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# Network Strategy for Entrepreneurs

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## Abstract

Networks are an emerging area within the literature related to how entrepreneurs transfer knowledge, seek partnerships, and ultimately interact with others. Some terms with which this area has been defined are Business Networks, Knowledge Networks & Collaboration Networks. It is a cross-cutting phenomenon in various areas of knowledge, such as open innovation and entrepreneurship. However, the relevance of the use of networks for entrepreneurs and the development of global start-ups leads us to the need to propose a conceptual framework for the planning and administration of these business networks. It is an analytical investigation with a case study methodology. They are cases of the cities of Sao Paulo (Brazil) and Santiago (Chile) mainly of consulting and software services. From the models usually used in entrepreneurship, those with integrated tools and methodologies for the development of business networks by founders or administrators of start-ups.

**Keywords:** networks, strategy, entrepreneurship

## 1. Introduction

The network is an emerging area in the literature related to how organizations transfer knowledge, seek partnerships and, finally, interact with other organizations.

In business, some terms with which this area was defined are Business Networks, Innovation Networks, Knowledge Networks, and Collaboration Networks. It is a phenomenon that cuts across several areas of knowledge such as open innovation; entrepreneurship; social and public innovation; research network; collaborative economies; internationalization; strategy.

Ability to manage knowledge of these networks, referring to how to classify them, identify partners, what resources can be obtained, the type of alliances they should generate, among others. This implies a contingency analysis and the availability of resources available to companies.

Huggins and Johnston [1] related the theory of firm resources [2, 3] and the theory of networks (intra-firm) suggesting that firms should also create and manage external networks, to create knowledge and have capabilities needed to exploit this knowledge.

Valkokari and Helander [4] also analyzed networks at a strategic level, since it is considered that they can be managed and are a component of macro-networks at an industrial, regional, and global level. Furthermore, for these authors, a network

delivers common meanings and interpretations, continuity, and a stable context to network members to coordinate their actions.

The previous approach is similar to that of “ba”, which is a virtual or physical place where knowledge transfer takes place [5, 6], which can be extended outside the company in an inter-organizational manner.

As for the level of development of strategic networks, they range from the traditional ones aimed at the efficiency of production or operation to those aimed at innovation, aimed at delivering (search) added value in the future [7]. These same authors indicate that, at the most developed level, focused on innovation, the ability to manage networks, create a vision, orchestrate and innovate is necessary. The question that can be asked is: what are these strategic network management activities?

So, if network management is important for the development of companies. We will discuss how to integrate business network planning and management models into organizations’ formal strategic planning.

## **2. Epistemological vision for a new strategy from knowledge**

Since 1990 the theory based on the resources and capabilities of the firm (resource-based theory) has received more attention than that based on competitive advantages [8]. The theory of resources and capabilities (resource-based view) is close to the idea of “core competencies” of Prahalad and Hamel [9], which needs to have similar attributes if they want to provide a competitive advantage, they need to provide access to a wide variety of markets, contributing significantly to the benefit of the customer and their products, and are difficult for competitors to imitate.

The resource-based view theory of the firm is a neo-evolutionary economic branch of Nelson and Winter [10], and the main idea is that the firm has resources that allow it a sustainable advantage over other firms. The problem with this perspective is that it is static, but Teece and Pisano [11] proposed that dynamic capabilities add two new characteristics, the renewal of competencies and that strategic management has a main role to improve and determine the organizational competencies.

In this context Venzin [12] proposed a distinction between 3 epistemologies that could guide practice and research, these are (1) Cognitivism [13]. Organizations such as open systems, generate knowledge by interpreting the world. (2) Connectionism [14]. Similar to cognitivism but the representation process is different. (3) The autopoiesis [15]. Provides a different understanding of information to a system.

The vision of autopoiesis [15], is an open system to data but closed to information and knowledge, both of which must be interpreted within the system. At an autopoietic system, the world is built with the system self-referenced, and the world is not seen as fixed and objective, so it is impossible to represent reality.

Furthermore, a group of individuals is seen as an organization, who creates a new and common frame of reference, common rules, and standards. Autopoiesis was defined too as a living system and auto-reproduction that keeps the organization constant [16]. Thus, an autopoietic epistemology of the organization considers that people are second-level entities and that knowledge comes through the life process. In addition, knowledge is in the individual who knows and cannot be “managed”.

In the vision of Maturana and Varela [17] autopoietic knowledge implies that knowledge is a process related to life, thus knowledge allows effective action in the environment. This definition considers knowledge as a personal asset and

that it exists only in the tacit form and explicit knowledge is only a representation of the above.

This epistemology is close to the works of Nonaka and Takeuchi [18] according to Sveiby [19]. This same author, based on Polanyi [20] and Wittgenstein [21] defines knowledge as the capacity to act (capacity-to-act), with the emphasis of this definition on the action element. An ability to act is only visible in action and each individual has to re-create this ability through experience, a vision that is close to constructivism [22].

Thus, we consider a socio-constructivist conception of knowledge, resident in practice groups or work teams [23]. Knowledge is dynamic, personal, and different from data and information, and this dynamic property of knowledge is the most important for executives [19].

On the other hand, inspired by evolutionary theory, knowledge, and capabilities are central elements in the so-called knowledge or competence-based theory. Regularly assuming constructivist conceptualizations, knowing has been seen as a process and evolving, inherently provisional and socially and technically referenced [23].

The knowledge-based approach considers knowledge as a key strategic resource in organizations, with creation, transfer, and transformation is a competitive advantage [24]. Thus, the differences in results between companies would be justified by their different stocks of knowledge and by their different capacities for the exploitation and development of new knowledge [18, 25, 26].

Knowledge management began to form as an area of knowledge when the authors Machlup [27], Bell [28], and Porat [29] around 1970 integrated a series of concepts of economics and administration, in addition to basic concepts of Knowledge and Knowledge Workers (knowledge workers). After this, Abernathy [30] differentiated the concepts of scientific knowledge from administrative knowledge, however, the orientation in those years was still dominated by research and development (R&D) and documentary knowledge.

Abandoning the idea of articulated knowledge, Nelson [10] developed the role of tacit knowledge in management, based on the work of Polanyi [31]. Tacit knowledge is the main basis of human abilities, especially when these are complex and not obvious to the observer. Tacit knowledge is certainly not causal and does not have a scientific knowledge base. Nelson took Polanyi's ideas to the level of complex organizations, determining that an "organizational routine" is a group of personal skills that are coordinated and integrated with coherent social action in the context of the organization. We emphasize for our purposes that of coherent social action.

According to Adcroft and Willis [32] there are few reflective works in strategy, because most of the works come from positivism, under this view the world is being socially constructed, where the researcher is part of the phenomenon.

For Quinton and Smallbone [33], positivist research is based on empirical social science methods with an emphasis on "validity, reliability, and generalizability", but phenomenological research seeks the truth and authenticity of each individual study with a qualitative orientation.

On the other hand, Jackson [34] indicates that socio-constructivism treats the organization as a single entity. That is capable of learning, despite the fact that the behavior is different from that of an individual. The socio-constructivist vision assumes that knowledge management transforms individual knowledge into organizational knowledge through organizational learning. Organizational learning is achieved through 3 steps that are externalization, internalization, and objectification [18].

Jakubik [35] identified that the knowledge management theory was ignoring the ontological, epistemological, and political characteristics of knowledge. Styhre [36]

indicates that it is important to establish a new vocabulary and a new epistemology in knowledge management. Schultze and Stabell [37] identified four main “discourses” on knowledge management. These discourses were around dimensions of social order (consensus or not) and epistemological. Thus, four discourses on knowledge management research are presented: 1. critical speeches; 2. neo-functionalist discourse; 3. constructivist discourses; 4. dialogical discourse.

These same authors adopt the constructivist discourse in the epistemology of practice (how it is transferred) rather than an epistemology of possession (who knows?). In addition, the constructivist discourse assumes duality before dichotomy, which means that they are not finite stocks of knowledge, but rather knowledge continually emerging. This leads us to the fact that knowledge is not a separate object from human actions because it is continuously associated with the social practices of individuals and communities.

This led Schultze and Stabell [37] to suggest 4 metaphors of knowledge according to discourses: 1. knowledge as power; 2. knowledge as an asset; 3. knowledge as thought; 4. knowledge as a discipline.

The epistemology that comes is a synthesis of the processes of learning and knowing of the person that leads to new experiences of knowledge and learning. Some of the characteristics proposed by various authors of this new epistemology are:

- It is an evolutionary, transformative, empirical, interactive, dynamic, dialectical, and social process.
- Synthesizes pragmatism and the theoretical, the empirical with the rational, direct, and indirect knowledge.
- Where new knowledge comes through an ontological and epistemological relationship of situational justifications of objectives, beliefs, values, and abilities.
- It unites subject and object of knowledge, those that are mutually changing as a result of their interactions. Individual and social identities and knowledge are emerging at the same time.

De Alvarenga Neto and Choo [5] review the conditions in which knowledge is developed and propose a model that relates these conditions to the type of knowledge process and the level of interaction in knowledge management. As I am working with a vision from the strategy, I will base myself mainly on the strategic and structural vision proposed by these authors.

The business vision and the necessary support in the strategy and structure of the organization are related to the creation and operation of the “ba” (the virtual or physical place where knowledge transfer occurs) [6]. The assembly conditions are:

- A vision of strategy and knowledge. How does this contribute to the success of the organization?
- Organizational structure. Workgroups with strong relationships and effective collaboration, such as project teams, cross-divisional units, and empowering employees.
- Learning incentives and knowledge transfer.
- Emergence of knowledge facilitators and activists.



- Leadership, styles, roles, commitment, and vision, among others.
- Architectural innovations. Creation of meeting spaces, physical and virtual work environments, conferences, and communities, among others.
- Organizational and inter-organizational processes. Extend the concept of “ba” outside the company.

For example, there is an implicit need for trust and personal relationships in the social vision (organizational behavior) and formal coordination and discipline to develop the vision strategy/structure.

French [38] explains that most of the research in the field of strategy has been developed in the epistemological paradigm of Modernism, but there are other paradigms such as Postmodernism and Critical Theory. According to this proposal, constructivism considers the following:

- Ontology: Local and specific “building” realities.
- Epistemology: The researcher is a “passionate participant” with the world he investigates.
- Methodologies: In-depth interviews, observation of the participants.

Battista [39] reviews the theoretical contributions on institutions made by various authors, concluding that this theoretical contribution mixed with constructivism, gives rise to establish the bases for a new conception of institutions that can help to solve two unresolved dichotomies in the economic analysis of organizations, we are talking then of process versus structure and individualism versus collectivism.

Valadao & Silva [40] study the overlap between strategy as practice and as a process. Strategy as the practice is seen as a social practice and seeks to understand strategists and their interaction.

On the other hand, strategy as a process is more than a simple plan, which considers the behavior, action, reflection, and patterns that emerge incrementally between the past and the future, think and act, model and develop. These relationships are developed both internally and externally.

Valadao & Silva [40] conclude that strategic practices and processes are continuously restructured, where the strategic alternatives taken by individuals are influenced by practices that are socially constructed and culturally accepted. Strategy is evident when executives and practices, structure, context, and operations complement social practices, where knowledge and language allow strategists to go beyond practice to more complex strategic processes in the current reality of the company.

McGee and Thomas [41] argue like Grant [25] about a pluralistic epistemology and the interaction between explicit (in documents) and tacit (in people) knowledge, and between different organizational units (from individuals to groups).

Spender [26] explains that the concepts of knowledge vary too much, inconsistently, and in different ways, without being related. Then a clear epistemology is necessary that provides meaning, as it is proposed:

- Knowledge as an interaction between tacit and explicit knowledge.
- There are different “adaptation mechanisms”, thus Nelson and Winter [10] contemplate adaptive processes between both types of knowledge that are

developed through individual options and “eventually” (very little empirically identified) are embedded in organizational routines.

- The origin of knowledge as intuition [18, 42], where what is tacitly known by individuals is transformed and communicated to the group (collectively and socially).

Spender [26] also analyzes 4 types of ideal connections of these adaptation mechanisms. According to the different types of knowledge there are different types of theories of knowledge, however, a theory based on “inherent, immobile and collective knowledge (a strategic resource)” leads to the conclusion that it is the safest and most strategically significant type of knowledge organizational.

Finally, we can propose a summary table, a structure of the knowledge of these different areas, and their articulation (**Table 1**).

Then, the basic epistemology is socio-constructivist [38, 39], but a particular look at this vision is necessary (**Table 2**).

Finally, we can structure a common epistemological vision to propose a theory of a strategy for start-ups and small businesses. The main epistemological vision of articulation within socio-constructivism is the autopoiesis of Maturana and Varela [15], also considering the adaptive vision of knowledge [10], knowledge as a discipline [37], and the concept of “ba” [5, 6].

Thus, we have the following norms or base rules of epistemology for a strategy:

- A “system” is open to data and not to information. A key capacity of the system is the capacity to represent the reality of the context. Three levels of analysis, individual, organization, and context.
- Knowledge resides in the individual, which must be transmitted and disseminated; it is tacit and can be explicit. For this, there is an implicit need for trust and personal relationships in the social vision, in addition to formal coordination and discipline to develop the common ethical vision.
- There is a relationship between the organizational structure and the strategy.
- An “organizational routine”, being personal skills, coordinated and integrated with a coherent social vision in the context of the organization.
- The behavior of the individual is different from that of the organization, it is not a synergistic relationship ( $2 + 2 = 3$ ).
- There are local and specific built realities.

Theory	Relation	Sub area
RBV [25, 43]	Knowledge as a key resource	Knowledge-based view—KBV [18, 25, 26]
KBV	Need to manage the key resource	Knowledge management—KM [18]
KM	Dynamic vision	Dynamic capabilities—DC [11]

Source: self-made.

**Table 1.**  
Theories.

Theory	Constructivist vision		
Strategy: RBV—DC	Pluralistic [25, 41, 44]	Autopoiesis [15]	Strategy as practice [40]
Joint	Autopoiesis [15, 16, 45]	“Inherent, immobile and collective knowledge (a strategic resource)” [26].	Necessary support of the strategy and structure of the organization for the “ba” [6]
Knowledge: KBV—KM	Interaction [25, 26] adaptation [10] and intuition [18, 42]	Organizational and inter-organizational processes to extend the “ba” outside the company [5]	Knowledge as a discipline [37]

*Source: self-made.*

**Table 2.**  
*Epistemological vision.*

### 3. Methodology

It was an analytical investigation with a case study methodology. There were 16 cases from the cities of Sao Paulo (Brazil) and Santiago (Chile), mainly in the areas of consulting and software services.

In the first instance, from the interviews, causal maps were developed for each company, to later integrate the companies that were in the same stage of development in a single diagram. On the other hand, the procedure was completed, listing all the identified “strategic actions” in order, to later assess the relationship of the different actions identified and how they affect the others.

Then, network management was analyzed based on the strategic activities identified for Startups. A selection was made of the activities present in the company’s network management process.

Thus, network management activities were classified in each quadrant according to the model of Nonaka and Takeuchi [18]. This systematization considers a series of filters, considering the relevance, occurrence, and priority identified in the content analysis.

Finally, the network management activities already identified are integrated into a process to propose a relationship between the results and the presence of the activities (**Table 3**).

The interviews considered in the case study were in-depth, lasting approximately 1 hour, semi-structured, and conducted in Spanish, English, or Portuguese, which began with reference questions. A type of episodic interview was used [57] that corresponds to establishing situations of the phenomenon under study, and in a sequential manner. This sought to better capture the meaning of strategic practices by administrators.

The questions were asked based on the level of development and the events the company has gone through. For example, at the 1st level, the events of “incubation and creation of the company” occur, and questions such as who was your first customer and how did you do it? Also, at the last level, the event of “sending a commercial proposal to a client abroad” occurs, and questions such as do you maintain any alliance or agreement with other companies in the region or globally?

For this research, startups had between 5 and 50 employees, and professional executives from different specialties with more than 5 years of experience, are expected to have previous international experience. A representative number of executives was interviewed, 1 or 2 per company. The companies had to be 3 years old or more, with sales in all years of operation and at least 3 active clients. You must



Categories	Description
Characteristics	Owner. Rationality, motivation, nature, types of participants. Dynamism, stability and spatial reach [1]. Type of capital [1]. Antiquity. Cohesion [46]. Proximity [47]. Governance. Density [48]. Types of resources available.
Actors	Number of partners or partners. Type of relationship. Knowledge delivery feasibility. Interpretation feasibility. Characteristic of the knowledge it provides.
Alliances	Repetition or frequency and sustainability [49, 50]. Intensity and disposition [51, 52].
Relative position	Central, peripheral [53–55].
Power	Domination, dependence [56].

*Source: self-made.*

**Table 3.**  
*Analysis categories.*

have effective exports made or at least have submitted proposals (technical and commercial) to clients in other markets in the last 2 years.

The cases are 16 companies (11 Chilean and 5 Brazilian), obtaining a good description and analysis of the specific event in question. The companies belong to the sectors: miscellaneous businesses; research and experimental development in natural sciences and engineering; business and management consulting activities; software consultancy and services (4); data processing (1).

#### 4. Developing a network strategy for entrepreneurs

Those companies that can classify the networks in which they participate and maintain networks that handle knowledge, beyond the market or customers, are in a greater stage of development and in the process of internationalization.

It is possible to establish the types of networks most used and relevant for the companies interviewed, when the administrator recognizes the different types of networks in which they participate and can manage them separately with an ICT tool or support. The planning activities known at this stage are contact coordination.

The ability to migrate from the personal and company network certainly determines the scalability of a start-up, this can be appreciated by the need for coordination (of the network and contacts) and the use of support tools for the entire company (ICTs). Kaya and Erkut [58] recommend new research focus on the strategy process and implementation, especially in a social media environment and knowledge generation.

The explicit component of network knowledge management corresponds mainly to some technology management techniques and customer management accessible to administrators.

The proposal that knowledge of networks (Network Knowledge) is prior to other types of knowledge such as technological and market knowledge remains valid. However, the main challenge is how to create governance structures to involve people in the strategic decision-making process, and do not be trapped in the knowledge problem [59].

The transfer of knowledge occurs in an expanded context of the company, as the stage of the outsourcing and combination process was reviewed in the results, which occurs in workgroups and companies respectively, in the expanded context it considers the members of the company and the partners or partners that are in the network. The latter is not there if the network is not established or deployed, and the resources that they have will not be available, such as technological, distant markets, reputation, and marketing knowledge, among others.

A common nomenclature is established between interactions with customers or business contacts, a virtual and face-to-face network, as well as a formal and informal relationship. Companies with a focus on the local context (city, region or state, and country) are intensive in face-to-face and informal relationships (social and close). They do not handle formal relationship procedures with clients or other related entities, another type of network in addition to the market or clients is not distinguished. The level of internationalization is null or unfeasible among administrators, furthermore, the orientation towards face-to-face and informal (personal) relationships does not prepare the organization for future stages of development.

Intensive personal networks in this type of company are also centralized, based on power, since they are managed by the owner(s). The perception of associate consultants, employees, or freelancers is the same, their contributions are only work hours, not new contacts, projects, or clients.

Working together with the other company, client or partner, has been established as one of the most relevant activities for the transfer of knowledge, and achieving affinity and long-term relationships, which is related to the achievement of social capital in the medium to long term.

Within the sequential questions asked, the stage that provided the most conclusive evidence and antecedents corresponds to the second stage or “network management”. This provides background information to conclude that the company that differentiates networks other than the market (customers) and that has a formal mechanism for managing these contacts is in a phase change and allows it to access regional and global markets.

In the Nonaka and Takeuchi model [18], it is possible to establish levels of development in network knowledge management, considering the network between companies, where those companies that gain access to more complex activities such as internationalization, implies that the flow between the stages is balanced and there is also a sequence between network management activities. This is important because a virtuous circle can be established, a dynamic capacity that allows the company's networks to expand.

The company's network management development events are determined by the following milestones:

- Original or personal network clients of the owners, personal and face-to-face relationship.
- Establishment of a partnership with an employee or external entity, which generates a new project at the local level.

- Identification of various networks in which it participates and formal relationships with partners at the local and regional level. New project (business) at the regional level.
- Management of business networks (procedure) and the existence of virtual interaction, with a global partner. New project (business) at a global level.

In the most relevant stage for this research, we have:

- Topics of interest or communities in which to participate are identified.
- There are procedures or routines for the management of local partners (parceiros in Portuguese).
- Technological and reputational networks are identified, in addition to the commercial one (clients).
- Networking practices are disseminated within the company.
- There are technological cooperation or alliances.
- Networks (contacts) are maintained in person and virtually.

The companies that present at least some of these actions or functions within their operations are in transition to the last stage of development or in this, which is the management of networks at a regional or global level.

Now, not as stage transition actions or functions, but within the more complex actions, the following can be mentioned as findings other than those present in the literature:

- Development of a network strategy.
- Coordination of partners.
- Disseminate Networking practices.
- Rules of operation with partners.
- Analysis of new forms of integration with partners.
- Representations of a partner, or mirror functions where a related or complementary service is represented, before requiring the same in distant markets for their own services.

## **5. Results discussion**

According to the results obtained, there are the criteria for the planning of business networks, which are the first discriminators on the selection of the network:

1st. Types of resources available

This is likely to imply an additional effort on the part of administrators because they will have to identify who their participants are and their motivations, and other related aspects such as what is the rationality and nature of the network.

Analysis was similar to that of Stakeholders with the MML, Corporate Social Responsibility, or Stakeholder management based on the theory of Freeman [60].

The administrators in these aspects behave from intuitively, rationally to strategically, according to the level of basic development, networks or export respectively. But the first thing to look for is to increase the number of interactions in order to gather the information you require about the network, the actors involved, their relative position, and their power. This knowledge is eminently market or commercial, that is, that contacts can provide information to trigger new business.

### 2nd. Viability of the network

This has to do with criteria of governance, proximity, dynamism, stability, and spatial scope of the network. In simple terms, if you participate and dedicate time to managing and maintaining the contacts of that network, it will not be a failure. Although the evidence recorded is that this action is intuitive, most of the managers interviewed identify that the network they participate in has no contribution and has been “a waste of time”, with which they have felt frustrated.

Other criteria have been left as secondary, since, in a dynamic and open, non-traditional system, the owners of the networks, their cohesion, age, and density are determined by higher quality information, which is obtained already by participating in this group or net. Only the owner or age of the network could be viable information to obtain immediately, but it is not necessarily what is happening in reality, because there are informal owners or the network is inactive for many periods.

Within the viability of the network, criteria such as relative, central, or peripheral position are included, which every time the company progresses in its development, accesses new markets or sectors, returns to a peripheral position. This also occurs when accessing new networks, such as that of technological and reputational knowledge, which, as previously reviewed, are identified and managed by administrators in stages of greater development of the company.

### 3rd. Selection of partners

Here, the criteria for selecting actors within the networks in which they participate are considered, as well as the number with whom they can interact. Within these criteria, there is the type of relationship, the viability of delivering the knowledge, where its characteristics and the possibility of being able to interpret it are considered.

This occurs, for example, in the interaction of a technological network between a University or Research Center and entrepreneurs who need to further develop a technology or seek a technological option for the identified business opportunity. Here there are problems of interpretation, power, motivation, and feasibility of delivery.

At this stage, it is necessary to consider the implicit power in the relationship with partners or partners, of domination or dependence, but in these dynamic and collaborative work environments, it is necessary to have sufficient flexibility, since, according to the spatial level of the network (local, regional or global), the type of network (market, technological, reputational or other) and its viability, administrators will find themselves in a permanent challenge to manage both positions, domination or dependency, in collaborative work environments.

At this stage, it is necessary to consider the criteria associated with alliances, such as their frequency and sustainability, and the intensity and willingness of the members. As the selection of partners or partners is a skill available to companies that are already in a stage of managing their business networks, they are queries that administrators should make when they have already selected the networks where they are going to participate and the appropriate actors or partners with whom to form these alliances. Partners are entities that can range from individual professionals to companies or organizations.



In order to compile the antecedents exposed in this investigation, particular conclusions can be presented for administrators. For these professionals, the ability to network is crucial, the selection of partners or partners, and to be able to work under different conditions of dependence and power, depending on the network in which they are participating. You must understand the conditions of low social capital, so you have to be a generator of new trusts and spread this practice within the company and the network. You must be aware that personal egos, internal political conditions, prejudices, and other personal or organizational culture conditions make the team or company inflexible, where permeability and flexibility are required to transfer, deliver or receive knowledge.

A crucial skill for administrators is to be able to differentiate the various networks in which the company participates, and that it can be trained for this. It should be remembered that the ability to distinguish technological and reputational networks is present in administrators and companies with a higher level of development and internationalization.

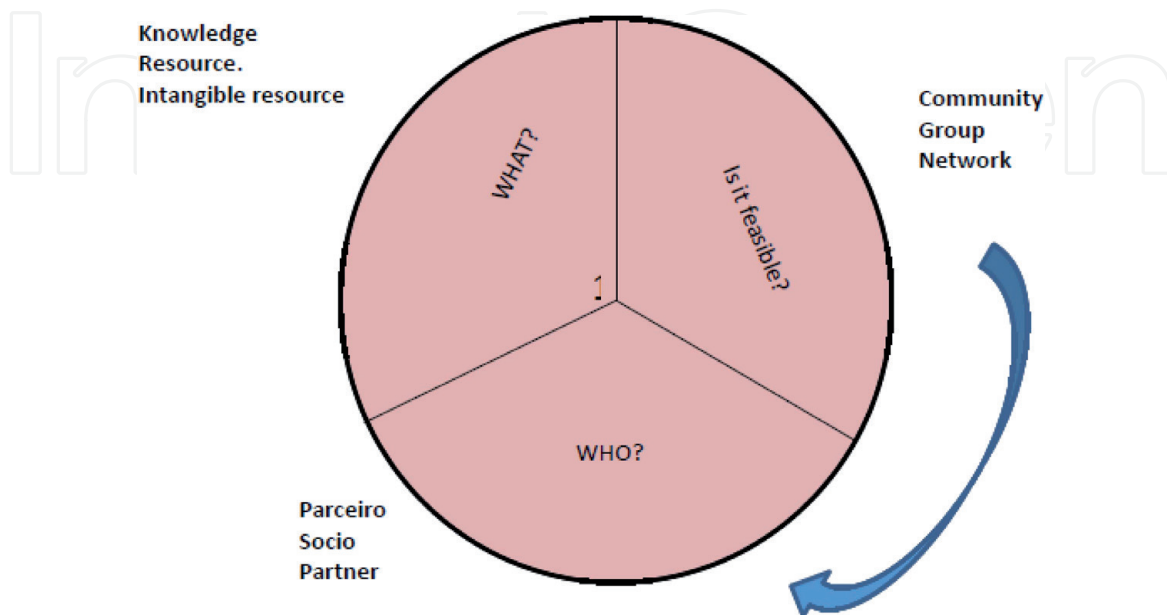
The contextual conditions for both administrators and small service companies are that they must understand that they work with open systems, probably as a professional or company in intermediary positions, as well as the dynamic and innovative network in which they operate. In addition, the understanding of being established or positioned in the value-adding channel.

The learning capacity should also be mentioned, which has to do with identifying areas of interest or communities, as well as the search for interaction activities, intensive in knowledge with partners or partners.

A practical application of the use of the criteria or discriminators explained above is a guide to design a business network plan. Formal planning for small work teams, where the following example considers a start-up venture. The objective is the sustainability of the project and the scalability of sales.

From the Entrepreneurship Business Model [61], the analysis consists of 2 stages:

First stage: Review the commercial areas, channels, relationship with customers, and customer segment. Using the central circle in **Figure 1**. First, the information and/or knowledge necessary to access channels and clients is identified, then



Source: self-made.

**Figure 1.**  
Business network plan. Source: self-made.



the community or networks to participate in, and finally the necessary partners (parceiros). Those are the questions: What? (1), is it feasible? (2) and Who? (3) in clockwise order.

Second stage: Review the non-commercial areas, key partners, activities, and key resources. Using the outer circle of **Figure 1**. Then, the questions asked in the First Stage are repeated to identify information and/or knowledge necessary to access key partners, activities, and resources. In the same previous order of the clock hands.

The previous analysis allows us to identify this triad made up of Knowledge, Network, and Partner. Those circles that are complete can be prioritized and assigned to the professionals of the working group for their exploitation and follow-up. Those incomplete circles, usually in Network (2) and/or Partner (3), imply a search or investigation work of the pending data to complete the triad.

This entire process allows the business model to be validated under the vision of business networks. In addition, define and schedule formally and simply the activities of the business network plan.

## 6. Conclusions

Finally, in order to collect the background exposed in this research, particular conclusions can be presented for professionals, companies, public policy, and internationalization.

For administrators and professionals, the ability to network is crucial, the selection of partners or partners, and to be able to work under different conditions of dependence and power, depending on the network in which they are participating. You must understand the conditions of low social capital, so you have to be a generator of new trusts and spread this practice within the company and the network.

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The context conditions for both administrators and small service companies are that they must understand that they work with open systems, probably as a professional or company in intermediary positions, as well as the dynamic and innovative network in which they operate. In addition, the understanding of being established or positioned in the value-adding channel.

The learning capacity should also be mentioned, which has to do with identifying areas of interest or communities, as well as the search for interaction activities, intensive in knowledge with partners or partners.

## 7. Limitations

This is a qualitative investigation, with a case methodology, where 16 companies in Chile and Brazil were analyzed. Access to these companies was complex because they are niche companies, intensive in expert knowledge. For one in three of the companies that were contacted, an effective interview was achieved. The companies interviewed in Brazil allowed us to validate the behavior of companies in the same categories in Chile.

The composition by type of the cases does not allow generalizing behaviors, since we worked with consulting, software, and software services (SAAS)

companies. The items corresponded to diverse businesses, research and development, consulting, software services, and data processing.

The specificity of the interviews carried out and their duration was aimed at responding adequately to the research questions and proposals, but not providing background information on management practices outside of the analyzed business networks. In addition, the interview is in virtual mode (via SKYPE®) allowed to validate the use of the tool by the administrators, but not the physical operating conditions of the companies, only through their internet sites (Web Site) and material delivered to the researcher.

## **8. Future research**

One aspect to be developed corresponds to the validation of the instrument to measure the level of development of companies, specifically in the capacity to manage business networks.

A variant of this research, and where the same content analysis methodologies and application of knowledge management models can be used, is to carry out the necessary variations to apply this “Test” at the level of business networks to various areas or sectors.

The greatest variations of the instrument are expected for social and public innovation, personal marketing, as well as research networks or researchers (Research Network). As mentioned above, the areas of open innovation, entrepreneurship, and digital marketing are closely related to this research, which would imply very few adjustments to the instrument.

When making a relationship of terms between the area and the problem, only considering the primary and secondary information collected by this research, and where business network management can have inference, we have (area—problem):

- Social innovation—project sustainability and financing.
- Entrepreneurship—scalability of the business and exploitation of the opportunity.
- Public innovation—program sustainability and coordination.
- Research—relevance and impact.
- Digital marketing—planning and evaluation of results.
- Open innovation—integration and coordination of topics and specialists.

In the area of strategy, there are various applications for formal strategic planning from a business model, business plan, strategic unit planning, corporate planning, or any formal planning model. How the management of business networks is integrated to complement or enhance the formal strategic planning that the company has?. This is determined by the strategic objectives, as well as the identified tactic and action plan.

Related to the proper planning of business networks, compilation and systematization must be carried out, in addition to the application and evaluation of the results in companies. This is to establish a broadly detailed model of business network planning, which allows representing the various techniques or practices dispersed in economic sectors, as well as the use and effectiveness of various

theoretical supports that tangentially describe the management of business networks. One of the areas where this network planning model could be used and validated in a better way is in areas, where there is diverse content on the internet, and data capture can be done historically, with public information and open, making it more viable.

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## References

- [1] Huggins R, Johnston A. Knowledge flow and inter-firm networks: The influence of network resources, spatial proximity and firm size. *Entrepreneurship and Regional Development*. 2010;22(5):457. Available from <http://search.proquest.com/docview/749880088?accountid=45394>
- [2] Barney J. Firm resources and sustained competitive advantage. *Journal of Management*. 1991;17(1):99-120
- [3] Wernerfelt B. A resource-based view of the firm. *Strategic Management Journal*. 1984;5(2):171-180
- [4] Valkokari K, Helander N. Knowledge management in different types of strategic SME networks. *Management Research News*. 2007;30(8):597-608
- [5] de Alvarenga Neto RCD, Choo CW. The post Nonaka concept of ba: Eclectic roots, evolutionary paths and future advancements. *Proceedings of the American Society for Information Science and Technology*. 2010;47(1):1-10
- [6] Nonaka I, Konno N. The concept of “ba” building a foundation for the knowledge creation. *California Management Review*. 1998;40(3)
- [7] Moller K, Rajala A, Svahn S. Strategic business nets—Their type and management. *Journal of Business Research*. 2005;58(9):1274-1284. Available from: <http://search.proquest.com/docview/196326562?accountid=45394>
- [8] Porter ME. Industry structure and competitive strategy: Keys to profitability. *Financial Analysts Journal*. 1980;36(4):30-41
- [9] Prahalad CK, Hamel G. The core competence of the corporation. *Harvard Business Review*. 1990;68(3):79-87
- [10] Nelson R, Winter S. The Schumpeterian tradeoff revisited. *American Economic Review*. 1982;72(1):114. Available from: EBSCOhost
- [11] Teece D, Pisano G, Shuen A. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*. 1997;28(13):1319-1350
- [12] Venzin M, von Krogh G, Roos J. Future research into knowledge management. In: Krogh, Ross, Kleine, editors. *Knowing in Firms, Understanding, Managing and Measuring Knowledge*. London: Sage; 1998
- [13] Simon H. *Models of Bounded Rationality*. Vol. 2. Boston, MA: MIT Press; 1982
- [14] Zander U, Kogut B. Knowledge and speed of transfer and imitation of organizational capabilities: An empirical test. *Organization Science*. 1995;6(1):76-92
- [15] Maturana H, Varela T. *Autopoiesis and Cognition*. London: Reidl; 1980
- [16] Parboteeah P, Jackson TW. Expert evaluation study of an autopoietic model of knowledge. *Journal of Knowledge Management*. 2011
- [17] Maturana H, Varela F. *De máquinas y seres vivos*. Universitaria; 1998
- [18] Nonaka I, Takeuchi H. La organización creadora de conocimiento. In: *Como las compañías japonesas crean la dinámica de la innovación* (Martin Hernández, traductor). Mexico: Oxford University Press; 1999

- [19] Sveiby KE. A knowledge-based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*. 2001;**2**(4):344-358. DOI: 10.1108/14691930110409651
- [20] Polanyi M. *Personal Knowledge*. New York, NY: Routledge & Kegan Paul; 1958
- [21] Wittgenstein L. *Philosophical Investigations* (orig. 1953). Oxford: Blackwell; 1995
- [22] Von Glasersfeld E. Constructivism as a Scientific Method. *Scientific Reasoning Research Institute Newsletter*. 1988;**3**(2):8-9
- [23] Hakanson L. The firm as an epistemic community: The knowledge based view revisited. *Industrial and Corporate Change*. 2010;**19**(6):1801-1828. DOI: 10.1093/icc/dtq052
- [24] Kogut B, Zander U. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*. 1992;**3**:383-397
- [25] Grant RM. Toward a knowledge-based theory of the firm. *Strategic Management Journal*. 1996;**17**(Winter Special Issue):109-122
- [26] Spender JC. Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*. 1996;**17**(S2):45-62
- [27] Machlup F. *The Production and Distribution of Knowledge in the United States*. Princeton, New Jersey: Princeton University Press; 1962
- [28] Bell D. Communication technology: for better or for worse?. *The Information Society: Economic, Social, and Structural Issues*. 1989;89-103
- [29] Porat M. *The Information Economy: Definitions and Measurement*. Special Publication 77-12(1). Washington, DC: Department of Commerce, Office of Telecommunications; 1977
- [30] Abernathy WJ. *The Productivity Dilemma: Roadblock to Innovation in the Automobile Industry*. Baltimore: Johns Hopkins University Press; 1978
- [31] Polanyi M. *The Tacit Knowledge*. Vol. 1997. London: Routledge and Kegan Paul; 1962
- [32] Adcroft A, Willis R, Hurst J. A new model for managing change: The holistic view. *Journal of Business Strategy*. 2008;**29**(1):40-45. DOI: 10.1108/02756660810845697
- [33] Quinton S, Smallbone T. The troublesome triplets: issues in teaching reliability, validity and generalisation to business students. *Teaching in Higher Education*. 2005;**10**(3):299-311
- [34] Jackson TW. Applying autopoiesis to knowledge management in organisations. *Journal of Knowledge Management*. 2007;**11**(3):78-91. DOI: 10.1108/13673270710752126
- [35] Jakubik M. Becoming to know. Shifting the knowledge creation paradigm. *Journal of Knowledge Management*. 2011;**15**(3):374-402. DOI: 10.1108/13673271111137394
- [36] Styhre A. *Understanding Knowledge Management Critical and Postmodern Perspectives*. Copenhagen Business School Press; 2003
- [37] Schultze U, Stabell C. Knowing what you don't know? Discourses and contradictions in knowledge management research. *Journal of Management Studies*. 2004;**41**(4):549-573
- [38] French S. Cogito ergo sum: Exploring epistemological options for strategic management. *Journal of Management Development*. 2009;**28**(1):18-37. DOI: 10.1108/02621710910923845



- [39] Battista RN. Expanding the scientific basis of health technology assessment: A research agenda for the next decade. *International Journal of Technology Assessment in Health Care*. 2006;**22**(3):275-280
- [40] Valadao JDAD, Silva SSDS. Juxtapositions of strategy as practice and strategy process: Before the post-processual view of strategy. *RAM. Revista de Administração Mackenzie*. 2012;**13**(2):171-195
- [41] McGee J, Thomas H. Knowledge as a lens on the jigsaw puzzle of strategy: Reflections and conjectures on the contribution of a knowledge-based view to analytic models of strategic management. *Management Decision*. 2007;**45**(3):539-563. DOI: 10.1108/00251740710745124
- [42] Polanyi M. *The Tacit Dimension*. London: Routledge & Kegan Paul; 1967
- [43] Barney JB. Looking inside for competitive advantage. *Academy of Management Perspectives*. 1995;**9**(4):49-61. DOI: 10.5465/ame.1995.9512032192
- [44] Grant RM. The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*. 1991;**1991**:114-135
- [45] Hall WP. Biological nature of knowledge in the learning organisation. *The Learning Organization*. 2005;**12**(2):169-188. DOI: 10.1108/09696470510583548
- [46] Yu J, Gilbert BA, Oviatt BM. Effects of alliances, time, and network cohesion on the initiation of foreign sales by new ventures. *Strategic Management Journal*. 2011;**32**(4):424-446
- [47] Boschma RA. Proximity and innovation: A critical assessment. *Regional Studies*. 2005;**39**(1):61-74. Available from <http://search.proquest.com/docview/208884848?accountid=45394>
- [48] Burt R. *Brokerage and Closure: An Introduction to Social Capital*. New York: Oxford University Press; 2005
- [49] Huggins R. Inter-firm network policies and firm performance: Evaluating the impact of initiatives in the United Kingdom. *Research Policy*. 2001;**30**:443-458
- [50] Podolny JM, Page KL. Network forms of organization. *Annual Review of Sociology*. 1998;**24**(1):57-76
- [51] Gulati R. Network location and learning: The influence of network resources and firm capabilities on alliance formation. *Strategic Management Journal*. 1999;**20**:397-420
- [52] Yli-Renko H, Autio E, Sapienza HJ. Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal*. 2001;**22**(6-7):587-613
- [53] Borgatti SP, Jones C, Everett MG. Network measures of social capital. *Connections*. 1998;**21**(2):27-36
- [54] Borgatti SP, Carley KM, Krackhardt D. On the robustness of centrality measures under conditions of imperfect data. *Social Networks*. 2006;**28**(2):124-136. DOI: 10.1016/j.socnet.2005.05.001
- [55] Freeman LC. Centrality in social networks conceptual clarification. *Social Networks*. 1979;**1**(3):215-239. DOI: 10.1016/0378-8733(78)90021-7
- [56] Lorentzen A. Knowledge networks in local and global space. *Entrepreneurship and Regional Development*. 2008;**20**(6):533. Available from: <http://search.proquest.com/docview/215158442?accountid=45394>

[57] Flick U. Episodic interviewing. In: Bauer AM, Gaskell G, editors. *Qualitative Researching with Text, Image and Sound—A Handbook*. London: Sage; 2000. pp. 75-92

[58] Kaya T, Erkut B. Tacit knowledge for strategic advantage: Social media use of employees in the financial sector. In: *Proceedings of the 18th European Conference on Knowledge Management (ECKM 2017)*; 7-8 September, 2017. Barcelona, Spain; 2017. pp. 516-523

[59] Erkut B. From digital government to digital governance: Are we there yet? *Sustainability*. 2020;12(3):860

[60] Freeman RE. *Strategic Management: A Stakeholder Approach*. Cambridge University Press; 2010

[61] Osterwalder A, Pigneur Y. *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Vol. 1. John Wiley & Sons; 2013