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Technology Is Not Enough: Improving Performance by Building Organizational Memory

Rob Cross & Lloyd Baird

To improve business performance, cutting-edge companies are moving from the simple accumulation of individually acquired knowledge to ensuring that their employees "capture" knowledge for collective benefit. Some of these organisations rely on databases to store lessons learned through experience. However, the authors argue, technology alone does not improve performance. Employees learn most by interacting with other employees; when seeking information, they are more likely to turn to trusted colleagues than to databases. Although technology plays a useful role, managers must understand the many channels through which knowledge migrates into organisations and address the idiosyncratic ways in which people actually seek out information and solve problems.

Key experiences, such as new product development and core work processes, generate knowledge that becomes part of organisational memory. The knowledge is held within individuals, networks and relationships, information repositories, work processes and support systems. Business performance improves as managers use the growing stores of knowledge. Building organisational memory involves three steps:

First, managers determine which experiences are worth learning from. They should target projects and activities of the greatest strategic importance. These are often critical business initiatives such as new product launches.

Secondly, managers should provide structures that encourage individuals and groups to reflect on and share what they have learned from their experiences (see article below!). Successful approaches used by companies include 'after action reviews', peer reviews and collaboration, and communities of practice.

Finally, managers embed the lessons of experience into information repositories, work processes and support systems, products and services. Methods include: intranet sites, online communities, expert evaluation of proposed improvements, product line extensions or new product lines based on previous learning. Through these actions, managers ensure that knowledge is not only abstracted from experience but also effectively driven into operations. (See the HBR article *Balancing Act* for a different, more 'bottom-up' approach).

Education and Organisational Learning

Deming was a great advocate of education, as well as, but distinct from, training, and it's education and learning that I want to focus here. As a teacher in the Auckland University Business School, I am often struck by the amount of support that Auckland businesses give to their people so they can come to University and enrol in a Diploma course, a Master's degree or an MBA. What strikes me more, however, is the poor return these companies are getting on their investments. Let me elaborate.

Most business courses involve a certain amount of project work. The students learn to apply the techniques and new knowledge they gain in class, and the companies in which the projects are carried out gain a real return. Why, then, is it so difficult to get students to contribute projects from their own companies? If I was paying for someone from my firm to attend the Business School, I would add a little to the financial investment and brief the student on possible projects in the firm, perhaps even doing some of the initial spadework, so that the project would be an attractive proposition when it was suggested in class. Yet the opposite is the case: companies seem to think that giving someone the financial help they need to attend classes is the end of the investment. This may be an investment in the people, but it's certainly not always an investment in the firm's future!

How many students give their companies a regular debrief of what they have learned and its potential relevance to the firm? Not many, according to my informal surveys in class. Among those who do, none have had a formal review process, and there has been little or no effort to capture the learning as organisational learning rather than

individual learning. What needs to be done? And in whose hands does the responsibility lie? Comments will be gratefully received! PRM

HARVARD BUSINESS REVIEW

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Balancing Act: How to Capture Knowledge Without Killing It.

John S Brown and Paul Duguid

Managers of the 1990s have had a difficult time. When the Internet touched down it disrupted every aspect of business and compelled them to manage for a new economy. To complicate matters, the experts were offering two radically different theories about what such management should look like. One approach – reegineering – focused on process. Major companies spent millions of dollars and hours implementing it just to be told that process was stale. The *new* new thing was knowledge management – businesses that could capture the knowledge embedded in their organisations would own the future. Reeingeering and knowledge management are very different approaches. Reengineering is about the structured coordination of people and information. It's top down. Knowledge management focuses on effectiveness more than efficiency. It's bottom up. Management fads shift all the time but the authors believe that this recent shift is more than fashion. It represents an ongoing management dilemma: the tension between process, the way matters are formally organised, and practice, the way things actually get done. In the balancing of process and practice lies the means to allow new ideas to spark and to implement those same ideas.

The authors draw on the experience of Xerox Corporation to illustrate how it is possible to foster best practice amongst a group of employees and then to circulate their expertise using the organisational support that process can provide. The community of Xerox people who fix machines found that large machines are not as predictable as documentation would suggest. So when following the service manual is not enough, the reps come together – over breakfast, at breaks, at the end of the day – and talk about their own best practices. Then Xerox goes a step further. It has set up a process similar to an academic peer-review system to gather, vet, and share those best practices across the company. The reps get much-welcome recognition for their creativity, and local best practices are deployed company-wide.

To help the reps share their local knowledge around the world, Xerox created a database to preserve ideas over time and deliver them over space. Most databases are created by managers and filled with the things they think will be useful for the people they manage. Most are rarely used. Xerox's Eureka database is different: reps not the organisation supply the tips and reps also vet the tips. A local expert works with the rep to refine the tip, and at a central review process reps and engineers again vet the tips, calling in experts where appropriate.

> The current Eureka database holds about 30,000 records. Its value is illustrated by a case in Brazil where an engineer was about to replace a problematic $40,000 machine for a disgruntled customer. On the database he found a tip from a Montreal technician that led him to replace a defective 50 cent fuse instead.

Xerox offered to pay for the tips but the pilot group of reps who designed the system thought that would be a mistake, leading people to focus on quantity rather than quality in making submissions. Instead, the reps chose to have their names attached to tips and those who submit good tips earn positive recognition in their work community, building social capital, as well as career advancement, through the quality of their input.

Get the Right Mix of Bricks and Clicks

Ranjay Gulati and Jason Garino

Many executives now assume that if their Internet businesses are to survive they need to be separate from their traditional business with its traditional ways. For example, booksellers Barnes & Noble, to compete with Amazon.com, established a completely new division which it ultimately spun off as a stand-alone company. Despite the obvious benefits of flexibility, available capital and an entrepreneurial culture, it has struggled and Barnes & Noble may have sacrificed more than it gained.

The authors contend that companies don't have to make an either-or choice when it comes to their clicks-and-mortar strategies. The question shouldn't be, "Should we develop our Internet business in-house or launch a spin-off?" but rather, "What degree of integration makes sense for our company?" US business Office Depot has had success by tightly integrating its Web site and its physical stores to form a single, seamless retailing network. As the CEO puts it, "The Internet is just another channel that gets plugged into the business architecture."

Other mortar businesses may choose to join forces with an 'e-tailer' to capitalise on the advantages of both integration and separation. The authors recommend considering the four

business dimensions - brand, management, operation, and equity - to determine the degree of integration that makes sense in each. By thinking carefully about which aspects of a business to integrate and which to keep distinct, companies can tailor their clicks-and-mortar strategy to their own particular market and competitive situation.

Many companies have bought into the myth that the Internet is a self-service channel. They assume they should let their on-line customers help themselves to whatever product or service they need. The problem is that when a company does less, the customer ends up doing more – and most customers don't want to do more. Instead of forcing customers to do all the work, successful e-commerce sites are taking over many aspects of the shopping process.

Quality Progress

April 200

Tapping into People

B Palmer & M Ziemianski

When Respironics Inc, a manufacture of medical equipment, made a commitment to be viewed as its area's best place to work a group of the firm's human resources and quality people decided to survey the 500 employees to provide valuable input towards this goal. They also felt that instituting a survey process, with surveys completed each year, would provide a systematic approach for employee relations.

As a result of their ongoing process the authors suggest that the following points should be kept in mind when creating a survey:

- Use good design principles. A good design makes a survey look simple, supports a high return rate, and makes analysis more robust. If you plan to use employee surveys as an ongoing process, expect to invest considerably in design planning.
- Ask bold questions. You will be surprised at what people will tell you if asked directly.
- Survey data provides robust input to strategic planning.
- Employee surveys provide excellent opportunities for collaboration between quality professionals and human resources professionals.
- Don't start something you can't finish. A survey consists not just of the survey itself, but more importantly, the projects undertaken as a result.

A survey is just a beginning, not an end.

STORIES FROM THE QUALITY FRONT

The good .... *Auckland City Council*. I telephoned to report that our rubbish bin had lost a wheel. My call was answered on the second ring by a very pleasant young man who introduced himself. He took some details, explained that the Council took full responsibility for the bins, asked if there was anything else he could help me with and transferred me to the appropriate section. After a short wait another pleasant person took more details and promised that the bin would be fixed within 6 working days. It was done on the fourth day. A few days later I needed to contact their Town Planning section for information and once again encountered the most friendly, helpful and knowledgable service I've had for ages. Please let it last!

and the not so good….*Telecom Directories* who billed us for an entry we don't remember authorising. I rang to query the bill and on two occasions, two weeks apart, was told that the person who handles our account wasn't available but would call back. One month later, nothing has happened. A week ago I posted the bill minus the disputed amount with an explanatory note and am waiting to see if a financial incentive will produce some response. Telecom Directories recently won a Quality Award but it can't have anything to do with their customer service – not only did they fail to contact me, the people I dealt with were unprofessional and seemed disorganised.

I used to be just a wee bit scathing about the "And how are you today, Madam. Have a nice day," type of customer interaction but have decided recently that a naturally grumpy or sullen person with an overlay of customer service training is a great deal more pleasant to deal with than a grumpy or sullen person without it. Best of all, of course, are front-line people like the folk at *Urgent Couriers* and *Corporate Cabs* who give the impression that their customer focus is layered on top of naturally pleasant people. LKC

The Quality Magazine

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Knowledge Management Part 1: The Basics

Dr D Sinclair & Dr N Hardie

Data is the sea of facts that surrounds us. From this we have to select and combine relevant bits to create information – that which 'informs'. People transform this information into knowledge through a process of learning and understanding. While data-information-knowledge is an accepted sequence there is much more to knowledge management than processing and filtering information. Knowledge management is now a

key strategic issue.

What Kind of Knowledge do we Need?

- Knowledge of our customers and competitors
- Knowledge of the technology
- Knowledge of our capabilities and limitations
- Knowledge of our staff and culture
- Knowledge of our suppliers
- Knowledge of the economic and political climate

Software companies may try to convince us that knowledge management is about computerised knowledge-based systems. The authors believe that while these have a part to play they are really concerned with data and information. Interaction with people is needed for knowledge creation.

The authors discuss the framework for knowledge management developed by Blumentritt and Johnston (1999) which has the key components of: personal knowledge processes, organisational knowledge processes and organisational information processes. They believe that knowledge management needs to be addressed at the strategic level following these steps :

1. Identify knowledge needs
2. Create knowledge maps
3. Analyse knowledge links
4. Identify knowledge gaps
5. Facilitate knowledge creation
6. Optimise knowledge use

Peter Drucker (1993) said that 'knowledge proves itself in action'. Inevitably, knowledge management must impact on the bottom line.

Personal Mastery

Personal mastery is one of Senge's great themes in his view of the learning Organisation. Given a group of students who have committed themselves to a business education, one might expect a high level of personal mastery in a variety of areas, not least the daily tools of management that they use. The tool that I have in mind at present is the spreadsheet, particularly Microsoft Excel. While Microsoft Excel has many drawbacks and inelegancies, it is nevertheless the most widely distributed package for the manipulation of numerical data in the world. Its ubiquity makes it almost necessary for someone in business to have a certain degree of personal mastery of Excel and its capabilities.

Teaching an MBA class several years ago, I set an assignment: I gave the class copies of a spreadsheet holding the results of an internal "climate" survey . The results consisted of responses to 73 questions. There were 43 respondents to the questionnaire, and I told the class that I expected them to have looked through the 73 bar charts for the questions, and perhaps to have selected a small subset of these to support their arguments. I was dismayed when told a fortnight later that some students had spent in excess of 35 hours producing the charts. I had expected that they might spend at most two hours producing charts, another hour writing up their results, and then perhaps an hour revising.

Creating a chart in such a way that the process can be repeated economically can be a straightforward task. There is a reasonably simple approach that can take a great deal of the labour out of it, and then there is a little bit of Excel trickery that can take out a lot more drudgery and even look like an "elegant" solution. For those who want to have a look at it, it's available as a pdf file on my University webpage: http://www.stat.auckland.ac.nz/mullins/material/index.shtml. The file is called ReUsableCharts.pdf. If you haven't a copy of Acrobat Reader, there is a link on the page for downloading it. The pdf file refers to an Excel file – this is also available on the page, and is called BKMw95.xls. Note that the techniques do not require anything that wasn't in the Windows 95 version of Excel.

There are several hundred functions in Excel, and a large number of built-in statistical routines. While the defaults of Excel are not particularly clever, it is not difficult to change them, to produce graphs with clarity, and tables that are easy to read and carry their messages well. If you think that your organisation could use a "lift" in its Excel skills, why not give us a call at *Sage* and discuss your needs? In the meantime, enjoy the ReUsableCharts file – I hope this technique is of some use to you.

PRM

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