

Connectivity and Knowledge Management in Virtual Organizations: Networking and Developing Interactive Communications

Cesar Camison
University Jaume I, Spain

Daniel Palacios
University Jaume I, Spain

Fernando Garrigos
University Jaume I, Spain

Carlos Devece
University Jaume I, Spain

Information Science
REFERENCE

INFORMATION SCIENCE REFERENCE

Hershey • New York

Director of Editorial Content: Kristin Klinger
Director of Production: Jennifer Neidig
Managing Editor: Jamie Snavely
Assistant Managing Editor: Carole Coulson
Typesetter: Amanda Appicello
Cover Design: Lisa Tosheff
Printed at: Yurchak Printing Inc.

Published in the United States of America by
Information Science Reference (an imprint of IGI Global)
701 E. Chocolate Avenue, Suite 200
Hershey PA 17033
Tel: 717-533-8845
Fax: 717-533-8661
E-mail: cust@igi-global.com
Web site: <http://www.igi-global.com>

and in the United Kingdom by
Information Science Reference (an imprint of IGI Global)
3 Henrietta Street
Covent Garden
London WC2E 8LU
Tel: 44 20 7240 0856
Fax: 44 20 7379 0609
Web site: <http://www.eurospanbookstore.com>

Copyright © 2009 by IGI Global. All rights reserved. No part of this publication may be reproduced, stored or distributed in any form or by any means, electronic or mechanical, including photocopying, without written permission from the publisher.

Product or company names used in this set are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark.

Library of Congress Cataloging-in-Publication Data

Connectivity and knowledge management in virtual organizations : networking and interactive communications / Cesar Camison ... [et al.], editor.

p. cm.

Summary: "This book analyzes different types of virtual communities, proposing Knowledge Management as a solid theoretical ground for approaching their management"--Provided by publisher.

Includes bibliographical references and index.

ISBN 978-1-60566-070-7 (hardcover) -- ISBN 978-1-60566-071-4 (ebook)

1. Virtual reality in management. 2. Knowledge management. 3. Virtual corporations--Management. 4. Information networks. I. Camison, Cesar, 1958-

HD30.2122.C664 2009

658.4038--dc22

2008020499

British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book set is original material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

If a library purchased a print copy of this publication, please go to <http://www.igi-global.com/agreement> for information on activating the library's complimentary electronic access to this publication.

Chapter VI

Model on

Knowledge–Governance: Collaboration Focus and Communities of Practice

Eduardo Bueno Campos
University of Madrid, Spain

Carlos Merino Moreno
University of Madrid, Spain

Reinaldo Plaz Landaeta
University of Madrid, Spain

ABSTRACT

The aim of this chapter is to deepen the concept of ‘Communities of Practice’ (CoPs) from the understanding of a reference framework for knowledge governance, stressing the grey area which distinguishes such governance from the traditional term ‘Knowledge Management,’ since knowledge governance means not just the management of such assets but also their creation and development, which generates a richer and more appropriate meaning or sense. Without entering into exhaustive referential analyses, we attempt to offer the reader a practical approach which allows structuring an action plan that, in this case, will be explicated for the field of CoPs. Identification and measurement of assets based on information and knowledge and the processes carried out towards its improvement create the convergence of the dynamic of intellectual capital and the afore-mentioned knowledge governance as complementary subjects for an appropriate exploitation and monitoring of the impact which the organizational fostering of this strategic-reality has on business.

VALUATION OF ORGANIZATIONAL INTANGIBLE ASSETS

The strategic approach of businesses in the current economy has an important part related with certain support processes linked to analysis tasks corresponding to dynamic processes of decision making, as an attempt to diminish the risks inherent to such processes. In this sense, such argument on intelligent or learning-capable organizations (Senge, 1990) gains a high value for the extraction of information and the creation of both appropriate internal and external knowledge.

This approach insists on the importance of basic resources for strategic management focused on the couple information-knowledge (Itami, 1987; Vassiliadis *et al.*, 2000) and on derived individual and organizational learning. In this case, corporative philosophy should create the necessary atmosphere to recognize the value of intangible assets, very close to the understanding of the theory of resources and abilities, which does not only take into account those resources related with the tangible field but also those linked to non-physical elements located in the organizational ‘roots’ (1).

Obviously, it arises a requirement around a model or scheme of analysis; firstly, for the identification and measurement of such typology of assets, and also to facilitate a structured framework of reflection and analysis, an area covered by the intellectual-capital approach (Itami & Roehl, 1991; Grant, 1991; Bontis, 1999; Bueno & Salmador, 2000; Ordoñez, 2000).

This thematic area of intangible assets—which we could qualify as emerging if study cases are observed, although it has been historically tackled in organizational literature within the field of the theory of resources and abilities (Wernerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993)—had already collected, in different ways, contributions which helped to the valuation of non-tangible assets.

The basic models of intellectual capital (2) are generally structured by three basic components (IADE-CIC, 2003). Firstly, human capital—where attitudes, competency and abilities are analysed developing a profile to identify and measure knowledge from an individual viewpoint. On the other hand, structural capital (3)—responsible for knowledge diagnosis of organizational nature (Nonaka & Takeuchi, 1995; Brown & Duguid, 1991 and 1998; Teece, 1998 and 2000; Nonaka *et al.*, 2000; Tsoukas & Vladimirou, 2001)—considers aspects such as organizational design, reported culture and processes, and also a technology reality related with efforts in I+D such as tools and results which facilitate and make knowledge tangible (Brooking, 1996).

Finally, relational capital—which is explained by knowledge and information flows derived from the framework of alliances directly related with business processes (customers, suppliers, etc.) or involved with the social environment (4) (Nahapiet & Ghosal, 1996).

However, measurement only lacks of sense without a sustainable exertion allowing the analysis of different initiatives developed to improve the stock of intellectual capital. Such initiatives are processes related with the idea of ‘knowledge in action’ (Davenport & Prusak, 1998), creating a requirement of a holistic model integrating different alternatives and options, and also avoiding the common error linked to the consideration of strategic plans for knowledge governance or management just as a mere accumulations of initiatives. This accumulative approach creates difficulty and complexity in understanding certain dimensions and interactions among assets, generates chaos and includes contradictions among different programmes.

The result of such intellectual capital is centred on a ‘photograph’ (Bontis, 1999) as a traditional balance showing the status of the basic intangible assets identified by the organization; however, this approach may present a double objective—that

Model on Knowledge-Governance

is, the improvement of internal management and external communication through the information for stakeholders about a more complete organizational reality (5).

The general argument of ‘knowledge in action’ is traditionally linked to ‘knowledge governance or management’, processes which develop intellectual capital looking for improving the results of the initial measurement scheme. In this sense, there is a basic difference between intellectual capital and knowledge governance, bearing in mind a static or dynamic perspective, respectively.

However, the need for a complete exercise of management beyond the traditional financial-accountant approach creates an emerging line for the development of new areas within the structure of organizational responsibilities with a specific demand of abilities.

COLLABORATION APPROACH WITHIN KNOWLEDGE GOVERNANCE

Organizations consider in their strategies those factors to which they recognize significant value

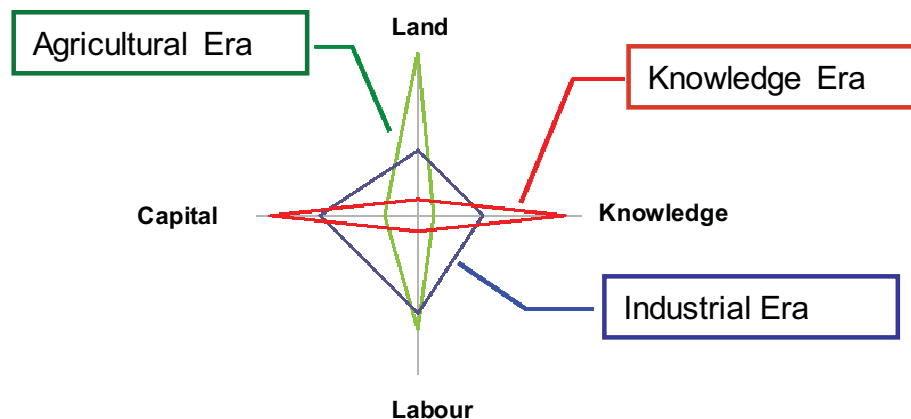
contributions (Barney, 1991; Grant, 1991; Peteraf, 1993), certainly measurable or at least as presumptions. This initial argument means the possibility of different strategic approaches according to business orientation or awareness showed by the organization towards the relevance of the different types of assets it owns.

In Figure 1 it is observed a distinct evolution and evidence towards the consideration of knowledge as a key asset (6), as an organizational value—that is, as a resource to which a significant contribution is recognized openly.

Without deepening into the theoretical framework associated to the concept of knowledge, this resource owns a characteristic linked to its intangibility which is that of enriching through the exchange among the large agents owning it (Nonaka, 1994; Nonaka & Takeuchi, 1995; Grant, 1996; Kogut & Zander, 1992 and 1996; Spender, 1996; Tsoukas, 1996), which implies the consideration of certain transference and exchange schemes as means supporting its advance and development.

Individual knowledge is transformed and is the base of the collective since it is transmitted through oral, written, encoded, sign, etc. language.

Figure 1. Evolution of the economic paradigms (Source: Gorey & Dobat (1996) and Bueno & Salvador (2000))



For Spender (1996), Von Krogh & Ross (1995) and Cook & Brown (1999), among others, social knowledge is not merely the sum of individual knowledge, but something else, different from that, which is especially important for organization survival and development in the long run.

This transference pattern means that individual knowledge is enriched in the process of exchange and transmission adding a contextual dimension to it, which gives it organizational value. In this sense, individual knowledge is idiosyncratic by nature and owns strong links to the organizational context in which it is developed. Knowledge transference, from this perspective, is necessarily social and conclusively outdistances from the schemes of electronic transference of data and information.

Social knowledge is built up from networks of agents creating a system of relations which facilitates, fosters and allows that individual knowledge is transferred and, at the same time, enriched, giving rise to social or organizational knowledge. It is precisely in this point where we can identify the difference between Knowledge Management and governance. In the first, management occurs around an explicit and encoded object or entity which we call, usually in a wrong manner, knowledge, when in fact it is data or information. In the latter, we rather talk about a system of relations among agents governed by a series of guidelines, norms and rules regulating, leading and guiding knowledge flows or processes. In this system, the centre of attention is the subject of knowledge, which involves a more organic viewpoint of the concept—contemplating in a clear manner its different dimensions: explicit and tacit—and its relation with the context in which it is created and developed.

From a viewpoint of governance, thinking of guiding knowledge processes transcends the very meaning of the expression. Many authors insist that knowledge, in an abstract sense, cannot be

managed (Drucker, 2001). Knowledge, as we have already mentioned, lies in people and responds to mental models of behaviour intrinsic to the very nature of individuals. At most, we can induce certain behaviours in subjects. It is possible to give them tools and competences to exercise and develop their mental and cognitive abilities with the aim of increasing their knowledge stock and use. From this viewpoint, and in the field of cognitive processes, each individual will build patterns of social behaviour linked to processes of understanding, assimilation, learning and application of new knowledge (Bueno, 2005).

In the sense of the contributions by Foss (2006), this knowledge governance is close to a double level—micro (individual) and macro (collective), where it is important to consider not just tools, but also those attitudes and motivations which come into play in this reality of behaviours.

These processes are endogenous by nature and, therefore, they do not admit norms, rules and external intervention. A pedagogical method for learning, for instance, is nothing more than an instrument or tool to facilitate learning. However, its effectiveness will depend, deep down, on the individual's ability, interest and motivation for learning. We can induce or favour behaviours and stimulate processes; however, the governance of what-is-known is a subject concerning the individual him/herself and depends on his/her context (Cook & Brown, 1999).

Organizations are increasingly giving more importance to the administration of their intangible assets and to the forms in which such assets contribute to generate business value (Bueno, 2003). In this sense, the processes of professional learning and development are oriented at the improvement of competences for innovation, allowing their articulation in organizational models and systems which in turn become differentiating elements to achieve competitive positioning in markets. This knowledge approach adopts an

open and systemic viewpoint of the organizational processes—in which interactions, relations and collaboration processes act as channels for new-knowledge transmission and assimilation (Plaz & Gonzalez, 2005).

From this viewpoint, an ontological approach of knowledge centred on the governance of processes of social relations emerges. It is in this context that the transference of knowledge flows takes place, causing expressions of knowledge organization, codification and specification in the form of organizational records. It is this way how relations and relational capital, for instance, constitute key sources of organization enrichment and a means to keep the dynamic of knowledge renovation (Bueno, 2005).

This approach has recently distinguished between individual knowledge and the creation (development), management or governance of organizational knowledge (Nonaka, 1994 and 1995; Bueno & Plaz, 2005). Such distinction is important since it focuses the discussion on Knowledge Management at the level of organizational system and its management.

Knowledge management or administration places the debate in the field of governance of the exchange flows and key organizational processes which increase the value of intangible assets. In this sense, talking about organization implies referring to the system of relations and connexions allowing the interaction of agents and individuals, and that knowledge flows—as a part of such process—are produced in the same directions of such interaction. It is important to stand out that Knowledge Management—considered from this viewpoint and with a sense of governance—means the definition of policies, guidelines, channels, proceedings and resources to create optimum conditions for fostering, channelling, catalysing and promoting such flows of organizational knowledge.

PROPOSAL OF FRAMEWORK MODEL FOR KNOWLEDGE GOVERNANCE

Talking about organizational-knowledge governance and development therefore means creating support structures for the processes of interaction individual-individual, individual-organizational system, and organizational system-organizational system. These structures facilitate knowledge flows and allow at the same time leaving a trace or record. This record is the result of specifying tacit knowledge to convert it into explicit codes leading to the definition of routines of organizational behaviour and progressively acquiring an own identity.

Organizational culture is nothing but the historic trace of individual behaviours grounded on a collective expression. Stating that an organization owns a determined working culture makes us date back to and look for—in its founders and previous leaders—those behaviours which have been progressively modelled and have become in reference and standard.

These processes are initiated through relations and interactions among knowledge agents or subjects from a determined viewpoint or strategic thought, given a context of reference which incardinate the process of knowledge. Information technologies are only the catalyser to facilitate collaboration among subjects and propose knowledge exchange as a common resource, which—once it is developed by action of practice—will be transformed from explicit into tacit, and from individual into social.

Without this conviction, at least in its top-down version (7), it is very complex to face—moving away from the approach of simple fashion—a scheme aimed at a more appropriate way to tackle knowledge, or more precisely, the so-called knowledge governance (Plaz & Gonzalez, 2005), than just management, given that this term should gather those tasks related to creation and development.

Going back to the argument on knowledge governance, such governance is obviously configured from a structure of processes acting as drivers of the business in question, assuring the exploitation of all organizational knowledge—an aspect which doubtlessly should be imbricated with a system of organizational intelligence (8) acting as a supplier of informative inputs for the recycling and updating of the organization’s knowledge base (Vassiliadis *et al.*, 2000; Merino, 2004). The dynamics of creation of value occur around the tasks of internal transference of tacit and explicit knowledge, as well as around those tasks of incorporation of external knowledge or that created by other agents, generating learning cycles which build up the new knowledge within a process of transformation of essential competences which generate intangible or intellectual-capital assets (see Figure 2), as Bueno (2002) proposes in the new conception of the company as an economic system based on knowledge.

Accompanying this overall framework and prior to tackling the projection of the model of knowledge governance on the role of transference and collaborative approaches, it should be stood out the need to aligning such structure with a series of business objectives which allow clarify-

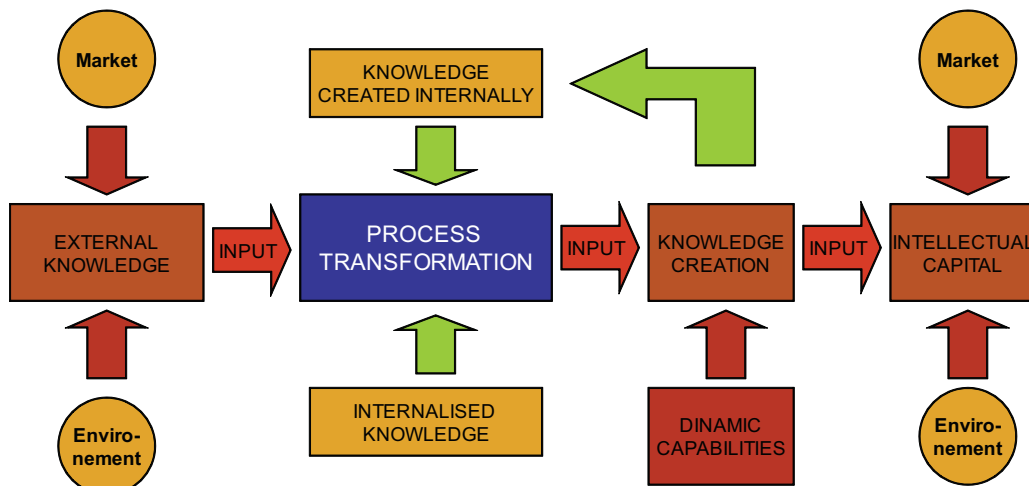
ing, visualizing and understanding the returns or impacts involved in knowledge valuation and acting in consequence. Those returns, beyond a short-term period, will adjust to the context of the organization, looking for action lines adapted to its level of organizational and technological maturity, considering a set of possible key factors for success (Plaz & Gonzalez, 2005).

At the same time, the achievement of results will require an appropriate scheme of measures which allow an appropriate evaluation not just of those variables of a finalist nature for business, but also of the statistics associated with the afore-mentioned chain of knowledge creation, development and management.

For both analysis and fixation of objectives and the reality of these processes linked to knowledge governance, we may use the dynamic of a balanced scorecard (Kaplan & Norton, 1992) and even for more specific themes, like the support for the control panel, several instruments such as the model of the European Foundation for Quality Management (EFQM) or the models of intellectual capital (10) can be used.

Undoubtedly, the action on knowledge governance should pursue the improvement of the organization’s intellectual capital as a way to

Figure 2. Company as a system based on knowledge (Source: Bueno, 2002)



Model on Knowledge-Governance

get to know the suitability of the actions aimed at putting into practice a strategy in the line of knowledge valuation (see Figure 3).

The approach of processes which shapes the model of knowledge governance makes clear an action loop (Bueno & Plaz, 2005; Nonaka, 1991 and 1994; Kogut & Zander, 1992; Blumentritt & Johnston, 1999; Shin *et al.*, 2001; Alavi & Leidner, 2001; Staples *et al.*, 2001; Zahra & George, 2002; Argote *et al.*, 2003; Zack, 2003) around the dynamics of understanding, register, storage (Walsh & Ungson, 1991; Davenport & Prusak, 1998; Teece, 2000; Staples *et al.*, 2001; McGrath & Argote, 2002), diffusion (Davenport & Prusak, 1998; Szulanski, 2000), use and improvement of information and knowledge, where the organization should consider the way of putting it into practice or value, already counting on a traditional approach based on certain support departments —namely, documentation centres, system departments, training units, quality areas, etc.— whose mission is clearly positioned in relation to the afore-mentioned loop.

In any case, it would be convenient to integrate the set of dynamics specified in a modelled framework which allows visualizing, in a complete manner, the reach of knowledge governance in order to be able to face its display properly. In this case, literature revision (Gupta & Govindarajan, 2000; Alavi & Leidner, 2001; Shin *et al.*, 2001; Staples *et al.*, 2001; Zack, 2003; Argote *et al.*, 2003; among others) describes a wide range of references which partially raise the different

viewpoints of the afore-mentioned knowledge governance, losing a reference of holistic sense. The configuration of this model joins the dynamic of the afore-mentioned loop and the stages which achieve its alignment with the key strategy and factors of the business, apart from the corresponding evaluation of impacts (see Figure 4).

All this is included within a scheme characterized by complexity, given that the ‘act or fact of knowing’ is complex in itself, as well as the different knowledge processes (flows), given their diversity and functionality, which justify understanding governance as an action aimed at guiding such complexity.

This decrease in the terms alluding knowledge government allows translating its conceptual framework into a series of action lines recognized by all organizations and that, therefore, own a history, a record, programmes and tools which in many cases merely lack of integration; that is, a model for knowledge governance is not about accumulating programmes. These action lines are centred on the afore-mentioned organizational intelligence, expert management, communication, quality, learning-training, I+D and documental management, and on the strategies/mechanisms briefly described next:

- Organizational intelligence is an action line which pursues the configuration of an alert system for the organization (Escorsa & Maspons, 2001; Kurtyka, 2003; Almeida *et al.*, 2003). The activities linked to techno-

Figure 3. Improvement of intellectual capital (Source: Personal compilation)

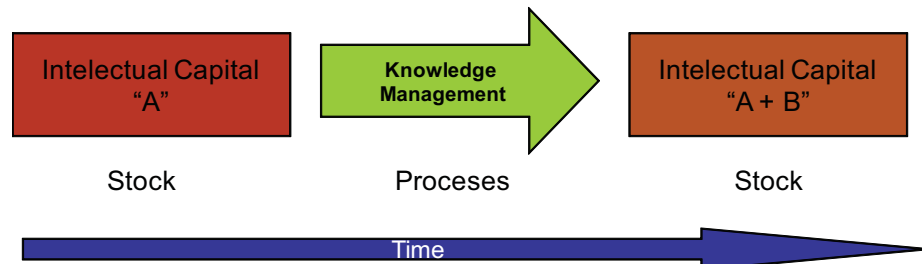
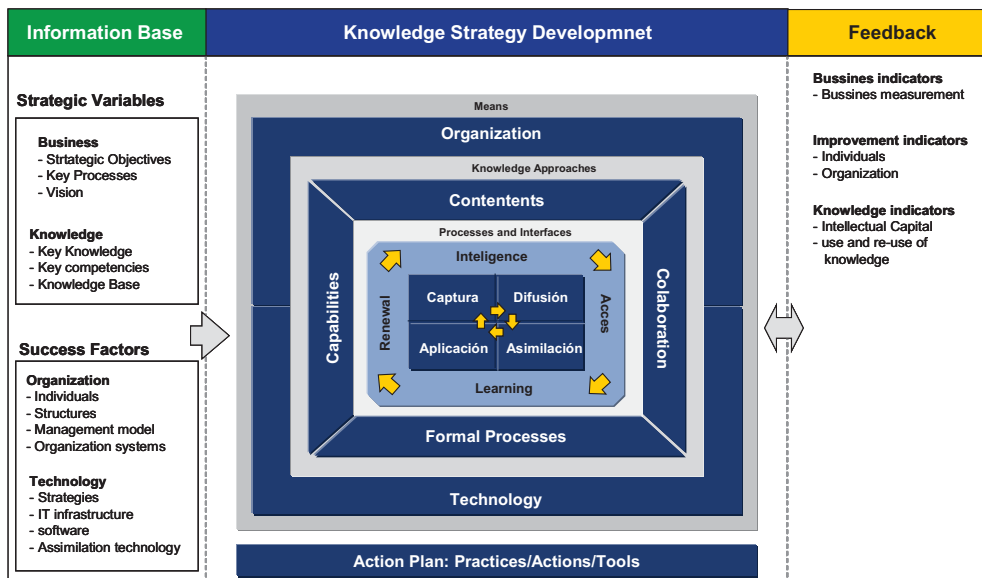


Figure 4. Knowledge-governance model (Source: Bueno & Plaz (2005) and personal compilation)



- logical vigilance, competitive intelligence, benchmarking, etc., are practices recognized within this kind of action.
 - Expert management is a mechanism mainly based on collaborative approaches, networks, communities of practice, etc., where knowledge exchange, especially that of tacit knowledge, becomes a key objective.
 - Communication, strategy based on the information about the organization's abilities, resources, results, etc., where communication models, existing channels, etc., play essential roles (Davenport & Prusak, 1998; Szulanski, 2000).
 - Content management is centred on the systems allowing appropriate tackling and accessibility to documents through data bases.
 - Individual learning —bearing in mind the dynamics of training, offer and demand, attendance and on-line, which generate cycles (Nonaka & Takeuchi, 1995) of knowledge recycling where performance of the learnt concepts is an important objective.
 - Organizational learning is an action line based on the development of exchange and collaboration areas where the concept of communities in practice may favour knowledge register in organizational memory and the improvement of its degree of advance when shaping thematic groups of interest (Easterby-Smith & Lyles, 2003), and
 - Innovation and improvement is centred on the organization's efforts on I+D and the obtained results (Zack, 1999). Thus, those dynamics favouring creativity, incentives and recognition are an important part of this strategy.
- Once the breadth of knowledge governance is observed, we can clearly state that the central positioning of collaboration dynamics in this matter goes further than the documental approaches which have characterized the first stages of the strategies of those companies concerned with Knowledge Management, in which great efforts for digitalization have also been raised. As a result,

Model on Knowledge-Governance

we have come to the subsequent replacement of *knowledge stock* by *knowledge flow*.

Once we have reached this point, and from the double dimension (see Figure 5) which intersects between the loop and the action lines, it is important to emphasize the enriching effect on coordination and individual and organizational learning derived from a collaborative working approach.

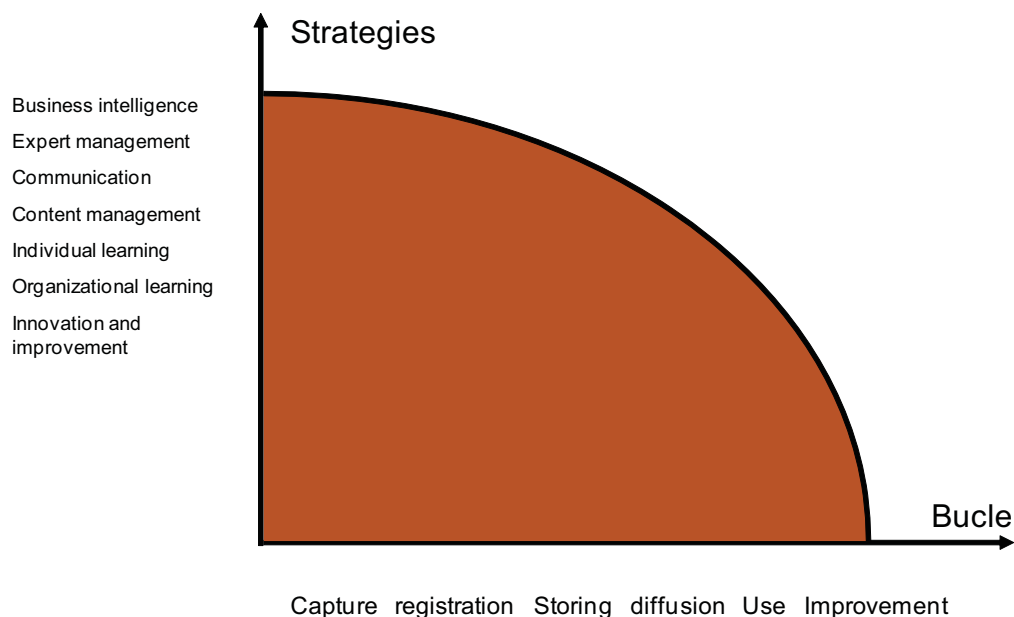
Therefore, transference and exchange dynamics appear as recipes of high strategic interest from the couple collaboration-communication, where we can reflect, design and explore areas, channels and subject matters.

From the field of collaboration, the main axes of action are centred, on one hand, on the creation of appropriate areas—attendance or virtual—which facilitate sharing ideas and documents, and, on the other hand, on establishing a culture prone to share, in which leadership, awareness and recognition exertion become key elements for its operation.

Therefore, the phenomenon of transference as a communication process influenced by a set of causal contingencies or variables of contextual nature—so that we have to take into account the attitudes, competency and abilities of the emitter and receiver agents, and the existence, on one hand, of a wide range of messages (information and knowledge) with a comprehensive and available approach of added value and, on the other hand, of the appropriate channels for their transmission according to the nature of such messages with the aim of eliminating or avoiding, as much as possible, mechanic, semantic and contextual noises and interferences. Regarding the latter, message is linked to the information and the knowledge we attempt to transfer, both if it is of documental or tacit nature, all set in a specific cultural context.

Thus, from the beginning, in spite of counting on a significant value offer, it may occur that the set of resources and abilities of the emitter or receiver may benefit or limit the process. This

Figure 5. Field of action for knowledge governance (Source: personal compilation)



way, it should be emphasized that it would be more interesting to count on a motivated and capable emitter with a first-level offer, since—to a large extent—a relevant number of requirements are not found in the vanguard of knowledge.

To sum up, we attempt to reach understanding between both extremes of the transference process, for which the channel or means should be adjusted to the nature of knowledge—whether it is explicit or tacit, intellectual or collective, since each of them will raise specific and different requirements.

Active and passive communication may also be taken into account, bearing in mind those mechanisms which allow the message to reach its addressee (systems of selective information diffusion) or, on the contrary, others needing willingness from the addressee in order to achieve the objective of communication (e.g., notice-boards), according to the dimensions characterizing knowledge (epistemological, ontological, systemic and strategic), which leads to the design of different operative programmes of management of knowledge processes, according to the LICI index (Level of Information, Complexity and Imagination) of the transferred knowledge (Bueno, 2002).

Among all options occurring nowadays on the subject of collaboration, it is to stand out communities of practice as a concept of high strategic interest, given its linkage to an area of specific knowledge and interest for organization which includes collaboration within a process from which a result is expected.

THE CONCEPT OF COMMUNITIES OF PRACTICE (COP)

The purpose of existence of the communities of practice (Wenger, 2001; Wenger & Sneyder, 2000) is oriented towards the creation of a common area for individual meeting in order to interact in benefit of the generation, exchange and assimilation

of experiences around specific application areas with clearly defined objectives.

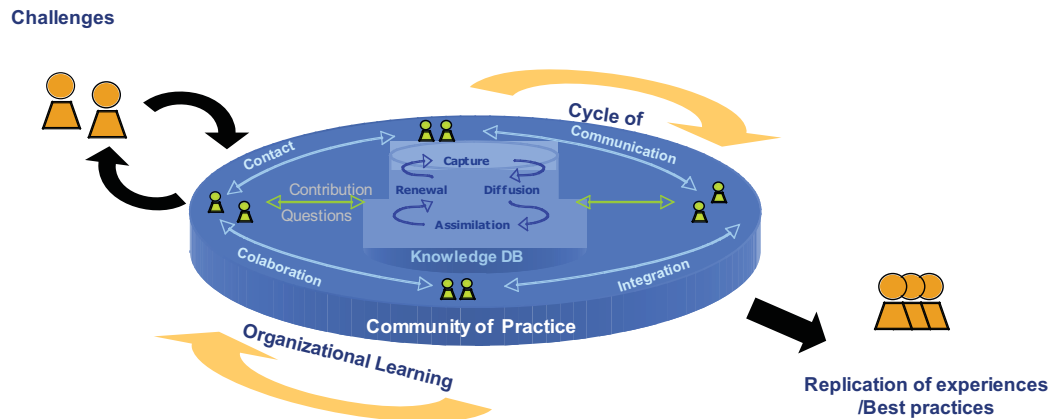
This common area should use, on one hand, the cycle of knowledge reception, diffusion, assimilation and renovation in the organizational data base, structuring the experiences and facilitating its members' searches and contributions. This way, we can apply to CoP, as an agent, the whole model of knowledge governance from the viewpoint of both the loop and the seven defined strategies (see Figure 6).

On the other hand, it should also facilitate the relation among community members beyond mere information exchange, which is the only way to make non-specified knowledge appear in reports of formal nature. This exchange dynamic is only possible if mission and objective internalization occurs within the context of the community, since that internalization would facilitate the flow of the interaction cycle which will favour cohesion among its members.

A consolidated community of practice represents the natural place we turn to when we need to seek for advice or raise requests linked to its field. The development of practice and attention to requests raised to the community facilitates the replication of experiences in order to dynamize and accelerate the velocity of the organizational learning cycle. Community of Practice is grounded on three basic pillars which provide it with a management framework and the necessary support tools for its operation:

- Technology provides with the necessary tools and means to create effective collaboration areas from an operational viewpoint.
- The organizational environment and the necessary culture to meet the objectives and necessities of the community, the organization and its individuals, in order to achieve an identity and generate policies and appropriate management plans grounded on a solid base of training, awareness (com-

Figure 6. Knowledge processes (Source: Personal compilation)



munication) and motivation (incentives and recognitions), and

- The management model through which the rules of the game are established, the definition of flows and work processes, identification of actors (roles), knowledge types and their associated taxonomy.

In this sense, Figure 7 shows the relations of these three components with the community, as well as its linkage with the expected impact at the level of individuals, organization, business and the community itself, fields which lead to visualize the different returns which may be derived of an approach of CoPs.

Therefore, monitoring of practice in the community is carried out through indicators linked to four dimensions —namely, people, group, organization and business— which allow measuring the impact of the results, the generated and seized know-how and, through that, establishing strategies of impulse/monitoring which contribute to the creation of improvements and the alignment of objectives and actions.

THE PROCESS OF CREATION AND DEVELOPMENT OF A COP

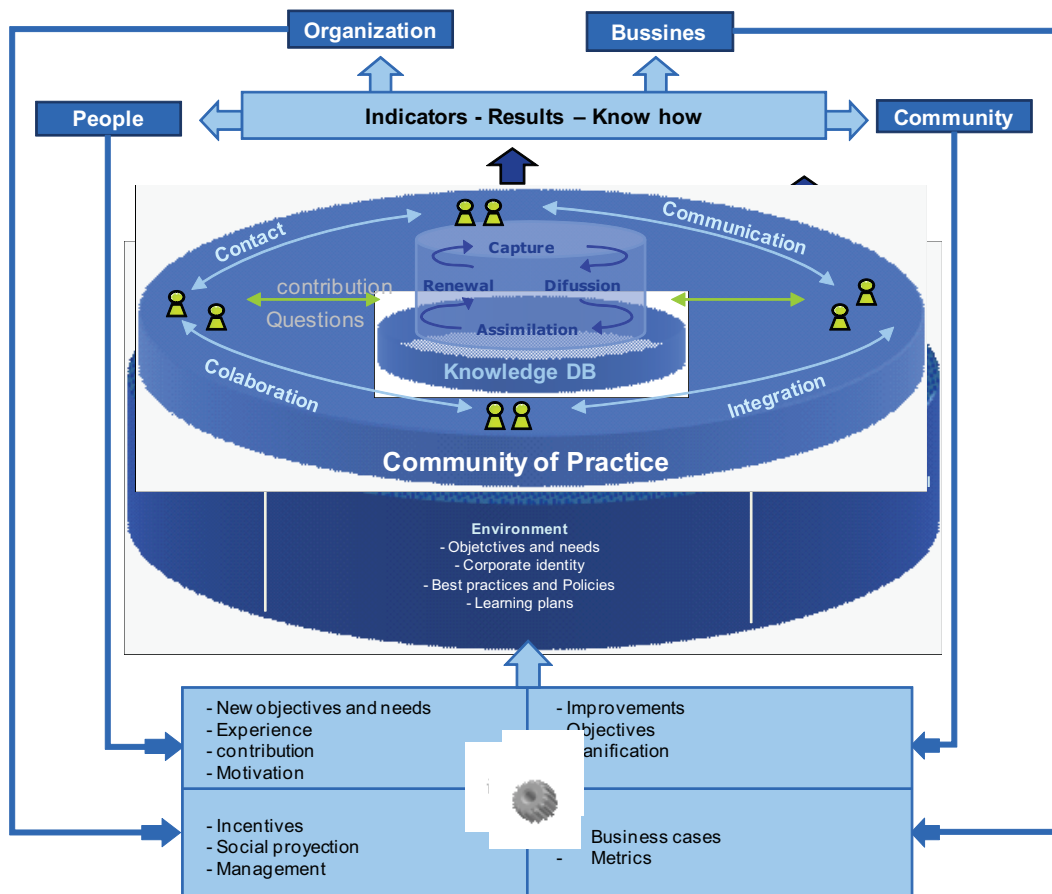
The creation of a CoP may be mainly linked to two approaches:

1. A push one, declared by the organization, in which practices structuring the community are decided and chosen by headship, involving a previous exercise of strategic reflection, and
2. A pull one, whose approach is based on providing resources and support to those groups developing a certain successful collaboration labour within the organization.

Obviously, success expectancy of both options may turn out to be very unequal, especially if we bear in mind the predisposition to collaboration showed by both alternatives. In any case, the process goes through a series of stages (see Figure 8):

- **Stage 1—Identification:** It is linked to the strategic priorities of the organization, which may be originated from the previously-mentioned push and pull viewpoints.

Figure 7. Overall approach of CoP (Source: Personal compilation)



- **Stage 2—Design:** The generation of a model which adjusts to collaboration necessities; that is, identifying the processes developed in its area and their fundamental requirements.
- **Stage 3—Construction:** Articulation of the preliminary organizational structure of the community, with its defined and necessary objectives, roles, responsibilities, and resources. In this case, the institutionalization of the CoP may be achieved through the formal recognition of its existence and certain responsibilities within the practice in question.
- **Stage 4—Implementation:** Turning on of a functional model through the generation of an area or platform supporting collaboration, an aspect in which non-area criteria prevail nowadays.
- **Stage 5—Growth:** Development of an extensive approach of the communities involving a higher number of people and, therefore, exceeding the idea of the organization’s preliminary structure. In this sense, preliminary stages can entitle the role of ‘observer’ as an agent which shows interest in becoming a part of the CoP in the future. This expansion clearly impacts in the ambiguity of the organizations’ limits, and
- **Stage 6—Improvements:** Establishment of a self-diagnosis policy, consolidating the

Model on Knowledge-Governance

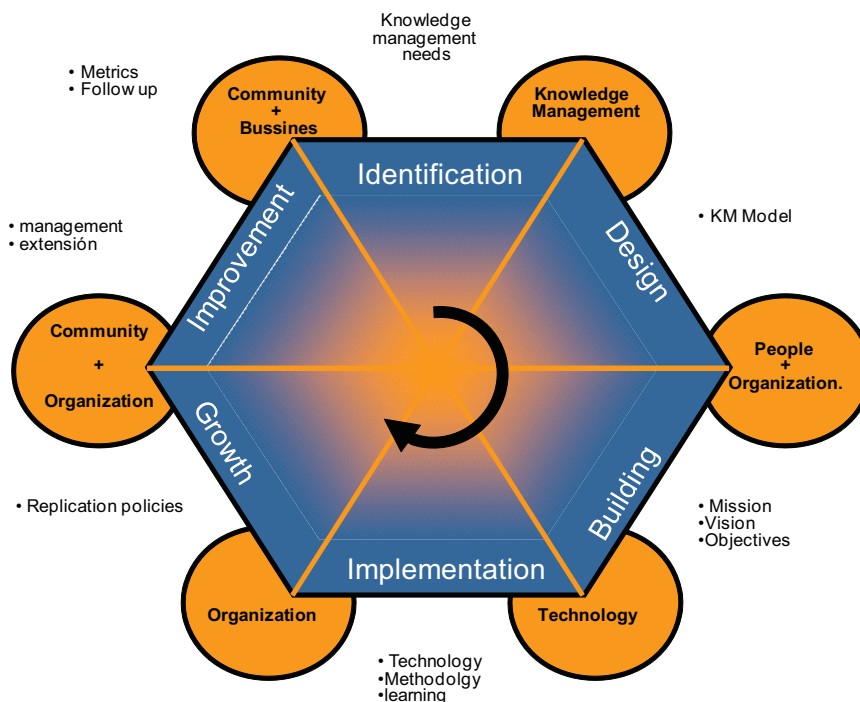
benefits which it contributes to the community, especially through the generation of an organized set of indicators.

FINAL REFLECTION

Through the approach of Communities of Practice we make clear important benefits which enable the identification of opportunities for growth and development of an organizational culture centred on the seizing of talent and continuous improvement. Among the most obvious general benefits of this approach we can emphasize the following:

1. Boast a structured and common data base containing relevant information for the different projects and activities carried out in the organization in the context of the influence areas of the CoPs.
2. Count on technological resources which allow creating new virtual areas of collaborative work for the generation and construction of documents in an asynchronic and ubiquitous manner, facilitating the exchange of documents and opinions among group members without depending on attendance meetings.
3. This interaction will work to generate—in real time—a record of all documents generated by the group, which may be consulted.
4. Facilitate and accelerate the processes of generation of records and work around the conclusions and commitments established in a meeting, and
5. Boast instruments and platforms which facilitate assessment processes of suppliers and the creation of a common data base on suppliers, an interface which optimize the actions of diffusion and access to informa-

Figure 8. Process of creation of a CoP (Source: Personal compilation)



tion on suppliers, and registers (records) of the result of relevant indicators for CoPs in order to facilitate the activities related to benchmarking.

Therefore, given the concept of CoP, the pillars on which its turning-on is grounded, and the general process which may act as a roadmap, we have come to meet a specific reality as a tool which—from a collaborative viewpoint—insists on the approach of the knowledge-governance model, making a proper use of transference and exchange dynamics, which is the aim of this chapter.

REFERENCES

- Alavi, M. & Leidner, D.E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, 25, 107-136.
- Almeida, P.; Phene, A. & Grant, R. (2003). Innovation and Knowledge Management: Scanning Sourcing and Integration. In M. Easterby-Smith & M.A. Lyles (eds.), *Handbook of Organizational Learning and Knowledge Management* (pp. 356-371). Oxford, UK: Blackwell Publishing.
- Argote, L.; McEvily, B. & Reagans, R. (2003). Managing Knowledge in Organizations: An Integrative Framework and Review of Emerging Themes. *Management Science*, 49, 571-582.
- Barney, J.B. (1991). Firm Resources and Sustained Competitive Advantage: A Comment. *Journal of Management*, 17(1), 99-120.
- Blumentritt, R. & Johnston, R. (1999). Towards a Strategy for Knowledge Management. *Technology Analysis and Strategic Management*, 11, 287-300.
- Bontis, N. (1999). Managing Organizational Knowledge by Diagnosing Intellectual Capital: Framing and Advancing the State of the Field. *International Journal of Technology Management*, 18, 433-462.
- Brown, J.S. & Duguid, P. (1991). Organizational Learning and Communities of Practice: Towards a Unified view of Working, Learning and Innovation. *Organization Science*, 2, 40-57.
- Brown, J.S. & Duguid, P. (1998). Organizing Knowledge, *California Management Review*, 40, 90-111.
- Bueno, E. (2005). Fundamentos epistemológicos de dirección del conocimiento organizativo: Desarrollo, medición y gestión de intangibles. *Economía Industrial* [Spanish Ministry for Industry, Tourism y Trade], 357, 13-26.
- Bueno, E. (2003). Enfoques principales y tendencias en dirección del conocimiento (Knowledge Management). In R. Hernández (ed.), *Dirección del conocimiento: Desarrollos teóricos y aplicaciones* (pp. 21-54). Trujillo, Spain: Ediciones La Coria.
- Bueno, E. (2002). Dirección estratégica basada en conocimiento: Teoría y práctica de la nueva perspectiva. In P. Morcillo & J. Fernández Aguado (eds.), *Nuevas claves en la Dirección Estratégica* (pp. 91-166), Madrid: Ariel.
- Bueno, E. & Plaz, R. (2005). Desarrollo y Gobierno del Conocimiento Organizativo: Agentes y procesos. *Boletín Intellectus*, 8, 16-23.
- Bueno, E. & Salmador, M.P. (eds.) (2000). Perspectivas sobre Dirección del Conocimiento y Capital Intelectual. Madrid: Instituto Universitario Euroforum Escorial.
- Cook, S.D.N. & Brown, J.S. (1999). Bridging Epistemologies: The Generative Dance between Organizational Knowledge and Organizational Knowing. *Organization Science*, 10(4), 381-400.
- Davenport, T.H. & Prusak, L. (1998). *Working Knowledge. How Organizations What They Know*. Harvard, US: Harvard Business School Press.

Model on Knowledge-Governance

- Drucker, P. (2001): The Next Society. *The Economist*, November 3rd, 3-22.
- Easterby-Smith, M. & Lyles, M.A. (Eds.) (2003). *The Blackwell Handbook of Organizational Learning and Knowledge Management*. Oxford: Blackwell.
- Escorsa, P. & Maspons, R. (2001). De la Vigilancia Tecnológica a la Inteligencia Competitiva. *Financial Times*. Madrid: Prentice Hall.
- Foss, N. (2006): The Emerging Knowledge Governance Approach: Challenges and Characteristics, DRUID Working Paper, no. 06-10.
- Gorey R.M. & Dovat D.R. (1996). *Managing on the Knowledge Era*. New York: Harper and Row.
- Grant, R.M. (1996) Toward a Knowledge-based Theory of Firm. *Strategic Management Journal*, 17, 109-122.
- Grant, R.M. (1991). A Resource Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, 33(3), 114-135.
- Gupta, A.K. & Govindarajan, V. (2000). Knowledge Management's Social Dimension: Lessons from Nucor Steel. *Sloan Management Review*, fall issue, 71-80.
- IADE-CIC (2003). *Modelo de medición y gestión del capital intelectual: Modelo Intellectus*. Madrid: Universidad Autónoma de Madrid: CIC-IADE.
- Itami, H. (1987). *Mobilizing Invisible Assets*. Boston, Harvard University Press.
- Itami, H. & Roehl (1987). *Mobilizing Invisible Assets*. Cambridge, MA: Harvard University Press.
- Kaplan, R.S. & Norton, D.P. (1992). The Balanced Scorecard Measures that Drive Performance. *Harvard Business Review*, 70(1), 71-79.
- Kogut, B. & Zander, U. (1992). Knowledge of the Firm, Combinative Capabilities and the Repliation of Technology. *Organization Science*, 3, 383-397.
- McGrath, J.E. & Argote, L. (2002). Group Processes in Organizational Contexts. In M.A. How & R.S. Tindale (eds.). *Blackwell Handbook of Social Psychology*. Oxford, UK: Blackwell.
- Merino, C. (2004). La Inteligencia Organizativa como Dinamizador del Capital Intelectual. *Revista Puzzle*, 3(14), 4-10.
- Nahapiet, J. & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*, 23, 242-266.
- Nonaka, I. (1991). The Knowledge-creating Company. *Harvard Business Review*, 69, 96-104.
- Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, 5(1), 14-37.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Nonaka, I.; Toyama, R. & Cono, N. (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. *Long Range Planning*, 33, 5-34.
- Ordoñez, P. (2001). Relevant Experiences on Measuring and Reporting Intellectual Capital in European Pioneering Firms. In N. Bontis & C. Cheng (eds.) *World Congress on Intellectual Capital Reading*. New York: Butterworth-Heinemann.
- Peteraf, M.A. (1993). The Cornerstone of Competitive Advantage: A Resource-Based View. *Strategic Management Journal*, 14, 179-191.
- Plaz, R. & González, N. (2005). La gestión del conocimiento organizativo: dinámicas de agre-

- gación de valor en la organización. *Economía Industrial*, 357, 41-62.
- Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York, Doubleday Currency.
- Shin, M.; Holden, T. & Schmidt, R.A. (2001). From Knowledge Theory to Management Practice: Towards an Integrated Approach. *Information Processing and Management*, 37, 335-355.
- Spender, J.C. (1996). Making Knowledge the Basis of a Dynamic Theory of the Firm. *Strategic Management Journal*, 17, 45-62.
- Staples, D.S.; Greenaway, K. & Mckeen, J. (2001). Opportunities for Research about Managing the Knowledge-based Enterprise. *International Journal of Management Reviews*, 3, 1-20.
- Szulanski, G. (2000). The Process of Knowledge Transfer: A Diachronic Analysis of Stickiness. *Organizational Behaviour and Human Decision Processes*, 82, 9-27.
- Teece, D.J. (1998). Research Directions for Knowledge Management. *California Management Review*, 40, 289-292.
- Teece, D.J. (2000). Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context. *Long Range Planning*, 33, 509-533.
- Tsoukas, H. (1996). The Firm as a Distributed Knowledge System: A Constructionist Approach. *Strategic Management Journal*, 17, 11-25.
- Tsoukas, H. & Vladimirou, E. (2001). What Is Organizational Knowledge? *Journal of Management Studies*, 38, 973-993.
- Vassiliadis, S.; Seufert, A.; Back, A. & Von Krogh, G. (2000). Competing with Intellectual Capital: Theoretical Background. Institute for Information Management and Institute of Management, University of St. Gallen.
- Walsh, J.P. & Ungson, G.R. (1991). Organizational Memory. *Academy of Management Review*, 16, 57-91.
- Wenger, E. (2001). *Comunidades de práctica aprendizaje, significado e identidad*. Barcelona: Paidós.
- Wenger, E.C. & Sneyder, W. (2000) Communities of Practice: The Organizational Frontier. *Harvard Business Review*, 78(1), 139-145.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5, 171-180.
- Von Krogh, G. & Ross, J. (1995). *Organizational Epistemology*. New York: MacMillan and St Martin's Press.
- Zack, M. (1999). Developing a Knowledge Strategy. *California Management Review*, 41, 125-145.
- Zack, M. (2003). Rethinking the Knowledge-Based Organization. *MIT Sloan Management Review*, summer issue, 67-71.

ENDNOTES

- ¹ It is important to consider not just the aspect of resource and ability property but also their availability —that is, the existence of an external offer of added value, frequently within the area or environment in which the organization is located.
- ² In the line of the model EFQM, intellectual-capital models propose a set of factors for reflection on organizational intangible assets.
- ³ Due to management criteria, structural capital is composed by organizational capital and technological capital, where the first establishes a set of structural and

Model on Knowledge-Governance

- non-technological factors and the second establishes all those elements linked to the use of technology and the results of innovation (intellectual and industrial property).
- 4 In the case of public organizations, social capital is related with the task of public service. This consideration may transfer social capital to structural capital, since it is shaped as a nucleus which legitimizes the organization's labour.
 - 5 In this case, the interest towards intellectual capital is oriented at better information for investors and other stakeholders who may be found within certain levels of technical or economic relations with the organization.
 - 6 Knowledge should be emphasized as a strategic key of the current economy, embodied in a person, transferred to the organization or social group according to real or moral contracts, and valued as a productive resource and dynamic competence.
 - 7 Where it is necessary to raise an appropriate management style articulated on the base of a leadership, awareness, etc. exercise which permeates the organization's culture.
 - 8 Systems turning around the concept of corporate radar, as an antenna which feeds the organization on information and basic knowledge.
 - 9 Instrument which favours organizational diagnosis according to a series of key criteria looking for certain fields of improvement and strengthens, and
 - 10 Tool for reflection and report on the organization's intangible assets, in its side of identification and measurement.