Building knowledge sharing communities using team expertise access maps

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Abstract: It is difficult for large and geographically dispersed organisations to manage personal knowledge for easy discovery and sharing, especially in the areas of identification, indexing and codification of the knowledge held in people's heads and the cultural issues of discovery, mutual trust and sharing. We have prototyped a methodology based on mind mapping and a relational database to codify, index and map staff knowledge. This includes an interview process to build trust while eliciting career histories, plus a relationally based

graphical knowledge retrieval structure making it easy for other staff to determine who is likely to posses the kind of knowledge needed.

Keywords: autopoiesis; career history database; communities of practice; human resource management; knowledge mapping; mind mapping; tacit knowledge transfer.

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1 Introduction

This paper is concerned with knowledge sharing in distributed organisations large enough so they do not depend for survival on resources or capabilities of any single individual member, and where it is impractical for most members to know one another. The aim is to understand how tacit knowledge in such organisations can be identified for sharing and transfer, and the kinds of interventions that can serve to make the transfer processes more effective and robust. In this paper there is a focus on the development and prototyping of a methodology and technology for identifying and mapping personal knowledge developed within the organisation to make it more available for sharing.

The need for such tools is particularly evident in the 'leaving expert' situation, when a company needs to downsize or when staff members holding important knowledge are

preparing to leave the company (Hofer-Alfeis, 2008), or in other times of major organisational change where networks for exchanging tacit knowledge are being broken or do not exist.

Due to the constraints imposed by management of the particular organisation in which the work was performed during a time of upheaval, any knowledge mapping to be done was required to be inexpensive to apply and have minimal time impacts on the staff involved in the process. In the end, management was so concerned about staff disruption that no KM methods were implemented, to the detriment of the organisation (Hall et al., 2008). Nevertheless, the prototype described here was successful and demonstrates a methodology for mapping personal knowledge in an organisational framework that can be applied with only minimal time demands on the staff.

2 Organisational epistemology

The terms 'knowledge' and 'information' are slippery in the context of organisations (e.g. Bhatt, 2000; Stenmark, 2001; Tsoukas, 2005; King, 2007). Here, 'knowledge' is product(s) of cognition, in whatever form (e.g. tacit or explicit), or even more generally following the epistemology of Popper (1972), 'solutions to problems of life'. 'Information' is used here as a generic term for syntactically assembled data or explicitly expressed forms of knowledge.

Human organisations are hierarchically complex systems, where knowledge may exist in different forms at different structural levels in them (Nousala and Hall, 2008). 'Organisational knowledge' pertains primarily to the organisation and its problems, processes and intellectual capital. This knowledge is held in the minds of individual members and in various other forms (King, 2007; Vines et al., 2007), ranging from explicit corporate documentation (Hall, 2003a), tacit organisational routines belonging to internal communities (Nelson and Winter, 1982; Cohendet and Llerena, 2001) and physical layout of plant and offices (Nelson and Winter, 1982).

Organisations need to respond fast and rationally to problems. Their ability is bounded by limited resources and time to identify, access and assemble relevant knowledge (Ullman, 2006; Hall et al., 2007). Normally, the best decisions that organisation can strive for are 'just good enough' or 'satisficing' (Simon, 1955, 1957; Arrow, 1974; Else, 2004). Many kinds of knowledge can be articulated and documented, but are not because of time and cost, so knowledge remains embodied as 'personal knowledge' in organisation members' minds (Lehner and Maier, 2000). Members also have lives and careers beyond the organisation's bounds (Arthur, 1994; Arthur and Rousseau, 1996; Currie et al., 2006), and in general will know much the organisation (as an entity) does not know that could be valuable if such knowledge could be identified and made more generally available (Bhatt, 2000; Becker and Haunschild, 2003; Day, 2005).

Personal knowledge may be 'tacit', in the form of skills and understandings that cannot readily be expressed in words; or 'implicit' knowledge that the person could articulate and which could be shared if anyone knew to ask for it (Polanyi, 1958, 1966; Nickols, 2000; Snowden, 2000, 2002; Bartholomaei, 2005; Day, 2005). However, because 'tacit' has been used for so many different meanings (Gourlay, 2004; Haldin-Herrgard, 2004), we prefer the term 'personal' knowledge, after Polanyi (1966).

Even where the organisation holds large and useful bodies of explicit knowledge, personal knowledge may still be required to access and apply it (Cowan et al., 2000; Tsoukas, 2005). It is the people belonging to the organisation who know:

- what knowledge is needed
- who may know the answer
- where explicit knowledge may be found
- why particular knowledge is important or why it was created
- when the knowledge was last needed or may be needed in the future
- how to apply the knowledge.

To improve its performance an organisation needs to ensure

1 people who need particular knowledge can quickly identify and find those who have it

2 that this knowledge will be readily transferred.

This situation becomes particularly critical to the organisation when the organisation faces major changes likely to disrupt tacit knowledge networks or long-term members are leaving the organisation (Hofer-Alfeis, 2008). We believe that the methodology described here can help to achieve that.

This paper follows a 'biological' paradigm of organisations and knowledge that considers many organisations to be living entities in their own rights. This paradigm, detailed in Hall (2003b, 2005) and Hall et al. (2005), combines evolutionary epistemology of Popper (1972) with a theory of complex self-maintaining systems deriving from the autopoiesis of Maturana and Varela (1980) – considered as a basis for organisational epistemology by von Krogh and Roos (1995), Magalhaes (1996, 1999) and Maula (2000a,b, 2005). Although Social Systems Theory of Luhmann (1986, 1989, 1990, 1995a,b) has been applied to organisations and is also based on autopoiesis, the approach followed here is quite different from the one by Luhmann (1986, 1989, 1990, 1995a,b).

The theory of Luhmann (1986, 1989, 1990, 1995a,b) reduces social systems to organisationally closed networks of self-producing 'communications' (Mingers, 1995, 2002; Moeller, 2006), where the networks are their own boundaries, and people and their actions are formally external to and not part of the networks. As will be discussed in more depth elsewhere, Luhmann (1995b) focuses on the supposed contradictions of self-reference and uses the Laws of Form by Spencer Brown (1972) to resolve these by placing the formation of these communication networks on an imaginary dimension orthogonal to the material world. Thus, Luhmann (1986, 1989, 1990, 1995a,b) seriously distorts definition of autopoiesis of Maturana (1980) and Varela (1979) by trying to apply the concept developed for material 'organisations' to intangible and paradoxically bounded entities.

As such, we think 'autopoiesis' of Luhmann (1986, 1989, 1990, 1995a,b) has little bearing on our work here that applies a 'three worlds' ontology deriving from evolutionary epistemology of Popper (1972, 1994) and Hall (2005) to bypass paradoxes of Luhmann (1986, 1989, 1990, 1995a,b):

- World 1 ('W1') is external reality or everything that exists.

- World 2 ('W2') is the domain of cognition and embodied or 'dispositional' knowledge. Personal and tacit knowledge of Polanyi (1958, 1966) is arguably encompassed within W2 (Hall, 2005).
- World 3 ('W3') is where explicit or 'objective' knowledge such as the logical contents of books, computer memories, heredity and other persistent products of cognition is found (Popper, 1972, p.115).

Lyon (2004) argues that cognition, and thus knowledge, is fundamental properties of autopoietic life. Hall (2003a,b, 2005, 2006) also argues that 'knowing' and various forms of knowledge are fundamental to the emergence (Goldstein, 1999) and evolution of autopoiesis at any level of organisation, whether single cells, multicellular organisms or human organisations. Autopoietic organisations have emergent properties beyond any summation of the properties and capabilities of the individual human members of the organisation. To survive in competitive environments, organisations must assemble, deploy, preserve and replicate knowledge in response to situational demands. Organisational knowledge is that which helps the organisation survive, for example, the concept of Nelson and Winter (1982, 2002) shows that organisations have 'hereditary' knowledge in their own rights, comprising competence, learning and routines.

The KM literature discusses knowledge exchanges in terms of tacit and explicit knowledge (Polyani, 1958; Nonaka and Takeuchi, 1995). This does not explain the emergence, support or sustenance of knowledge in organisations (Maula, 2000b; Hall, 2005; Tsoukas, 2005; Nousala and Hall, 2008).

To date, most research and practice working with this biological view of organisational knowledge has looked at objective (i.e. explicit), infrastructural (Hall, 2003a) and procedural (Dalmaris, 2006; Dalmaris et al., 2007) aspects of knowledge management. Nousala et al. (2005a, 2007) and Nousala (2006) have focused on the management of personal knowledge within and between organisations. This paper describes the development of a prototype system to help with the identification and sharing of personal knowledge within organisations.

3 Methodology

3.1 General

The research here is novel, interdisciplinary and exploratory, and still in progress. However, it provides the basis for theory development and serves as a prototype for a properly grounded study. The research combines methodologies of grounded and qualitative approaches. The qualitative aspect refers to the ethnological approach to the data collection:

1 the organisation is approached with a view to observe and to record the experiences of individuals

2 action research is applied within the ethnographic approach (Ticehurst and Veal, 2000)

3 in-depth interviews used a knowledge mapping tool to collect individual details.

Commonalities were looked for that would help identify any emergent organisational phenomena in interviews and in the overt behaviours observed in our day-to-day interactions. Tacit knowledge networks were also explored with a view to identify common descriptors or elements suggested by the literature that might provide the basis for designing a model and a methodology based on that model.

3.2 The case study organisation

We performed the work reported here in an engineering project management organisation ('EPMO') that manages large, knowledge intensive and long-lived engineering projects. During the period of the research, from 2004 to 2005, the organisation had been in existence for approximately 15 years, showed turn-over rate approximately $1 billion per year and employed a few thousand people in several divisions across several states. The organisation ceased to exist as an independent entity in 2008 when it was taken over by a competitor. More of its history is reported in Hall et al. (2008).

EPMO's major organisational imperatives were to qualify and win more contracts (increase revenue), perform better on contracts won (improve return on investment), satisfy customers, manage and mitigate risks, comply with regulations, respond to community and environmental standards and to increase shareholder value. Fluctuating employment due to project cycles made it difficult for any single division to retain skills – exacerbated by skills shortages in the external environment. Without systems to help retain and transfer skills and project know-how it becomes more difficult for such organisations to compete.

At the time the present study was performed, a 17-year long multi-billion dollar project was nearing completion and the company was gearing up for a shorter, smaller but intensive project on the same site. Optimising knowledge use in EPMO seemed to be imperative. Finding and sharing personal knowledge requires navigating complex and diverse organisational communication networks having both tacit and explicit components (Choo, 1998; Nousala et al., 2005a). Corporate history, geographic dispersion and attitudes of many line managers create barriers to share tacit knowledge. Such barriers may be typical in distributed organisations (Ford and Sterman, 2003; Mønsted, 2004). Also, project oriented engineering organisations are hierarchical where each project is often carried out by dedicated teams that are effectively isolated from other teams in the organisation (i.e. in organisational 'silos'), so it is difficult to form tacit networks across divisional and silo boundaries (Nousala and Terziovski, 2007).

3.3 Cartography

'Knowledge mapping' is general term for various techniques, including matrices (e.g. Speel et al., 1999), concept maps (Eppler, 2001; Coffey et al., 2002; Cañas et al., 2004; Dumestre, 2004; etc.) and mind maps (Buzan, 2004; Ermine et al., 2006). Skills matrices such as 'yellow pages' are supposed to help people find particular kinds of personal knowledge in the organisation, but these can be difficult to implement and maintain because of privacy concerns and legislation, or because some people are unwilling to serve as a reference service (Barnard and Rothe, 2003). Such databases often only collect standard personnel data (Earl, 2001; Becks et al., 2003; Ackerman and Halverson, 2004; Blackman and Henderson, 2005) and do a poor job of 'personalising' the information or 'socialising' interviewees to facilitate interpersonal exchanges

required once they have been located as a potential expert. In other words, such databases are too 'impersonal'. In general, social networks are much better for finding and transferring knowledge than databases (Newell et al., 2004).

Concept maps primarily focus on the logical development of empirical ontologies rather than providing a practical means to locate people who hold that knowledge.

'Mind mapping' (Buzan, 2004), used in this study, provides a way to identify and navigate to specific blocks of personal knowledge.

3.4 Interviews

In early 2004, as a major EPMO division neared the end of a very large and long-term project and began to shed staff. Hall and Kilpatrick in an unpublished internal study and report tested the feasibility of mind mapping to identify and describe personal knowledge before it was lost. Two people were interviewed, but due to line managers' immediate priorities to maximise day-to-day profit, a budget and permission to interview other staff were unavailable. Nousala (2006; as an embedded researcher) conducted several more mind mapping interviews. Because some EPMO line and project managers thought such interviews were 'time wasting' against their project budgets (see Hall et al., 2008), some interviews were conducted out of hours. Through the process some interviewees were identified as possible instigators of communities of people in the organisation, and who were willing to share their experience. Nousala (2003, 2004, 2006) studied both sets of interviews with the view to establish communities of practice.

The interviews were semi-structured, guided by a mind mapping tool, MindManager.[1] The most time consuming stages were information collection and final conversion into a browsable and navigable framework. The ease of data conversion between MindManager and other digital tools was important as this allowed all information to be managed electronically from the initial transcription. Even though analysis was required to fully understand the knowledge networks, transcribing the interviews into the mind mapping tool facilitated early access to individual experiences and processing for access and retrieval. Sample interview questions are provided by Nousala et al. (2005a,b). These would be tailored to fit the organisation being mapped.

Interview durations averaging around 2 hr depended on interviewee responsiveness. Mind mapping provided a comfortable method to help interviewees focus on essential issues and structure their responses. The interview process also had another initially unanticipated outcome – social facilitation. Several interviewees commented during the interview process, "Why has not anyone asked us this stuff before now?" A few even offered that the process was one of the more enjoyable things they had done for a while.

Interviews aimed just not only to record obvious personal data but also to identify career knowledge brought to the company and gained on the job. This included highlights before and after joining the company, 'war stories', lessons learned, networks of personal relationships built up by the interviewees, understanding types of knowledge tools used and 'nuggets of gold' – where the respondent identified units knowledge that could be transferred. The primary aim of the interviews was not to transform personal to explicit knowledge, but to catalogue and humanise links to personal knowledge into an approachable resource that might later contribute to the organisational knowledge network. Serendipitously the interview process also preconditioned respondents to see and feel the value of sharing what they know with those interested or needing to know it.

Several factors contributed to successful interviews: preparation typically involved initial discussion, making the appointment, distributing the Hall and Kilpatrick methodology paper with a mind map of the interview questions (Nousala et al., 2005a,b), providing a sample, introducing the ethics of the process and clarifying any queries or concerns. This gave respondents the opportunity to take an active role. Interviews were normally conducted by two interviewers:

1 an 'old hand' familiar with the general history and significant issues of the organisation

2 a 'naive student' needing to understand the stories and explanations performed a vital role of clarification and more importantly provided a point of reflection for the interviewees.

By following the format and guidance offered by the mind map the old hand could ask supplemental questions highlighting critical areas of knowledge for the individual in relation to the organisation as well as previous relevant experience. The interaction of the old hand/naive student roles is important, as this provided respondent with opportunities to reflect on and clarify significant life experiences (Nousala et al., 2005a,b).

4 Results

4.1 Interview transcripts

Taped interviews were transcribed. Appropriate snippets were electronically copied from transcripts to the mind maps initially used to guide the interviews. This allowed comparably structured interview results to be built for each person in their own words, irrespective of the sequence in which the various points were addressed in the semi-structured interview itself.

4.2 Analysis

Mind mapping requires the analyst to trace the respondents' experiences as they occurred in relationship to different job roles. Transcripts were analysed to identify and understand emergent local behaviours, including sensitivities, circumstances, potential blockages, etc., relating to knowledge sharing and network relations from the respondents' experiences. Two threads were emphasised for tracking:

- Key experiences: these are important enough to the individual to be remembered and shared. These key experiences are then subsequently 'followed' in context by the analyst, using the mind maps.
- Contextual threads: contextual threads help to define relationships of key experiences to other aspects of the work and potential clusters of key knowledge objects.

The link between experiential and contextual threads provides the basis for developing an empirical ontology for personal knowledge in the organisation, using the individual's highlighted experiences as the key 'knowledge objects'. The ontology can then be structured to identify different elements of experience, depending on the access requirements to be determined at a later date, such as historic or current/continuing.

Transcribing interviews to mind maps also helped us identify key individuals in the knowledge dynamics of the organisation and who might help build further networks. Working outward from these key people we can begin to identify, record and develop implicit/explicit knowledge network structures and communities, and perhaps understand how these emerge and are sustained.

Our work was helped by an informal community relating to engineering knowledge management within EPMO, which broadened over the months, and through which other key people were identified. Most respondents had some form of involvement with this community. The success of the facilitation was demonstrated through invitations for TEAM project people to join formal and informal meetings in the ordinary lines of business within the EPMO organisation that would have otherwise been off limits for them.

The 'formal' interviews using the mind mapping process established a clear protocol for continuing informal discussion facilitating additional deep sharing of individual personal knowledge and experiences outside the interview process.

5 Developing and deploying an ontology

To build a database of personal knowledge, the transcribed histories of the individual interviewees must be broken down into 'contextual points' that can be mapped to an ontological structure. The contextual points in turn identify 'information clusters'. These information clusters are sentences or paragraphs that 'belong together' or are held together by a theme based on the epistemology of the initial theoretical framework. The ontological structure imposed on the interview results then determines what is possible to find and retrieve from an electronically organised database of the transcripts. The ontology should include elements for both experiential and personal attributes (i.e. metadata). Personal attributes are based on both historical and present experiences.

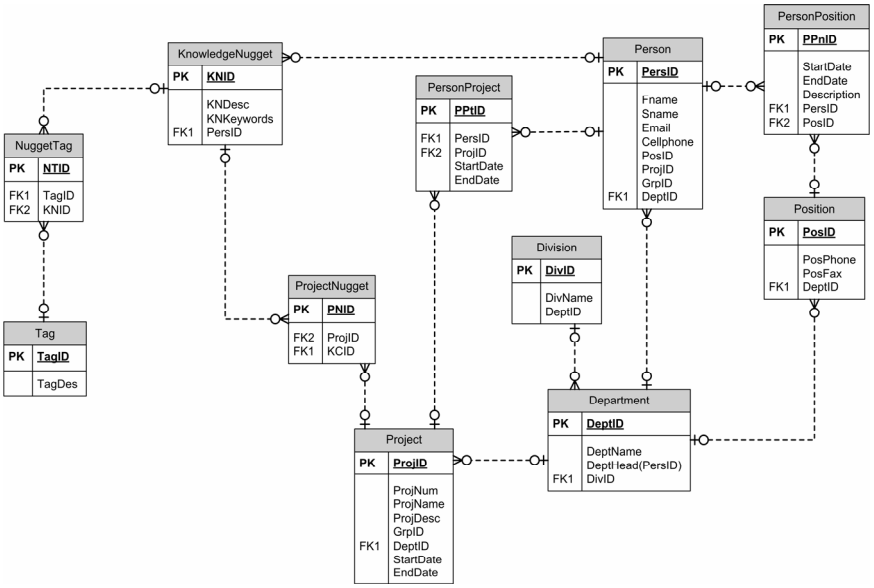
The following is an example of defining human attributes for the ontological construction from contextual points. These contextual points are the 'knowledge containers' to which the attributes are linked.

- knowledge sharing (difficulties and solutions)
- physical organisation and people structures
- creating organisational models.

Figure 1 presents a preliminary ontology for the TEAM database used in the prototype which displays the various attributes identified to this point.

For the present study, Nousala and Miles used the Crossbow[2] data aggregation and interrogation engine (Sykes and Hall, 2003) to prototype a repository and graphical user interface for navigating the personal data and experiences as extracted from the TEAM interviews. Where the focus during the information gathering stage was on the person whose knowledge was being recorded; in designing the application, the focus had to shift to needs of knowledge seekers. Seekers are other organisational members looking for personal knowledge they do not have, or for someone else with appropriate knowledge to develop a collaborative approach. Understanding the natures of 'persons' and 'knowledge nuggets' is key to this system. These are the references to crucial knowledge objects held by people interviewed.

Figure 1 Ontology with personal attributes and history (position, organisation, project, length of time, project connections to other projects and people)



Of particular note is the ability of a Crossbow user to follow easily from a focus on one entity through other entities to a final focus quite different from the starting point. In most database systems the focus is to find an instance or group of instances that match the search criteria, and while the TEAM database starts with this approach, its flow, as supported by Crossbow, is on the relationships between instances of entities. As Nousala et al. (2005a,b, Figures 9–13) demonstrate, users can navigate from a knowledge nuggets, through a person to their history. What was not shown is that a user could then move through a history item into a project, and from there into a department, or a person, or indeed back into other knowledge instances, this time focusing on the knowledge gained in that project instead of just the knowledge matching their original search. In a 'traditional' database application, the user would have to make repeated searches of the database to follow the same approach, each time recording the details of the next search they wish to conduct. Simply put, the TEAM database, as implemented using Crossbow, allows knowledge seekers to follow their own trains of thought through the information space to satisfy their needs. In a fully implemented application, the approach would also include data from standard HR databases.

This tool could be used in a busy environment where time is scarce, and as such must undertake to hold the users attention long enough to provide value. In the case of a traditional database, each of the repeated searches is a single user task, with the user completing the task when they receive the results. If the results are not those desired, the user then has to make the conscious decision to start a new task with a new search string, and importantly may just as easily make the decision to give up and use whatever information is on hand. With the developed application the same searches are conducted, however, from the user's perspective the task is continuous, with no single point of 'closure' until the final information is found. As such the user is less likely to cease searching until they have achieved a measure of success.

6 Discussion

Mind mapping personal competencies within the organisation provides a method that allows other people to locate hidden/forgotten resources in their own or sister teams that may be relevant to their current problems and needs. The narrative texts captured within the mapped structure gives a genuine flavour of the personal competency (i.e. something approaching 'holistic concept of man' by Koskinen and Pihlanto (2004)) and possibly even hints as to how particular problems were solved. Even this pilot study revealed deep reservoirs of valuable personal knowledge that were not widely appreciated or used by contemporary managers and other staffs in EPMO, and that remained untapped when the passage of time showed such knowledge would have been critically valuable to help resolve issues more quickly or to have avoided them entirely in the first place (Hall et al., 2008).

Mind mapping also gives HR and management a tool for understanding the kinds of personal training, skills and knowledge required to deal with particular kinds of situations. For example, used as an exit interview – particularly when numbers of experienced staffs are released with completion of a large project, the methodology can record the kinds of knowledge lost to the organisation and thus provide a much more effective search image of what should be sought in replacements for departing individuals and for induction/mobilisation training when a new project is mobilised.

One of the major problems identified in this research is related to boundaryless careers (Arthur, 1994; Arthur and Rousseau, 1996; Becker and Haunschild, 2003). Divisional and project management requirements change with project phases. Many managers are only familiar with particular project phases and move between projects and companies where those phases are active, and thus may only ever have the competencies for their immediate jobs in the current project phase. In other cases, individuals show career progression within particular projects. However, even when someone progresses relatively directly from journeyman to master or manager in one company, other managers in the organisation may be unaware of the individual's competencies and knowledge outside the existing project phase that would be invaluable if anyone would only ask.

It was observed that much of what EPMO learned in its historical development was retained in the careers of people who were still employed somewhere in the overall organisation. Also, the individuals interviewed all showed great allegiance to the organisation even when they regard themselves as being under or poorly utilised. These observations highlight the importance to better use personal competencies of individuals within the organisation and make a strong argument for this type of process to take place. However, because personal networks are constantly being broken and reformed as people move into different contexts

1 by organisational restructuring within the company

2 by the career moves between companies typical of this industry, people simply do not know what knowledge their present networks contain; even less, people do not know what exists in other possibly accessible networks.

Without some mechanism to track personal knowledge in extensive tacit knowledge networks, which was once organisational knowledge easily becomes only personal knowledge (Vines et al., 2007).

Successful knowledge sharing also depends on the willingness and eagerness of donors to share (van den Hoof and Hendrix, 2004). An interesting observation in testing the TEAM methodology was that not only were interviewees in EPMO willing to share their knowledge but also in the process, some interviewees became so eager to share their histories that it proved difficult to terminate the interviews. A wider application of the TEAM methodology, combined with some community of practice facilitation, should be able to integrate isolated personal knowledge into genuine organisational tacit knowledge networks to improve an organisation's overall effectiveness in its competitive environment. The TEAM methodology was seen to be particularly important for a project-oriented organisation like EPMO where individuals may focus on long-lived projects that span an appreciable fraction of their employment careers, where there are several ongoing projects at different phases in their lifecycles, and where new projects periodically need to be mobilised.

Building a TEAM database may require more labour than a 'yellow pages' style skills database, but should still cost little to deploy. Out test interviews occupied a couple of hours for the interviewee, and a couple of days for an investigator to transcribe and analyse the transcript for each interviewee, compared to potential returns of many millions of dollars that could be gained from better use of presently unknown staff skills to win more contracts and complete them more effectively. However, as noted earlier, given day-to-day demands on scarce personnel resources in EPMO, it was difficult for management to accept that the TEAM approach would help them mobilise knowledge the organisation needed. For example, in organisations with distributed profit centres (Mønsted, 2004), the cost of sharing is clearly visible to the donor project but the benefit from doing so may only be realised in another project's profits several years later. Arguably, the cost to EPMO's owners for their failure to implement methods for transferring knowledge between projects was possibly as much as $250 million when the organisation became unsustainable and was sold (Hall et al., 2008).

7 Conclusions

Individuals clearly cannot exercise all their competencies at once. However, social interactions can provide opportunities for sharing and mentoring where expertise can be shared with minimal time costs to main jobs via providing key ideas, guidance and mentoring. There are social rewards for experience and sharing, which can provide better security and the possibility of better remuneration, as job requirements change through the organisation's increased competitiveness from better use of the personal skills of its members.

Even though the EPMO organisation did not always fully use the career competencies of its members, it is clear that individual's competencies do contribute strongly to the capabilities of the organisation as an autopoietic entity in its own right.

It is difficult to implement KM processes in project-based engineering organisations because KM involves horizontal activities cutting across strongly hierarchical and 'stovepiped' project organisations and profit centres within the larger commercial organisation. This is probably because the cost of resources expended to help other projects and departments are easily visible while the value received in the form of help provided by other centres may not be so easily seen.

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Notes

[1] Marketed by MindJet – Available at: http://www.mindjet.com/us/.

[2] Developed by Tenix – Available at: http://tinyurl.com/5ng35q.