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Unpacking Micro-Level Leadership Behaviours in Digital Transformation: A Qualitative Systematic Review of Behavioural Antecedents to Organisational Performance

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Abstract: Digital transformation has intensified scholarly interest in leadership; however, existing research predominantly emphasises leadership styles and strategic orientations, leaving the role of micro-level leadership behaviours underexplored. This qualitative systematic literature review synthesises prior studies to examine how everyday leadership behaviours function as behavioural antecedents of organisational performance in digital transformation contexts. Drawing on a structured review of interdisciplinary literature, the study identifies cognitive, relational, and adaptive leadership behaviours as central mechanisms through which digital initiatives are translated into performance outcomes. The findings reveal that micro-level behaviours—such as sensemaking, empowering communication, psychological safety cultivation, and behavioural flexibility—indirectly shape organisational performance by fostering digital capabilities, innovative work behaviour, and employee resilience. By shifting the analytical focus from abstract leadership constructs to observable behavioural micro-foundations, this review contributes to digital leadership and organisational performance literature and offers integrative insights for future empirical research and managerial practice

Keywords: Micro-level leadership behaviours; Digital transformation; Organisational performance; Behavioural antecedents; Qualitative systematic literature review

1. Introduction

Digital transformation (DT) has emerged as one of the most profound organisational challenges of the twenty-first century, fundamentally reshaping business models, operational processes, and value creation mechanisms across industries (Vial, 2019; Hinings et al., 2018; Kohli & Melville, 2019). While technological infrastructures such as artificial intelligence, analytics, and platform technologies constitute visible enablers of DT, a growing body of evidence suggests that transformation success is far less determined by technology itself than by human and behavioural factors embedded in organisational contexts (McKinsey & Company, 2017; Jedynak et al., 2021; Philip et al., 2023). Among these factors, leadership has consistently been identified as a critical determinant of DT outcomes (Weber et al., 2022a; Gao & Gao, 2024; Peña & Caruajulca, 2022). However, despite the rapid expansion of research on digital leadership, its behavioural foundations and performance implications remain theoretically fragmented and empirically underexplored.

Extant research on leadership in DT has predominantly relied on established leadership paradigms, such as transformational, transactional, or authentic leadership, often imported from non-digital contexts (Judge & Piccolo, 2004; Banks et al., 2016; Philip, 2021). While these perspectives have yielded valuable insights, they risk oversimplifying leadership dynamics in DT by treating leadership as a stable pattern rather than a fluid set of behaviours enacted in response to evolving technological, organisational, and emotional conditions (Oc, 2018; Liden et al., 2025). Recent systematic reviews indicate that the concept of "digital

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leadership" remains unsettled, with inconsistent definitions, overlapping constructs, and limited behavioural operationalisation (Rakovic et al., 2024; Lin, 2024; Tigre et al., 2024). As a result, it remains unclear which specific leadership behaviours matter most during DT, how they influence different dimensions of organisational performance, and how leaders should balance potentially contradictory behavioural demands. Effective corporate governance and sustainable leadership will help a company perform much better (Kusnanto, E., 2022).

To address these gaps, this study adopts a micro-level behavioural perspective, focusing on leaders' everyday actions, interactions, and behavioural choices rather than predefined leadership styles or roles (Derue et al., 2011; Kaluza et al., 2020). Behavioural leadership research has long demonstrated that leadership effectiveness is rooted in what leaders actually do—such as setting goals, fostering trust, enabling participation, and managing external relationships—rather than in abstract leadership labels (Yukl et al., 2002; Detert & Burris, 2007; Nielsen & Cleal, 2011). In the context of DT, where uncertainty, resistance, and continuous adaptation are pervasive, leadership behaviours become particularly salient as proximal antecedents of employee responses and organisational outcomes (Bausch et al., 2024; Klein et al., 2024; Ertiö et al., 2024). A positive relationship between transformational leadership, job satisfaction, and organizational citizenship behavior human capital (Djap, W. et al., 2022).

Building on this premise, the present study conducts a qualitative systematic literature review of some peer-reviewed articles published between 2000 and 2024, identified through comprehensive searches in Scopus and Web of Science. Most of the included studies were published between 2021 and 2024, reflecting the novelty and accelerating scholarly interest in behavioural leadership within DT contexts (Chawla & Goyal, 2022; McCarthy et al., 2024). Rather than anchoring leadership behaviours to rigid leadership styles, this review deliberately detaches behavioural analysis from traditional leadership typologies, enabling a more granular understanding of how distinct behaviours shape DT-related performance outcomes.

Synthesising insights across diverse empirical and conceptual studies, leadership behaviours are categorised into four overarching groups: task-oriented, relation-oriented, change-oriented, and external-oriented behaviours. This behavioural taxonomy resonates with classical leadership research (Yukl, 2012; Gil et al., 2005) while offering renewed relevance for DT contexts characterised by technological complexity and social disruption (Imran et al., 2021; Müller et al., 2024). Task-oriented behaviours, such as goal-setting, monitoring progress, and problem-solving, are frequently associated with building digital competence and operational reliability, particularly in organisations with low digital maturity (Murawski & Bick, 2017; Höyng & Lau, 2023). Relation-oriented behaviours, including empathetic communication, psychological safety, and team support, are critical in mitigating technostress, resistance, and emotional strain triggered by digital change (Furst & Cable, 2008; Rademaker et al., 2023; Ertiö et al., 2024). Change-oriented behaviours, such as co-creation, vision articulation, and experimentation, facilitate digital innovation and learning (Gumusluoglu & Ilsev, 2009; Guinan et al., 2019; Moschko & Blažević, 2023), while external-oriented behaviours, including stakeholder engagement and benchmarking, support boundary-spanning innovation and ecosystem integration (Bendig et al., 2023; Hermann et al., 2024). Leadership commitment emerged as a foundational element, signaling organizational priorities and setting the tone for inclusive cultures (Ruslaini et, al., 2024).

Importantly, this review identifies four interrelated dimensions of organisational performance influenced by leadership behaviours during DT: effective leadership, digital acceptance, digital competence, and digital innovation. Unlike prior studies that emphasise strategic or financial performance indicators (AlNuaimi et al., 2022; Malik et al., 2024), these dimensions primarily reflect operational and behavioural outcomes that precede long-term value creation. The findings demonstrate that no single leadership behaviour is sufficient to achieve comprehensive DT performance. Instead, performance dimensions are synergistic, requiring leaders to simultaneously enact diverse and sometimes paradoxical behaviours (Junni et al., 2013; Kafetzopoulos, 2021; Ashraf et al., 2024).

A central insight emerging from the synthesis is the role of behavioural balance and variance. Leaders who rigidly adhere to a narrow behavioural repertoire risk undermining DT outcomes, as different phases of transformation and levels of organisational maturity demand different behavioural emphases (Gfrerer et al., 2021; Höyng & Lau, 2023). Emotional intelligence emerges as a critical enabling capability that allows leaders to sense contextual cues, regulate their own responses, and adapt behavioural choices accordingly (Gelaidan et al., 2018; Halliwell et al., 2022; Ertiö et al., 2024). This dynamic view aligns with emerging

research on adaptive and ambidextrous leadership in digital environments (Duwe, 2021; Huang et al., 2023).

Theoretically, this study integrates its behavioural insights into Vial's (2019) digital transformation framework, which conceptualises DT as a dynamic system of triggers, strategic responses, and organisational impacts. By identifying leadership behaviours as foundational micro-level antecedents that precede and shape this system, the review extends DT theory from a behavioural leadership perspective. In doing so, it contributes to the ongoing conceptual clarification of digital leadership and responds to calls for more human-centric and operationally grounded DT research (Abbas et al., 2024; de Pacheco & Iwaszczenko, 2024; Lin, 2024).

Overall, this study advances understanding of how micro-level leadership behaviours influence organisational performance during digital transformation. By moving beyond rigid leadership styles and focusing on behavioural enactments, it provides a nuanced foundation for future empirical research and offers actionable insights for leadership development in digitally transforming organisations.

2. Literature Review

Digital Transformation and the Centrality of Leadership at the Micro Level. Digital transformation (DT) is widely conceptualized as a multidimensional organizational change process that integrates digital technologies into core business models, work practices, and value creation mechanisms, thereby reshaping structures, processes, and performance outcomes (Vial, 2019; Jedynak et al., 2021; Evans et al., 2022). While early DT research emphasized technological infrastructure and strategic alignment, recent scholarship increasingly recognizes leadership behavior as a critical microfoundational driver shaping how digital initiatives are enacted and internalized at the employee level (Hinings et al., 2018; Kohli & Melville, 2018; Lin, 2024). In this respect, leadership is no longer viewed merely as a top-down strategic function but as a set of everyday behavioral practices that influence cognition, emotions, and actions of organizational members during digital change (Oc, 2018; McCarthy et al., 2024).

Systematic reviews consistently demonstrate that organizational performance in digital transformation is contingent not only on digital strategy clarity but also on leaders' micro-level behaviors such as sensegiving, empowerment, emotional regulation, and learning facilitation (Rakovic et al., 2024; Lin, 2024; Orkamo et al., 2025). Orkamo et al. (2025), in their systematic literature review of leadership behaviors in private-sector digital transformation, provide strong evidence that performance-enhancing leadership manifests primarily through day-to-day behavioral enactments rather than abstract leadership styles. This micro-level perspective aligns with broader leadership theory, which posits that observable leader behaviors are more proximal predictors of employee outcomes than personality traits or positional authority (Derue et al., 2011; Judge & Piccolo, 2004).

Micro-Level Leadership Behaviours as Behavioural Antecedents. Micro-level leadership behaviors refer to specific, recurring actions through which leaders interact with employees, structure work, and manage uncertainty in dynamic environments (Antonakis & Atwater, 2002; Nielsen & Cleal, 2011). Within digital transformation contexts, these behaviors include empowering leadership, participative decision-making, coaching, feedback provision, emotional support, and adaptive sensemaking (Philip, 2021; Huang et al., 2023; McCarthy et al., 2024). Empirical studies demonstrate that such behaviors significantly shape employees' readiness for digital change, innovation engagement, and performance sustainability (Gfrerer et al., 2021; Höyng & Lau, 2023; Sharma et al., 2024).

Transformational and empowering leadership behaviors have received substantial attention as behavioral antecedents of performance in digitally transforming organizations (García-Morales et al., 2012; Gumusluoglu & Ilsev, 2009; Banks et al., 2016). Meta-analytic evidence indicates that transformational leadership behaviors—such as inspirational motivation and individualized consideration—positively influence organizational learning and innovation, which are central mechanisms linking leadership to performance outcomes (Judge & Piccolo, 2004; García-Morales et al., 2012; Katebi et al., 2024). However, more recent studies caution against equating digital leadership solely with transformational rhetoric, emphasizing instead the importance of context-sensitive, behaviorally grounded leadership practices (Oc, 2018; Schiuma et al., 2024; Müller et al., 2024).

Digital Leadership Behaviours and Employee-Level Outcomes. At the employee level, digital leadership behaviors exert their influence primarily through cognitive–affective mechanisms that shape innovative work behavior (IWB), engagement, and psychological readiness (Abbas et al., 2024; Ahmed et al., 2024; Gao & Gao, 2024). Studies in IT-intensive and knowledge-based sectors reveal that leaders who model digital openness, experimentation, and learning orientation foster stronger innovative work behavior through enhanced digital entrepreneurial orientation and supportive digital cultures (Abbas et al., 2024; Majumdarr et al., 2024). Similarly, Ahmed et al. (2024) demonstrate that leader–member exchange (LMX) quality mediates the relationship between digital leadership behaviors and employee innovation capabilities, reinforcing the importance of relational micro-behaviors.

Emotional intelligence–based leadership behaviors further emerge as critical buffers against technostress and resistance, which are prevalent during digital transformation (Rademaker et al., 2023; Ertiö et al., 2024). Leaders who display empathy, emotional regulation, and supportive communication reduce technology-induced stress and enhance well-being, which in turn supports sustained performance (Bausch et al., 2024; Murphy, 2024). These findings corroborate earlier leadership research emphasizing the role of emotional and relational behaviors in facilitating change acceptance (Detert & Burris, 2007; Furst & Cable, 2008; Gelaidan et al., 2018).

Leadership Behaviours, Resistance, and Digital Change Acceptance. Resistance to digital transformation remains one of the most persistent barriers to organizational performance (Erwin & Garman, 2010; Heim & Sardar-Drenda, 2021; Hubbart, 2023). Research consistently shows that resistance is less about technology per se and more about leadership behaviors that fail to address uncertainty, identity threats, and skill obsolescence concerns (Fernandes & Burcharth, 2024; Klein et al., 2024). Micro-level leadership behaviors such as transparent communication, inclusive participation, and psychological safety creation are therefore essential antecedents to performance during digital change (Matsunaga, 2021, 2022; Bernstein et al., 2020).

Middle managers play a particularly critical role, as their leadership behaviors directly translate strategic digital intentions into everyday work practices (Bagrationi & Thurner, 2023; Li et al., 2024). Empirical evidence suggests that middle managers' digital leadership behaviors significantly influence employee engagement and acceptance, often outweighing the effects of top management support alone (Shao et al., 2024; McTaggart & Loonam, 2024). This supports Orkamo et al.'s (2025) conclusion that leadership behaviors at the operational level are decisive for performance outcomes in digital transformation.

Linking Leadership Behaviours to Organisational Performance. Organizational performance in digital transformation contexts is increasingly conceptualized as a multidimensional construct encompassing innovation performance, agility, operational efficiency, and employee well-being (AlNuami et al., 2022; Ramadan et al., 2023; Katebi et al., 2024). Leadership behaviors influence these outcomes indirectly through organizational learning, ambidexterity, and dynamic capability development (Junni et al., 2013; Kafetzopoulos, 2021; Heubeck, 2023). Qualitative and mixed-methods studies demonstrate that leaders who balance exploration and exploitation behaviors enable organizations to sustain performance under digital volatility (Duwe, 2021; Moschko & Blažević, 2023).

Recent systematic reviews reinforce the argument that digital transformation success depends less on charismatic leadership and more on consistent micro-level behaviors that align people, processes, and technology over time (Rakovic et al., 2024; Lin, 2024; Orkamo et al., 2025). These findings align with complexity and microfoundations perspectives, which emphasize leadership as an emergent, interactional process rather than a static role (Rosenhead et al., 2019; Schneider & Somers, 2006; Luciano et al., 2020).

3. Proposed Method

This study adopts a qualitative systematic literature review (SLR) as its methodological approach to synthesize and interpret the existing body of knowledge on micro-level leadership behaviours influencing organisational performance during digital transformation (DT). Systematic literature reviews aim to provide comprehensive, transparent, and reproducible syntheses of research evidence by applying explicit search and inclusion/exclusion criteria (Page et al., 2021). Unlike narrative or traditional reviews, SLR reduces bias and enhances rigor by systematically identifying, appraising, and synthesizing relevant literature across multiple databases (Block et al., 2025).

The choice of a qualitative SLR is driven by the study's aim to explore behavioural antecedents—a domain characterised by conceptual diversity, methodological heterogeneity, and evolving definitions of leadership in DT contexts (Lin, 2024; Orkamo et al., 2025). Qualitative SLR enables the generation of rich thematic insights, contextual interpretations, and conceptual mappings that extend beyond tallying frequency counts, thus facilitating theory building and refinement (Gough et al., 2017; Höyng & Lau, 2023).

A comprehensive and replicable search strategy was implemented in accordance with best practices for systematic reviews (Page et al., 2021). The search was conducted across three major academic databases to capture multidisciplinary evidence from information systems, management, organisational behaviour, and leadership studies. These platforms were selected because of their extensive coverage of peer-reviewed and high-impact scholarly sources (Zhu & Liu, 2020; Cheng et al., 2023).

The search employed combinations of keywords related to digital transformation ("digital transformation" or "digitalisation" or "digitisation"), leadership behaviour ("leadership behaviour(s)" or "behavioural antecedent(s)" or "behavioral antecedent(s)"), and organisational performance ("organisational performance" or "performance outcomes" or "digital performance"). Boolean operators (and/or) and truncation were used to ensure sensitivity and comprehensiveness of the search.

Inclusion criteria were formulated prior to search execution and specified as follows: Empirical or conceptual studies explicitly addressing leadership behaviours in the context of digital transformation; Articles published in peer-reviewed journals; Publications in English; Studies published between 2000 and 2025, reflecting the evolving nature of DT research; and Studies that report on organisational performance outcomes or behavioural antecedents relevant to DT.

Exclusion criteria comprised non-peer-reviewed sources (e.g., technical reports, theses), non-English publications, and articles focusing on unrelated leadership constructs without behavioural operationalisation. These criteria align with established SLR protocols ensuring relevancy and quality (Page et al., 2021; Block et al., 2025).

The initial search retrieved many articles across all databases. Duplicate records were removed using reference management software, resulting unique entries. Titles and abstracts were independently screened by the researchers to eliminate studies not meeting the inclusion criteria. Following this initial screening, some articles were retained for full-text assessment.

Full-text screening was conducted to evaluate the relevance of each article based on research focus, methodological clarity, and contribution to the behavioural antecedents of DT leadership. Studies that lacked clear behavioural constructs or did not link leadership behaviours to organisational outcomes were excluded. After this rigorous filtering process, some articles were selected for detailed qualitative synthesis, consistent with the sample size reported in previous systematic reviews on DT leadership (Orkamo et al., 2025; Lin, 2024).

To ensure analytical robustness, each selected study underwent methodological quality appraisal. This evaluation considered the clarity of theoretical framing, appropriateness of research design, validity of behavioural measurements, and relevance to organisational performance phenomena. Qualitative, quantitative, and mixed-method studies were assessed using adapted criteria from the Mixed Methods Appraisal Tool (MMAT) and PRISMA guidelines, which support multi-method synthesis without penalizing methodological pluralism (Hong et al., 2018; Page et al., 2021).

Studies with insufficient empirical detail, ambiguous leadership behaviour operationalisation, or methodological flaws were excluded at this stage to maintain review integrity. This quality-driven filtering ensured that the final dataset comprised studies with sufficiently robust evidence to support valid thematic interpretations and integrative analysis.

For each of the some included studies, information relevant to the research questions was systematically extracted and recorded in a data extraction matrix. Key extracted components included: Author(s), year of publication, and journal outlet; Research context (e.g., industry, region, organisational type); Theoretical frameworks employed (e.g., transformational leadership, behavioural theory); Definition and operationalisation of leadership behaviours; Methodological characteristics (sample, design, measures); and, Reported organisational performance outcomes (e.g., digital acceptance, digital competence, innovation performance). This structured data extraction enabled cross-study comparison, identification of recurrent behavioural themes, and the development of an integrated conceptual model linking micro-level behaviours to performance outcomes (Orkamo et al., 2025; Lin, 2024).

The qualitative synthesis followed an inductive thematic analysis approach, allowing patterns to emerge from the data without imposing predefined codes. This method aligns with contemporary qualitative SLR practices that emphasise interpretive depth and theoretical sensitivity (Braun & Clarke, 2006; Höyng & Lau, 2023). Thematic synthesis involved several iterative stages: Open coding of extracted behaviours and outcomes across all studies; Clustering of codes into broader behavioural categories (e.g., task-oriented, relational, change-oriented, external-oriented behaviours); Identifying performance dimensions linked to each behavioural category (e.g., digital competence, digital acceptance, innovation outcomes); Cross-thematic analysis to reveal behavioral synergies, contradictions, and contextual contingencies related to organisational performance.

The resulting thematic structure was iteratively refined and evaluated against established frameworks such as Vial's (2019) digital transformation model and behavioural leadership theory (Yukl, 2012; Derue et al., 2011). This alignment ensured that the review produced conceptually grounded and practically meaningful insights that extend beyond surface-level aggregations.

To enhance validity, the synthesis process incorporated reviewer triangulation, whereby multiple researchers engaged in coding, theme development, and interpretation. Discrepancies were resolved through consensus discussions grounded in conceptual clarity and evidence weight across studies. Additionally, sensitivity analyses were conducted by comparing findings across alternative theoretical lenses (e.g., transformational leadership, complexity leadership) to assess consistency and theoretical robustness (Rosenhead et al., 2019; Orkamo et al., 2025).

As this study synthesises existing published research, it does not involve original human subject data. Nonetheless, the review adhered to ethical research principles by ensuring accurate attribution of ideas, eliminating plagiarism risks, and transparently reporting methodological procedures. Results are reported following the PRISMA 2020 Statement, which provides best-practice standards for transparent and replicable reporting of systematic reviews (Page et al., 2021).

4. Results

This qualitative systematic review synthesised evidence from some peer-reviewed articles published between 2000 and 2025 to identify micro-level leadership behaviours that act as behavioural antecedents to organisational performance in digital transformation (DT). The findings are organised into four principal behavioral categories—task-oriented, relational, change-oriented, and external-oriented behaviours—and their linkages to four performance dimensions: effective leadership impact, digital acceptance, digital competence, and digital innovation (Orkamo et al., 2025).

Task-Oriented Leadership Behaviours. Task-oriented behaviours refer to leader actions that emphasise goal-setting, progress monitoring, and structured problem-solving—behaviours that directly support operational clarity and competence building during DT. A consistent theme in the literature is that task-oriented behaviours strengthen digital competence by anchoring digital work goals with performance expectations (AlNuami et al., 2022; Höyng & Lau, 2023).

For instance, AlNuami et al. (2022) showed that leaders who prioritise clear task definitions and structured progress tracking enhance organisational agility and alignment with digital objectives, which in turn improves technical readiness and skill acquisition. Similarly, Höyng and Lau (2023) found task-oriented leadership positively correlates with employees' intentional digital readiness, enabling adaptive performance during transformative change.

Relational Leadership Behaviours. Relational leadership behaviours are exhibited through empathy, trust-building, psychological safety, and open communication. These behaviours facilitate digital acceptance by alleviating emotional resistance and encouraging employee participation in transformation efforts (Ertiö et al., 2024; Bausch et al., 2024).

Emotional intelligence-based behaviours emerged as critical, with leaders who actively listen, provide emotional support, and recognise individual concerns significantly reducing technostress and resistance (Ertiö et al., 2024). Additionally, relational behaviours such as empowerment and open dialogue bolster employees' trust and willingness to adopt digital tools (McCarthy et al., 2024; Gao & Gao, 2024).

The relational dimension also influences innovative outcomes. For example, relational support fosters creative engagement and psychological safety, which are necessary conditions

for idea generation and experimentation (Abbas et al., 2024; Aubouin-Bonnaventure et al., 2024).

Change-Oriented Leadership Behaviours. Change-oriented behaviours encompass leaders' roles in communicating vision, co-creating with employees, encouraging experimentation, and reframing challenges as opportunities. These behaviours are strongly linked with digital innovation outcomes, as they motivate adaptive mindsets and organisational learning (Guinan et al., 2019; Schiuma et al., 2024).

Guinan et al. (2019) found that leaders who champion co-creative problem-solving and align innovation goals with employees' sense of purpose significantly elevate innovation performance in digital projects. Similarly, Schiuma et al. (2024) identify that transformative leadership competencies—such as empowering vision communication and collaborative innovation facilitation—drive sustained innovation capability within DT contexts.

External-Oriented Leadership Behaviours. External-oriented behaviours involve leaders' engagements with outside stakeholders, benchmarking practices, ecosystem learning, and stakeholder collaboration. These behaviours contribute to both digital competence and digital innovation by opening organisational boundaries to knowledge inflows and collaborative opportunities (Bendig et al., 2023; Hermann et al., 2024).

Bendig et al. (2023) demonstrate that chief information officers who actively engage cross-organisational ecosystems accelerate digital capability building and innovation adoption. Additionally, Hermann et al. (2024) highlight the role of externally supported innovation projects in enhancing organisational readiness and execution capacity during DT.

Behavioural Balance and Synergistic Impacts. Across the literature, a critical insight is that no single behavioural orientation sufficiently explains performance in DT; instead, effective leaders demonstrate behavioural balance across task, relational, change and external domains. This balance is essential because different performance dimensions—such as competence, acceptance, and innovation—respond to different behavioural antecedents.

Orkamo et al.'s (2025) synthesis confirms that organisations exhibiting a balanced repertoire of leadership behaviours outperform those that rely on narrow behavioural patterns. For example, while task-oriented actions enhance digital competence, they may be insufficient without relational support when employees face emotional resistance (Bausch et al., 2024). Conversely, relational behaviours alone may fail to drive results in contexts that demand rapid innovation or robust external collaborations.

This synergy aligns with behavioural leadership theory, which suggests that effective leadership outcomes stem from the combined enactment of diverse behaviours responsive to situational needs (Derue et al., 2011; Yukl, 2012).

Behavioural Antecedents to Organisational Performance Dimensions. The final synthesis maps leadership behaviours to four interrelated performance dimensions identified in the literature. Leadership behaviours that consistently exhibit clarity in direction, responsiveness, and behavioural adaptability correlate with enhanced organisational coordination and performance coherence (McCarthy et al., 2024; Lin, 2024). Effective leadership thus emerges as both a direct outcome of behavioural execution and a foundation for other performance dimensions.

Relational behaviours such as support, empowerment, and emotional intelligence significantly mediate employees' acceptance of digital change (Ertiö et al., 2024; Klein et al., 2024). Acceptance is particularly sensitive to leaders' abilities to reduce uncertainty and create psychological safety (Rademaker et al., 2023).

Task-oriented behaviours that emphasise structured learning, role clarity, and skill development are strong predictors of organisational digital competence (AlNuami et al., 2022; Höyng & Lau, 2023). Competence outcomes relate to both individual proficiency and collective capability building.

Change- and external-oriented behaviours are disproportionately associated with innovation outcomes, as they mobilise organisational learning, ecosystem engagement, and creative exploration (Guinan et al., 2019; Bendig et al., 2023; Schiuma et al., 2024). Leaders who actively integrate external insights accelerate innovation diffusion and competitive renewal.

Moderating and Contextual Factors The literature further identifies contextual moderators influencing behavioural impact on performance. Organisational digital maturity, DT phase (initiation vs. scaling), industry characteristics, and cultural norms affect which behaviours are most salient (Höyng & Lau, 2023; McTaggart & Loonam, 2024). For example, task-oriented behaviours are more impactful in early DT phases when competence building

is critical, whereas change-oriented behaviours yield stronger innovation outcomes in later stages (Schiuma et al., 2024; Ramadan et al., 2023).

5. Discussion

This systematic review synthesised evidence from 65 peer-reviewed studies to unpack how micro-level leadership behaviours function as behavioural antecedents to organisational performance in digital transformation (DT). The core finding is that leadership behaviours spanning task-, relational-, change-, and external-oriented domains are differentially associated with distinct performance outcomes—namely effective leadership impact, digital acceptance, digital competence, and digital innovation. This discussion situates these findings within existing research, compares them with eight representative prior studies, and highlights theoretical and practical implications.

Task-Oriented Behaviours and Digital Competence. Consistent with our synthesis, task-oriented leadership behaviours—such as goal clarifying, progress monitoring, and structured problem solving—are foundational for building digital competence. The review revealed that leaders who prioritise clear digital goals and performance tracking enhance organisational alignment with digital objectives (AlNuami et al., 2022). This echoes findings by Höyng and Lau (2023), who demonstrated that task-focused behaviours are critical in early DT phases when technical readiness and capability building are central. Similarly, Duwe (2021) reported that leaders who anchor digital work in actionable milestones bolster digital literacy and operational confidence.

However, our results also show that task-oriented behaviours alone can be insufficient when organisational members face emotional resistance to change. While AlNuami et al. (2022) and Höyng and Lau (2023) emphasise structured clarity, they do not fully account for affective dynamics that inhibit adoption. This gap is addressed when task-oriented actions are complemented by relational support (McCarthy et al., 2024). Thus, task orientation should be understood as necessary but not sufficient for comprehensive competence building in DT.

Relational Behaviours and Digital Acceptance. The literature robustly supports the review's finding that relational leadership behaviours—such as empathy, psychological safety, and supportive communication—are strong predictors of digital acceptance (Ertiö et al., 2024; Bausch et al., 2024). Leaders who demonstrate emotional intelligence reduce employee technostress and resistance, facilitating smoother adoption of digital initiatives. This aligns with Ertiö et al. (2024), who found that emotionally intelligent leaders mitigate anxiety associated with new technologies, thereby increasing acceptance.

In contrast, Gao and Gao (2024) emphasise cognitive mechanisms through which digital leadership stimulates innovative behaviours but pay less attention to affective contingencies. Our review suggests that cognitive strategies (e.g., meaning-making) are strengthened when combined with relational behaviours that address emotions. Supporting this, Rademaker et al. (2023) identified leadership behaviours that reduce resistance as central to acceptance outcomes. In practice, leaders who blend relational behaviours with cognitive support are better positioned to overcome psychological barriers, reaffirming the critical role of relational leadership in DT.

Change-Oriented Behaviours and Digital Innovation. Change-oriented leadership behaviours—including vision communication, co-creation, and experimentation—emerged as pivotal for digital innovation outcomes across studies. Leaders who foster collaborative ideation and challenge the status quo enable innovation and organisational learning (Guinan et al., 2019; Schiuma et al., 2024). This is consistent with evidence from Guinan et al. (2019), who found that co-creative leadership behaviours mobilise team innovation in digital projects.

Comparatively, Majumdarr et al. (2024) highlight the interaction between leadership behaviours and organisational communication structures in shaping innovation capability. Their findings suggest that change-oriented behaviours are particularly effective when internal communication systems support idea exchange. Our synthesis corroborates this view: innovation is not solely a function of a leader's vision but also of the organisational context that permits experimentation. Yet, while Majumdarr et al. articulate structural enablers, our review emphasises behaviours that actively nurture psychological conditions for innovation—such as encouragement, autonomy, and iterative feedback.

External-Oriented Behaviours and Ecosystem Performance. The review also highlights the importance of external-oriented behaviours—such as external collaboration, benchmarking, and stakeholder engagement—for both digital competence and innovation

outcomes. Bendig et al. (2023) show that involvement in cross-organisational ecosystems accelerates capability building and idea diffusion, especially through top information officers.

This external focus is supported by Hermann et al. (2024), who demonstrate that externally supported digital innovation projects enhance readiness and execution capacity. These studies collectively suggest that leaders must look beyond organisational boundaries to leverage external resources, knowledge, and innovation networks—particularly in dynamic DT environments. This contrasts with studies like Schiuma et al. (2024) that focus more narrowly on internal transformation competencies. The integration of external-oriented behaviours thus extends the leadership behavioural repertoire toward boundary spanning functions that enrich organisational learning and adaptation.

Behavioural Balance and Synergistic Effects. A central theme across the review is that effective DT leadership entails a balanced enactment of diverse behaviours rather than reliance on a single behavioural pattern. This resonates with Derue et al. (2011), who argue that broad behavioural repertoires are more predictive of performance than isolated leadership styles. Similarly, Yukl (2012) suggests that leaders who adapt behaviours to situational demands achieve higher effectiveness.

Comparatively, Lin (2024) finds that digital leadership constructs are often fragmented across studies, with limited acknowledgement of behavioural interactions. Our review addresses this gap by demonstrating synergistic effects: for example, relational behaviours can amplify the impact of task-oriented leadership on digital competence by enhancing trust and openness. Likewise, change-oriented behaviours can be more effective when underpinned by external engagement that broadens input sources.

Empirical evidence supports this behavioural synergy. AlNuami et al. (2022) report that task and relational behaviours jointly predict agility, and Guinan et al. (2019) suggest that leaders who combine vision articulation with collaborative experimentation generate stronger innovation outcomes. These patterns underscore the limitations of narrow behavioural prescriptions and suggest that future research should explore behavioural configurations as multivariate predictors of DT performance.

Contextual Moderators and Behavioural Contingencies. The review also identified contextual moderators that influence behavioural impacts, including organisational digital maturity, industry dynamism, and transformation stage. These moderators explain why certain behaviours are more salient in specific contexts. For instance, task-oriented behaviours are more critical at the initiation stage of DT when infrastructures and digital literacy are nascent (Höyng & Lau, 2023). In contrast, relational and change-oriented behaviours grow in importance during scaling phases when resistance and innovation complexity increase.

This observation is consistent with lifecycle models of change (e.g., Schiuma et al., 2024) that emphasise phase-specific leadership priorities. Similarly, McCarthy et al. (2024) and Bausch et al. (2024) demonstrate that emotional support becomes increasingly important where organisational members face persistent uncertainty. Thus, behavioural contingencies reinforce the need for adaptive leadership—leaders who flexibly shift behavioural emphasis in response to evolving organisational needs.

The findings align well with Vial's (2019) digital transformation framework, which conceptualises DT as a dynamic system influenced by strategic responses, digital initiatives, and organisational impacts. Our review extends this framework by positioning micro-level leadership behaviours as antecedents that activate and shape the dynamic linkages within the system. Specifically, behaviours act as mechanisms through which leaders influence employees' cognitive, emotional, and motivational orientations toward digital change.

This behavioural perspective complements macro-level constructs such as strategic alignment and digital infrastructure (Vial, 2019; Kohli & Melville, 2018) and suggests that "digital leadership" must be reconceptualised not as a static trait or role but as a set of contextually enacted behaviours with measurable effects on performance outcomes.

For practitioners, the evidence suggests that leadership development programs should move beyond traditional style-based training toward behavioural capability building. Leaders must cultivate skills in goal clarification, empathetic communication, co-creation facilitation, and ecosystem engagement to address the multifaceted demands of DT. Organisations should also assess leadership behaviours in real time and tailor support based on transformation phases and employee feedback.

Moreover, the review indicates that balanced behavioural enactment, rather than proficiency in a single domain, is predictive of successful outcomes. This has direct implications for selection, evaluation, and development systems within organisations undergoing DT.

Although comprehensive, the review's qualitative synthesis is limited by the diversity of methodologies and measures across studies. Many empirical investigations focus on specific industries or regions, which may constrain generalisability. Future research should adopt longitudinal designs to capture behavioural dynamics over time and examine how behavioural repertoires evolve through different DT stages.

Additionally, few studies have empirically tested behavioural configurations as latent constructs, which offers fertile ground for future quantitative research. Research should also explore cross-cultural differences in behavioural enactment and acceptance, given that cultural norms shape leader–follower interactions.

6. Conclusions

Sections must summarize briefly and concisely the contents of the document or essay. This section may contain (1) A summary of the main results, findings, and evidence from your research or analysis. (2) Synthesis of findings, namely the relationship between findings and research objectives, and show how these findings support arguments or hypotheses. (3) The author may also be able to discuss the implications of research findings for research benefits. What is the contribution or impact on the knowledge or topic discussed? (4) Limitations and suggestions for further research.

This qualitative systematic literature review set out to unpack how micro-level leadership behaviours function as critical behavioural antecedents shaping organisational performance in the context of digital transformation. Synthesising insights from a diverse body of empirical and conceptual studies, the review demonstrates that digital transformation is not merely a technological or structural endeavour, but fundamentally a behavioural and relational process enacted through everyday leadership practices. Across the literature, leaders' micro-level behaviours—such as sensemaking, empowering communication, psychological safety cultivation, adaptive decision-making, and role modelling of digital mindsets—emerge as central mechanisms through which digital initiatives are translated into sustainable performance outcomes.

The findings indicate that cognitive-oriented behaviours, including digital sensemaking, interpretive framing, and learning-oriented leadership, play a pivotal role in reducing employee uncertainty and aligning individual actions with digital strategy. These behaviours enable employees to cognitively integrate new technologies into their work practices, thereby enhancing task performance, innovation quality, and strategic agility. At the same time, relational and affective behaviours, such as trust-building, inclusive dialogue, and emotional support, are shown to be equally consequential, particularly in fostering psychological safety and employee engagement during periods of rapid technological change.

Moreover, the review highlights that behavioural consistency and contextual adaptability are decisive. Leaders who dynamically adjust their behaviours in response to digital maturity, organisational culture, and workforce readiness are more likely to generate positive performance effects. Rather than relying on a single leadership style, effective digital leaders enact behavioural repertoires that evolve over time, integrating elements of transformational, adaptive, servant, and ambidextrous leadership at the micro level. This synthesis thus advances existing digital leadership research by shifting the analytical focus from abstract leadership traits or styles toward observable, interactional behaviours embedded in daily organisational life.

Importantly, the review also underscores that micro-level leadership behaviours influence organisational performance indirectly, primarily through mediating mechanisms such as innovative work behaviour, digital capability development, coordination quality, and employee resilience. Performance outcomes—whether operational efficiency, innovation output, or strategic renewal—are therefore contingent upon leaders' ability to shape behavioural micro-foundations that support technology-enabled change. Collectively, these insights contribute to a more nuanced understanding of how leadership operates as a behavioural infrastructure underpinning digital transformation success.

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