Journal of International Management xxx (xxxx) xxx

Contents lists available at ScienceDirect

Journal of International Management

journal homepage: www.elsevier.com/locate/intman

Untangling indigenous leadership competences in sustainability challenged firms: A Sustainable Indigenous Network Leadership commitment toward emission mitigation in Bahrain energy industry☆

Nawaf AlGhanem [a,*], Ashley Braganza [a], Christian Harrison [b]

[a] Brunel Business School, Brunel University London, Uxbridge, UK
[b] Greater Manchester Business School, University of Bolton, Bolton, UK

ARTICLE INFO

Keywords:
Network leadership
Indigenous competences
Organisational change
Climate change
SDGs
Net-zero

ABSTRACT

This study examines how indigenous leadership competences can be integrated into network leadership frameworks to support emission mitigation in Bahrain's energy sector. Given the lack of culturally aligned leadership models in sustainability-challenged firms, this research addresses a theoretical and practical gap. Drawing on qualitative data from eight firms, the study proposes a Sustainable Indigenous Network Leadership (SINLA) framework comprising four competence dimensions: socio-cultural, socio-political, socio-economic, and socio-knowledge. The findings reveal that embedding indigenous values into network leadership enhances organisational change capacity and supports organisational transformation addressing climate change. This contributes to leadership theory by expanding the applicability of network leadership to non-Western, emission-intensive contexts.

1. Introduction

Addressing the United Nations Sustainable Development Goals (UNSDGs) within the energy industry requires leadership engagement across all organisational levels (Millot et al., 2020; Maurya et al., 2021; AlGhanem and Mendy, 2024), particularly in relation to SDG13, which calls for urgent action to combat climate change. Global agreements such as the 2030 Sustainable Development Agenda emphasise cross-sectoral collaboration and collective responsibility, identifying 17 SDGs as a global action plan to address societal, environmental, and economic challenges. These goals require government and private entities across all sectors to mobilise jointly, with reporting mechanisms such as nationally determined contributions agreed under the United Nations Framework Convention on Climate Change (UNFCCC). SDGs are interrelated and call for collaboration and participation across organisational and sectoral boundaries (Aldulaimi, 2021; Lindbergh et al., 2022). At the same time, the SDGs present contradictory expectations: several goals call for urgent environmental action (SDG6, SDG12, SDG13, SDG14, SDG15), while others call for sustained economic growth (SDG8, SDG9) and poverty alleviation (SDGs 1, 2, 3, 4).

UNSDGs assume that global economic growth can continue while environmental degradation declines (Kørnøv et al., 2020;

☆ This article is part of a special issue entitled: 'Indigenous Management Systems' published in Journal of International Management.

* Corresponding author.
E-mail address: alghanem.nawaf@gmail.com (N. AlGhanem).

https://doi.org/10.1016/j.intman.2026.101388
Received 29 September 2024; Received in revised form 26 April 2026; Accepted 28 May 2026

Please cite this article as: Nawaf AlGhanem et al., *Journal of International Management*, https://doi.org/10.1016/j.intman.2026.101388

Majekodunmi, 2020). As highlighted by Hickel (2019, p.13), "with respect to greenhouse gas emissions, the SDGs propose that the global economy can continue to grow while emissions decline fast enough to stay within the carbon budget… as per the Paris Agreement." SDG13 specifically emphasises urgent climate mitigation, recognising that hydrocarbon emissions are the major source of greenhouse gases. Energy companies are therefore under pressure to reduce emissions and minimise their carbon footprint to preserve environmental balance (Maurya et al., 2021; Mendy and Al Ghanem, 2025).

Leadership in energy companies thus plays a pivotal role in aligning organisational policies, regulations, financial risk management, and operational decisions with climate change (Aldulaimi, 2021; Maurya et al., 2021). Leadership operates across multiple organisational levels to embed sustainability challenges into core business activities. Increasing organisational complexity encourages a shift toward network-based forms of organisation (Cullen-Lester and Yammarino, 2016; Uster et al., 2022; AlGhanem and Mendy, 2024). Network leadership has been identified as suitable for complex organisational and contextual environments (Silvia and McGuire, 2010; Cullen-Lester and Yammarino, 2016). In the context of sustainability, scholars suggest that sustainable forms of network leadership can help address the complexity facing energy companies (AlGhanem and Mendy, 2024). Network leadership shifts attention from a single leader toward a distributed network of actors who collectively implement planned organisational changes (Azorín, 2020). Yet, network leadership remains underexplored, with scholars calling for extension into new sectors and contexts (Silvia, 2011). Meanwhile, research on energy companies continues to focus largely on technical and operational aspects (Davis et al., 2018; Millot et al., 2020), while leadership's impact on organisational change remains underexamined (Mendy and Al Ghanem, 2025).

While scholarship on sustainability leadership and organisational transformation has expanded, it remains grounded largely in Western paradigms prioritising hierarchical authority and technocratic innovation (Millot et al., 2020; Abdeldayem and Aldulaimi, 2024). These frameworks often overlook culturally embedded leadership logics in non-Western contexts, especially GCC societies (Eyong, 2017; Budhwar et al., 2021; AlGhanem and Mendy, 2024). Indigenous leadership research conducted primarily in settler-colonial contexts such as Canada, Australia, and New Zealand has not been sufficiently extended to Middle Eastern or African contexts where tribal governance, kinship ties, and place-based authority continue to shape decision-making (Aldulaimi, 2021). Sustainability, network leadership, and indigenous leadership remain treated as separate domains, despite their potential complementarities. Research on network leadership highlights its role in collaboration and cross-sectoral alignment (Strasser et al., 2019; Leithwood, 2019), while indigenous leadership scholarship emphasises relational authority, ecological stewardship, and cultural continuity (Aldulaimi, 2021). Few studies, however, have explored how these paradigms intersect to support change within emission-challenged energy industries.

This disconnect is particularly pronounced in the energy sector, where scholarship focuses on technology, regulation, and market mechanisms (Geels et al., 2017), while indigenous leadership and Middle Eastern management frameworks remain underexplored (Budhwar et al., 2021). Calls for new theoretical and empirical insights into indigenous leadership in the Middle East continue to grow (Budhwar and Mellahi, 2018; AlGhanem and Mendy, 2024). There is a pressing need to understand how indigenous competences and network leadership practices can jointly support climate change-related organisational change. This paper addresses this gap by proposing a Sustainable Indigenous Network Leadership (SINLA) framework tailored to Bahrain's energy industry.

Further, research examining organisational transformation, network leadership, and indigenous leadership in sustainability-challenged energy firms is largely overlooked (Millot et al., 2020; AlGhanem and Mendy, 2024; Abdeldayem and Aldulaimi, 2024). Indigenous leadership is inherently relational, emphasising trust-based authority, societal cohesion, and long-term stewardship competences that may be highly relevant for sustainability transitions. This study contributes to three intersecting streams of literature: sustainability leadership in complex organisations, network leadership in the Global South, and indigenous leadership in corporate contexts. Existing sustainability leadership research tends to emphasise technocratic interventions (Millot et al., 2020), while network leadership scholarship assumes universal applicability and rarely considers indigenous norms (Silvia, 2011; McGuire and Silvia, 2009). Indigenous leadership research remains focused on settler-colonial contexts (Gumede, 2016), with limited application to Middle Eastern organisations.

By synthesising these streams, this study introduces the SINLA framework, demonstrating how culturally embedded leadership competences can support systemic sustainability-oriented change in energy firms. The findings show that relational authority, intergenerational knowledge, and socio-political alignment shape legitimacy and resilience in transformation processes offering a novel contribution to organisational change theory under climate governance imperatives such as SDG13.

This study is conducted in domains that remain neglected in the energy industry and unexplored in Bahrain. The aim of this research is to identify indigenous competences that support changes to address climate change in Bahrain's energy sector. To address the research gap, the following questions guide the study:

RQ1. What suitable competences (indigenous) could address climate change challenges in Bahrain's sustainability-challenged energy industry?

RQ2. How does the combination of indigenous competences and network leadership practices lead to successful changes to address climate change in Bahrain's energy companies?

RQ3. What indigenous competences emerge as critical in developing a sustainable form of network leadership to address climate change challenges in Bahrain's energy industry?

This paper adopts an interpretivism philosophical stance, utilising in-depth qualitative research through semi-structured interviews with companies in Bahrain's energy sector. The paper proceeds with the problem background and literature synthesis, followed by a description of the research methods, development of the conceptual model, and concludes with implications and future research directions.

Table 1
Network leadership definition.

Reference	Definition
Kickert et al. (1997)	"Network management is aimed at stimulating this last category of coordination. As mentioned earlier, it should be distinguished from forms of central coordination which are associated with polyarchy and hierarchy" (P. 8)
McGuire and Silvia (2009)	"Network leadership refers to the behaviour of public managers that facilitate productive interaction and move participants in the network toward effective resolution of a problem…The assumption that networks exist in collaborative structure, but seldom do researchers documents the actual competencies, tasks and behaviours that constitute such leadership" (P. 35)
McGuire and Bevir (2011)	"Network management is the strategic activity meant to influence the interaction of the nodes (actors). The purposes of the interactions may include achieving the goals of the individual actors (and their 'home' organisations) while simultaneously achieving network- level results" (P. 441)
Wei-Skillern and Silver (2013)	"The four network leadership principles are mission impact before organisational growth, trust rather than control, other rather than own and constellation rather than stress" (P. 121)
Popp et al. (2014)	"Leadership in networks is not viewed as the purview of a single leader in a formal leadership position but is seen as something more organic in nature that is supported and grown across the network. This way of conceptualising leadership aligns with both a relational view of leadership that focuses on process, context, and relational building; and with literature on complexity leadership" (P. 94)
Stiver (2017)	"Network leadership is more about influence than control; it is also a more indirect than direct form of leadership, requiring leaders to create a work environment based on autonomy, empowerment, trust, sharing, and collaboration….. Network leadership is about figuring out "how to mobilise and support the work of groups of people to get toward common outcomes."" (P. 149)
Leithwood and Azah (2016)	"Network leadership is often assumed to be different from leadership of agencies or organisations" (P. 411)
Peckham and Whitehead (2019)	"Leadership in a networked world is more about enabling than directing, more about influence than control and more indirect than direct. It is leadership understood first and foremost as a social process that creates direction, alignment, and commitment." (P. 48)
Strasser et al. (2019)	"Network leadership is usually very different from traditional top-down leadership and involves a more distributed, emergent, collective leadership among various actors at different levels of the network. Network leadership may thus be seen as a distributed practice of actors." (P. 12)

2. Synthesis of extant thinking

2.1. Organisational transformation in sustainability-challenged energy firms

Organisational transformation is a process that goes beyond systems-level adjustments to encompass multi-level shifts in organisational values, culture, structures, and routines that enhance sustainability and long-term resilience (Canterino et al., 2018; Beckhard, 2006). Organisational leaders responsible for driving such change play a pivotal role in translating strategic intent into operational action (Kempster et al., 2014). Transformation is therefore a multifaceted process requiring coherent leadership approaches capable of supporting the effective implementation of multiple change initiatives (MacKillop, 2018; Canterino et al., 2018; Abdeldayem and Aldulaimi, 2024).

In the global energy industry, organisational transformation has become imperative as firms contribute to a lower-carbon economy and respond to net-zero commitments. These transformations are not solely technological; they are deeply embedded in organisational culture, socio-political dynamics, strategic execution, and leadership innovation (IEA, 2021; Geels et al., 2017). This creates unprecedented organisational complexity, especially in regions where the energy sector is closely intertwined with national governance structures.

In Bahrain and across the Gulf Cooperation Council (GCC), the challenge is amplified by structural dependence on hydrocarbons and centralised governance, making transformation a high-stake endeavour (Budhwar et al., 2021; Mendy and Al Ghanem, 2025). Organisational transformation therefore requires not only technological shifts but also fundamental cultural and leadership reconfigurations (Rogelj et al., 2021; IEA, 2021). Bahrain's energy sector is therefore situated at the intersection of hydrocarbon dependency, national sustainability agendas such as Bahrain Vision 2030, and international climate obligations (Maurya et al., 2021). These intertwined pressures elevate the relevance of leadership approaches capable of mobilising diverse actors, fostering collaboration, and addressing socio-cultural dynamics that shape organisational decision-making.

While organisational transformation literature generally emphasises structural redesign and strategic execution, comparatively little attention has been paid to the influence of culturally grounded leadership practices in non-Western, sustainability-challenged environments. This gap foregrounds the relevance of network leadership as an approach capable of navigating multilevel organisational change while accommodating the socio-political and relational characteristics of Gulf energy organisations.

2.2. Network leadership

Network leadership refers to leader's ability to interact, connect and integrate dispersed organisational elements to facilitate knowledge exchange and coordinated action across organisational boundaries (Al-Ghanem et al., 2020; Leithwood, 2019; Silvia and McGuire, 2010). It has emerged as a response to rising organisational complexity and a shift from rigid hierarchical structures toward more flexible, adaptive network-based arrangements (Turner and Baker, 2018; Denis et al., 2012; Silvia, 2011). This leadership concept encompasses the competencies, attributes, and practices that enable actors to work collaboratively within distributed systems. Despite its growing relevance, Silvia and McGuire (2010) characterise network leadership as "the 800 lb gorilla in the room" (p.264) because the behaviours and competencies that constitute it remain insufficiently explored. They argue that while network-level

analysis of collaborative structures is useful, leadership behaviours and competencies within these collaborations are rarely documented (Silvia and McGuire, 2010).

Scholarship on network leadership highlights influence rather than authority, collaboration over control, and collective rather than individual action. Table 1 summarises the different definitions advanced in the literature, underscoring common emphases on cross-boundary coordination, shared responsibility, and distributed leadership.

Across these definitions, several common threads emerge: network leadership is consistently characterised by influence rather than authority, distributed rather than centralised decision-making, and collaborative rather than competitive orientations. The definitions converge on the centrality of cross-boundary coordination, relational trust, and collective rather than individual agency. Where they diverge is in emphasising some foreground structural arrangements (Kickert et al., 1997; Provan and Kenis, 2008), while others privilege behavioural and relational dimensions (McGuire and Silvia, 2009; Stiver, 2017). For the purpose of this study, we adopt McGuire and Silvia's (2009) conceptualisation of network leadership as the behaviours and competences that facilitate productive interaction and move participants toward effective resolution of shared challenges. This definition is most congruent with the study's focus on leadership competences in practice, its qualitative and interpretive methodology, and its concern with how leaders enact change within complex, socio-culturally embedded organisational environments.

Recent studies argue for transitioning from individualistic management models to more collaborative, networked forms of leadership, in which responsibilities and decision-making are distributed across actors and organisational units (Provan and Kenis, 2008; Leithwood, 2019). However, most existing models implicitly assume Western organisational norms and therefore overlook the role of local socio-cultural dynamics in shaping collaboration, trust, and decision-making (Silvia, 2011; McGuire and Silvia, 2009). This creates an important conceptual gap, particularly in regions where relational authority and cultural legitimacy play a central role in organisational life.

Network leadership is highly relevant to the energy industry, where addressing sustainability challenges specifically hydrocarbon emissions require cross-sectoral collaboration, engagement, coordination, inclusion and resilience (Millot et al., 2020; Maurya et al., 2021). Energy companies increasingly rely on partnerships with governments, environmental NGOs, research institutions, and local communities to legitimise and implement climate responsive strategies (Loorbach, 2010). In such contexts, network leadership offers structural adaptability in rapidly shifting regulatory and environmental landscapes by enabling organisations to leverage diverse expertise and distributed capacities.

Yet studies rarely address how network leadership operates in non-Western settings, including the Gulf Cooperation Council (GCC), where socio-cultural expectations, relational norms, and political dynamics significantly shape organisational behaviour (Budhwar et al., 2021; Mendy and Al Ghanem, 2025). This omission limits the applicability of existing models in sustainability-challenged contexts such as Bahrain's energy sector. Addressing this gap requires examining how culturally embedded leadership competencies particularly those drawn from indigenous traditions can strengthen or modify network leadership practices.

The limitations of current Western-centric models thus provide a foundation for integrating indigenous leadership principles, which emphasise relationality, trust, and socio-cultural alignment. These principles can complement network leadership and enhance its relevance for organisational transformation in the GCC energy sector. The next section explores these indigenous leadership traditions in more depth.

2.3. *Indigenous leadership in the Gulf Cooperation Council (GCC)*

Scholars increasingly highlight the need to extend leadership research into non-western socio-cultural contexts due to the limitations of Western-centric frameworks and the rising complexity of global organisations (Budhwar et al., 2021; AlGhanem and Mendy, 2024). Examining indigenous leadership within such contexts promotes socio-cultural inclusivity and supports the development of leadership models that reflect local norms, values, and relational dynamics (Mendy and Al Ghanem, 2025).

Western leadership theories have historically been shaped by individualism, heroism, linearity, and masculinity (Turner and Baker, 2018; Bolden et al., 2009). However, scholars argue that these paradigms overlook indigenous socio-cultural competences that are essential for effective organisational change in non-western contexts (Budhwar and Mellahi, 2018). There is growing consensus that Middle Eastern indigenous leadership norms should be integrated into Western-developed frameworks to enhance their relevance and applicability. The limited research on indigenous leadership in the GCC has reinforced assumptions common in Western theorisation that Arab-centric leadership practices lack organisational value (Budhwar et al., 2019).

Leadership research in the MENA region increasingly recognises distinct non-western leadership typologies grounded in relationality, collective identity, and socio-cultural embeddedness (Budhwar et al., 2019; Bolden et al., 2009). While indigenous leadership scholarship is most often discussed in the context of settler colonial nations, recent work acknowledges also shape leadership in GCC societies (Budhwar et al., 2019). In Bahrain, indigenous leadership competences are embedded in socio-cultural codes that align strongly with organisational values (Budhwar et al., 2021). These competences such as intergenerational knowledge transmission, relational authority, and heritage-based legitimacy reflect internationally recognised indigenous leadership principles (Budhwar and Mellahi, 2018).

Indigenous leadership in the GCC, and particularly in Bahrain, emphasises consensus-building, dialogue, and social harmony, which are increasingly crucial for sustainability transitions requiring coordination, trust, and multi-stakeholder engagement (Blazquez et al., 2020). Despite this relevance, limited scholarship integrates GCC indigenous leadership into sustainability or climate-governance frameworks. Most studies prioritise Western models or technocratic governance, leaving a conceptual gap in understanding how culturally embedded leadership can support ecological transformation in high-emission sectors.

Yet, the literature remains sparse on how to formally integrate GCC-based indigenous leadership into climate governance and

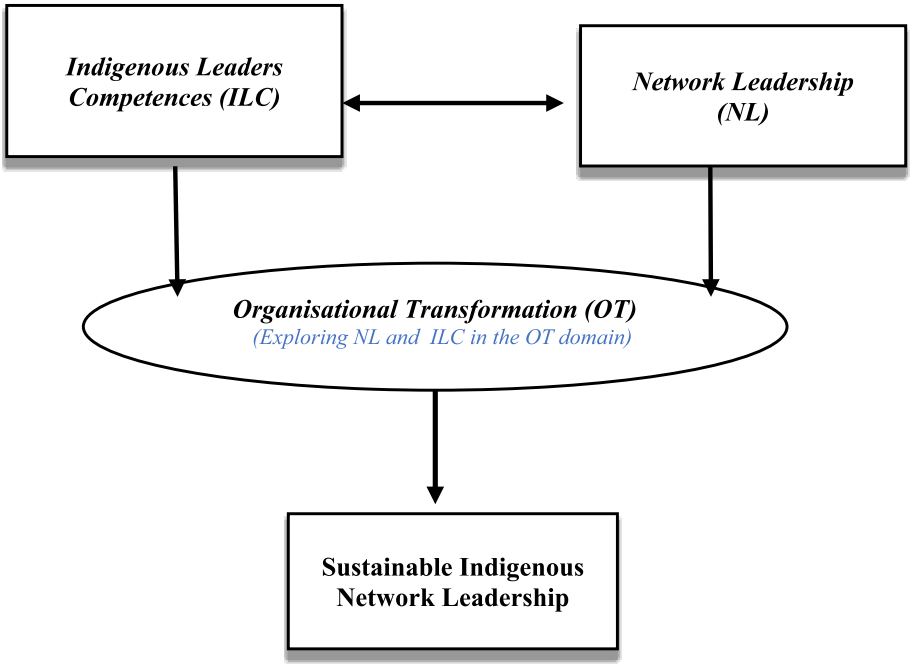

Fig. 1. Conceptual model of Sustainable Indigenous Network Leadership.

corporate sustainability. This paper addresses that gap by proposing the Sustainable Indigenous Network Leadership Approach (SINLA), which positions indigenous leadership competences as the cultural and relational foundation for network leadership practices in Bahrain's sustainability-challenged energy sector. This integration provides a culturally grounded and operationally adaptable basis for emission mitigation and organisational transformation under SDG13.

2.4. Synthesis: toward a conceptual model of Sustainable Indigenous Network Leadership

Leadership is a pivotal factor in the process of successful change implementation in the energy industry to achieve net-zero (Budhwar and Mellahi, 2018; Budhwar et al., 2021). However, leadership remains unexplored in this sector despite its strategic relevance. Scholars and practitioners perceive network leadership as a facilitator of the change process by assembling groups (networks) of change actors who share and distribute leadership roles during different times and circumstances (Mendy and Al Ghanem, 2025). Network leadership has been rarely explored in domains or contexts outside Western and Anglo-Saxon settings (Budhwar et al., 2021; Mendy and Al Ghanem, 2025). As organisational complexity and sustainability pressures increase, the need has emerged to identify sustainable forms of leadership capable of addressing these challenges.

In Bahrain's sustainability-challenged energy sector, indigenous leaders' competences were identified and applied using the network leadership framework developed by AlGhanem and Mendy, 2024. The theoretical synthesis across the three literature streams points toward a convergent logic. Organisational transformation in sustainability-challenged energy firms requires leadership that is simultaneously distributed across actors, culturally grounded in local norms, and capable of mobilising relational authority alongside technical expertise. Network leadership provides the structural and collaborative scaffolding for this process, while indigenous leadership competences supply the relational capital, legitimacy, and socio-cultural congruence that Western-centric models cannot adequately account for. The intersection of these two leadership logics within the domain of organisational transformation thus constitutes the conceptual space from which the proposed framework emerges. It is from this triadic relationship that the Sustainable Indigenous Network Leadership Approach (SINLA) is developed.

The proposed SINL framework integrates three core constructs: (1) Indigenous Leadership Competences socio-culturally rooted traits that guide leadership legitimacy and relational authority; (2) Network Leadership: distributed, collaborative leadership practices suited to complex systems; and (3) Organisational Transformation multi-level changes required to align with sustainability mandates such as climate change. The SINLA model posits that indigenous competences provide relational capital and socio-cultural congruence, while network leadership offers structural flexibility. Organisational transformation is the contextual domain in which these leadership logics converge. Indigenous competences supply the trust, cohesion, and legitimacy often missing from technocratic leadership approaches. These competences support the distributed and adaptive mechanisms of network leadership. Through this triadic integration, energy firms can navigate both cultural continuity and systemic innovation. Fig. 1 illustrates this conceptual relationship.

This conceptual model illustrates how network leadership (NL) and indigenous leadership competences (ILC) are expected to jointly influence organisational transformation (OT). The model reflects the theoretical assumption that integrating modern network leadership practices with indigenous cultural and relational competences enhances the organisation's capacity for change. This

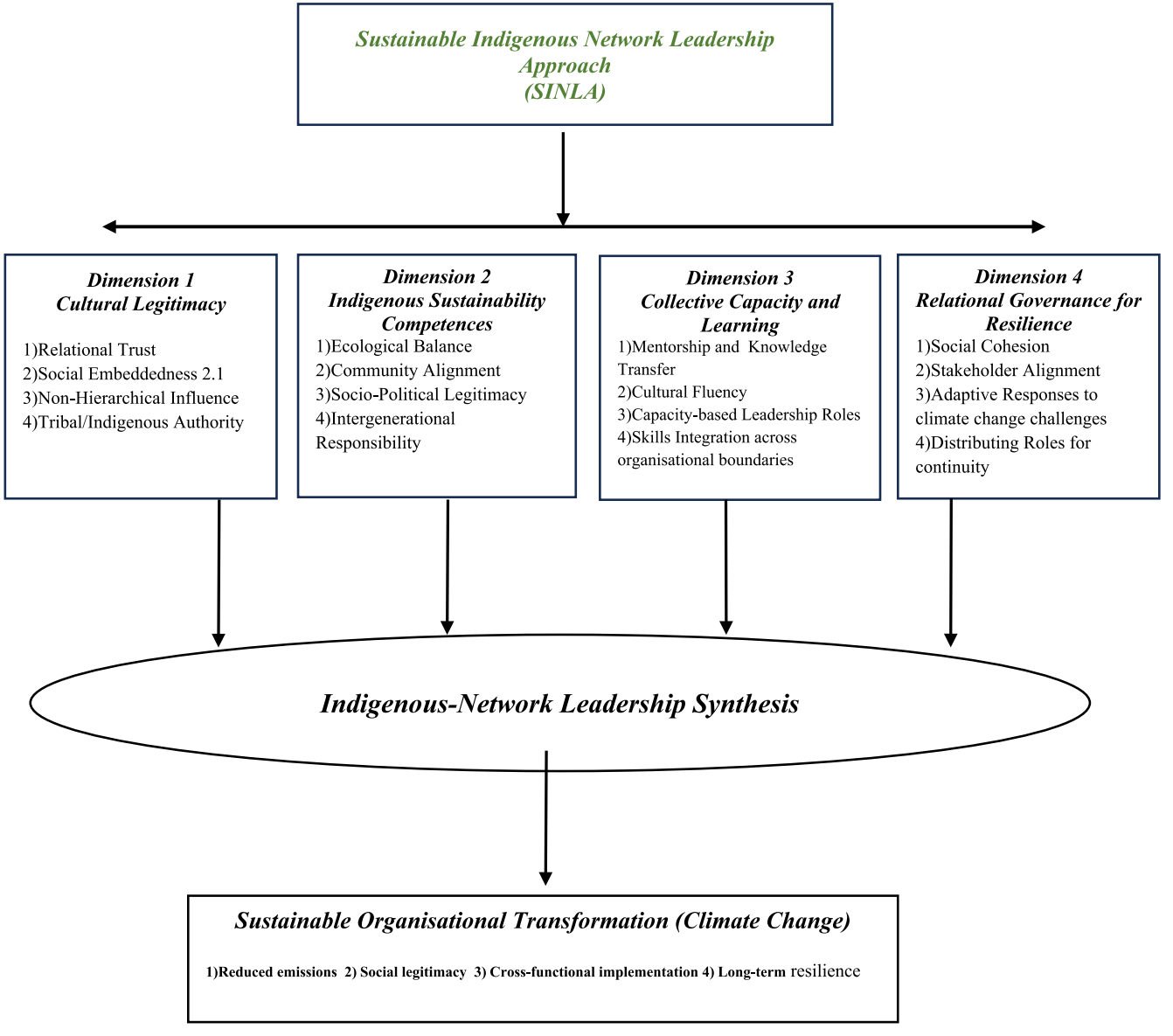

Fig. 2. Sustainable Indigenous Network Leadership Approach (SINLA): final integrated framework.

framework served as the analytical foundation prior to empirical exploration. Over the past three decades, only a limited number of studies have examined network-based leadership despite its recognition as a response to increasing organisational complexity and the shift from traditional hierarchical structures toward network-based forms. Existing studies primarily define or conceptualise the approach, and network leadership remains underexplored across diverse domains and socio-cultural contexts (McGuire and Silvia, 2009; AlGhanem and Mendy, 2024; Abdeldayem and Aldulaimi, 2024).

Fig. 1 presents the conceptual framing developed from the extant literature, illustrating how indigenous leadership competences and network leadership are theorised to interact within the organisational transformation domain. This conceptual model provides the analytical lens guiding the empirical exploration. The findings section examines leadership practices within this conceptual space through inductive thematic analysis, while Fig. 2 presents the empirically derived Sustainable Indigenous Network Leadership Approach (SINLA), which synthesises the study's findings into an integrated leadership framework.

3. Methodological approach

The energy sector remains a critical domain for examining leadership, sustainability, and organisational transformation due to its centrality to economic development, global emissions, and national climate commitments (Maurya et al., 2021). Bahrain's energy industry comprising upstream, downstream, and petrochemical operations is undergoing extensive transformation as it seeks to remain competitive, address SDG7 and SDG13, and align with Bahrain's national sustainability agenda. Despite these pressures, limited scholarly attention has been given to how leaders in this region conceptualise, interpret, and enact leadership practices that shape sustainability-driven organisational change. This study therefore adopts a methodological approach capable of capturing the socio-cultural, relational, and contextual dynamics embedded in indigenous and network leadership practices within Bahrain's energy firms.

An interpretivist philosophical stance guided the research design. Interpretivism positions organisational reality as socially constructed through the meanings, interpretations, and interactions of individuals operating within their cultural and institutional environments (Burrell and Morgan, 1985; Hussey, 2009). This approach is particularly appropriate as the study seeks to understand *how leaders make sense of their indigenous competences*, *how these competences influence organisational change*, and *how network leadership emerges in practice*. Rather than seeking causal prediction, interpretivism privileges the co-construction of meaning between researcher and participants and produces rich, contextualised insights particularly relevant in non-Western socio-cultural environments where leadership practices are embedded in heritage, relational norms, and indigenous values.

Inductive reasoning underpins the methodological strategy. The research does not begin with predetermined leadership constructs or hypothesised relationships. Instead, it moves from empirical insights toward conceptual development, enabling theory generation appropriate for underexplored domains such as indigenous leadership in the GCC and network leadership in sustainability-challenged sectors. This inductive logic supports the development of the Sustainable Indigenous Network Leadership Approach (SINLA), which emerged through the iterative analysis of leaders' accounts, patterns of meaning, and shared competences.

Given the exploratory, meaning-oriented nature of the study, a qualitative research design was selected (Creswell, 1994). Qualitative inquiry is well suited to uncovering socio-cultural traits, leadership behaviours, and relational dynamics that cannot be accessed through quantitative measures (Mack et al., 2005; Omeihe and Harrison, 2024). This approach allows for the extraction of rich, thick descriptions about leaders' competences, perceptions of SDG-driven organisational change, and the contextual interactions shaping the adoption of sustainable leadership frameworks.

The research context the Bahrain energy sector is historically and strategically significant. Bahrain was the site of the first oil discovery in the GCC in 1929, shaping its economic trajectory and organisational governance structures for nearly a century. Contemporary leaders face growing pressures to diversify, reduce emissions, and strengthen resilience amid global sustainability transitions. This setting is therefore useful for investigating how indigenous competences, network-based collaboration, and organisational transformation converge within a complex socio-cultural and institutional environment.

Semi-structured interviews were employed as the primary data collection tool. This method allows participants to narrate their experiences freely while enabling the researcher to probe meaningfully into concepts such as trust, legitimacy, relational authority, collaboration, and cultural values. Semi-structured interviews capture both the *actions* and the *interpretations* of organisational leaders' two dimensions essential for understanding indigenous competences in practice. Interviews ranged from 45 to 105 min, with an 75% response rate.

The research design ensured rigour through principles of trustworthiness credibility, transferability, dependability, and confirmability. Credibility was enhanced through prolonged engagement with participants, iterative questioning, and cross-case comparisons across multiple firms. Transferability was ensured by providing thick descriptions of organisational settings and leadership contexts, enabling readers to determine applicability to similar environments. Dependability was strengthened through systematic documentation of the research process, including coding procedures, sampling decisions, and analytical steps. Confirmability was ensured by grounding all interpretations in participant narratives, maintaining an audit trail, and applying reflexive practices to minimise researcher bias.

3.1. Research sampling and unit of analysis

The Bahrain energy sector served as the contextual and organisational boundary of the study. The unit of analysis consisted of major energy organisations, including NOGA, Bapco Energies, Bapco Downstream, Bapco Exploration, Bapco Gas, GPIC, Chevron, BAFCO, and ASRY. These firms collectively capture the breadth of Bahrain's energy ecosystem across upstream, downstream, petrochemical, and service operations.

Table 2
Participant's selection.

Organisation	Sector	Participant roles	Rationale for inclusion	Sample size
NOGA	Regulator (National Energy Strategy)	Minister/Chairman; Under Secretary; CEO; Deputy CEOs; Strategic Advisor	Central governmental body overseeing national energy governance and Climate Change commitments	5
Bapco Energies (Holding)	Integrated Energy Group	CEO; COO; CIO; CFO	Oversight of transformation programmes, digitalisation, and sustainability alignment across subsidiaries	4
Bapco Refining	Downstream Operations	Chairman/Chief Executive; Deputy Chief Executive; CFO; GM Marketing; GM HR and Admin; GM Maintenance; GM BAPCO Modernisation Programme	Involved in major change initiatives such as energy efficiency, emissions reduction, and operational transformation	7
Bapco Exploration	Upstream	Chairman; CEO; Deputy CEO; GM Exploration; GM Supply Chain; GM Operation; CFO	Represents exploration leadership responsible for resource management and decarbonisation strategy	7
GPIC	Petrochemicals	President	Key player in carbon-intensive petrochemical production with long-established sustainability reporting	1
Bapco Gas	Gas Operations	Chairman; Vice Chairman; CEO; GM HR and Finance; GM Operations	Leadership responsible for gas optimisation, emissions management, and Climate change-related initiatives	5
BAFCO	Services	Chairman; Managing Director	Energy-services organisation supporting fuel supply infrastructure	2
ASRY	Services (Industrial/ Marine)	Chairman; Managing Director	Industrial operations exposed to emissions-regulation and sustainability pressures	2
Chevron Bahrain	Downstream (International Operator)	Chairman Bahrain; Managing Director Middle East	Provides comparative insights on leadership competences and sustainability practices from a multinational perspective	2

A theoretical sampling strategy was adopted, targeting leaders whose roles provided insight into sustainability-driven organisational change. Participants included chairpersons, CEOs, deputy CEOs, general managers, and heads of strategic divisions. They were selected based on tenure, strategic influence, and experience with SDG-aligned decision making. This approach ensured access to information-rich cases capable of illuminating the research questions (Omeihe and Harrison, 2024).

A total of 36 participants were interviewed from an initial proposed sample of 48. Theoretical saturation defined as the point at which no new insights emerged was reached at the 26th interview, although remaining scheduled interviews were completed for broader representation. The sample's diversity reflects multiple organisational hierarchies and perspectives, contributing to a robust understanding of indigenous and network leadership competences across Bahrain's energy landscape.

A theoretical, non-probability sampling strategy was applied to ensure representation of senior leaders with direct responsibility for organisational transformation and SDG-aligned decision-making. The sample was bounded to Bahrain's energy sector, drawing on chairpersons, CEOs, and senior executives with significant exposure to change leadership across upstream, downstream, petrochemical, and service segments. This strategy ensured access to information-rich cases capable of offering thick descriptions of leadership competences in a sustainability-challenged context. Table 2 summarises the distribution of participants across the organisations studied, their leadership roles, and the rationale for their inclusion.

3.2. Data collection

Semi-structured interviews allowed the researcher to explore the depth and nuance of leaders' interpretations of their competences, their relational approaches to collaboration, and their understanding of SDG-related organisational pressures. This method is particularly suitable for capturing socio-cultural constructs such as legitimacy, trust-building, collective identity, and relational authority dimensions central to indigenous leadership. Participants were contacted through formal organisational channels, followed by email and telephone invitations. All interviews were conducted face-to-face, audio recorded with participant consent and transcribed verbatim using NVivo 12 Pro transcription software. Ethical protocols were observed throughout, including anonymity, pseudonym assignment, and voluntary participation.

3.3. Data analysis

Braun and Clarke's (2006) six-phase thematic analysis guided the analytical process. The analysis involved generating initial codes, collating codes into candidate themes, reviewing themes for coherence, defining and naming themes, and synthesising themes into conceptual insights. The inductive analysis enabled the emergence of four overarching themes reflecting indigenous competences and network leadership practices relevant to climate change implementation.

Following theme development, the analysis progressed from first-order codes to four higher-order themes that captured recurring patterns of leadership practice. These empirically grounded themes were iteratively compared, refined, and abstracted into four integrative leadership competence dimensions through engagement with the data, the thematic structure, and relevant conceptual

insights from the literature.

The conceptual development of the SINLA model was grounded in this abstraction process. Indigenous competences provided the relational and cultural foundations, while network leadership practices reflected distributed and collaborative mechanisms of change. The integration of these dimensions within the organisational transformation domain led to the articulation of the Sustainable Indigenous Network Leadership Approach.

4. Findings

Guided by the conceptual framing outlined in Fig. 1, the analysis remains inductive and data-driven, allowing leadership competences and practices to emerge from participants' accounts rather than being imposed a priori. To address the research questions, the data were analysed inductively using Braun and Clarke's (2006) thematic process, which enabled the identification of shared patterns across the 36 interviews. This analysis generated four empirically grounded themes that collectively explain how indigenous leadership competences intersect with network leadership logics in Bahrain's sustainability-challenged energy sector. The themes reflect culturally embedded leadership behaviours and organisational dynamics that emerged consistently across the participating firms. Taken together, these four themes illuminate the intersection of indigenous competences and network leadership practices in concrete organisational terms. Socio-cultural consideration establishes the relational and legitimacy foundations through which leaders earn trust and mobilise collective action. Socio-political homogeneity reflects how indigenous norms of communal responsibility and societal stewardship shape alignment between organisational strategy and national sustainability imperatives. Socio-economic integration captures the structural flexibility and competence-based authority redistribution that enable cross-functional collaboration in complex, emission-intensive environments. Integrative socio-knowledge demonstrates how culturally embedded knowledge exchange and situationally activated leadership roles sustain adaptive capacity during transformation. Collectively, these dimensions reveal that indigenous leadership competences do not operate in isolation but function as an interconnected system of relational, political, economic, and epistemic practices that reinforce and extend network leadership in the GCC energy context. In line with the SINLA framework, each theme captures a dimension of competence that contributes to understanding how leaders negotiate change, build legitimacy, and mobilise organisational transformation toward climate change goals. The findings are structured around four interrelated themes that emerged from the thematic analysis: socio-cultural consideration, socio-political homogeneity, socio-economic integration, and integrative socio-knowledge. We now offer deeper insights into each, comparing participant narratives and highlighting convergence and divergence.

For instance, while most participants emphasised the importance of relational trust, some noted generational gaps in how authority is perceived. Respondent 3 described leadership as rooted in “community responsibility,” while Respondent 8 warned of younger leaders being “disconnected from our values.” This contrast illustrates the dynamic evolution of indigenous competences.

Similarly, in the theme of socio-economic integration, while many agreed on the necessity of cross-functional collaboration, some raised concerns about power asymmetries. These nuances illuminate how indigenous and network logics intersect unevenly, depending on organisational hierarchy and historical trajectories. The findings thus reveal the practical complexity of operationalising the SINLA framework and underscore the contextual sensitivity required.

4.1. Socio-cultural consideration

Participants consistently emphasised the importance of aligning transformation efforts with cultural values, indigenous norms, and social expectations. Leadership effectiveness was found to rest on relational legitimacy rather than hierarchical authority. “People need to work together in order to achieve the goals they want” (Int 1). “Use stories, not just reports it makes it real to them” (Int 9).

These narratives reaffirm that cultural embeddedness functions as a key mechanism through which leaders secure trust, legitimacy, and cooperation particularly in high-context societies such as Bahrain. Several participants stressed that “leadership only works when people feel you respect who they are” (Int 6), while others highlighted that “culture influences how we accept change more than strategy does” (Int 12).This aligns with Dimension 1 of the SINLA framework, reinforcing that cultural embeddedness is essential for leadership legitimacy and internal stakeholder engagement (Al-Roubaie and Al-Zayer, 2006).

Importantly, this theme directly addresses RQ1 by illustrating how indigenous competences such as storytelling, relational trust-building, and respect for social hierarchy enable leaders to motivate employees and mobilise collective action toward sustainability targets. It also contributes to RQ2 by demonstrating how cultural anchoring shapes the effectiveness of network-based collaboration across units and leadership tiers. This competence is enacted through leadership behaviours such as culturally grounded storytelling, relational trust-building, respect for social hierarchy, and mediation between tradition and organisational change, rather than mere awareness of cultural norms.

4.2. Socio-political homogeneity

Participants emphasised that successful sustainability transformation requires alignment between organisational objectives and Bahrain's broader national development agenda. Leaders acknowledged the need to align organisational objectives with Bahrain's national sustainability agenda. They discussed the importance of harmonising internal transformations with broader policy directions to ensure continuity and support from public institutions. “Everybody is brought together… that is the most important element” (Int 1). This sense of alignment was consistently described as a stabilising force in the transformation process, allowing firms to pursue change while maintaining institutional cohesion. Respondent 12 explained that “when the organisation's goals reflect the national direction,

people support the decisions more naturally," highlighting the importance of shared socio-political purpose.

Several participants viewed alignment with national institutions as a mechanism to reduce resistance to sustainability-related change, especially in a sector traditionally structured around legacy systems and hierarchical governance. As one senior leader noted, "National goals guide us it helps us justify difficult decisions" (Int 6). This relationship between organisational strategy and national policy was especially evident in discussions surrounding climate change implementation, wherein leaders framed their sustainability efforts as part of Bahrain's broader economic and environmental transition.

This theme corresponds directly with Dimension 2 of the SINLA framework, which stresses the significance of socio-political alignment for organisational stability and coordinated action. From the perspective of RQ1, socio-political homogeneity demonstrates how indigenous leadership competences particularly communal responsibility, loyalty, and societal stewardship shape sustainability-oriented decision-making. Leaders perceived their role as extending beyond organisational boundaries, reflecting a culturally embedded expectation to contribute to national progress.

In relation to RQ2, the findings highlight the role of network leadership in facilitating vertical and horizontal alignment. "The network of leaders helps align with national transformation goals" (Int 4). Leaders described informal cross-organisational networks as crucial communication channels through which sustainability priorities were clarified, negotiated, and reinforced across entities within the energy sector. This informal coordination reflects a network logic of governance rather than a purely top-down mandate. Together, the findings show that socio-political homogeneity acts as a bridging mechanism between indigenous cultural norms and strategic organisational transformation. By grounding sustainability efforts in a shared national narrative, leaders enhance legitimacy, encourage collective participation, and mitigate uncertainty key drivers in operationalising SINLA within Bahrain's energy sector. As a leadership competence, socio-political homogeneity is enacted through behaviours such as aligning organisational narratives with national priorities, brokering legitimacy across institutional boundaries, and actively translating policy expectations into operational change practices.

4.3. Socio-economic integration

Participants emphasised that effective organisational transformation in Bahrain's energy sector depends on the integration of leadership practices that cross formal departmental boundaries and redistribute authority based on competence rather than hierarchy. They consistently highlighted that socio-economic realities such as organisational interdependence, resource constraints, and the need for multi-level coordination require leaders to operate within distributed networks that can rapidly mobilise expertise. As one participant explained, "Execution depends on functionality rather than seniority" (Int 11), underscoring the shift from title-based authority to competence-based leadership mobilisation.

Leaders further emphasised the increasing dependence on cross-functional, multi-disciplinary teams capable of addressing complex sustainability and operational challenges. As Respondent 3 noted, transformation requires "a leadership team with individuals of multi-talent, skills, and knowledge," reinforcing the importance of drawing on diverse socio-economic and professional backgrounds. Another participant added, "We cannot rely on one department anymore; sustainability challenges force us to think collectively and deploy the right expertise at the right moment" (Int 6).

A clear pattern emerged linking socio-economic integration to organisational agility. Several respondents emphasised that the speed and success of climate change aligned initiatives depended on their ability to "work as an ecosystem rather than isolated units" (Int 14). This reflects the necessity of flexible coordination structures that respond dynamically to emerging sustainability requirements and operational uncertainties. As one leader remarked, "When you break the silos, ideas flow faster, and projects encounter fewer bottlenecks" (Int 9).

These insights support Dimension 3 of the SINLA framework, which posits that organisational transformation in sustainability-challenged firms requires structural flexibility, integrative decision-making, and capability-driven leadership deployment. This aligns with Provan and Kenis (2008), who argue that network-based systems outperform hierarchical structures when addressing complex, cross-cutting challenges. In Bahrain's energy context, socio-economic integration thus enables firms to harness collective expertise, reduce inefficiencies caused by rigid hierarchies, and accelerate transformation efforts aligned with climate change imperatives. This competence reflects leaders' ability to mobilise resources, redistribute authority based on expertise rather than hierarchy, and coordinate cross-functional collaboration to address sustainability challenges, rather than simply responding to structural or economic conditions.

4.4. Integrative socio-knowledge

Integrative socio-knowledge functions as a leadership competence through behaviours such as identifying informal experts, translating technical knowledge into culturally resonant language, and dynamically reallocating leadership roles based on situational expertise, rather than through the possession of technical or professional knowledge alone. Participants consistently noted that effective leadership within Bahrain's energy sector does not emerge from formal authority, position, or tenure, but from the demonstrated competence, credibility, and practical influence exercised by individuals in critical moments. Leadership was frequently described as a dynamic and situationally activated role, assumed by those who possess the relevant expertise, contextual understanding, and interpersonal capability needed to advance transformation efforts. As one respondent stressed, "Get the right people on board at the right time" (Int 23), highlighting the value of timely mobilisation of domain-specific knowledge. Another participant reinforced this perspective, stating that "Leadership roles emerge based on who is most effective" (Int 7).

Several respondents elaborated that knowledge integration is not merely technical but deeply relational, requiring individuals to

translate expertise across organisational boundaries. As Int 12 noted, "People listen to those who can explain the problem in our language… that's how knowledge travels here," underscoring the cultural embeddedness of knowledge-sharing practices. Others pointed out that teams rely on informal experts individuals who hold contextual, historical, and socio-cultural knowledge that is not captured in organisational charts but is essential for guiding decision-making during complex transitions (Int 4; Int 18).

Participants also highlighted the need to synthesise different forms of knowledge technical, experiential, indigenous, and organisational to navigate transformation effectively. One executive explained, "When you combine local wisdom with technical expertise, you get better decisions and fewer disruptions" (Int 5). This reinforces the value of collective intelligence and the integration of diverse knowledge sources within networked teams.

This theme corresponds to Dimension 4 of the SINLA framework, which emphasises competence-driven leadership activation, relational knowledge exchange, and integrative decision-making. It aligns with McGuire and Silvia (2009) and Wei-Skillern and Silver (2013), who argue that function-based leadership rather than formal authority is vital in networked organisations facing complex, interdependent challenges. In Bahrain's energy sector, integrative socio-knowledge thus becomes a critical capability that strengthens adaptive capacity, enhances problem-solving, and ensures that transformation processes remain culturally grounded and operationally effective.

4.5. Summary of thematic contributions

The findings confirm that Bahrain's energy sector requires a leadership model that is socially embedded, culturally adaptive, and functionally distributed. The four emergent themes socio-cultural consideration, socio-political homogeneity, socio-economic integration, and integrative socio-knowledge collectively demonstrate how indigenous competences and network leadership practices intersect in practice. These themes highlight the centrality of cultural legitimacy, relational trust, national alignment, capability-based influence, and cross-functional collaboration in driving climate change related organisational change.

Together, these contributions validate the need for a leadership approach that extends beyond Western techno-rational frameworks and incorporates culturally grounded mechanisms of influence and coordination. The themes form the empirical basis for the Sustainable Indigenous Network Leadership Approach (SINLA), showing how indigenous socio-cultural norms reinforce network-based agility and distributed leadership structures in Bahrain's energy sector. Collectively, these four dimensions represent behavioural leadership competences that enable indigenous leaders to enact network leadership through culturally grounded, relational, and situational practices in sustainability-challenged energy organisations. The four dimensions identified in this study extend existing network leadership competences beyond the attributes documented in prior scholarship, incorporating socio-cultural consideration, socio-political homogeneity, socio-economic integration, and integrative socio-knowledge as novel contributions to the framework. Taken together, the four themes identified in Section 4 provide the empirical foundation for the Sustainable Indigenous Network Leadership Approach (SINLA), which is presented in Fig. 2 as a higher-order synthesis of the study's findings.

5. Discussion

This section reflects on the study's findings and explains how they collectively address the research questions through the development of a novel leadership approach adapted to the socio-cultural dynamics of Bahrain's energy sector. The findings confirm that indigenous leaders' competences particularly those rooted in relational legitimacy, cultural cohesion, and socio-political alignment play a critical role in enabling organisational transformation within sustainability-challenged, non-western industries (Paiola et al., 2021; Budhwar et al., 2019). However, prevailing leadership frameworks remain largely shaped by western assumptions of individualism, linearity, and technocratic governance, which insufficiently account for the relational and communal norms that influence leadership legitimacy in the GCC (Sales et al., 2023; Majekodunmi, 2020; AlGhanem and Mendy, 2024).

The limited discourse on indigenous leadership within non-western corporate contexts has contributed to critical competence gaps, particularly in understanding how cultural norms shape leadership effectiveness (AlGhanem and Mendy, 2024). This study addresses this gap by advancing the Sustainable Indigenous Network Leadership Approach (SINLA) a culturally embedded framework that integrates indigenous leadership values with distributed network leadership practices. Unlike the conceptual model proposed in the literature review (Fig. 1), which offered a theoretical foundation, the SINLA framework presented here (Fig. 2) is grounded in empirical evidence drawn from eight major Bahraini energy organisations.

This figure illustrates the SINLA framework developed from the empirical findings. The model brings together four pillars that underpin leadership effectiveness in sustainability-challenged, non-western organisational contexts: (1) Cultural Legitimacy, which embeds leadership practices in indigenous norms and relational authority; (2) Indigenous Sustainability Competences, which represents the primary climate change-oriented pillar of the framework, aligning organisational action with ecological balance, socio-political legitimacy, and intergenerational responsibility as core leadership imperatives in emission-intensive contexts; (3) Collective Capacity and Learning, which emphasise reskilling, knowledge integration, and competence-based leadership emergence; and (4) Relational Governance for Resilience, which foregrounds adaptive responses to climate change challenges as the organising logic through which stakeholder cohesion and organisational continuity are sustained during transformation. Together, these pillars support a culturally grounded pathway for climate change-oriented organisational change.

5.1. Sustainable Indigenous Network Leadership Approach (SINLA)

The four SINLA dimensions presented in Fig. 2 represent higher-order theoretical abstractions derived from the empirically

grounded themes identified in Section 4. Specifically, socio-cultural consideration informs the dimension of Cultural Legitimacy; socio-political homogeneity underpins Indigenous Sustainability Competences; socio-economic integration gives rise to Collective Capacity and Learning; and integrative socio-knowledge is expressed through Relational Governance for Resilience. This abstraction process enables the translation of context-specific empirical insights into a coherent leadership framework while preserving their indigenous and behavioural foundations.

The SINLA framework encapsulates how indigenous and network leadership logics converge within Bahrain's energy sector. It reframes leadership as a culturally anchored, relationally coordinated, and competence-driven process. Unlike the conceptual model in Fig. 1, which provided an abstract theoretical lens, SINLA emerges directly from the empirical analysis of eight firms and 36 senior leaders.

Leaders in the study repeatedly emphasised the interplay between cultural legitimacy, collective decision-making, knowledge-sharing practices, and structural coordination. Together, these dynamics formed four recurring patterns that constitute the SINLA dimensions. These dimensions explain how leaders operationalise organisational change in sustainability-challenged contexts and how indigenous values become practical enablers of transformation.

5.1.1. Dimension 1: reframing organisational change through cultural legitimacy

This dimension builds directly on the theme of socio-cultural consideration identified in the findings (Section 4.1) and is represented in Fig. 2 as Cultural Legitimacy. The four SINLA dimensions presented in Fig. 2 represent higher-order theoretical abstractions derived directly from the empirically grounded themes identified in Section 4. Specifically, socio-cultural consideration informs the dimension of Cultural Legitimacy; socio-political homogeneity underpins Indigenous Sustainability Competences; socio-economic integration gives rise to Collective Capacity and Learning; and integrative socio-knowledge is expressed through Relational Governance for Resilience. This abstraction enables the translation of context-specific empirical insights into an integrated leadership framework while retaining their indigenous and behavioural foundations.

The first dimension highlights the centrality of cultural legitimacy in shaping how change is initiated and implemented. Participants described leadership influence as arising from relational trust, social embeddedness, and alignment with communal norms rather than positional authority. As one leader noted, *"We avoid top-down orders they disrupt relationships"* (Int 1). This aligns with Theme 1 (socio-cultural consideration) and underscores the need for culturally congruent leadership during climate change driven transformation.

While global change models emphasise agility and structural redesign (Millot et al., 2020), such approaches risk rejection if they lack indigenous resonance. The Bahrain context shows that cultural legitimacy acts as a precondition for organisational acceptance of change. This extends network leadership theory by demonstrating that distributed leadership only functions when grounded in socio-cultural authority systems. This dimension primarily addresses RQ2 by explaining how indigenous competences enhance change implementation.

5.1.2. Dimension 2: embedding sustainability through indigenous competences

This dimension is grounded in the theme of socio-political homogeneity (Section 4.2) and reflects how indigenous values and national alignment shape sustainability leadership practices. The second dimension explains how sustainability transitions gain meaning and momentum when linked to indigenous worldviews about environmental balance, community welfare, and intergenerational responsibility. Leaders framed sustainability not as a technical obligation but as a culturally rooted social duty. *"The network of leaders helps align with national transformation goals"* (Int 4) reflects Theme 2 (socio-political homogeneity) and demonstrates how indigenous and national logics mutually reinforce sustainability agendas.

Existing sustainability leadership models typically privilege compliance, metrics, and reporting (Sharma et al., 2022). SINLA expands this by recognising the cultural framing of sustainability as essential in the Global South. This dimension responds directly to RQ1, showing how indigenous competences shape leaders' understanding of sustainability and influence organisational behaviour.

5.1.3. Dimension 3: building competence through Collective Capacity and Learning

This dimension is grounded in the theme of socio-economic integration identified in Section 4.3 and is represented in Fig. 2 as Collective Capacity and Learning, capturing how competence-based role allocation, cross-functional collaboration, and shared learning practices support sustainability-oriented organisational change. The third dimension extends Theme 3 (socio-economic integration). Leaders consistently articulated the need for collective learning, mutual support, and capability-based role allocation. As one participant stated, *"It is not at all about your position, it's about your capability"* (Int 11). Another emphasised intergenerational learning: *"We must teach the young how to lead sustainably"* (Int 3).

While network leadership literature emphasises agility, innovation, and cross-functional collaboration (Guandalini, 2022), it often overlooks cultural learning practices, story-based communication, and indigenous mentorship. SINLA demonstrates that capacity building in Bahrain transcends technical upskilling and incorporates deeply embedded social and cultural knowledge. This dimension responds to both RQ1 and RQ2, showing how leaders' competences influence both understanding and enactment of sustainability-focused change.

5.1.4. Dimension 4: advancing resilience through Relational Governance

This dimension builds directly on the theme of integrative socio-knowledge identified in Section 4.4 and is reflected in Fig. 2 as Relational Governance for Resilience, highlighting how relational knowledge exchange, situational leadership activation, and culturally embedded coordination practices enhance organisational adaptability during sustainability-driven transformation. The

fourth dimension introduces a relational conceptualisation of organisational resilience grounded in social cohesion, cultural empathy, and adaptive collaboration. This reflects Theme 4 (integrative socio-knowledge) and challenges narrower views of resilience as operational robustness. Leaders described resilience as emerging from unity, trust, and collective coordination during change: *"If you want to transform your organisation… through network leadership approach it will be a success"* (Int 1).

Network leadership studies emphasise governance structures (Provan and Kenis, 2008) but rarely address cultural legitimacy as a factor in resilience. SINLA shows that in the Bahrain energy sector, resilience is relational before it is structural. This dimension addresses RQ2, highlighting how indigenous and network competences enhance organisational adaptation under climate change pressures.

5.2. Theoretical contribution

This study advances leadership scholarship by introducing the Sustainable Indigenous Network Leadership Approach (SINLA), a framework that integrates indigenous leadership competences with network leadership theory to support sustainability transitions and emission mitigation. The findings challenge the assumption that conventional, largely Western-centric leadership frameworks are universally applicable in complex organisational environments, particularly in non-Western, socio-culturally dense contexts such as the GCC. By embedding indigenous values cultural stewardship, relational authority, interdependence, and community responsibility SINLA expands the theoretical boundaries of network leadership, which has traditionally been conceptualised through bureaucratic, structural, or technocratic logics (Silvia and McGuire, 2010). The approach demonstrates that cultural legitimacy and relational embeddedness are not peripheral elements, but core enablers of distributed leadership effectiveness in high-emission sectors undergoing sustainability-driven transformation.

At the same time, this study contributes to the indigenous leadership literature by relocating its application from community or political settings into the domain of corporate sustainability and organisational change. Existing scholarship often emphasises indigenous leadership in local governance or cultural preservation (Millot et al., 2020). This research extends its relevance to strategic organisational contexts, showing that indigenous competences can shape organisational legitimacy, employee engagement, and long-term resilience in the energy sector. By positioning indigenous knowledge as an operational asset rather than a socio-cultural characteristic, SINLA offers a novel foundation for understanding how non-Western leadership logics can support climate change-oriented organisational transformation.

Furthermore, this study contributes to organisational change literature by reframing sustainability transitions as socially negotiated, relational processes rather than merely technical or compliance-oriented endeavours. The multi-dimensional nature of SINLA encompassing structural, cultural, political, and competence-based elements provides a more holistic account of how organisations adapt to climate imperatives in the Global South. It highlights the crucial role of culturally grounded leadership competences in bridging organisational, community, and national sustainability priorities. This theoretical repositioning demonstrates that meaningful transformation arises not only from structural redesign or technological investment, but from culturally resonant leadership practices that mobilise people, networks, and knowledge across organisational boundaries.

5.3. Managerial implications

The insights generated through this study carry several implications for executives, policymakers, and organisational leaders operating in Bahrain's energy sector and similar sustainability-challenged contexts. The findings suggest that effective transformation requires greater recognition of indigenous leadership competences and their integration into formal organisational change strategies. Leaders who rely solely on imported leadership models risk overlooking critical relational and cultural dimensions that influence trust, cooperation, and acceptance within teams. Embracing locally rooted forms of authority grounded in tribal legitimacy, communal responsibility, and social cohesion can enhance organisational capacity to navigate multi-stakeholder transformation initiatives and strengthen internal alignment around SDG priorities.

The study also reveals the importance of culturally informed reskilling and leadership development programmes. Leadership training should embed socio-cultural fluency, indigenous communication norms, and ecological ethics alongside technical competencies to ensure that leaders are equipped to manage both organisational and social complexity. Such programmes can help cultivate a leadership pipeline capable of sustaining long-term transformation and bridging generational differences in leadership expectations. By investing in the development of culturally responsive leadership skills, energy firms can enhance their readiness for sustainability transitions while reinforcing staff engagement and morale.

Additionally, the findings highlight the need for organisational structures that are more agile, distributed, and participatory. Hierarchical systems that prioritise seniority over capability may diminish innovation and impede multi-scalar coordination. By shifting toward flatter, network-oriented structures, firms can enhance responsiveness, accelerate decision-making, and promote collaboration across functional and organisational boundaries. This structural shift must be accompanied by communication strategies that reflect socio-cultural norms, such as storytelling, dialogue, and community-oriented messaging. Effective transformation requires not only the dissemination of information, but the cultivation of shared meaning and collective purpose rooted in local socio-cultural realities.

Overall, the managerial implications underscore the necessity of a paradigm shift in how leadership is understood and practiced within non-Western energy industries. By integrating indigenous leadership competences into organisational systems and aligning leadership practices with cultural expectations, firms can navigate sustainability transitions more effectively, build stronger relational foundations, and enhance their legitimacy within both organisational and societal spheres. These insights provide actionable guidance for leaders seeking to reconcile sustainability imperatives with culturally grounded leadership practices.

Table 3
Expanded network leadership competences for indigenous contexts.

Findings	Literature supported	Novel contribution
Sharing Knowledge	✓	
Communication Facilitation	✓	
Influence and Innovation	✓	
Personal Skills	✓	
Socio-Cultural Consideration		✓
Socio-Political Homogeneity		✓
Socio-Economic Integration		✓
Integrative Socio-Knowledge		✓

6. Conclusion, limitations, and future research

The global energy sector is undergoing unprecedented pressure to address climate change, with SDG13 calling for urgent action to reduce carbon emissions. To limit global warming to 1.5–2 °C and achieve net-zero emissions by 2050, energy companies must undergo complex, large-scale organisational changes. This is particularly critical in fossil fuel-dependent economies such as Bahrain, where sustainability transitions are both technically demanding and culturally sensitive.

The study addresses three core research questions and finds that: (1) indigenous competences such as relational legitimacy and ecological stewardship are essential for leadership in sustainability transitions; (2) the integration of indigenous and network logics enables more inclusive and resilient change strategies; and (3) a structured framework like SINLA provides operational guidance for aligning leadership with climate change.

Based on these findings, we conclude that effective leadership for emission mitigation in non-western energy sectors should be culturally embedded, relationally grounded, and organisationally adaptive. Our findings extend network leadership theory by incorporating competences such as socio-cultural sensitivity, socio-political homogeneity, socio-economic integration, and integrative socio-knowledge elements that are crucial for sustainable transformation in Bahrain's energy industry to address emission mitigation challenges but largely absent in existing leadership models (see Table 3). This paper also contributes to the broader literature by moving beyond the traditional technical and operational lenses that dominate energy sector research, offering a contextualised, people-centred perspective on leading transformational change. In conclusion, this study provides a theoretically grounded and empirically validated leadership SINLA framework that redefines how organisations in the Middle East can embed sustainability into their transformation strategies. By aligning indigenous competences with network leadership, it offers a culturally attuned roadmap for change in emission-intensive sectors.

6.1. Limitations and future research directions

Despite its contributions, no study is without limitations. First, the research was conducted within the specific context of Bahrain's oil and gas sector. Second, data were collected primarily from leaders and senior managers, potentially overlooking the insights of frontline employees and middle managers who are also critical to change implementation. However, the focus of the study was to obtain a rich description of network leadership within the Bahrain energy sector context and address the limited conceptualisation of the phenomenon within the Middle East.

Therefore, this study opens promising avenues for future inquiry in leadership and organisational change within the energy sector and beyond. Key areas for further research include: The formation, evolution, and impact of Sustainable Indigenous Network Leadership groups within and across organisations. Exploring the longitudinal effects of indigenous-network leadership on emission reduction, innovation adoption, and stakeholder engagement. Investigating comparative models of indigenous leadership across other GCC countries or regions with similar tribal and socio-cultural dynamics. Empirically testing SINLA through mixed methods, incorporating large-scale surveys, ethnographic insights, and organisational network analysis. Finally, examining employee-level experiences of indigenous leadership and sustainability-driven change to assess emotional, cognitive, and behavioural responses.

CRediT authorship contribution statement

Nawaf AlGhanem: Writing – original draft, Investigation, Conceptualization. **Ashley Braganza:** Writing – review & editing, Project administration. **Christian Harrison:** Writing – review & editing.

Data availability

Data will be made available on request.

References

Abdeldayem, M.M., Aldulaimi, S.H., 2024. Sustainable leadership and sustainability: Insights from the GCC. In: In Information and Communication Technology in Technical and Vocational Education and Training for Sustainable and Equal Opportunity: Education, Sustainability and Women's Empowerment. Springer Nature Singapore, Singapore, pp. 401–411.
Aldulaimi, Saeed Hameed, 2021. Rational leadership for the Middle East: a multiple competencies model. J. Asian Finance Econ. Bus. 8 (4), 687–697.
AlGhanem, N., Mendy, J., 2024. Sustaining successful organisational change through leadership competence within Bahrain oil and gas: the power of sustainable network leadership approach. J. Organ. Chang. Manag. Dec 6;37 (6), 1340–1360.
Al-Ghanem, N.H., Braganza, A., Aldhean, E., 2020. Distributed leadership in transformation initiatives: the emergence of network leadership. Int. J. Acc. Fin. Rev. 5 (1), 51–65.
Al-Roubaie, Amer, Al-Zayer, Jamal, 2006. Sustaining development in the GCC countries: the impact of technology transfer. World Review of Entrepreneurship, Management and Sustainable Development 2 (3), 175–188.
Azorín, C., 2020. Leading networks. Sch. Leadersh. Manag. 40 (2–3), 105–110.
Beckhard, R., 2006. The healthy organization. In: Organizational Development, pp. 950–952.
Blazquez, J., Fuentes, R., Manzano, B., 2020. On some economic principles of the energy transition. Energy Policy 147, 111807.
Bolden, R., Petrov, G., Gosling, J., 2009. Distributed leadership in higher education: rhetoric and reality. Educational Management Administration & Leadership 37 (2), 257–277.
Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qual. Res. Psychol. 3 (2), 77–101.
Budhwar, P., Mellahi, K., 2018. HRM in the middle east. In: Handbook of Research on Comparative Human Resource Management. Edward Elgar Publishing, pp. 487–499.
Budhwar, P., Pereira, V., Mellahi, K., Singh, S.K., 2019. The state of HRM in the Middle East: challenges and future research agenda. Asia Pac. J. Manag. 36, 905–933.
Budhwar, P., Pereira, V., Temouri, Y., Do, H., 2021. International business research and scholarship in the Middle East: developments and future directions. Int. Stud. Manag. Organ. 51 (3), 185–200.
Burrell, G., Morgan, G., 1985. Sociological Paradigams and Organisational Analysis. Hants, UK.
Canterino, F., Shani, A.B., Cirella, S., 2018. Leading organizational transformation: an action research study. J. Manag. Psychol. 33 (1), 15.
Hussey, R., 2009. Business Research, 4th edn. Palgrave Macmillan, New York.
Creswell, J.W., 1994. Research design, qualitative & quantitative approaches. Sage, Londong.
Cullen-Lester, K.L., Yammarino, F.J., 2016. Collective and network approaches to leadership: special issue introduction. Leadersh. Q. 27 (2), 173–180. https://doi.org/10.1016/j.leaqua.2016.02.001.
Davis, S.J., Lewis, N.S., Shaner, M., Aggarwal, S., Arent, D., Azevedo, I.L., Benson, S.M., Bradley, T., Brouwer, J., Chiang, Y., Clack, C.T.M., Cohen, A., Doig, S., Edmonds, J., Fennell, P., Field, C.B., Hannegan, B., Hodge, B., Hoffert, M.I., Ingersoll, E., Jaramillo, P., Lackner, K.S., Mach, K.J., Mastrandrea, M., Ogden, J., Peterson, P.F., Sanchez, D.L., Sperling, D., Stagner, J., Trancik, J.E., Yang, C., Caldeira, K., 2018. Net-Zero Emissions Energy Systems. American Association for the Advancement of Science (AAAS).
Denis, J.L., Langley, A., Sergi, V., 2012. Leadership in the plural. Acad. Manag. Ann. 6 (1), 211–283.
Eyong, J.E., 2017. Indigenous African leadership: key differences from Anglo-centric thinking and writings. Leadership 13 (2), 133–153.
Geels, F.W., Sovacool, B.K., Schwanen, T., Sorrell, S., 2017. Sociotechnical transitions for deep decarbonization. Science 357 (6357), 1242–1244.
Guandalini, I., 2022. Sustainability through digital transformation: a systematic literature review for research guidance. J. Bus. Res. 148, 456–471.
Gumede, W., 2016. The political economy of state-owned enterprises restructuring in South Africa. Journal of Governance & Public Policy 6 (2), 69.
Hickel, J., 2019. The contradiction of the sustainable development goals: growth versus ecology on a finite planet. Sustain. Dev. 27 (5), 873–884.
IEA, 2021. World Energy Outlook 2021. IEA, Paris. https://www.iea.org/reports/world-energy-outlook-2021.
Kempster, S., Higgs, M., Wuerz, T., 2014. Pilots for change: exploring organisational change through distributed leadership. Leadersh. Org. Dev. J. 35 (2), 152–167.
Kickert, W.J., Klijn, E., Koppenjan, J.F., 1997. Managing Complex Networks: Strategies for the Public Sector. Sage.
Kørnøv, L., Lyhne, I., Davila, J.G., 2020. Linking the UN SDGs and environmental assessment: towards a conceptual framework. Environ. Impact Assess. Rev. 85, 106463.
Leithwood, K., 2019. Characteristics of effective leadership networks: a replication and extension. Sch. Leadersh. Manag. 39 (2), 175–197.
Leithwood, K., Azah, V.N., 2016. Characteristics of effective leadership networks. J. Educ. Adm. 54 (4), 409–433.
Lindbergh, S., Ju, Y., He, Y., Radke, J., Rakas, J., 2022. Cross-sectoral and multiscalar exposure assessment to advance climate adaptation policy: the case of future coastal flooding of California's airports. Clim. Risk Manag. 38, 100462.
Loorbach, D., 2010. Transition management for sustainable development: a prescriptive, complexity-based governance framework. Governance 23 (1), 161–183.
Mack, N., Woodsong, C., MacQueen, K.M., Guest, G., Namey, E., 2005. Qualitative research methods: a data collector's field guide. Family Health International.
MacKillop, E., 2018. Leadership in organisational change: a post-structuralist research agenda. Organization 25 (2), 205–222. https://doi.org/10.1177/1350508417733137.
Majekodunmi, T.A., 2020. Global efforts against climate change in the oil and gas sector: a case study of China and Nigeria's legislate compliance with SDG 13. J. Commer. Prop. Law 7 (2).
Maurya, P.K., Mondal, S., Kumar, V., Singh, S.P., 2021. Roadmap to sustainable carbon-neutral energy and environment: can we cross the barrier of biomass productivity? Environ. Sci. Pollut. Res. Int. 28 (36), 49327–49342. https://doi.org/10.1007/s11356-021-15540-8.
McGuire, M., Bevir, M., 2011. Network management. In: The SAGE Handbook of Governance, pp. 436–453.
McGuire, M., Silvia, C., 2009. Does leadership in networks matter? Examining the effect of leadership behaviors on managers' perceptions of network effectiveness. Public Perform. Manag. Rev. 33 (1), 34–62.
Mendy, J., Al Ghanem, N.H., 2025. Towards a meaningful understanding of organizational leaders' localized and contextualized implementation of UNSDGs in Bahrain's changing energy sector businesses. Strateg. Chang. 34 (1), 43–56.
Millot, A., Krook-Riekkola, A., Maïzi, N., 2020. Guiding the future energy transition to net-zero emissions: lessons from exploring the differences between France and Sweden. Energy Policy 139, 111358. https://doi.org/10.1016/j.enpol.2020. 111358.
Omeihe, K., Harrison, C., 2024. Qualitative Research for Business Students: A Global Approach. Sage Publishing Limited, Sage, London.
Paiola, M., Schiavone, F., Grandinetti, R., Chen, J., 2021. Digital servitization and sustainability through networking: some evidences from IoT-based business models. J. Bus. Res. 132, 507–516.
Peckham, M., Whitehead, J., 2019. Network leadership. RSA J. 165 (3), 48 (5579).
Popp, J., MacKean, G.L., Casebeer, A., Milward, H.B., Lindstrom, R.R., 2014. Inter-Organizational Networks: A Review of the Literature to Inform Practice. IBM Center for the Business of Government, Washington, DC, pp. 93–96.
Provan, K.G., Kenis, P., 2008. Modes of network governance: structure, management, and effectiveness. J. Public Adm. Res. Theory 18 (2), 229–252.
Rogelj, J., Geden, O., Cowie, A., Reisinger, A., 2021. Net-zero emissions targets are vague: three ways to fix. Nature 591 (7850), 365–368.
Sales, A., Mansur, J., Roth, S., 2023. Fit for functional differentiation: new directions for personnel management and organizational change bridging the fit theory and social systems theory. J. Organ. Chang. Manag. 36 (2), 273–289.
Sharma, G.D., Mendy, J., Shahzad, U., 2022. Export product quality, renewable energy, and sustainable production. Front. Environ. Sci. Dec 8 (10), 1069041.
Silvia, Chris, 2011. Collaborative governance concepts for successful network leadership. State Local Gov. Rev. 43 (1), 66–71. https://doi.org/10.1177/0160323X11400211.
Silvia, C., McGuire, M., 2010. Leading public sector networks: an empirical examination of integrative leadership behaviors. Leadersh. Q. 21 (2), 264–277.
Stiver, D.C., 2017. Catalysing Collective Action: A Grounded Theory of Network Leadership. ProQuest Dissertations Publishing.

Strasser, T., de Kraker, J., Kemp, R., 2019. Developing the transformative capacity of social innovation through learning: a conceptual framework and research agenda for the roles of network leadership. Sustainability 11 (5), 1304.

Turner, J.R., Baker, R., 2018. A review of leadership theories: identifying a lack of growth in the HRD leadership domain. Eur. J. Train. Dev. 42 (7–8), 470–498.

Uster, A., Vashdi, D., Beeri, I., 2022. Enhancing local service effectiveness through purpose-oriented networks: the role of network leadership and structure. Am. Rev. Public Adm. 52 (4), 298–316.

Wei-Skillern, J., Silver, N., 2013. Four network principles for collaboration success. Found. Rev. 5 (1), 10.