# Designing and managing business communities of practice

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## Abstract

**Purpose** – The purpose of this paper is to put forward a model to map the evolution of a business Community of Practice (CoP) in terms of learning and knowledge management processes.

**Design/methodology/approach** – Empirical evidence is based on seven case studies and the analyses of three best practices from secondary sources. Two of those cases are analyzed longitudinally from inception, while the others are retrospective. Cases were chosen in order to cover different kinds of industries and, especially, to analyze sharing of different kinds of knowledge (from call-centre operators to complex new products knowledge).

**Findings** – The article sheds light on the different evolutionary paths that business CoPs follow and the role of the dynamics of the organizational commitment and the people involvement. It was noticed that a high level of commitment from both the organization and its members is related to the effectiveness of the Community in supporting learning and knowledge management processes.

**Research limitations/implications** – The case studies and best practice examples reported are all based on the experiences of Western companies – although some, if not all, may have global operations. It is possible that some of the conclusions (e.g, levels of organizational commitment and individual participation, evolutionary stages and drivers), may not be valid for Asian-headquartered companies.

**Practical implications** – This article aims to develop actionable knowledge to support management in understanding how to manage a business CoP, in order to create value for both the organization and its members. The proposed model can be used for mapping the CoP evolution, while identifying the appropriate governance tools to cultivate, stimulate and drive the Community evolution.

**Originality/value** – In the model, the evolution of a Community has been assessed in terms of its vitality – i.e. its effectiveness in supporting knowledge management and learning. This vitality depends on the combination of the organization's commitment and members' involvement. Therefore, supporting a Community in its evolution means stimulating and maintaining the commitment (animation and promotions levers) of these two parties.

**Keywords** Working practices, Knowledge management, Case studies, Governance

**Paper type** Research paper

## Introduction

Since KM became a prominent topic in management literature, various perspectives have been developed: from the first, technology-focused view to the taxonomic-based standpoint; from ''knowledge as what is known'' to the later socio-practical concept. Each perspective embodies a different role of ICT: from a classical Information System which allows users to translate knowledge into information, as well as to extrapolate knowledge from information (technology- focused view) to the need to transfer non-codified knowledge (taxonomic-based standpoint) while arriving to a backward role in respect to managerial and organizational levers in the what is known perspective (knowledge lies in the individual mind).

The authors' perspective on organizational knowledge is socio-practical, which considers knowledge as a common good rather than a mere individual asset (Von Krogh, 2002).

Knowledge creation and sharing are interpreted as social processes, in which the most important role is played by individuals and their relationships with others (Senge, 1990; Brown and Duguid, 1998). The creation and transfer of knowledge are considered as social phenomena and an integral part of a Community (Brown *et al.*, 1998; Wenger, 1998a). Indeed, individuals choose other individuals with whom to cooperate from beyond their structures and formal ties (i.e. departments, divisions, etc.), thus creating informal networks that overlap formal ones, and top-down designed structures within the organization.

Among the different types of informal networks, the Communities of Practice are the most interesting from a knowledge management point of view.

Through the Communities, the individuals find the answers to those needs of sociality, belonging and experience-sharing that organizations find increasingly difficult to satisfy. Moreover, through the Communities, firms see the possibility of finding new ways to connect people, thus overcoming the geographical and organizational bonds of traditional company structures. This is a growing need, considering the ''mobile workers phenomenon'', which represents an increasingly important share of the total workforce (Drucker, 2002; Corso *et al.*, 2006) and requires different solutions compared to the traditional approaches.

It is clear that these developments have a strong influence on the working environment: on the one hand, the very concept of space changes, while, on the other, there is a different relationship between companies and employees. The latter identify less and less with their companies and are left alone with their needs and professional projects. In many cases, being a distance worker is an obligation rather than a choice and compared to the traditional figure of the worker it involves individual qualities such as independence and spirit. At the same time, distance workers are more interested in their professional development than in personnel development policies.

For the companies, all this means finding new ways to respond to people's needs (safety and identity, membership and sharing, visibility and status, learning and personal development), re-designing the workspace on the basis of a number of guidelines: process re-configurability and layout independence, predominance of people over tools, and finally, operations, cooperation and access. In other words, processes need to be made re-configurable independently of the layout and of an organizational structure that is becoming ever more fluid; the focus needs to be on people and competences combined with supporting tools, and not the other way round; the system needs to be brought in line with changing operations, allowing people to work and cooperate, and have access to information and competences wherever they are and under all conditions.

From a technological point of view, a great opportunity is offered by the web as the place in which organizations design and manage the Communities.

The challenge is, however, at the organizational and managerial level: Communities of Practice are emerging as self-organizing entities that management can encourage and support, gaining great advantages, without owning or controlling them totally. If Knowledge Management is about ''. . .creating an environment that encourages people to learn and share knowledge by aligning goals, integrating bits and pieces of information within and across organizational boundaries, and producing new knowledge that is usable and useful to the organization'' (Corso *et al.* 2004, 2006), Community-based knowledge management means ''designing the right set of communication tools, incentives, motivation, organizational and managerial mechanisms that, without being intrusive, follow and guide Community life and evolution''.

This working environment is the result of technical, organizational and managerial choices with which the company influences people's behaviour in all phases of the knowledge lifecycle, including the acquisition, transfer and sharing, capitalization and reuse of knowledge. This environment has to be designed to fit the internal and external context of the organization.

According to this line of research, ICT is interpreted and then used as a set of tools to recreate a social reality made up of interpersonal relationships and communication flows and possibly enhance this reality, emphasizing openness and cooperation.

## 1. Theoretical background

Knowledge Management is a complex phenomenon that can be understood only if, among other things, individual and collective learning processes and formal and informal organizational structures in the organization are analyzed.

### 1.1 Community-based knowledge management

The term ''Community of Practice'' was introduced by Wenger and Leave in the early 1990s (Leave and Wenger, 1991). The concept was born (Knowledge Board, 2003) within a research project run at the Institute for Research on Learning (IRL), a spin-off of Xerox Corp. Palo Alto Research Center (PARC). At that time, Wenger and Leave were studying apprenticeship as a way to share knowledge. They noticed that learning is not just a one-to-one relationship with a master, but a relationship with a whole community of people, with apprentices at different levels. The intuition came by observing a group of Xerox's copy machine technicians gathering around vendor machines and spontaneously sharing their ''tricks'' and telling each other stories regarding repairing experiences. Technicians, before checking handbooks or ''official'' learning material, usually contact colleagues in order to find information and suggestions for their jobs. The group was in some way the primary context where any new technicians could form their own expertise. One of the main conclusions drawn by IRL was that learning is a social fact, fostered by involvement and participation in a practice.

Scientific literature provides several definitions of Communities of Practice (Brown and Duguid, 1998; Wenger and Snyder, 2000; Magnusson and Davidsson, 2001; Andriessen *et al.*, 2002), but all of them starting from different points of view, stress the role the Community has in enabling and facilitating knowledge creation and sharing that allows its members to learn and develop their competences. Wenger, in particular, defines the Community of Practice as a group of individuals who share a common interest, a set of problems or a passion and who increase their knowledge and the understanding of these aspects through interpersonal relationships (Wenger *et al.*, 2002).

Wenger *et al.* (2002) identify three common characteristics of Communities of Practice, although they recognize that Communities assume different forms according to the context in which they exist. These three characteristics are:

1. *Domain.* The area of interest, which creates a common base among members and allows them to develop a group identity.

2. *Community.* The learning social factory (Wenger, 1998), a group of people who interact, learn together, build relationships and through this develop a sense of membership and reciprocal commitment.

3. *Practice.* The shared repertory of competences and common resources (i.e. routines, documents, tools, styles, legends, symbols and language) that members have developed; this repertory includes the knowledge created and shared in the past and

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allows for future learning, for trusted relationships and for circulation of explicit and tacit knowledge.

Each CoP is a different combination of these fundamental aspects which evolve according to the context in which the Community exists through a process of continuous re-definition led by its members.

Social interaction (Vygotsky, 1978) plays a very important role in learning and in the development of cognitive ability. Situated learning (Leave and Wenger, 1991) is a way to understand learning as a social event rather than a psychological dynamic. Learning usually depends on the activities, on the context and on the culture in which it occurs: in the case of situated learning, it is the authenticity of the context in which the learning occurs that helps knowledge creation and allows each individual to apply it in new ways and to new situations.

With the concept of situated learning, Leave and Wenger (1991) also define the concept of Legitimate Peripheral Participation, which describes how new entrants become integrated into a CoP: apprenticeship is a metaphor that explains how individuals develop knowledge and at the same time modify the Community which they are in – this may be done through experience, interaction and, ultimately, participation in the activities on the Community agenda, starting from a peripheral position, but legitimated by the other members.

A CoP (Wenger, 1998) is not a new type of organizational form; it is a different point of view in the organization which stresses how people are involved in learning dynamics more than the units they belong to or the projects they work on. When members work in multidisciplinary teams, they can, on one hand, apply their knowledge, the Community's knowledge, to the real problems, and, on the other hand, subsequently bring back to the Community the new experience learned from experts in different subjects.

Like other living things, Communities are not born in their final state, but go through a natural cycle of birth, growth and death. Many go through such radical transformations that the reason they stay together has little relation to the reason they started in the first place (Wenger *et al.*, 2002). Although Communities of Practice continually evolve, it is possible to observe five stages of Community development: potential, coalescing, maturing, stewardship and transformation. They typically start as loose networks that hold the potential to become more connected and thus a more important part of the organization. As members build connections, they coalesce into a Community. Once formed, the Community often grows in both membership and in the depth of knowledge their members share. When mature, Communities go through cycles of high and low activity, just like other living things. During this stage, Communities often take active stewardship of the knowledge and practices they share and consciously develop them.

All the studies on CoPs are in a pre-paradigmatic phase: existing theories are mostly interpretative and derived from anecdotic evidence. There is a need for empirically grounded explanatory research to understand:

1. how to ''design'' and to cultivate a business community;

2. in what contexts CoPs can live, generating value and supporting innovation; and

3. the CoP sustainability (how to survive and how to measure its value).

The article intends to be a contribution to the first point.

## 2. Research questions

Based on a review of the literature, the authors assume that the effectiveness of CoP in terms of knowledge assimilation, creation, transfer, sharing, capitalization and reuse, is dependent on:

■ the organization's commitment to the Community in terms of resources (i.e. time, space, management attention) allocated and level of legitimization; and

■ the members' level of participation and involvement in the Community's activities.

> **"Like other living things, Communities are not born in their final state, but go through a natural cycle of birth, growth and death."**

As the main purpose of the research is to understand how to manage Communities of Practice effectively in order to create value for the organization and the individuals throughout its life-cycle, the research questions to be addressed here are the following.

*RQ1.* What are the stages of evolution of a Community in terms of the functioning of its learning and knowledge management processes?

Assuming that those evolutionary stages depend on the level of involvement and participation of the members and on the organization's commitment, two further questions arise:

*RQ2.* What are the levers that enable the organizations to enhance their members' involvement and participation in the Community?

*RQ3.* What are the levers that enable a single Community to obtain resources and legitimization towards the organization?

## 3. Methodology

A CoP is a complex entity that is the result of the sum of all its past experiences. Individuals participating in its activities have specific experiences and establish relations with each other. All those factors are strictly related to the history of an individual in the Community and of the Community as a social entity. This organic nature of the Communities is the reason why qualitative methodologies have been used to understand this phenomenon (in all its aspects).

Hence, we have used a case study methodology. In particular, three best practices were chosen from secondary sources (Xerox – Eureka; Xerox – SPI; Dailmer Chrysler – Tech Club), and seven case studies were conducted as empirical research. Two of those cases (Telco – Sales1; Telco CC1) are analyzed longitudinally from inception, while the others are retrospective. Cases were chosen in order to cover different kinds of industries and, especially, to analyze Communities in which members share different kinds of knowledge: from single smart information shared by call-centre operators to complex modules that designers share and reuse when they develop new products and solutions in a telecom company.

Data were collected in order to acquire the greatest amount of information about the phenomenon analyzed (a single Community) and the external context. Multiple data collection methods were used – both qualitative and quantitative (Yin, 1994) – in order to obtain the triangulation of the information acquired[1].

The use of semi-structured interviews gave a good deal of freedom to the interviewer and interviewee, but at the same time assured that all relevant subjects were discussed and all the required information collected. Two different checklists (one for the key informant people and another for the Community coordinators) were therefore used, to define what subjects should be covered. However, the order of the questions, the topics to study in depth, the level of detail, and the words to use, etc. were decided by the interviewer during the meeting. A report was written for each case study after the interview.

## 4. Case studies

In this section, the Communities are briefly described; except those chosen from secondary sources, they are titled with a name assigned by the authors and related to their features.

### 4.1 Xerox – Eureka

The famous Community of Xerox technicians, Eureka (APQC, 2000), started as a spontaneous aggregation of individuals sharing information and tricks on how to solve copy machine problems. Over the years, the organization has recognized the Community as something that creates value and has given it resources. While, at the beginning, the Community was mostly a set of local entities, now, with the organization's resources, it is able to interact and share information all over the world. The organization has even given resources to develop a platform (the Eureka system) that allows communication between geographically scattered individuals. There are no incentives, and participation is not compulsory but enhanced by personal involvement and by the identification with a professional group. To express all its potential, it just needed the appropriate tools.

### 4.2 Xerox – SPI

The Software Process Improvement (SPI) Community (APQC, 2000) is an internal group of individuals involved in the software development/improvement process. The SPI program started in 1995 as a team of experts in this area from different divisions whose aim was to reduce software development costs and time. However, the project was not particularly successful, because the group did not accept its institutional role. A few years later, in 1997, this team reorganized itself as a Community with its own working method. It just had to report its activities every three months to the management. The main purpose of the Community became sharing knowledge and building relationships, and the results began to arrive. The Community has a virtual meeting once a month, using a tool that supports remote cooperation and communication. The SPI became such a best practice that it won the Xerox Best Community award in 1999.

### 4.3 Daimler Chrysler – Tech Club

The Tech Clubs Community (APQC, 2000) was started when, after an internal reorganization in which inter-functional teams began to manage the entire vehicle production-cycle, individuals needed to get back in touch with their peers with similar competences. Tech Clubs aim to link engineers who work in the same process but in different platform teams. They have frequent face-to-face or virtual meetings, depending on the geographical distance. Participation is not mandatory, but the organization recognizes formal rewards and individuals are assessed indirectly on the basis of their participation.

### 4.4 Telco Operator – Sales1

In a large Italian telecom operator, ''Sales1'' is the Community of SME indirect sellers. It started in 2000 to reduce turnover, improve the learning process, and foster interaction by supporting agent-to-agent contact and developing a direct channel communication between the company and seller not mediated by an agency manager. The Community is based on a web portal in which members find news about their work and information about products, training courses, tools for everyday work, and, above all, a virtual space to interact, build relations and share experiences. The organization promoted this platform from the start-up phase (with a presentation road shop, merchandising activities and other marketing activities). Moreover, an editorial board updates information everyday, continually stimulating participation and offering some rewards (not monetary) for online games. The level of participation is very high, and most accesses are concentrated in out-of-work time, evidence that the members are involved because they perceive it as an investment for their professional development. The organization now uses this channel to communicate directly with these sellers (who are not contractually linked to the organization) and to acquire from them information about the market, customers and competitors.

### 4.5 Telco Operator – CC1

In the same telecom operator, ''CC1'' is the Community of call center operators. It is a recent project that has delivered good results in one of the operator's largest call centers, and for this reason it will be extended to all the other centers in Italy. In a call center, the operators work on many different shifts with limited time to meet each other. The web tool aims to foster interaction between members. The aim is to improve the sense of belonging, the internal work atmosphere and collect knowledge and best practices regarding VAS (value added services on the mobile network). During the design phase, significant emphasis was placed on understanding the operators' needs, and now there are two Community members (chosen periodically from the most active ones in the previous two weeks) on the editorial staff to improve involvement and a sense of identification. Even if time is a particularly critical resource for operators (since they are also assessed on specific, time-based indicators), the level of participation is high (i.e. operators often use free time during their coffee breaks to interact) and the Community is starting to see results.

### 4.6 Bank – GB

In a major Italian bank, ''GB'' is the Community of customer accounts with a personal estate between €100.000 and €500.000. It was created with the aim of increasing knowledge of the market and emergent trends, to gain information on competitors, to foster interaction between geographically scattered individuals and to support social learning. In a few months, the project provided good results in terms of numbers and, in particular, of the quality of the information shared. However, tools such as a search engine or a means to classify knowledge were missing. When the animation activities and the stimuli were suspended, the Community went into a sort of stand-by phase. It is still on line, but all the activities have been significantly reduced.

### 4.7 Bank – CC2

In the same bank, ''CC2'' is the Community of call center operators. This Community was started to coincide with the launching of a training course when, with a limited budget, a web platform with forums was developed. When the course ended, the forum remained active and its members continued to post messages. Its members are mostly university students, the average age is around 24, and the staff turnover is quite high. Even if participation is supported by the call center manager, it is not directly stimulated by the organization with formal recognition and there are no animation actions. Members participate because they perceive this Community as something useful and necessary for their work. They can find suggestions, news about bank products, solutions to recurring problems, etc. There is not a real core group, although it is possible to distinguish really active participation (with members that write and read messages) and more passive involvement (individuals that just read messages without posting). It is now one of the best Communities in the bank in terms of involvement and frequency of interaction.

### 4.8 ICT service provider – CoC Telco

''CoC Telco'' is the Centre of Competence (CoC) in telecommunication technologies within an ICT service provider, itself part of a worldwide technology company. The CoC is based on the concept of reusability, i.e. the possibility to exploit past experiences or solutions (called reusable) in new work. The CoC aims to promote reusable sharing across the company. The company's knowledge strategy and the roles linked to the knowledge management process, inside and outside the Community, are well-defined. Although the organization has given the Community all the necessary resources and a web portal that supports functions, participation is very limited. Of about 400 potential members, only 50 are enrolled and rarely participate in the activities. One of the problems seems to be language. The majority of the members speak German, and this is an insurmountable barrier for most non-German members. Moreover, there is not any kind of stimulus for the individuals; it is their organizational units that benefit from the reusable exchange. In recent months, however, the

visibility of the CoC within the organization has been increasing and that seems to encourage member participation.

### 4.9 Advertising company – Sales2

''Sales2'' is the sales force Community of an advertising company. Sellers in this company have always had a strong collective identity, but geographical distance and the few opportunities to meet have limited the group to an informal network. Only after the introduction of a web portal to support interaction in 2001 did the sales group become a true Community. Through the forum on the portal, they support each other in solving problems and exchanging tricks and experiences. An editorial board capitalizes the more interesting messages, which are reorganized into easy-to-find FAQs. There is not any kind of formal incentive (monetary or other), but, with continuous animation, the periodical identification of new, interesting topics, and the innate sense of belonging shared by the sellers, the level of participation is very high and the Community gives essential support to the knowledge management process.

### 4.10 ICT consulting firm – FP

In a company that provides technology consulting to a large government authority in Italy, ''FP'' is the Community of experts in Function Point, a methodology to evaluate software. It was created in late 1996 when this methodology was introduced into the organization as the standard way to evaluate all software contracts with providers and customers. There are about 50 members from different divisions in the Community. They all have international certification from IFPUG (a worldwide FP Community) and this differentiates them from other employees in the company and creates a strong sense of belonging. However, the Community has few opportunities to interact (two/three meetings a year) and the only ways to communicate are the mailing list and the telephone. These conditions have limited the Community's growth in terms of effectiveness in the knowledge management process.

## 5. The evolutionary model

This section first describes the model, then the evolution of each Community is defined and explained.

A Community is a social entity within an organization that can be seen as a machine that produces intellectual capital. As any machine, the way a Community works can be studied through the existing relations between its input and output. However, the best comparison for a Community is with a living system: it produces some outputs from some inputs, but the transformation process is neither deterministically predictable nor explicable according to univocal cause-effect relations.

The way a Community works depends on its social structure. This social structure is determined by each individual's will and cultural background and by the previous experiences of the group. A Community is, therefore, a self-controlled structure, which is difficult to manage in a classical way. It must be given a good deal of autonomy. Any action towards the Community is unlikely to modify the inner working patterns (existing and potential), since nobody has the power and the skills to achieve this objective. Some levers can, however, be set to create the most suitable conditions (to supply input) so that the ''Community'' organism can pursue its own goals (to obtain output) effectively.

The evolutionary model proposed herein underlines a dual responsibility for the development of a Community, as synthesized by the input (supplied to sustain a Community and improve its performance) of the two requirements, i.e. the members' involvement and organizational commitment. A Community shares knowledge and supports the effectiveness of the learning process only if it can benefit from the members' involvement and if it can exploit the resources provided by the organization. Hence, it is necessary first to understand how the members' involvement and the organization's commitment manifest themselves. Moreover, the levels of commitment regarding the two agents that determine a Community's success vary during its life.

If those two dimensions (i.e. the members' involvement and the organization's commitment) are combined into a matrix, a map can be obtained in which each cell identifies different levels of viability and usefulness of a Community.

The position in this matrix is not fixed in the Community's life but is dynamic. An analysis of how the position has changed highlights the Community's evolution.

Finally, this evolutionary model identifies a set of levers that either agent (i.e. the members or the organization) can use to win the other party's commitment. This process starts from the evolutionary phase in which a specific Community is situated.

The proposed model (Figure 1) has two fundamental dimensions: the organization's commitment and the members' involvement and participation.

Alone, a Community does not possess the necessary resources to sustain its activities, and the time a member dedicates to Community participation often conflicts with the time needed for work. Consequently, the full development of a Community is related to the organization's commitment to assisting its achievement and growth. Without active involvement and real support in terms of resources spent by the organization, it is impossible for a Community to become an effective tool for knowledge management and to support learning. Moreover, the individuals' participation is related to their perception of the organization's opinion of the Community, its activities and the time spent in participating. As a dimension, the Organization's Commitment is operationalized with a variable-step scale. The authors decided to associate a negative score to a level of commitment that describes a hostile attitude to the Community, thus underlining that such a relationship damages the Community. The levels of Organization's Commitment are as follows:

■ *Hostility – Indifference* (level = −1). The organization does not know of the existence of the Community or, if it does, it does not recognize any usefulness nor does it approve of the Community. The organization does not provide any resources in terms of time, space or money. The value is negative to underline that this hostile attitude damages the Community.

**Figure 1** Evolutionary model
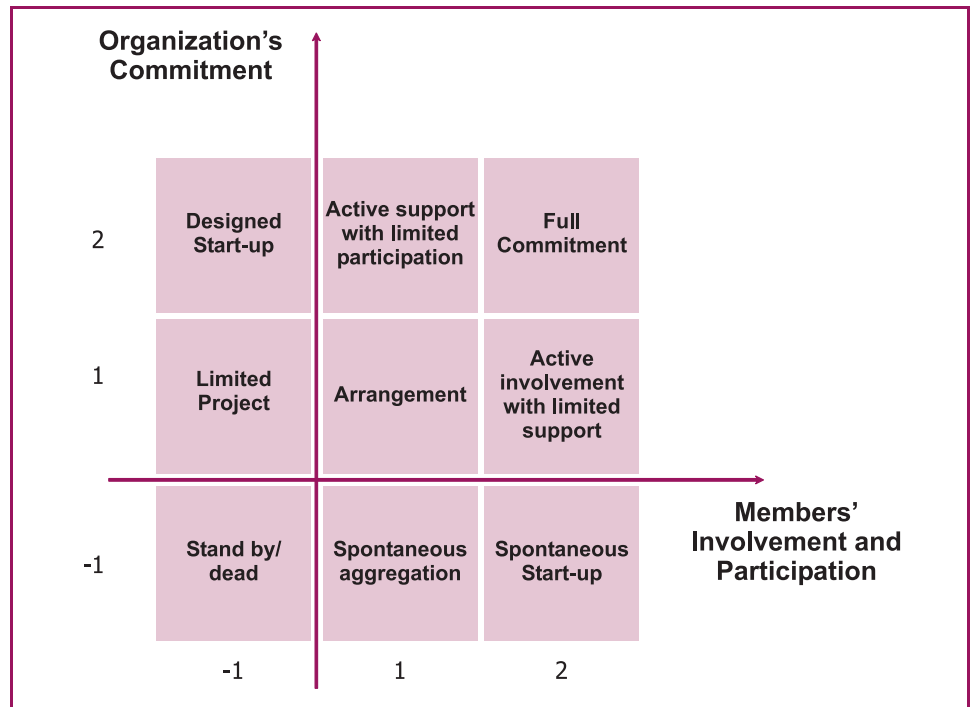
■ *Partial support* (level = 1). The organization recognizes that the Community can be useful to knowledge management or the learning processes. The organization supports the Community by providing some time and space. Limited economical resources are allocated to the Community, generally through the budget of the "closest" organizational unit (division or function).

■ *Active support* (level = 2). The organization recognizes the Community as an important and fundamental means to support learning and manage knowledge. The organization actively supports the Community, providing its own budget and devoting time and space to it.

On the other hand, a Community is made up of individuals, so it is led by their interest in the domain. A strong interest in the domain encourages the members to participate actively, share experiences, tighten relations and learn from others. When this interest is poor, the Community cannot exist and, therefore, it cannot support organizational learning. As in the previous dimension, the Members' Involvement and Participation are operationalized at three levels:

1. *Hostility* (level = −1). Members perceive the Community as irrelevant to their own professional interests, so the Community is seen as a waste of time. Participation in the activities is limited, there are no interpersonal relations between its members, knowledge is not shared, and the Community's activities are obstructed or boycotted.

2. *Limited participation* (level = 1). The Members acknowledge the Community as something useful to increase their knowledge. Participation occurs at two different levels: most members participate passively in the Community's activities, observing and listening to what is happening but without participating directly; a limited number of individuals are particularly active and aware of belonging to a Community showing reciprocal respect and mutual involvement.

3. *Active involvement* (level = 2). The Members recognize the opportunity to participate as one of the main ways to increase their knowledge. Most members are particularly involved in the Community's activities, participating regularly and actively in meetings. There are strong interpersonal relations with reciprocal trust and mutual engagement, and belonging to the Community is one of the most important aspects for the Members' professional identity.

### 6.1 Evolutionary stages

With the operationalization described, nine different quadrants are obtained by combining the level of the organization's commitment and the members' involvement. These quadrants, representing different stages in the evolution of a Community, are described in this section.

*6.1.1 Spontaneous aggregation and limited project.* The Community has limited commitment from either party, while the other party remains uninterested or hostile. In this quadrant, a Community may be in the early stages of its life when it starts as a pilot project (therefore with a limited budget), or if it is a marginal initiative in the working activities of the members.

*6.1.2 Spontaneous/designed start-up.* The Community has strong commitment from either the organization or its members (depending on who wants it to exist). This is the typical early stage of a Community's life: one side is completely involved and gives wide support while the other side perceives the Community as something secondary, useless or even damaging to its own interests. When this party begins to perceive some utility, the Community can move on to the stage of "active involvement with limited support" or "active support with limited participation".

*6.1.3 Arrangement.* The Community is recognized but not particularly supported by the organization and accepted mostly passively by its members. Neither party is particularly involved, but the Community exists and produces some results in terms of support to learning and knowledge management. A Community could stay in this quadrant if the original domain has been redefined in order to involve and win over the other party. When

either party becomes more interested, the Community moves on to the stage of ''active involvement with limited support'' or ''active support with limited participation''.

*6.1.4 Active involvement with limited support and Active support with limited participation*. The Community is recognized by both parties, but one is more interested than the other. The more involved party plays an active role in defining targets, managing the Community, and trying to win the full collaboration of the other party in order to move to the full commitment quadrant.

*6.1.5 Full commitment*. The Community has a strong commitment from both the organization and its members. These are the best conditions for the Community to become an effective instrument to support learning and knowledge management processes.

*6.1.6 Stand-by or dead*. The Community has no commitment from either the organization or its members. It is seen as something useless and self-defeating. A Community will be in this quadrant only in the last stage of its life, before dying or changing shape completely.

*6.2 Using the model to map the cases*. Following the analysis of the Communities examined, the evolutionary stages can be mapped onto the model (Figure 2). The evolutionary steps are shown as arrows. The broken arrows indicate a faster pace.

Based on all the evolutionary paths, some preliminary comments can be made.

First of all, each Community has its own evolutionary path with its own speed. For example, a Community can move in short steps over long periods (i.e. SPI, Sales1), while another can evolve so fast that the evolutionary stages become difficult to recognize (i.e. CC1, Tech Club).

Furthermore, a Community must originate from the four quadrants Spontaneous aggregation, Spontaneous start-up, Designed start-up or Limited project. This fact underlines that a Community can only be created if the organization or a group of individuals are involved. In the cases analyzed, there is a prevalence of Communities set up as a result

**Figure 2** Evolution of the analysed business communities
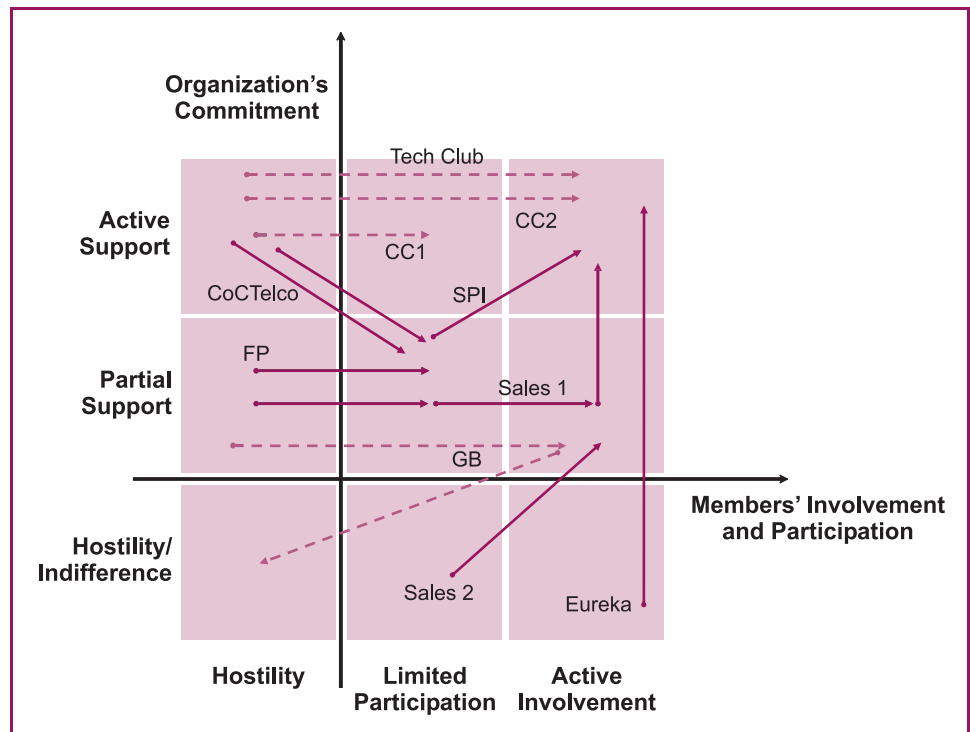
of an organization's initiative. That is not a coincidence, as the ultimate aim of the study is to develop tools that help management to conceive, develop and manage a Community. The analysis of both successful and failed Communities created as an organization's initiative points to the most effective actions to take and the mistakes to avoid.

The analysis of the evolution of each case shows which levers were used by the organization or by the members to win the other party's commitment and move from one quadrant to another in the model. Taking into consideration the prevalence of Communities created from an organizational initiative, we have a good empirical base of examples of how to win the members' commitment. On the other hand, with only two Communities that were set up spontaneously, the authors could identify just a limited number of actions that the members used to obtain the organization's commitment. These levers will be described in the next section.

In the case of ''GB'', it was noticed that, when the organization stopped animating the Community, the frequency and the quality of the members' contributions to the forum collapsed. The Community has continued to stay on line, but interactions have become rare and with limited interest. Some members would like to restore forums, and this shows they do perceive its usefulness.

The case studies taken from literature (Eureka, Tech Club and SPI) are best practices. Along different paths, these Communities have reached the stage of full commitment. Continuous action was important in all these cases in order to maintain a high commitment from both the organization and the members.

## 7. Governance tools: animation and promotion levers

In the proposed model, the evolution of a Community has been assessed in terms of its viability and, hence, its effectiveness in supporting knowledge management and learning. In turn, this viability was identified as depending on a combination of the organization's commitment and the members' involvement. Therefore, supporting a Community in its evolution means stimulating and maintaining the commitment of these two parties. A review of the literature analysis and mainly empirical research pointed at some levers (managerial, organizational and technological) that help to move a specific Community along the members' involvement and participation axis (animation levers) or the organization's commitment axis (promotion levers), thus improving the viability and usefulness of the Community.

### 7.1 Animation levers

The following tool aims to understand which levers the organization can use when it decides to develop a Community in a specific domain. Since it is the sponsor of the initiative, the organization shows its commitment, and its actions aim to win the full commitment of the potential members of the Community. In this case, the main actors are the organization itself and the coordinator that the organization has chosen to head the Community development project.

The literature and research suggest that members' full commitment can be won through:

1. *Improving individual involvement in terms of personal value and identification.* Individuals participate in activities they perceive as useful and if there is an overlap between their own interests and the Community's domain.

2. *Enhancing social relations.* Individual involvement must occur through participation in a social context.

3. *Improving connectivity between members.* Opportunities for members to come into contact with each other and build relations must be improved. This condition depends on the availability and the quality of spaces for both physical and virtual interaction.

4. *Improving communality.* The existence of common ground enables information and knowledge sharing between the Community's members.

> **Community-based knowledge management means designing the right set of communication tools, incentives, motivation, organizational and managerial mechanisms that, without being intrusive, follow and guide Community life and evolution.**

For these four elements, we have identified the best levers to adopt at each stage of the members' involvement and participation:

- Raising the members' interest (to move the Community from level − 1 to level 1 on the members' involvement and participation axis). To improve individual involvement, the members' curiosity must be stimulated and the initiative seen as something new with a potential benefit for them. It is essential that they perceive a link between the Community's domain and their own interests, which is not imposed on them by the management. Regarding social relations, the Community should help the potential members to get to know each other by leveraging on an existing network, promoting informal relations and defining Community access criteria. To improve connectivity, opportunities to use interaction-supporting tools must be provided. Finally, as to communality, the domain must be defined very clearly, in order to identify which skills and abilities the members should have if they want to participate effectively in the Community.

- To win the members' full commitment (to move the Community from level 1 to level 2 on the members' involvement and participation axis). To improve individual involvement, it is necessary to point out the sustainability over time of all the advantages related to participation in the Community, to support integration between Community activities and daily work, to highlight career opportunities, and help members to understand the usefulness of the Community for the organization. As to social relations, it is necessary to sustain the quality of the interaction, promoting collaborative attitudes, enriching the Community by enlarging the participation base, and supporting social structures that emerge spontaneously between the members. To improve connectivity, tools and opportunities to meet that are appropriate for the group's ways of interaction must be established. Communality can be encouraged by consolidating experiences and collecting and classifying knowledge, which embodies the developed expertise.

- To retain the members' full commitment (keep the members' involvement and participation at level 2). As to personal involvement, it is necessary to support the evolutionary nature of the Community even in the members' expectations and make them aware of their responsibilities in managing the Community resources. As to social relations, evolutions in Community leadership related to changes in domain must be supported, avoiding the growth of social structures that can lead to lobbying. For connectivity, tools and opportunities to meet must continue to be appropriate for the group's ways to interact. To maintain communality, a historical sense of the Community must be created in order to highlight the set of common experiences that have been acquired during the life of the group.

### 7.2 Promotion levers

This section looks at the levers the Community can use when it wants to acquire new resources to improve its effectiveness in pursuit of its goals. The Community's aim is to obtain commitment from the organization. In this case, the main actors are the members and the leader (as their influential representative) of the Community.

The literature and research suggest that an organization's full commitment can be pursued through:

1. *Increasing the Community's visibility.* The Community must be evident as a concrete and well-organized entity.

2. *Culture.* The Community has to have a cultural foundation that allows the organization to pursue its core values.

3. *Achievement of aims.* The Community must be able to deliver results in line with the organization's goals and, in particular, underline the impacts of its activities on business performance.

As in the previous section, these three elements can be detailed on the basis of the level of the organization's commitment:

1. To obtain legitimization form the organization (to move the Community from level -1 to level 1 on the organization's commitment axis). Regarding visibility, the Community has to show itself to the organization as an active entity with its own structure that actively involves individuals from the organization. At a cultural level, the Community has to operate in line with the organization's values. The Community must show which benefits the organization can gain from its activities and should be prepared to accept potential minor changes in the domain in response to the organization's needs.

2. To win the organization's full commitment (to move the Community from level 1 to level 2 on the organization's commitment axes). Regarding visibility, the Community should prove to be able to make the most of the opportunities offered by the organization and to effectively manage and organize its resources, time and spaces. At a cultural level, the Community has to work to support the spreading of the organization's core values. Moreover, the Community should point out and measure the results, showing their sustainability over time, and prove the cause-effect relations between the organization's performances and the Community itself.

3. Maintain the organization's full commitment (maintain the Community at level 2 on the organization's commitment axis). The Community has to maintain the visibility achieved. At a cultural level, the Community should be flexible and adapt itself to variations in core values or to radical cultural changes related to specific events. Regarding the achievement of its aims, the Community must respond to variations in the organization's critical success factors and be able to realign its action guidelines to new organizational objectives.

## 8. Conclusions

The research supports the assumption that the combination of two dimensions – the organization's commitment and the members' involvement and participation – can explain the evolutionary path of a business Community. The empirical research underlines the dynamic nature of those two dimensions: it was noticed that a high level of commitment from both the organization and its members is related to the effectiveness of the Community in supporting learning and Knowledge Management processes.

The analysis shows that:

■ a Community can be born only if the organization or a group of individuals are involved;

■ each Community has its own evolutionary path, moving at its own speed: a Community can move in short steps in long periods while another can evolve so fast that the evolutionary stages become difficult to be recognized;

■ as the CoP's viability is embodied by a combination of the organization's commitment and the members' involvement, supporting a Community in its evolution means fostering the achievement and maintaining the commitment of both sides; and

■ to move from a quadrant to another one in the model (i.e. to evolve), so as to win the other party's commitment, the organization or the members have to use appropriate levers: promotion levers to be used by the Community in order to acquire new resources to

improve its effectiveness, animation levers to be used by the organization to increase the members' involvement and participation.

In order to generalize results, the collaborative research methodology could be used (Coughlan and Brannick, 2001): working in partnership with the companies as change agents will give researchers the opportunity to test and validate the current evolutionary model and the related levers and, if needed, to change or adapt them, with a view to developing more actionable knowledge.

In terms of future developments, the proposed model, which can be used to map the Community's life, is a prerequisite for outlining a CoP development roadmap: in order to develop actionable knowledge, guidelines for the management to design, implement and cultivate a business Community are urgently required.

In this context, the word ''design'', as used in the title, should not refer to the definition of a model in which action and reaction are mathematically linked, but to the creation of the organizational conditions that enable the Community to be born and grow as a body. Management can be involved, encourage, support, take value from the Communities but it cannot fully control them, because the Communities need volunteers, not ''forced'' people: the ''project'' of a Community is successful only insofar as it is targeted to a group of individuals who not only feel they share the same identity but that they can also benefit on a personal level from participating in the Community. Therefore, management must support and give to the different professional families appropriate tools to spur people to share knowledge and cooperate, in the attempt to steer the goals of the Community towards the goals of the organization, without creating any rules or procedures that impose the use of them.

An effective planning and development of the Community depends on a ''delicate'' combination of organizational and technological strategic choices, which it is important to plan in a way that is aware of the problems involved.

The stimulus that needs to be offered in order to activate the desired behaviors depends also on cultural factors. In this sense there could be a potential limit to the model proposed. In fact, the case studies and best practice examples reported in the article are all based on the experiences of Western companies – although some, if not all, may have global operations. This could be a limit for the extension of its results, as, without any studied examples from Asian organizations, some of the conclusions – e.g. levels of organizational commitment and individual participation, evolutionary stages and drivers – may not be valid for Asian-headquartered companies.

## Note

1. Data were gathered from the following sources: Documentation about the company analyzed; Semi-structured interviews with key informant people (i.e. members of top management) of the firm to collect other data about the company, its organization and strategy and the knowledge management strategies (when defined); Semi-structured interviews with Community coordinators, leaders or core group members to understand the history of the Community, the domain, the kind of knowledge shared and the members' characteristics; Community output documentation to assess the kind of knowledge and the domain complexity; Online tracking of the Community's activities.

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