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Network Managers and Artificial Intelligence: Functions and Competencies for Business Network Governance

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Abstract

This study develops a conceptual framework to explain how Artificial Intelligence (AI) may reshape the role and competencies of the Network Manager (NM) in inter-organizational network governance. Drawing on research on network governance, human–AI collaboration, and algorithmic management, it examines five functional configurations: Temporary Manager, Facility Manager, Diversity Manager, Business Cultural Mediator, and Meta-Manager. For each configuration, the analysis distinguishes activities that can be augmented by AI from those that remain dependent on human judgement and relational capabilities. A qualitative interpretive matrix links managerial configurations, core functions, and the degree of AI augmentation. The framework suggests that AI mainly strengthens analytical, forecasting, monitoring, and decision-support activities, while trust-building, negotiation, mediation, and actor legitimation continue to require human leadership. It therefore highlights the complementarity between AI and the NM and identifies the digital, relational, ethical, and governance competencies required for effective network management.

Keywords: Network Governance, Managerial Competencies, Artificial Intelligence

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1. Introduction

The relationship between artificial intelligence (AI) and the management of inter-organizational networks is an increasingly salient topic. AI has considerable transformative potential to streamline many of the organizational functions required for networked business arrangements to operate—functions typically entrusted to the actor responsible for coordinating and governing business networks. From this perspective, recent literature indicates that the introduction of AI systems not only supports managerial activities but also profoundly reshapes decision-making mechanisms and the logics of organizational control.

More specifically, research on human–machine integration shows that decision-making processes increasingly emerge from collaboration between human agents and algorithmic systems, giving rise to forms of human–AI symbiosis that transform the role of management (Jarrahi, 2018). Rather than emphasizing collaboration alone, some authors prefer the concept of an integrated system in which humans and AI co-evolve and learn together (Dellermann et al., 2019). At the same time, the spread of algorithmic management practices demonstrates how algorithms can assume coordination, monitoring, and performance-evaluation functions, thereby redefining the traditional balance between autonomy and control within organizations (Kellogg et al., 2020). This perspective has recently been developed further by studies proposing an integrated view of human–AI collaboration and algorithmic management and emphasizing the need to shift the level of analysis from individual tasks to the organization as a whole (Hillebrand et al., 2025).

This study seeks to identify which activities are most amenable to AI support and which, by contrast, are difficult—either wholly or partly—to delegate to algorithmic systems.

The article builds on previous studies of the Network Manager, the role played by this figure in network coordination and shared-governance processes, and the variability of the role's functions across the different stages of the business-network life cycle (Tresca, 2015a; Tresca, 2015b; Tresca, 2024).

Its aim is to update this earlier research by examining the extent to which AI can support or redefine coordination and governance functions in interfirm network settings.

The article adopts a theoretical-conceptual research design. It does not seek to test hypotheses empirically; rather, it develops an interpretive framework for understanding how AI may reconfigure the role and competencies of the NM in the governance of inter-organizational networks.

The analysis integrates three main strands of literature: studies of network governance and inter-organizational coordination; contributions addressing the role, functions, and competencies of the NM; and the more recent literature on human–AI collaboration, algorithmic management, and digital governance.

The study considers both foundational theoretical contributions, which help delimit the concepts of network and governance, and recent research needed to interpret the

impact of AI on decision-making and managerial processes within interfirm networks. The literature was examined through an interpretive and comparative lens to identify the NM's functional dimensions that are most open to algorithmic augmentation and those that remain more dependent on relational, political, and context-specific competencies.
The article follows a multi-stage analytical process. First, having defined the NM with reference to inter-organizational settings and business networks, it identifies the main functions and competencies traditionally associated with the role. Five managerial roles potentially related to that of a Network Manager (NM) were subsequently identified - that is, managerial professionals whose activities may also be relevant to a manager responsible for network governance: Temporary Manager, Facility Manager, Diversity Manager, Business Cultural Mediator, and Meta-Manager. These managerial figures were selected based on their ability to represent functional dimensions already identified in the literature on Network Managers. They were therefore used as "analytical lenses" rather than as equivalent professional categories. For each role configuration, the analysis subsequently distinguishes between activities that can be augmented by AI and those that remain strongly dependent on relational, political, and interpretive human capabilities. Finally, the outcomes of this conceptual comparison are synthesized in an interpretive matrix which, although not based on empirical measurement, captures the qualitative conceptual framework adopted in the study.

2. Redefining the Network Manager's Distinctive Competencies in the Age of AI

2.1 The Network Manager between Operational Complexity, Relational Leadership, and AI Support

In this article, the term network refers to inter-organizational and business networks, namely collaborative arrangements among legally autonomous organizations that coordinate their activities in pursuit of shared objectives while preserving their respective independence (Provan, Kenis, 2008; Gulati et al., 2000; Meneguzzo, Cepiku, 2010; Tresca, 2024).
Such collaborative configurations enable firms to access resources, knowledge, and innovation opportunities that would be difficult to develop independently. The structure of interorganizational ties affects firms' ability to benefit from these resources and translate them into innovative outcomes (Ahuja, 2000).
In these settings, the NM is the managerial actor responsible for supporting network coordination, facilitating interaction among members, fostering mutual trust, and sustaining shared-governance processes in the absence of traditional hierarchical authority (Tresca, 2015b; Meneguzzo, Cepiku, 2010). The Network Manager's function therefore does not consist in exercising direct hierarchical authority, but in

activating processes of coordination, mediation, and consensus-building among formally autonomous actors (Tresca, 2015b).
In operational practice, the NM is increasingly recognized as both a pivotal and an inherently complex figure in the governance of collaborative settings. This complexity derives from the broad range of functions the role may be required to perform, the plurality and cross-cutting nature of the competencies it demands, and the need to interact with highly heterogeneous stakeholders.
The complexity of the NM's role also becomes apparent when network management is contrasted with traditional firm management (Kickert et al. 1997). More specifically, whereas corporate managers operate within clearly defined hierarchical structures (Meneguzzo, Cepiku, 2010), the NM typically works in a fluid environment without rigid chains of command, where negotiation, mediation, and consensus-building form the foundations of effective network functioning. Networks operate not through imposition, but through persuasion and agreement; in this sense, the NM is above all a builder and weaver of relational and trust-based ties. Network-governance scholarship clearly shows that, in contexts characterized by high actor autonomy and the absence of formal hierarchies, coordination rests on mechanisms of trust, reciprocity, and multilateral negotiation (Provan, Kenis, 2008). From this perspective, interfirm networks can be understood as meta-organizations: systems in which participating entities retain their independence while committing to shared coordination structures. Within such structures, governance is exercised not through hierarchical authority but through processes of strategic alignment and the integration of heterogeneous interests (Gulati et al., 2012). Accordingly, the managerial figure operating within a network setting possesses distinctive characteristics that differentiate it from managers working within a single firm. In a business network, the introduction of AI tools helps transform how control and coordination are exercised. In particular, the algorithmic-management literature shows how algorithmic systems can complement - and, in some cases, replace - human management in monitoring, evaluation, and resource-allocation activities, giving rise to new forms of data-driven organizational control (Jarrahi et al., 2023a).
Nevertheless, such tools cannot replace the intrinsically human role involved in building, weaving, and continuously sustaining the network of relationships among partners on which successful collective action depends. Coordinating and governing collaborative settings requires trust, empathy, and emotional intelligence - factors that no algorithm can fully automate.
This leads to a reconfiguration of the managerial role, which must appropriately balance the algorithmic logics characteristic of AI with relational logics that require distinctly human competencies. This perspective is fully consistent with recent contributions that interpret AI-enabled management as a systemic phenomenon grounded in the interaction between human and algorithmic capabilities within organizations (Hillebrand et al., 2025).

2.2 Functions, Competencies, and Cross-Cutting Skills of the Network Manager in the Age of AI

From a managerial perspective, the activities performed by a Network Manager (NM) span multiple levels, reflecting the multidimensional nature of the role. Recent developments in digital governance first suggest that the diffusion of advanced technologies, including AI, significantly reconfigures the NM's functions by reshaping coordination mechanisms within complex organizations and fostering governance models based on the integration of human decision-making and data-driven systems (Hanisch et al., 2023). In such settings, information management, the definition of operating rules, and activity monitoring are increasingly mediated by digital infrastructures that expand coordination capacity while simultaneously requiring new interpretive and oversight competencies from management.

Closer examination reveals that AI affects the NM's various functions differently, depending on the relative weight of the human component in their execution. To identify and delineate the NM's core activities, it is first necessary to consider managerial and administrative functions, which primarily encompass the design and management of network-formalization processes, the monitoring of project activities, and the definition of shared rules and operating procedures. In these areas, AI-based tools can support the processing of large volumes of data, pattern identification, and forecasting, thereby broadening the information base available for decision-making. However, when decisions involve high levels of ambiguity, context dependence, and accountability, the algorithmic contribution tends to complement rather than replace human managerial judgment (Jarrahi, 2018; Shrestha et al., 2019; Raisch, Krakowski, 2021).

Alongside these predominantly technical responsibilities, the NM also performs a representational role, presenting the network in a range of external settings, including institutional venues, trade fairs, training environments, and public forums. Performing this function effectively requires strong communication skills, command of language, and a well-developed awareness of the network's identity—all capabilities that cannot be delegated to technology because they are intrinsically human.

The NM's most delicate responsibility emerges in the role of connector among the participants in the "shared initiative." More specifically, the NM acts as a mediator and facilitator of internal relationships among network members and between those members and external stakeholders. In this role, AI can support the collection and analysis of relational and textual data, identify recurring patterns in communication flows, and flag potentially dysfunctional expressions in conflict settings (Fan, Ilk, 2020; Hsu, Chaudhary, 2023). It can thus provide information useful for relational diagnosis, but cannot replace the manager's interpretation of the specific network context. Trust-building, negotiation, and mediation remain predominantly dependent on distinctly human competencies, including emotional intelligence, intercultural sensitivity, and the assumption of responsibility within relationships.

The NM is also responsible for assessing the network's composition and coordination requirements at different stages of its life cycle, since managerial functions, priorities, and competencies may change according to the developmental stage reached by the inter-organizational collaboration (Tresca, 2015a; Romiti, Sarti, 2013). In this regard, by monitoring the performance of individual firms and the network as a whole throughout the network life cycle, the NM is expected to propose any necessary structural adjustments. The competencies required for these activities are highly heterogeneous. They include both relational and psychological abilities - needed to build consensus and motivate network members - and anticipatory and problem-solving capabilities, which are essential for identifying and interpreting emerging problems and proposing timely solutions. AI can provide valuable support for the latter activities, for example through predictive models or scenario-analysis tools. Strategic interpretation and the selection of appropriate courses of action, however, remain largely dependent on the NM's judgment and accountability.
Additional competencies required of the network coordinator and manager include organizational capabilities, particularly those related to planning, time management, and performance monitoring. Although intelligent technologies can undoubtedly facilitate these functions, they cannot, once again, dispense with human intervention. In particular, the ability to adapt project-management methods to the specific features of complex network settings remains a distinctive managerial competency.
Overall, the examination of the NM's main functions suggests that AI can be regarded as a valuable support tool for predominantly technical and operational functions, while remaining inadequate for activities grounded in human relationships - especially trust, negotiation, and mediation.

3. Reconfiguring the Network Manager in the Age of AI: An Interpretive Perspective Based on Related Managerial Roles

3.1 Analytical Framework

To better understand the specificity of the NM and define its competency and skill profile more systematically, previous studies have found it useful to compare the role with several related professional figures: Temporary Manager, Facility Manager, Diversity Manager, Business Cultural Mediator, and Meta-Manager. These figures share, to varying degrees, characteristics or functions associated with a manager engaged in the governance of network settings.
The comparison with these managerial roles is not intended to assimilate the NM to them or to treat the role as interchangeable or overlapping with the professional categories considered. Rather, these roles are used as "analytical lenses" for identifying specific functional dimensions of the NM. In particular, the Temporary Manager highlights the time-bound and transitional dimension of network governance; the Facility Manager, understood here as a network facilitator,

emphasizes trust-building and collaborative relationships; the Diversity Manager enables closer examination of the governance of heterogeneity among network members; the Business Cultural Mediator captures the intercultural and communicative dimension of mediation; and the Meta-Manager sheds light on the strategic and politico-institutional dimension of network governance.
The findings of previous studies (Tresca, 2024) are summarized in the following table (Table I).

Table I – The Network Manager through Different Managerial Roles

Role	Variable	Description
Temporary Manager	Temporariness of intervention	Time-bound governance of the network: limited to the implementation of the undertaken project; limited to addressing the issues specific to the life-cycle phase the network is undergoing.
Facility Manager	Trust	Promotion and strengthening of relationships by investing in the development of trust among the parties.
Diversity Manager	Diversity	Management of existing differences among network members (including differences in adopted managerial styles).
Business Cultural Mediator	Interculturality	Fostering collaboration among actors belonging to different cultures through linguistic, cultural, and business knowledge.
Meta-manager	Mediation	Providing the system with an overarching strategic orientation; governing internal political processes within the network; creating the conditions that enable the network's potential to fully emerge.

Source: author's elaboration based on Tresca, 2024.

The progressive integration of AI into managerial processes calls for a review and extension of previous studies, with the aim of defining the Network Manager's role more precisely by relating it, as far as possible, to the managerial figures outlined above.

3.2 AI and the Network Manager through the Lens of Related Managerial Roles: A Detailed Analysis

As a first approximation, an analysis that profiles the Network Manager (NM) by comparing the role with the Temporary Manager, Facility Manager, Diversity Manager, Business Cultural Mediator, and Meta-Manager suggests that Artificial Intelligence (AI) tends to strengthen the technical and informational dimensions of network governance, while leaving substantially unchanged - or even rendering more visible - the relational, trust-based, and politico-institutional components that characterize the management of network settings.
A more detailed analysis, however, reveals that the impact of AI varies across the Network Manager's specific functional configurations, as interpreted through the five managerial roles.
With regard to the Temporary Manager (Quarta, 2010; D'Egidio et al., 1997; Polese, 2004) - a highly qualified managerial figure operating under a time-bound mandate to achieve predefined objectives, typically during critical or transitional phases - advanced analytics, predictive models, and performance-monitoring systems can support restructuring and transition interventions by improving information processing, the assessment of alternatives, and the anticipation of possible scenarios (Shrestha et al., 2019; Shrestha et al., 2021). When the analysis is confined to single-firm contexts characterized by hierarchical structures and a clear allocation of decision-making authority, algorithmic systems can significantly enhance managerial effectiveness. If the Temporary Manager operates within a network setting, thereby assuming the role of Network Temporary Manager, governance complexity shifts from intra-organizational optimization to inter-organizational coordination. The high level of inter-organizational complexity - generated by actor heterogeneity, distributed decision-making power, and multiple objectives - makes these activities increasingly reliant on advanced data analytics, scenario simulations, and decision-support systems. The technical-analytical component is consequently strengthened and becomes central to the effective management of interdependencies and the strategic direction of the network. Relational and negotiating dimensions remain relevant because autonomous actors must still be coordinated and divergent interests managed. Overall, however, the NM acting as a Network Temporary Manager is characterized by a predominance of technical-analytical functions that are significantly augmented by AI.
A similar interpretive picture emerges when the NM is compared with what this study terms the Facility Manager, an expression used as an "analytical label" for the role of network facilitator - consistent with McEvily and Zaheer's (2004) description of "architects of trust." The role's primary task is to promote and strengthen inter-organizational relationships, facilitate negotiations, and create opportunities that foster mutual trust. Facilitating interaction and building a trust-based social context are key determinants of network success, as they reduce opportunistic behavior and encourage cooperation. As negotiation theory suggests, relational success depends on

coordination and cooperation among actors (Adair, Brett, 2005). In this context, AI can support collaborative dynamics by monitoring communication flows, detecting recurring interaction patterns, and automatically examining the linguistic characteristics of messages. Text-analytics and sentiment-analysis tools, in particular, can flag changes in communication tone or expressions potentially associated with relational tension, providing the manager with useful information for timely intervention (Fan, Ilk, 2020; Hsu, Chaudhary, 2023). However, these are merely indications that cannot provide a direct measure of trust or an automatic diagnosis of conflict between partners. Trust remains a socially constructed phenomenon, rooted in human dimensions such as credibility, reciprocity, responsibility, and perceived consistency within the network. Although AI can process indicators associated with interactions among actors, it cannot independently assume moral responsibility or become the bearer of the trust commitments that characterize inter-organizational relationships. The NM's role as guarantor of collaborative reliability therefore remains intrinsically human and institutionally grounded.

Further insights concern how AI reconfigures the NM's competencies when the role is compared with the Diversity Manager. This managerial figure is responsible for the active and strategic management of organizational differences - including differences in managerial styles - with the aim of generating system-wide competitive advantage. Diversity management rests on the assumption that business decisions should be made in a climate of trust, acceptance, and appreciation (Cox Jr, Blake, 1991; Mandrell, Kohler-Gray, 1990).

From this perspective, diversity is not solely a matter of equity or representation; it can also have direct economic and managerial relevance by strengthening an organization's capacity to understand heterogeneous contexts, develop innovative solutions, and enhance its competitiveness (Esty, 1988; Cox Jr., Blake, 1991).

Diversity management is a governance model that treats differences as genuine resources capable of increasing the value of organizations that successfully internalize them. The principle underlying this managerial practice may be summarized as follows: "We are on the same team with our differences, not despite them" (Thomas, Ely, 1996).

From an operational standpoint, diversity management is an active, strategically oriented process aimed at recognizing, valuing, and integrating differences - and similarities - within the organization. Its implementation follows a sequential logic: diversity must first be recognized, after which awareness of its value within the organization must be developed. These initial stages - awareness and appreciation of diversity - are necessary but not sufficient for value creation. Fully leveraging diversity requires governance, namely the integration of diversity practices into managerial and learning processes. This entails selecting and combining an appropriate mix of differences and defining actions that are consistent with strategic objectives (Thomas Jr, 2006).

AI does not alter the fundamental nature of diversity management, but it transforms its operating methods and the competencies it requires. During the diversity-

recognition phase, AI substantially enhances diagnostic capabilities through organizational data analysis, competency mapping, network analysis, and natural language processing, allowing the identification of relational patterns, information asymmetries, and marginalization dynamics that might otherwise remain hidden. This introduces an evidence-based dimension that requires data literacy and critical interpretive capabilities to avoid technological bias (Shrestha et al., 2021; Raghavan et al., 2020).

During the phase in which awareness of the value of diversity is developed, AI can support training and communication through adaptive-learning systems, interactive simulations, and organizational-climate monitoring tools, enabling tailored interventions and the faster identification of conflict signals. Nevertheless, inclusive leadership remains intrinsically human and requires the NM to foster trust, legitimation, and collective identification.

The most significant transformation of differences into value occurs in the subsequent phase of strategic diversity governance. At this stage, AI can facilitate decision-making through predictive and comparative analyses, expanding the available information and enabling alternative configurations to be examined (Shrestha et al., 2019; Shrestha et al., 2021). Algorithmic optimization, however, cannot serve as the sole decision criterion: equity, pluralism, and representativeness require explicit managerial and ethical evaluation of the data, objectives, and effects generated by the systems employed (Raghavan et al., 2020).

Overall, AI does not change the underlying rationale of diversity management, but it does redefine its operational architecture. The NM must integrate human and algorithmic capital by developing new meta-competencies, including data literacy, algorithmic understanding, bias mitigation, and ethical awareness.

The comparison with the Business Cultural Mediator rests on the fact that the NM has traditionally been a "multicultural" actor who combines linguistic-cultural and managerial competencies to build trust, reduce resistance, and foster collaboration among actors operating in different territorial contexts (Katan, 2004; Kawar, 2012). From this perspective, AI can augment certain linguistic and informational activities through machine translation, natural language processing, and semantic analysis. While these applications can facilitate information exchange among actors from different linguistic contexts, they cannot fully capture broader meaning, contextual implications, or cultural nuances (Läubli et al., 2018). Trust-building and the interpretation of implicit cultural codes therefore continue to require the sensitivity and responsibility of the human manager.

Finally, when considered in relation to the Meta-Manager, the NM can be interpreted through meta-organization theory, in which coordination occurs among formally independent actors (Gulati et al., 2012; Butera, Alberti, 2012; Provan, Kenis, 2008; Snow et al, 1992). In this setting, AI can support digital governance through predictive scenario analysis, the processing of relational data, and the strengthening of organizational knowledge-creation, sharing, and use processes (Shrestha et al., 2021; Jarrahi et al., 2023b). Although these tools can provide information useful for

interpreting network dynamics, they do not independently determine the distribution of power, adjudicate actor legitimacy, or establish the network's collective strategic direction. The use of AI therefore requires the Meta-Manager to orchestrate the interaction between human actors and intelligent systems appropriately, ensuring that digital innovation strengthens the network's strategic and identity-related dimensions (Table II).

Table n. II -The Network Manager and the impact of AI

Network Manager Role	Core Functions in Network Contexts	AI-Augmentable Areas	AI-Resilient Areas
Network Manager as Temporary Manager	Management of restructuring, transition, or relaunch phases of the network	Predictive performance analytics; KPI monitoring; strategic simulations; data-driven decision support	Multi-party negotiation; resistance management; trust and legitimacy building
Network Manager as Facility Manager	Facilitation of inter-firm relationships and development of collaborative trust	Communication flow analysis; relationship mapping; sentiment analysis; meeting organization support	Trust-building; conflict mediation; promotion of cooperation and reciprocity
Network Manager as Diversity Manager	Governance of organizational and cultural differences to generate systemic value	Organizational data analysis; competence mapping; network analysis; team configuration simulations	Inclusive leadership; cultural awareness; ethical evaluation and bias management
Network Manager as Business Cultural Mediator	Mediation among firms from different cultural and territorial contexts	Automated translation; semantic analysis; monitoring of economic and regulatory environments; market data analytics	Interpretation of implicit cultural codes; trust-building; negotiation balance
Network Manager as Meta-manager	Strategic direction of the network and management of internal politico-institutional processes	Predictive scenario analysis; power dynamics network analysis; knowledge management platforms	Systemic leadership; shared vision building; consensus management and institutional legitimacy

Source: author's elaboration based on Jarrahi (2018), Shrestha et al. (2019, 2021), Fan and Ilk (2020), Raghavan et al. (2020), Raisch and Krakowski (2021), Jarrahi et al. (2023a, 2023b), and Hillebrand et al. (2025).

4. An Interpretive Matrix Positioning the Network Manager Relative to Related Managerial Roles in the Age of AI

To systematize the insights emerging from the theoretical discussion and synthesize the different ways in which artificial intelligence (AI) technologies may affect the competencies of the Network Manager (NM), the outcomes of the conceptual analysis developed in the previous section can be represented through an interpretive matrix. The matrix serves as a conceptual framework for positioning the NM within the different functional configurations that the role may assume in the governance of network settings: Temporary Manager, Facility Manager, Diversity Manager, Business Cultural Mediator, and Meta-Manager.

The adoption of this interpretive framework is consistent with recent contributions proposing integrative models for understanding the role of AI in organizational management (Hillebrand, et al., 2025).

More specifically, the matrix is intended to highlight the different manifestations of the NM role across the functional configurations considered, showing that they involve different levels of interaction with intelligent technologies and require different competency sets.

The matrix is structured along two main analytical dimensions. The first, represented on the horizontal axis, concerns the predominant nature of managerial functions and extends along a continuum from technical-operational and analytical activities to relational and politico-institutional activities, with an intermediate hybrid configuration of technical-relational activities. The former include, in particular, performance monitoring, data analysis, planning, and decision-support functions; the latter concern trust-building among network actors, mediation among autonomous organizations, conflict management, and the governance of the politico-institutional processes characteristic of network systems.

The second dimension, represented on the vertical axis, concerns the degree of augmentation provided by AI in the performance of managerial functions. It ranges from high levels - where intelligent technologies can provide substantial support through data-analytics tools, predictive models, and advanced information-monitoring systems - to lower levels, where AI mainly plays an informational-support role without materially affecting relational and decision-making dynamics.

The intersection of these two dimensions results in a qualitative positioning matrix illustrating how NM, across its different functional configurations, presents varying levels of potential technological enhancement.

Figure I – Matrix Positioning the Network Manager Relative to Related Managerial Roles in the Age of AI



Source: author's elaboration on a qualitative basis.

As shown in the matrix, the quadrant characterized by high technological augmentation and a predominance of technical-analytical functions corresponds to the NM in the functional configuration of Temporary Manager. In this managerial capacity, activities relating to organizational diagnosis, performance monitoring, and the formulation of data-driven strategies play a central role. These are precisely the functions that can be strongly supported by AI, particularly through predictive-analytics tools, scenario simulation, and advanced information-management systems. Such tools substantially enhance the manager's ability to interpret the available data and, consequently, to support decision-making.

An intermediate position is occupied by the NM in the Diversity Manager configuration, which is inherently hybrid. Strategic diversity management requires, on the one hand, analytical tools capable of mapping competencies, relationships, and organizational dynamics and, on the other, relational and cultural competencies aimed at valuing differences and fostering an inclusive climate. In this area, AI can enhance the manager's diagnostic capabilities, but it cannot replace the relational and leadership competencies required to govern diversity.

The NM as Facility Manager, Business Cultural Mediator, and Meta-Manager is located in the quadrant characterized by low technological augmentation and a predominance of relational functions. As discussed above, managerial activities in these configurations primarily involve building trust among network actors, mediating divergent interests, managing cultural differences, and defining shared

strategic visions. Although AI can provide useful tools for accurately analyzing communication flows, effectively mapping relationships, or promptly monitoring economic and institutional environments, it cannot replace the fundamentally human dimensions of network governance. These include personal credibility, institutional legitimacy, and the capacity for multilateral negotiation, all of which are critical determinants for these managerial profiles.
In essence, the matrix provides a visual representation of the theoretical arguments derived from the literature review and illustrates how the introduction of AI affects the NM differently depending on the specific comparable managerial profile against which it is assessed. Intelligent technologies primarily provide substantial support for the technical, analytical, and informational dimensions of network management by enhancing data-processing and scenario-forecasting capabilities. By contrast, functions involving the management of relationships among autonomous organizations, trust-building, and the governance of politico-institutional processes remain firmly anchored in the human dimension of leadership.

5. Conclusions, Limitations, and Future Research Directions

The growing diffusion of AI technologies is transforming how organizations coordinate their activities and manage inter-organizational relationships. This article has examined the implications of this development for the role of the Network Manager (NM), focusing in particular on how the adoption of algorithmic tools affects the competencies required to coordinate and govern business networks. The analysis shows that AI offers significant opportunities to support the management of network systems by enhancing information-processing, performance-monitoring, and scenario-anticipation capabilities. Data-analytics tools, predictive models, and collaborative platforms, in particular, improve the quality of available information and strengthen coordination among the actors involved in inter-organizational cooperation.
The study also shows, however, that AI's impact is not uniform across all dimensions of managerial activity. Although intelligent technologies facilitate information management and decision-making, they face clear limitations in the social and relational components of network governance. In collaborative settings characterized by decision-making autonomy and high interdependence among organizations, network functioning depends heavily on factors such as trust, reputation, and mutual legitimation. It follows that algorithmic logic alone cannot independently ensure effective network governance.
This perspective suggests that the relationship between AI and network governance should be viewed as complementary rather than substitutive, in line with the emerging conception of "management with AI" as a systemic and augmentative phenomenon rather than a replacement process (Hillebrand, et al., 2025). In essence, while AI strengthens the NM's informational and analytical capabilities, the

management of relationships among autonomous organizations remains firmly rooted in human competencies. AI therefore does not eliminate the need for human oversight in activities characterized by high relational and decision-making complexity (Kellogg et al., 2020; Jarrahi et al., 2023).

Consequently, the NM plays a central mediating role between two distinct logics: that of intelligent systems, oriented toward processing large volumes of data, and that of relational management, grounded in negotiation, consensus-building, and the management of conflicting interests.

Interpreting the NM profile through different functional configurations - from Temporary Manager and Diversity Manager to Facility Manager, Business Cultural Mediator, and Meta-Manager - shows that the integration of technological and relational competencies varies according to the nature of the activities performed. Managerial roles centered on information management and operational coordination are more readily supported by intelligent technologies, whereas roles related to trust-building, the management of differences, and the definition of shared strategic visions continue to require strong human oversight.

On the basis of these considerations, the article proposes an interpretive framework, represented by a matrix, that links managerial functions to the degree of support offered by AI. The framework provides a visual mapping of the NM's position within the different potential functional configurations considered, distinguishing areas in which AI can significantly augment managerial capabilities from those in which the technological contribution necessarily remains subordinate to the relational dimension of leadership. In practice, the matrix graphically synthesizes the proposed theoretical interpretation, distinguishing activities that are more amenable to algorithmic augmentation from those that remain predominantly dependent on human competencies.

As a theoretical-conceptual contribution, this study has several objective limitations that can be grouped into three main areas. First, the proposed framework is not based on primary empirical data, but on a conceptual synthesis of the existing literature. The positioning of the different NM configurations within the matrix should therefore be understood as interpretive and exploratory. Second, the analysis focuses on a selected set of managerial roles - Temporary Manager, Diversity Manager, Facility Manager, Business Cultural Mediator, and Meta-Manager - considered particularly relevant to profiling the NM and delimiting its functions and competencies. This does not preclude the consideration of other professional figures capable of offering additional interpretive insights. Third, given the rapid evolution of AI technologies, the boundaries between managerial activities that can be augmented by AI and those that are more resilient to automation may progressively shift.

Future research could address these limitations through empirical studies based on case analyses, interviews with Network Managers, or comparisons across different types of inter-organizational networks. Further studies could also examine how the adoption of AI tools varies according to network size, industry, governance structure, or the level of digital maturity achieved. Finally, prospective research could explore

the ethical and organizational implications of AI-supported network governance, with particular attention to trust and human oversight.

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