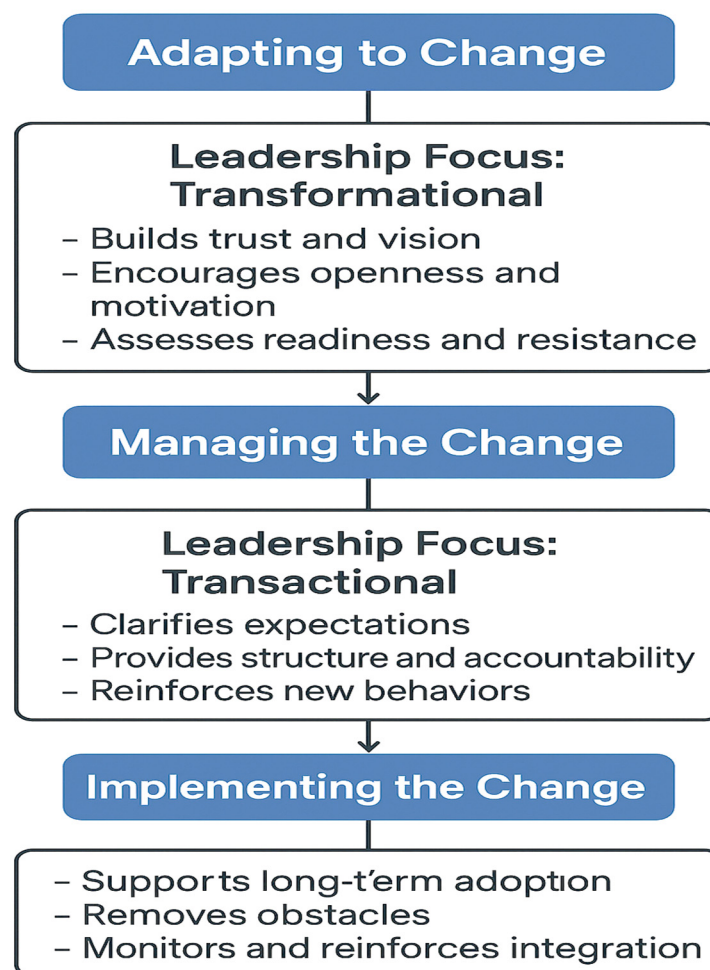

Figure 3. Change management stages and leadership styles flowchart. (Source: Authors' own work).

Sustainability-embedded leadership plays an important role in the design, development, and implementation of change management within an organization. Leaders who

understand the nuances of change can significantly impact how smoothly and successfully change is adopted by the organization, fostering organizational sustainability. In designing change management, sustainability-embedded leaders articulate a clear and compelling vision for change, providing a roadmap that aligns with the organization's sustainability and strategic goals. This helps in creating a strong foundation for the change management process [33].

To develop change management strategies, sustainability-embedded leaders build coalitions of support by involving influential stakeholders who can champion the change effort across different levels of the organization. These change champions help drive momentum and enthusiasm for the change. Sustainability-embedded leaders can implement and sustain change by involving employees in decision-making processes, providing opportunities for skill development, fostering an environment that encourages innovation and adaptability, and embedding new behaviors and practices into the organization's culture by recognizing and rewarding those who support and exhibit the desired changes [34]. These strategies facilitate organizational sustainability.

Predicting the duration of change management within an organization is challenging due to the varying rates at which employees adapt. Some individuals may quickly embrace change, while others might need more time to adjust. Similarly, while some employees will welcome the change, others may resist it. Sustainability-embedded leaders must engage in clear communication and collaboration with their teams to ensure the sustainability-driven success of the change process [35]. Leaders with strong and effective skills can motivate and influence employees, thereby facilitating successful organizational change and long-term sustainability. Ref. [7] argue that without sustainability-embedded leadership, change is unlikely, as there would be no one to inspire, guide, and provide clear direction for the organization's employees. Sustainability-embedded leadership is crucial for managing change, which is necessary for an organization to remain competitive in today's business environment and achieve its goals.

Change is often uncomfortable, and some individuals may resist or deny it, risking obsolescence [23]. Interest in leadership during change implementation is fundamentally about achieving organizational sustainability. To satisfy this interest, we must first understand what constitutes 'sustainability-embedded leadership' and how it contributes to organizational sustainability. From this perspective, sustainability-embedded leadership is achieved when it meets the needs for both completing tasks and maintaining group cohesion. Therefore, sustainability-embedded leadership is crucial for driving organizational change and achieving sustainability. Equally, sustainability-embedded leadership is vital in motivating and encouraging individuals to embrace and drive change toward sustainability. Leadership plays a key role in ensuring that employees adapt and contribute to the organization's continuous and sustainable improvement and ability to thrive in a dynamic business landscape.

3.5. Concrete Examples of How Leaders Mitigated Resistance in Sustainability Initiatives

Leaders play a pivotal role in overcoming resistance during the implementation of sustainability initiatives, and both academic research and practical case studies provide ample evidence of effective strategies and tangible results. In organizations seeking to integrate sustainability into their core operations, resistance from employees, middle management, or even senior leaders is a common hurdle. This resistance can stem from skepticism, perceived costs, disruption to established routines, or uncertainty about long-term benefits. To successfully address these challenges, leaders have employed a variety of methods grounded in transparency, education, inclusivity, and transformational engagement [36].

Organizations facing entrenched resistance at the middle-management level take a direct, engagement-focused approach. For instance, Circular Computing, a company championing eco-friendly technology solutions, experienced notable resistance from its management team when embarking on a sustainability-focused transformation. The leadership responded by combining proactive advocacy with concrete demonstration of value: they integrated compelling sustainability goals into performance appraisals, encouraged managers to lead innovation circles exploring operational improvements, and involved skeptics directly in pilot projects. By positioning managers as co-owners rather than mere implementers, resistance was reframed as involvement, and the visible endorsement by senior leaders reinforced the strategic importance of sustainability. A case narrative highlights, "Being assertive, proactive, and unwavering in the pursuit of a sustainable future can overcome these barriers. The narrative needs a shift from gentle persuasion to compelling, confident leadership" [37].

Noteworthy is also the experience of Unilever under former CEO Paul Polman, who championed the Sustainable Living Plan as a fundamental business strategy [37]. Polman's approach was to embed sustainability into every unit and function of the business, pairing visionary leadership with relentless communication and employee empowerment. He frequently addressed concerns openly during town halls, fostering a culture where questioning and feedback were inputs for refining strategy rather than obstacles to be overcome. By integrating sustainability KPIs into bonus schemes and performance metrics, the leadership created clear incentives while neutralizing the perception that sustainability was a peripheral or idealistic agenda. "Sustainability is not a choice we make, but a way of operating that defines our future relevance," Polman emphasized, underscoring the role leadership plays in translating vision into shared urgency.

The academic literature [2,36] further reinforces these case findings, with research arguing that leaders who anticipate resistance, rather than react to it, tend to be more successful. Strategies such as involving employees meaningfully in design and decision-making, communicating the purpose repeatedly and through varied channels, and leveraging feedback loops are consistently cited as best practices. For instance, as argued by [2], he highlighted resistance to waste reduction initiatives was met by inviting operational staff to co-design process adjustments, which led not only to smoother adoption but also to innovative ideas from those closest to the shop floor. Leaders supported these efforts by providing emotional and technical resources, such as coaching, peer mentoring, and opportunities for hands-on learning, which increased ownership and reduced fear of job loss or skill redundancy.

Another effective tactic is the use of inclusive, democratic leadership, where employees are treated as change partners rather than subjects. Case studies [36] show that by forming cross-functional sustainability teams and rotating leadership roles within these teams, organizations mobilize diverse perspectives, reduce silos, and foster collective problem-solving. Open forums and structured feedback mechanisms allowed employees to voice concerns, suggest adjustments, and see their contributions reflected in the evolving sustainability agenda, which was critical to shifting mindsets from resistance to engagement. Leaders also addressed root causes of resistance by transparently discussing trade-offs, responding to concerns about short-term costs versus long-term gains, and sharing external examples of industry best practices to provide external validation.

Where financial or resource-based resistance was significant, successful leaders framed sustainability not as a compliance exercise but as a driver of long-term business value. For example, according to a recent report by McKinsey [33], Company B, in a well-documented rollout of energy efficiency programs, faced initial pushback over capital investments and disruption to operational routines. Leaders countered this by piloting small-scale projects, openly sharing ROI data, and involving resisters in measuring and reporting positive

outcomes such as cost savings or enhanced safety. Over time, the visible, data-driven successes moved doubters to advocates, and the organization's leadership became a visible sponsor of further innovation. In sum, leaders mitigate resistance to sustainability through an adaptive blend of clear vision, educational engagement, empathetic listening, inclusion, visible sponsorship, and the strategic use of quick wins that build credibility. Through these concrete methods, evident across sectors, they not only dismantle barriers but also turn resistance into momentum for lasting change.

4. Discussion and Conclusions

Given the challenges facing leaders in the 21st century, we believe that equipping future leaders with the right leadership strategies is pertinent for their success in organizational sustainability and the successful advancement of numerous United Nations Sustainable Development Goals (SDGs). For instance, leaders who cultivate inclusive, supportive, and performance-oriented environments contribute directly to SDG 8 (Decent Work and Economic Growth), as they prioritize employee well-being, fair compensation, and professional development. This enhances employee engagement and workforce resilience during organizational transformations. Furthermore, by integrating sustainable practices into core operations and decision-making, leaders champion SDG 12 (Responsible Consumption and Production), ensuring that consumption patterns and resource utilization within organizations become more ethical, circular, and community-conscious. The manuscript's emphasis on adaptive, emotionally intelligent, and ethically grounded leadership also aligns with SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities), seeing that open communication and team collaboration can challenge traditional power imbalances and promote diverse perspectives in decision-making, thus supporting broader social goals inherent to sustainability initiatives [38]. Strong leadership skills also foster trust among employees, which simplifies other tasks and enhances overall operations. Leaders with these skills can guide their teams in alignment with the organization's vision and mission, motivating continuous improvement and innovation. As a result, the organization's performance will improve and sustain itself even in today's complex and uncertain business environment. Our research findings have provided valuable insights to the leadership-organizational sustainability literature by clarifying the advantages and disadvantages that different leaders may experience in enhancing organizational performance and sustainability. This article now turns to discuss the implications of research findings on knowledge advancement and practical implications.

4.1. Knowledge Advancement

In the past, organizations increasingly adopted complex matrix structures with silos and opaque hierarchies. Adopting complex matrix structures with silos and opaque hierarchies can indeed undermine sustainability-embedded leadership. While matrix structures are intended to promote flexibility and cross-functional collaboration, when poorly implemented, they can create significant barriers to leadership and overall organizational effectiveness and sustainability. However, new organizational models are breaking down these barriers, facilitating more effective collaboration and better adaptation to change, which are very significant attributes for organizational sustainability [20]. By transitioning from siloed hierarchies to networks of autonomous teams that emphasize transparency, trust, and collaboration, companies can improve their sustainability, adaptability, and resilience.

This shift requires leaders to move from directive roles within a vertical hierarchy to becoming change agents who empower and guide self-managing teams. Sustainability-embedded leadership in this new framework involves fostering connection, dialogue, and cooperation across traditional organizational boundaries, thereby building trust, respect,

and compassion but also encourages leaders to relinquish the power associated with positional authority in favor of openness, thereby strengthening human connections within and across teams and enhancing organizational sustainability [39].

On the basis of this, to advance knowledge in this field, we propose that three key leadership practices can facilitate the shift. To begin with, fostering and empowering small, self-regulating teams is crucial. However, effective empowerment does not mean leaving employees to fend for themselves. In fact, true empowerment involves leaders providing both the right tools and necessary guidance. Leaders should adopt a coaching role: they do not dictate tasks but offer guidance, set boundaries, and ensure accountability while allowing team members to find their own sustainability-driven solutions [40]. Organizations should focus on enhancing managers' coaching skills and creating time for them to coach their teams, rather than getting bogged down by administrative tasks like report writing and meetings. Even simple practices, such as daily stand-ups or check-ins, can facilitate organizational sustainability, horizontal connectivity, enabling teams to understand each other's work and identify where help is needed, without relying on hierarchical directives [41].

Next, promoting transparency and collaboration across the network and beyond is essential. Sustainability-embedded leadership involves utilizing tools and platforms that make information sharing seamless. This includes regular updates, open meetings, and collaborative platforms that keep everyone informed and engaged. Furthermore, facilitating relationships grounded in trust and mutual respect is crucial in improving organizational performance and sustainability. This involves being transparent in decision-making processes and welcoming feedback. Inclusivity is also key in achieving organizational sustainability, ensuring that every voice is heard and valued, and that input is gathered from all levels and departments to incorporate diverse perspectives [42].

Finally, transitioning from a hierarchy of individual leaders to networks of leadership teams can be highly beneficial. When sustainability-embedded leaders build connections between teams, this approach shifts the model from a central hub-and-spoke structure to a more extensive network. In a well-functioning network, the central hub maintains visibility over all activities without creating a bureaucratic bottleneck that impedes responsiveness. By encouraging a unified purpose, the network can enhance the organization's ability to swiftly address challenges and work toward making sustainable choices [43]. Furthermore, this structure emphasizes crucial behaviors such as empathy, communication, and clear decision-making, paving the way for a more sustainable, dynamic, and agile organization in the future.

Furthermore, this research contributes meaningfully to advancing leadership and sustainability theory by integrating and critically assessing multiple leadership paradigms. Through its use of theory triangulation and by bringing together Goleman's emotional intelligence-based leadership, Complexity Leadership Theory (CLT), and Authentic Leadership Theory (ALT), the study challenges traditional, style-centric views of leadership. Instead of endorsing a one-size-fits-all model, it promotes a multidimensional understanding of leadership effectiveness, particularly in driving sustainability-embedded change. By highlighting the limitations of purely hierarchical or leader-centric models, the research reinforces CLT's view of leadership as an emergent, relational process rooted in adaptive systems [43]. Likewise, the inclusion of ALT underscores that ethical authenticity and value alignment are not peripheral but essential to sustainable leadership. These insights culminate in the proposed SEALF framework, which synthesizes adaptive style deployment, systemic emergence, and sustained authenticity as core dimensions of effective sustainability leadership. This marks a conceptual shift from prescriptive leadership models to more context-responsive, ethically grounded, and systems-aware approaches.

By bridging empirical insights with theoretical innovation, the study not only extends the boundaries of leadership theory but also reframes how organizations might operationalize sustainability through leadership that is simultaneously agile, participatory, and anchored in moral integrity.

4.2. Practical Implications

We can infer from research findings that sustainability-embedded leadership and change management are essential for embedding sustainability into an organization's DNA. By encouraging a culture of continuous improvement, aligning change initiatives with sustainable goals, and engaging stakeholders, leaders can facilitate long-term sustainability and ensure the organization thrives in a rapidly changing environment. To extend our current understanding of sustainability-embedded leadership and change management in facilitating organizational sustainability, effective leaders in organizations should ensure that change initiatives align with the organization's sustainability goals, such as reducing environmental impact, enhancing social responsibility, or improving economic performance. They should integrate sustainability into the core strategy, ensuring that every change aligns with long-term goals. This involves investing in sustainable practices, technologies, and innovations that reduce waste, optimize resources, and enhance stakeholder value [33].

The findings of this study underscore the necessity for managers and policymakers to adopt a strategically diversified and evidence-based approach to leadership in the context of sustainability-embedded change management. Firstly, it is imperative for managers to engage in regular check-ins, regular leadership assessments, and training programs that emphasize situational adaptability, equipping leaders at all levels with the awareness and skill set to deploy varied leadership styles, such as visionary, coaching, affiliative, and democratic, in response to evolving organizational challenges [25]. Organizations should institutionalize adaptive leadership development, integrating coaching and experiential learning (for example, through cross-functional sustainability projects or scenario-based workshops) that enable emerging and established leaders to practice real-time style flexibility and emotional intelligence. A related actionable measure is embedding sustainability competencies into leadership appraisal and promotion criteria, ensuring those ascending to influential roles have demonstrated an ability to unite teams around purpose-driven goals, foster learning cultures, and navigate resistance during change initiatives.

Additionally, managers should create mechanisms for distributed leadership and bottom-up innovation by establishing multidisciplinary "sustainability leadership circles" and digital platforms that harness employee input and surface emergent solutions, reflecting the insights of Complexity Leadership Theory. Regular check-ins, feedback loops, and cross-level dialogues should be institutionalized so that leadership can sense and respond to shifting dynamics and actively facilitate collaborative problem-solving. For policymakers, there is a need to develop regulatory frameworks and professional standards that incentivize leadership accountability for sustainability outcomes. This can include coaching strategies and formal recognition and rewards for organizations that demonstrate sustained success in sustainability change management, as well as funding streams dedicated to sector-wide leadership capacity building in sustainability [40]. Policy instruments could also require large organizations to publicly report on their leadership development programs, particularly the extent to which they address sustainable change management competencies, authentic leadership, and the ethical dimensions of decision-making.

Both managers and policymakers should prioritize efforts to mitigate leadership style traps, such as excessive reliance on pacesetting or authoritative approaches, by articulating and monitoring balance at an organizational level. Concrete actions here include rotating leadership roles in sustainability initiatives, implementing leadership mentoring to foster

authentic and values-aligned behavior, and using AI-powered dashboards to monitor leadership impact on sustainability indicators in real time [13]. To support a culture of authentic and distributed leadership, organizations and policymakers must also model transparency by regularly communicating challenges, successes, and lessons learned in the sustainability journey, thus reinforcing stakeholder trust and engagement. Finally, the typological framework provided in this study should be operationalized through customizable diagnostics and decision-support tools, empowering managers and policymakers to align leadership strategies more precisely with the complexity and scale of their unique sustainability challenges. Through transforming these research insights into actionable systems, processes, and policies, organizations can bridge the persistent gap between espoused sustainability commitments and the realization of measurable, enduring change outcomes [25].

It is pertinent to also point out that the implications of sustainability-embedded leadership are not uniform across organization types. For instance, in SMEs, leaders face unique challenges like resource constraints and flatter hierarchical structures, making coaching, democratic, and emotionally intelligent leadership more vital to motivate teams and foster innovation with limited means. Sustainability-embedded SME leaders tend to rely on close-knit team dynamics and direct engagement, enabling quicker adaptation and strong buy-in for sustainability goals [44]. Conversely, leaders in large corporations must manage complex bureaucracies, coordinate cross-functional efforts, and often institutionalize sustainability through formalized policies, which can dilute individual influence. Here, visionary and transformational leadership styles are often required to inspire widespread culture change and align regional or international operations with high-level sustainability strategies. Thus, while the principles of sustainability-embedded leadership are broadly applicable, their actualization demands tailored strategies that consider organizational scale, structure, and context.

4.3. Limitations and Suggestions for Future Research

This article's contributions must be contextualized within several key limitations that inform opportunities for future research. Foremost, the focus on eight established leadership theories, while necessary for analytic clarity, inevitably narrows the theoretical lens, potentially overlooking less conventional or emergent approaches that could shape sustainability-embedded leadership and change management for organizational sustainability. As leadership and organizational change are inherently multifaceted and context-dependent, incorporating a broader or more nuanced array of theoretical perspectives, such as shared leadership, distributed leadership, or digital-era leadership models, could enrich the understanding of how different styles interact with evolving sustainability demands.

Furthermore, the research relies exclusively on secondary sources for data collection and analysis, a methodological choice driven by time and data access constraints [45]. While systematic literature selection and rigorous theme coding were employed, the absence of primary data means findings are contingent on the scope, quality, and biases of existing studies. This precludes detailed, context-specific practitioner insights into the priorities, mechanisms, and actor dynamics within real-world organizations undertaking sustainability transformations. To address these limitations, future research should pursue empirical studies that integrate qualitative methods using in-depth interviews from primary practitioners or participant observation, with quantitative techniques, with a focus on advanced econometric modeling. Such mixed-methods designs would enable more robust assessments of causal mechanisms and contingent effects, clarifying how specific leadership attributes, such as emotional intelligence, authenticity, and work-life balance, concretely influence the design, implementation, and outcomes of sustainability initiatives.

Further, longitudinal studies could illuminate how leadership effectiveness evolves alongside organizational and environmental change, as well as undertake comparative studies to explore how cultural contexts, such as collectivist versus individualist societies, shape sustainability leadership practices. Researchers should also scrutinize the impact of digital and AI-enabled leadership, a rapidly emerging field intersecting with sustainability imperatives. By expanding theoretical horizons and integrating richer empirical evidence, future scholarship can more comprehensively map the complex interplay between leadership, change management, and organizational sustainability, thus providing practitioners and policymakers with actionable, context-sensitive guidance.

5. Conclusions

This study makes a distinct contribution by expanding Daniel Goleman's emotional intelligence-based leadership framework into the domain of sustainability-driven change management, an area underdeveloped in the literature. While Goleman's model emphasizes situational leadership styles informed by emotional intelligence, this article builds on that by integrating it with Authentic Leadership Theory and Complexity Leadership Theory through a Theory Triangulation Method. The result is a novel analytic framework—SEALF (Sustainability-Embedded Adaptive Leadership Framework) that situates emotionally intelligent leadership within broader systems thinking and ethical authenticity. Unlike prior work [40] that treats leadership effectiveness in sustainability as either a moral imperative or a structural phenomenon, this study bridges micro-level behavioral adaptability with macro-level organizational dynamics and ethical alignment.

The contrast table of eight leadership types operationalizes Goleman's theory in sustainability contexts, demonstrating how each style contributes to or hinders sustainable outcomes. Furthermore, by incorporating emerging forms such as AI-empowered leadership, the research advances the field beyond static typologies, addressing current technological and ethical complexities. Ultimately, this study clarifies how leaders can adaptively deploy styles, foster systemic emergence, and maintain authenticity to embed sustainability into organizational change, thus offering a multidimensional and practical extension of Goleman's framework in real-world sustainability transitions [45].

Sustainability needs to be integrated into the core of how organizations operate, and this requires sustainability-embedded leadership and intentional change management. Leaders have a central role in creating a culture that supports sustainable values, encourages collaboration across departments, and builds trust. Organizations should invest in developing managers' coaching abilities and prioritize time for team engagement over administrative tasks. Leaders should also make use of tools and platforms that facilitate open communication and shared responsibility for sustainability goals, including regular updates, open meetings, and collaborative systems that promote alignment, sustainability, and transparency [10].

Author Contributions: Conceptualization, S.A. and K.C.; Methodology, S.A.; Software, K.C.; Formal analysis, S.A. and K.C.; Investigation, S.A.; Writing—original draft, S.A.; Writing—review & editing, K.C. and S.B. All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Van Vugt, M.; Chang, K.; Hart, C. The impact of leadership styles on group stability. *Chin. J. Psychol.* **2005**, *47*, 365–380.
2. Cullen-Lester, K.L.; Yammarino, F.J. Collective and network approaches to leadership: Special issue introduction. *Leadersh. Q.* **2016**, *27*, 173–180. [CrossRef]
3. Zacher, H.; Kühner, C.; Katz, I.M.; Rudolph, C.W. Leadership and Environmental Sustainability: An Integrative Conceptual Model of Multilevel Antecedents and Consequences of Leader Green Behavior. *Group Organ. Manag.* **2024**, *49*, 365–394. [CrossRef]
4. Atkinson, P.; Mackenzie, R. Without leadership there is no change. *Manag. Serv.* **2015**, *59*, 42–47.
5. Koeslag-Kreunen, M.; Van den Bossche, P.; Hoven, M.; Van der, K.; Gijselaers, W. When leadership powers team learning: A meta-analysis. *Small Group Res.* **2018**, *49*, 475–513. [CrossRef] [PubMed]
6. Alessandro, L.; Antony, J.; Ramadan, M.; Dhaheri, A.; Anders, F.; Lars, S. Leadership characteristics for implementation and sustainability of quality: An exploratory study and directions for further research. *Tqm J.* **2024**, *36*, 2599–2617.
7. Cabeza-Erikson, I.; Edwards, K.; Van Brabant, T. *Development of Leadership Capacities as a Strategic Factor for Sustainability*; BTH: Karlskrona, Switzerland, 2008.
8. Dierking, K. Resistance to Change in the Workplace: How to Overcome It. Yourthoughtpartner.com. 2025. Available online: https://www.yourthoughtpartner.com/blog/resistance-to-change-in-the-workplace (accessed on 1 July 2025).
9. Harms, P.D.; Credé, M.; Tynan, M.; Leon, M.; Jeung, W. Leadership and stress: A meta-analytic review. *Leadersh. Q.* **2017**, *28*, 178–194. [CrossRef]
10. Abbas, W.; Asghar, I. The role of leadership in organizational change: Relating the successful organizational change to visionary and innovative leadership. *DiVA* **2010**. Available online: https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A326289&dswid=-5548 (accessed on 1 July 2025).
11. Nasir, Z. *Redefining Sustainability Leadership: A Bold Approach to Overcoming Middle Management Resistance*; Circular Computing: Portsmouth, UK, 2024. Available online: https://circularcomputing.com/news/redefining-sustainability-leadership (accessed on 21 July 2025).
12. Adisa, T.; Chang, K. A balanced work-life relationship helps boost employee performance. *Hum. Resour. Manag. Serv.* **2024**, *6*, 3460. [CrossRef]
13. Ahsan, M.J.; Khawaja, S. Sustainable leadership impact on environmental performance: Exploring employee well-being, innovation, and organizational resilience. *Discov. Sustain.* **2024**, *5*, 1–22. [CrossRef]
14. Ernst, B.A.; Banks, G.C.; Loignon, A.C.; Frear, K.A.; Williams, C.E.; Arciniega, L.M.; Gupta, R.K.; Kodydek, G.; Subramanian, D. Virtual charismatic leadership and signaling theory: A prospective meta-analysis in five countries. *Leadersh. Q.* **2022**, *33*, 101541. [CrossRef]
15. Jansen, K.J.; Hofmann, D.A. Mapping momentum fluctuations during organizational change: A multistudy validation. In *Research in Organizational Change and Development*; Pasmore, W., Woodman, R.W., Eds.; Emerald: London, UK, 2011; pp. 163–190.
16. Goleman, D. The focused leader. *Harv. Bus. Rev.* **2013**, *R1312B*.
17. Ali, A.A.; Ahamad, N.N. A Study on the Role of Leaders in Achieving Sustainable Competitiveness and Sustainability During Change. *Sustainability* **2024**, *16*, 9978. [CrossRef]
18. Bastardoz, N. Signaling charisma. In *Routledge International Handbook of Charisma*; Zuquete, J.P., Ed.; Routledge: London, UK, 2020; pp. 313–323.
19. Dugan, J.P. *Leadership Theory: Cultivating Critical Perspectives, 2nd ed*; Jossey-Bass: London, UK, 2024; ISBN 13 978-1394152100.
20. Engelbert, L.H.; Van Elk, M.; Theeuwes, J.; Van Vugt, M. The role of charismatic leadership tactics and inconsistent messages in processing and evaluating climate change information. *Collabra Psychol.* **2024**, *10*, 1–24. [CrossRef]
21. Ford, J.D.; Ford, L.W. The leadership of organizational change: A view from recent empirical evidence. In *Research in Organization Change and Development*; Shani, A.B.R., Pasmore, W.A., Woordman, R.W., Eds.; Emerald: London, UK, 2012; Volume 20, pp. 1–36.
22. Behrendt, P.; Matz, S.; Goritz, A.S. An integrative model of leadership behavior. *Leadersh. Q.* **2017**, *28*, 229–244. [CrossRef]
23. Chang, K. Ethical and operational challenges of AI in talent acquisition. *Innov. Bus. Strateg. Manag.* **2024**, *2*, 29–32.
24. Chang, K.S. Membership stability and performance: A study of baseball clubs and laboratory groups. *Int. J. Hum. Resour. Manag.* **2011**, *22*, 457–480. [CrossRef]
25. Ferede, W.L.; Endawoke, Y.; Tessema, G. Change management through strategic leadership: The mediating effect of knowledge management in public organizations, Ethiopia. *Future Bus. J.* **2024**, *10*, 1–17. [CrossRef]
26. Chang, K.; Lasyoud, A.A.; Osman, D. Management accounting system: Insights from the decision making theories. *Soc. Sci. Humanit. Open* **2023**, *8*, 100529. [CrossRef]
27. Gaubatz, J.A.; Ensminger, D.C. Department chairs as change agents: Leading change in resistant environments. *Educ. Manag. Adm. Leadersh.* **2017**, *45*, 141–163. [CrossRef]
28. Grint, K. Learning to Lead: Can Aristotle Help Us Find the Road to Wisdom? *Leadership* **2007**, *3*, 231–246. [CrossRef]
29. Jiang, W.; Zhao, X.; Ni, J. The impact of transformational leadership on employee sustainable performance: The mediating role of organizational citizenship behavior. *Sustainability* **2017**, *9*, 1567. [CrossRef]

30. Wuestman, D.; Casey, J. Lean leadership: Sustaining long-term process change. *Strateg. Financ.* **2015**, *96*, 15–16.

31. Patton, M.Q. Enhancing the quality and credibility of qualitative analysis. *Health Serv. Res.* **1999**, *34*, 1189–1208. [PubMed]

32. Sancak, I.E. Change management in sustainability transformation: A model for business organizations. *J. Environ. Manag.* **2023**, *330*, 117165. [CrossRef] [PubMed]

33. Join The Collective. Overcoming Change Resistance: Leadership Strategies. 2023. Available online: https://www.jointhecollective.com/article/overcoming-change-resistance-leadership-strategies/ (accessed on 1 July 2025).

34. Issah, M.; Zimmerman, J.A. A change model for 21st century leaders: The essentials. *Int. J. Pedagog. Innov.* **2016**, *4*, 23–29. [CrossRef]

35. Jackson, B.; Parry, K. *A Very Short, Fairly Interesting and Reasonably Cheap Book About Studying Leadership*; SAGE: London, UK, 2018; Volume 208, p. 25.

36. Join The Collective. Case Studies of Successful Corporate Sustainability Initiatives. 2024. Available online: https://www.jointhecollective.com/article/case-studies-of-successful-corporate-sustainability-initiatives/ (accessed on 1 July 2025).

37. Ganta, V.C.; Manukonda, J.K. Leadership during change and uncertainty in organizations. *Int. J. Organ. Behav. Manag. Perspect.* **2014**, *3*, 1183.

38. Northhouse, P.G. *Leadership: Theory and Practice*, 3rd ed.; SAGE: London, UK, 2004.

39. Sultan, M.; Hussain, S. Towards a sustainable workforce: Integrating workplace spirituality, green leadership, and employee adaptability for green creativity. *Discov. Sustain.* **2025**, *6*, 1–14. [CrossRef]

40. Watkins, D.; Earnhardt, M.; Pittenger, L.; Roberts, R.; Rietsema, K.; Cosman-Ross, J. Thriving in complexity: A framework for leadership education. *J. Leadersh. Educ.* **2017**, *16*, 148–163. [CrossRef]

41. Knight, R. Six common leadership styles and how to decide which to use when. *Harv. Bus. Rev.* **2024**. Available online: https://hbr.org/2024/04/6-common-leadership-styles-and-how-to-decide-which-to-use-when (accessed on 1 July 2025).

42. Montano, D.; Franke, R.F.; Hüffmeier, J. Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *J. Organ. Behav.* **2017**, *38*, 327–350. [CrossRef]

43. Wamsler, C.; Osberg, G.; Janss, J.; Stephan, L. Revolutionising sustainability leadership and education: Addressing the human dimension to support flourishing, culture and system transformation. *Clim. Change* **2023**, *177*, 1–23. [CrossRef]

44. Graetz, F.; Rimmer, M.; Smith, A.; Lawrence, A. *Leadership for Change: Managing Organizational Change*, 3rd ed.; John Wiley & Sons.: London, UK, 2012.

45. Koh, D.; Lee, K.; Joshi, K. Transformational leadership and creativity: A meta-analytic review and identification of an integrated model. *J. Organ. Behav.* **2019**, *40*, 625–650. [CrossRef]