Knowledge Management Handout

Contents

An Introduction to Knowledge Management

Increasingly, large companies are realising the importance of handling the transfer and retention of knowledge within the organisation as a management function. However, less than 40% of companies have an active strategy to achieve this.

Consider the two types of knowledge within your company,

- Explicit knowledge – easy to record and likely to be a procedure or a specification. Explicit knowledge can be in the form of a manual or a set of instructions which somebody can follow with relative ease.

- Tacit knowledge – difficult to value or record. Consists of "experience" and human judgement. The knowledge of how to set a machine to run smoothly with non standard settings or the best route to take for deliveries at different times of the day.

Knowledge within organisations "walks". A classic example was Yorkshire water at the time of privatisation. Many experienced engineers were made redundant before the company realised that many of the water cock locations for the network were not documented and more importantly, how they related to each other in the event of a shut-down. 70 years of experience and knowledge left the company at an eventual cost of many millions of pounds.

Most organisations cope with the explicit knowledge within the company, what tends to be missing is the strategy to encourage the transfer of tacit knowledge as a management function. Understanding the types of transfer and developing opportunities for this to happen is an increasingly important management function at all levels.

Types of Knowledge Transfer

There are five main types of transfer according to Nancy Dixon, the author of "Common Knowledge".

- Serial Transfer – where the knowledge and experience of a team performing a task in one setting is transferred to the next time that the team performs a similar task in a different setting e.g. a boiler installation team.

- Near Transfer – where the knowledge of a team performing a frequent and repeated task is transferred to other teams elsewhere performing a similar task e.g. production processes in different locations.

- Far Transfer – where a team performing a non routine task transfers the experience to others within the organisation who may have to do something similar occasionally e.g. peers travelling to assist in the evaluation of an oil exploration site.

- Strategic transfer – the collective knowledge of an organisation being made available to accomplish a strategic task that occurs infrequently e.g. a takeover or plant closure.

- Expert transfer – where a team facing a technical issue beyond the scope of its own expertise seeks knowledge from other specialists within the company e.g. how to optimise an out of date system.

These situations involve either explicit or tacit knowledge or a mix of both. All require actively managing in order to keep or gain a competitive advantage.

Treating Knowledge as a valuable resource and managing it accordingly involves a number of steps.

1. What is knowledge and how do we value it in financial terms?

2. How to recognise the types of knowledge and the types of transfer situation.

3. How to recognise and overcome the barriers to knowledge transfer.

4. Developing and implementing a strategy to manage the knowledge within the company.

This handout pack accompanies the Executive Development Ltd Knowledge Management courses and contains a number of articles, background reading material and other information that we hope you will find useful.

Knowledge Management: More Than Just Know-how

People sometimes interchange the terms "know-how" and "knowledge", but there's a world of difference! Systems vendors are falling over themselves to sell you so-called "integrated knowledge management solutions", but these are rarely more than glorified information management systems with go-faster stripes.If we fail to understand knowledge in all its facets, then there is a danger that in doing so we miss out on the most valuable aspects of knowledge management and end up delivering a system-driven solution, rather than a cultural shift towards sharing and learning from experience.

Know-how is the processes, procedures, techniques and tools you use to get something done. This kind of knowledge can?t always be captured in its entirety - imagine trying to write down your know-how on "how to ride a bicycle"! Some things are simply best learned from combination of know-how and experience.

Know-why relates to strategic insight - understanding the context of your role, and the value of your actions. It's the "big picture" view of things. Why are we doing this? Where are we trying to get to? What would happen if we didn't do it? Where do I fit in all of this? Think back to your first ever job. Did anyone explain to you why what you did was important, or were you just expected to "get on with it" and not ask stupid questions? Know-why is a key to lifting morale and generating commitment and buy-in from staff.

Know-what is the facts required to complete a task, it's the information needed in order to take a decision and it's the things you need to collect together before making something. This kind of knowledge can be captured and embedded into systems, scripts and processes.

Know-who includes knowledge about relationships, contacts, networks, who to call on for help. It's the "I know a man who can" factor. All of us apply and build up this type of knowledge on a day-to-day basis, often subconsciously. If your role is sales-oriented, you'll know just how important know-who can be. The degree to which the know-who in your organisation can be accessed will be a reflection of your culture. How easy is to find the right people? When you do find them, are they willing to give you the benefits of their experience? Are networks and communities of practice supported and encouraged in your organisation?

Know-where is that uncanny ability that some people have for navigating through and finding the right information. You probably know people in your office who fulfil this role, functioning like human search engines! In his bestseller "The Tipping Point", Malcolm Gladwell describes these people as

connectors. If you visit Yahoo!, or one of the other major Internet portals, you?ll be in a knowledge-rich environment where most of the content is know-where - links to where relevant *know-how* (and often *know-who*) can be found on the web.

Finally *Know-when* is the sense of timing - to know the best time to do something, to make a decision, or to stop something.

Conclusion

Knowledge is a many faceted gem - to truly extract the value, you will need to look beyond "know-how", and polish-up your organisation's performance in a wider range of areas. By doing this, you will move far closer to having an integrated strategy for managing knowledge.

Leadership Behaviours Which Encourage Knowledge-Sharing

The concept of knowledge management or knowledge sharing makes intellectual sense to the leadership teams in most organisations. Why wouldn't we want to learn from our successes and failures, and translate that learning into value?

However, there is often a gap between the conceptual understanding, and their own behaviours as leaders - and that can be a problem - How do you engage leaders both intellectually and emotionally, in a way which will make a difference to their day-to-day behaviours? It requires more than a set of competency frameworks!

The examples below are taken from the bestselling fieldbook: "Learning to Fly - Practical knowledge management from leading and learning organisations", written by Chris Collison and Geoff Parcell.

Example 1) In BP, well known for its knowledge-sharing culture, the senior leadership developed a habit of reinforcing "learning from others" when they visited operational sites. *Imagine the scene: the Director or Senior VP arrives, and is given the usual tour of the site. They sit down with the management team and review the performance of the business against a set of stated KPIs. One of these KPIs is currently not being met. What happens when they identify this issue?*

"Have you thought about approach X? Addressed performance issue Y? Changed widget Z?"

..will generate one set of behaviours.

"Who else have you spoken with at other sites who might have a similar issue?" ..will drive a very different set of behaviours.

This is the route that BP has chosen to take; senior management visits are opportunities to reinforce the value of learning from others, rather than opportunities to underline their seniority by providing "the answer".

Example 2) When the senior directors from energy and essential services company, Centrica, met to discuss how to improve knowledge sharing in the company, they agreed a set of practical "leadership challenges" for senior managers across the organisation:

- How can I personally demonstrate that "asking for help" is a sign of strength rather than weakness?

- When encountering a business problem, how can I reinforce the importance of learning from others - rather than simply providing an answer?
- When reviewing a project or investment proposal, have I challenged to ensure that it brings to bear knowledge from other projects?
- How do I react when someone fails - is it purely a loss to the business, or is it an investment in their education?
- Do my team see failure as something to learn from, or something to cover up?

These kinds of questions and challenges bring to life the notion of knowledge management in a tangible, practical manner.

What would work in your organisation? If you could issue five challenges to your senior team, what would you choose?

Lessons Learned and How To Identify Them

Many organisations use the term "lessons learned" to describe the way in which they avoid repeating mistakes, or ensure that they build on past successes, yet a lesson can only be applied if it has been successfully identified, and captured first. Even in "learning organisations" who profess to be good at knowledge management and knowledge sharing, the process for identifying lessons learned can lacks rigour or depth. All too often, lessons end up as "motherhood and apple pie" statements, and end up in reports on shelves gathering dust (or its electronic equivalent).

The guidelines below are drawn from the book "Learning to Fly - Practical knowledge management from leading and learning organisations" – Chris Collison and Geoff Parcell), and set out ten key steps to facilitating a "lessons learned" review.

1 Call the meeting. Hold a face-to-face meeting as soon as you can after the project ends, within weeks rather than months.

2 Invite the right people. The project leader needs to attend, as do key members of the project team. If a similar project is already underway, then there is great value in the new project team attending - a "customer" for the knowledge

3 Appoint a facilitator. Identify a facilitator who was not closely involved in the project. The facilitator should be someone who can ask questions from an independent, but non-threatening standpoint. This isn't an audit, it's an investment!

4 Revisit the objectives and deliverables of the project. Ask "what did we set out to do?" and "what did we achieve?"

5 Go through the project step by step. Revisit the project plan and identify any deviation from plan. Where were the delays, and what went ahead of schedule? What changed and why?

6 Ask ?what went well?? Ask "what were the successful steps towards achieving your objective?" and "what went really well in the project?"

Ask a "why?" question several times. This is vital, and will get you to the root of the reason. Don't take the initial response at face value. Often people don't even realise what the underlying reason behind a success or failure is. Your role may involve guiding them on a voyage of discovery (without regressing them to their childhood!).

7 Find out why these aspects went well, and express the learning as advice or guidelines for the future. This is a key point. Try to avoid expressing

lessons learned in a passive, past tense, such as: "Project Foxtrot completed ahead of schedule because the project team remained in-tact throughout the design and execution stages".

The lesson will be far more accessible to others if it is expressed as:

"On time-critical projects, ensure that the project team remains consistent throughout the design and execution stages of the project. This will eliminate any learning-curve issues due to the take-on of new staff".

As the facilitator, acknowledge feelings and press for the facts. Ask "what repeatable, successful processes did we use?? and ?how could we ensure future projects go just as well, or even better?"

8 Ask "what could have gone better?" Ask "what were the aspects that stopped you delivering even more?" Identify the stumbling blocks and pitfalls, so they can be avoided in future by asking "what would your advice be to future project teams, based on your experiences here?"

9 Ensure that participants leave with their feelings acknowledged. Ask for "Marks out of ten" and "What would make it a ten for you?" to access residual issues.

10 Record the meeting. Use quotes to express the depth of feeling. Express the recommendations as clearly, measurably and unambiguously as possible, using the guideline format explained in point 7. Take a photograph of the project team, and ensure that you record contact information (e-mail and telephone) to make follow-up conversations easy for anyone reading he lessons learned. Ensure that you circulate the write-up around the participants for comment, and permission to use specific quotes before sharing more widely.

Conclusion

Identifying and recording lessons learned is fairly straightforward process, given the simple set of steps above and a measure of facilitation skills. Of course, identifying the lessons is only part of a knowledge management cycle; lessons learned, and the guidelines that they spawn, have no intrinsic value. The benefits come from ensuring that the lessons are actually applied - which is another story!

Knowledge Management - Capturing And Structuring Knowledge Into Reusable Assets

Many organizations have an approach for identifying and recording lessons learned, perhaps as part of a post-project review or similar process. Unfortunately, lessons learned reports have a tendency to end up on a shelf gathering dust, or lost in the un-chartered corner of a fileserver somewhere. Let's get real. How many people will *really* trawl diligently through a number of lessons learned documents in order to glean some key point? The reality is, if you can motivate employees to initiate any kind of "learning before doing" activity, then you?re doing pretty well.

Remember the last time you packed your bag in preparation for a business trip?

All those things you need to remember? tickets, passport, currency, itinerary, contact, driving license, power adaptor, Ipod?

We manage to remember the things we need for our business trips without going through each past suitcase-packing experience in our minds, one by one. Somehow, we maintain a meta-level list in our memories. And yet, when it comes to lessons learned, we expect people in our organizations to work thought a pile of lessons learned reports in the hope that a key insight will leap out at them?

We need to find ways to package knowledge into easily accessible "knowledge assets" - structured with a customer in mind.

The steps below are taken from the best-selling fieldbook "Learning to Fly - Practical knowledge management from leading and learning organisations", written by Chris Collison and Geoff Parcell. They don't require sophisticated, bespoke technology just a wilingness to think-through and structure what has been learned.

1. Identify a customer for this knowledge. Have a clear customer - current or future - in mind when considering the creation of a knowledge asset.

2. Get clear what your knowledge asset is really about. What is the scope of your knowledge asset? A knowledge asset needs to cover a specific area of business activity.

3. Identify a community of practice relating to this subject. The community will be the source of the knowledge initially, the users of the knowledge in immediate term, and the people who have an on-going responsibility for validating the future contents of in the knowledge asset. This is key ? or there is a real risk that you will end up with an electronic time capsule - a

snapshot in time of the way things used to be done - rather than the current, prized know-how in your organisation.

4. Collate any existing material upon which you can base your knowledge asset and look for general guidelines. Provide some context so that people can understand the purpose and relevance of the knowledge asset. Are there general guidelines that you can distil out of this material?

5. Build a checklist illustrated with examples and stories. The checklist should tell the user of the knowledge asset:

"What are the questions I need to ask myself?"
"What are the steps that I need to take?"

Illustrate it with examples, stories, pictures, digital photographs, models, quotes, video and audio clips if possible.

6. Include links to people. Create a hyperlink to the person's personal home page or e-mail address wherever you mention them in the text. Include a list of all the people with any relationship with the content. Use thumbnail photographs if you have them available.

7.Validate the Guidelines Circulate the guidelines around the community again, and ask *"Do the guidelines accurately reflect your knowledge and experience?" "Do you have anything to add?"*

8. Publish the knowledge asset. Store the knowledge in a space where it can be accessed by its community. Often this will mean the company intranet.

9. Initiate a feedback and ownership process. Encourage feedback from users, so that they pick up and eliminate any invalid recommendations. Instil a sense of obligation that "if you use it, then you should add to it".

Over time, you'll build up a series of knowledge assets which relate to the key practices in your organisation ? the areas which can bring competitive advantage. The creation of these tangible knowledge assets provides a focus for the communities of practice associated with each one, and ultimately will give credibility to your knowledge management efforts.

Conducting an After Action Review

Introducing a learning culture into organisations can be difficult at times, particularly if the effort required it great and the benefits aren't quickly identifiable.

After Action Reviews (known as AARs) are one of the simplest knowledge management techniques, and have been used to great effect in organisations ranging from the US Army, to BP, and even in the development sector in NGOs like TearFund. Their power comes from the fact that they take little time, generate rapid results, and the approach can be easily learned and repeated. In summary, they have a "low barrier to entry".

So how do you conduct an AAR?

AARs are a simple way for individuals and teams to learn immediately, from both successes and failures, regardless of the length of the task in question. The learning is by the team, for the team. The format is very simple and quick - its a "pencil and paper" or flipchart exercise. In an open and honest meeting, usually no longer than twenty minutes, each participant in the event answers four simple questions:

- **What was supposed to happen?**
- **What actually happened?**
- **Why were there differences?**
- **What can we learn from that?**

The guidelines below are drawn from the book "Learning to Fly - Practical knowledge management from leading and learning organisations – Chris Collison and Geoff Parcell), and sets out the key steps to facilitating an effective After Action Review.

1. Hold the AAR immediately. AARs are carried out immediately whilst all of the participants are still available, and their memories are fresh. Learning can then be applied right away, even on the next day.

2. Create the right climate. The ideal climate for an AAR to be successful is one of openness and commitment to learning. Everyone should participate in an atmosphere free from the concept of seniority or rank. AARs are learning events rather than critiques or audits. They certainly should not be treated as personal performance evaluation. The US Army describe an environment where "you pin your stripes to the wall" before starting an AAR.

3. Appoint a facilitator. The facilitator of an AAR is not there to "give" answers, but to help the team to "learn" answers. Learning must be drawn out, both from the individual and for the group?s learning.

4. Ask "what was supposed to happen?" The facilitator should start by dividing the event into discrete activities, each of which had (or should have had!) an identifiable objective and plan of action. The discussion begins with the first question: "What was supposed to happen?"

5. Ask "what actually happened"? This means the team must understand and agree facts about what happened. Facts - not opinions. Remember, the aim is to identify a problem or learning point - not a culprit!

6. Now compare the plan with reality. The real learning begins as the team of teams compares the plan to what actually happened in reality and determines "Why were there differences?" and "What did we learn?" Identify and discuss successes and shortfalls. Put in place action plans to sustain the successes and to improve upon the shortfalls.

7. Record the key points. Recording the key elements of an AAR (initially on a flipchart) clarifies what happened and compares it to what was supposed to happen. It facilitates sharing of learning experiences within the team and provides the basis for a broader learning programme in the organisation.

That's all there is to it. Why not build an AAR into the agenda of your next major team meeting, training event, negotiation or project review meeting? You'll be surprised at how quickly you learn what you didn't know.

How do we get Knowledge?
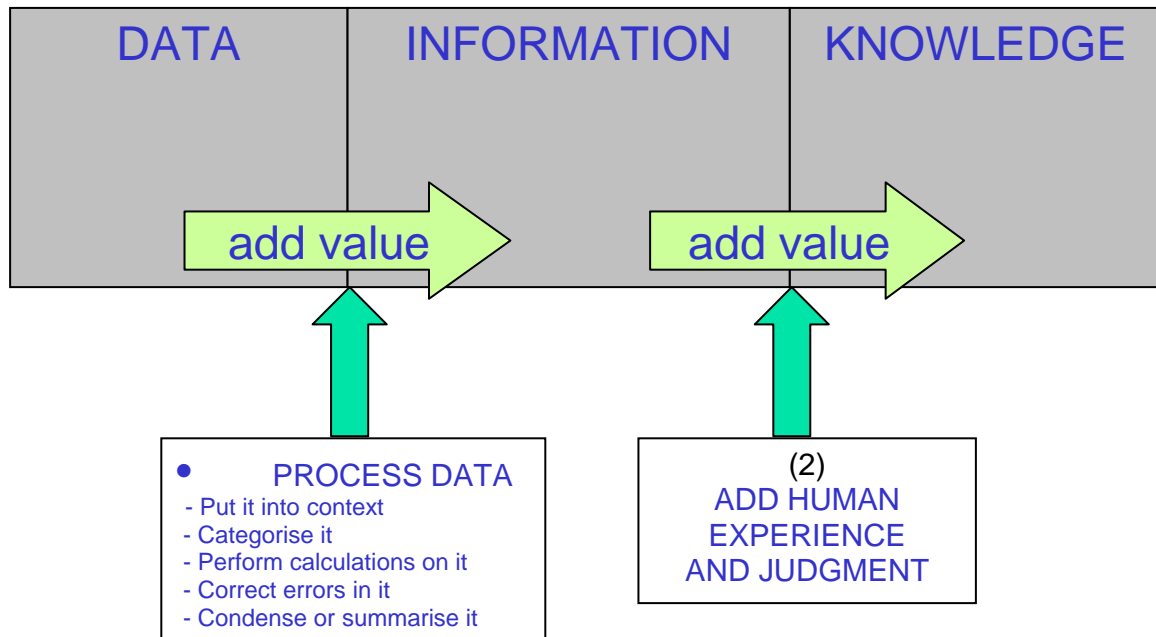
What is DATA?

"things known or granted, assumptions or premises from which inferences may be drawn"
"facts or information, esp. as a basis for inference; quantities or characters operated on by computers etc. and stored or transmitted on punched cards etc."

CONCISE OXFORD DICTIONARY

"a set of discrete, objective facts about events"
"structured records of transactions"

DAVENPORT & PRUSAK

What is INFORMATION?

"informing, telling; thing told, knowledge, (desired) items of knowledge, news"

THE CONCISE OXFORD DICTIONARY

"data endowed with relevance and purpose"

DRUCKER

"data that makes a difference"
"a *message*, usually in the form of a document or an audible or visible communication"

DAVENPORT & PRUSAK

What is KNOWLEDGE?

"knowing, familiarity gained by experience"
"person's range of information"
"theoretical or practical understanding"
"the sum of what is known"

CONCISE OXFORD DICTIONARY

"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. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms."

DAVENPORT & PRUSAK

"the fact or condition of knowing something with familiarity gained through experience or association"

WEBSTER'S DICTIONARY

Overcoming Concerns about Knowledge Transfer Types

SERIAL TRANSFER

Team members won't take the time to meet

- Make sure meetings achieve something of value
- Make sure team members are aware of the outcome (e.g. an improvement in performance)
- Encourage team to design own internal measures of improvement, which are not necessarily reported outside the group

Team members do not contribute to meetings

- Encourage all team members to contribute by
  - Using a standardized format for questions
    - E.g.   (1) What was supposed to happen?
             (2) What happened?
             (3) What accounts for the difference?
  - Have a team member (someone familiar with the process) act as facilitator
  - Have a "no recriminations policy" and encourage truth telling
  - Do not publish minutes outside the group

Team members disperse before the end of the project

- If the same team does not do the next project together, then the techniques for serial transfer may need to be supplemented with those for other types of transfer
- For lengthy projects, hold meetings at regular intervals
- Invite team members who have moved on to other projects

Team members cannot physically meet due to geographical spread

- Use video-conferencing as an effective substitute
  (the cost of the equipment outweighs travelling costs and person-hours, but the benefits of meeting can still be achieved)

NEAR TRANSFER

People won't use knowledge made available to them electronically on a "database"

- Make sure a "business driver" is present
    - E.g. a need to reduce time and/or costs
- Make sure the knowledge is relevant to the "business driver"
- Use face-to-face meetings to enable contributors to the database to get to know one another
- Have a means of monitoring usage of the knowledge, and the effects of using it
- Designate people responsible for inputting and retrieving knowledge from the "database"

People won't use ideas invented by someone else

- Identify and build on informal knowledge sharing that is already happening
    - Who is already sharing information?
    - What information are they sharing?
    - Why are they sharing it?
- Those already sharing knowledge may be best placed to expand the informal system

People don't have time to share

- Check that there is sufficient similarity between source and receiving teams to enable brevity
- If brevity is not possible, then the knowledge is probably not explicit. Therefore techniques for other types of transfer may need to be employed

FAR TRANSFER

How do we get tacit knowledge out of people's heads?

- Don't try to write tacit knowledge down

- Move people around so that they can interact with others to transfer their tacit knowledge

- Technology is less useful for tacit knowledge

People won't ask for help

- In any organization there are some people who call on each other for help

- Start with those people who are already interested and involved

- Far Transfer can work even if only a small percentage of people share knowledge

- Introduce some formality into existing knowledge sharing, to make it easier for those people who are interested to share knowledge

- It will then become easier for others to participate

- Give the knowledge-sharing procedure formal backing by giving it a name (e.g.BP use "Peer Assist")

STRATEGIC TRANSFER

It's too expensive to have knowledge specialists

- "Borrow" people on a temporary basis from elsewhere in the organization

- Dedicating people to the task may appear expensive, but it highlights the organization's interest in knowledge sharing

- Strategic transfer does require some people dedicated to the task

- Only engage in strategic transfer when it is critical to the organization's future

- Use other, less costly and more effective knowledge transfer methods for other types of knowledge transfer

People will not want to conform to company-imposed "best practice"

- Emphasise that knowledge sharing is about bringing people and their ideas together, not about imposing practices

- Allow knowledge products to contain multiple options based on various ideas brought by knowledge specialists

EXPERT TRANSFER

Our technology is not sophisticated enough to connect people

- Make sure software is compatible

- If there is incompatibility, start the system with those people who do have compatible software, and extend it later

- Use a help-line or an "intermediary" as an interim measure, if people cannot connect to one another directly

Our people aren't computer literate

- Make sure people have the hardware and software

Knowledge management practices in Professional Consulting Ltd:

A case study

Professional Consulting Ltd was founded in 1986. The firm is a UK-based business and scientific consultancy that operates on a global basis. At the time of its inception, the founder wished to create a consultancy environment that would not only develop solutions in response to client problems, but would also stimulate invention and innovation more generally. Of the workforce, 85 per cent are highly educated scientists, who rely primarily on their expertise and knowledge to provide inventions and innovative solutions for manufacturing, engineering and pharmaceutical companies around the world.

Since 1986, the firm has grown from a small entrepreneurial business employing a handful of scientific consultants specialising in engineering and communications, to a medium-sized company that has incorporated other scientific disciplines such as bio-technology, applied sciences and information systems. The Organizational structure incorporates only one level of management. Consultants are grouped into divisions according to their particular scientific specialism. However, there is an overriding emphasis placed on the maintenance of a highly egalitarian, informal environment. In 1998, approximately 140 people were employed by Professional Consulting directly, of whom 116 were expert consultants, representing 19 different nationalities. The firm also employed a further 110 people on an associate basis in the USA, Japan and Europe, the majority of whom were also scientists.

Day-to-day working is characterized by consultants working in self-forming and self-managed project teams to develop completely new concepts and products, which are marketed as intellectual property rights (IPR) to clients, and innovative solutions to client problems using existing concepts, ideas and technologies in new ways. Thus, in some important respects, the firm could be Characterized as an adhocracy with extremely low levels of formalisation and all work conducted within self-managed project teams. The firm has been responsible for the invention of major technological developments that are recognised and used throughout the world, including such items as the electronic security tag. Professional Consultancy is primarily in the business, then, of creating new knowledge and applying existing knowledge in new ways. The importance of managing knowledge in terms of managing the knowledge base of the firm is crucial then for competitive success.

Management practices

Appreciating the rarity of pure invention facilitates a greater understanding of the significant level of expertise needed to be maintained and nurtured if the firm was to be both creative and innovative, successfully and consistently over time. It was of crucial importance, then, to the firm to be able to attract and retain scientific consultants of international standing. During the period of the research annual turnover rates were low within the firm, at approximately 6 per cent, and management were keen to maintain these levels in the face of Organizational growth. Management believed that there were two contributing factors to high retention rates. The first was the unique way that the firm organised around interdisciplinary project team working and the second was the highly informal, non-systematised approach adopted to managing the expert workforce, which is discussed in the following sections.

Up until 1995 Professional Consulting had operated a process of recruitment and selection which relied almost totally on informal word of mouth approach, drawing on existing constant global personal networks. However as Professional Consulting began to experience a 15 per cent increase in staffing levels annually a more structured approach was required. An HR manager was appointed to develop and implement a recruitment and selection process that would satisfy the firm's demand for expert consultants.

The HR manager modified the approach taken to selection in a limited way. A multi-stage approach was implemented to replace the highly informal interviewing that had occurred prior to his appointment. At the preliminary selection stage, candidates took an intelligence test and personality test. Only candidates with a PhD in a scientific discipline were shortlisted; hence it was virtually impossible for any candidate to fail the intelligence test. It was also difficult to fail because the firm did not look for an "ideal" profile other than "openness" and willingness to experiment". Thus, almost all candidates who had been shortlisted proceeded to a short interview with the HR manager and the relevant divisional manager.

During the initial short interview candidates were expected to demonstrate a strong understanding of their own and, more importantly, other disciplines. They were also expected to be "almost naturally innovative" and have a strong commercial awareness. Candidates were expected to demonstrate these traits within ten to 15 minutes. The HR manager stated:

"It's quite a unique mix we are looking for. All the way through the selection process we give out big indicators to say the sort of organisation we are. It's quite aggressive maybe and I'm sure interviewees will pick up quite a lot of arrogance on the part of the company but the messages we are giving out are more about confidence in what we do and how we do it rather than us thinking we are better than anyone else."

The majority of candidates were rejected at this first interview stage; approximately 25 per cent, which typically equated to four candidates, progressed to a second interview. The firm was only interested in individuals with a PhD in a scientific discipline, who were fluent in English, had some commercial/industrial experience and who were prepared to adopt a consultancy role, which required them to market their own and, more generally, the firm's abilities and expertise. It was a relatively unique combination of characteristics they were looking for in candidates.

The second interview focused on assessing the candidate's ability to market to clients, their overall level of expertise and their ability to work inter-disciplinarily. This second interview was a panel interview involving a number of consultants from several divisions, who "quizzed" the applicants in some depth on their knowledge of the inter-relationship between particular scientific specialisms and the way in which they could apply their knowledge across different disciplines. The emphasis here was on the candidates' ability to effectively communicate and share their knowledge base with others, who primarily worked in different specialist areas. Panel members were randomly drawn from across the firm, based on availability at the time. If there was consensus across the panel then the candidate would be recommended for appointment to the MD. It was rare that he vetoed a selection decision but that option was available to him.

The HR manager commented:
"You get a CV and the person has a PhD and they've worked for a pretty high powered research agency and that's brilliant, you've got to see them, but you know that there is a pretty strong chance that the moment you meet them you're going to know what they're not - they're not one of us".

Training and development

At Professional Consulting, the people management practices required focused less on direct intervention such as identifying relevant courses, seminars and workshops to attend, and more on basic housekeeping, administrative type activities, for example, providing the necessary financial resources making bookings, etc. Consultants were expected and required to determine for themselves which courses were of particular relevance to them for their own professional development. In many instances, it often appeared that courses, conferences, etc. had limited direct relevance for the project work that individuals were directly involved in. This approach recognises the importance of "redundancy" - allowing project members to engage in activities that outwardly appear to be unconnected with the task in hand. While the HR manager was a professional within his own particular field, he could not hope to appreciate and directly support the developmental requirements of a significant number of scientists and technologists. These individuals had to be trusted to know what developmental activities were appropriate for them. They were also trusted to organise their own workloads in order to undertake any further professional development they

considered necessary without any significant disruption of project work occurring.

Formal, systematic training was not considered to be a substantive issue that demanded attention in Professional Consulting. Management believed that the quality of the people they employed negated any need for systematic training overseen by an HR professional. It was assumed that if dedicated training was required, for example, in the use of particular software applications for project work, then consultants were sufficiently skilled to train themselves at times that suited them.

Maintaining and improving retention rates

In terms of maintaining and improving retention rates, the HR manager was both facilitated and constrained by the cultural environment within the firm characterised by egalitarianism and informality. Professional consultants had the potential to be highly mobile and the salaries offered by the firm were only considered to be average within the consultancy industry. Therefore, other Organizational factors were considered to primarily contribute to the high retention rates enjoyed by the firm.

The organisational culture at Professional Consulting was then considered to contribute significantly to processes of knowledge creation, and the management of knowledge workers more generally, indicating the need to develop a highly autonomous working environment. At Professional Consulting the dual notions of egalitarianism and autonomy were strongly entrenched and reinforced within the culture. Egalitarianism at Professional Consulting implied a flat Organizational structure, consisting of the chairman and managing director, "overseeing" the rest of the workforce. The majority of decision making within the firm typically involved significant numbers of consultants as well as management. A worker committee known as the Board of Management made recommendations to management regarding day-to-day operations and organising. Management communicated constantly with the whole of the firm (generally using e-mail) regarding new projects and potential future projects. Both turnover and profitability were also communicated to everyone on a monthly basis. Hence, everyone within the firm was kept fully informed of developments and communications could be Characterized both substantive and two-way.

Importantly, members of the management team were all also active consultants, contributing significantly to project team working within the firm. They were all then considered to be active team members as well as management, reinforcing notions of egalitarianism. The rest of the workforce was organised across divisions according to their particular scientific expertise; however, there were no hierarchical levels either within or across divisions. These seven divisions emerged, merged and disbanded in a reactive manner, based on the client project work in hand. For example, the

life sciences division emerged from the applied science division when sufficient bio-technology projects had been secured to ensure the division's sustainability in the medium term. The divisional structure had been introduced in 1990 in order simply to provide improved financial accountability. Prior to this, all consultants were allocated loosely to the two original skill groupings of engineering and communications. Certain consultants were allocated the title of "divisional manager". However, these individuals were appointed on the basis of their ability to manage minimal administrative duties and their willingness to actually carry out administrative work. They were not rewarded financially for taking on this role and, in many instances, consultants within divisions commanded higher salaries than divisional managers.

Terms and conditions

People management skills as regards day-to-day operations were largely considered unnecessary, as consultants were trusted to organise and manage themselves. For example, there were no fixed hours of work or holiday entitlements. Consultants were trusted to apply personal discretion in this respect and organise their own workloads accordingly. Everyone was involved in project team working and expected to work according to the time scales jointly negotiated by the project leader and client. It was not common for consultants to work at weekends; however, some chose to do so. While the majority of consultants tended to spread their holidays throughout the year, certain individuals preferred to work constantly for months at a time, often seven days a week. They would then, following the completion of large projects, notify everyone within the firm of their intentions to take a two- to three-month break. This highlighted their short-term unavailability to the rest of the firm.

Impact of the reward system

Only one formal system existed at Professional Consulting and this was the financial control system that was introduced in 1990. This system was introduced at the same time as consultants were allocated to divisions. The system focused on divisional revenue targets (DRTs) and personal revenue targets (PRTs). These targets were established by management at the beginning of each financial year and monitored monthly. In order to highlight and reinforce the emphasis management placed on egalitarianism, a decision was taken to apply the same monthly PRT to all consultants, regardless of age, experience, etc. Hence DRTs were the accumulation of PRTs, premised on the number of consultants within the divisions. By default then, the larger divisions had to generate more revenue.

Revenue was generated through project work that was generally priced at a flat rate rather than fee rate. The "lead" consultant (again this could be

anyone within the firm) was responsible for negotiating the value of the project with the client, after careful consideration of the resources that would be required in terms of breadth of Professionalise and time. Once the value of a project had been agreed with the client, it was then the responsibility of individual consultants who wanted to work on the project to negotiate with the project leader exactly how much of the project revenue would be allocated to them. As there were no formal systems to record these negotiations, e-mail messages served as a record of any negotiations that had taken place. The allocation of project revenue contributed to the individual consultants' PRT and the DRT to which they were assigned.

Management described PRTs as a scheme for making people sell their skills to other people in an effective manner:

It is a micro economy. It is a free market for expertise. Over the years it has been the subject of much controversy as it puts a lot of pressure on people and it is in this way that we try to maintain a competitive (some would say combative) environment, which does create tension but at the same time enhances innovation given by the rate at which new ideas come out of the organisation.

The role of information technology

Significant resources were made available for investment in any technology that might facilitate project working, and hence, knowledge creation. As the firm grew, an e-mail system was introduced in 1990 to facilitate communication between consultants. As there were very few formal systems or procedures generally for communication, and on any particular day, there could be significant numbers of consultants working remotely at client firms, the e-mail system began almost immediately to be used extensively. A consultant could expect to receive between 100 and 150 e-mails each day. No protocols were used to classify mail sent, other than to attach a prefix of SOC for "social" communication and INNOV for an e-mail where the sender was searching for information. It was the e-mail system, then, that was generally used to broadcast requests for information when putting together proposals for clients. Anyone who wanted to be involved in a potential project would communicate in outline their potential contribution, in terms of skills and expertise, initially via e-mail. The system worked well in this respect, as the medium was good for communicating low level information quickly and across the whole firm. However, the level of email communication consultants were exposed to on a daily basis was becoming unmanageable. Norms had developed, such as sending replies to everyone in the firm and failing to edit the title of e-mails to ensure that it related to the content of the e-mail. These norms, while making the use of e-mail relatively thoughtless, informal and simple, had generated a system of communication that was beginning to break down. For example, some consultants, when faced with ever increasing numbers of e-mail, had decided

not to bother reading the majority and only used the system when absolutely necessary.

Other technologies such as groupware and intranets existed and consultants were aware that packages such as Lotus Notes could provide quality project documentation. However, the use of both was spasmodic and piecemeal. For example, groupware only tended to be used when geographical constraints imposed a need to work in this fashion. Consultants preferred project team working to be face-to-face, rather than via Lotus Notes discussion threads. Groupware technology was not considered rich enough to adequately convey some types of information and knowledge required during project work. In many instances, when significant decisions or results needed to be shared across a project team, the technology would simply be used to schedule a telephone conference call.

Questions

Making reference to knowledge management literature answer the following questions in no more than 300 words each.

1. Identify the knowledge management practices within Professional Consulting and evaluate how these practices add value to a) Professional Consulting, b) their clients & c) their employees.

2. What role did Professional Consulting's culture play within their knowledge management approach?

3. Describe the role of IT played within Professional Consulting's approach to knowledge management

4. Professional consulting is a company based on a core asset of its employee's intellectual capital and as such is a knowledge intensive company. How might a labour intensive company approach to knowledge management be different?

Issues of Knowledge Management within Professional Consulting

Knowledge management within Professional Consulting consisted fundamentally of facilitating and sustaining processes of knowledge creation. This was achieved primarily through specific people management practices that created an organizational environment in which knowledge was willingly shared by expert consultants, and expert consultants were motivated to stay with the firm. Thus project team working was not hindered by consultants jealously guarding their personal knowledge and expertise, and more generally, the organisational culture was such that consultants were motivated to remain loyal. Valuable organizational knowledge and skills were thus retained within the firm over time, which is considered crucial within this particular organizational context. Professional's consultants were selected on the basis of their cultural fit, which was subjectively assessed by other expert consultants. Cultural fit implied a willingness and ability to share knowledge and skills with consultants from different disciplines.

Consultants remained with the firm because it afforded them a unique environment in which to work. They were free to work on inter-disciplinary projects of their choice, which allowed them to work with others from different specialisms and further develop and enhance their own intellectual capital. Interdisciplinary project team working provided these highly skilled experts with a knowledge-rich and stimulating forum in which to work and there were also ample opportunities and resources made available for continuous professional development. Consultants worked in a highly autonomous, egalitarian culture, characterized by high trust in which knowledge sharing was an inherent aspect of the organisational environment. Consultants were unencumbered by any form of bureaucracy, procedures or systems, other than a financial control system. This importantly but unobtrusively served as the primary control mechanism within the firm. PRTs served to stimulate knowledge sharing and created an internal market for expertise. While consultants aimed to achieve PRTs, as a matter of professional pride, those that had problems achieving the targets set were given active encouragement by divisional managers to improve. Formal or informal sanctions were not imposed.

This high trust environment was characterised by the way in which consultants organised their own work activities around other members of the project team. Ample resources were also made available, not only for professional development, but also for the development of new ideas more generally, via the Innovation Exploitation Board. This also served to provide a highly conducive environment for knowledge creation. It was both structural and cultural factors then, in combination, which facilitated processes of knowledge creation within the firm. Importantly, knowledge management activities centred on people management issues rather than formal attempts to "capture" knowledge within IS-based knowledge

management systems. The distinctive way in which consultants were managed highlighted a miss-fit with mainstream HR in that formalised, codified practices were rejected in favour of highly informal, subjective approaches that in many cases relied on consultants managing themselves. Knowledge management consisted of "managing" the consultants, paradoxically in a way that diverted attention away from control and towards knowledge sharing. Efforts were directed mainly at sustaining a highly informal, networking environment in which experts would enjoy working.

Information technology was only considered to be a tool for low-level communication and co-ordination and tended to be abused rather than exploited for knowledge management purposes within the firm. It is unlikely that management within the firm had failed to recognise the potential of information systems for knowledge management. However, knowledge management focused more on the mechanisms required to facilitate knowledge creation than on the development of extensive project databases and systems identifying who knew what. Knowledge creation relied primarily on attracting and retaining those individuals most capable of communicating and synthesising their knowledge and expertise with others. In this respect, distinctive people management practices that acknowledged and perpetuated high levels of autonomy were crucial, highlighting the highly situated and contextual nature of KM in practice.

Key Summary points

♦ It is not enough to simply employ smart people, they need to be conformable working in the organisations culture
♦ Knowledge sharing can not be conscripted it must be volunteered. People need to benefit directly from the sharing of their knowledge and recognise these benefits.
♦ Trust in an environment of mutual co-operation is a key factor.
♦ Cross-functional and inter-disciplinary teams are a key factor in knowledge creation and sharing.
♦ The organisational structure of the organisation was flat, none hierarchical and avoided bureaucracy.

Basic Metaphor for Professional Consulting

An organism, fluid, dynamic and evolving. Smart and able to think for itself and adapt to changes in the environment. Each part of the organisation has the ability to sense and think for itself.

Basic Metaphor for 'Old Organisations'

A machine ridged and designed to do a set number of predefined tasks in a predefined order. Each part of the machine is dependent on another and has no autonomy or flexibility. Target and measures are set and work is allocated accordingly. Systems, structures and procedures and key