Knowledge Management in the Brazilian Organisational Context: a shift towards the concept of "Ba"

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Abstract: The paper investigates the theme known as "Knowledge Management" (KM) in three large Brazilian organisations trying to discuss its concepts, constituent elements, managerial approaches and tools, while aiming at leaving behind the purely terminological discussion, which is innocuous and naive. The basic presuppositions were two: (i) most of what is referred to or named KM is actually "Information Management" (IM) and IM is just one of the components of KM. KM is more than simply IM due to the fact that it includes and incorporates other concerns, such as the creation, use and sharing of information and knowledge in the organisational context; (ii) a conceptual model or map can be formulated based on three basic concepts: (a) a strategic concept of information and knowledge, (b) the introduction of such strategy in the tactical and operational levels through the several managerial approaches and information technology tools and (c) the creation of an organisational space for knowledge. The main objective is to investigate and analyse the concepts, motivations, practices and results of KM effectively implemented in three large Brazilian organisations. The qualitative research strategy used was the study of multiple cases with incorporated units of analysis and three criteria were observed for the judgment of the quality of the research project: validity of the construct, external validity and reliability. Multiple sources of evidence were used and data analysis consisted of three flows of activities: data reduction, data displays and conclusion drawing/verification. The results confirmed the presuppositions and the fact that KM means a rethinking of management practices in the information era. Knowledge as such cannot be managed; it is just promoted or stimulated through the creation of a favourable organisational context, namely "Ba". It was also identified that the main challenges facing organisations committed to KM have its focus on change management, cultural and behavioural issues and the creation of an enabling context that favours the creation, use and sharing of information and knowledge.

Keywords: knowledge management; strategic information management; enabling context or "Ba"; knowledge management conceptual umbrella metaphor; knowledge and information management.

1. Introduction

The emergence of a technological economical paradigm based on innovation, information and knowledge, as well as the growing consolidation of technologies such as microelectronics, information technology and computer networks, bring complex multifaceted issues to surface facing contemporary organisations. Stewart (1998) suggests that ground zero or "Year 1" of the informational era or post-industrialism is 1991. His analysis considered capital expenditures in the United States as registered by the Agency of Economic Analysis of the US Department of Commerce in between 1965-1991. comparison contrasted the expenditures of American companies with capital goods typical of the industrial era - such as machines and equipment for production engineering - vis-a-vis the expenditures of American companies with capital goods typical of the so-called information computers and telecommunication equipment. As seen on Figure 1 below, the two lines - capital expenditures in the industrial era and capital expenditures in the information era - intersect in 1991. The conclusion is that since 1991, American firms are spending more with equipment that collect, process, analyse and disseminate information and less with equipments that are typical of the industrial era. His analysis can be applied to the Brazilian context (Souza and Alvarenga Neto, 2003), as information and knowledge management have become key issues for competitiveness of Brazilian firms.

This transition of the "old rigidity of the atoms to the fluidity of the bits" in organisations lights up many discussions concerning the profusion of new terminologies created in the information era. Therefore, contemporary organisations face new "knowledge management", terms such as "communities of practice", "strategic intellectual capital management", "competitive intelligence", "organisational learning" and many others. These different perspectives reflect different concepts of organisational knowledge and organisations growing themselves. besides a need meticulous analysis about the upcoming opportunities for gaining competitive advantages through strategic use of information and knowledge. In this particular arena, KM arises

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both as an opportunity and an oxymoron, depending on how it is conceited, analysed, practiced and measured for its results concerning the organisations' core-business and readiness to compete. Alvarenga Neto (2002) and Marchand and Davenport (2004) suggest that most of what it is called "knowledge management" (KM) is actually information management. They also affirm that KM is more than simply information management due to the fact that it includes and incorporates other concerns such as the creation, use and sharing of information and knowledge in the organisational context, not to mention the creation of the so called "enabling context" or "enabling

conditions", among others. Hence, information management is just one of the components of KM and a starting point for other KM initiatives and approaches.

Many researches have risked definitions for KM. Wilson (2002) examined the "Web of Science" databases from 1981 to 2002 and verified the great diversity of concepts attributed to KM, reaffirming all the terminological controversy and polemic. He also confirmed the exponential growing of publications with the expression "knowledge management", as show in Figure 2.

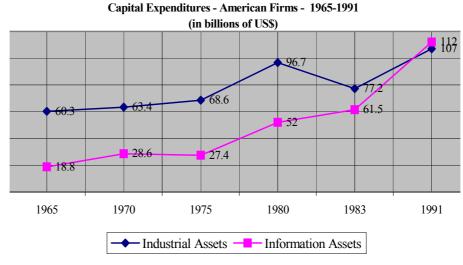


Figure 1: Capital expenditures of American Firms, 1965-1991 (adapted from Stewart, 1998).

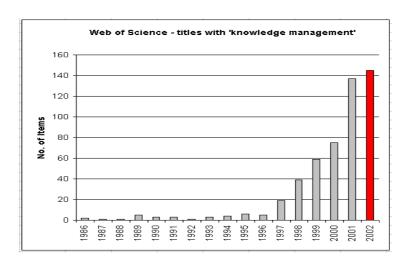


Figure 2: Publications with the expression "Knowledge Management" – Web of Science – (Wilson, 2002).

The current debate about KM is also and mainly divulged in recent publications of mainstream authors from the librarian and information science field research, such as Davenport and Cronin (2000). They suggest that

Though considerable academic and professional attention has been focused on this area in the past decade, the concept is

not yet stable: the term appears to be used differently across domains with each claiming that its partial understanding represents a definitive articulation of the concept. (Davenport and Cronin, 2000)

Their inquiry is seminal: "Is it a semantic drift or a conceptual shift?" Davenport and Cronin (2000) explored the concept of KM in the context of three

domains committed to KM, that is to say, (i) librarian and information science (information management or KM by another name), (ii) engineering (business processes. ontologies, the management of 'know-how') and (iii) organisational theory (from knowledge as a resource to knowledge as a capability; tacit and explicit knowledge conversions; the context, "Ba" or organisational space for knowledge). The objective of their proposal - called "KM Triad Framework" - is the proposition of a tool or analysis instrument that it's suitable for exploring the tensions that might arise in any organisations committed to KM, where different domains have different comprehensions. The "KM Triad" can be used to identify conflicts or territorial struggles and to contribute for a collective understanding of all interactors of the KM space in organisations.

Debates like those, associated with the lack of a conceptual definition and all the controversy surrounding the term KM, motivated a research study concerning how Brazilian organisations understand, define, implement, practice, measure and evaluate KM, what motives led them to those initiatives and what they expect to achieve with it. The basic presuppositions were two, respectively: (i) most of what it's referred to or named "Knowledge Management" is actually "Information Management" and information management is just one of the components of KM. Consequently, KM is more than simply information management due to the fact that it includes and incorporates other aspects, themes, approaches and concerns such as the creation, use and sharing of information and knowledge in the organisational context, not to mention the creation of the so called "enabling context" or "enabling conditions", among others; (ii) a conceptual model or map can be formulated based on three basic concepts: (a) a strategic concept of information and knowledge, factors of competitiveness for organisations and nations; (b) the creation of an organisational space for knowledge or the enabling context - the favourable conditions that should be provided by organisations in order for them to use the best information and knowledge available; (c) the introduction of such strategy in the tactical and operational levels through the several managerial approaches and information technology tools, which are susceptible to communication and orchestration. The results of such study will be presented in this paper.

2. Knowledge management: models, maps and conceptual trials

A conceptual KM model or map can be formulated based on three basic concepts: (i) a strategic

concept of information and knowledge - as proposed by CHOO (1998) - factors of competitiveness for organisations and nations; (ii) the creation of an organisational space (in the tactical level) for knowledge, the enabling context or "Ba": the favourable conditions that should be provided by organisations in order for them to use the best information and knowledge available - as suggested by Von Krogh, Ichijo and Nonaka (2001); (iii) the introduction of such strategy in the operational level through the several managerial approaches and information technology tools, which are susceptible to communication and orchestration, metaphorically named here as a "KM conceptual umbrella";

2.1 A strategic concept for information and knowledge in organisations

(1998)asserts Choo that the "knowing organisations" are those that use information strategically in the context of three arenas, namely, (a) sense making, (b) knowledge creation and (c) decision making. Concerning (a) sense making, its immediate goal is to allow the organisations' members the construction of a mutual and shared understanding of what the organisation is and what it does. Strategic reflections must be done concerning the organisation's mission, vision, values and culture, allowing its members to bring meaning to their lives and jobs. An ambitious and challenging vision or state of the future reveals the organisation's intention and it is extremely valuable, contributing to communicate the types of knowledge that are welcomed and will be nurtured. Sense making's long term goal is the warranty that organisations will adapt and continue to prosper in a dynamic and complex environment through activities of prospect and interpretation of relevant information that allow them to understand changes, trends and scenarios about clients, suppliers, competitors and other external environment actors. Organisations face issues such as the reduction of uncertainty and the management of ambiguity. Competitive, competitor and social intelligences, environmental scanning, marketing research and activities alike are organisational initiatives that aim at constructing meaning about issues for which there are no clear answers. Table 1 presents the organisational sense making process through an information perspective:

Table 1: The sense making process (adapted from Choo, 1998).

•	,	
Information Needs	Information Seeking	Information Use
What are the new trends in our industry?	Environmental scanning	Reduction of uncertainty and management of
What are the core	Information systems	ambiguity: collective interpretation
competences of our competitors?	Researches	Shared knowledge construction
What do our clients value?		Decision Making

(b) Knowledge creation is a process that allows an organisation to create or acquire, organise and process information in order to generate new knowledge through organisational learning. The new knowledge generated, in its turn, allows the organisation to develop new abilities and capabilities, create new products and new services, improve the existing ones and redesign its organisational processes. Table 2 supplies an analogy between knowledge creation models and permits inferences between their differences and likenesses.

Table 2: Knowledge creation processes (Choo, 1998, p.130).

	1	,
Knowledge	Knowledge	Knowledge-
Processes	Creation	Building
(Wikström and	Phases	Activities
Normann 1994)	(Nonaka and	(Leonard-
,	Takeuchi 1995)	Barton 1995)
Generative	Sharing tacit	Shared
Processes:	knowledge	problem
	Kilowicage	solving
Generating		_
new knowledge		Experimenting
		and
	Creating	prototyping
	concepts	
Productive	Justifying	Implementing
Processes:	concepts	and
operationalising	Building an	integrating
new knowledge	archetype	new
	aronotypo	processes
		and tools
Representative	Cross-levelling	Importing
	knowledge	knowledge
Processes:	KITOWIEUGE	Kilowieuge
Diffusing and		
transferring		
new knowledge		

The third component of Choo's (1998) model involves (c) decision-making. The firm must choose the best option among those that are plausible and presented and pursue it based on the organisation's strategy. Decision making process in organisations is constrained by the bounded rationality principle, as advocated by

March and Simon (1975). Many inferences can be made upon the decision theory, Choo (1998) and also March and Simon (1975) list a few of them:

- The decision making process is driven by the search for alternatives that are satisfactory or good enough, rather than seeking for the optimal solution;
- The choice of one single alternative implies in giving up the remaining ones and concomitantly in the emergence of trade-offs or costs of opportunity;
- A completely rational decision would require information beyond the capability of the organisation to collect, and information processing beyond the human capacity to execute.

2.2 The creation of an organisational space for knowledge, the enabling context or "Ba"

The creation of organisational knowledge is, in fact, the augmentation of knowledge created by individuals, once fulfilled the contextual conditions that should be supplied or enabled by the organisation. This is what Von Krogh, Ichijo and Nonaka (2001) call "Ba", enabling conditions or enabling context. "Ba" is needed in the tactical level in order to bridge the existing gap between strategy and action. In this context, the understanding of the word "management" when associated with the word "knowledge" should not mean control, but promotion of activities of knowledge creation and sharing in the organisational space. Hence, KM assumes a new hermeneutic perspective - from knowledge as a resource to knowledge as a capability, from knowledge management to a management towards knowledge, from knowledge management to a management from and to knowledge. Nonaka and Takeuchi (1995) and Von Krogh, Ichijo and Nonaka (2001) list the many elements of "Ba", namely: creative chaos, redundancy, layout, organisational culture and human behaviour, leadership, intention or vision of future and empowerment, not to mention organisational structure and layout, among others.

2.3 The "KM conceptual umbrella" metaphor

At last, the "KM Conceptual Umbrella" metaphor assumes that below its boundaries, many themes, ideas, managerial approaches and IT tools concerning information and knowledge in the organisational context are addressed and susceptible to communication and orchestration. It's imperative to highlight a few of them, such as, 'strategic information management', 'intellectual capital', 'organisational learning', 'competitive

intelligence' and 'communities of practice'. It's exactly the interrelation and permeability between those many themes that enable and delimitate the upbringing of a possible theoretical framework which can be entitled "knowledge management". Feedback is achieved by classifying the themes below the "KM conceptual umbrella" in the model proposed by Choo (1998).Competitive intelligence and environmental scanning are initiatives - managerial approaches and IT tools that drive the strategic concept sense making into action. That is, sense making is a strategic concept and, e.g., competitive intelligence, an action-driven managerial approach - a way to turn strategy into action is by using the right managerial approach or IT tool that can be found in the "KM conceptual umbrella". Communities of practice, strategic information management and organisational learning fit into the thematic of knowledge creation and so on. Figure 3 represents and summarises the integrative conceptual map used both as a theoretical framework and a guide for field research and data collection:

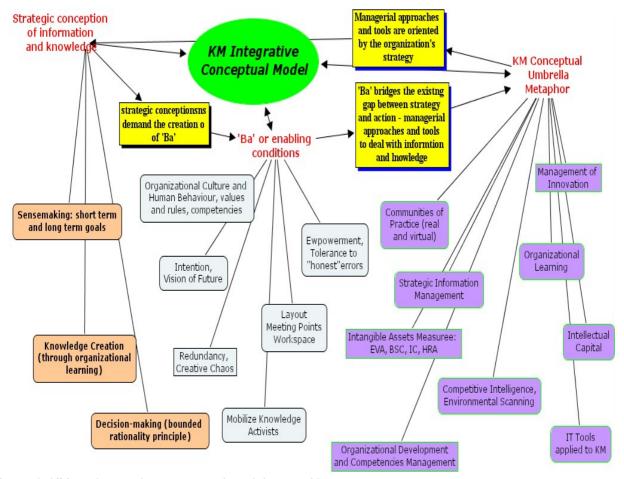


Figure 3: KM: an integrative conceptual model proposition

Last but not least, it's desirable to recur to Choo (2002) once again for the closing of this section, as he suggests a conceptual framework that could be useful for the comparison of possible information and knowledge management strategies. Choo's starting point is the "Johari Window", an approach that describes the

dynamics of human interaction and communication and has its genesis in the first names of its inventors, namely, Joseph Luft and Harry Ingham. His arriving point is the proposition of the "Windows of Knowledge Management", as shown in Table 3:

Table 3: Windows of knowledge management (Choo, 2002, p.261).

We know what we know	We know what we don't know	
Provide Information Access	Directed Information Seeking	
Facilitate Knowledge Sharing	Promote Knowledge Creation	
Intranets, Portals, Taxonomies, Benchmarking	Competitive Intelligence, RandD, Market Research	
We don't know what we know	We don't know what we don't know	
Information Auditing	Environmental Scanning	
Knowledge Mapping	Knowledge Discovery	
Communities of Practice, Knowledge Networks	Scenario Planning, Future Search, Dialogue	

3. The method

Research should not be assumed solely as a rational task - the one that is approached with safety and assurance - but the one that has the side effect of augmenting fear and grief (Bourdieu, 1998). From this point of view, it's a peremptory call to abandon the solely terminological discussion of KM and an essential condition to move on to the exploitation of a conceptual framework that is being designed in the field, as proposed by Alvarenga Neto (2002, 2005) and Souza and Alvarenga Neto (2003). In resume, it's about elaborating a coherent system of relations that must be put to judgment as it is. It's also necessary to achieve a comprehension that knowledge is something that is built of and from other knowledge from which we can exercise apprehension, criticism and lack of confidence. Another cornerstone is the fact that any attempt to represent reality will undoubtedly be more imperfect than what reality is and it's absolutely necessary the process of socialisation among researchers in order to achieve field advance, bearing in mind that innovation occurs in the frontiers of creative minds in synergy of purposes.

As said before, this paper aims at trying to propose a conceptual demarcation for the thematic knows as "knowledge management". Far from proposing a definite, quintessential solution or a hermetic model, it does aim to contribute to a better understand of the area/theme, as well as its borders and scopes. In order to study the visions and concrete initiatives of Brazilian firms in the knowledge management field, case studies in

three large Brazilian organisations were realised, aiming at leaving behind the purely terminological discussion, which is innocuous and naive. The analytical model was divided in five analytical categories as guidelines to field research, namely: (i) reasons or motives that lead the organisation to KM initiatives; (ii) the firm's definition or understanding of KM or/and KM's concepts; (iii) aspects, managerial approaches and tools considered under the aegis of the firm's KM area, program or project ("KM Conceptual Umbrella); (iv) the emphasis or priority aspects of KM; (v) main results related to or generated by KM initiatives.

A sine qua non condition in choosing the organisations was the fact that they should have already had KM implemented and, for this matter, three organisations - belonging each one to one of economy's three sectors - were chosen, that is to say, Centro de Tecnologia Canavieira (CTC), Siemens do Brasil and Pricewaterhouse and Coopers (PwC). The qualitative research strategy used was the study of multiple cases with incorporated units of analysis and three criteria were observed for the judgment of the quality of the research project: validity of the construct, external validity and reliability. Multiple sources of evidence were used – semi-structured interviews. documental research and direct observation - and the proposal of Miles and Huberman (1984) was adopted in order to analyse the data collected in the field. Their proposal consists of three flows of activities: data reduction, data displays and conclusion drawing/verification (figure 4).

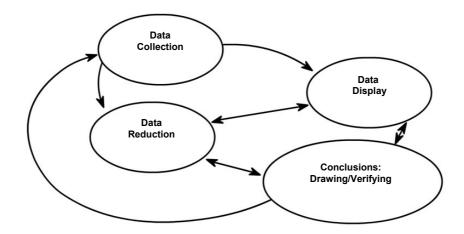


Figure 3: Components of data analysis: interactive model (Miles and Huberman, 1984).

The field research was realised in the cities of (i) Piracicaba, SP, (ii) São Paulo, SP and (iii) Belo Horisonte, MG in the period of March, 19th, 2005 to April, 12th, 2005. A total of 17 interviews were conducted, which resulted in 35 hours of tape recording and 533 pages of transcriptions. As to documental research, approximately 1600 pages were analysed with a loss of 12%. Four data reduction cycles were necessary until data could be incorporated to the final work and eight reduction displays were produced based on the analytical categories created (Table 4).

Table 4: Data reduction processes—data analysis of field research (Alvarenga Neto, 2005).

Data		
Reduction	From	
Processes	(pages)	To (pages)
1st Reduction		
Process	2150	180
2 nd Reduction		
Process	180	100
3 rd		
Reduction		
Process	100	52
4th Reduction		
Process	52	Final work

The results will be presented in the lines bellow.

4. Results analysis

The main reasons or motives for the adoption of KM in the organisations of this study concerned the following aspects:

- Lack of practices of protection and sharing of information and knowledge, leading the organisation to a constant reinvention of the wheel and continuous duplication of efforts;
- Problems with data/information collection, treatment, organisation and dissemination, indicating lack of strategic information management;

- Recognition that both information and knowledge are the mains factors of competitiveness of modern times;
- Need for the creation of an organisational space for knowledge, also knows as "Ba" or "enabling conditions", vis-à-vis the need to address cultural and behavioural issues.

Evidences and testimonies collected in field interviews confirm the statements above:

"[...] each part, area or department of our firm had idiosyncratic methods for storing and managing knowledge... [...] nowadays the firm is concerned with knowledge because knowledge is the main factor of competitiveness. [...] there were problems with information retrieval." (CTC's Coordinator of Technology Transfer)

"[...] thirty years generating technology and, as time went by, with turnover or retirement, knowledge was lost. [...] a few areas or departments were mutilated and had to start from ground zero – they were unable to retain knowledge for reusing it for its own good. [...] the loss of critical generated knowledge was a critical issue: lacking efficiency in information capture, people were taking their personal files with them...". (CTC's Chief Executive Officer)

"[...] I think it was a threat: the entrance of new competitors in the market, mainly in the external market. []... and the need to do faster researches and face the new competitors: Australia, India and South Africa. [...] we had a huge knowledge loss with downsizing and retirements. . (CTC's Knowledge Manager)

- "[...] both critical information and vital knowledge were lost and not shared." (PwC's Auditing Manager)
- "[...] PwC's greatest asset is the knowledge of its people... to make the knowledge of those professionals sharable" (PwC's Director of the Auditing Department and Human Resources Department)
- "[...] a transformation in the management model: from a very hierarchical model, stamp here, stamp there (sic), which is a slow model, to a much more network organic model. [...] that's the idea of KM, to break all kinds of barriers: geographical, hierarchical, linguistic, temporal, and personal, among others." (Siemens' Knowledge and Information Manager)
- "[...] quick access to organisational knowledge is a competitive differential." (Siemens' Sales Manager)
- "[...] someone, somewhere in the world, has already solved this problem" (Siemens' Human Resources Manager)
- "[...] if Siemens knew what it knows... [...] KM is one of the processes that supports strategy through innovation, customer satisfaction and global competitiveness." (Siemens' Regional Director)

There was a lack of consensus concerning a definition for KM in the organisations of this study. Nevertheless, a few terms were common in the answers of interviewees (content analysis), namely, process, information, knowledge, innovation, tacit-explicit knowledge conversion, registration, sharing, organisational culture, access and use, among others. Here are a few testimonies of interviewees that confirm this assertion:

"[...] there is no consensus of what KM is or should be in the organisation — it's a challenge. [...] there's a delimitation of performance areas: information treatment, tacit knowledge, enabling of sharing... [...] KM is a process, it has phases but no end. [...] process that aims to enable information and knowledge sharing, intangible assets protection, (sic) where knowledge is focused". (CTC's Knowledge Manager)

- [...] it's not very clear, but it's all that is managed for obtaining knowledge, innovation". (CTC's Chief Executive Officer)
- "[...] it's a process that contributes to place the workers' knowledge in a network". (Siemens' Regional Director)
- "[...] it's not a miracle, it's not a (sic) 'knowledge unlocker plus'. It's a great change in the philosophy of the organisation's strategic management. [...] tools for collaboration and the creation of channels". (Siemens' Knowledge and Information Manager)
- "[...] KM is a process, it has no end. [...] process for capturing all the knowledge that permeates the organisation. [...] readiness, use and share for the firm's good". (PwC's Documentation and Information Manager)
- "[...] KM is sustaining an environment that enables the coexistence of creation, development, sharing and dissemination of strategic knowledge to the organisation it's creating the context, it's a process that should permeate all the business processes of the organisation". (PwC's KM Coordinator for South and Central America)
- "[...]KM is not a project, it's a process that involves the organisation as a whole: to make knowledge available to the right people at the right time, being a key factor for maintaining an organisational culture of shared values, styles and behaviours." (Documental Research, PwC, 2005)

The next step was to investigate the theoretical proposal entitled "KM conceptual umbrella". Henceforth, the interviewees were asked to answer which aspects, managerial approaches and tools were considered under the aegis of the KM area, program or project in their respective organisations. Here's a comprehensive summary of the answers: (a) environmental scanning, competitive intelligence, market research, (b) strategic information management, electronic document management, process mapping, (c) intellectual capital management, competencies and people management, intangible assets, (d) communities of practice – both real and virtual, (e) organisational learning, including e-learning, (f) decision making support and (f) creation of the enabling conditions or "Ba".

"[...] yes, external environment information, competitor's products, market trends,

clippings... [...] there's also an informal information collection made by workers that (sic) "fish" something in the market and put it in the intranet – even rumours". (Siemens' Sales Manager)

"[...] KM is an strategic area hooked to the directorship, providing information to support decision making processes, it's directorship's advisory". (CTC's Knowledge Manager)

"[...] to implement a rigid taxonomy for all the organisational content". (Documental Research, CTC, 2005)

"[...] strategic information management, creation of an appropriate context for sharing, like, for instance, the "Bank of Ideas" and the "Cultural Moment..." (CTC's Information Analyst)

The interviewees were also inquired about the emphasis or priority aspects of KM in their organisations. Data analysis revealed that the starting point for KM initiatives — strategic information management — was reaching a stage of concept maturity, with consciousness that it is a permanent process. The organisations of this study were putting their efforts at advancing in aspects related to sharing, organisational culture and the creation of "Ba" or the enabling conditions. It's imperative to highlight the existence of many initiatives that are genuinely Brazilian initiatives, adopted to address the creation of "Ba", like the "Cultural Moment" at CTC and the "Knowledge Happy Hour" at Siemens. This last initiative is:

"[...] it is an informal practice of conferences, where essential organisational knowledge is shared in a tacit, spontaneous way. It's a local specific initiative that fits general policies. The speeches last for one hour and are presented by the firms' personnel". (Documental Research, Siemens, 2005)

At last, the main results related to or generated by KM were nominated by the interviewees: (i) innovation cycle reduction and faster time-to-market solutions; (ii) market share and portfolio increase; (iii) facilitation of expertise and people location; (iv) creation of an organisational memory and repository; (iv) increase in the learning capacity and (vi) ability to anticipate competitors' actions and movements.

5. Conclusions

This paper's main goal was to investigate and analyse the concepts, motivations, practices and results of KM effectively implemented in three large Brazilian organisations. Far from proposing a definite solution or a hermetic model, it hoped to contribute for a better understanding of the field. its borders, scopes and connections. A KM integrative model/map was elaborated starting from that proposed by CHOO (1998), associated to the "Ba" or enabling conditions proposition conceited by VON KROGH, ICHIJO and NONAKA (2001), in addition to the several managerial approaches and tools metaphorically denominated as the "KM conceptual umbrella". These three ideas interconnected are contributive for the construction of a theoretical framework as a starting point. Another corollary of this work assumed the task of confirming this integrative conceptual KM framework through the discussion and analysis of a Brazilian research work in three Brazilian organisations committed to KM.

Both the presuppositions and the theoretical framework presented in the literature review (FIGURE 2) were confirmed. This framework integrates the strategic, tactical and operational levels of the organisations concerning KM initiatives, e.g.: the strategic concept "sense making" is driven into action by using managerial approaches or tools for this purpose – found in the "KM Conceptual Umbrella - such as competitive intelligence, market research or environmental scanning; the strategic concept "knowledge creation" is driven into action by using managerial approaches or tools such as "strategic information" management", "intellectual capital" "communities of practices", among others. From strategy to action, "Ba" is needed to bridge the gap as it creates the favourable context for creativity, innovation, empowerment and creative chaos, among others. It is interesting to observe that the managerial approaches and tools considered in the "KM Conceptual Umbrella Metaphor" are also interconnected: strategic information management is the starting point that can lead to the strategic management of intellectual capital, the organisation of communities of practice, the start-up of organisational memory and organisational learning and so on.

The results confirmed the fact that KM means a rethinking of the management of the knowing organisations or organisations of the information era. This statement has its origins in the comprehension that information and knowledge are the main factors of competitiveness for contemporary organisations and nations. It was

also identified that the main challenges facing organisations committed to KM have its focus on change management, cultural and behavioural issues and the creation of an enabling context that favours the creation, use and sharing of information and knowledge. Another remarkable challenge is the proposal or creation of a group of metrics and/or performance indicators to evaluate KM. In this particular issue, Siemens' already taken a step forward by introducing its own metrics, named "KS-Enabled" and "Strategic Skill Gap". The truth is that KM must use both quantitative and qualitative metrics. conclusions suggest that KM is an oxymoron, perhaps an impossibility. Knowledge as such cannot be managed, it is just promoted or stimulated through the creation of a favourable organisational context. The word "management" when associated with "knowledge" must be comprehended as promotion or stimulus for the creation and sharing of organisational knowledge and KM assumes the meaning of a management from and to knowledge. There is strong qualitative evidence of a major shift in the context of the organisations contemplated in this study: from "knowledge management" to the "management of 'Ba' or the enabling conditions" that favours innovation, sharing, learning, collaborative problem solution, tolerance to honest mistakes, among others.

KM is highly political, demands knowledge managers and is an endless process that needs to be aligned with the organisations' strategy and highly in tune with leadership premises. KM is not the same as information technology (IT), but it can be a process supported by information technology. Not all KM initiatives need IT, as demonstrated by CTC and Siemens with their "Cultural Moment" and "Knowledge Happy Hour" initiatives. It is recommended to test this model and also KM practices in small and medium firms in the Brazilian organisational context.

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