

The Knowledge Management Challenge

Mastering the Softer Side of Knowledge Management



Written by:

Mark Easterby-Smith, AIM Senior Fellow, Lancaster University Management School

Irina Mikhailava, Lancaster University Management School

The Advanced Institute of Management Research (AIM) develops UK-based world-class management research. AIM seeks to identify ways to enhance the competitiveness of the UK economy and its infrastructure through research into management and organisational performance in both the private and public sectors.

Acknowledgements

The work presented here was a part of the Knowledge and Information Management (KIM) Through-Life Grand Challenge Project (www.kimproject.org) funded primarily by the Economic and Social Research Council (Grant No RES-331-27-0006) and the Advanced Institute of Management (AIM) Impact Grant Initiative.

We are grateful to the following people for their assistance in developing this report: Laurie Barrow, Joe Cloonan, Mike Crawford, Nigel Chapman, Kathryn Fahy, Gavin Folland, Jon Lervik, Pavel Bogolyubov and Alexslis Nyuyfoghan.

Written by:

Mark Easterby-Smith, AIM Senior Fellow, Lancaster University Management School
Irina Mikhailava, Lancaster University Management School

AIM consists of:

- Over 300 AIM Fellows and Scholars – all leading academics in their fields...
- Working in cooperation with leading international academics and specialists as well as UK policymakers and business leaders...
- Undertaking a wide range of collaborative research projects on management...
- Disseminating ideas and shared learning through publications, reports, workshops and events...
- Fostering new ways of working more effectively with managers and policymakers...
- To enhance UK competitiveness and productivity.

AIM's Objectives

Our mission is to significantly increase the contribution of and future capacity for world class UK management research.

Our more specific objectives are to:

- Conduct research that will identify actions to enhance the UK's international competitiveness
- Raise the quality and international standing of UK research on management
- Expand the size and capacity of the active UK research base on management
- Engage with practitioners and other users of research within and beyond the UK as co-producers of knowledge about management

contents

AIM – the UK's research initiative on management	2
About AIM	3
AIM research themes	4
Executive summary	5
Introduction: the importance of knowledge	7
Enabling the exchange of knowledge	9
Improving knowledge transfer	18
Conclusion	21

Current AIM research projects focus on:

UK productivity and performance for the 21st century.

How can UK policymakers evaluate and address concerns surrounding the UK's performance in relation to other countries?

National productivity has been the concern of economists, government policymakers, and corporate decision-makers for some time. Further research by scholars from a range of disciplines is bringing new voices to the debates about how the productivity gap can be measured, and what the UK can do to improve the effectiveness of UK industry and its supporting public services.

Sustaining innovation to achieve competitive advantage and high quality public services.

How can UK managers capture the benefits of innovation while meeting other demands of a competitive and social environment?

Innovation is a key source of competitive advantage and public value through new strategies, products, services and organisational processes. The UK has outstanding exemplars of innovative private and public sector organisations and is investing significantly in its science and skills base to underpin future innovative capacity.

Adapting promising practices to enhance performance across varied organisational contexts.

How can UK managers disseminate their experience whilst learning from others?

Improved management practices are identified as important for enhancing productivity and performance. The main focus is on how evidence behind good or promising practices can be systematically assessed, creatively adapted, successfully implemented and knowledge diffused to other organisations that will benefit.

Knowledge is a vital organisational resource; however capturing and transferring tacit knowledge, internalised experience, skills or cultural knowledge – softer forms of knowledge – can be particularly challenging as they are not easily explained or codified. Managing the softer side of knowledge often entails activities such as connecting, networking, and boundary spanning, bridging between people, organisations, across countries or continents. It must also consider the time dimension, as knowledge of legacy products, for example, must be retained over life-cycles that may last tens or hundreds of years.

Of particular importance are two knowledge management concepts: *knowledge exchange*, useful when people find themselves in the midst of networks, projects, meetings and conferences, and need to communicate actively within and outside the organisation; and *knowledge transfer*, especially when people reach late career, have accumulated substantial knowledge and expertise, and the organisation risks losing this knowledge when that person leaves.

When managing the softer aspects of knowledge and human communication it is knowledge exchange and knowledge transfer that have proved particularly difficult to master. These are the two stages that this *Executive Briefing* focuses on, examining the way a number of organisations have tackled the problem.

Knowledge exchange

The central focus of knowledge exchange is enabling human communication and interaction, and a popular way of doing this is through communities of practice. A community of practice (CoP) has been defined loosely as an activity system in which participants are united in a community by shared action, meaning and understanding, and they play a very important role in knowledge sharing within organisations and also in a boundary spanning role – helping to bridge the gap between the organisation and its environment.

We looked at the way three organisations approached knowledge exchange – ABB, Converteam, and Sellafield. Each had specific knowledge challenges that needed addressing. ABB wanted to find new ways to allow its service engineers to share their knowledge, both of their clients' business needs, and technical solutions to problems, with the rest of organisation. Converteam wanted to find a way to integrate globally-dispersed organisational knowledge enabling Converteam engineers to locate the knowledge they needed at any time and from anywhere. Sellafield wanted to improve the effectiveness of its Quarterly Suppliers Forums – face-to-face events intended to bring the company and its partners together in an open environment.

Managing the softer side of knowledge often entails activities such as connecting, networking, and boundary spanning...

Employee engagement and participation are crucial for the success of knowledge management initiatives.

Knowledge transfer

At Airbus the organisation faced a different knowledge management challenge. The company's products life-cycle is longer than the career span of any single employee, so the company must make sure that it can record and transfer knowledge between employees. The firm needed a knowledge transfer system that could move knowledge from those employees that were leaving – knowledge givers – to mid-career colleagues in the company – knowledge receivers.

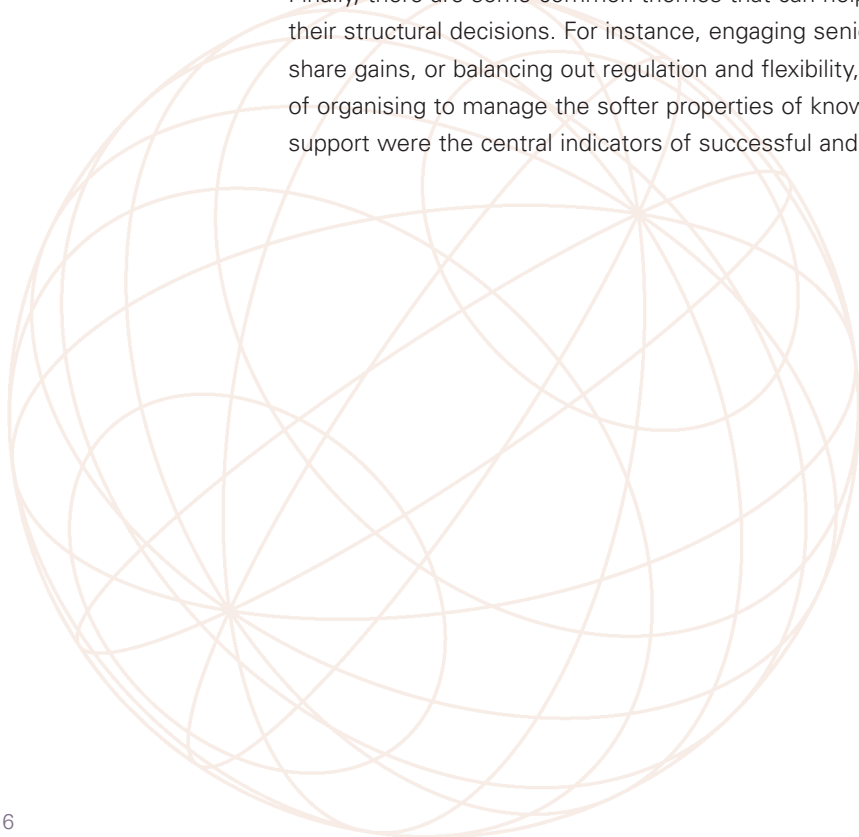
Common ground

While each organisation solved its knowledge management challenge in a different way (as detailed in the main report), there were a number of common factors underpinning each organisation's approach.

Employee engagement and participation are crucial for the success of knowledge management initiatives. In all four organisations we discovered deliberate efforts to maximise engagement, whether through workshops or by actively engaging the participants in the management and decision-making processes of a particular community of practice. So electrical engineering giant ABB, for example, demonstrates how a balance between flexibility and formality in the structure can be obtained by actively engaging the participants in the management and decision-making process of a particular community of practice.

Secondly, relationships are central for connecting people and engaging with their knowledge. This is particularly evident in exchanging or transferring the tacit knowledge that is not easily moved from one holder to the other. Opportunities for face-to-face interaction are integral to meeting the knowledge management challenge.

Finally, there are some common themes that can help organisations to think through their structural decisions. For instance, engaging senior management, preparing to share gains, or balancing out regulation and flexibility, are all fundamental aspects of organising to manage the softer properties of knowledge. Structural balance and support were the central indicators of successful and productive knowledge work.



introduction: the importance of knowledge

Knowledge is a vital organisational resource. But managing the knowledge that resides within an organisation so that it adds maximum value to the organisation's operations is not easy.

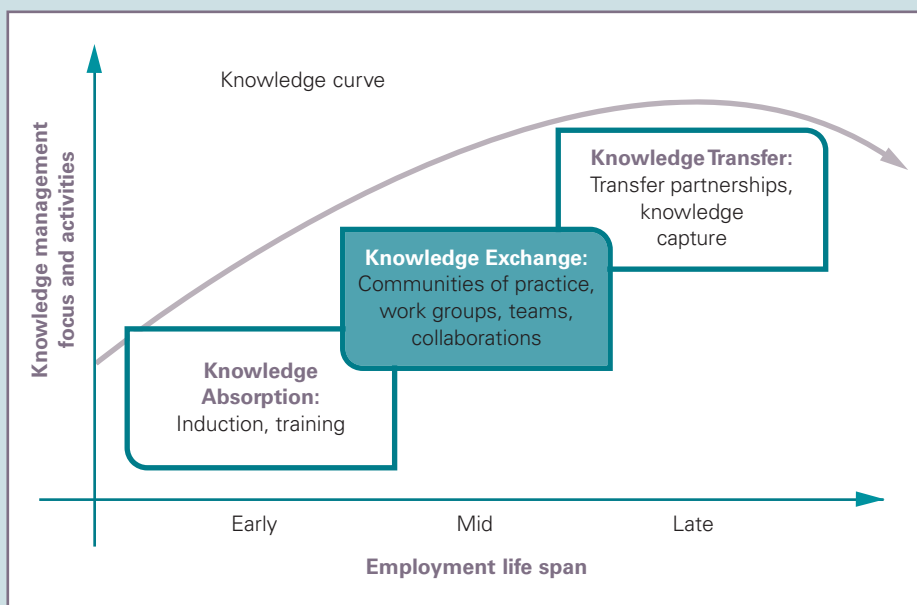
So far, the main approach to Knowledge Management (KM) has focused on the use of technology to capture, quantify, codify and transmit knowledge. The KM models that follow this technical approach – the 'hard' side of knowledge management – treat knowledge as a tangible asset which can be structured and codified using features such as intranets, databases or other IT tools.

However, the technical approach to KM has drawbacks. Technical systems are less effective at capturing and transferring tacit knowledge, internalised experience, skills or cultural knowledge. These 'softer' forms of knowledge are embedded in people's practices and not easily explained or codified.

To help organisations manage the softer forms of knowledge, the approaches towards knowledge management have moved on from being solely IT-oriented to incorporating practices and methodologies that enable human-to-human communication. Many organisations have tried, for example, to incorporate social methods for exchanging knowledge alongside the more traditional technological tools.

Managing the softer forms of knowledge often entails activities such as connecting, networking, and boundary spanning. It has to take account of moving within organisations or bridging between organisations, regions or countries. It must also consider the time dimension. Knowledge of legacy products, for example, must be retained over life-cycles that may last tens or hundreds of years, far longer than any single employee will be at an organisation.

Figure 1: Knowledge Management over time



One way of thinking about knowledge management and time is to consider it in the context of an employee's career progression. During the early career the emphasis for new entrants, keen to build on existing education by gaining local expertise and establishing social contacts and networks, is on *knowledge absorption*. This is normally facilitated through induction and training programmes, and perhaps by apprentice or mentoring schemes.

In the mid-stage of a career the focus is on collaborative work and *knowledge exchange*, as people find themselves in the midst of networks, projects, meetings and conferences, and need to communicate actively within and outside the organisation. This is the most prolific, active and perhaps longest stage of knowledge engagement with an organisation, it involves mechanisms deployed to foster communication for team or group work, partnerships, reviews, communities of practice, and others.

By the time people reach their late career, many will have accumulated substantial knowledge and expertise. That knowledge may be unique and risks being lost when these people leave. Here, *knowledge transfer* procedures may be implemented to try to ensure that strategic expertise is passed onto younger colleagues and does not simply walk out of the door.



When managing the softer aspects of knowledge and human communication, it is knowledge exchange and knowledge transfer that have proved the most difficult of the three stages to master. These are the two stages that our research focused on.

Knowledge exchange is at the heart of the way organisations operate. It is not confined to the boundaries of the organisation but can extend to external partners, and across regions, countries and continents. The central focus of knowledge exchange is enabling human communication and interaction, and a popular way of doing this is through communities of practice.

Communities of practice

A community of practice (CoP) has been defined loosely as an activity system in which participants are united in a community by shared action, meaning and understanding.

Communities of practice play a very important role in knowledge sharing within organisations and also in a boundary spanning role – helping to bridge the gap between the organisation and its environment. One school of thought is that they should emerge spontaneously from organisational networks amongst existing groups of employees who have similar work-related activities and interests – although this isn't always possible.

Over the last decade many organisations, large and small, have introduced communities of practice in a managed way as a mechanism for encouraging knowledge flows, although this moves away from the original ideas of spontaneity. And, as the scope and scale of communities of practice increases, flexible structural and leadership solutions are required to the challenges that managing communities of practice present, but these solutions are not always easy to attain.

Various organisations have attempted to tackle different aspects of the knowledge exchange challenge. These include: Swiss electrical engineering giant ABB – a community approach within one country; power conversion specialist Convertteam – a virtual and global community of practice; and nuclear reprocessing firm Sellafield – a community of practice across several companies (see Table 2).

i ABB: Communities within one company

The knowledge challenge

In the UK, ABB, the power and automation technologies organisation, operates a network of service engineers who mostly work independently, and are based in various geographical locations throughout the UK. Most of the engineers work from home and provide 24-hour call-out cover for customers, which tend to be large manufacturing companies making paper and other products. Work is done on the customer's premises. Although the engineers are in touch with each other and head office, the geographical spread means they rarely meet face-to-face.

Although the engineers are in touch with each other and head office the geographical spread means they rarely meet face-to-face.

...the story-telling and knowledge sharing between engineers often covered the technical problems they were facing and the ways to address them.

The introduction of communities of practice was championed by the company's general manager, and from the very beginning had senior leadership support. The main goal was performance improvement. The engineers gained valuable insights into the clients' business needs during service visits. Potentially, this knowledge could be used to generate new business and new servicing packages enabling ABB to provide greater customer value. Also, the story-telling and knowledge sharing between engineers often covered the technical problems they were facing and the ways to address them. Unfortunately, however, the company was not capturing the information. As a result ABB introduced 'The Community Approach.'

Mike Crawford, general manager of ABB in the UK described it thus: *'The Community Approach is a new way of organising the sales channels to provide greater front-end capacity to overcome the problems listed above. The approach is very simple and does not involve a great deal of change. However, everyone in the organisation has to participate and co-operate if it is to succeed. The long-term performance – even survival – depends on commitment and contribution by engineers, co-ordinators, operational managers etc, who in the past have not been engaged in the front-end strategy.'*

The idea was to legitimise and enhance the informal communication practices that the service engineers used. It also established new channels to allow the engineers' knowledge to be transferred to and shared with the rest of organisation.

Knowledge solutions

ABB has three communities within the UK: South, North, and Scotland. Each consists of an account manager, an operations engineer, and about eight service engineers (see Figure 2).

Before the communities approach was introduced, the service engineers were in regular informal contact with each other – they would call colleagues on the way to or from clients to discuss their experiences or get advice, for example. The new approach introduced a face-to-face meeting one day each quarter. It also brought in systematic procedures for sharing knowledge which included a system for capturing all potential leads and opportunities, and an incentive system – in the form of monetary rewards for a certain number of recorded entries – to motivate engineers to submit these opportunities.

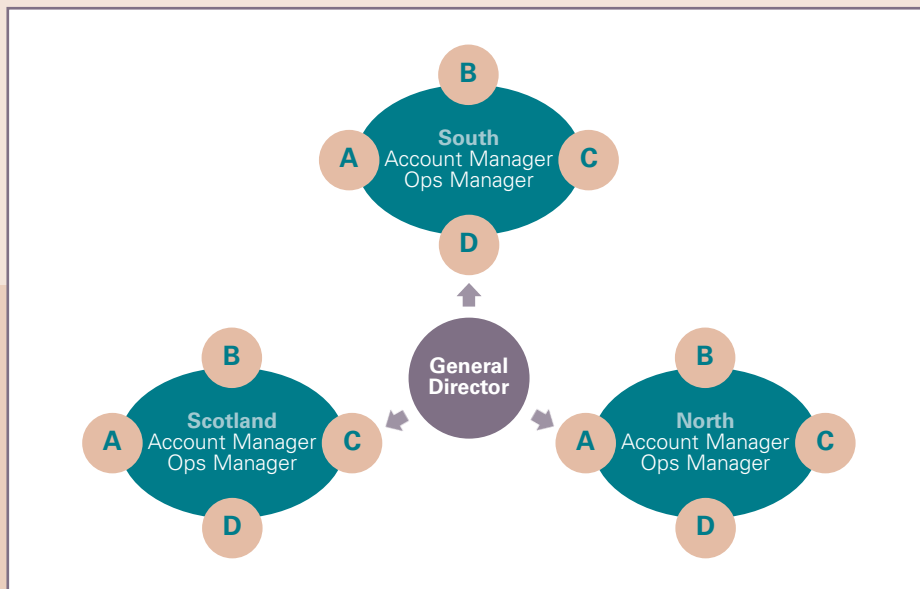
The service engineers objected to setting performance targets against recorded entries on the basis that geographical differences in the number and density of clients, and the differences in the nature of client relationships, made it unfair. Acknowledging these objections ABB agreed to a simple logging system – an excel spreadsheet – introduced by the engineers, and no performance targets.

The communities are also intended to put the service engineers in touch with the rest of organisation, and in particular the account managers and operations engineers. Owing to the dispersed nature of the community members and associated logistic issues, the meetings often take place in hotel rooms or other meeting facilities. Having managers run the meetings seemed to impede the information flow, so now they are run by 'community leaders' elected by the community from the pool of service engineers, who are offered a basic management training to help do that.

What are the lessons?

ABB's community approach provides a number of useful lessons.

Figure 2: ABB Community Approach



Structural arrangements of CoPs: Particular attention must be paid to the structural arrangements around communities of practice. In particular, there must be a balance between formality and flexibility in organising CoP practices, which can be assisted by a bottom up approach to engagement.

The bottom up approach and involvement: Involvement is central to the success of communities of practice. For example, the ABB case shows that a balance between flexibility and formality in the structure can be obtained by actively engaging the participants in the management and decision-making process of a particular CoP. Also, when initiating CoPs it helps to take into account the existing groups and networks and their governing principles. Creating community champions through the appropriate financial and non-financial incentives can facilitate community building efforts.

Face-to-face meetings: Face-to-face meetings are very important to the effective functioning of communities of practice, especially when communities are geographically dispersed or predominately based online.

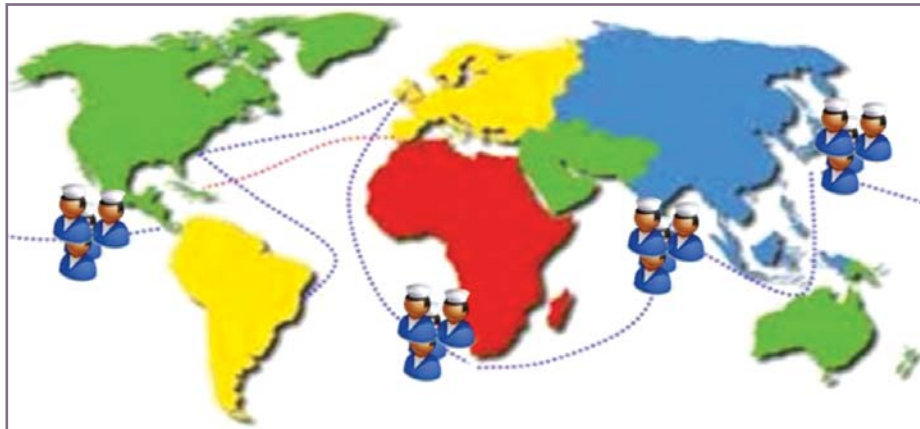
Senior management support: Senior management support and buy-in is essential in order to get a return from communities of practice, as it helps to legitimise them.

ii Converteam: Initiatives to establish global communities of practice

The knowledge challenge

Converteam, a specialist in power conversion engineering, is a global organisation with pockets of knowledge and expertise dispersed all over the world (see Figure 3). As a knowledge company the firm must be as efficient as possible in sharing, developing and preserving its knowledge, says its CEO Pierre Bastide.




Figure 3: Global Converteam



As part of creating a truly knowledge-sharing culture, Converteam wanted to find a way to integrate globally-dispersed organisational knowledge enabling Converteam engineers to locate the knowledge they needed at any time and from anywhere.

The knowledge residing in Converteam has a number of distinct qualities: it is widely distributed amongst engineers, customers, suppliers, product and project information, contractors and collaborators; it also spans long periods of time, often longer than the average time employees spend at the firm. The idea was to use communities of practice to create direct personal contacts between engineers in different parts of the world, and support this with a single entry portal giving access to central knowledge repositories. To do this the firm established a unified virtual community, a virtual knowledge network – Converteam Offshore Support Services (COSS) (see Figure 4).

Figure 4: COSS interface

  		
Convertteam Offshore Support Services		
Click here for additional information Basic User Manual		
Resources for Offshore Support Services		
The Vessels Database Database containing information about Vessels and their customers, from reference numbers to software versions, contact details etc.	Dynamic Organigram Simple and easy to use, this tool will enable you to find a person and navigate the organisational chart to see where she/he works and who their colleagues are.	Resource Index Quickly find and retrieve specific resources from any of the 2,000+ databases, design packs and file sets stored in the Converteam UK servers.
Correspondence Database Contains those communications that have been recorded between Converteam and its customers.	Expertise Inventory Find people with expertise in specific areas. We are currently working on the population of the expertises. Search and retrieval facilities will be available soon.	Ballet A reliable source of company information. It is the Northern Europe Intranet and has now been integrated with other tools within the KM platform.
Contact Management Database List of any interesting external contact, customer, partner, supplier, contractor etc that has been recorded by anyone in Converteam UK.	People Network A social networking tool that allows for the sharing of personal, informal information.	Issue Management System (IMS) Database containing information about Vessels and their customers, from reference numbers to software versions, contact details etc.
The Vessel Support Team List of jobs related to vessels. Job details: status, description etc.	Other Offshore Service Resources <ul style="list-style-type: none"> • Aliga • Nipture • Useful links to DP information within Converteam 	IT Help Desks <ul style="list-style-type: none"> • Global Service Help Desk • UK Service Help Desk
Browse All Converteam Information Resources	Browse Your Information Resources	Find People by browsing/searching Areas of Expertise
<small>Copyright © Converteam Offshore Support Services 2010. All rights reserved. Powered by Eritel © 2010</small>		

Knowledge solutions

Converteam implemented COSS in five steps:

Step 1 – Investigating issues affecting service: Converteam's KM team engaged in discussions, interviews and consultations with service engineers across the company, as part of an extensive internal knowledge audit. Some key issues affecting the service engineers were identified: finding people; finding resources; and mechanisms of knowledge sharing.

Step 2 – Design appropriate solutions: Following the KM team's research, a decision was made to propose the introduction of a virtual intranet portal that would help people find both internal experts and technical information.

Step 3 – Communicating the challenges and their impact on service to senior managers: The KM team secured buy-in from Converteam's senior management during a number of meetings by presenting evidence on the negative impact of the lack of communication (supported by anecdotal evidence from the engineers as well as real life examples) and outlining intended solutions.

Step 4 – Meetings with the service manager to agree on a pilot: It was decided that a face-to-face conference was the most effective way of introducing the new process to the organisation and so the firm ran an 'Offshore Service Knowledge Management Workshop' that brought together engineers from Brazil, India, Singapore, the USA and UK.

Each country was represented by key individuals nominated by their respective management teams. The country management teams were also responsible for making sure that everyone knew what the workshop was about and why it was important, this helped to coordinate the commitment and participation of everyone involved.

Workshop activities included: crafting a communication plan to engage engineers across different countries; involving suitable experts; and ensuring the selection of an appropriate technology to host the portal. The KM team also designed an index page to be specified and finalised during the workshop.

It was decided that a face-to-face conference was the most effective way of introducing the new process to the organisation...

Table 1: Reasons for choosing the portal

Case Setting and Methods

The Converteam portal

The portal is an HTML web-based platform, chosen for its ease of use, scalability, and reliability.

Training/ease of use: With little or no training needed it can be easily introduced to any user audience. This translated into rapid deployment time, high adoption rates, reduced training costs and user empowerment.

Scalability: This platform was easy to integrate with existing systems and extend both across and outside of the organisation.

Maintainability and reliability: The portal's design was quick and easy to maintain. It was operated with the help of easy modification and referencing procedures. It allowed rapid retrievals of information which optimised the decision-making process.

Indexing: The HTML platform also enabled engineers to index the content on every page and as a result to keep track of the search steps and locations.

Step 5 – Knowledge Management workshop and outcomes: The workshop was intended to launch the virtual network. Participants were introduced to the index and completed its design. This process of discussion proved to be a successful strategy as engineers felt that they had a stake in the virtual tool and therefore were more likely to use it. The result was a collaboratively created online solution that allowed Converteam employees to locate information from anywhere in the world – it was named Converteam Offshore Support Services.

What are the lessons?

Ownership: COSS was implemented as a solution to unify a complicated and diverse set of documents and practices and provide easy access to such information. The virtual tool is, however, a mechanism to allow people to find answers – it does not solve problems on its own. Nor is COSS a substitute for human communication. Consequently, the launch of the tool incorporated a face-to-face gathering of engineers in an attempt to build a sense of ownership, which in turn would encourage greater use of the tool.

Balancing soft and hard features: From Converteam's experiences it was also clear that to successfully implement a knowledge management system, the introduction of hard technical tools must be balanced with soft tools and features. Human communication and socialisation involving the face-to-face meetings between engineers was instrumental in the creation and launch of the knowledge management process. It also helped to build relationships between the network participants beyond the COSS system.

iii Sellafield: Knowledge market – community of practice across several organisations

The knowledge challenge

Sellafield, which delivers decommissioning, reprocessing, nuclear waste management and fuel manufacturing services on behalf of the Nuclear Decommissioning Authority, is an unusual organisation – 70% of its budget is spent on outsourcing work to Tier 2 and 3 contractors. As a result, the company has a vast list of suppliers that provide everything from stationary to highly complex, industry-specific knowledge. To strengthen the ongoing partnership and communication with its suppliers, Sellafield runs Quarterly Suppliers Forums – face-to-face events intended to bring the company and its partners together in an open environment.

In practice, unfortunately, Sellafield employees tended to dominate the forum proceedings, with the event resembling a press conference where communication flowed downwards from Sellafield, rather than an open dialogue. Sellafield's dominant role overshadowed the suppliers and stifled the flow of knowledge. Consequently the firm decided to revise the Forum, and created a KM team to help achieve this.

Knowledge solutions

The Knowledge Management team approached the forum from a different perspective. They planned to put mutual communication at the heart of the event, and enable communication between the suppliers in order to share knowledge gains. The newly created community was intended to foster unregulated knowledge exchange and open communication, and was named 'the knowledge market'.

The knowledge market – an annual one day face-to-face event – was opened to all Sellafield's existing and potential suppliers. All suppliers register with the KM team and nominate at least two representatives: one to share the knowledge, the other to cross-fertilise and collect ideas from the other market stalls.

Each knowledge market opens with a speed-dating type ice-breaker; a five minute presentation from company to company in a rotating basis. Initially, there was no attempt to cluster the market space and community around subjects or issues. The knowledge management team hoped that zoning would emerge during the market through knowledge exchange and learning, and this is actually what happened with several specialist clusters created around distinct areas of professional knowledge, such as the experiences of dealing with a particular type of isotope or metal.

The knowledge market's success was measured by the amount of new partnerships established, and whether at least one Sellafield problem was matched with a solution.

Sellafield say that results have exceeded all expectations. The community meeting has enabled the distribution of organisational learning across a broad area of knowledge, allowed access to any sellafield department at any given time, and led not only to the sharing of knowledge, but also to the identification of solutions to existing problems (see box). The market has also proved useful in generating new business leads and helped to build relationships between Sellafield and its suppliers founded on a better understanding and knowledge of each other.

Sellafield's success: Corrosion under insulation

Every five years Sellafield's pipe system undergoes a serious maintenance programme in order to prevent any build up of corrosion. A time and resource consuming process given that the pipe system is sealed, the programme is nevertheless essential, as the corrosion keeps reappearing.

After searching for a long term solution Sellafield brought the problem to the Knowledge Market and found exactly what it needed: an expert in corrosion under insulation. The solution suggested by this expert partner-company required re-application every ten years, causing less disruption and resulting in financial savings.

In implementing the knowledge market, Sellafield's knowledge management team was keen to address the potential risks involved in the process. There was always a reputational risk, as if anything went wrong it might have harmed existing ties and partnerships with other firms, as well as harming Sellafield's reputation in general.

There were also commercial concerns given that the event enabled an open dialogue between suppliers. There was a risk that, while other parties might benefit, Sellafield would not.

What are the lessons?

The Sellafield experience is instructive on a number of points.

Real dialogue and real problems: Integrating the knowledge exchange with existing organisational needs, i.e. real problems that need solving – makes it easier to establish new communication channels and capture new ideas, and so create greater learning and innovation returns.

Sharing the gains: Key to the success of Sellafield's knowledge exchange initiative was the willingness to recognise the interests and needs of the other parties involved. Through helping each other, the partners involved developed trust and established collaborative ways to grow. Greater learning can be achieved through cooperation and so it is important that the partners are prepared to foster each other's learning and share its gains.

Key to the success of Sellafield's knowledge exchange initiative was the willingness to recognise the interests and needs of the other parties involved.



Building relationships: Once again Sellafield's experiences confirm similar findings that building and maintaining relationships is an essential part of the knowledge exchange process, paving the way for more effective collaboration to solve problems in a way that is mutually beneficial over the long term.

Risk mitigation: It may be necessary to mitigate risks to reputation, and to the loss of commercially sensitive information avoiding a situation where some parties to the knowledge exchange benefit at the expense of others. As Sellafield discovered it is essential to take a proactive stance and actively seek for knowledge during such knowledge exchange events.

improving knowledge transfer

Knowledge is a major driver of organisational performance. As a result organisations are actively encouraged to seek, create, capture and distribute knowledge. Knowledge transfer, which can take place within or between companies, allows knowledge to be moved between units, departments, functions, teams and individuals, enabling organisations to ensure that they retain the knowledge they have created. This process can be particularly important, as in the case of those employees approaching the end of their employment.

i Airbus: Expertise transfer, capturing knowledge from people, projects or companies

The knowledge challenge

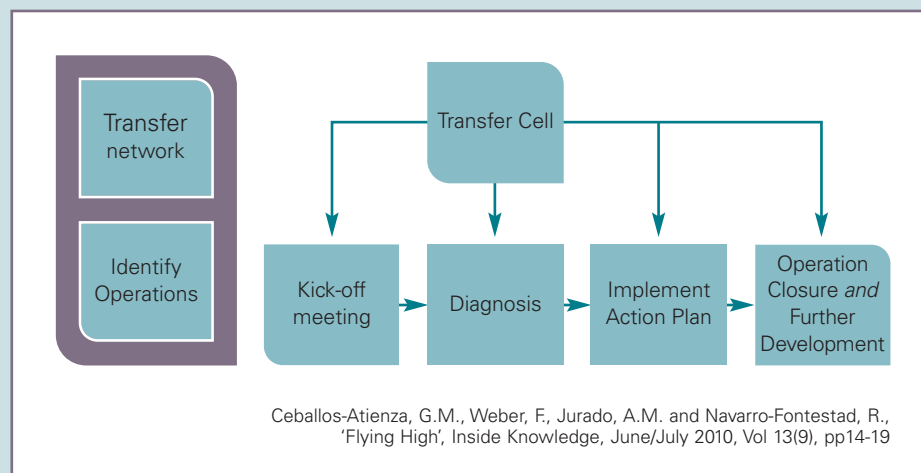
At aircraft manufacturer Airbus, the company's products life-cycle is longer than the career span of any single employee, so the company must make sure that it can record and transfer knowledge between employees. The firm needed a knowledge transfer system that could move knowledge from those employees that were leaving – knowledge givers – to mid-career colleagues in the company – knowledge receivers.

Knowledge solutions

The knowledge exchange process at Airbus is carried out by a 'transfer cell' which consists of the key stakeholders involved: the knowledge giver, knowledge receiver(s), direct manager and facilitator (see Figure 5). The facilitator is a third party who helps to facilitate and mediate the process.

The transfer team creates a space where the transfer of knowledge takes place; and manages and organises the process. Airbus tends to apply this methodology using a knowledge management consultant, who is at the hub of the transfer cell. The consultant administers and mediates the whole process, engaging with the knowledge giver, knowledge recipient and other relevant members of the organisation.

Figure 5: Airbus Expertise Transfer Process (ExTra)



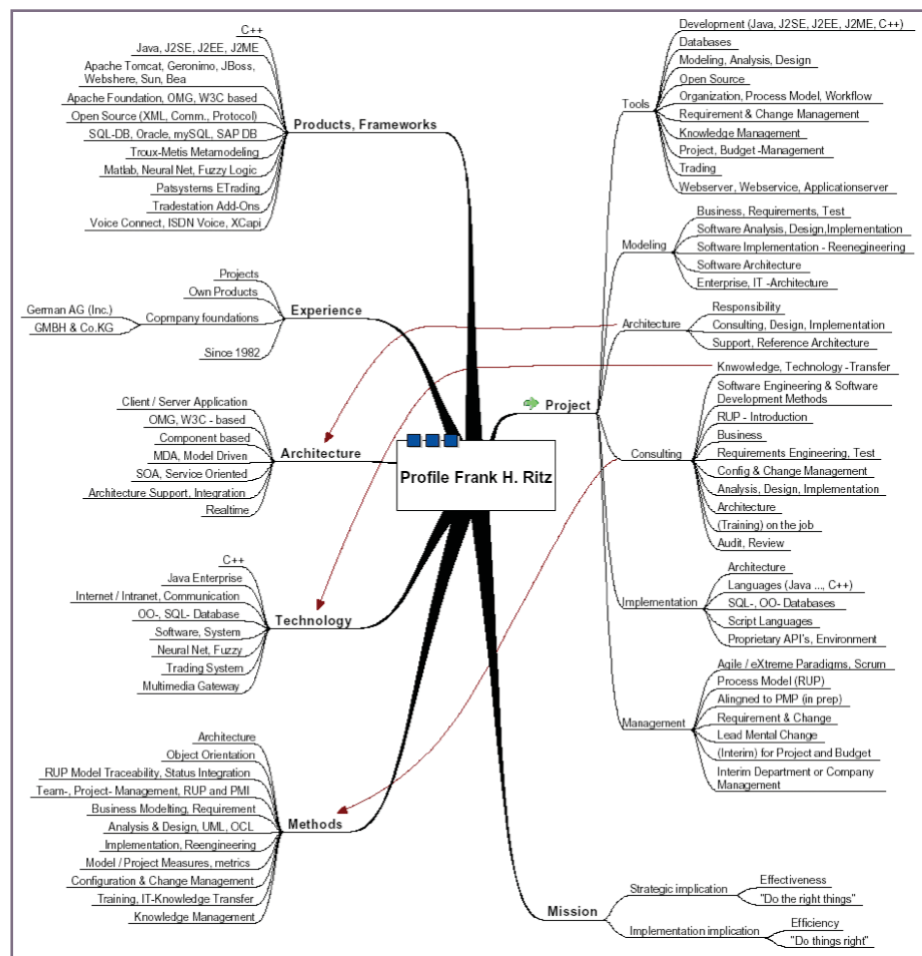
The knowledge transfer process consists of four stages: the kick-off meeting; diagnosis; action plan implementation; and operation closure.

The first step, once it is clear someone – the knowledge giver – is leaving the company, is to hold the kick-off meeting which is attended by the members of the Transfer Cell. The key concerns at this stage of the process are to find out what the knowledge givers main areas of expertise are, and to discuss the expectations for the transfer operation.

Next is the diagnosis phase. Here the facilitator interviews the knowledge giver, direct manager and knowledge receiver, usually separately. The main knowledge areas are captured with the help of a mind mapping process which develops understanding and visually represents the knowledge that ought to be transferred. The mind mapping can be done with pen and paper, or using software like *Mind Manage* or alternative programmes (see Figure 6). Asking the knowledge giver a simple question, ‘If you were starting the job tomorrow, what information do you think you’d need?’ is a typical starting point. The idea during this stage is to create a sense of *value* of the knowledge and of the process, to establish what links the knowledge has with the core business functions and what the potential business benefits may be.

Asking the knowledge giver a simple question, ‘If you were starting the job tomorrow, what information do you think you’d need?’ is a typical starting point.

Figure 6: Airbus mind map



The third stage involves the consultant developing a transfer action plan that focuses on encapsulating knowledge and ensuring that it is in a transferrable form, and supporting its implementation.

To measure the effectiveness of the knowledge transfer process Airbus attempts to assess the re-use of the transferred knowledge.

Methods of capturing and transferring knowledge are agreed by the transfer cell. The explicit knowledge is often recorded with the help of written diaries and logs, while tacit knowledge is extracted through in-depth interviews. The consultant conducts exhaustive interviews ensuring that all key areas of expertise are properly covered and captured. The interview structure and questions are informed by the mind mapping and take into account the objectives of the transfer process. At this stage it is essential to build relationships and establish trust within the transfer cell in order to encourage open communication and knowledge flow.

The actual formal transfer of knowledge takes place in a number of ways. Collaborative meetings ensure that the knowledge and expertise captured through written and verbal communication is transferred between key participants. It is important that during this part of the process there is focus on the recipient of the information, and ensuring that knowledge has been transferred to that person, in a way that they understand the information and its value within the organisation.

Finally, the transfer process needs to be drawn to a close. The members of the transfer cell should meet to confirm that the transfer has been completed and to ask for feedback on the success of the process. The feedback results are analysed to gauge the effectiveness of the knowledge transfer and to think about how the transfer operations might be improved.

To measure the effectiveness of the knowledge transfer process Airbus attempts to assess the re-use of the transferred knowledge. However, measuring changes in the recipient's knowledge or in organisational performance as a consequence of the knowledge transfer is not easy, especially where any increase in knowledge takes a tacit form. While some changes in performance can be captured with the help of metrics on productivity or financials, Airbus also conducts a post-transfer evaluation a few months down the line and/or revisits and re-interviews transfer recipients.

What are the lessons?

A number of lessons can be taken from the way that Airbus approaches knowledge transfer.

Value of knowledge: An appreciation and value of knowledge lies at the heart of knowledge transfer success. It is important to begin with a clear understanding of why and where the knowledge is needed.

Building relationships: In learning terms, internal and external relationships are equally important. Networks and relationships enable a smoother and more participative transmission of knowledge from sender to receiver, and as a result allow one generation to pass on wisdom to the next.

Learner's interests: It is important to acknowledge and pursue the knowledge recipient's interests during the knowledge transfer process. It is imperative to meet the recipient's needs to ensure that transferred knowledge is appropriated and utilised.

conclusion

Knowledge matters. Increasingly, the fortunes of companies will be linked to how well they manage the knowledge that resides within their value chain. Organisations are reasonably effective at dealing with the hard aspects of knowledge management, the technical IT related systems and structures that facilitate knowledge management. But firms are less adept at mastering and managing the softer aspects of knowledge, and in particular its exchange and transfer.

This *Executive Briefing* provides some assistance for managers grappling with these knowledge management challenges. By examining the methods and mechanism employed by four companies to deal with the knowledge exchange and transfer of soft forms of knowledge – ABB, Converteam, Sellafield, Airbus – we reveal a number of specific ways that organisations can network and connect people in ways that promote these activities.

Table 2: Four approaches to knowledge management

	Challenges of the approach	Solutions to the challenges	Lessons for the future
ABB 'Face to Face Communities of Practice' is a KM tactic that allows ABB to create new business opportunities by sharing as much knowledge as possible	<ul style="list-style-type: none"> – to ensure participation and appropriate capturing of useful information – to manage the relationships within the community and handle the power struggles 	<ul style="list-style-type: none"> – hand over all decisions around community operations to the community participants; self-government with little direction or prescription 	<ul style="list-style-type: none"> – ensure the balance between formality and flexibility – enable a bottom-up approach in practices of the community – provide senior management support, but not control
Converteam 'Online Communities of Practice' is a KM practice that enables Converteam to enhance its knowledge sharing and communication across the multiple global offices	<ul style="list-style-type: none"> – to ensure that community members are able to take full advantage of the new online resource – to provide a new tangible solution in the area of communication to address increasing organisational globalisation 	<ul style="list-style-type: none"> – give the community a proper launch (preferably face-to-face) – engage as many organisational members in its design as possible 	<ul style="list-style-type: none"> – balance out the virtual and face-to-face communication – build relationships for long term sustainability – develop a bottom-up ownership of the community
Sellafield 'Knowledge Markets' is a KM approach that allows people to learn from organisational partners and networks	<ul style="list-style-type: none"> – to get better use of the organisation's extensive networks and partners – to find new solutions to old problems 	<ul style="list-style-type: none"> – create an open and safe space for information sharing with equal opportunities for everybody 	<ul style="list-style-type: none"> – be prepared to share – pose real problems and look for real solutions – build and maintain the relationships
Airbus 'Knowledge Transfer Cell' is a KM tool that allows Airbus to move knowledge from those employees that are leaving to knowledge receivers.	<ul style="list-style-type: none"> – to identify key knowledge holders and capture their knowledge in time and in form suitable for knowledge receivers 	<ul style="list-style-type: none"> – involve knowledge givers and receivers in the process of knowledge transfer – use creative and engaging methodologies 	<ul style="list-style-type: none"> – appreciate the value of knowledge – keep the learner's interests at heart – build relationships

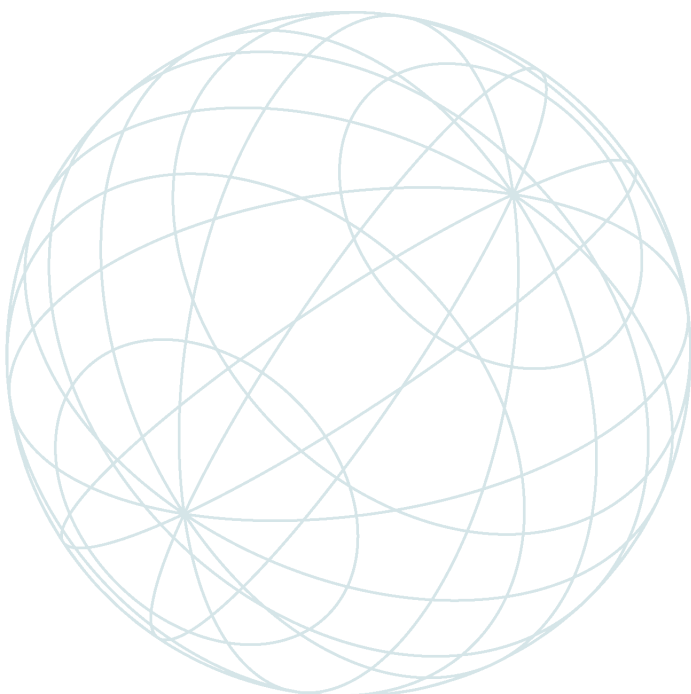
Structural balance and support were the central indicators of successful and productive knowledge work.

In addition we identified three main lessons in dealing with the softer aspects of knowledge management, whether it involves setting up communities of practice or transfer cells as described in the briefing.

To begin with employee engagement and participation are crucial for the success of knowledge management initiatives. In all four organisations we discovered deliberate efforts to maximise engagement, whether it was through workshops or actively engaging the participants in the management and decision-making processes of a particular community of practice.

Secondly, relationships are central for connecting people and engaging with their knowledge. This is particularly evident in exchanging or transferring tacit knowledge that is not easily moved from one holder to the other. Opportunities for face-to-face interaction are, therefore, integral to meeting the knowledge management challenge.

Finally, there are some common themes that can help organisations to think through their structure decisions. For instance, engaging senior management, preparing to share gains, or balancing out regulation and flexibility, are all fundamental properties of organising to manage the softer properties of knowledge. Structural balance and support were the central indicators of successful and productive knowledge work.



AIM Research Reports

Executive Briefings

- 2011 **Leveraging your human capital**
Managing better outcomes from meetings, discussions and conversations
- 2010 **The growth of services**
Towards a better understanding of service measurement, performance and innovation
- 2010 **Creating a culture of innovation**
Why corporate culture is key to radical innovation in firms
- 2010 **The Uncertain Middle**
Innovation lessons for low carbon energy technology from demonstration projects and trials
- 2010 **The Ten Myths of Manufacturing**
What does the future hold for UK manufacturing?
- 2009 **Building a strategy toolkit**
Lessons from business
- 2009 **Outcome-based contracting**
Changing the boundaries of B2B customer relationships
- 2009 **Risk management gets personal**
Lessons from the credit crisis
- 2009 **Radical Innovation: Making the Right Bets**
- 2009 **Racing For Radical Innovation**
How motorsport companies harness network diversity for discontinuous innovation
- 2009 **Capability vs. Productivity**
Identifying the weaknesses in the UK Retail Industry
- 2008 **High Value Manufacturing**
Delivering on the Promise
- 2008 **Is the UK's science base performing?**
- 2008 **When organisations change**
A middle management perspective on getting it right
- 2008 **Leadership of Business Schools**
Perceptions, Priorities and Predicaments
- 2007 **Dancing with gorillas**
How SMEs can go global by forging links with MNCs
- 2007 **Adapting to the China Challenge**
Lessons from experienced multinationals
- 2007 **Twelve search strategies that could save your organisation**
Is discontinuous innovation on your corporate radar?
This report is accompanied with a self-assessment booklet
- 2007 **The Future of Business School Faculty**
- 2007 **The Future of HR**
How Human Resource outsourcing is transforming the HR function
- 2007 **The Importance of Meetings**
How the structure of meetings affects strategic change in organisations
- 2007 **The International Success of British Companies**
An industry perspective
- 2007 **Making sense of workplace performance**
- 2006 **From Modern to Paternalistic**
How does your firm type affect your performance?
- 2006 **How does UK retail productivity measure up?**
- 2006 **'Who does what' and 'who gets what'**
Capturing the value from innovation
- 2006 **Is Organisational Learning a Myth?**
- 2006 **Attention HQ**
Strategies for UK subsidiary companies
- 2006 **The Asian Century**
Opportunities and challenges for the UK
- 2006 **The Future of Business Schools in the UK**
Finding a path to success
- 2006 **Acting on Information**
Performance management for the public sector
- 2006 **Signing up for Competitive Advantage**
How signature processes beat best practice
- 2006 **Biotech Clusters in the UK**
Challenges and opportunities
- 2006 **Give and Take**
Understanding attitudes to learning in the collaborative process
- 2006 **Intelligent Design**
How managing the design process can boost company performance
- 2005 **Dealing with Discontinuity**
How to sharpen up your innovation act
- 2005 **The Ambidextrous Organisation**
- 2005 **Leading for Innovation**
The impact of leadership on innovation
- 2005 **The Cluster Effect**
How clusters policy can make the UK more competitive
- 2005 **Making Best Practice Stick**
How UK firms can increase productivity by adopting leading-edge working practices
- 2005 **Offshoring: Myth and Reality**
What the global trade in business service means for the UK
- 2005 **Pathways to Value**
How UK firms can create more value using innovation strategically
- 2004 **i-works**
How high value innovation networks can boost UK productivity

Academic Publications and Working Papers

Academic Publications and Working Papers are also available from our website www.aimresearch.org

AIM – The UK's research initiative on management

If you are interested in working with AIM Research, require further information or to access the following:

- Full UK programme of AIM workshops, conferences and event listings
- Fellows' profiles and full research project details
- AIM quarterly Newsletter and press releases
- Research papers and AIM publications available as downloads
- Information for the media

please visit AIM's website **www.aimresearch.org**



For all enquiries please contact:

Advanced Institute of Management Research (AIM)
4th Floor, Stewart House
32 Russell Square
London WC1B 5DN

Tel: +44 (0)870 734 3000

Fax: +44 (0)870 734 3001

Email: aim@wbs.ac.uk

Web: www.aimresearch.org

The Advanced Institute of Management Research (AIM) was founded in October 2002. It is a multi council initiative of the UK's Economic and Social Research Council (ESRC) and Engineering and Physical Sciences Research Council (EPSRC) – with activities at over 180 institutions in the UK and overseas.

ISBN 978-1-906087-357