

Learning from the past

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B2BCafe Business Network, 5 May 2003



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Presentation for

B2B Café Business Network

de Bono Centre

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5 May 2003

From the past to the future

- “How much does it cost an organisation to forget what key employees know, to be unable to answer customer questions quickly or at all, or to make poor decisions based on faulty knowledge?”
 - Tom Davenport, Information Management Program, University of Texas at Austin

5 May 2003

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I'll start with a throwaway line from Noel, a senior staffer at one of our clients: “How would you store thirty years of experience in a database, in a form you could share with others?”

It wasn't a trivial question. They're a research organisation, working on large, expensive structures that are in use for decades - longer than researchers' working lifetimes. But their knowledge management was short-term at best. In one fairly recent case they had to go back to the source-data of a project that had been recorded on the leading-edge technology of the time: nine-channel mag-tapes. To get the data back, they had to bake the tapes to get the moisture out, find a museum in Sydney that could still read the things, then make random guesses as to what the unlabelled columns of figures actually meant...

Another project was deemed to need security, so they recorded everything through a hardware encryption system - and ten years down the track someone threw out that computer as being obsolete, without transferring the data to the new system...

As you can guess, this isn't a simple problem that could be fixed with new computer: it went right to the roots of the organisation, and it'll take a fair while to resolve. But I think it's worthwhile to look at a few themes which came up on that project.

Knowledge for learning

“Those who do not learn from the past
are doomed to repeat it...
or worse...!”

- Most important knowledge-skills now:
 - ability to find the right information fast
 - ability to learn how to learn

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Knowledge is central to any business. But in the fast-changing times we face now, creating new knowledge, and learning how to put it to use fast, isn't a luxury - it's a matter of survival.

Years ago, it used to be enough to spend a few years in Uni or TAFE, and reckon that that knowledge would last a working lifetime. Not any more... "If you always do what you've always done, you'll always get what you always got": but that means that "what you always got" is the *best* that you'll get - and in these times that's not enough. Whilst some things stay the same, and always will, old knowledge often goes out of date now in a matter of months, or years at best; in some industries the competitive advantage of new knowledge can be as little as six weeks, or less.

So as far as business knowledge is concerned, *the most important skills* are the *ability to find the right information fast* and, above all, *the ability to learn how to learn*.

That's what knowledge management is all about.

The learning organization

- Learning leads to innovation
 - learning as individuals
 - learning as a team, an organization
- Innovation comes from integration
 - behavioural (physical)
 - conceptual (mental)
 - relational (emotional)
 - aspirational (spiritual)

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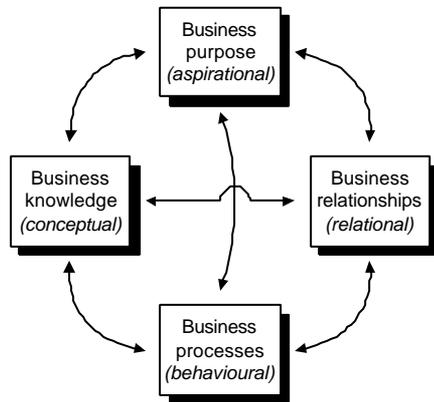
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The need to learn how to learn, and to keep learning as we work, is true both for individuals, and collectively for work-teams or whole organizations. Hence the interest in the concept of a 'learning organization', pioneered by writers like Peter Senge, Chris Argyris and Ikujiro Nonaka.

But at Soul Dynamics we'd go further than that, and say that knowledge is useless and meaningless unless it's part of an overall business integration. To create maximum effectiveness in a business, four distinct domains need to be linked together: the physical, mental, emotional and spiritual or, in more business oriented terms, the behavioural, conceptual, relational and aspirational dimensions of the business.

Knowledge and integration



- “Three pillars of innovation” (B2B):
 - resources (*physical*)
 - knowledge (*conceptual*)
 - human capital (*relational*)
- Missing fourth pillar:
 - *purpose (aspirational)*

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Each of these domain or dimensions needs to support the others: business practices support business knowledge support business relationships support business purpose, and so on. If any one of these dimensions is missing, or poorly supported, the result is always ineffectiveness.

And there's often at least one that's absent, or forgotten. For example, the missing 'fourth pillar of innovation' is *purpose* - the reason *why* we aim to innovate in the first place. But one of the most common is the absence of any systematic process for acquiring and managing the organisation's deep knowledge - which brings us back to knowledge management.

What is knowledge management?

- Knowledge management is:

“the conscious support of knowledge as a business asset - linking information to business practices, business relationships and business purpose”

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So let's just sum up: knowledge management is the conscious support of knowledge as a business asset - linking information, skills and learning to business practices, business relationships and business purpose.

Linking all of these together in a systematic way is what leads to innovation.

What is learning?

- Learning is “the personal application of knowledge”
- Collective learning: record / reassess ‘best practices’ *and* ‘worst practices’
- Importance of both content and context
 - most learning is personal, context-dependent
 - can’t learn using another’s ‘brain’!

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So what do we mean by learning, anyway? What do we mean by knowledge?

In a practical sense, learning is the *personal* application of knowledge. In business, for example, we can gain enormous advantage from identifying best *and* worst practices - recording not just what works, but also what *doesn't* work, and why. For example, Holden's have saved millions of dollars over the past few years by keeping a detailed database of 'worst practices' - experiments that (to use the famous phrase) "seemed like a good idea at the time" but that they don't want to repeat!

The 'personal' part of learning is important, too. In any true skill, what works for one person may not work well for another, simply because of who they are. Computer software, for example, is notorious for packaging all manner of assumptions about *the way to work*, which doesn't actually work for anyone other than the software designers. As one writer commented recently, "you can't think using another person's brain"!

What is knowledge?

- Knowledge is more than information:
 - content (data)
 - context (metadata)
 - connections and patterns (links to other items)
- Where knowledge resides:
 - some is explicit ('objective')
 - much is tacit (*within* person, or *between* people)
 - may be outside of conscious awareness

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And knowledge is also much more than just information. There are at least three parts to knowledge: the content, or data; the context, or metadata; and the connections, the links to other items of information.

For example, a digital photograph itself is just data - and that can be stored easily on a filesystem or in a database. But it's meaningless without metadata to describe its context: who took the photograph, what it shows, when it was taken, and so on. There are some standards for this 'information about information', but it's still a lot trickier to store in databases. Yet it's the links or connections that really give it deep meaning, or use - and these are much harder to store, since anything could be connected to anything else, as we can see with links on the Web. And often it's the *absence* of a link - what's missing, what's *not* connected - that's the most important factor: such as remembering someone who *wasn't* in the photograph. These are much, much more difficult to store in any meaningful way.

Which is why we need to remember that despite huge advances in knowledge-management software and hardware, most real knowledge resides *in* people, and even *between* people - think of all those water-cooler conversations!

So downsizing a business' staff, for example, will usually result in a permanent downsizing of the business' knowledge too - which may not be such a good idea... Much the same applies to outsourcing, or job-sharing. The social aspects of knowledge start to become much more important once we look at the overall organization from this perspective of business integration.

How do we find new knowledge?

- For adult learners, must be ‘directly and personally relevant’
 - learn by doing, reflecting - not being talked at!
- Systematic techniques
 - e.g. action learning, anticipatory action research
- Social processes are important
 - create safety for learning
 - mistakes as ‘mis-takes’, opportunities to learn

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What do knowledge processes look like in practice?

Perhaps the key understanding is that the standard ‘chalk and talk’-learning we suffered in school doesn’t work all that well with adults. Instead, adult learners learn best by practice, by example, by doing and reflecting on what they’ve done - and any information needs to be directly and personally relevant to the work at hand, or else it’ll soon be forgotten.

There are a number of systematic processes and techniques that have been shown to work well for capturing and recording new knowledge within the everyday work of organizations, and translating that knowledge into shared learning. These techniques often go under names such as ‘action learning’ and ‘anticipatory action research’, and are also well established in the social services arena. Marcus may also describe some other variants used in strategic foresight; and all of them can make use of the support provided by the kind of knowledge-management systems that Rohan will describe later.

But regardless of how the information is stored, searched and retrieved at a later date, the crucial requirement is to capture that knowledge at the moment it’s created. And it’s here that the social aspects of the processes come to the fore, because it’s essential to create a safe space in which learning can take place: one in which mistakes are seen simply as ‘mis-takes’ - not as opportunities to blame, but as opportunities for *everyone* to learn.

Example: After Action Review

- Context is crucial:
 - done immediately after the action
 - everyone is equal: “pin your stripes at the door”
- Consists of four questions:
 - “what was supposed to happen?”
 - “what actually happened?”
 - “what caused the difference?”
 - “what can we learn from this?”

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I'll illustrate this with a process which we've found enormously valuable in our own work as consultants. Originally developed by the US Army for use in military exercises, it's known as the 'After Action Review'. And that's exactly what it is: a quick review immediately after any kind of action, especially one involving several people. We'll do one straight after this meeting, for example.

The real simplicity is that the review consists of just four questions, repeated as often as necessary: “what was supposed to happen?”, “what actually happened?”, “what caused the difference?”, and “what can we learn from this?” With a little practice, and sometimes with a little help from an independent facilitator, *anyone* can and does become an active researcher in their own field of work. That's real knowledge; that's real learning.

The power of the process lies in its simplicity, and the strict social rules that apply during the review. The first requirement is that it should be done as soon as possible, so that the memories are fresh. The next, as the Army puts it, is a requirement to “pin your stripes at the door”: in a team, everyone is interdependent on each other, hence in that sense everyone is equal, regardless of rank. And the last requirement is that the results should be recorded somehow: on paper, on computer, it actually doesn't matter how, as long as it's possible to review them later. We've found it useful to come back to our AARs months or even years later, and remind ourselves of what we'd learned at the time - and the new learnings that arise as we do so.

Those four questions...

- What was supposed to happen?
 - requires understanding of objectives, purpose
- What actually happened?
 - requires ability to observe honestly in action
- What caused the difference?
 - requires ability to analyse, relate, assess
- What can we learn from this?
 - requires ability to change behaviours, practices

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Let's look at those four questions again, because they tell us a lot not only about how to learn from what happened, but also about business integration.

First, we can only tell what was supposed to happen if we have some idea of purpose. Sometimes there's a clear objective for an individual action: we know beforehand that we want to close a specific sale, for example. But often the objective is far less easily defined: and it's then that we need to have clear organizational vision, values and purpose to guide us, because they're *always* part of "what's supposed to happen".

Second, we can only tell what actually happened afterward if we're aware enough to track what's happening when it's going on, and report it honestly and dispassionately. This is a real skill in itself - and a valuable one.

Next, we'll only be able to identify the cause for any difference if we can analyse our own actions and those of others, and *help* each other to reach conclusions and learnings. This requires a simple understanding that "we're all in this together" - simple, yet rarely easy when people's egos are at stake!

And learning means more than talking about it: it means changing what we actually *do* - which again is rarely as easy as it sounds...

So creating and capturing new knowledge requires a clear understanding of purpose; new skills in thinking and observing; honest relating with self and others; and the courage to change behaviours. That's what integration really means in practice: all of these attributes supporting the others.

Innovation and integration

- Not knowledge for its own sake
 - what's the purpose? what's the use?
- Example: Nokia
 - from paper to boots to rifles to mobile phones
 - the real product is innovation
 - people have “the power to make ideas happen”
 - culture design provides “a small-company soul inside a big-company body”

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Remember that this isn't about knowledge as such - in other words knowledge for knowledge's sake. That might almost be appropriate in an academic environment, but rarely anywhere else! The knowledge we create and collect needs to have a purpose, integrated with the rest of the business needs and relationships and practices. Otherwise knowledge-management just sinks into yet another meaningless management fad - and an expensive one at that.

A good example is Nokia. Over the last century it's changed its business from paper to rubber boots to raincoats to rifles, to consumer electronics, to mobile phones and more. But its real product is innovation: it's constantly reinventing itself. "People need to feel they make a difference", says their president, Matti Aluhuhta. "And they need to have the power to make their ideas happen. We've created a small-company soul inside a big-company body."

Perhaps the best summary I've seen was a quote in an article in *Across The Board*, an American magazine for senior executives. They described a 'thinking organization' - what we'd call an integrated organization - as "a network of people, grounded in the learning process by not being constrained by what they know, who use values-based, future-focussed inquiry to create, test and implement new organizational practices and innovations".

And that's also how we'd answer Noel's question: we store thirty years of experience in a database, by doing it every day, building an organisational culture which understands its responsibility to the future as well as to the

A summary

- What is learning? What is knowledge?
 - content, context, connections
- Where does knowledge reside?
 - explicit, tacit; in things and in people
- How can we capture knowledge?
 - learning-by-doing, action-research, etc
- Innovation comes from integration
 - behaviours, relationships, knowledge, purpose

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So in summary, we saw that learning is the personal application of knowledge; and knowledge, in turn, is made up of content, context, and connections - data, metadata, and links with other items.

We saw that knowledge can be explicit, and stored in repositories or documents; or tacit, and residing only in people's memories, or even between people, in interactions between people.

We saw that we can create and capture knowledge in everyday work through action-learning techniques such as the After Action Review.

And we saw that, important though it is, knowledge does not exist on its own: it only gains its true meaning and value when it's integrated with business practice, business relationships and business purpose.

Innovation arises from integration; and knowledge - appropriate knowledge, the *right* knowledge - is an essential part of that integration.

Learning from the past and the present, to create a new future: that to us at Soul Dynamics is what knowledge, and integration, and innovation, is all about.

Thank you.