

The Dissemination and Adoption of Knowledge Management Practices Behavioural Model

Raul M. Abril
Henley Management College, UK
Raul.abril@ncr.com

Abstract: Moving a global consulting organisation from an attitude based on individuals' "knowledge is power" to the advocated principles of knowledge sharing is a challenge that requires facilitation. This paper studies a real global consulting organisation that recognised that important firm resources like processes, technology and capital were not enough in order to drive the required attitudinal change. Details are presented about the lessons learned from a couple of unsuccessful past knowledge management programs and from a successful implementation of a knowledge enablement program involving agents as facilitators of attitudinal change. Some of the lessons learned were that (i) action research components were of help harvesting knowledge assets from tacit knowledge, (ii) perceived value moderates the motivation of associates to participate in the knowledge enablement program, and (iii) knowledge practice owners should perform their agentic task as consultants. A topic for discussion is if the prior knowledge of knowledge practice owners on a given knowledge domain is a requirement to facilitate an attitudinal change.

Keywords: driving attitudinal change, knowledge practice owners, ethnography, knowledge enablement, global consulting organisation, action research

1. Introduction

This paper addresses a subject of business and academic relevance: How to implement a behavioural change in a professional services organisation that is perceived as having an excellent performance delivering projects? The question has embedded a subtle distinction between behaviour and performance. If it is performing, why we should touch it? The counterargument is that it is better to focus firm scarce resources in changing behaviour in areas that are not performing as expected. The compelling business reason for implementing behavioural change in a professional services organisation that is perceived as performing well it is essentially of competitive nature (e.g. sustainability of a leadership position).

Past experiences and the lessons learned implementing knowledge management practices are presented with a narrative style. All the field observations were made using a combination of case study research and action research (Remenyi, Williams, Money, and Swartz 1998). A number of working hypotheses are articulated driving behavioural change towards the adoption of knowledge management practices. A research model is suggested for discussion that explains the hypothesised relationships among the drivers for behavioural change and adoption of knowledge management practices as the dependent variable. Knowledge Management Antecedents

1.1 The organisation

DataCon is the fictitious name of a real business unit of a big IT firm. DataCon has a global presence (i.e. over 100 countries), a world-class customer list with more than 800 customers in industries like banking, telecommunications, retail. DataCon customer base includes firms in the top ten ranking in Fortune 500 (e.g. 90% of top global communication service providers, 50% of top global retailers). DataCon's technological solutions are delivered by 2,500 professional service consultants and produced revenue of \$1,500M in 2005. Market analysts consider DataCon as the dominant leader of decision-making solutions (e.g. customer management, financial management, profitability analytics, supply chain management, demand chain management), which includes professional services.

The professional services are organised on territorial bases. Professional services managers report to a sales vice-president. Consultants in the professional services organisation have strong billable time objectives and their delivery approach is the traditional consulting project team applying project management techniques (e.g. Project Management Institute 2000). Deliverables are produced in most of the cases in local language with some remarkable exceptions. For example, in Scandinavia and Middle East it is common to deliver in English. In terms of language, Europe, Middle East and Africa professional services organisations demand that best-in-class assets are translated to English. However, Asia-Pacific and Japan professional

services organisations demand that best-in-class assets are translated to their country languages. The territory is clustered by location and demand. So, in areas like Middle East, a professional organisation covers more than one country and for all industries. However, in US, professional organisations are segmented by industry covering a number of states (e.g. South East states and for retail industry).

Project teams are the organisational links among the professional consultants. Consultants on “the bench” (i.e. not assigned to a project) use to have a virtual office. Most of the projects are done at the customer site. This means that project team members travel to the locations where the customer premises are located and they keep communication links with the rest of DataCon using phone and e-mail when possible. The implementation phase of a project might last anything between a few weeks for a basic business intelligence reporting to several months for a full data warehouse implementation. Consultants enter and leave the project as dictated in the project plan. It is not uncommon to have a consultant at the customer site for six to twelve weeks. The exception is the project manager who usually has on site presence during the entire project. Contact access is easy through mobile telephony. However, e-mail access and internet access is not a standard even in areas like US. It is not uncommon to find customers that do not allow the consultants to gain external access to internet. This means that these consultants only have access to corporate work environments when they are in their hotel rooms after their long working hours. Furthermore, being at the customer site, their traditional way of sharing assets is via memory sticks and the assets are dispersed among the laptops of the consultants.

1.2 Knowledge management antecedents

Knowledge management practices (e.g. Edvisnsson, Buzan, and Truch 2004) had been in place in a few local organisations. In this environment, knowledge did not flow cross local organisations in a smooth way. In fact knowledge was located in organisational local silos. DataCon recognised that knowledge was a firm resource (e.g. Barney 1991, Huang, Lee, and Wang 1998) and define a corporate vision towards knowledge management characterised by the following constructs:

- A generic definition of knowledge management based in reference material (i.e. “Knowledge Management is the discipline that promotes an integrated approach to identifying, managing, and sharing all of an enterprise’s information objects”

- A number of generic objectives (e.g. improve margin and profit, improve use of practitioners, decrease risk)
- Investment in a technology program to develop and deploy an environment that would support this vision. This program was named as Knowledge and Asset Manager (KAM).

KAM was released last quarter 1998 and globally deployed to all the organisations. KAM used a web interface and, optionally a Lotus Notes client interface. KAM web interface provided search and submission capabilities of knowledge assets. The Lotus Notes client interface provided capabilities for manipulating knowledge assets produced in the context of customer facing engagements. In parallel, it was recognised the need for having processes documenting the knowledge asset flow with KAM. Expectation was that the professional organisations delivering projects and the RandD and marketing organisations would make KAM as the single centralised tool and repository of knowledge assets. KAM had limited support resources in the field and they focussed their action to promote the usage of KAM with generic presentations about the value of using KAM. KAM technology received an acceptable level of adoption from the RandD and marketing organisations. This was visible in the form of documentation and sales assets available in KAM. Unfortunately, there was little adoption in the professional services organisations. Acceptance of processes and technology (e.g. Davis 1989) has been frequently studied in the literature in relation behavioural constructs like usage. Frequent complains were: cumbersome access to assets and few or lack of relevancy for the task at hand. KAM was discontinued in October 2002.

By last quarter 2002, a number of intranet sites had been operational for few years and they became the prime mechanism of outbound communication. Each intranet site targeted a function (e.g. sales, support, professional services). There was a clear conviction that knowledge assets had a prime user and it was not needed to grant access to associates in other functional areas. Submissions of assets were under control and not generally available to every associate. Again, this technology received an acceptable level of adoption from the RandD and marketing organisations and a little adoption in the professional services organisations. Furthermore, the volume of assets grew and the need for accessing knowledge assets cross functional areas became an issue. From a technology stand point, this issue was addressed by (i) removing most of the access restrictions that were associated to each role and (ii) with the development of a search engine exploring all the

intranets. In parallel, to these search engines cross intranets, DataCon considered that the active involvement of the practitioners was a requirement for the success of knowledge management. The hope was that by actively making the practitioners players they would start adopting their dedicated intranet site. This idea was operationalised promoting communities of interests. The management action focussed in communicating the message to the field trying to persuade practitioners to organise themselves into communities covering one specific subject.

These communities of interest were organisational structures characterised in reality by their informal nature (loosely coupled systems (e.g. Weick, K.E. 2001), voluntary assignments, and not regular meetings). The hope was that the exchange of knowledge in these communities of interest would drive the usage among the participants of the professional services intranet. Unfortunately, few communities of interest were constituted and they never were really operational. Of course, there were standard advocated processes for conducting projects and, in fact, there was a considerable effort in the organisation developing best in class processes. All this explicit knowledge impacted positively and had business significant impact in terms of risks reduction and quality improvement. However, these artifacts (i.e. processes, tools, templates, KAM) had some holes in terms of detail (e.g. not enough to deliver being a junior consultant), in terms of subject (e.g. released applications by RandD with no explicit knowledge on how to implement them), and in terms of situations (e.g. how to design a logical data model that can be physically populated with the existing data sources versus a theoretical logical data model that might be almost empty in the implementation). Knowledge management needs on the "front line" of customer engagements were addressed by using personal networks of contacts and broadcasting e-mails to discussion forums requesting for help. These discussion groups were very popular among the practitioners and represented a just-in-time access to mostly explicit knowledge in some part of the organisation.

1.3 Lessons learned from the KAM and intranet experiences

The generic objectives (e.g. improve margin and profit, improve use of practitioners, decrease risk) were never formally endorsed by the field professional services management. So, they became more a set of corporate values than a set of operational objectives to be measured for guiding management attention and action. Consultants in the professional organisations are very focussed on their yearly objectives and their

behaviour is strongly influenced by such objectives. There were no explicit/implicit knowledge management objectives for professional services and this did not favour their attention for adopting enthusiastically KAM. Knowledge growth was enabled by training courses and mostly by experiential learning (e.g. Kolb 1984). In fact, any average senior consultant (e.g. a logical data modeller, an architect, a project manager) required a considerable learning curve measured in years. It was not unusual to require between three and five years to reach proficiency and once this level was reached it was not uncommon to think that "knowledge is power". So, as some consultants said "why should I submit my templates and lessons learned?"

An almost only technologic approach to knowledge management, as the KAM initiative represented, did not enable a significant knowledge management enhancement in DataCon. Professional services organisations did not have the attitudes of a classical consulting company where knowledge is the life-blood of the organisation and where turnaround in the junior levels is measure in months. Another lesson learned was that an appropriate level of human resources is needed to support a technologic approach like KAM. It was clearly not enough to offer presentations talking about the functionalities of KAM and arguing that usage of KAM was synonymous of good corporate citizenship. This few resources acted as tool administrators and in their charter there was not any role in driving change. The intranets sites became technologic environments providing pulling capabilities of knowledge assets. Furthermore, such assets were systematically final versions of released documents. For example, the few knowledge assets that some one could expect to find in the professional services intranet were uploaded when the project was closed (e.g. statements of work, project plans, requirements documents, technical specifications, post-mortem lessons learned). Most of the flow of documents during a normal project implementation among the project team members happened via e-mail. E-mail servers became the critical tool for disperse project teams and the inbox folder of the project manager was the central repository for all the knowledge assets in the project team. From a corporate standpoint, this is an unsatisfactory situation to be corrected. The need for collaborative environment was identified in order to allow that work-in-progress assets are exchanged among the team members.

Furthermore, confusion was identified between access rights and the location of the assets. The implementation of dedicated intranet sites granted

access rights by segregating assets cross-functional areas. DataCon recognised that knowledge is ubiquitous through assets and that segregation of assets in dedicated intranet sites was in fact breaking knowledge that could be formed cross assets just jumping from asset to asset.

The implementation of the communities of interest did not have the desired adoption by the professional services organisations because two factors (i) there was not enough motivation for the consultant to participate in these forums and (ii) consultants already satisfied their individualistic needs for knowledge on just-in-time bases by broadcasting requests for help via e-mails. Of course, a lot of the explicit knowledge (e.g. customer deliverables) was under the control of the delivery local organisation but not under the control of the business unit. Not mentioning that the consultants primarily held the tacit knowledge. Overall, there was not an understanding of the overall knowledge that was out of control. The suspect was that DataCon could be leaking knowledge without being aware of it. Probably, the hardest lesson learned was the frustrating understanding that outstanding management *action* would be needed in order to enforce the adoption of knowledge management practices by professional services organisations. Interestingly, the knowledge management initiatives were funded at the business unit level and there was a limited authority enforcing such initiatives among the professional services organisations because these organisations were mostly aligned to the sales territorial organisations. Therefore, management communication of the goodness of knowledge management benefits in this organisational context was not enough to get adoption by the professional services organisations. "What do we need to do in order to bring them on board?" this was the question in order to transition to an acceptable level of knowledge capturing, sharing, and reusing.

2. From knowledge management to knowledge enablement

2.1 Enabling knowledge as opposed to managing knowledge

In 2004 a new push to knowledge management was launched in DataCon. The lessons learned from the KAM and intranet experiences were framed in a problem statement (e.g. Dutton, Fahey, and Narayanan 1983, Dutton and Jackson 1987), a theorised conclusion and in a solution approach. The problem statement was enacted as "low adoption of knowledge management practices in the professional services organisation after a number of unsuccessful initiatives" (Abril

2006). The theorised conclusion was that "There are unfavourable attitudes and they influence professional services behaviour which results in low adoption of knowledge management practices in the professional services organisation" (e.g. (Davis 1989) (Abril 2006)). If DataCon wanted to achieve a remarkable dissemination (e.g. Schulz 2001) and adoption of knowledge management principles in professional services then significant management action had to be taken changing the attitudes driving such behaviour. This problem statement embedded a holistic approach to knowledge management. It was not enough to formulate a vision, a set of generic objectives and to invest in a technological work environment. It was needed to fundamentally remove all the aspects that were barriers to the dissemination and adoption of knowledge management principles. Another implication of this problem statement was the need for a focus on execution. Change would not happen alone. DataCon would need to assign expensive resources and for a considerable time in order to enforce change. Consequently, a broader solution approach was needed. A contingent solution plan (e.g. Payne, Bettman, and Johnson 1993) was formally defined and approved. This solution plan adopted basically the shape of a change management plan. A subtle change was introduced framing the effort. Instead of targeting "managing" knowledge, DataCon moved to "enabling" knowledge (e.g. Day 1994). This new frame wanted to envelop the objective of providing the appropriate resources for disseminating and adopting knowledge management practices by the entire organisation. This "enabling" construct fully covered the desire of managing knowledge assets (e.g. measure impact) and enriched it with the recognition that dissemination and adoption of knowledge management practice would require facilitation for a considerable period of time.

2.2 Research question and research method. Action research for the formulation of the hypotheses in the change management plan

The following research question was formulated "What are the drivers that will favour positive attitudes that will enable a behavioural change towards the adoption of knowledge management practices (in a professional services organisation that is perceived as having an excellent performance delivering projects)?" Once these drivers would be identified, then the change management plan should be constructed identifying specific actions aligned to such drivers. A research design was decided for addressing the research question. The unit of analysis was the individual member of professional services organisations. The research method was action

research and not, as wrongly presented in (Abril 2006), ethnographic. This aspect deserves explanation. The main criticism characterising as “ethnographic” the conducted research is that the researcher asked questions looking for clarifications. This fact (i.e. asking questions) according to the literature means that the researcher is not a passive neutral observer and therefore, just by the fact of asking clarifications, it might influence the observations because the question might impact the behaviour of the observed individuals. The feedbacks from the experts attending the conference were we presented our findings (see (Abril 2006)) made us to revisit the research method that we used. Furthermore, we consider very difficult to conduct ethnographic research for knowledge management in organisational environments as supported in (Kane, H., Ragsdell, G. and Oppenheim, C. 2006)

In essence, the objective of the action research was to observe the members of the professional organisations and formulate a set of hypotheses addressing the research question. This prior declaration was key in order to identify which findings would count as knowledge acquired (Checkland and Holwell 1998). Data was gathered by asking about the lessons learned of past experiences and by embedding researchers in project teams. This means that researchers were not independent of research as frequently they asked questions. One of the tactics used by researchers was “shadowing” subject matter experts in their daily regular field jobs. Observations were captured in the form of “a day-in-the-life” storyboards (e.g. (Girard and Lambert 2006)) for the main roles in the professional services organisations. Careful attention was dedicated to the knowledge needs of the professional services consultants. The research started in July 2005 and ended in December 2005. As a result of this research a number of drivers were identified. The label “drivers” was used to transmit the sense of the more academic construct “critical success factor”. This means, that such drivers were identified as necessary, all of them, for the successful dissemination and adoption of knowledge management practices among the professional services organisations. Failure in just one of such drivers would imply that attitudinal change would not happen. Furthermore, success implementing all the drivers would not imply success in the dissemination and adoption of knowledge management practices among the professional services organisations because an underidentification issue (e.g. Hair Jr., Black, Babin, Anderson, and Tatham 2006) could have happen with the drives.

The identified drivers for an attitudinal change in DataCon towards the dissemination and adoption of knowledge management practices in the professional organisations were: personalised value, executive sponsorship, effective training, enabling support organisation, and incremental perceived successes.

2.3 The personalised value driver

Individual behaviour is strongly influenced by motivation according to expectancy theory (e.g. Vroom 1964). The benefits of knowledge management practices would be aligned to the business objectives that professional services organisations had. Professional services managers were identified as the key influencers on the dissemination and adoption of knowledge management practices. They hire and hire consultants. They negotiate the yearly objectives with the consultants. The hypothesis was that “consultants’ change of behaviour towards a dissemination and adoption of knowledge management practices would be positively associated with a perception of the value of such adoption by their direct managers”. A knowledge demand-supply approach was deployed where the value was articulated in terms of effectiveness and efficiency filling the knowledge gaps for the project teams. Two types of scenarios were identified: Presales and implementation. In presales situations it is not uncommon the need for tacit knowledge in order to increase credibility and or reduce risks closing deals. This knowledge needs had to be filled in by the project team with the involvement of the professional services manager by broadcasting requests for help via e-mail and with lengthy follow up calls assessing the responses. In this presales scenario the knowledge sources use to be in the form of tacit knowledge. Therefore, the key aspects in this scenario are in the identification and qualification of the sources of the required knowledge and linking such sources with the team looking for knowledge. From the professional services manager perspective, an increase in the availability of tacit knowledge options (i.e. effectiveness) and the reduction in time and effort looking for it (i.e. efficiency) were easily perceived as value.

In implementation scenarios, it is common to find cases that are considered best-in-class implementations. Unfortunately, the explicit knowledge assets produced in such great implementations have a limited reusability power because their specific details in terms of customer references, industry or implementation particularities. Consultants do not have time for making reusable their knowledge assets. When they finish a project, they use to move to

another project, or in the few occasions when they go to the “bench” they enroll in training courses. Therefore, in the next project that a similar task has to be performed, consultants use an anchor and adjustment heuristic (Tversky and Kahneman 1974). Consultants search for a past successful knowledge asset (i.e. the anchor) and depending on the specific requirements introduce appropriate adjustments. From the professional services manager perspective, a future increase in the availability of explicit knowledge options (i.e. effectiveness) and the promise of reduction in time and effort looking for it (i.e. efficiency) were easily perceived as an enough expectant value as to agree that it was worth to invest time in reusability at the time that the assets were produced (i.e. investing now to get the pay off tomorrow).

Overall, reusability of knowledge assets covers both explicit and tacit knowledge assets. Reusability of explicit knowledge assets includes diverse aspects as removing customer references, translation to, for example, English (in Europe) or from English to a local language in Asia Pacific, and cross-industry generalisation (e.g. from financial to retail). Reusability of tacit knowledge, in general, it requires considerable effort and time and includes making it explicit knowledge. Making explicit knowledge from what was just tacit knowledge it was definitively perceived as value by the professional services managers. Lessons learned and white papers are examples of assets with a high perceived value by the professional services managers. It is also remarkable to mention that the value of adoption of knowledge management practices was articulated in terms of instrumental utility with quality improvement initiatives of interest for the professional services organisations. For example, professional services managers understood that knowledge management practices were of value for them as they will help their organisations in achieving Capability Maturity Model level 2 (i.e. repeatable) (e.g. Software Engineering Institute 1980).

The change management plan has been executing initiatives in relation to the personalised value driver for one quarter in 2006 and anecdotic evidence suggests support to the working hypothesis that consultants’ change of behaviour towards the dissemination and adoption of knowledge management practices would be positively associated with a perception of the value of such adoption by their direct managers. This initial evidence has had an unexpected consequence, although reasonable, “management stress” for measuring the impact of the adoption of knowledge management practices by the

professional services organisations. The rationale goes in the following way “if value has been perceived by the professional services organisations in the adoption of knowledge management practices then a measurable business value contribution should exist and be measured”. Unfortunately, measuring such business contribution has been a difficult exercise that the literature on knowledge management has addressed with very limited consensus on the right approach (e.g. Marr, Schiuma, and Neely 2004). The knowledge management literature has an endless list of papers with suggestions on how to measure the organisational impact of knowledge management. Unfortunately there is no dominant paradigm on how to do it. Nevertheless, there is a considerable stream of research suggesting that perceptions of value are the best proxy to the construct value. This measurement is operationalised through surveys. Theoretically, benchmarking successive measurements it would be possible to measure value contribution (e.g. Moslehi, Mohaghar, Badie and Lucas 2006).

Although in the existing organisational context professional services managers were identified as the key influencers on the dissemination and adoption of knowledge management practices, an alternative working hypothesis was formulated as “change of consultants’ behaviour towards the dissemination and adoption of knowledge management practices would be positively associated with recognitions and rewards”. The change management plan defined and executed programs (e.g. “best asset in the month”, regional knowledge champion in the year”) pursuing this alternative working hypothesis. These initiatives have been in place for one year and the evidence gathered so far is that there are applications and nominations. Consultants are interested in getting a personal compensation in terms of value and or recognition but the business impact of these programs is marginal.

2.4 The executive sponsorship driver

The ideal situation would be that knowledge management practices would be institutionalised across all organisations. This means that all levels of management should enforce dissemination and adoption. In the existing organisational management by objectives context (e.g. Drucker 1954) the hypothesis was that “the inclusion of knowledge management objectives at the leadership team levels would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”.

The rationale for this working hypothesis was that in a hierarchical organisation personal objectives

are aligned across the different levels. Therefore, a contingent effort will be performed by the consultants towards their personal objectives (e.g. Payne, Bettman, and Johnson 1993). Examples of knowledge management objectives at the leadership team level were “searches for existing assets”, “submissions of reusable asset”, and “operational communities of practice”. In December 2005, knowledge management objectives were formally included in the leadership team members and cascaded down to all the levels in the professional services organisations. An unexpected challenge happened framing such objectives (e.g. Dutton et al 1983, Dutton and Jackson 1987). They should lead action towards a change in the behaviour of consultants with respect knowledge management practices indicating a clear adoption. This implied that a set of standard language was recommended in order to keep the essence of the objectives. The two quarter 2006 reviews since the change management plan has been executed in relation to the executive sponsorship driver suggests support to the working hypothesis that “the inclusion of knowledge management objectives at the leadership team levels would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”. Nevertheless, the next step is the assessment of the intensity of such behavioural change, which potentially will lead to a new set of objectives. Remarkably, the objectives in relation behavioural change with respect the dissemination and adoption of knowledge management practices were not framed in terms of value contribution to the business (e.g. performance improvements). This distinction avoided confusion between behavioural attitudes and business impact.

2.5 The effective training driver

Knowledge management practices involve management disciplines. In general, the components of knowledge management systems involve processes, technology, individuals and assets. There is a difference between adopting knowledge management practices and adopting with proficiency knowledge management practices (e.g. Gist 1989). Learning processes were designed in order to allow a holistic learning on the knowledge management principles in DataCon. The hypothesis was that “the level of trained consultants in the day-in-the-life knowledge management principles would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”. The rationale for this working hypothesis was the aggregation of a number of arguments. Because the learning outcome had to be reflected in a behavioural

change, the learning materials had to have a practical utilisation on the daily activities of the consultants. This implied the design of learning courses per each specific role (e.g. project managers, solution architects). Additionally, basic elements of business research had to be included in the learning courses. For example, learning how to perform efficient searches is assessed as a behavioural change with respect broadcasting an e-mail asking for related assets. Another example, filling the appropriate metadata (e.g. context, industry, things did not work well) describing the lessons learned after a project has concluded is assessed as a behavioural change with respect doing nothing or describing just the title of the referred lessons learned. Overall, careful balance had to be considered addressing the different aspects of the knowledge management system in DataCon. Hard lessons from the past, suggested that a focus in just technology did not provide the desired results, therefore, many aspects had to be considered in the learning courses (e.g. the processes, the contact individuals facilitating the dissemination and adoption of knowledge management practices).

Delivery mechanism of the training course was a relevant factor. It was unrealistic to expect presence of all the consultants in class rooms. Flexibility was a critical success factors. Most of the courses were designed to be delivered on demand via internet and via scheduled seminar via telephonic conferences. Tracking the attendance helped in the control of the training plans objectives. Objective of attendance was agreed with the professional services managers. One of the variables considered for measuring the dependent variable behavioural change in the working hypothesis “the level of trained consultants in the day-in-the-life knowledge management principles would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices” was usage of the available technological infrastructure. A basic monthly analysis provided evidence of positive association between the level of training and usage.

2.6 The enabling support organisation driver

DataCon recognised that enabling means (e.g. Day 1994) should be deployed in order to drive change in the professional organisations towards the adoption of knowledge management principles. These resources were funded and owned by a central Knowledge Management Office. As mentioned earlier, professional services organisations did not have a reporting link with

this Knowledge Management Office. A couple of enabling resources contemplated in the change management plan deserve attention: a collaborative work environment for project teams and the agentic role (Jensen and Meckling 1976) of knowledge practice owners. Enabling knowledge would include providing a collaborative infrastructure that would allow collaborative effort of project teams. This infrastructure would be a mean and not an end towards knowledge management. This collaborative environment was implemented using technology available in the market. The hypothesis was that “the usage of the collaborative environment for all the projects would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”. The rationale for this working hypothesis was that there was an expectation in that once all the intermediate, work in progress project assets were stored in a project folder in the referred collaborative environment then it would be relatively easy to promote some of them as knowledge assets that should be catalogued as reusable. This environment has been operational for just one quarter and there is not enough evidence to confirm or disconfirm this working hypothesis.

Knowledge practice owners are agents funded by the knowledge management office. Their role consists in facilitating the dissemination and adoption of knowledge management practices by the professional services organisations. This agentic role includes acting on behalf of the professional services organisations as if they were members of such organisations in the context of customer facing projects. The hypothesis was that “the agentic action of knowledge management practitioners would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”. The action of knowledge practice owners included facilitation of communities of practice, setting collaboration environments for project teams, ad-hoc support making reusable assets, linking sources and demand of tacit knowledge that were globally dispersed, and training. Action research components (Remenyi et al 1998) were of help harvesting knowledge assets from tacit knowledge. Although the academic term “action research” was not used in DataCon, this is what it was done. The terms used were “shadowing a subject matter expert” and “be embedded in the project teams”. Each knowledge practice owner shadowed a consultant in his/her regular field job. As a result of these observations a day-in-the-life storyboard was created for the main roles in the professional services organisations. Careful attention was dedicated to the knowledge needs

of such consultants. Because consultants perform their job in the context of project teams, “knowledge practice owners” were embedded in such teams while performing the “shadowing” exercise. This experience took all 2006.

Knowledge practice owners were instrumental in articulating the personalised value driver mentioned earlier. Framing the value of the dissemination and adoption of knowledge management practices in the terms that professional services organisations use was assessed as fundamental. This meant that knowledge practice owners took the consulting practices of the field for performing their agentic task. For example, a knowledge practice owner approached a new project team as their customers. He had to “sell” the value for the team of adopting knowledge management practices and obtain their acceptance to be embedded in the project team. The project manager was the owner/approver of the action performed by the knowledge practice owner. A knowledge assessment gap analysis had to be conducted in order to identify the knowledge gaps in the project plan before the implementation phase would start. As a consequence, a knowledge action plan was produced and included as part of the quality assurance project plan. During the project implementation, the assigned knowledge practice owner would support the team executing his/her knowledge action plan until the end of the project. Knowledge assets harvested by the knowledge practice owner would be approved/accepted by the project manager. The rationale for the working hypothesis “the agentic action of knowledge management practitioners would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices” was that professional services organisations would perceive value in the action of knowledge practice owners and this would provide a vicarious input in their self-efficacy beliefs (e.g. Bandura 1986) performing knowledge management practices. This agency approach of knowledge practice owners has been operational for just one quarter. The evidence gathered suggests support to the working hypothesis. A limitation of this agency approach in terms of the intensity of its impact is the number of project teams that can be enabled. There is a limitation of the number of teams that a knowledge practice owner can support concurrently (e.g. three to five).

2.7 The incremental perceived successes driver

DataCon is a public (in US terms) successful organisation that reviews performance quarter by quarter. This introduces a considerable

“management stress” that has considerable beneficial aspects and some undesirable bias towards the time horizon of each program. A basic project management lesson learned says that risk is positively associated with the duration of a project. Unfortunately, behavioural change in a geographically and attitudinally diverse professional services organisation takes some time. Not being able to borrow from the literature a model to predict how much time for a given organisation it is needed for implementing a behavioural change a set of incremental subgoals were established in order to favour a belief of continuous achievements (e.g. Gist and Mitchell 1992) and the hypothesis was that “incremental perceived successes would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices”.

It is very popular the said that “perception is reality”. This means that considerable resources would be needed in order to influence the perception of key stakeholders about the successes increasing the adoption of knowledge management practices by the professional services organisations. If a success is not perceived as such then it is not of worth for the change plan. Another aspect of the language of this hypothesis is that it refers to incremental. This means that the change plan included a roadmap of small successes during a three-year period. An assigned program manager in the knowledge management office monitored this program. The term “success” implies that there is an agreement on the meaning of success. Examples of agreed definitions of behavioural success were usage of explicit knowledge assets by other project teams, meeting the expectations of a knowledge action plan, gathering requirements for new features in

the context of a community of practice, availability of explicit knowledge assets for identified critical released products, relevancy of retrieved assets in a search, and intensity of usage of the collaboration environment. Examples of agreed definitions of performance success were revenue increase, margin increase, risk reduction, and project time reduction. The change plan implemented a reporting system to periodically track and communicate metrics about behavioural change. As expected, the difficulties measuring value from a performance perspective makes that the available evidence for reporting is based on anecdotic interpretative assessments of the performance.

The rational for the working hypothesis “incremental perceived successes would be positively associated with the consultants’ change of behaviour towards an adoption of knowledge management practices” was that professional services organisations would be motivated by the results/consequences of their adoption of knowledge management practices. This incremental approach was operational for the last quarter in 2006 and there is not enough evidence to confirm or disconfirm support for the working hypothesis.

3. General discussion

The lessons learned from past experiences deploying knowledge management practices and the evidence gathered executing a change plan towards the dissemination and adoption of knowledge management practices in DataCon suggest support to the dissemination and adoption of knowledge management practices behavioural model (TDAKM) showed in Figure 1 (Abril 2006).

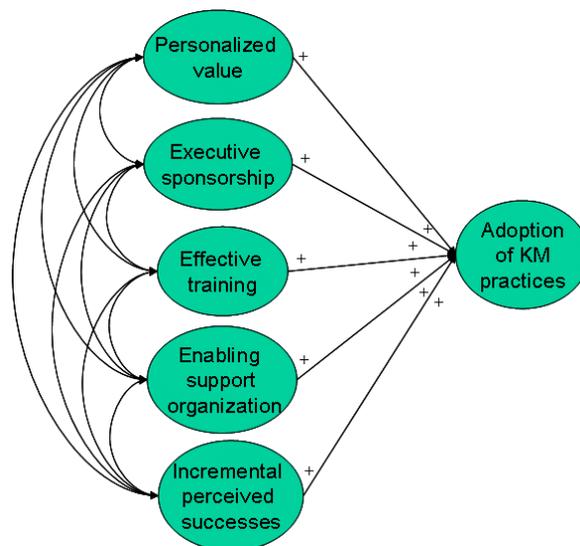


Figure 1: The dissemination and adoption of knowledge management practices behavioural model (TDAKM)

TDAKM hypothesises interdependencies among the independent variables. Obviously, TDAKM requires validation and it is suggested that it is done through empirical positivistic research both case and large-scale surveys. One limitation of this model is that organisational context is not visible as a moderating variable. All the hypotheses in TDAKM consider an organisational context where (i) there is not institutionalised attitudes towards knowledge management practices, (ii) there is a geographically and attitudinally diverse global professional services organisations, (iii) there is not a hierarchical reporting line between the knowledge management office and the professional services organisations, and (iv) professional services organisations are strongly driven with a management by objectives style. TDAKM neglects a debate around the issue of if the prior knowledge of knowledge practice owners on a given knowledge domain moderates the adoption of knowledge management practices. Arguments in favour suggest that trust is an important enabler of a good relationship with the project teams and that prior knowledge of the knowledge practice owner (e.g. as a "doer") will allow him/her to be respected as a value contributor. Arguments against suggest that what matters is the ability persuading the project team members on the value of knowledge management practices. Overall, TDAKM suggest an underpinning 'quid pro quo' between the knowledge management office and the professional services organisations where the knowledge management office is an

enabler of knowledge management value and the professional services organisations are adopting knowledge management practices.

4. Conclusion

This paper was produced considering the feedback from participants in the 3rd International Conference on Intellectual Capital, Knowledge Management and Organisational Learning to (Abril 2006). Researchers in Knowledge conducting research. We concluded that ethnographic research might not be a suitable research design for knowledge management in an organisational environment. TDAKM was the outcome learning of the conducted action research and this model was tested for one year in 2006. Although evidence is not conclusive, there is no refutation so far to it. The interdependences among the independent variables highlight their nature as critical success factors (i.e. it is postulated that you need all of them) with the caveat that further research is needed in order to check the parsimony in TDAKM (e.g. underinformed model missing relevant variables) From a knowledge management practitioner's perspective, TDAKM is a reference model that can be used planning a change management plan towards the adoption and dissemination of knowledge management practices in professional services organisations. The possible generalisation of TDAKM to other type of organisations exceeds the scope of this paper.

References

- Abril, R.M. (2006) The Role of Knowledge Practice Owners as Agents Driving an Attitudinal Change in Knowledge Management. 3rd International Conference on Intellectual Capital, Knowledge Management and Organisational Learning. Santiago, Chile
- Bandura, A. 1986 *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall
- Barney, J. 1991 Firm resources and sustained competitive advantage. *Journal of Management*, 17 1, 99-120
- Checkland, P. and Holwell, S. 1998 Action Research: Its Nature and Validity *Systemic Practice and Action Research* 11 (1) 9-21
- Day, G.S. 1994 The capabilities of market-driven organisations. *Journal of Marketing*, 58 October, 37-52
- Davis, F.D. 1989 Perceived usefulness, perceived ease of use and user acceptance of IT. *Management Information Systems Quarterly*, 13 3, 318-41
- Drucker, P 1954 *The Practice of Management* New York, Harper
- Dutton, J.E., Fahey, L. and Narayanan, U.K. 1983 Toward understanding strategic issue diagnosis. *Strategic Management Journal*, 4, 307-23
- Dutton, J.E. and Jackson, S.E. 1987 Categorising strategic issues: Links to organisational actions. *Academy of Management Journal Review*, 12, 76-90
- Edvisnsson, L.; Buzan, T. and Truch, E. 2004 *Leveraging Corporate Knowledge* Gower Publishing Company
- Girard, J. and Lambert, S. 2006 The Story of Knowledge: Writing Stories that Guide Organisations into the Future 3rd International Conference on Intellectual Capital, Knowledge Management and Organisational Learning. Santiago, Chile
- Gist, M.E. 1989 The influence of training method on self-efficacy and idea generation among managers. *Personal Psychology*, 42, 787-805
- Gist, M.E. and Mitchell, T.R. 1992 Self-efficacy: A theoretical analysis of its determinants and malleability. *The Academy of Management Review*, 17 2, 183-211
- Jensen. M. and Meckling, W. 1976 Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 4, 305-60.
- Hair Jr., J.F., Black, W.C., Babin, B. J., Anderson, R.E. , and Tatham, R.L. 2006 *Multivariate data analysis*. Prentice-Hall
- Huang, K.-T. , Lee, Y.W. and Wang, R.Y. 1998 *Quality information and knowledge management*
- Project Management Institute 2000 *A Guide to the Project Management Body of Knowledge PMBOK*

- Kane, H., Ragsdell, G. and Oppenheim, C. 2006 Knowledge Management Methodologies Electronic Journal of Knowledge Management 4 (2) 141 -52
- Kolb, D.A. 1984 *Experiential Learning. Experience as the Source of Learning and Development*. Prentice-Hall
- Marr, B., Schiuma, G., and Neely, A. 2004 Intellectual capital - defining key performance indicators for organisational knowledge assets *Business Process Management Journal*; 10, 5, 551-69
- Moslehi, A.; Mohaghar, A.; Badie, K. and Lucas, C. 2006 Introducing a Toolbox for IC Measurement in the Iran Insurance Industry *The Electronic Journal of Knowledge Management* 4, 2, 169 - 80
- Payne, J.W., Bettman, J.R. and Johnson, E.J. 1993 *The adaptive decision maker*. Cambridge, UK: Cambridge University Press
- Remenyi, D. , Williams, B. , Money, A. and Swartz, E. 1998 *Doing research in business and management. An introduction to process and method*. SAGE
- Software Engineering Institute 1980 www.sei.cmu.edu/cmmi
- Schulz, M. 2001 The uncertain relevance of newness: Organisational learning and knowledge flows. *Academy of Management Journal*, 44 (4), 661-81
- Tversky, A. and Kahneman, D. 1974 Judgment under uncertainty: Heuristics and biases. *Science*, 185, 1124-1130
- Vroom, V. 1964 *Work and Motivation*. New York: John Wiley and Sons, Ltd.
- Weick, K.E. 2001 Review on "Friendly Fire: The Accidental Shootdown of U.S. Black Hawks over Northern Iraq" by Scott A. Snook. *Administrative Science Quarterly*, 46 (1), 147-51

