

ORGANIZATIONAL SUSTAINABILITY THROUGH A SYSTEMS-BASED FRAMEWORK: THE LEAVITT MODEL PERSPECTIVE

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Purpose: The article aims to demonstrate how sustainability-oriented organizational change can be understood and managed using a system-based perspective, with particular emphasis on the Leavitt Model. By conceptualizing organizations as interdependent systems, the study seeks to explain how coordinated changes across key organizational elements can support the development of sustainable organizations.

Design/methodology/approach: The paper adopts a conceptual and theory-building approach based on a narrative literature review. Interdisciplinary literature on organizational systems, sustainability management, and organizational change was synthesized, and the Leavitt Model was applied as an analytical framework for structuring sustainability-oriented organizational change.

Findings: The study shows that sustainability-oriented organizational change requires coordinated modifications across people, tasks, structure, and technology. Sustainability can be effectively operationalized only through system-wide change rather than isolated initiatives, with the Leavitt Model illustrating how alignment among organizational elements supports long-term sustainability.

Research limitations/implications: The study is conceptual and does not include empirical validation, which limits the generalizability of the findings. Future research may empirically test the proposed framework in different organizational contexts and sectors, as well as examine dynamic interactions among the four elements of the Leavitt Model during sustainability transformations.

Practical implications: The proposed framework offers practical guidance for managers, sustainability officers, and change leaders seeking to embed sustainability across organizational systems. It supports diagnosing misalignments and designing coordinated interventions beyond symbolic or reporting-driven sustainability practices.

Social implications: By promoting a systemic approach to sustainability implementation, the study supports more credible corporate responses to environmental and social challenges, contributing to responsible organizational behavior and long-term societal value creation.

Originality/value: The paper extends the application of the Leavitt Model beyond technological and structural change by explicitly linking it to organizational sustainability. It provides an integrative framework translating sustainability objectives into concrete organizational change mechanisms.

Keywords: sustainable organization; organizational change; Leavitt Model.

Category of the paper: research paper.

1. Introduction

Sustainable development (SD) has become a central imperative for contemporary organizations, driven by intensifying environmental pressures, evolving stakeholder expectations, and increasingly stringent regulatory frameworks. Despite the widespread adoption of sustainability rhetoric, many organizations still struggle to translate sustainability aspirations into effective organizational change. As a result, sustainability is frequently treated as a declarative or symbolic concept rather than a practical and operational one. Common organizational responses remain limited to publishing sustainability reports, adopting green branding, or embedding sustainability commitments in mission statements, while core structures, processes, and everyday practices remain largely unchanged (Rodrigues, Franco, 2019).

Recent research consistently highlights a persistent gap between formal sustainability strategies and their actual implementation. This gap is often attributed to insufficient systemic thinking, fragmented governance mechanisms, weak leadership commitment, and uncertainty regarding how sustainability goals should be operationalized at different organizational levels (Wijethilake, Upadhaya, 2020; Al-Kwafi et al., 2023). Sustainability initiatives are frequently isolated within specific organizational units - such as marketing, or corporate communications - rather than embedded across the entire organizational system. Consequently, sustainability tends to function as an image-building exercise instead of serving as a driver of long-term organizational transformation and resilience (Kostova, Zaheer, 1999; Dyllick, Hockerts, 2002).

The growing body of sustainability literature underscores the need for holistic and integrated approaches to organizational change. Scholars increasingly argue that sustainability cannot be achieved through isolated initiatives or technological fixes alone, but requires coordinated changes in strategy, governance, organizational culture, structures, processes, and employee competencies (George, Schillebeeckx, Liak, 2015; Bocken, Schuit, Kraaijenhagen, 2018). Systems thinking has therefore gained renewed attention as a promising perspective for understanding how sustainability-oriented change unfolds within complex organizations (Williams, Whiteman, Parker, 2019). However, while system-based thinking is frequently advocated at a conceptual level, there remains a shortage of clear, operational frameworks that help organizations understand how to design and manage sustainability-driven change in practice.

That is why the article aims to demonstrate how sustainability-oriented organizational change can be understood and managed using a system-based perspective, with particular emphasis on the Leavitt Model. By conceptualizing organizations as interdependent systems, the study seeks to explain how coordinated changes across key organizational elements can support the development of sustainable organizations.

The value added of this article lies in its integrative and practice-oriented contribution. First, it extends the application of the Leavitt Model beyond its traditional use in technological and structural change by explicitly linking it to sustainability transformation. Second, it offers a coherent analytical framework that translates abstract sustainability goals into concrete organizational design and change mechanisms. Third, by synthesizing recent sustainability and organizational change literature, the article provides actionable insights that can support real-world implementation rather than remaining at a purely conceptual level.

The primary audience of this article consists of organizational practitioners, including top managers, sustainability officers, change managers, and consultants responsible for designing and implementing sustainability initiatives. The proposed framework is particularly relevant for practitioners seeking practical guidance on how to embed sustainability across organizational systems rather than confining it to isolated projects or reporting practices. At the same time, the article also contributes to academic discussions in the fields of sustainability management, organizational theory, and change management by offering a system-based conceptual lens that can inform future empirical research.

The remainder of the article is structured as follows. The next section presents the research approach and methodological assumptions. This is followed by a discussion of organizations as systems and a review of selected system-based organizational models, leading to a justification for adopting the Leavitt Model as the primary analytical framework. Subsequent sections analyze sustainability-oriented organizational change through the four elements of Leavitt's Diamond: people, tasks, structure, and technology. The article concludes with a synthesis of key insights, practical implications for managers, and directions for future research.

2. Methods

This article adopts a conceptual and theory-building research design grounded in a narrative literature review. The methodological objective is not empirical testing, but the development of an integrative analytical framework explaining sustainability-oriented organizational change through a systems perspective, with the Leavitt Model serving as the primary analytical lens.

The study draws on interdisciplinary scholarly literature from the fields of organizational theory, sustainability management, change management, and systems thinking. Relevant publications were identified using academic search engines (e.g., *Scopus*), university library databases, and direct access to peer-reviewed journals and academic monographs. Given the conceptual nature of the research problem and the dispersion of relevant studies across multiple disciplines, the review was not limited to a single database nor conducted as a formal systematic literature review.

A narrative review approach was deliberately selected to allow for interpretative synthesis and theoretical integration. Systematic review protocols were considered but deemed less suitable due to the study's focus on conceptual development, the need to incorporate foundational theoretical works, and the inclusion of diverse publication types (e.g., system theory texts, organizational models, and contemporary sustainability research). While narrative reviews do not rely on formal weighting procedures, the relative influence of the cited studies was reflected through their analytical role in the synthesis: foundational and widely cited theoretical works were used to frame core concepts and assumptions, whereas more recent and specialized studies were employed to refine, illustrate, or contextualize these concepts within the sustainability domain. In this way, theoretical prominence was conveyed through depth of discussion and positioning within the analytical framework rather than through quantitative weighting.

To enhance methodological transparency, explicit inclusion and exclusion criteria guided the selection of literature. Sources were included if they:

- addressed organizations as systems or open systems,
- examined organizational change, technological change, or sustainability-related transformation,
- discussed system-based organizational models (e.g., socio-technical systems, McKinsey 7S, Leavitt's Diamond); or
- contributed to theoretical discussions on sustainability implementation at the organizational level.

Sources were excluded if they:

- focused narrowly on technical solutions without organizational or systemic implications,
- addressed sustainability solely at the macro or policy level without organizational relevance; or
- lacked academic rigor, peer review, or theoretical grounding.

The analytical procedure consisted of three sequential stages. First, key system-based organizational models were identified and comparatively analyzed to clarify how different frameworks conceptualize internal organizational elements and their interdependencies. Second, the concept of the sustainable organization was theoretically elaborated through a synthesis of sustainability and organizational change literature, with the aim of clarifying its

defining characteristics, underlying assumptions, and key dimensions at the organizational level, without reference to specific analytical models. This stage focused on explaining how sustainability is operationalized within organizations as a system-wide and long-term process encompassing environmental, social, and economic objectives.

Third, drawing on the insights derived from both the comparative analysis of system-based models and the conceptual discussion of organizational sustainability, the Leavitt Model was applied as the primary analytical framework. The model was used to structure and present sustainability-oriented organizational change by examining how coordinated and mutually reinforcing modifications occur across its four core, interdependent elements - people, tasks, structure, and technology. This application enabled a systematic analysis of how sustainability objectives are translated into organizational practices and embedded across the organizational system. By explicitly emphasizing the mutual interdependencies among organizational elements, this approach ensures internal coherence of the analysis and is consistent with system theory assumptions that changes in one element inevitably affect the others.

Overall, the adopted methodology supports a theoretically grounded and practically oriented exploration of organizational sustainability. By combining a narrative literature review with a system-based analytical framework, the study provides a coherent basis for understanding how sustainability can be operationalized through integrated organizational change rather than isolated initiatives.

3. Organization as a System

In management and organization theory, the concept of a system refers to a set of interrelated and interdependent elements that function together as a coherent whole in order to achieve specific goals. A system is defined not only by its individual components, but also by the relationships and interactions among them (von Bertalanffy, 1968). Consequently, changes in one element of the system tend to affect other elements, as well as the overall system performance. To ensure coherent functioning and to prevent dysfunctions, the goals of the system must be aligned and synchronized with the objectives of its individual components (Zhao, Zhang, 2013).

This systemic perspective provides a useful foundation for understanding organizations, which are increasingly conceptualized as open systems that must continuously adapt to changes in their external environment in order to survive and develop (Scott, Davis, 2000; Daft, 2015). Such openness implies ongoing interactions with the environment and sensitivity to economic, social, technological, and environmental pressures. One of the most significant contemporary environmental trends shaping organizational functioning is SD, which imposes new expectations regarding responsibility, resource use, and long-term value creation.

Consequently, it becomes essential to understand how changes in the external environment - such as sustainability-related regulations, stakeholder expectations, or technological innovations - affect the configuration and alignment of internal organizational elements. Therefore, understanding which internal elements constitute an organization and how they are interrelated is crucial, as it provides the foundation for explaining adaptation processes and for managing change in a coherent and effective manner.

Viewing organizations as systems has led to the development of several system-based models. One of the foundational approaches is the Socio-Technical Systems Model (STS). It conceptualizes organizations as composed of two interdependent subsystems: the social subsystem (people, roles, relationships, culture) and the technical subsystem (tools, technologies, workflows). The core assumption of this approach is that organizational effectiveness depends on the joint optimization of both subsystems rather than on the improvement of one at the expense of the other (Trist, Bamforth, 1951).

The STS perspective has been widely applied in studies on work design, technological change, and digital transformation. Later authors expanded this model to analyze the impact of information systems and automation on organizational performance and employee well-being (Cherns, 1976; Pasmore, 1988). In contemporary research, socio-technical thinking is frequently used in the context of Industry 4.0 (Baxter, Sommerville, 2011).

Building on this systemic logic, broader integrative frameworks have been developed to capture a wider range of organizational elements and their interdependencies. One such approach is the McKinsey 7S Model, which presents organizations as systems consisting of seven interdependent elements: strategy, structure, and systems, as well as skills, style, staff, and shared values (Waterman, Peters, Phillips, 1980).

Strategy represents the organization's plans and actions to improve its position relative to competitors, for example through cost leadership, delivery efficiency, high perceived product or service quality, or achieving defined sales and service targets. It reflects the manner in which the organization intends to create unique value. Next, systems encompass all procedures, both formal and informal, that enable the organization to function, such as quality management systems, training programs, accounting procedures, and budgeting systems, while structure refers to the formal arrangement of parts within the organization, ensuring coordination and division of tasks. This can take the form of functional, product-based, market-based, geographic, or strategic business unit structures, defining dimensions of specialization, integration, and centralization. Skills constitute the dominant and key capabilities or functions that support the other elements, including organizational competencies, strengths, employee skills, and forms of knowledge aggregation. Style describes the adopted behaviors and management styles of leaders, including symbolic and cultural practices within the organization. Staff refers to the organization's human resources, considered both in a hard perspective (evaluation systems, payroll tables, formal training programs) and a soft perspective (morale, attitudes, motivation, and behavior), including processes of socialization, onboarding,

and career management. Finally, shared values are the overarching goals and philosophy of the organization, representing guiding principles, aspirations, and informal norms that extend beyond formal objectives. They shape the organization's activities and are common to all components, reflecting its collective mindset.

The 7S framework has been extensively used in strategic management, organizational diagnostics, and change management research. It has been applied to analyze strategic alignment (Higgins, 2005) and organizational transformation (Park, Yoo, Lee, 2021). Its strength lies in providing a holistic yet practical tool for assessing internal consistency within organizations, allowing scholars and practitioners to understand how hard and soft elements interact and influence overall organizational effectiveness.

Polish management literature offers complementary perspectives on organizational systems. Bielski (1997) proposed a model consisting of five interrelated subsystems: the goal and values subsystem, shaped by individual employee personalities, subcultures of small groups, personal goals and values, and the overall organizational culture; the psychosocial subsystem, consisting of people and groups interacting in day-to-day activities; the technical subsystem, encompassing techniques and technology used in the organization; the structure subsystem, which defines relationships among all components, task division, and coordination; and the management subsystem, which integrates all other subsystems and maintains balance between the organization and its environment. Similarly, Krzyżanowski (1999) conceptualizes the organization as a system composed of interrelated internal elements embedded in continuous interaction with the environment. At its core lies the management (steering) subsystem, which defines the mission, strategy, and goals and regulates organizational activity, while the structural subsystem enables the transformation of inputs into outputs by integrating input logistics, transformation processes, and output logistics, thereby coordinating tasks, information flows, and resource utilization. Organizational functioning is grounded in the interaction between human resources, understood as carriers of creative potential, and natural as well as technical–technological resources, which together constitute the material and technological base of operations. Ongoing exchanges with the environment, supported by feedback mechanisms, ensure system balance, adaptability, and the effective transfer of goods and services, highlighting the dynamic interdependence of management, structure, resources, and people in achieving organizational goals.

Finally, the Leavitt Model (Leavitt's Diamond) provides a parsimonious yet analytically robust framework for examining internal organizational systems. In contrast to more complex and multidimensional models, such as the McKinsey 7S framework or broader subsystem approaches, Leavitt's model reduces organizational complexity to four core, mutually dependent elements: tasks, people, structure, and technology. This reduction does not oversimplify organizational reality; rather, it enhances analytical clarity by making causal interdependencies between elements more explicit and empirically traceable (Markus, 1983).

The model is particularly well suited for analyzing organizational change, as it explicitly assumes that any modification in one element inevitably induces adjustments in the remaining elements. This assumption aligns closely with system theory principles and with contemporary challenges faced by organizations adapting to sustainability-related pressures, such as regulatory change, technological innovation, and evolving stakeholder expectations. As sustainability transformations typically require simultaneous changes in work processes, technologies, organizational structures, and employee competencies, the Leavitt Model offers a coherent framework for capturing these multidimensional adjustment processes in an integrated manner (Zha, Xu, 2009; Qin et al., 2023).

Table 1 presents a comparison of selected system-based organizational models, highlighting their core elements, analytical focus, and relative complexity. This overview illustrates how different models conceptualize interdependencies within organizations and provides a clear rationale for selecting the Leavitt Model as a practical framework for studying sustainability-driven organizational change.

Table 1.
Comparison of selected system-based organizational models

Model	Core Elements / Subsystems	Analytical Focus	Level of Complexity
Socio-Technical Systems (STS)	Social subsystem (people, roles, culture) and technical subsystem (technology, workflows)	Joint optimization of social and technical dimensions of work	Low–moderate
McKinsey 7S Model	Strategy, structure, systems, skills, style, staff, shared values	Internal alignment between hard and soft organizational elements	High
Krzyżanowski's System Model	Management (steering), structure, human resources, natural resources, technical - technological resources, logistics	Organization as a purpose-oriented open system embedded in the environment	High
Bielski's Subsystem Model	Goals and values, psychosocial, technical, structural, management subsystems	Internal coherence of organizational subsystems and balance with environment	High
Leavitt's Diamond	Tasks, people, structure, technology	Mutual interdependence of core organizational elements	Low

Source: Own elaboration.

The Leavitt Model is adopted as the primary analytical framework in the following sections due to its conceptual clarity, methodological flexibility, and proven applicability in studies of technological and organizational change. However, despite its analytical strengths, it has rarely been applied to sustainability-oriented organizations, as existing research has focused primarily on technological change and information systems without systematically incorporating long-term environmental and social objectives. This gap justifies embedding the Leavitt Model within a sustainability-oriented perspective, forming the basis for analyzing sustainability-driven organizational change.

4. Sustainable Organization: Theoretical Discussion

SD, understood as a more balanced and lasting managerial approach (Pietrzak, 2025), has become a central response to contemporary economic, environmental, and social challenges (Rahman et al., 2022; Purvis et al., 2018). In a world characterized by constant change, intensified by the rapid pace of technological change and deep structural transformations, comprehensive, long-term planning and management are increasingly challenging. This, in turn, leads organizations to seek more balanced and consistent paths of development and to implement more sustainable organizational systems, management practices and business models (Schaltegger et al., 2012; Kozar, Oleksiak, 2022). Under these conditions, the concept of sustainable organization has been recognized and broadly accepted, providing an important framework for understanding how organizations can create value through their responsible and future-oriented actions (Rahman et al., 2022; León, 2013; Tavanti, 2023). Also, there is a growing need to move beyond a general corporate-level commitment to sustainability towards concrete, systemic measures implemented across the organization in everyday operations. This, in turn, requires a clearer and more nuanced understanding of what being a sustainable organization actually entails.

An important milestone in the reorientation toward sustainable solutions was The UN World Commission on Environment and Development's report *Our Common Future* (also commonly referred to as the Brundtland Report), which defined SD as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). This definition later became a key reference point for broader sustainability frameworks, such as the triple bottom line concept: profit-people-planet (Elkington, 1997; 2004) or a more recent and broader perspective of applying SD principles to five areas: people, planet, prosperity, peace and partnership (Kasztelan, 2022; Pietrzak, 2025). The concept of SD shifted organizations' attention from short-term economic growth to responsibility for both present and future generations, emphasizing the need for intergenerational (Clark, Miles, 2021; Ketprapakorn, Kantabutra, 2022; Kaul et al., 2025) and distributive equity. Rather than focusing solely on maximizing profit, businesses increasingly adopt a broader perspective, viewing the organization as part of a wider ecosystem and taking into account interdependent operations, value networks, and diverse stakeholders (Rahman et al., 2022).

As organizations have shifted their overall orientation and management approach, the very concept of sustainable organization has also evolved (Graczyk-Kucharska, 2025). Until around 2000, a sustainable organization was understood as "an entity that integrates economic, environmental, and social development opportunities into its business strategies, with a long-term orientation that meets current needs without compromising those of future generations" (Soyka, 2012; León, 2013 after: Graczyk-Kucharska, 2025). After 2000, definitions

increasingly emphasized the integration of economic, environmental, and social goals in strategies, operations, and project portfolios (Turan et al., 2008), stressing that sustainable organizations can effectively manage their resources, achieve long-term financial and operational stability and proactively manage risk and innovation, applying SD principles (Soyka, 2012). León (2013) further stresses that a sustainable organization not only adapts its operational practices to SD principles but also develops new strategies that support innovation and the organization's adaptive capabilities. In more recent publications, a sustainable organization is one whose “production, organizational, and marketing processes follow sustainable development principles, using environmentally friendly technologies, reducing waste, ensuring energy efficiency, and managing resources sustainably across social, natural, and economic pillars” (2025, p. 29). It is also described as an organization that pursues strategic SD beyond mere economic growth, and “prioritizes social inclusion, equality, and environmental sustainability to achieve success in the global economy” (Graczyk-Kucharska, 2025, p. 29), and an entity whose management is oriented toward the integration of sustainability principles into corporate culture, communication as well as performance and quality standards (Pietrzak et al., 2025). Increasingly, authors and researchers emphasize the practical and applicable aspects of an SD three-dimensional framework, stressing that a sustainable organization integrates economic, social, and environmental goals across the company, in both its daily operations and its long-term development strategies.

Due to its socio-economic importance, the business sector is identified as one of the key participants in achieving SD. Organizations are an integral component of modern societies and, as Lozano (2018, p. 1157) points out, “they are subsystems of a larger environmental system”. As Błach (2025, p. 65) stresses, “each economic entity can implement sustainable development goals in a manner tailored to its scale and specific operations”. It is important to note that the triple bottom line (profit–people–planet) translates the macro-level idea of SD into a business-oriented framework (Levi-Jakšić et al., 2018). It implies an authentic shift from a corporate orientation focused on financial results to three equally important dimensions: economic, social, and environmental. For an organization to be considered sustainable, the change needs to be embedded in corporate strategy, governance, decision-making, and operations (Das et al., 2025), not pursued as secondary, marketing-driven initiatives or a peripheral activity (Putra et al., 2025). The three dimensions shape both the overall performance and legitimacy of the sustainable organization (León, 2013; Terlecka, 2014, after: Pietrzak, 2025). In this perspective, a sustainable organization is accountable not only to its management and shareholders, but also to employees, customers, local communities, and the ecosystems it affects. It integrates societal fairness, economic effectiveness, and environmental performance into corporate practices (Varsei et al., 2014, after: Rahman, 2022), and SD is seen as “a comprehensive approach that guides the firm to limit harm and create economic, social, and environmental value”, not merely as “a way to measure and report a company’s business, social, and environmental performance” (Žak, 2015, p. 254).

As Tasleem et al. (2017, p. 3) indicate, “corporate management is keen to adopt a roadmap or a framework that can be useful in the identification, management and measurement of the drivers and can lead to desired outcomes relating to sustainable performance”. Building on this need, the authors propose a system-oriented framework to operationalize sustainability at the organizational level, shifting from general declarations to measurable solutions and ensuring commitments are met through implementation. The authors’ perspective on a sustainable organization, which is presented below, reflects a broader understanding of the concept as a system that, in line with the SD principles, creates economic value, minimizes negative environmental impacts, and enhances human well-being.

5. The Sustainable Organization: A Systems Perspective

Organizational sustainability requires a holistic and systemic approach in which changes are not implemented in isolation but encompass the entire socio-technical system of the organization. Sustainable organizations are those that can adapt to environmental, technological, and social changes while maintaining alignment between their goals, structures, processes, and people.

Evidence from public sector information systems projects shows that sustainable outcomes depend on aligning technological change with organizational structures, work practices, and human capabilities (Heiskanen et al., 2013). Similarly, lean production initiatives demonstrate that improvements in operational efficiency require synchronized adjustments in organizational roles, task design, and supporting technologies (Zha, Xu, 2009). Furthermore, successful change management relies on active employee engagement, clear communication, and strong leadership support (Cork, 2005).

Overall, organizational sustainability can only be achieved through an integrated, system-wide approach to change - one that considers the mutual interdependencies among people, tasks, structures, and technologies. In this context, Leavitt’s model provides a practical and analytically robust framework for understanding and managing such holistic transformations.

In the following sections, this article will provide a detailed analysis of the changes that must occur within each element of Leavitt’s model, highlighting how coordinated adaptations across tasks, people, structures, and technologies can support the development of sustainability-oriented organizations.

5.1. The role of people in sustainability-oriented organizational transformation

From a systems perspective, people constitute the central element of the organization, as they interpret strategic goals, make decisions, and translate sustainability principles into everyday practices. Consequently, the development of employees' and leaders' competencies is a key prerequisite for effective sustainability-oriented transformation. Mentoring and coaching play a particularly important role in this process as tools for human capital development. Mentoring provides long-term, relationship-based support that facilitates knowledge transfer, value internalization, and leadership development, whereas coaching focuses on structured, time-bound goals aimed at improving performance and effectiveness (Irwin, 2005; Basher, 2025). Both practices have been shown to increase employee engagement, retention, and job satisfaction, thereby fostering a culture of continuous learning and development within organizations (Smith, Lynch, 2014; Basher, 2025).

In the context of sustainability, mentoring and coaching also support inclusive leadership, facilitate the integration of new employees into organizational culture, and improve communication and access to senior leadership positions (Smith & Lynch, 2014; Singha, 2024). Furthermore, mentorship has been linked to enhanced innovative behavior and proactive engagement, crucial for organizations operating in rapidly changing environments (Baran, Clutterbuck, 2023). Coaching specifically can help individuals develop self-awareness, resilience, and adaptability, which are widely recognized as key competencies of the future workplace, especially in sustainability-driven roles where change is continuous and unpredictable.

The growing use of virtual platforms and artificial intelligence (AI) has further expanded the scope of these practices, making them more accessible, scalable, and personalized, which supports the widespread development of sustainability-related competencies across the organization (Basher, 2025). Recent research on AI in coaching suggests that generative AI tools can augment traditional coaching by enhancing personalization and providing real-time feedback, thereby supporting continuous learning and development at scale (Diller, Stenzel, Passmore, 2024). These technology-enhanced approaches also align with broader trends in digital-enabled human resource practices that emphasize agile learning, collaboration, and data-driven decision making as strategic enablers of sustainable growth.

By integrating mentoring and coaching into organizational strategies, companies not only build individual capacity but also foster collective competencies - such as ethical leadership, systems thinking, and collaborative problem solving - that are essential for navigating complex sustainability challenges. This holistic development supports a resilient workforce capable of driving long-term sustainable value creation in dynamic economic and social contexts.

5.2. The role of tasks in sustainability-oriented organizational transformation

Within Leavitt's model, organizational tasks are closely linked to the organization's mission, vision, and strategic objectives. In a sustainable organization, the "green" mission statement plays a pivotal role by integrating economic goals with environmental and social responsibility. Mission statements communicate an organization's commitment to sustainability to its stakeholders, strengthening consumer identification with the company and positively influencing purchasing decisions (Ding et al., 2025). Sustainability-oriented missions may also serve as a source of competitive advantage and long-term value creation for customers and other stakeholders (Ding et al., 2025; King et al., 2010). However, the effectiveness of a green mission statement depends on its relevance and consistency with actual organizational practices. Regular updates of mission statements are necessary to reflect changes in the socio-economic environment and internal strategic priorities, thereby preventing sustainability from being reduced to a purely symbolic or image-building exercise (King et al., 2010; Yozgat, Karataş, 2011).

In practice, sustainable organizations redesign tasks to align daily activities and responsibilities with environmental, social, and long-term economic goals. Routine tasks are structured to minimize resource consumption, reduce waste, and limit negative environmental impact - for example, implementing energy-efficient processes or adopting circular material flows. Greater emphasis is placed on cross-functional and collaborative tasks, enabling holistic problem-solving related to sustainability, such as joint teams working on eco-innovation or sustainable supply chain solutions. Tasks are also designed to foster continuous improvement and learning, including process optimization, sustainable service design, and experimentation with environmentally friendly technologies. Decision-related tasks explicitly incorporate sustainability criteria, such as evaluating carbon footprints, ensuring ethical sourcing, and assessing social responsibility implications of business choices.

By integrating these practices, organizations ensure that sustainability is not only a strategic statement but a guiding principle embedded in everyday operations, driving both long-term value creation and positive environmental and social outcomes.

5.3. The role of structure in sustainability-oriented organizational transformation

Organizational structure shapes how activities are coordinated and how information flows within a system. In sustainable organizations, flexible structures and cross-functional teams are increasingly important, as they enable the integration of environmental, social, and economic considerations into decision-making and operational processes.

In practice, organizations may have departments or positions such as a President, Chief Sustainability Officer (CSO), and heads of Environmental, Economic, and Social Sustainability. The President sets the overall sustainability strategy and policy, while the CSO translates these strategic goals into actionable plans, monitors performance through

comprehensive reports, and communicates with key stakeholders. Operational responsibilities are delegated to the heads of environmental, social, and economic sustainability, who oversee teams that implement initiatives, monitor progress, and prepare targeted reports. These teams work closely with other units to coordinate sustainability actions, collect data, and ensure follow-up, ensuring that initiatives are effectively embedded across the organization.

This approach emphasizes both vertical and horizontal alignment. Vertical alignment ensures that sustainability objectives flow consistently from top management to operational teams, while horizontal alignment promotes collaboration among environmental, social, and economic functions. Sustainability teams play a key role in facilitating knowledge sharing, collaborative problem-solving, and the development of interpersonal relationships, all of which are essential for team effectiveness and viability (Kalabina, Belyak, 2020; Demir, Ergün, 2023).

Effective sustainability teams integrate diverse competencies, encourage cross-functional collaboration, and foster a culture of continuous improvement and organizational learning (Kalabina, Belyak, 2020; Messaoudene, 2019). Research also shows that team performance improves when teams operate in an environment characterized by organizational justice, trust, and active employee participation, leading to greater stability, resilience, and higher performance levels (Demir, Ergün, 2023).

By combining hierarchical oversight with cross-functional collaboration, organizations can respond dynamically to sustainability challenges, align ESG objectives with operational activities, and engage all levels - from strategic decision-makers to operational teams - in creating long-term value.

5.4. The role of technology in sustainability-oriented organizational transformation

Technology constitutes a critical enabler of sustainability implementation within organizations. Green technologies - such as renewable energy solutions, energy-efficient systems, and environmental monitoring tools - allow organizations to reduce their environmental footprint while improving resource efficiency. Research indicates that green technology innovation contributes positively to corporate Environmental, Social, and Governance (ESG) performance by reducing environmental management costs and increasing employee engagement in pro-environmental activities (Wang, Yang, 2025; Zong, 2024).

Digital transformation further strengthens the relationship between ESG performance and green technology innovation, acting as a key moderating factor (Xu, He, 2025). ESG reporting, particularly when supported by digital technologies, artificial intelligence, and blockchain solutions, enhances transparency, accountability, and stakeholder trust (Soomro et al., 2025; Khamitdkhanovich et al., 2025). Moreover, strong ESG performance encourages further investment in green innovation, creating a positive feedback loop between sustainability outcomes and long-term organizational competitiveness (Zhao et al., 2025).

However, the sustainability implications of technology adoption are not exclusively positive. Efficiency improvements enabled by green and digital technologies may give rise to rebound effects, whereby reduced costs and increased productivity lead to higher overall resource consumption, partially offsetting environmental gains. In addition, the deployment of digital technologies can introduce unintended sustainability trade-offs, including increased energy demand, electronic waste generation, and social challenges related to skills polarization and data governance (Yerushalmi, Saha, 2025).

In this context, organizations that integrate green technology and digital tools into their operations while critically assessing and managing these potential side effects are better positioned to achieve sustainable performance goals. The adoption of such technologies not only addresses regulatory and environmental pressures but also fosters innovation, improves operational efficiency, and strengthens the organization’s reputation among stakeholders. Consequently, technology serves as both a practical instrument for implementing sustainability initiatives and a strategic driver of long-term competitive advantage, provided that its application is guided by a systemic and holistic sustainability perspective rather than a purely technological one.

To ensure that technology-driven sustainability initiatives remain aligned with other organizational elements within the Leavitt Model, organizations should systematically monitor organizational-level indicators capturing the coherence between people, tasks, structure, and technology. Such metrics enable managers to assess whether sustainability-oriented technologies genuinely support strategic goals, are embedded in daily operations, and are reinforced by appropriate competencies and structures, rather than generating isolated or counterproductive effects. Table 2 presents exemplary indicators that allow organizations to evaluate this alignment in a structured and measurable way.

Table 2.
Organizational-level indicators for assessing sustainability alignment within the Leavitt Model

Leavitt Model element	Example organizational-level indicators / metrics
People	<ul style="list-style-type: none"> • Percentage of employees trained in sustainability-related digital/green technologies. • Employee sustainability engagement index (survey-based). • Share of leadership roles with sustainability or ESG-related performance objectives. • Use rate of AI-supported mentoring/coaching tools.
Tasks	<ul style="list-style-type: none"> • Percentage of core processes with embedded sustainability criteria (e.g. carbon, social impact). • Number of sustainability-related KPIs included in operational dashboards. • Share of projects assessed using life-cycle or ESG-based evaluation tools.
Structure	<ul style="list-style-type: none"> • Existence of formal sustainability governance roles (e.g. CSO, ESG committees). • Frequency of cross-functional sustainability meetings or projects. • Degree of vertical ESG goal alignment. • Clarity of sustainability-related reporting lines.
Technology	<ul style="list-style-type: none"> • Reduction in energy use / emissions per unit of output enabled by technology. • Share of IT and digital investments classified as green or ESG-supporting. • Quality and completeness of digital ESG reporting (audit or assurance scores).

Source: Own elaboration.

6. Summary

The article addresses a critical and increasingly relevant challenge faced by contemporary organizations: the persistent gap between formally declared sustainability strategies and their effective implementation in everyday organizational practices. Although sustainability has become a widely adopted managerial concept, many organizations continue to approach it in a fragmented and symbolic manner, limiting their efforts to reporting, branding, or isolated environmental initiatives without introducing meaningful changes to core organizational systems.

In response to this problem, the article adopts a systems-based perspective on sustainability-oriented organizational change, positioning sustainability not as a standalone initiative but as a comprehensive, organization-wide transformation. The central premise of the study is that long-term organizational sustainability can only be achieved through the coherent alignment of key organizational elements and their mutual interdependencies. To operationalize this perspective, the authors employ the Leavitt Model as an analytical framework, conceptualizing organizations as systems composed of four interrelated elements: people, tasks, structure, and technology.

The main objective of the article - namely, to demonstrate how sustainability-oriented organizational change can be understood and managed using a systems-based perspective with particular emphasis on the Leavitt Model - has been successfully achieved. The authors clearly articulate the theoretical foundations of systems thinking, justify the selection of the Leavitt Model, and consistently apply it throughout the analysis of sustainability-oriented change.

By systematically examining each element of the model and highlighting their interdependencies, the article effectively shows how sustainability can be operationalized as an integrated organizational transformation rather than as a set of isolated or symbolic activities. The conceptual framework directly addresses the research objective and provides a clear analytical logic that links sustainability goals to organizational design and change processes.

The article makes several important theoretical and practical contributions. First, it extends the application of the Leavitt Model beyond its traditional focus on technological and structural change by explicitly integrating sustainability objectives into the model. This represents a meaningful theoretical advancement, as sustainability has rarely been analyzed through this particular systems-based framework.

Second, the study offers an integrative and practice-oriented perspective that bridges the gap between abstract sustainability concepts and concrete organizational change mechanisms. By translating sustainability into coordinated changes in people, tasks, structure, and technology, the article provides managers, sustainability professionals, and change leaders with a clear diagnostic and design tool for sustainability implementation.

Third, by synthesizing recent literature from multiple disciplines, the article contributes to the consolidation of fragmented research streams on organizational sustainability and change management. This integrative approach strengthens the conceptual foundations of sustainability-oriented organizational research and lays a solid basis for further empirical investigation.

Despite its contributions, the article has several limitations. The primary limitation is its conceptual nature and the absence of empirical validation. As the framework is developed through a narrative literature review, the findings cannot be generalized without further empirical testing. Additionally, the narrative review methodology, while suitable for theory-building, involves a degree of subjectivity in literature selection and interpretation.

Another limitation is that the article does not provide a systematic comparison of the explanatory power of the Leavitt Model with alternative sustainability-oriented organizational frameworks (e.g. socio-technical systems, the McKinsey 7S framework, or ESG- and capability-based models). Although these frameworks are acknowledged in the theoretical background, their relative strengths and limitations in explaining sustainability-oriented organizational change are not explicitly contrasted. Addressing this gap would strengthen the theoretical positioning of the Leavitt Model and clarify its distinctive analytical contribution.

Future research should therefore focus on empirically testing the proposed framework in different organizational contexts, industries, and institutional environments. Quantitative studies could examine the relationships between the alignment of Leavitt's elements and sustainability performance, while qualitative case studies could explore the dynamic interactions among people, tasks, structure, and technology during sustainability transformations.

Further research could also investigate longitudinal aspects of sustainability-oriented change, analyzing how system-wide alignment evolves over time and how organizations manage tensions and trade-offs between sustainability objectives and short-term performance pressures. In addition, comparative studies that explicitly evaluate the Leavitt Model alongside other sustainability-oriented frameworks could provide deeper insights into their respective explanatory power and practical applicability. Finally, integrating the Leavitt Model with other sustainability and performance frameworks - such as ESG metrics or quality management models - could further enrich the understanding of sustainable organizational transformation.

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