

ENTEL: A Case Study on Knowledge Networks and the Impact of Web 2.0 Technologies

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Abstract: This study re-visits an organisation that defined its knowledge-management strategy in 2008-9 applying an established strategy-intellectual capital alignment framework. It addresses questions "How has knowledge management evolved at ENTEL, and what lessons can be learnt? Does the strategy-knowledge management alignment framework applied at ENTEL in 2008-9 still hold today?" The enquiry applies qualitative research in the form of a single case study, applying semi-structured interviews and analysing the evidence through coding at a phrase level. It arrives at some interesting findings, such as that leadership of communities of practice (COPs) is critical to their success, at least in the early stages of their implementation. Also that the incorporation of generation Y (GY) into the workforce is changing the culture and openness to sharing knowledge, and thus accelerating the adoption of social networking (SN) tools, but the barriers to full deployment are still embedded in the older generation of senior and middle managers. Finally, it also emerges from the study that the paradigm by which organisations needed to choose between people-driven and technology-driven networks may no longer be valid: Due to changes in culture, to the need to speed up knowledge transfer, to the imperative for innovation and to the advent of low-cost and low-complexity SN technologies, organisations can make the most of both.

Keywords: e-Learning, Web 2.0, Communities of Practice, Knowledge Management, Intellectual Capital

1 Introduction

A study performed with knowledge-intensive organisations in 2008 arrived at a framework that links the type of knowledge networks (i.e., technology-driven, people-driven) that an organisation should prioritise according to its value discipline. An interesting finding of that work was that organisations selected either technology-driven or people-driven networks, not both simultaneously (Griffiths & Remenyi, 2008).

Many changes have happened in the business world since 2008 when the paradigm was articulated. Some of them are the result of policies that have been in place for decades but are only now taking effect (ACAS, 2012; Green et al., 2012; Griffiths & Arena, 2013; Kerby & Burns, 2012; UCSF, 2012; WSJ, 2013); others are the result of changing demographics that were predictable and are now a reality (Barnes et al., 2009; Bockman & Sirotnik, 2008; in 't Hout et al., 2010; Tishman et al., 2012; Work & Family, 2013); others are effects of the advent of new technologies (AIIM, 2013; Deloitte, 2013; Hinchcliffe, 2007; McAfee, 2009; Raskino, 2007; Smolan & Erwitte, 2012); and yet others are second order effects of all the prior factors that have combined in different and extraordinary ways to change the context in which businesses operate (Griffiths & Arena, 2013; Viedma & Cabrita, 2012).

In 2008-9 one of the authors was involved with a project to strengthen knowledge management at ENTEL, a telecommunications company in Chile. The framework applied in that project was precisely that described in Griffiths & Remenyi (2008). In the present paper the authors go back to ENTEL to review their knowledge management maturity nearly five years hence, with an aim at addressing the questions: How has knowledge management evolved at ENTEL, and what lessons can be learnt? Does the strategy-knowledge management alignment paradigm applied at ENTEL in 2008-9 still hold today?

The following section gives an overview of the strategy-knowledge management alignment paradigm; section 3 describes the methodology followed in this inquiry; section 4 gives background on ENTEL and the knowledge management project developed in 2008-9; section 5 does a case study of the present status of knowledge management at ENTEL; section 6 presents a discussion on the findings, and section 7 gives the conclusions and suggestions for future research.

2 The framework

Researching with organisations in knowledge intensive industries two clear trends emerged: While some organisations rely on a knowledge codification strategy that seeks to make knowledge independent of individuals and store it in repositories for users to access through information and communications technology (ICT) tools (Davenport & Hansen, 2002), others rely on a personalization strategy that emphasizes the channeling of individual expertise to the right place at the required time through person-to-person interaction (Bartlett, 2000; Griffiths & Remenyi, 2007).

The issue of how outward looking the organization has to be in its knowledge management also emerged as a core concept. Organisations need to find the right balance, the most effective blend, between internal and external content, and avoid the trappings of being too introverted, too satisfied with their own view of the world. Their internal networks need to link up with external ones in their areas of expertise (Bartlett, 2000; Collins, 2002,1998; Ezingard et al., 2002)

This can be represented in a two-dimensional space as shown in Figure 1. One axis represents the degree of development of knowledge management founded on Technology-based networks, from Low to High. The other axis represents the degree at which the organization has developed its person-to-person knowledge sharing capabilities (People-based networks.) In both cases the “High” development indicates a robust integration with external knowledge networks.

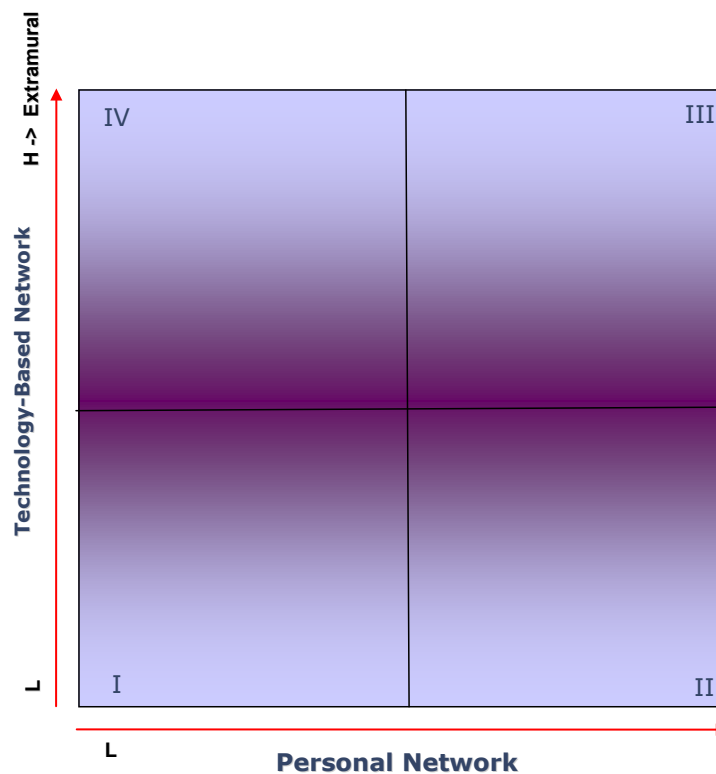


Figure 1: Knowledge Management founded on Technology-based networks vs. Personal networks (Griffiths & Remenyi, 2007)

By placing the organisations on this plane according to their approach to knowledge management, and then analysing their business strategy expressed by the value proposition they make to their clients, a clear pattern emerged linking knowledge-management-approach to business-strategy. Organisations that build their competitive positioning on delivering tailor-made, one-off services to their Clients, place themselves in quadrant II. That is they approach knowledge management by developing strong people-based networks (Bartlett, 2000; Griffiths & Remenyi, 2007)

Organisations that compete by building scale and efficiency and found their value proposition on replicating proven solutions, place themselves in quadrant IV. Their knowledge management initiative is top-down, with

standards and rigid guidelines created at the centre. They make significant investments in ICT networks aimed at producing large document repositories and powerful search engines (Davenport & Hansen, 2000; Griffiths & Remenyi, 2007; Haas & Hansen, 2005).

The prior study arrived at that start-up and boutique consulting firms are forced into quadrant I. The study also discovered that the hybrid approach to knowledge management of quadrant III was probably a utopia, and utopias are dangerous: they mobilize in the short but paralyze in the long term (Romano de Sant' Ana, 2006).

In summary, the paradigm states that on the one hand an approach to knowledge management driven by people-based networks is bottom-up, requires low cash investment but significant personal time; it relies heavily on tacit knowledge and creates an environment for moving knowledge from tacit to explicit. On the other, an approach to knowledge management driven by technology-based networks is top-down; requires high investment and relies mainly on explicit knowledge. The study did not find any leading organisation that was strong on both people-based and technology-based networks, so a significant premise was that attempting that was a utopia and revealed a lack of commitment in terms of the value proposition of the organisation. This is represented in table 1.

Table 1: Linking knowledge-management approach to strategy in the alignment paradigm

Business Strategy/Value Proposition	Approach to Knowledge Management	
Trust or Narrow Expertise Based	Quadrant I -Low on Technology-based Networks -Low on People-based Networks	Based on personal knowledge of leader Low investments in ICT repositories No formal knowledge sharing processes
Thought Leadership/Personalisation	Quadrant II -Low on Technology-based networks -High on People-based networks	Requires a relatively low investment Motivate staff to write thought leadership pieces Knowledge is shared in person-to-person relationships Within and across communities of practice Knowledge creation and sharing is a bottom-up process Promotes creativity and originality
Hybrid/Utopia	Quadrant III -High on Technology-based networks -High on People-based networks	Void - No examples found A reflection of ambiguity Avoiding decisions on business strategy
Productivity/Re-usability	Quadrant IV -High on Technology-based networks -Low on People-based Networks	Knowledge management initiative is top-down Standards and rigid guidelines created at the centre Promotes efficiencies Large document repositories and powerful search engines Populate repositories by motivating staff to upload deliverables Use as "accelerators" for subsequent engagements Completely automate the search processes and eliminate interpersonal knowledge sharing

3 Methodology

This inquiry is embedded in the interpretive tradition. It does a single, in-depth case-study on the status of knowledge management in an organisation, by means of qualitative methods. The unit of analysis is the whole new-co ENTEL (result of the recent merger of old-co ENTEL and ENTEL PCS.) The main sources of evidence are semi-structured interviews to six members of the organisation's management team performed in January 2014, and field-notes and reflection-notes from the prior intervention in 2008-9. Rich notes were taken at the interviews, and detailed interview transcripts were written up from them (Yin, 1994).

The semi-structured interview guide was informed by the framework described in section 2. It has seven sections, namely: (1) Background, that aims at establishing the position and involvement in knowledge management of the informant; (2) The Knowledge Management Network Model, that presents the characteristics knowledge networks and their application at ENTEL; (3) the Strategy-KM Alignment Framework, presents the alignment framework to the interviewee and seeks feedback on its application at ENTEL; (4) A Shift in Paradigm inquires on the interviewees vision on why the prior framework may be falling out of sync with the knowledge economy; (5) Our Hypothesis for the Causes of the Shift exposes our ideas of change and seeks feedback from the informant; (6) ENTEL: KM and Innovation explores the relationship between KM and innovation at ENTEL; and (7) Open Discussion creates a space for the informant to expand on any aspect of

Strategy-KM alignment not addressed in the other sections. The interview guide can be obtained from the authors.

Data analysis is done via coding of the interview transcripts: Open-coding at a phrase level, followed by Axial-coding to identify emergent concepts, and finally bringing it altogether in a narrative (Strauss & Cobin, 1990). As is expected in this approach, the objective is particularisation and not statistical generalisation.

4 ENTEL case study

4.1 The company

ENTEL is one of the largest telecom companies in Chile. The country fully privatised and opened up its telecommunications services in the late 1980s and early 1990s, in what is generally known as one of the most successful cases of its kind. Success here is used in the sense that it resulted in a much improved quality of service and reduced cost of service for the population, and established the telecommunications service as part of the platform that enabled the radical transformation to efficiency and growth of the Chilean economy. Chile has for many years had one of the most competitive telecom sectors in the world. ENTEL, previously a state-owned land-line telecom service provider, has specialized in serving the corporate sector in its voice and data communications needs. ENTEL also set up a successful mobile-telephony service that until recently was managed through a separate company called ENTEL PCS.

ENTEL had a high degree of penetration in the corporate market, where it reached close to 60 percent market share in its traditional telecom products. Its leadership team thus realized that in order to grow it would need to have new products to offer its client-base and decided to incorporate IT Outsourcing Services to its product offering. Responding to this strategic change, in 2004 ENTEL entered the IT Outsourcing Services market and won several projects, some of them large and highly visible. It created its Corporation Services Division (CSD) with its sales and delivery capabilities by recruiting individuals with experience in the service, and by setting up ad-hoc partnerships to tackle each opportunity, but without making the structural and organizational changes that entering this new product market required.

In the 2007-2009 period it decided to engage consultants to design the required changes. The CSD was aligned along four industry groups (i.e., Financial Services, Retail & CPG, Natural Resources and Government) with a specific technology offering for each one. In the diagnostic stage it quickly emerged that one area that needed attention was knowledge management and the leadership of the CSD agreed to apply the strategy-knowledge management alignment framework given above to do so. One of the authors of this paper was invited by ENTEL CSD to moderate its application. The initiative was kicked off in June 2008.

4.2 Application of the framework

The leadership team at CSD arrived at a consensus to adopt a value discipline of “customer intimacy”, and thus make a value proposition to Clients based on “best total solution.” By doing this it was thought that CSD would position itself to compete with large international IT Outsourcing providers operating in Chile such as IBM, EDS, TCS (that come to the market with global, standard, ‘leading practice’ solutions), by leveraging its better knowledge of the local market and its clients, to offer tailor-made solutions.

Discussion then moved on to how CSD should approach knowledge-management and, in accordance with the framework, it was agreed that they should favor a people-driven knowledge networks approach, rather than technology-based ones. It was decided to set up six Communities of Practice (CoP) on key knowledge areas for the company, one of which would be taken as a pilot, and the other five would follow incorporating lessons learned from the pilot. It was decided to give the pilot CoP a 5 month period for design and implementation, and that the 6 CoPs would be operating in a year. It was also decided that all 140 professionals in CSD would be encouraged to belong to at least one CoP, and that membership of a CoP would be voluntary.

The six CoPs were defined in the following subject areas:

- COP1: Technology Convergence and New Developments
- COP2: Technology solutions for Financial Services
- COP3: Technology solutions for Government

- COP4: Technology solutions for Retail and CPG
- COP5: Technology solutions for Natural Resources (Mining)
- COP6: Information and Communications technology services

COP1 was defined as the pilot COP and was launched on July 30th 2008.

4.3 The outcome

The plan was to set up the pilot CoP and run it for three months. After that we would reflect on improvements to the design, and launch COP2 and COP3 in October 2008, and COP4, COP5 and COP6 in January 2009.

The first job was to appoint the COP1 Leader for which an ideal profile was designed and the selection was done with the VP for CSD and the heads of the industry vertical groups. The COP1 Leader was appointed in their first meeting.

In parallel with the appointment of the COP1 Leader, a call for volunteer members to the six COPs was done with a very good response, as 30 people were accepted for the first intake of the COP1, and similar numbers for the other COPs. It was defined that initially the pilot COP would meet in face-to-face meetings that needed to be moderated by the leader. The leader was coached on different techniques for moderating the meetings such as “Knowledge Cafe”, “Socratic Dialogue”, “Research & Present”...The first meeting took the form of a Knowledge Cafe to define the Vision and Mission of COP1, and to agree on what would be the channels for communication until there were a technological infrastructure to facilitate this. It was agreed that a mailing list would be set up, and that the COP1 Leader would arrange to set up a repository to store the IP produced in the meetings so that all members could have access to it. It was also agreed to create a COP e-bulletin that would summarise issues discussed and comment on other issues of interest to its members. One of the authors was retained as a consultant to coach the COP leader, monitor progress, and propose suggestions for improvement.

As planned, after three months a balance was drawn and the design of the COP was reviewed on the basis of experience. After that and on the basis of the updated design, COP2 and COP3 were launched; and subsequently COP4, COP5 and COP6 too. As would be expected, the development of the six COPs took different rhythms and differing degrees of achievement – details cannot be included here due to limitations of space, but they can be made available by the authors on request.

In July 2009 the global credit crunch hit Chile severely, which led ENTEL to review downwards its budget and cut expenses on many fronts. One of the measures was that the COPs would now have to operate without the assistance of an external coach. Clearly by that time the functioning of the six COPs had made progress but was still not mature, and the technological platform had been designed and was in the process of being developed using MS Sharepoint, but was still far from being deployed.

From observing the functioning of the six COPs it became evident that the characteristics of the COP Leader are crucial to its success, at least in these early stages. Looking back at the field-notes of the first quarter of 2009 the following excerpts were detected:

“CoP1 – Mr. COP1Leader just refuses to take ownership. He is perfectly willing to stand in the front of the room to moderate the group when there, but he does not seem to realise that a CoP is an ongoing concern that needs to be convened once a month. If I don’t nudge him, the machine stops. I will have another meeting with him to spell this out to him. But I am starting to believe he has no future. One solution might be to put someone from BPO to co-Chair with him. A bit of competition might do him good.”

“CoP2 – The [Industry vertical] BU leader passed the baton onto Mr. COP2Leader, but he does not grasp the nettle. I had to moderate the 1st meeting because he did not show up. He never called for a second meeting. Pity because there is a good turn out and participation, but motivation could be failing. We need to pass the CoP leadership to BPO.”

“CoP3. Mr. COP3Leader has really taken ownership. In the first meeting they defined the Mission and themes they want to develop in the year. He cultivates a low-profile sort of leadership style. He is unpretentious, but enthusiastic about the subject. He tends to merge into the team, rather than stand-out as a leader. Need to monitor participation in numbers (also in interventions, but that is not so important).”

“CoP4. Mr. COP4Leader is clearly taking ownership. He has a rare mix of a rather noisy leadership style (always making sure the rest knows who is in charge) with a promoting participation attitude. I think Mr. COP4Leader tends to talk too much; to take a central role. Suggest that they go for another format of meeting for next time.”

“CoP5- Mr.COP5Leader has the makings of a good CoP leader. He has taken ownership. He has the seniority to be respected. He also is open to other people intervening. All good traits for the role. The problem is the he does not have very good time-management skills. Need to coach him on this. But he has a good turn out and keeps the team engaged. I think this CoP should thrive.”

“CoP6 – Mr. COP6Leader is very methodical, attached to detail, structured, and all that put together. Some people, who appear to know him well, are amused and understanding; others get frustrated and vote with their feet. This CoP is attended by only a small group (of course, it could be owed to holiday season). I fear that the group will dwindle away. The leader is criticised for asking and answering the questions. I think this is exaggerated.”

With this background, we will now review the present status of knowledge management at ENTEL.

5 Knowledge management at ENTEL

5.1 Knowledge management at ENTEL is essential.

Turnover and headcount growth are huge at ENTEL. The present headcount is approximately 6,000 people and some key areas of the company have turnover rates of 50 percent. The manifestation of this is not significant at senior management level, but very much so for middle managers and supervisors down. On average people stay with ENTEL for 18 months, which means they leave just as they are becoming productive. As a result of this, the operational units are doing their own induction programmes, by-passing those of the HR department because they find them too superficial. They need to do in-depth and department-specific training, and with the sort of numbers they are recruiting it takes no time to fill a classroom of twenty.

ENTEL is now working on employer-branding as a means to improve attraction and retention of staff, but with the turnover rates they suffer, knowledge management (KM) is essential

5.2 Strategy and KM alignment

At the time of the initial intervention of this research, ENTEL managed its traditional services and its mobile services as completely independent companies. The former was known as ENTEL and the latter as ENTEL PCS. Due to market rationale it has merged the two companies and divided its structure into three large market segments: Corporate, Enterprise and Retail. As the names of the new divisions imply, Corporate looks after large corporations, Enterprise after SMEs, and Retail after individuals. From our interaction with company leaders it is quite clear that this new structure is not yet fully consolidated.

As in the early intervention, Treacy & Wiersema’s (1995) value discipline model was applied to understand the new organisation’s business strategy. From the interviews it becomes clear that the organisation is still not fully aligned on a value discipline. Although there are informants – particularly in the Corporate market division - who stated that the priority is Customer Intimacy, the issues of focus on cost and of highly rigid processes was continually lingering in our conversations. We detected expressions such as that “there is much talk of pushing for customer satisfaction but reality is that we are strongly driven by financial results”. Differences across the market segment divisions also emerged with, naturally, the Corporate market division putting more emphasis on the customer but the other divisions stating that they pursue Operational Excellence (OE).

The merger of the two companies is still a highly relevant issue in people's day-to-day activities. The models and culture of the two companies were significantly distant from each other and that impacted their approach to client service and KM. On the one hand, at old-co ENTEL processes and procedures were highly formalised and rigid, leading to clients being relegated in the staff's priorities (e.g., clients had to fill detailed and unfriendly forms, and there were no real procedures to keep their information updated). On the other hand, at ENTEL PCS the agents would concede to every client demand with total disregard for procedures, which later translated into great difficulties to keep track and deliver, which also translated into poor client service standards.

5.3 Knowledge networks

One of the issues that became evident early on in the merger of old-co ENTEL and ENTEL PCS was that the people coming from each part of the old organisation had very little knowledge of the technologies applied and managed by the other part. In order to overcome this problem, the Innovation division launched two initiatives. The first was a "Technology Bulletin" aimed at breaking down technology knowledge-silos across divisions. It contained articles written by in-house experts that circulated monthly to the 800 senior and key people in the new organisation. The other initiative was what they called "Technology Teams." Under this initiative task forces were put together to research new or emerging technologies and their application to ENTEL services. Once the research had concluded the findings were presented to the ENTEL community in periodic meetings called "Team Day."

Introduced to the knowledge-networks two-dimensional framework, informants tended to agree with it. Their view on whether ENTEL followed a People-driven or a Technology-driven networks approach was somehow blurred. Several informants mentioned Technology-driven ones but when they were asked to go further in detail it became apparent that they were referring not to Technology-driven ones in the sense of the framework (i.e., repositories) but in the sense of People-driven networks supported by some kind of technology.

An interesting concept that emerged from the interviews is that knowledge networking in ENTEL is being driven by the grass-roots rather the company. While the old stock are reluctant to get involved, the new young people are pushing the agenda by bringing in their own devices and being permanently connected. This has led to the realisation that the company has very little control over even the most sensitive information (e.g., commercial proposals) which has triggered great concern particularly for the Information Security Officer. This situation is leveraged by the fact that the average age of ENTEL's staff is quite young (under 38 years) and, according to the informants, these people have a far more collaborative mindset which, together with connectedness, strengthens the people-driven knowledge networks.

In line with the above, the prevailing opinion is that knowledge repositories and other static document management tools are not enough. It is not enough to store the deliverables of projects, but there is a need to keep record of the history of project and conversations and other sorts of communications between project members. There is also a need to have Facebook-type tools to find the experts and connect with them, and even to 'follow' them. There is a need for effective social networking tools that enable people to share their information and knowledge. If these are not provided, people will store this information in their own hard discs or in their Drop-box.

In terms of social networks (SN) platforms, the previous initiative based on Sharepoint was not successful. It was adopted because ENTEL had corporate licenses, but in the end failed because of its complexity, its rigidity and the need to have a systems administrator which kills its spontaneity and agility.

ENTEL has embarked on a pilot SN project based on Jive that has the advantage of not needing a centralised administration. They currently have between 300 and 500 people connected on the pilot, who are using the SN to go beyond sharing documents and are using it as a communicating platform.

People-driven networks exist in ENTEL but they are small, which is an indication of immaturity. An example of a group that works is the remnants of the Government Community of Practice (CoP). They have a core team of 5 or 6 people that call themselves "Good Ideas Community" (Comunidad de Güenas Ideas, CGI). Up to last year they used to meet weekly, but have now moved to meeting on demand. They analysed specific cases or best

practices that they then share with their industry group, and are connected through a WhatsApp group. They find that knowledge sharing is happening and is growing within this community. They have noticed that SN tools have helped increase collaboration. Our informants assign to this effective KM initiative the fact that the Government and Mining Industry groups, that have been recently merged, have by far the highest rating on the “Best Place to Work” survey. This industry group scores amongst the top 30 companies in Chile, while ENTEL as a whole is well below the Chilean average.

5.4 KM and innovation

Innovation has been on ENTEL’s leadership agenda for at least five or six years, but it has had mixed success. Several years ago there was an initiative to set up an Innovation Centre that appears to have characteristics in line with what in KM is called a centre of excellence (CoE). This was a space in which ENTEL staff, clients and business partners would come together to work on solving specific client problems. The physical space was set up next to ENTEL’s laboratory. Unfortunately the initiative failed due to that despite the infrastructure having been deployed, ENTEL never assigned this unit a budget or implemented a governance scheme.

In 2008-9 old-co ENTEL retained an external consulting firm to assist it deploy a company-wide “Open Innovation” programme, but the concept did not stick and the initiative was eventually dropped.

With the merger ENTEL has taken a pragmatic approach and split responsibility for innovation between the three market divisions and a corporate Strategy-Innovation Division (S-ID). Each market division has an individual innovation department that focuses on short term (i.e., under a year) objectives. The S-ID works long term by defining guidelines and working with managers across the market divisions to incorporate innovation into their projects.

Our informants reflected that there is not one single way of managing knowledge for innovation. Experience at ENTEL indicates that in the early stages of innovation networks seem to work well to generate initiatives and avoid duplications. However, in later stages, once they have defined what they want to achieve, the “development factory” (CoE) concept that concentrates deep technical knowledge needs to take over the initiative and deliver.

As mentioned in section 5.1 ENTEL is a product-driven company for which they have implemented a “Product Factory” unit that houses the core of technical experts and serves all market segment divisions. The process of developing a new product operates in the early stages as a network-type consultation, but once the product is defined it is input to the “Factory” that will develop it. However, there is concern that there is room for significant improvement.

In general people believe KM at ENTEL is still not really successful in terms of leveraging innovation, but it is moving in the right direction. A question that came up on the part of the informants is who should lead KM in the company? An idea that came through is that the organisation should appoint someone with the joint responsibility for sharing knowledge and for restricting it, such as the Information Security Manager.

5.5 The human factor and its impact on KM

Senior management’s view on social networks is paradoxical. On the one hand this group understands the value and benefits of SN, and have hard evidence that they are here to stay, as the company’s revenue from SMS traffic has stagnated or even dropped due to the widespread adoption of WhatsApp amongst its clients. On the other hand their adoption rate of SN is low and senior management does not use SN to mobilise their people.

At the middle management level, particularly amongst the older population, resistance is even higher, which is a significant barrier to implementation. The present pilot with Jive is working with a relative small sample of young enthusiasts, but how to penetrate this contingent will be a challenge, particularly if senior management does not support it explicitly.

Hurdles to implementation are not only entrenched in the type of people as mentioned above, but also in their incentives. The present incentives system is based on short term financial results and strongly geared towards

sales-related compensation. It is thus not aligned with the more mid-term objectives of incorporating SN to improve work. Success in this is therefore conditioned to a revision in key performance indicators.

ENTEL does not have a position of Knowledge Manager but from the discussions it emerged that it should have. The role entails having competencies for innovation and for communications. The individual must generate trust as quite often in organisations knowledge is seen as power, so the positions of knowledge manager needs to fall upon an individual who conveys clarity and transparency. It is not strictly necessary that the individual has a strong technical background – it would help, but it is not strictly necessary.

6 Discussion

Reflecting on the effects of the KM project at the CSD of ENTEL in 2008-9, one concludes that it had a positive short-term effect on the organisation which was getting people to know each other and extend their in-house networks. However, the sustainability of the COPs that were the visible effect of the project, had difficulties. Of the six COPs that were set up, only one that appears to engulf two of the original COPs is still operating: the one in the subject of Technology Solutions for Government that later absorbed the one corresponding to Mining. It has to be admitted that this does not come entirely as a surprise. As can be seen in the excerpts at the end of section 4, it was already anticipated in March 2009 that in COP1 and COP2 the leaders were not taking ownership. In the case of COP3 (Government) it already looked promising and the leader has stayed in charge since then and the COP is still operating under the name CGI. COP4 and COP5 were working well, but the two leaders subsequently left the organisation. And in the case of COP6 it was anticipated that the COP leader was methodical and thorough, but his leadership style was controversial and people were already “voting with their feet” on the survival of the community.

The state of the COPs is aligned with predictions made in March 2009 that the model was still not mature. There were cultural issues deriving from ENTEL being a very hierarchical organisation and not accustomed to the idea of relationships across hierarchical barriers. It was also said that in its early stages the survival of the COPs depended much on the performance of its leader, and this seems to be corroborated by the comments in the previous paragraph.

ENTEL's high staff turnover and aggressive recruiting rate has caused an increasing number of GY amongst its headcount. This alone is causing cultural changes with the new generation being far more prone to connectedness and having a more natural tendency to share through social networks. This has helped trigger the ubiquity of connection devices and leverage the network effect. The question that remains to be answered is whether this connectedness and participation in social networks has translated into business benefits for the organisation.

Closely connected to the previous point is the issue of the causal relationship between the change in culture that promotes people-driven networks, and the facility for implementing social networking. Has the fact that the organisation is making several attempts to implement social networking tools had a positive impact on ENTEL's people increased openness to knowledge sharing? Or is it that the change in culture in terms of propensity to share is enabling the implementation of social networking tools? From analysing the evidence it is concluded that the latter is the case. Social networking tools are being implemented with relative ease in the pilot phase when it is reaching people who are avid to using this technology. As seen in section 5, when social networking initiatives reach the upper echelons of the organisation and the older mid-managers (both groups normally baby-boomers) the initiatives run into trouble. This corroborates prior experiences that technology adoption demands cultural change, and not that technology adoption leads to cultural change. In that sense, social networking technologies are no different from other ICTs.

With regard to technological tools, it has emerged that social networking tools need to be user-friendly if they are to be adopted and flourish. They need to have i-Pad type touch-screens and be self-managed, such as Jive or Yammer. Sharepoint has proven to be problematic mainly due to poor interface, to difficulties in configuration and, above all, the rigidities imposed by the need to be centrally managed.

ENTEL is tackling its high HR turnover by decentralising induction training (which consumes many resources and retards new entrants' understanding of the corporate culture) and entering in employer-branding campaigns. Considering that there is evidence from the Government vertical in the Corporate market that

good KM increases job satisfaction and thus retention, would it not make more sense to invest those funds in strengthening the organisation's KM?

It is clear that all our informants understand and basically agree with our two-dimensional knowledge networking framework and the model that connects it to the value discipline of the organisation. From our conversations it also emerged that they can see why this paradigm would have changed in recent years. On the one hand, knowledge repository technology has become far cheaper, so technology-driven networking tools do not require the large investments of the alignment paradigm. On the other hand, the incorporation of GY with their greater openness to sharing and with them the SN tools, has increased the facilities for extending peoples' people-network. The fact that SN tools have incorporated knowledge repositories into a single technological platform, again undermines the need for the "or" and promotes the "and" decision.

The prior trend is strengthened by changes in our industrial organisation and the reinforcement of the knowledge economy. As indicated by Viedma & Cabrita (2012, pp. 258-81) cited in section 2, on the one hand the growing importance of Relational Capital with respect to Human Capital and Structural Capital is also undermining the "or" decision and leading to people-driven knowledge networks being a "must". On the other, in the present context business models need to evolve permanently so organisations cannot rely on simply replicating solutions found in a knowledge repository (the traditional model of OE) so re-utilising old solutions needs to be complimented by creative enhancements achieved by working with experts. The external forces of the economy are thus pressing organisations to develop both technology-driven and people-driven networks. ENTEL has still not matured along this line which explains why its innovation programmes (e.g., Open Innovation, Centre of Excellence) have not been successful.

Finally, in retrospect it now looks surprising that the old paradigm does not include any construct related to culture. With the evident role that culture and leadership play in the functioning of communities of practice, it is clear that future models will have to consider this.

7 Conclusions

The ENTEL case is an interesting one to study due to that its KM strategy was designed in 2008-9 applying the old paradigm. The lessons that do emerge clearly from this case:

- Leadership of COPs is critical to their success, at least in the early stages of their implementation.
- The incorporation of GY is changing the culture and openness to sharing knowledge, and accelerating the adoption of SN tools, but the barriers to full deployment are still embedded in the older generation of senior and middle managers.
- KM at ENTEL seems to be moving in the right direction, but still needs a long way to go to be mature.
- Moving further down this path seems to be a pre-requisite for ENTEL to be able to materialise the potential of innovation programmes.

This paper appears to support that the paradigm for strategy-KM alignment has given way to a new state of affairs where organisations need to pursue both people-driven and technology-driven knowledge networks. The impact of this is that our strategy-KM alignment model would no longer be valid, and we are enticed into searching for a new framework that looks beyond knowledge networks. Reflection on the ENTEL case leads us to believe that such a model will need to incorporate "culture" as a significant construct.

Clearly a single case is not enough to arrive at generalisations or even final conclusions on the falsification of the model and other cases will have to be analysed. And finally, back to the title, the impact factor is not Web2.0 but GY entering the workforce.

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