

# The Director's IT **Compass** INSIGHTS & TOOLS FOR DIRECTORS & CEOs



## Mark Toomey

A guide to top-level governance of IT, for those who know how important IT is, and for those less informed, with questions to help you balance performance and risk.

Second Edition  
Introducing the Standard  
for Governance of IT.



Infonomics,  
Melbourne,  
Australia



The Director's IT Compass is published by:

Infonomics Pty Ltd.  
19 Stratford Square  
Wantirna  
Victoria 3101  
Australia



[www.infonomics.com.au](http://www.infonomics.com.au)

The first edition of this book was published in May 2001 by BCT Governance Pty. Ltd. BCT Governance ceased trading in November 2002, and its intellectual property rights passed to its principals, Steve Moir and Mark Toomey.

This is Edition 2, Revision 3, available online from [www.infonomics.com.au](http://www.infonomics.com.au).

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## **Preface to the Second Edition**

Explosive growth in the global population of mobile telephones (cellphones) perhaps best illustrates the extent to which much of the world's society and business has become addicted to information and communication technology.

When Steve Moir and I penned (keyed, actually) the first edition of *The Director's Compass*, as a marketing exercise, the dependence of business on IT was widely established, but perhaps not as well understood, and the concepts of IT Governance were at best embryonic.

Much has changed since early 2001. New laws, and the threat of even more laws, are forcing organisations to become more accountable and to ensure that their systems of control are effective. Labour markets are changing dramatically, as instant communication and readily accessible travel shrink the world, and as many nations begin to suffer shortfalls in workforce entry. Through all this, Information and Communication Technology continues its inexorable penetration of the heart of enterprise, to the extent that most enterprises are totally dependent on the technology.

Demands for quality, economy and reliability have driven the IT industry to significant investment in its approach to planning, building and running systems. The notion of IT Governance has become mainstream, and many IT vendors are now offering "IT Governance" solutions. We have seen IT organisations invest heavily in improved capability.

But despite the efforts of IT specialists, performance of organisations in achieving success with IT investment remains substandard. Researchers report no significant improvement in performance.

It's not just projects that pose risk of failure. As basic business operations and infrastructure relies more and more on IT, there are increasingly frequent stories emerging of serious business impact arising from operational failure.

Some directors understand the risks of IT very well. Some are equipped to ask appropriate questions of management and thereby

reduce the risks to themselves (of not asking appropriate questions) and to their organisations. Many more directors probably need to be better informed of just how dependent their organisation is on IT. They too need to develop the skills to ask relevant questions.

I sincerely hope that they, and their advisors, all find this expanded IT Compass useful.

Mark Toomey November, 2006.

## Preface to the first edition

When we started our careers information technology was in its commercial infancy. Solutions were expensive, obscure, and full of jargon. There were horror stories of operational disasters, failed projects, budget blowouts, and wasted investments.

Now IT is cheaper, easier to use, and almost pervasive. Along the way many lessons have been learnt, new tools and techniques have been developed, but little has changed – the technology is still obscure, couched in jargon, and there are still horror stories.

Why is it so? Why do we *still* hear that information technology is inflexible, that the products of expensive IT projects remain unused, and that IT systems are threats to corporate survival?

Directors and managers need to understand how IT projects and operations are managed in their organizations. But many are confounded by the jargon, not sure that they are asking the right questions, and not sure that they are getting meaningful answers.

This handbook provides Directors and managers with tools to help them recognise whether their organisations are doing the IT things that are important. It is not a book on IT management theory, but is a set of observations, questions and answers.

We trust that you will find this handbook informative and useful as you navigate through the all-too-common fog that surrounds business use of information technology.

*Steve Moir and Mark Toomey. May, 2001*

*July, 2001.*



## Acknowledgements

Before I began working with Steve Moir in mid 2000, I had been concerned that there was something wrong – something that was resulting in many organisations experiencing terrible trouble with their use of IT. Steve was the catalyst for my understanding of the role (and failings) of corporate governance in these problem situations. As we strove to build a business that focused on an area of key discomfort for corporate leaders, Steve drove me to a deeper and clearer understanding of the issues, and the remedies. As part of that drive, Steve triggered the creation of The Director's IT Compass – and we wrote Edition 1 in just 3 weeks.

Steve continues his passion in the use and governance of IT, and has extended his view to encompass the relationships between IT, business planning and business performance improvement.

Chris Gillies, a leading consultant and director of several organisations, including Centrelink, made a very generous contribution to Edition 1, particularly with her advice from a Director's perspective.

The first print run of The Director's IT Compass delivered just 52 copies. We gave them all away as promotional material! But over the intervening five years, several organisations saw the value and ordered copies. It surprises me to realise that there are over 500 copies now in circulation – many delivered gratis, but more than a few being purchased. Some boards ordered a copy for each director. Those buyers gave me the courage to keep reprinting, and in five years, there were no less than six reprints.

More recently, Hewlett Packard has delivered a major vote of confidence, by ordering several hundred copies for its sales force. This second edition is a direct result of HP's confidence, and brings the book up to date with some key developments in the field of corporate governance of IT.



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## How to Use this Book

More than a book of information, this is a book of questions. When you are dealing with information technology, whether as a company director, a business manager, an independent advisor or as an IT specialist, you need to ask questions about how and why IT is being used.

Carry this book with you. Refer to it when you need to consider some aspect of information technology.

Chapter 1 – **Why Governance of IT is Important** – is all about motivating you to read further and to use the book frequently. If you think that IT is not critical to your organisation, **Read it NOW!** You may find yourself adopting a different view as you consider the findings of rigorous research and snapshots of organisations that have suffered.

Chapter 2 – **Governance Fundamentals** – deals with the problem of media and marketing hype around the notion of governance. There has been a tendency for governance and management to be confused. This confusion leads to uncertainty about what has or has not happened, and who is, or is not responsible. Read this chapter to ensure that you are clear on the concepts of governance and management.

Chapter 3 – **The Governance Standard** – introduces AS8015, the Australian Standard for Corporate Governance of Information and Communication Technology. AS8015 is the precursor to a global ISO standard, and is written specifically to guide board directors on their supervision of the use of IT. A Self-Assessment included in Chapter 3 provides an early indicator of how effective your organisation's IT Governance is.

Chapter 4 – **A Director's View of IT** – gives you a quick starting point for asking relevant questions about whether IT is under control and serving your business properly. It gives you *ten high-level questions* that you can consider, or that you can ask of others.

Chapter 5 – **The IT Management Cycle** – helps when you are presented with information relating to IT. Most information falls into one of four IT management processes. Chapter 5 introduces the four

phases of the management cycle, and provides *twelve targeted questions* – still at a high level – to help you check on what you should be seeing, and not seeing.

Chapters 6, 7, 8, and 9 – **Strategy, Plan, Deliver** and **Operate** – are designed to help you understand the information you are getting, identify when you are not getting what you need, and to ask relevant questions about what is, or should be, happening. If you cannot satisfy yourself that you have answers to these questions, or when you are dissatisfied with the information you are getting, you should probe and understand what is going on in your organisation. Each chapter describes the relevant processes, introduces the behaviours that should be observed, and lists outcomes that should be produced when the processes are working effectively. Each chapter presents:

- ◆ **Introductory discussion** that positions the approach and behaviours that should be expected;
- ◆ **Twelve key characteristics** – a discussion of key areas in which the approach, behaviour and results can be evaluated;
- ◆ **Symptoms** – a summary of things that can go wrong in each of the twelve key areas;
- ◆ **Remedies** – what organisations should be doing to avoid problems;
- ◆ **Director's Dozen** – *twelve sharp and focused questions* to use in probing just how effective is the management and control of IT.

# Why Governance of IT is Important

## The Issue

While some persist in denial, most organisations of today rely on IT for their day to day activities. And with such reliance comes vulnerability. A problem with IT was once a mere inconvenience. Now, it can be catastrophic – yet organisations seem more exposed today than ever.

When it comes to investing in IT, there seems to be an unwritten law that delays will occur, budgets will be overrun, benefits will fail to materialise and tempers will fray all the way to the Boardroom. Indeed, well structured research shows conclusively that only a tiny percentage of IT investments are an unqualified success when compared with clearly defined initial objectives.

*On 12 October 2005, the Australian Customs Service introduced a new computer system for handling imports, in the face of strident claims from sections of the industry that there would be problems. A review conducted by international consultancy Booz Allen Hamilton<sup>1</sup> said:*

- ◆ *ICS Imports was implemented on 12 October 2005, with some transition problems for air cargo but with severe short-term consequences for the movement of sea cargo.*
- ◆ *Customs continued to introduce changes to the software up until 6 October, only one week prior to the go-live date.*
- ◆ *Problems with some third-party software forced many companies to attempt to use the ICS directly through Customs Interactive... (which) was not designed to accommodate a large number of users;"*
- ◆ *We have been unable to locate a clear and quantified set of outcomes and benefits expected from the introduction of the ICS*
- ◆ *Some changes have been the cause of severe disruptions and reduced process efficiency.*

*In the case of the ICS, there does not appear to have been an effective structure or process to direct and control the project, nor to make suitable risk decisions. To fulfil this task, Customs has had at least 10 bodies responsible for different aspects of the management and governance of the ICS, including the interactions with industry... These bodies overlap in their responsibilities and accountabilities, and overall the program has no single business owner and accountabilities for its delivery are unclear.*

It's not just projects. Organisations rely heavily on IT on a day to day basis for basic business operations. For some it may be merely telephones and emails, without which people seem lost and unable to function. For others, it is IT systems that underpin core business processes.

*In July 2003, a problem with the computerised boarding system at Los Angeles resulted in airline staff using manual procedures<sup>2</sup>. Without the rigor of the automated system, staff did not notice that one passenger who boarded a Qantas flight to Sydney should have been on a Cathay Pacific flight to Hong Kong.*

The Qantas incident probably could be dismissed as minor in itself. The passenger was inconvenienced, and some additional costs were incurred, and both are trivial in comparison to the millions of passenger journeys undertaken every year. But it does also raise a vital point – that when the computers are not working as they should, things can and do go wrong.

One reason for this is that computers have graduated from background support for business process, to foreground implementation of the business process. Where there was a previously manual process, it may sometimes be possible to revert temporarily to manual procedures. But if this does not happen frequently, the manual procedures may become ineffective, because people do not know how to perform them consistently and correctly, and at a satisfactory rate of throughput.

A more difficult scenario emerges when there is no predecessor to the automated system.

*In September 2006, failure of a computer controlling safety systems in a major tollway tunnel resulted in the tunnel being closed, and thousands of commuters being stranded<sup>3</sup>. The tollway operators were obliged to refund tolls already collected by the sophisticated electronic tolling system.*

Statutory obligations depend on IT as well. What are the consequences for an organisation when, as a result of IT problems, it cannot deliver what is required by law?

*In August 2006, the Annual Report to Shareholders<sup>4</sup> for Australian Pharmaceutical Industries Limited read:*

- ◆ *"Since the end of the 2006 financial year, the company has been through a trying period and the events are unacceptable for shareholders... The announcement of our full year financial result was delayed, as during final consolidation of the 30 April balance sheet, a number of significant items did not reconcile."*
- ◆ *"It is the view of the company that the discrepancies related to the processes in the conversion from the previous legacy IT systems to the new IT platform. The unreconciled balances totalled \$17.2 million."*
- ◆ *"The review also identified improvements in the financial processes, controls and resourcing which were inadequate during the conversion process."*
- ◆ *"From the investigation undertaken it appears that the unreconciled balances are related to the upgrade of IT systems in the Pharmacy Distribution business. API had changed from two legacy IT systems to a fully integrated ERP system. The changeover was extremely complex; and, to minimise disruption, financial transactions were maintained on all three systems as each state's operations converted separately and progressively."*

Directors and executives of many organisations, regardless of whether they are small, medium or large, privately held, listed on the stock exchange, or government owned, for profit or not-for-profit, might consider these incidents and wonder whether similar situations might occur in their own organisations.

But how can those responsible for sustainable, profitable ongoing operation of their organisations be assured that problems with information technology won't cause serious trouble for the business?

How is it that some organisations get IT right, while others seem to struggle?

Like any other field of endeavour, the organisations that consistently get it right don't do so merely by good luck. They work hard to create that good luck, by ensuring that they have the right people, doing the right things, the right way, for the right reasons, to deliver the right results, whether in new investments or in ongoing operations.

In other words, they carefully, and explicitly govern every aspect of their use of IT.

## **Governance of IT and bottom line performance.**

Peter Weill is Director of the Centre for Information Systems Research at the Massachusetts Institute of Technology Sloan School of Management. In his recent book, with Jeanne W. Ross, Weill says: "Too many IT initiatives have failed to deliver the bottom line results companies had hoped for".

In "IT Governance – How Top Performers Manage IT Decision Rights for Superior Performance", Weill says:

- ◆ Top performing enterprises generate ROI for IT 40% greater than competitors;
- ◆ Above average governance-performing firms have ROA more than 20% higher than firms with poorer governance pursuing the same strategy;
- ◆ The best predictor of IT Governance performance is the percentage of managers who can accurately describe IT Governance.

The research underpinning these assertions covers 250 enterprises worldwide. The data presented in the book is compelling. And it makes sense. If good governance avoids failures, there must be a contribution to the bottom line. But the research points to a deeper conclusion – that organisations with good control over their use of IT generally make better decisions about their business, and as a result they perform better than their competitors. To reach this state, it would seem necessary that organisations realise that IT is not merely a supporting tool, but that it is now a fundamental enabler of the business. Understanding how to best use IT surely means having a comprehensive understanding of the business itself.

It's not surprising then that Weill and Ross advocate that organisations abandon past views of IT as an isolated support function, and start developing their IT Governance skills as an organisational competency.

## **But success with IT is elusive.**

KPMG published its 2005 Global IT Project Management Survey<sup>6</sup> in September 2005, opening the report with a simple statement that: "Boards and executives are making increasing commitments to achieve business results through (IT) project outcomes". KPMG's survey report goes on to say:

- ◆ Traditional measures of success against duration and budget are being superseded: "Achieving benefits – keeping commitments – is now the key determinant of project success."
- ◆ Since 2003, performance of projects has improved marginally, but failure rates are still appalling, with many organisations not having any focus on realising or measuring benefits.
- ◆ "The key element (that makes some organisations more successful) appears to be an appropriate governance framework – to complement planning and prioritisation of activities and to help ensure execution controls are in place until benefits are realised."
- ◆ "The board must put in place, through management, a rigorous oversight framework to monitor achievement of budgets, the meeting of timelines and to help ensure that the agreed benefits are realised. To achieve this, the board must receive the right information at the right time".

KPMG's research quantified success rates of projects in 600 organisations across 22 countries. They found increasing levels of investment and complexity in projects, with almost 75% of the activity driven by fundamental business matters including new products and services, and business process improvement. Despite this orientation, KPMG found that business cases, although common, failed to address the realisation of business benefits, and that top level monitoring of projects diminishes after funding is allocated. Only 13% of organisations track benefits until they are realised.

Macquarie University researcher Dr Raymond Young delivered similar findings to the KPMG research. He estimates<sup>7</sup> that in Australia alone, the wasted spend on IT initiatives amounts to:

- ◆ \$1.4b per annum on terminated projects;
- ◆ \$3.2b more p.a. on projects that fail to deliver benefits.

Young's research shows that IT investment promises major opportunities, but carries significant risk which is not adequately

resolved by supply-side controls. He says that four facets of demand side governance require greater attention:

- ◆ Benefits – identification and strategic orientation;
- ◆ Risk – particularly organisational change;
- ◆ Management – particularly accountability for benefits;
- ◆ Disclosure – monitoring and reporting on results.

## **A matter for board consideration?**

A significant question for organisation seeking to maximize their performance is whether or not they should consider IT at board level. The debate that continues in both board and IT circles is one of whether governance of IT is a board and business role, or a technical one. One of the common arguments against board-level supervision is that the board is not properly skilled to understand, direct and monitor IT.

In "Information Technology and the Board of Directors: Is there an Attention Deficit", Huff, Maher and Munro<sup>8</sup> state that "Boards must also deal with their corporation's reliance on IT". But in 17 major organisations surveyed, none gave comprehensive board attention to IT matters and none had a board-level IT Committee. They contrast these organisations with organisations such as FedEx, Hewlett-Packard, Proctor & Gamble and Wal-Mart, all of which have established specific mechanisms for board level governance of IT. In highlighting the criticality of IT to modern organisations, the paper cites the case of a major Canadian bank, in which "Millions of customers were unsure of their account balances and payroll deposits".

The report quotes a mining company Chairman/CEO, who said: "*even if the company's information systems stopped working completely, its operations would not be significantly affected*". One needs know very little about modern mining to wonder at the credibility of this statement:

- ◆ Mine safety systems probably depend on information systems. How long can a mine be worked, if the safety systems are not operational?
- ◆ Even with sophisticated machinery, mining personnel are likely to be intolerant of administrative breakdowns. How long will miners continue to dig when their pay has been held up due to information systems failure?

- ◆ Mining is energy intensive. How long can the mine continue to operate when systems that pay for energy, and schedule its delivery (eg diesel fuel) are not working?

Nolan & McFarlan<sup>9</sup> are quite explicit about the role of the board with regard to information technology:

- ◆ "Lack of board oversight for IT activities is dangerous; it puts the firm at risk in the same way that failing to audit its books would".

They note that boards have grown increasingly nervous about corporate dependence on information technology, but most boards remain largely in the dark when it comes to IT spending and strategy, despite the fact that corporate information assets can account for more than 50% of capital spending.

In line with the findings of Weill and Ross, and Young, Nolan and McFarlan found that companies with established board-level IT governance committees are better able to control IT project costs and carve out competitive advantage.

IT is a critical resource for most organisations, in day to day operations and in long term sustainability of the organisation. Directors have, at law, very clear duties with regard to the ability of the organisation to continue its day to day operations, and with regard to the organisation's long term viability. If IT is not used and controlled properly, both day to day operations and long term viability can be compromised, and directors may find themselves being held accountable. It is thus in the best interests of directors that they are aware of IT as an important board-level attention in many organisations, and that they are supported by appropriate resources to guide them in their consideration.

It is vital that directors who have not previously needed to consider IT (because IT was not previously critical to current and future operations) now take up this responsibility, so that the community at large, regulators and the courts can establish reasonable expectations of director competence and performance in governing their organisations' use of IT.

## **In Summary.**

Contemporary business, in most forms, depends on IT for day to day operation and as a key plank of future capability. When IT goes wrong, business consequences can be severe. No longer can problems with IT be hidden from view. Frequently, the consequences of a significant IT problem can extend well beyond the direct control of the organisation.

Protecting organisations from serious risk is one of the key roles of the board of directors, and equivalent governing bodies. Boards are also responsible for driving the performance and sustainability of the organisation.

With IT now playing such significant roles in day to day and longer term views, it is necessary for boards to exercise due care in their ongoing governance of IT as a source of advantage and as a source of risk.

It is inevitable that failures to exercise due care in governing the use of IT in organisations will result in directors being held accountable for the consequences of such failures.

The explanation of how IT is used in organisations, and the questions that are raised in this book should help directors ensure that they have exercised reasonable care in their stewardship.

## Ordering Information

The Director's IT Compass, is available for purchase as hard copy or as a downloadable e-book, in PDF format.

Find it at: [www.infonomics.com.au](http://www.infonomics.com.au)

## About the Author

Mark Toomey is a leading independent advisor in corporate governance of information and communication technology, as set out in Australia's world-leading standard AS8015. With thirty years experience in planning and delivering IT solutions that enable business performance, he now specialises in providing governance, management and strategic advice to business and IT executives and company directors who need to assure themselves that their business change and ICT activities are appropriate, under control and producing appropriate outcomes.



Mark is a Fellow of the Australian Institute of Company Directors, and is the Institute's representative on Standards Australia's committee controlling the Australian Standards for Corporate Governance of Information and Communications Technology. He was heavily involved in the development of the head standard – AS8015, and as a committee member has oversight of the development of further standards for the governance of IT.

He publishes "The Infonomics IT Governance Letter", and has spoken extensively on the topic of IT Governance, for the Australian Institute of Company Directors and many IT interest groups.

Mark's career has included 11 years with global consulting firm DMR, in Australia, New Zealand and Great Britain. He has been involved at senior levels in massive IT projects such as the UK National EftPos Scheme. He was Chief Architect for a major bank, and project director for a critical Year 2000 upgrade in a major communications company.

In his spare time, Mark has a keen interest in classic Jaguar cars, Australian wines and is frequently entertained the Rainbow Lorikeets that inhabit his neighbourhood.

See inside the back cover for ordering and pricing information.

The Director's IT Compass is published by:

Infonomics Pty Ltd  
Victoria,  
Australia.

