

BUSINESS INNOVATION: EXPLORING THE HIDDEN HUMAN FACTORS

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Navigate the New – the theme for this CPA Congress – I understand is about your aspirations to:

- make sense of a new economic order;
- journey to recovery and growth, post-GFC; and
- set the pace, not just stay in the race.

It made me think of a line from a poem, *The Second Coming* by William Butler Yeats:

Things fall apart; the centre cannot hold.

He went on to say:

*The best lack all conviction, while the worst
Are full of passionate intensity.*

Well, if the centre cannot hold, if the core is shifting, then where else do we look for answers than from the edge – from frontiers, boundaries and borderlines.

This thought took me immediately to the work on ‘Edge Perspectives’ of US industry legend, author, scholar, adviser and practitioner, John Seely Brown (JSB). For nearly two decades he was the director of the famed Xerox PARC lab and is also co-Chairman of the intriguingly-named Deloitte Center for the Edge. With several equally prolific and expert colleagues, he is an evidence-based ‘contrarian’ on subjects like innovation, education and learning, management practices, digital media and the youth culture.

They question conventional wisdom and look to the edge for insights.

John Seely Brown advanced the view that in a rapidly changing world, the edge increasingly reshapes the centre. If you don’t go to the edge, you won’t see what’s coming at you, both opportunities and threats.

Going to the edge takes many forms:

- the distinctive strategic advantage of a competitive edge;
- new ideas can be introduced at peripheries, because of necessity or lack of ‘lock-in’ to existing practices;
- boundaries and borderlines are fertile for innovation as they are where different people, experiences, beliefs and needs encounter each other;
- pushing the edge of the envelope means stretching performance limits and achieving new heights;
- being edgy means embracing the unknown, not being content or complacent, being a bit unorthodox and ahead of the game.

My task today is to address the topic of Business Innovation: exploring the hidden human factors. I am bringing to this topic, evidence from the Australian Business Foundation’s body

of research intelligence accumulated over 13 years of working on the edge, inciting practical action from fresh insightful research.

The Australian Business Foundation is a classic 'edge' organisation, a spin-off company, sponsored by but independent from one of Australia's eminent industry associations. It was established at arm's length from the mainstream to get above the squabble and authorised for heresy. The Foundation's research looks over the horizon and has pioneered a distinctive model of business-backed collaborative and influential research designed so that:

- We see further – the antennae for the soft signals that detect impactful issues earlier than others.
- We delve deeper – research which probes beyond the obvious and discerns new patterns and realities.
- We make connections others don't – both across disparate subject matter and among diverse networks of expert researchers and practitioners in Australia and internationally.

Our research has specialised on business innovation and sustainability, new models of business competitiveness and opportunities arising from knowledge economies.

Our studies have traversed Australia and globalization, future scenarios, doing business in China, the role of multinationals, Australian industry success stories like wine and mining and property trusts, regional infrastructure, comparisons of innovation and industry policy in Taiwan, Singapore Finland and Sweden, Australia's productivity drivers and a 360° look at the realities of innovation including the human factors often overlooked and unrecognized.

Before I address the hidden human factors, let me set the scene by distilling the active ingredients about innovation from the Foundation's body of research evidence.

Understanding Innovation

The Australian Business Foundation's headline message from over a decade of evidence-based research on business innovation and competitiveness is that innovation is the chief weapon in the 'productivity revolution' and its active ingredient is how businesses innovate by responding and experimenting to meet market and customer demands.

There is a quantum leap in the competitiveness challenges facing businesses – more intense global competition and opportunities; new work and business patterns; shifts in the power relationships with consumers and suppliers; and greater regulatory, governance and social responsibility expectations. Knowledge is now a decisive business resource – what and who you know and your know-how is more important than what you own and use.

A key theme is the imperative of competing by innovation and knowledge, not on price or even on quality. The latter are either a race to the bottom (price) or not distinctive because everyone's doing it (quality).

Knowledge and its use can give companies a decisive competitive edge. Today assets are mobile, so knowledge that makes you distinctive really counts – market intelligence, 'ownership' of customers, tacit know-how and skills. Knowledge is not just from R&D, but from learning. Fundamentally different business strategies, based on innovation and knowledge, are vital for a competitive edge. It involves applying knowledge to better meet market and customer demands. The knowledge driving innovation comes from learning by doing, learning by using technology and equipment and learning by interacting with others.

Invariably, business enterprises do not steal a march on their competition just because they invent a better product or a new generation technology. They survive and attract the resources to grow and sustain their enterprise by how well they organise and deliver business offerings that provide a solution someone is prepared to pay for.

Firms create competitive advantage by perceiving and discovering new and better ways to compete and bringing these to market. This involves innovation, but it is innovation that can occur in a number of dimensions: new delivery and distribution channels; new attributes of their business offerings; new organisational arrangements or changes to products and processes; new ways of managing customer relationships and providing better customer experiences.

Innovation shifts competitive advantage when rival fails to perceive the new way of competing or are unwilling or unable to respond. The most potent form of innovation that makes it difficult for rivals to compete is business model innovation, changing the rules of the game. That is, finding a whole new recipe for your business. For example, low cost airlines undermining the competitiveness of full service airlines, and e-commerce and direct online bookings eroding the position of retail travel agents, or Apple iPod. Organisational and managerial innovation which captures and deploys your people more effectively is the other potent form of innovation that lifts not only the productivity of firms, but of nations.

Navigate the New: what to do when the game changes

Productivity gains are usually defined as efficiencies, when the reality is that transformations in business capabilities are the key.

Transforming businesses and workplaces is the key to understanding innovation and its link to productivity. Innovative managers and workplaces create productivity by transforming the capabilities of their businesses: finding imaginative new ways of problem-solving; collaborating with customers, suppliers and even competitors; adapting existing technologies and processes to new uses; and devising fresh solutions to meet the needs of demanding customers.

It is vital to see innovation as a means to an end, not an end in itself. And the end is: generating new sources of enduring competitive advantage. Innovation involves the change and dynamism that gives businesses a lasting competitive edge.

Transformation is a key concept (can be incremental and cumulative, not radical). Businesses must not only succeed in current business endeavours, but revitalize and transform themselves, to anticipate and respond to long term changes and challenges.

Special report on 'Competing on Knowledge' in Spring 2008 edition of Business Strategy Review published by London Business School with six eminent authors reporting on research for the Advanced Institute of Management Research – namely, John Bessant (Imperial), Julian Birkenshaw (London B.S.), Rick Dellbridge (Cardiff Bus School), Rachel Griffith (University College London), Jonathan Haskel (Queen Mary Uni of London), Andy Neely (Cranfield School of Management).

The report makes a distinction between 'steady state innovation' (run of mill improvements for efficiencies and utility – everyone's doing it – copied very quickly – not therefore lasting source of advantage) and higher order forms of innovation resulting in distinctive and enduring competitive advantage for those that master them (eg. business model innovation, management innovation, discontinuous innovation).

Management innovation is defined a “marked departure from traditional management principles, processes and practices or a departure from customary organisational forms that significantly alter the way the work of management is performed ... (and) transforms the way organisations operate”.

Examples of these higher order innovations could include the quality revolution begun by Toyota and other Japanese companies; micro-multinationals, globally integrated enterprises or matrix organisational structures; open innovation initiatives by companies such as Lego, Proctor & Gamble; workplace engagement practices like employee share schemes ; or sales and market testing innovations such as IBM’s Innovation Jam or Deloitte’s Intensive Learning Campaigns and Innovation Acceleration Team.

The authors of the special report on ‘Competing on Knowledge’ point out that while steady state innovation practices, run of the mill improvements are adequate for equilibrium conditions or non-complex environments, they are ineffective in turbulent, volatile and unpredictable times.

Such times call for higher order innovation that gives enterprises a new distinctive competitive edge, an even more urgent imperative in a downturn where demand is falling off and the value of doing what you have always done is being dramatically eroded. This is reinforced when the external economic landscape is also changing with new standards, regulations and community expectations.

The challenge is to find new resilient growth pathways. A focus on existing strategies, current assets and cost-cutting measures are insufficient. There is no retreat to the tried and true. Enterprises must navigate the new.

The challenge for all of us is to create our own future. This is where it is vital to understand that innovation is a social not a technical process and where the hidden human dimensions could mean the difference between success and failure.

Business Innovation: exploring the hidden human factors

To explore these hidden human factors, I am drawing on a collection of expert papers edited and released last year by the Australian Business Foundation, titled *Inside the Innovation Matrix: Finding the Hidden Human Dimensions*.

People are innovation’s active ingredient, the catalyst that turns novelty into real benefits for economies and communities. Benefits like jobs, wealth, productivity and life-changing progress – not just better ways of earning a living, but better ways of having a life.

The role of people in innovation is a fact that remains hidden in plain sight. It is axiomatic – everyone says it and believes it, but few understand anything at all about the human factors in innovation.

For starters, most equate innovation with science and research and advanced technologies. Or else the world of innovation for many is populated only by the lone inventor, the gifted nerd or the creative genius entrepreneur.

But in its tradition of probing beyond the obvious, the Australian Business Foundation questioned these conventional views of innovation, and sought to understand the real dynamics and the hidden human dimensions of innovation.

Hence, we brought together and published this book, *Inside the Innovation Matrix: Finding the Hidden Human Dimensions*. A collection of 14 expert papers by 26 authors, it is a

collaborative effort offering a kaleidoscope of insights from eminent business people, international scholars and leading researchers that take us inside the often invisible matrix of human interactions that are vital to successful innovation in both enterprises and nations.

The focus of the book is the pivotal role of people as innovation carriers – their networks, collaborations, knowledge flows, interactions and tacit knowledge – and how innovation itself is a potent competitive force that drives productivity.

The *Inside the Innovation Matrix* book is different because instead of reporting on just a single line of research, it takes soundings of a variety of thinkers in business and in the academic community to illuminate the people factors in innovation.

It explores how the human factors activate the social and economic benefits we seek from being innovative – more about problem-solving and learning than scientific discovery, more about the customer than the producer, and more about transformation than technology.

It is obvious that successful innovation depends on people, but the easy answers of how this chemistry works are invariably wrong. People factors in innovation don't refer just to the creativity of individuals, to the need for more scientists and engineers, to building an innovation culture, or even to the interaction between technology and human beings.

The fresh insights from the Australian Business Foundation's soundings from expert contributors are found in the book's title *Inside the Innovation Matrix*. This matrix is the sticky spider web of human interactions from which innovation springs, that give it origin and form. While this matrix is often hidden or underestimated, its key elements are knowledge-sharing, networks and collaboration.

There are three headline findings about innovation's human factors that I want to share. These are:

- ***Flows of knowledge are more critical to competitive success than stocks of knowledge; and knowledge travels through people.***

More often than not, we over-emphasise the creation of stocks of knowledge (through funding the supply of research) at the expense of investing in the sharing, use and expansion of knowledge.

Our friend on the edge, John Seely Brown made the argument persuasively in his speech to the World Economic Forum in Davos in 2006:

Who we know is more important than what we own...

- *As change accelerates, our stocks of physical assets and knowledge depreciate at a more rapid rate. Flows of new knowledge become critical to competitive success and these flows occur only in the context of relationships. In this world, the primary value of assets is their ability to help us build and sustain relationships.*
- *Whatever our existing capabilities, we will only succeed in the future by finding ways to get better faster than others. No matter how good we are internally, we will be able to get better even faster by working with others at the edge because people with complementary capabilities can help us to find creative ways to deepen and extend those capabilities.*

Several contributions to *Inside the Innovation Matrix* testify to this. Firstly, Mark Matthews and Bob Frater chart the prehistory of the success of Australian integrated chip start-up

Radiata who was bought and taken global by Cisco and whose people have gone onto greater things within the Australian and global electronics and IT fields.

Radiata met the technical challenge of designing the integrated chip because the design team's capabilities excelled beyond the industry norm. This was because of their broad connections to key people, past accumulated learning, and access to R&D labs, training and critical new technologies from their professional and scientific community of interest. These knowledge flows were the key to their design of error-free chips with a minimum of re-working loops, which helped them reduce costs and get to market quickly.

Matthews and Frater conclude that people who innovate together by capitalising on their tacit knowledge, informal know-how and past R&D investments succeed because they can "navigate the white-water risks" of innovation more successfully than their competitors.

Other examples of using extended communities of practice or 'tribes' to add to their intelligence and ability to learn fast are offered in two papers from Deloitte. One describes the Innovation Acceleration Team that cuts across service lines and hierarchies to come up with breakthrough new business offerings. The other is Deloitte's Intensive Learning Campaigns, successive short-lived cross-disciplinary teams that hold 'action learning' sessions with prospective clients that seem to be delivering swift sales of customised services.

Focusing on the contribution to business of scientists, engineers and technologists, Marceau, Turpin and Wooley's paper emphasises the value of maintaining relationships to keep science and technology knowledge current, even when specialist services are outsourced. Enterprises need this knowledge flow so they can be discerning and demanding customers of their outsourced service providers.

- ***Networks are the oxygen of innovation***

Alistair Nolan of the OECD made this comment to an Australian Business Foundation audience several years ago, and *Inside the Innovation Matrix* proves it is still true.

John Steen, Sam Macauley and Tim Kastle of UQ Business School are at the forefront of social network analysis as a tool to understand, measure and manage innovation networks in firms. They find that innovation doesn't necessarily happen where you think it should and it does not necessarily feature those with "Innovation" in their job titles.

Through their visualisation and measuring of social network dynamics, Steen and colleagues find that some networks support innovation better than others, and it revolves around analysing the number, depth, distance and flow of connections. It turns out that "friends of friends" matter – the more friends you have and the more diverse sets of friends they have, the greater the innovative performance and competitive advantage. (Forgive the paraphrasing).

Global people power is the next wave of growth, fuelled by two factors: the movement of highly educated and skilled people globally and the movement of productive activities in close proximity to suitable skilled people. Anand Kulkarni and George Bougias argue that Australia is well-placed to capitalise on these global people movements and knowledge flows through the diaspora of offshore Aussies and its strong multicultural community at home.

Marcus Spiller's enticingly titled paper, "Innovation: Your Place or Mine", adds a further dimension to innovation networking – geography. Spiller details the role of advanced business services or knowledge-intensive service activities as agents of innovation.

Advanced business services are those enterprises providing a largely customised problem solving service to other businesses, where the solutions in question require application of significant intellectual effort or capital. Examples include management consultants, specialised legal services, high level accounting services, financial brokers and venture capital services, marketing, advertising and PR consultants, engineering, IT and technical advisors, design services and human resource advisory services. They are critical agents in the creation and diffusion of ideas and problem-solving in modern economies.

To achieve their potential as innovation agents with other businesses, these advanced business services are dependent on trust-based relationships, which in turn, rely on face to face contact, personal referrals and recommendations and mastery of local business cultures and mores. So, being physically close to your business customer is key. Spiller points to the strong spatial concentration of advanced business services in Sydney and Melbourne. As the innovation catalyst effect of these “thinking services” erodes with distance, he suggests this geographic imbalance poses a danger to the innovative capabilities of the rest of the country.

Other contributors like Professor John Bessant of Imperial College London, round out the discussion of networks as the oxygen of innovation by exploring ‘learning networks’ about shared and cooperative inter-firm learning. Such firms benefit by greater absorption of new knowledge and faster transformation of knowledge into new capabilities.

- ***Collaboration and adaptability drive the innovation pay-off***

But, innovation is not just about the intrinsic value of learning, or comparing the size of your innovation networks. All innovation needs a pay-off. This is the third key piece of intelligence. What contributes most to an innovation return – collaboration and adaptability.

Graham Hubbard’s paper reveals the innovation lessons of a 25 year study of 11 top-performing Australian enterprises. Their story is low on breakthrough innovations (like the blockbuster drug or new frontier high tech gadget), but high on incremental product and service innovation, on transforming processes and on borrowing great ideas from overseas.

Graham Hubbard’s study points to two values and behaviours that are key to innovation processes in these high achiever companies. Both are human dimensions. They are collaboration and adaptability.

Hubbard’s study found that the factors critical to securing an innovation pay-off: embracing both change and speed, and focusing outwards on customers and other stakeholders, with an international focus and with antennae out for ideas and information.

Finally, the innovation matrix also throws up a wealth of advice and evidence on managing innovation for practical bottom line outcomes – secrets of project management and innovation portfolio management from both experienced practitioners and eminent researchers; hints from Becker and Hyland for “unlearning” so that innovation can flourish freed from the emotional impact that causes change to be resisted; and last but not least, Verity Byth and Ross Honeywill’s insights about recognising and managing both the people who are natural change agents and those who are natural stabilisers in sustaining innovation and its outcomes.

How can CPA navigate the new?

Having explored business innovation and its human factors, where do we take it? We have determined that Australia needs to invest in the kind of innovation that transforms the

capabilities of businesses and boosts the enduring productivity performance of the nation. The hallmark of such innovation-led prosperity resides in people and organisations that are dynamic, knowledgeable, outward-looking and connected.

So what can CPAs do about this? Your profession and the industry sectors in which you work are in fact classic knowledge-intensive service activities (KISA). That is, you trade in knowledge and add value to it by its use by other businesses. This puts you in a pivotal position to be innovation change agents for the wider business community.

The OECD KISA study (2006) noted the importance of knowledge intensive business services to innovation because they serve as:

- sources of innovation when they contribute to the initiation and development of innovative activities in their own firms and in client organisations;
- facilitators of innovation when they support client organisations in their own innovation process; and
- carriers of innovation when they assist in transferring existing knowledge among or within organisations, industries or networks so that it can be applied in a new context.

We know the importance of knowledge flows, networks, collaboration and adaptability to innovation-led prosperity. Navigating the new in an age of uncertainty means making connections, expanding frontiers and being pathfinders.

Yes, we are back on the edge. Most of us have a natural tendency to avoid edges. From an early age, we are counselled to stay away from edges – you can fall over them or they can cut you. Edges mean danger and risk, not the natural home of the CPA Congress.

John Seely Brown, however, says the antidote to the danger of edges lies in creating social nets. These ‘safety’ nets are social networks of people and connections that enhance peripheral awareness, add to knowledge and capabilities and mobilise and refresh these continually in response to changing circumstances. Such rare and unusual connections prepare us to deal with ambiguity, disequilibrium and uncertainty. There is both strength and safety in numbers so that we can respond with agility in the face of the unknown and surprising. And in the case of business innovation, this means creating a competitive edge and earning a return from doing so.

This is why CPAs belong on the edge as knowledge carriers, connectors and ultimately, change agents. As Lang Davidson commented in March 2010 Harvard Business Review blog:

In business, edges are places where the potential for innovation and growth is highest. They are where unmet needs intersect with unexploited capabilities.

But, the last word goes to Seinfeld – if you are not living on the edge, then you are taking up too much room!