

As published in:

*Inside the Innovation Matrix —  
finding the hidden human dimensions*

By **Oliver Freeman**,  
The Neville Freeman Agency

# People, Scenarios and Innovation



Australian Business Foundation • Sydney • October 2008

## OLIVER FREEMAN

---

**O**liver Freeman is a career publisher and a scenario planning consultant with over twenty years experience in futures and foresight work. He founded GBN Australia (with Richard Bawden) and the Neville Freeman Agency (with Richard Neville). In 2007 he completed a two-year project with Teaching Australia on the future of teaching and since 2003 he has directed projects on the future of electricity (for Aurora Energy in Tasmania); the futures of government & primary industries (for the Victorian Government); the future of urban water management (for Ku-Ring-Gai Council); the future of financial services (for St George Bank) and the future of printing (for RMIT). He was a director of the Australian Business Foundation from 2001 to 2007.



# People, Scenarios and Innovation

## OLIVER FREEMAN

Oliver Freeman is a director of The Neville Freeman Agency, and an adjunct professor in the Faculty of Business at University of Technology Sydney.

When it comes to innovation, people are the *only* asset a business enterprise has. The concept of the learning organisation has turned out to be inadequate: organisations don't learn, people do. Another inadequate concept has been the idea of continuous business development. True innovation requires scenario planning that can take into account the full spectrum of possibilities the future holds and, if necessary lead to radical innovation. Such innovation does not simply respond to the existing environment in which the business operates, but transforms that environment.

## INTRODUCTION

*"Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow."*

– William Pollard, CEO, The Service Master Company.  
Author of *The Soul of the Firm*

This paper looks at the interrelationships between people; the business and organisations (systems) they inhabit and indeed constitute; the alternative future worlds or environments (scenarios) that they may have to encounter; and how learning from the future can influence the strategic innovation they create for their businesses and organisations today.

## PEOPLE

It is more than a cliché that people are the most valuable assets of any enterprise, particularly in a business environment where successful firms compete through knowledge and innovation. When it comes to innovation, they are the *only* asset.

### POINTERS FROM EXPERIENCE

As a preliminary step in a leadership workshop, we asked participants to define what they meant by leadership. They then had to pin these attributes on a huge sketch we had made of the human body as to the source of each.

The locus of this predominantly male group's attributes was the head and the arms. Brain power and physical strength. Masculine, stereotyped and abstract.

We then spent three hours in conversation about what they needed from leadership in the future to deal with the exigencies of business today.

The new set of attributes were pinned on the body. Lo and behold, they now covered the whole body – head, body, arms and legs, hands and feet, and the heart. Masculine and feminine values. Human and real.

Think for a moment about one-design yacht racing. A fleet of boats built to a common design race against each other under the same conditions. Same water, same winds, same tides. The only differentiators between them (ignoring the possible intervention of illicit drugs and illegal differences in the actual physical specification of the boats)

are the qualities – mind, body and spirit – of the crew members. It is these aspects that separate the winners from the rest of the fleet, and their confluence that creates innovation in strategy, tactics and process.

When the race is won, victory isn't delivered by the boat that has won or by the group from which the crew members are drawn – nor even the sponsors who are funding the crew and its equipment. It is delivered by the people on board combining together and innovating to navigate successfully the challenges presented by the water, the wind and the tides – and by the other competitors.

### POINTERS FROM EXPERIENCE

Sailing at Cowes Week in the United Kingdom some years ago, we were matched with a fleet of one-design yachts on a day when light winds fluked about and the tides were muddled and hard to read.

Our skipper took us from the start on the opposite tack to the other boats, and as we hugged the shore while the fleet sailed a mile out to sea, we appeared to be last by a considerable distance. But near the end of the race we made a long starboard tack that took us around the last buoy 200 m ahead of the competition.

Over the last 20 years, two major themes in business have turned out to be inadequate as frameworks for understanding how business crews might improve the way they engage with the tidal uncertainties of the external environments in which they operate.

The first is the concept of the learning organisation and the learning company developed notably by Chris Argyris, Peter Senge, Arie de Geus and others. If organisations cannot learn, they cannot win. But learning and winning are done by people, not by 'organisations'. The learning company and the learning organisation are abstractions, however personalised they may be by an anthropomorphising culture.

*"Everything that can be invented has been invented."*

– Charles H Duell, Commissioner, US Office of Patents, 1899

The second is the idea of continuous business improvement, which has turned out to be at best an incomplete response to a changing world and at worst a lesson in blindsiding.

Every day we hear of businesses being encouraged to do things better and to be nimble and adaptive in the world they inhabit, without any attempt to consider they might

do better things and change the world in which they live. As Toyota's president Katsuaki Watanabe is reported as saying in *AFR BOSS* in September 2007, the economic success spawned by the long boom (1992 – 2007) nurtured the concept of continuous improvement while blinding people to the deep changes which are fermenting.

We have been enjoying continuous improvement and its governance has worked well in Australia for key indicators like economic growth, levels of employment, shareholder value and personal wealth. But what is needed now – based on the evidence of such things as climate change, peak oil, obesity, feelings of insecurity as well as the uncertainties linked to things like the Internet, biotechnology and generational change – is radical renewal. Disruptive, generative change.

*"With over 50 foreign cars already on sale here, the Japanese auto industry isn't likely to carve out a big slice of the US market."*

– *Business Week*, 2 August 1968

If innovation and change are properly in the hands of the people rather than the inanimate organisations in which they work, it is contestable as to who from the organisation is involved, how and when. Leaders of organisations often believe that the top executives are likely to be more innovative than people down the hierarchy. But innovation is not like that. It is an emergent property which thrives on flat management structures, open space collaborations and an environment which challenges hierarchical thinking.

#### POINTERS FROM EXPERIENCE

A power tools manufacturer in the United States is family-owned and the major shareholders come to work every day. They have a traditional hierarchical structure and place a great deal of emphasis on governance so as to protect their interests. They recognise, however, that innovation is at the heart of their success and the hierarchy is made of triangles from which one side has been removed. Everyone in the company has the right to engage with everyone else through these open sides on matters relating to innovation and R&D. When it comes to innovation they have a flat management structure.

The lesson from Jim Suriowecki's *Wisdom of Crowds* (2005) helps answer these questions. The headline idea is that nobody is smarter than all of us. Suriowecki is not suggesting that 'group-think' is better than 'I-think'; Pauline Hanson appealed to a type of group-think which would advocate the return of capital punishment and the closing of our borders to Asian immigrants, examples of Alexis de Tocqueville's complaint almost 150 years ago about 'the tyranny of the majority' in US-style democracy. Suriowecki wisdom of crowds is a wisdom made up of the aggregation of individual

decisions from diverse group of participants, compared with the views of a small number of experts contemplating the same issues.

*"Very interesting, Whittle, my boy, but it will never work."*

– Professor of Aeronautical Engineering at Cambridge,  
shown Frank Whittle's plan for the jet engine

Let's dub this wisdom 'I-intelligence', 'I' standing for 'me', 'the eye', 'my world view', and so on. Its significance arises when the individual views of all participants are taken together and create a completely new context within which businesses and organisations review their strategic future.

This is the process that drives, for example, the acceptance of new technology or its push back, the adoption of new ideas or their rejection and the framing of how the world is seen by its participants. Innovation in regard to climate change, for example, needs more than an understanding of science. What we do about it, how we respond to it (which is driven by I-intelligence) is the key.

#### POINTERS FROM EXPERIENCE

A scenario planning client, introducing our futures methodology to the scenario building team, prefaced his few words with the observation that he had been in the public service for over 25 years, during which time nothing had changed, and that he did not expect anything to change in the next 25 years. This was his I-intelligence at work. The way he sees the world and what he sees are powerful filters. It is no surprise that this piece of work failed to deliver innovative outcomes as the managers involved were not given permission to be transformed and did not have the courage to stand up for themselves.

So I-intelligence is critical. Many innovation initiatives have failed to deliver because they ignore the importance of the human context within which innovation takes place.

Innovation is not just about R&D, where men and women dressed in white coats come up with new ideas. Nor is it just about levels of investment from the financial markets or the focus of government on promoting such things as the clustering of new enterprises and smart thinking.

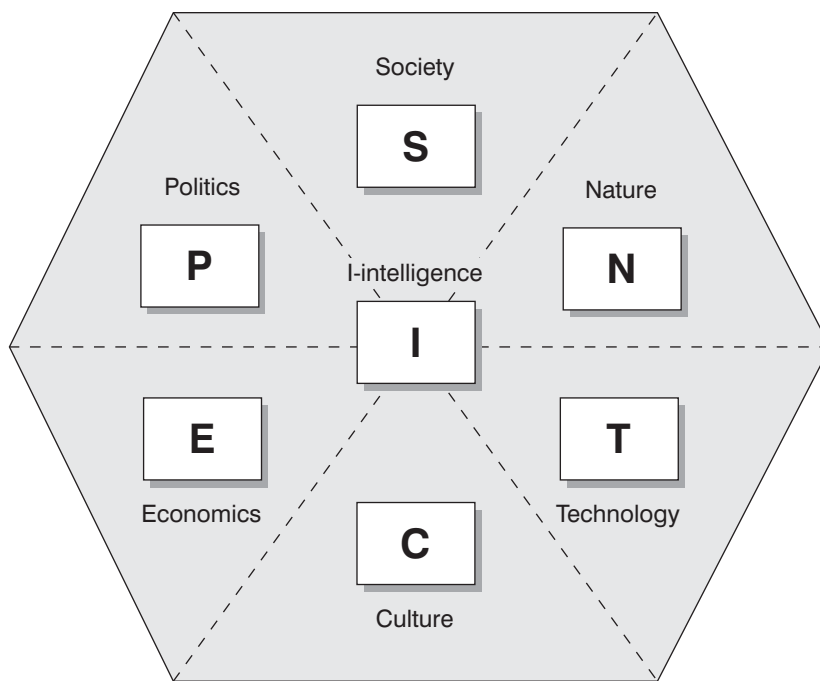
*"There will never be a bigger plane built."*

– A Boeing engineer, after the first flight of the 247,  
a twin-engine plane that carried 10 people

Innovation is the outcome of an interaction between 'mechanistic' components like these with the contextual human dimensions of I-intelligence. Understanding I-intelligence and recognising its formative power in making or breaking the desire for innovation thus becomes a pre-requisite. Innovation is emergent. And at the heart of I-intelligence are people. The I's have it!

## SCENARIOS

If I-intelligence is a critical component of the environment in which businesses operate, it is not the only one. There are many other independent influences that need attention. These can be clustered using the INSPECT environmental scanning tool that the Neville Freeman Agency has developed as part of its Scenario Planning Learning Quest™.



**FIGURE 1:** The INSPECT environmental scanning tool

Scenario planning scans the future environment and identifies the influences that are likely to be most important and most relevant as the context for innovative change and thus to the research agenda (the 'framing' question or questions).

*"I think there's a world market for about five computers."*

– Thomas J Watson, chairman of the board of IBM



The environment, which lies outside the organisation as the world in which it must operate, can be viewed at many levels. It might be local (micro) for a business serving an immediate community, for example with hospitality, home services, health or education. The environment could be regional (meso) for a business with some outreach, as in financial services, insurance, manufacturing or transport. Or it might be global (macro) as in travel, outsourced services, fashion and the Internet.

These layers are not exclusive; a business might be influenced by what is happening at all three levels. A provider of educational digital media would be an example.

What is significant about these contextual frames in the process of learning about the environment is how resolutely uncertain they are – not only in their component parts but also in the way they might come together. Alternative scenarios for the future are, thus, powerful tools for helping people to be innovative because they provide a more rounded vision of what the future might be.

#### POINTERS FROM EXPERIENCE

In a recent project on the future of teaching and the teaching profession, one of the participants wrote: “For me, the richness of the ... experience was more to do with robust exchange of differing world views and the shaping of personal viewpoints than it was to do with building the scenarios themselves. From a more pragmatic perspective, I will, in the future, engage more diverse viewpoints in planning activities in my school. Enriching the world views of participants seems to be of more value and importance than any plan itself.”

Before embarking on strategic innovation, businesses and organisations create these alternative futures as a way of promoting new thinking about the future and reducing the risk of being unprepared for what might in reality be coming at us at a million miles an hour.

Futures linked to climate change, for example, vary significantly on the impact of global warming. The ‘big melt’ of the ice at the poles might hit the world in as little as 10 years or could it be that we have 50 years of grace before our coastal towns are flooded. Innovators working on urban water management would like to know the answers!

These uncertainties which make the future such a slippery devil are not suggesting we live in an either/or world. For every future we are interested in, there is a cluster of influences whose confluence has the power to generate very different worlds. For example:

Future of ...	Critical influences ...
Hospitality	Leisure time, personal wealth, work ethics, licensing laws, geopolitics, carbon emissions
Education	Job design, educational technology, social stratification, globalisation; multiculturalism
Financial services	Technology, globalisation, Internet, mobile technology, economic wealth, branding
Fashion	Disposable income, generational change, cult of celebrity, brands, sustainability

Scenarios are pictures of the alternative futures created from the critical influences. The crucial skill is not to attempt to pick which scenario will actually happen – to guess the ‘right future’, as it were. Rather, the aim should be to ‘imagine into being’ and then explore a sufficiently comprehensive range of futures to avoid getting the future wrong. This idea was first voiced in the mid 90s by Peter Schwartz, co-founder of GBN.

Scenarios, thus, work as a set of futures, none of which is likely to emerge as framed but all of which, taken together, seem to comprehensively embrace the known ‘critical uncertainties’ that unfolding futures unveil.

*“There is no reason anyone would want a computer in their home.”*

– Ken Olson, president of Digital Equipment Corp., 1977

The influences are made up of a broad mix of elements: events, characteristics, propensities and useful abstractions. Some of them are wild cards: things that happen that are totally unexpected, whatever hindsight might say. Some are seen as possibilities but are critical uncertainties – important events that are foreseeable but whose outcome cannot be predicted. Others seem bound to happen – pre-determined elements – however nervous observers might be about sharing that view with others. Still others are the result of confluences of different influences interacting in ways that are so complex that the emergent outcomes are impossible to know with any confidence until they actually emerge.

Wild cards, critical uncertainties and pre-determined elements are all part of the strategic innovators’ armoury, and by engaging with them they are engaging with the dynamic elements that enable innovative engagement with the future.

## POINTERS FROM EXPERIENCE

The way we see the world is very personal and, despite 'group think', we are always struck by the diversity that lurks in every group we facilitate. The challenge is eliciting this diversity and it is only by focusing on the human dimension in organisations that we find it. A 12-year-old student in a scenario focus group responded to the question 'What do you learn from your parents?', not with the stereotypical 'social values and how to behave', but with the mind-blowing 'I learn how to love'. Just imagine what innovation could be built on that 'world view'!

What are the strategic implications of scenarios? Are these implications universal or specific to one future environment rather than another?

*"This 'telephone' has too many shortcomings to be seriously considered as a means of communication."*

– Western Union memo, 1876

These are the critical questions that need to be answered before innovation can be set in motion. Learning from the future in this way is exciting and challenging because it changes, forever, the way innovation is undertaken in the present.

Once the implications are identified and prioritised in terms of the universality of their application, the innovators are ready to do their thing: to intervene and change the products or services to be offered.

Before leaving the subject of scenarios: scenario thinking can usefully be applied to the internal issues (such as vision, mission and the reason for being) faced by the subject organisation. The framing questions are not always externally focused.

*"The concept is interesting and well formed, but in order to earn better than a 'C', the idea must be feasible."*

– A Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)

A company may have significant issues surrounding its vision, mission, values, culture and behaviours. When seeking to be more innovative, the organisation will often bump into messy human issues inherent in these topics. And scenario approaches can help get people 'unstuck' about them by unlocking value that is ever-present and not always easy to access.

These problems become marked when there are dilemmas about purpose. Companies in Australia have a governance responsibility to look after the interests of their shareholders. But they also have responsibilities to the community at large, their customers and their customers' customers.

### POINTERS FROM EXPERIENCE

The asbestosis crisis that hit James Hardie Industries was an example of the dilemmas companies can face with 'conflicting' responsibilities. We can expect that managing the conflict between shareholder value and the liability for compensation to victims will change in the future as aspects of corporate social responsibility become enshrined in the statute book.

Scenario techniques can help mediate these potential conflicts by creating a 'place' in which the divergent stakeholder interests that need to be embraced are identified and measured so as to drive explicit outcomes for the creation of the soft (human) building blocks on which organisations are built.

Compelling reasons for being (like the wish to 'make a difference') are mapped as to 'who for?' and 'by doing what?' and then contrasted with enabling 'metrics' around uncertainties such as 'our resources', 'competitors' and 'distinctive competencies'.

These then generate scenario frameworks that create unique alternative future pictures of the organisation's success formula – and the pathways to bringing into being the desired characteristics become clear.

## INNOVATION

In the scenario planner's world, innovation undertaken within any organisational system is a strategic response to the possible future behaviour of the environments (micro, meso and macro) in which it is embedded.

The pathway to innovation has been made by assessing these future behaviours and identifying opportunities to adapt and intervene in ways that lead to transformative change. Rigorous, experiential, collective and critical learning processes are used to classify and better understand their emergent properties as clusters of systemically linked influences.

Scenarios are developed to give these clusters life and meaning and to reflect their complexity. Strategic innovation comes to the fore when ideas for desirable and feasible change are identified, reflected upon and debated within the context of the complexity, contingency and uncertainty that scenarios reveal.

*"Drill for oil? You mean drill into the ground to try and find oil? You're crazy."*

– Drillers who Edwin L Drake tried to enlist to his project to drill for oil in 1859

Innovation is transformative. It is built on the I-intelligence of the way people see the world. Through the lens of the 'I', it can either be an evolutionary or adaptive response to the external environment on the one hand or, on the other, a proactive, creative strategy that changes the environment itself.

Adaptive responses are about continuous business improvement (doing things better) while generative radical responses are about changing the business idea (doing better things).

*Adaptive innovation*, thus, occurs when the innovators are concerned with responses to a given set of conditions in the external environment. The power of the process is revealed when these conditions have been seen as prospective (in the future) and contextualised (not one scenario but many).

*"640KB [kilobytes] ought to be enough for anybody."*

– Bill Gates, 1981

A typical framing question that drives innovation will assume that the social need being met by the innovators' products and services is a given ('people will always need to eat') and that the innovation will be in identifying how the business meets this need given uncertainty about conditions affecting the size and nature of demand.

Australian business is very good at evolutionary innovation. It assumes that the broad brush that paints the operational canvas is a given because Australia, being two per cent of everything global (except land mass, natural resources and sports talent!), has no power to change the world. The 'sunburnt country, a land of sweeping plains' is a fast follower, responding with agility and adeptness to the changing world of business.

## POINTERS FROM EXPERIENCE

When we built scenarios for the future of urban water management with a multi-stakeholder group in New South Wales, the initial sense of strategy was based on a convergent 'official' future that that we needn't worry because technology would save us. By the end of the process, this confidence had evaporated (along with most of the state's water!) and the group was engaging positively on how to make a radical difference to the prognostications of the scientists.

*Radical innovation* occurs when the innovators are responding to a fast-changing world in which there is little convergent thinking about the nature of reality and what is given.

The results generate qualitative changes in the products and services offered and may introduce completely new ones that influence such matters as demand in the external environment itself.

Australian business is less successful in radical innovation because its business culture is strongly derivative. However, the writing is on the wall if Australia is to develop a sustainable business sector which is not dependent on mining and primary industries.

The innovative challenge is to identify the future environments that Australian business might well have to engage with and to think about the added-value, non-mining goods and services that might be developed.

## CONCLUSIONS

Innovation researchers and management consultancies spend much time on reifying the unreifiable. Whether it is the 'learning organisation', 'research and development' or 'business re-engineering', these are all abstractions with limited value.

Innovation is about transformative change and change is about people. And people are about world views. Their 'I-intelligence' is the most dominant influence in the mix from which innovation flows.

*"Radio has no future."*

*"X-rays are clearly a hoax."*

*"The aeroplane is scientifically impossible."*

– Royal Society president William Thomson, Lord Kelvin, 1897–9

Leaders seeking to promote innovation are well served if they focus on their people, on understanding how they see the world, and on the way the organisation, as a system, engages with the world through its people.

The writer once argued with a director of human resources of a major bank that any company that had a customer service department was in trouble.

By reifying customer service in this way, the organisation institutionalises the activity and suggests that other staff members are *not* involved with customer service. Richard Branson's success is based on his understanding that everyone employed by Virgin has a customer service role.

The human dimension is everything in business. Without it, success through innovation is unachievable.

## REFERENCES

- Argyris, C (1982), *Reasoning, Learning, and Action: Individual and Organizational*, Jossey-Bass, San Francisco.
- Chakravorti, B (2003), *The Slow Pace of Fast Change*, Harvard Business School Press, Cambridge, Mass.
- Geus de, A (1997), *The Living Company*, Nicholas Brealey, London.
- Friedman, T (2000), *The World is Flat*, Farrar, Strauss & Giroux, New York.
- GBN Australia (2000), *Alternative Futures: Scenarios for Business to the Year 2015*, Australian Business Foundation, Sydney.
- Neville Freeman Agency (2005), 'The Ancient Mariner Scenarios for the Future of Urban Water Management', unpublished paper prepared for Ku-ring-gai Council, Sydney.
- Neville Freeman Agency (2006), 'Scenarios for the Future of Primary Industries', unpublished paper prepared for Department of Primary Industries, Victoria.
- Neville Freeman Agency (2007), 'The Open Book Scenarios for the Future of Teaching', unpublished paper prepared for Teaching Australia, Canberra.
- Pollard, CW (1996), *The Soul of the Firm*, Zondervan, Grand Rapids.
- Surowiecki, J (2004), *The Wisdom of Crowds*, Doubleday, New York.
- Tocqueville de, A (2000), *Democracy in America* (originally two vols, 1835 and 1840), trans. and ed. H Mansfield and D Winthrop, University of Chicago Press, Chicago, 2000.
- Twinaime, E, *Sail Race and Win*, London, Macmillan, 1982.