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## **Knowledge Management and Communities of Practice: an experience from Rabobank Australia and New Zealand**

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### **Abstract**

Knowledge and information transfer have become important ingredients for an organisation's competitive advantage. Knowledge management has emerged as an overarching strategy to enhance knowledge creation, information transfer, utilisation, and reticulation in order to generate innovation and improve organisational performance. Part of this strategy involves the creation of Communities of Practice. These are networks of individuals with a common, shared purpose grouped together to facilitate knowledge building, idea creation and information exchange. The experience establishing Communities of Practice at Rabobank Australia and New Zealand is examined.

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### **Introduction**

Knowledge and information transfer have become increasingly important to organisations throughout the world (Drucker, 1993; Davenport and Prusak, 1998). Knowledge is now recognised as a valuable intangible asset in its own right (Sveiby, 1997; Stewart, 2000). The challenge for business today is in using information and its intellectual assets the most productively.

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A key competitive advantage is the ability for firms to turn information into knowledge in order to improve efficiencies, drive innovation and respond rapidly to changing competitive conditions (Quinn 1992; Tidd, 1997; Tapscott, 1999). The building of knowledge generation capabilities within the firm creates an organisation with the flexibility to meet new challenges. A firm's adaptive flexibility – its agility – in this fast-paced, globalised world is a major success factor.

People are working smarter across all sectors of the economy. It is clear that the increasing speed, volume and adaptive role knowledge and information play as an applied input into a myriad of industries is a feature of contemporary capitalism. In agriculture, biotechnology, traceability and identity preservation systems are obvious examples. High powered ultrasound technologies for the removal of contaminants from vegetables, high pressure processing of seafood (particularly oysters) to lengthen shelf life, and oxygen scavenging packaging that prevents oxidation contamination are knowledge-intensive technologies already being applied in the food industry<sup>1</sup>.

Given that information and knowledge have become key drivers for competitive advantage in many industries, how can organisations harness these drivers for operational efficiencies and innovation? Knowledge management is the overarching strategy that pulls it all together.

This paper will examine some core concepts in knowledge management. The experience of Rabobank Australia and New Zealand in establishing an important component of knowledge management, Communities of Practice, illustrates one effective way of harnessing knowledge and sharing information in order to improve efficiencies, grow the knowledge base and help service client needs more effectively.

## **Knowledge management**

Knowledge management over the past 10-15 years has become a rather prodigious breeder in the literature of information management, organisational development, business strategy, human resources, education, communication, and information technology. It has created its own pedigree with a plethora of publications, articles, courses and consultancies. Like a stud bull, knowledge management has produced enormously but has sometimes fallen short of expectations when quality has been exhausted by over-proliferation.

Knowledge management is a collective term for the *facilitation* of improvements to an organisation's capabilities, efficiencies and competitive advantage through the better use of its individual and collective knowledge and information resources. There are a number of knowledge management approaches (Alvesson and Karreman, 2001; Malhotra, 2000; Prusak, 2001) but, essentially, the aim is the

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<sup>1</sup> I am indebted to Mr Lyndon Kurth of Food Science Australia for alerting me to these food technology innovations.

effective utilisation of information and knowledge within organisations, *particularly the intellectual assets of individuals*, leading to improved performance.

Examples of successful knowledge management applications for corporations include several insightful examples: Buckman Laboratories (Pan and Scarborough, 1999), Unilever (Von Krogh, Ichijo and Nonaka, 2000: pp:60-61), Warner-Lambert (Goodes, 2002), Heinekin USA (Chase, 2002) and Clarica Insurance (Saint-Onge and Wallace, 2003).

### **Knowledge, Information and Innovation**

Knowledge management, not surprisingly, is particularly interested in knowledge – how it is created, absorbed, transferred and utilised. It is therefore necessary to explore the meaning of some key concepts.

Knowledge is an active human process that involves the understanding and processing of information (thinking) in order to internalise or generate more knowledge. Davenport and Prusak (1998: p.5) contend that: "Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of *knowers*". Knowledge, then, is intrinsically linked to human thought and experience.

Knowledge is characterised as being tacit or explicit, notwithstanding some issues over the exactness of definitions<sup>2</sup>. Tacit knowledge is generally regarded as referring to the internal information, thought processes, experiences and accumulated knowledge (know-how) that is held within the minds of individuals. Explicit knowledge covers codified information such as books, journals, documents, legislation, visual and audio recordings, digitised text, e-mail and the world wide web. Tacit knowledge has also been termed "soft" knowledge and explicit knowledge as being "hard" (Hildreth and Kimble, 2002).

In simple terms, "we [can] consider the stuff that is stored in books and on computer systems [explicit] as *information* and that in peoples' heads [tacit] as *knowledge*" (Pierce, n.d.. p.1), my italics. This is a simple, yet under-utilised definition.

Knowledge management is especially interested in turning tacit knowledge into explicit knowledge and back into tacit knowledge in an expanding cycle of growth and regeneration. Nonaka and Takeuchi (1995) call this the "knowledge spiral".

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<sup>2</sup> The debate revolves around whether tacit knowledge can be made explicit, based on Polanyi's (1967) working definition that tacit knowledge is not conscious to an individual and therefore could never be made explicit. The definition of tacit knowledge has been broadened in knowledge management, enabling it to become explicit in some way (Smith, 2001; Cavusgil, Calantone and Zhao, 2003).

This knowledge-information-knowledge cycle is what drives innovation, especially if networked and leveraged across a number of individuals.

Ancient civilisations have used knowledge for innovation throughout time. The application of such cognitive skills is not new<sup>3</sup>. However, today, “in an environment of shortened business cycles and rapid technological change, the intellectual capital framework represents the primary value-creation dynamics of the firm” (Saint-Onge, 1996: p.10). Innovating faster and more efficiently while driving revenues are the hallmarks of this changing competitive environment. Agriculture and agribusiness (the agrosector) is not immune from this environment (National Council for Agricultural Research, 1998a and 1998b).

Information is ubiquitous and therefore not always unique. Prusak (2001: p.1002) explains: “As access to information dramatically expands, so that people increasingly have access to almost all the information they might need at any time and in any place (and, surprisingly, at low or no cost), the value of the cognitive skills still unreplicable by silicon becomes greater”. These cognitive skills reside in the minds of individuals within the firm. Nurturing the human dimension (Gratton, 2001) of these knowledge assets is an important part of organisational management.

### **Information transfer**

Information transfer is the necessary link in communicating knowledge and information. Information availability is high for those with the capacity to access it. In addition to the traditional information resources, digital information mediums allow for greater volumes, faster transfer speeds and more widespread dissemination, certainly in the developed economies of the world.

Networking information leverages content over a wider audience with the opportunity to generate new thinking and ideas, much the same way industrial clusters operate. Management guru, Michael Porter (1998: p.80), elaborates: “a cluster allows each member to benefit as if it had a greater scale or as if it had joined with others formally – without requiring it to sacrifice its flexibility”. Sporleder and Moss (2002) make the observation that knowledge benefits can accrue by networking information vertically through the agricultural supply chain. Collaboration is the key. Networking can be internal, external or a combination of both.

Innovations in information and communication technologies have the capacity to generate further productivity gains for business in the future (Gulati, Sawhney, and Paoni, 2003). In the fast moving consumer goods market, sophisticated applications

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<sup>3</sup> In the 1940's the Lockheed Corporation created special, informal “think tanks” (called skunkworks®) operating outside normal organisational parameters to create innovative ideas for the company's aircraft manufacturing business, part of which involved working in secret with the US Defence Department.

are being found for neuronal networks, fuzzy logic and other intelligent systems for inspection, control, design and marketing functions (Corney, 2002). Electronic commerce and B2B (business to business) relationships have emerged in the digital age and are likely to become more widespread.

Data mining, using information from existing client relationships or through permission marketing (Godin, 1999), is also important for client driven outcomes. Supermarkets want to track in-store purchasing information while scanner technologies help food and produce companies gather quantitative sales information. Permission marketing is quite common on the World Wide Web where firms provide “free” offers after obtaining requested information given voluntarily by an internet user.

Information flows need to be analysed and knowledge mapping (Wexler, 2001) and social network analysis (Parker 2002) are two useful processes for visualising information networks across both knowledge and information domains.

### **The Knowledge Organisation**

A feature of successful knowledge companies<sup>4</sup> is an organisation’s willingness to embrace knowledge as a critical workplace condition. Knowledge leadership is vital. Learning organisations (Senge, 1992) look at enabling and encouraging knowledge and its use throughout the organisation. As part of such a strategy, Communities of Practice are practical applications.

### **Communities of Practice**

Communities of Practice are collaborative, interactive networks of individuals within a generally defined topic of knowledge. Communities of Practice arose as a tool to facilitate knowledge sharing in a learning environment (Lave and Wenger, 1991). Communities of Practice have become a feature of the knowledge management literature in recent years as their applications to business have received greater attention (Lesser, Fontaine and Slusher, 2000).

Initially, they tended to emerge from voluntary, informal personal workgroups with a specific knowledge. An existing workplace and/or social relationship was often necessary to create the sense of community purpose. The oft cited example (Brown and Duguid, 2000) of Xerox photocopier technicians discussing problems with colleagues (“war stories”<sup>5</sup>) in the warehouse or over a coffee and receiving

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<sup>4</sup> Selected winners of the 5<sup>th</sup> annual global Most Admired Knowledge Enterprises (MAKE) for 2002 included Accenture, BP, Buckman Laboratories, Clarica, Ernst & Young, Hewlett Packard, IBM, KPMG, Microsoft, Nokia, Siemens, Skandia, Unilever, World Bank and Xerox.

<sup>5</sup> “War stories” was the term cited by Brown and Duguid (2000) to describe the Xerox technicians’ conversations. Denning (2001) applies a similar notion in his exposition of “storytelling” as a communication style for knowledge generation. In both cases, the communication style seeks to help make knowledge sharing easier and more in keeping with the daily work habits of members.

information for effective solutions is a classic case of informal, social networking. In some workplaces, these informal meetings are encouraged with the provision of kitchen dining areas, coffee machines and work-space architectures.

Communities of Practice can exist wherever there is a will to share information and experiences in a helpful, like-minded community. Participation in the network is essential. Whilst personal interactions can help foster relationships and trust within a group (and thereby giving it a “community” feel), Communities of Practice can in fact be *virtual* in the sense that members may not physically work in the same location. Members do not even have to be part of the one firm and can be established by individuals, like farmers, outside any institutional framework.

It is interesting to note the nature and pervasiveness of existing informal, network opportunities. The benefits of attending conferences, business-breakfasts and farmer or agribusiness association meetings all have at their heart the exchange of information with peers, possible allies and competitors. Farmers chatting over a beer at the local pub about new crop varieties is an informal, social network. Personal networking is a key function of these types of gatherings. Conversing and learning from each other through informal channels can be a highly effective mode of knowledge generation.

Communities of Practice can yield positive outcomes. According to Wenger and Snyder (2000: p. 140), “people in communities of practice share their experiences and knowledge in free-flowing, creative ways that foster new approaches to problems”. These new approaches can yield positive tangible benefits.

Communities of Practice offer a vehicle for knowledge diffusion (Storck and Hill, 2000) and enable the leveraging of intellectual assets across the firm. Lesser and Storck (2001: p. 836) identify a number of tangible benefits:

- “Decreasing the learning curve of new employees
- Responding more rapidly to customer needs and inquiries
- Reducing rework and preventing “reinvention of the wheel”
- Spawning new ideas for products and services”.

Communities of Practice offer a valuable tool for organisations wishing to take advantage of their knowledge and information assets.

### **The Experience of Rabobank Australia and New Zealand**

Rabobank Australia and New Zealand are part of the Dutch-based Rabobank Group. Rabobank provides financial products and services to clients in agriculture and agribusiness sectors. In Australia and New Zealand, this involves lending finance to farmers and on throughout the agribusiness value chain.

Over the past ten years staff numbers in the bank in Australia and New Zealand have tripled to 760. The bank has offices in the major Australian and New Zealand cities plus over 50 decentralised branch offices. The rural account (relationship) managers and financial officers in these offices have considerable and widespread agricultural knowledge and experience. Leveraging this knowledge was a major focus of the Communities of Practice project.

Whilst the primary focus of the project was the rural-based staff, the benefit to the corporate and middle-market divisions of the business, servicing post-farm agribusiness, would also be enhanced by the sharing and exchange of information throughout the whole network. This would foster stronger relationships between all parts of the business. The desired outcome would be in providing better information and business solutions to clients.

A traditional library and information service had already been established (after an initial information audit) prior to the Communities of Practice project. This included intranet access for electronic documentation and links to relevant internet sites based on commodity specific topics, acting like mini-portals.

### **Pubs<sup>6</sup>**

There are eleven Pubs – aquaculture and fisheries; beef and sheepmeat; cotton; dairy; grains and oilseeds; pork; poultry; sugar; water; wine, and wool. They were selected as being areas of most interest to the bank and correspond to existing commodity categories on the library intranet page. Pubs compliment the existing knowledge management platforms.

The very first Pub was created, rather opportunistically, after a “Beef Roundtable”. This is part of a series of group meetings organised by the Agribusiness Consulting and Research Services (ACRS) division of Rabobank in Sydney. Roundtables bring together the rural, corporate and middle-market divisions of the bank to discuss issues in a particular commodity. Invited speakers, including clients and individuals from the global Rabobank network, open the proceedings. Unfortunately, this Pub was not successful because there was insufficient input into its development, a mistake that was not repeated with the second and more comprehensive launch of the groups.

In order to make the Pubs an effective medium, extensive external and intra-organisational research was undertaken. The external research included a comprehensive review of the knowledge management and Communities of Practice

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<sup>6</sup> Pubs was the name created by the author for the commodity Communities of Practice at Rabobank Australia and New Zealand. The name was deliberately chosen because pubs (drinking establishments) are an important social focal point. Having a yarn (conversation) over a few beers is a great Australian and New Zealand social tradition. This concept of social interaction and conversation was to be translated to a virtual pub environment (without the beers).

literature, discussion with academics and practitioners in the field, and looking at examples in other organisations. Some adult education sources were also used.

More importantly, the intra-organisational research involved talking with the relationship managers in the decentralised offices and finding out how they used information and how they communicated information as part of their daily routines. Workplace context is vital in establishing the social habits of information collection and dissemination within the main target group. The main information transfer conduits were interpersonal, usually on-farm or at selected events, and via the telephone. E-mail was also used. Other information was accessed from publications, the company library service, ACRS, and via the internet. However, the preferred communication methods were interpersonal, and to a lesser extent, e-mail.

### **Pubs and Information Transfer**

A group e-mail system<sup>7</sup> was chosen over more sophisticated Communities of Practice technological options because of the following reasons:-

1. E-mail was easy to use. Most of the target individuals were familiar with e-mail and were confident in being able to use it.
2. E-mail was already a part of the daily work routines in the office.
3. E-mail was something that could be pushed out to the desktop alerting a person to an incoming posting rather than having to go to a special location to follow discussions. This was considered important since it made it easier to access and facilitate interaction.
4. The opportunity to provide training for all potential members was not possible so that an existing technology solution would obviate the need to learn new systems.
5. E-mail was to be used as a testing vehicle to see how the Community of Practice idea took off before more sophisticated options could be looked at.

The critical considerations were ease of use and familiarity in order to facilitate early adoption and activity. The people defined the technology, not the other way around. This was an important factor given the pervasiveness of information technology “solutions” (Thomas, Kellogg and Erickson, 2001). E-mail was therefore a suitable medium.

E-mail was regarded as a good approximator for normal speech, given the strong interpersonal communication preferences of the rural staff. E-mail is generally written in a conversation style using informal text. This has proved to be the case.

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<sup>7</sup> E-mail is relevant as a Community of Practice forum across both small and large organisations. Small businesses will find it cheap, easy to facilitate and use. At the other scale, the World Bank’s Global Knowledge for Development uses e-mail as the key communication networking tool because it best suited the needs of participants.



Senior management of the rural division, in which most of the target individuals worked, was very supportive of the concept. Membership was voluntary. The early take-up rate was high. A critical mass in each Pub was quickly established. Some key success factors for the early take-up of Pubs included a number of, although not extensive, personal visits to rural offices or to events where a combination of office staff could be targeted in order to explain the concept. The concept and goal were also explained on the intranet. A competition to encourage joining, in conjunction with a weekly general information alert service on the intranet, was another mechanism of informing staff about the Pubs. Information and questions were also pushed out by members of the ACRS team in order to generate responses. The "Pub" name also generated much internal discussion.

There was considerable follow-up interest as word-of-mouth spread and some early positive postings helped demonstrate some of the benefits. As awareness grows, interaction will increase. Already, traffic on the pubs has improved markedly after the first six months of operation.

Feedback from the relationship managers has generally been positive. A sample of responses include:

"information is real life information"

"information you can work with"

"up-to-date and relevant"

"not really sure what I can contribute"

"it's a time-saver"

"I don't mind admitting I don't know something if it means getting the job done so the Pubs are great for asking questions and getting feedback"

"helps update my knowledge"

"don't have enough time"

"after doing all this work in preparation for credit committee, I want to be sure I've covered everything"

"I like getting the information sent to me. It helps me and my clients"

"puts me in touch with others in the network"

After making his first posting, one relationship manager said, "it wasn't that hard after all – I'll have to do it some more"

"getting feedback on client situations helps me to help my client – that's what it's all about, isn't it?"

It is clear that establishing personal contact with intended Pub members is positively related to membership and use. By explaining and demonstrating the concept of Communities of Practice, a greater understanding of the benefits is possible. One aspect to this is in overcoming the reluctance to make postings because of uncertainty or lack of confidence. On the other hand, responding to Pub postings allows an individual's commodity knowledge to become visible within the

organisation. Knowledge visibility is important to staff and peers. This offers opportunities for recognition and rewards.

Timeliness is an issue, particularly with the relationship managers in the rural division. They are often in the car travelling hundreds of kilometres every day visiting clients and meeting potential clients. Being out of the office for much of the week is not unusual. This means responses are not always made on the same day as a posting and that other work pressures can delay responses even when back in the office.

A weakness of using e-mail is that there is no central repository of threads. Pub members are encouraged to set up personal folders to store incoming e-mails for each Pub. However, new members will have missed previous discussions. Currently, options to alleviate this repository problem are being investigated.

Communities of Practice at Rabobank Australia and New Zealand have given individuals within the firm the opportunity to share knowledge and information across a wide internal network. It provides a vehicle for ideas and discussion that can lead to innovation and improved work performance. The benefits have been in helping staff to work smarter, encourage thought, and put that into action by helping clients.

## **Conclusion**

Knowledge management and its component applications offer organisations the ability to use information and knowledge more effectively and productively. A key competitive advantage is in harnessing the unique intellectual assets of individuals in the organising and leveraging those assets in a continuous “knowledge spiral” leading to improved customer and organisational performance.

The major consideration for establishing a Community of Practice must be how the individuals operate within their workplace contexts and the extent of helpfulness, networking and subject interest. Workplace context will reveal attitudes, work habits and preferred communication styles. This will have a major bearing on the appropriateness of communication channels. Management support is very important. Naturally, if resources and time permit, it may be possible to change existing workplace habits to take advantage of more sophisticated technological options, quicken adoption and benefits, and encourage workplace learning. Training will be critical in this situation.

The use of e-mail as the communication tool has been successful in terms of gaining quick acceptance and ease of use. Despite its limitations, this system best suited the existing workplace habits of the major target group.

At an organisational level, the Pubs were established as part of an information management strategy in a staged process. The Pubs would benefit from being part of a formal company induction scheme and this is already in development. A comprehensive knowledge management strategy, under the direction of an independent team leader, would be advantageous from a strategic viewpoint and should include input from relevant departments. However, such an organisational strategy does not have to be a necessary precondition for the implementation of Communities of Practice so long as the conditions for establishing such groups exist among individuals within the firm, as was the case with Rabobank Australia and New Zealand.

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