

Inter-Organizational Networks: A Review of the Literature to Inform Practice

By Janice K. Popp, H. Brinton Milward, Gail MacKean, Ann Casebeer, Ronald Lindstrom

The use of inter-organizational networks as a strategy for public sector management, and the study of these networks by a diversity of scholars, has grown rapidly in the past 15 to 20 years. Network practice has often had to move ahead without the benefit of a well understood or easily available evidence base, and, while doing so, advance practical knowledge in the field. This review of the literature, undertaken in a partnership between academics and practitioners, on the conceptualization, implementation, and evaluation of inter-organizational networks, is primarily meant to be a resource document for network practitioners—leaders, managers, participants and facilitators. The goal of the review was to bring forward and discuss evidence that would be of practical value to people managing or working in inter-organizational networks. Both academic research and literature from the practice field were included in the review.

The key findings from this literature review fall under five thematic headings:

- Key concepts and characteristics
- Network types and functions
- Network governance, leadership and management, and structure
- Network evolution
- Evaluating networks

Key Concepts and Characteristics

- There are many definitions of inter-organizational networks in the literature; at the foundation of virtually all lies the concept of networks consisting of the structure of relationships between actors (individuals and organizations), the nature of the links between actors, and the meaning of those relationships. Trust is described as the lubricant that makes cooperation possible between these actors, and higher levels of trust are believed to lead to increasing network effectiveness.
- Some argue that inter-organizational networks exist because of a moral imperative. That is, the important issues facing society (e.g., poverty, crime, health promo-

tion, economic development, the environment, natural disasters, education, health care reform) *must be addressed*, yet clearly cannot be tackled by single organizations working on their own.

Benefits and Limitations of Networks

- Many of the benefits described in the literature (e.g., shared risk, advocacy, positive deviance, innovation, flexibility and responsiveness) suggest that the creation of inter-organizational networks can be a strategy for developing a structure that is more nimble and able to create change, and/or be more responsive to change, than bureaucratic organizations.
- There are known challenges to working in inter-organizational networks (e.g., achieving consensus on the network purpose and goals, culture clashes, loss of autonomy, coordination fatigue, the time and effort it takes to develop trusting relationships, power imbalances) that practitioners need to seriously consider and work diligently to mitigate. Networks should only be used if the task is unsuitable for a hierarchical organization.
- Two important questions for consideration by practitioners and researchers alike are:
 - Do the added benefits of networks outweigh their challenges or limitations, and in what circumstances?
 - When is an inter-organizational network the right organizational form for a particular task?

Emergent vs. Formal Networks

- There are pros and cons to emergent and formal (mandated) networks. An obvious pro of a mandated network is that it can provide a powerful incentive for organizations to work together. An emergent network, on the other hand, may start with higher levels of trust due to its voluntary nature. Allowing sufficient time for trust and genuine commitment to be built is critical to the longer-term effectiveness of all networks.

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Network Types and Functions

- Under the umbrella of collaborative inter-organizational networks, there are a variety of network types and functions described in the literature.
- The types and functions of networks described commonly in the literature are briefly outlined, with three functions described in more depth given their centrality to many networks:
 - Information diffusion and knowledge exchange
 - Network learning
 - Innovation
- Although a network may be viewed as a particular type of network, based on its primary function, it will generally have multiple functions. For example, a service delivery network, with the main function being the delivery of coordinated services to a particular client group, will likely have a number of other important functions such as information diffusion, knowledge exchange, learning and capacity building.

Network Governance, Leadership, Management, and Structure

- Three key interlocking themes related to effective network development and growth are:
 - Network governance
 - Management and leadership of and in networks
 - Network structures

The exploration of these themes begins to answer the question, “Is there a way of working that is unique to networks?”

- A typology of *network governance* proposed by Provan and Kenis (2008) is widely referred to in the public administration literature on networks and identifies three distinct types of governance structures within networks:
 - Shared governance
 - Lead organization
 - Network administration organization

An important task for network managers is to determine which governance structure is the best fit for an individual network at a particular time and why as to ensure that the network structure evolves to meet the changing needs of the network as it grows and develops.

- *Leadership* in a network is not viewed as the purview of a single leader in a formal leadership position, but is seen as something more organic in nature that is supported and grown across the network. This way of conceptualizing leadership aligns with both a relational view of leadership that focuses on process, context and relationship building; and with the literature on complexity leadership, in which leadership processes can be shared, distributed, collective, relational, dynamic, emergent and adaptive. The role of a network manager as leader is to nurture this kind of leadership. Some terms used to describe network leadership include host, servant leader, helper, network weaver and network orchestrator. However, some types of networks, such as mandated networks, may need to approximate more traditional forms of leadership.
- Network managers must have a good understanding of the purpose and functions of a network to manage it effectively. Some essential *network management*, and potentially leadership, tasks and behaviours identified in the literature are described in this review, and include management of design, commitment, conflict, accountability, and legitimacy. There are a number of tensions and paradoxes inherent in networks that need to be managed, one of which is the balancing of the needs of the organization with the needs of the network.
- An understanding of network structure can help in the design of effective networks. *Network structure* consists of the nodes that compose the network; the ties that connect the nodes; and the patterns, structures and nature of the relationships that result from these connections. Each node represents an actor in a network, and in an inter-organizational network these actors are organizations. Social network analysis is often used to study the structure of inter-organizational networks, or the connections between these nodes. The structure and nature of the ties are important and both strong ties and weak ties are of value in a network, serving different purposes.

Network Evolution

- Despite the recognition of the cyclical nature of networks by many people working in this field, there is very little published research on how networks evolve over time. Four stages of evolution are identified and briefly discussed.

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Table 1: Potential Benefits of Inter-organizational Networks

Potential benefit	Description
Access to and leveraging of resources	<ul style="list-style-type: none"> • Stretch, build on or strengthen limited resources • Access to resources not held within a particular organization <p>(Bryson et al., 2006; Gulati, Lavie, & Madhavan, 2011; Huxham & Vangen, 2005; Milward & Provan, 2006; Provan & Lemaire, 2012; Scott & Hofmeyer, 2007; Weber & Khademian, 2008)</p>
Shared risk	<ul style="list-style-type: none"> • The ability to distribute or share risks fosters creativity and innovation by reducing risk to any one organization <p>(Casebeer, Popp, & Scott, 2009; Hoberecht et al., 2011; Huxham & Vangen, 2005; Kapucu & Demiroz, 2011; Weber & Khademian, 2008)</p>
Efficiency	<ul style="list-style-type: none"> • More efficient use of resources • Ability to achieve economies of scale (e.g., purchasing, being more competitive in grant competitions) <p>(Huxham & Vangen, 2005; Provan & Kenis, 2008; Provan & Lemaire, 2012)</p>
Service quality, coordination, seamlessness	<ul style="list-style-type: none"> • Ability to provide coordinated, higher quality services and a full continuum of care <p>(Hoberecht et al., 2011; Huxham & Vangen, 2005; Kenis & Provan, 2009; Popp, Douglas-England, Casebeer, & Tough, 2005a; Provan & Lemaire, 2012)</p>
Advocacy	<ul style="list-style-type: none"> • Able to exert more pressure due to greater political clout and community reach resulting from greater numbers and diversity of network members <p>(Provan & Lemaire, 2012)</p>
Learning, capacity building	<ul style="list-style-type: none"> • Knowledge exchange can enable learning and capacity building at a network level and in the broader community <p>(Brass, Galaskiewicz, Greve, & Tsai, 2004; Bryson et al., 2006; Huxham & Vangen, 2005; Isett et al., 2011; Keast et al., 2004; Kenis & Provan, 2009; Klijn, Edelenbos, & Steijn, 2010; Knight, 2002; Knight & Pye, 2005; Provan & Lemaire, 2012; Weber & Khademian, 2008)</p>
Positive deviance	<ul style="list-style-type: none"> • Networks can be a forum to think and act beyond the organizational norm, structure or mandate; to work deliberately in deviation from the standard organizational processes, overtly or covertly, to influence change in systems <p>(Casebeer et al., 2009; Bradley, Curry, Ramanadhan, Rowe, Nembhard, & Krumholz, 2009; Singhal, 2010; Goldsmith, 2014)</p>
Innovation	<ul style="list-style-type: none"> • Networks are enabling structures that create opportunities for innovation, which is closely connected to learning <p>(Brass et al., 2004; Hoberecht et al., 2011; Klijn et al., 2010; Provan & Lemaire, 2012; Turrini, Christofoli, Frosini & Nasi, 2010)</p>
Shared accountability	<ul style="list-style-type: none"> • Opportunity to work collaboratively to address, and share responsibility for, a quadruple bottom line (e.g., financial, social, environmental and cultural) • Developing a sense of accountability to one's network colleagues <p>(Hoberecht et al., 2011; Romzek, LeRoux, & Blackmar, 2012; Romzek, LeRoux, Johnston & Kempf, 2014)</p>
Flexibility and responsiveness	<ul style="list-style-type: none"> • Capacity to be more flexible and responsive in order to deal with unforeseen problems (e.g., disasters) <p>(Isett et al., 2011; Provan & Lemaire, 2012)</p>

- Stage One: Formation. There are multiple early decisions, activities, and processes required when establishing a network. Consideration must be given to precursors and context, balancing development of network structures and processes, and setting the tone for ongoing collaboration and consensus building, sustainability and resilience.
- Stage Two: Development and growth. The development and growth of a network requires conscious facilitation, paying attention to what is going on with respect to network structure, carrying out essential management tasks, and encouraging distributed leadership. Four themes of relevance if the network is to continue to develop and grow are discussed in more detail: trust, power, positive deviance, and outcome attribution and accountability.
- Stage Three: Maturity, sustainability and resilience. As a network matures, engaging in and supporting the following activities would seem to be important for network leaders:
 - Scanning the context within which the network exists
 - Revisiting the network’s vision in order to respond to changes in the context
 - Ongoing development of internal and external legitimacy
 - Monitoring and evaluating the network’s processes and outcomes
- Stage Four: Death and transformation. Given the dearth of research on the natural life cycle of inter-organizational networks, we have very little understanding of their death and/or transformation. Future evaluation and research is needed to contribute to our knowledge about how to distinguish between a natural and an untimely death of a network, including how to prepare for the former and prevent the latter.

Evaluating Networks

- An understanding of what the research to date says about factors contributing to network effectiveness is critical to the evaluation of networks. In general terms, network effectiveness can be defined as the achievement of positive network-level outcomes that cannot be attained by individual organizational participants acting alone. Examining both a network’s processes and outcomes is important, as is multi-level analysis.
- Building on what has been learned through practice and research about network effectiveness, we propose an evolving model of action that might be helpful to guide

the evaluation of network processes and outcomes, with a goal of maximizing our learning about what works, what does not, in what contexts, and why.

- Social network analysis as a method of evaluating networks remains highly useful, particularly as a way to understand the structure and quality of relationships of various types. It can function as a map that managers can use to more effectively manage the network by pointing out gaps and areas in need of strengthening or adjustment. However, there is still much to learn about how to adequately capture the value of inter-organizational networks beyond their structure, particularly in ways that support the value of the network without diminishing the roles and contributions of the member organizations.

Gaps in Knowledge and Future Research and Evaluation

- Given the value of stimulating and supporting networks as vehicles for achieving societal goals, it is important that we continue to generate knowledge about if and when inter-organizational networks are needed, the circumstances under which they are best formed; what type of network might be most suitable depending on the purpose and context; and how best to support the evolution of a network throughout its life cycle. Longitudinal, comparative, and practice-based research and evaluation are needed. ■

TO LEARN MORE

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