Winds of change

Hello and welcome to The Infonomics Letter for February 2012. No, I wasn't caught out by the leap year – but others were, and I decided to delay this edition and include that problem in the discussion.

Just for this month, I've also inverted the sequence of content in The Infonomics Letter. First comes the Infonomics Education Program. I've given it prominence this month because in March I will be on deck in three Australian cities, talking about governance of IT. I hope regular and new readers of The Infonomics Letter will give serious consideration to the small investment required for participation, and that you will also recommend the sessions to your colleagues and customers.

Late in 2011 I mentioned my interest in the work of the Innovation Value Institute, which is based in Dublin. Now I'm very pleased to announce in A New Partnership that Infonomics has signed up as a Contributing Member of IVI, and that I will be participating in their efforts to develop pragmatic and useful guidance on governance of IT.

Governance of IT is a significant issue for company directors. Efficient, effective and appropriate use of IT is fundamental to current and future performance of business – much more so today than when I first took on the role of representing company directors in the Standards Australia and ISO committees that developed first AS 8015 and then ISO 38500. As IT has become more deeply embedded as an operational tool of business, and as IT has become more significant in formulation of business strategy, it has become increasingly clear that the bodies which develop guidance on governance of IT must have an effective balance between the supply and demand side perspectives. Recently, Standards Australia has acted to revise the constitution of its primary committee in the field, and the Australian Institute of Company Directors has reconfirmed that it intends to have a strong voice on that committee. Company Directors Engage on Governance of IT provides some background, and explains why governance of IT must now be seen as a business leadership discipline, rather than as an IT supply discipline.

Good governance of IT should, among other things, ensure that business does not experience major IT-linked operational problems. Regulators Intervene in IT Issues looks at what happens when governance arrangements are not working well enough, resulting in business disruption and customer inconvenience. The discussion is driven by the fact that Australian regulators are, right now, beginning to intervene in problems with banking systems.

Mark Toomey   1 March 2012

Infonomics Education Program

The Infonomics program of delivering plain language education for business leaders on governance of IT continues in March with four events:

"Delivering Business Value through IT Governance": a half day conference organised by the Intec Group, on March 20, in Adelaide. Confirmed speakers are Jane Treadwell, Andy Koronias, Phil Ingerson and Mark Toomey.

"Information Technology Governance and Management Seminar": a 5 hour exploration of the guidance in ISO 38500, for business and technology leaders, planners and managers. The seminars are organised by Australian Industry Group and developed and delivered by Mark Toomey. Key dates are:

- March 28: Adelaide
- March 29: Melbourne
- March 30: Sydney

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A New Partnership

I'm very happy to announce to readers of The Infonomics Letter that Infonomics has recently become a Contributing Member of the Innovation Value Institute (IVI). IVI was co-founded by National University of Ireland (NUI) Maynooth, Intel and The Boston Consulting Group in 2006 and is made up of a consortium of leading industry players and academia. IVI's mission is to create the global standard to realise the business value from IT investments.

Through this Contributing Membership, I will be adding my experience of developing, promoting and deploying the international standard ISO 38500 to the complementary work of IVI, as it too begins to understand the issues in, and develop guidance on governance of information technology. I will be emphasising my long held view that governance of IT is, first and foremost, a business leadership and board level governance issue. For too long, those who use IT and those who supply IT have regarded governance of IT as the suppliers' problem, and too many on the supply side have been too willing to reinforce this misconception.

ISO 38500 was a serious attempt to reset the balance, and remains an outstanding guide to those who choose to think deeply and apply its core messages. However, ISO 38500 has not achieved critical mass in almost four years since its release, largely because, in my view, it lacks the underlying horsepower of professional, consulting and early-adopter organisations which accurately transmit its messages to business and IT leaders.

With major international companies from both the supply and demand sides of the IT universe among its patrons, contributors and associates, I think that IVI has the means and the opportunity to develop and deliver practical, pragmatic and effective guidance that will be used and proven by its members and then exploited by organisations everywhere. Because its membership includes companies operating on a global scale, IVI has the horsepower to break the constraints that have limited adoption of ISO 38500, and to develop further coherent guidance on governance of information technology for all organisations around the globe.

While promoting the value of ISO 38500, it is my intention to also emphasise the changing role of business leadership in governance of IT, which stems from the observable reality that the value in information technology today is not in automation of business, but in transformation and creation of new business opportunity. The emphasis has shifted from efficiency and effectiveness in supply of IT services to insight and innovation in use of IT as a transformational tool of business.

In this context, governance of IT must address not just the planning and delivery of IT supply, but the planning and delivery of organisation and business change.

The work that I will be doing with IVI does not diminish my commitment to the continuing development of ISO 38500 and related guidance for business leaders on governance of IT. Rather, I hope that by contributing to both sets of activities, I will be advancing the overall cause of improving the way that organisations everywhere govern their individual use of IT, with better planning and risk control leading to greater value from investment in IT and less disruption from failure of operational IT systems.

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## Company Directors Engage on Standards for Governance of IT

Standards Australia has reviewed the constitution of the IT-030 committee which created the world's first standardised guidance for directors and executives on governance of information technology, when it published AS 8015 in January 2005.

The new membership is substantially expanded and includes several new delegates representing business organisations and government agencies. The Australian Institute of Company Directors will continue to participate and is currently undertaking an initiative to select and appoint the most appropriate lead delegate to the committee.

Some may ask why should an organisation representing the leaders of business and government organisations became involved in a topic such as governance of IT. I think it's a matter of perspective.

In all discussion of IT, there is a persistent risk that the conversation is dominated by the supply side experts who will tend to focus on the capability and operation of the technology. But the role of IT in business is to be a tool that we use to maintain and grow the performance of the organisation. It is vital that the conversations about governance and management of IT are balanced, addressing both the supply of IT, and its use by all manner of organisations.

Consider a model first published in 1965 by HJ Leavitt, as part of his research into organisation change. Here I've adapted Leavitt's Diamond to position the role of information technology in business today. The various capabilities which make up our overall business
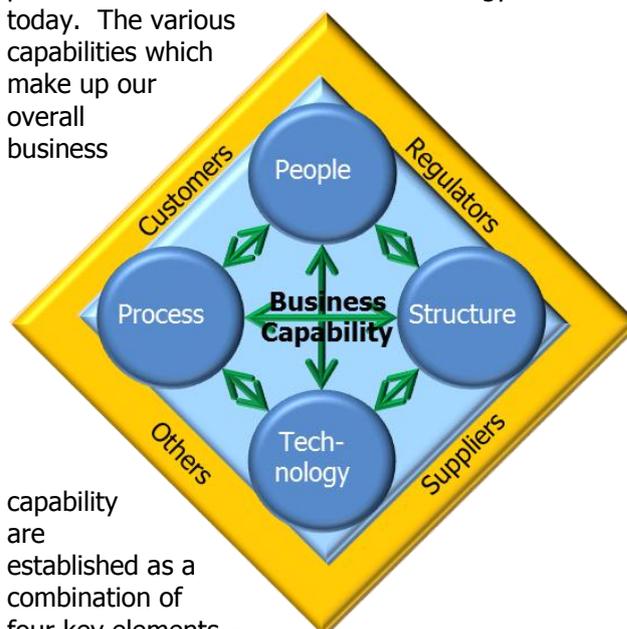
capability are established as a combination of four key elements – the people who operate the business, the processes they perform, the structure and rules within which they operate, and the technology which enables the work to be done. Where once technology was predominantly passive, simply automating the process, the relentless development of technology means that new IT now creates new business opportunity in its own right. For market leaders, an investment in IT is no longer merely one of replicating and refining what already exists. Rather it is one of creating something that has never existed, because it has never before been feasible.

As a result, conversations about IT can no longer be conversations only about cost and efficiency. Of course these issues remain important, but the sharp end of business now includes understanding how the changing capabilities of IT are changing the rules and opportunities in the marketplace. We've had conversations about this in recent editions of The Infonomics Letter, such as in the January 2011 article titled *"What Should Management Know?"*. Conversations about IT now must include the way competitors are using IT to create advantage for themselves, and the way your own organisation might do things that have never before been contemplated, creating your own advantage. But the critical thing to

realise about these conversations is that they are not really conversations about information technology. Rather, they are conversations about business that are driven by IT-enabled innovation. Consequently, the boardroom conversation can no longer be just about budgets, timelines and asset lifecycles. Today the boardroom conversation needs to include competitive pressure and opportunity, as well as operational performance, risk and compliance aspects that rarely needed attention in the past.

This need for expert guidance on decisions about information technology is also being amplified by the rapidly expanding trend to outsourcing and cloud computing models, where the key front-line suppliers of technology advice and expertise who were once employees with a keen interest in their employer's organisation are now external agents whose primary allegiance is to their own employer. This change of relationship, if nothing else, demands new thinking on how the business which uses IT approaches the strategic planning task of defining its IT-enabled and dependent future; orchestrating the investment to build its IT-enabled and dependent business capability; and ensuring that its IT-enabled and dependent day to day business activity is efficient, effective and acceptable.

Many practicing company directors know that there are often very confused views in the market of the distinction between governance and management. This confusion is particularly strong in the IT arena, where the term "governance" has come, for many, to mean the key decision making activities of management. The confusion is exacerbated by IT industry organisations and companies which continue to discuss management activities using the term "governance". A significant risk for directors is that publication of guidance under the banner of standards which incorrectly nominate management activities as governance could result in the unwitting creation of onerous and impossible-to-fulfil obligations for directors. There is also risk that such guidance may attempt to disempower directors, by ceding too much authority to managers.

It is critical that company directors maintain a strong voice in the Standards Australia committee on governance of IT, and its international counterparts. That voice must seek to prevent flawed guidance and unrealistic obligations being established, and must promote a proper, coherent understanding in the committee of the real distinction between governance and management. As the chair of a bank said to me a few years ago, one simple way of making the distinction is to understand that governance is ensuring that managers are doing their jobs properly.

It was important that IT-030 be reconstituted, as it had too little business engagement, and was in danger of being dominated by IT supply experts. It is important in the new IT-030 constitution that there continues to be a strong voice from Company

Directors that insists on, and helps guide the balance in the conversation.

AICD members may add their own thoughts to the conversation about the Standards Australia committee on governance and management of IT on the AICD Members' LinkedIn discussion group. The topic, launched by Joanna Mackie, is called: "Represent your fellow members: IT Governance Standards".

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Regulators Intervene in IT Issues

Two Australian regulators have issued blunt warnings to financial institutions regarding reliability of information technology enabled business systems.

In recent years, there have been a number of significant failures of banking systems – in both online transaction processing and in the (generally much older) background systems that manage the detail of individual customer accounts. We've looked at some of these in prior editions of The Infonomics Letter. In November/December 2010, the focus was on a breakdown in overnight processing at National Australia Bank. In January 2010, it was the case of a different bank's EFTPoS machines that thought the day after 31 December 2009 was 1 January 2016!

During the current month of February alone we've seen headlines like:
- Friday freezes NAB funds;
- Citibank overcharged some iPad customers;
- St George, Bank of Melbourne sites suffer technical difficulties;
- NAB experiences tech banking meltdown;
- Westpac's silence on unstable site.

Then, on 29 February, the newsfeeds were again gushing – this time with stories of two major banks, CBA and NAB, "battling crashes".

Can it be any surprise that the Reserve Bank of Australia (RBA - Australia's central bank) and the Australian Prudential Regulatory Authority (APRA) have both issues blunt public warnings to banks to improve their performance? Indeed, according to the press reports, RBA says it will formalise the process in which banks need to report "significant instances" of technical problems.

The RBA also announced that it may launch an inquiry into implementing "additional measures" to ensure that bank technology meltdowns do not affect retail organisations. In this context, RBA is said to be "discussing possible ways to regulate system outages with APRA".

APRA's view was presented at a recent conference by its Head of IT Risk, David Pegrem. According to itnews, Pegrem said that there would be "no tolerance" for service outages at Australia's banks and building societies due to neglected legacy systems. Pegrem also warned banks not to lose the gains in resilience that had been made during 2011, and that

aggressive cost-cutting and aggressive timetables for systems replacements should be avoided.

How many business leaders would welcome regulatory intervention in their affairs? Most likely, the answer would be "very few, if any". Most would see regulatory intervention as costly and intrusive – a blunt instrument being applied to an intractable issue. Perhaps senior bankers and the boards to which they report are now asking questions like "What do we do to remove this intervention and the pressure that is driving it"?

Answering this question requires clear understanding of the problem. Is this simply a case of technology that fails, or is it something deeper, and more fundamental? Is it something that the top executive and board of directors can address?

The cases referenced earlier, and the events of February 29, indicate that it is almost certainly something more fundamental and that, with appropriate knowledge and guidance, can and should be addressed from the top. The problem with EFTPoS machines leaping six years into the future was, without doubt, a software defect. But, we all know that software is prone to being defective, and it's for that reason that an essential part of all software development is testing. It's also not too difficult to understand that most business systems are made up of myriad individual pieces of software that come from different sources, are of varying age, are developed under varying levels of discipline and technique, such that ensuring the reliability of the whole system depends heavily on testing it as a whole. It's just like testing a motor car or an aeroplane – one has to ensure that all the components work individually as they should, and that they all work together as intended to provide safe, reliable, efficient transport.

The service schedule for any machine is designed to pre-empt failures, through regular checking that components are serviceable and replacement of those which have reached end of life. Failure to complete proper servicing and to check components is likely to result in premature breakdown. Again, the IT systems on which businesses rely should also be subject to routine checking to ensure that they will continue to work as business conditions evolve.

According to reports, the problems experienced by NAB on 29 February were specifically "leap year failures". The HICAPS system would accept transactions dated 28 February, but refused those dated 29 February. How difficult, in hindsight, would it have been for NAB to set up and run tests that provided evidence-based confidence in the systems well ahead of time? Perhaps some expect that the testing should have been in place and done properly when the offending software was developed, or when it was last modified – and that is a reasonable

expectation – but who should have confirmed that the tests are comprehensive, rigorous, and actually done?

We know that information technology systems are prone to error, and therefore we should be persistently testing them to ensure that they work properly. I wonder how many banks have a rigorous approach to testing that enables them to deal with faults before they become significant. I wonder how many boards ask their managers about whether or not they have such testing capability. I wonder whether, in an effort to reduce costs, any banks have decommissioned such testing capabilities, and increased their dependence on good luck. Will the regulators go so far as to demand that banks establish rigorous testing regimes, and if so will they demand evidence that tests are being done and that faults uncovered by testing are being properly resolved?

Testing is one of several factors that can make a difference in the perceived reliability of banking systems. As was discussed in the story about NAB's overnight processing failure, any veteran of large scale IT systems developed in the 20th century knows that there is a risk of incorrect data being passed from the systems that capture the business transactions during the working day, to the systems where the transactions are ultimately processed overnight, when the front line is inactive. Where these systems were critical to ongoing business operations, there was always a very comprehensive and strict management system in place to oversee the processing, and to ensure that any problems which did arise were either resolved promptly, or isolated to allow the main body of work to be completed. The profile of some problems that have been reported, including that of the NAB processing problem in 2010, suggests that some management systems have become degraded.

What this means for top level executives and directors is that their questions should not be focused on the technology, but on the management systems, to ensure that they are capable of controlling both normal and abnormal conditions.

For Australia's banks, the importance of effective governance arrangements is now being highlighted by the regulators. An effective system for governance of IT should have given each bank board a sound, evidence based comfort that the bank's IT systems are reliable and effective, and should have alerted executive management and the board to weakness that might have resulted in business disruption, brand damage, economic loss and the unwelcome intrusion of the regulator.

The fact that banks and other industries are having these problems, and that regulators are intervening, seems to be to be a powerful argument for developing additional guidance that helps business leaders be on top of these situations before they become issues.