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Promises And Successful Practice In IT Governance: A Survey Of Australian Senior IT Managers

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PROMISES AND SUCCESSFUL PRACTICE IN IT GOVERNANCE: A SURVEY OF AUSTRALIAN SENIOR IT MANAGERS

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Abstract

In a global, digital economy, companies increasingly depend on IT for timely information sharing, effective operational control, rapid innovation, speed to market, and customer satisfaction. On the other hand, recent global financial crisis and economic recessions encourage trends for increased managerial scrutiny to reduce IT spending and to increase business value of IT. Globally, concepts of IT governance (ITG) have proliferated as a solution for improving IT management under business uncertainty and rapid technological change. However, empirical research on organisational ITG practice still is lacking and urgently required. This paper, therefore, presents survey results on ITG practice from a perspective of senior IT managers in Australian private-sector organisations. The survey examines ITG practices, IT/business strategic alignment, ITG maturity level, IT organisation, and the relationship between IT organisation and business. Archival analysis of company documents is also performed to verify survey responses and gain additional insights. Despite different ITG frameworks being implemented across the companies, the results show the central importance of shared clear understanding of the strategic role of ITG by all levels of employees across the enterprise. The paper also discusses research limitations and future research directions.

Keywords: IT governance, Australia, IT/business strategic alignment, Shared understanding of the strategic role of IT governance

1   INTRODUCTION

In the modern digital economy, companies are increasingly dependent upon IT for competitive advantage through timely information sharing, effective operational control, rapid innovation, speed to market, and customer satisfaction. The recent global financial crisis and economic recessions have encouraged an emphasis for increased managerial scrutiny upon IT spending and the IT contribution *to* business value. Globally, concepts of IT governance (ITG) have proliferated (Weill and Ross, 2004; ITGI, 2007; De Haes and Van Grembergen, 2009a) as a solution for improving IT management under business uncertainty and rapid technological change.

Organisations such as the ITG Institute have significantly advanced the acceptance within businesses and boards of the important role that ITG can play in realising business strategy. While the concepts of ITG are widely accepted, the manner in which organisations choose to implement their ITG practices, and the focus of their ITG policies (e.g. cost containment, business flexibility) varies greatly between organisations. Empirical research into organisational ITG practices is lacking and urgently required (Ward and Daniel, 2006, Van Grembergen and De Haes, 2009). In the Australian context, empirical studies of private Australian organisations are even more limited.

This exploratory research paper contributes to the empirical knowledge of ITG practices in Australian organisations by presenting survey results of ITG practice from the perspective of senior IT managers in Australian private-sector organisations. Drawing on extant conceptual framework on enterprise governance of IT (Van Grembergen and De Haes, 2009), a questionnaire survey was conducted to examine ITG practices, IT/business strategic alignment, ITG maturity level, IT organisation, and the relationship between IT organisation and business. Archival analysis of company documents and additional contacts within each organisation were utilised to verify survey responses and gain additional insights into ITG practices. Despite different ITG frameworks being implemented across the companies, the results show the central importance of shared clear understanding of the strategic role of ITG by all levels of employees across the enterprise. The paper also discusses research limitations and future research directions.

The remainder of this paper is organised as follows. Section 2 presents a literature review of the concept of ITG, ITG framework, strategic alignment maturity, and ITG in Australia. Section 3 describes research objectives and the methodology used for questionnaire survey and archival analysis. Section 4 presents our survey results and implications. The conclusion is presented in Section 5.

2   LITERATURE REVIEW

2.1   IT Governance

As IT becomes more pervasive throughout organisations, a key issue is whether boards have adequate focus on IT within the corporate governance framework. Gillies (2005) observed that Boards tend to deal with IT outside of normal governance framework, leaving it to the CIO and IT organisation. Gillies (2005) considered this "delegation" an indication that the board has put IT in the *too hard* basket, and results in the IT organisation driving the business strategy through the writing of the business cases for IT investments, determining what IT tools will be used, and redesigning the business processes. Marshall and McKay (2004) observed that a consequence of the lack of understanding of IT within the board and executive means that they feel *pressured* into approving IT investments despite misgivings they may have about the investment.

As economies transition to information and information technology based, the importance of corporate governance, and ITG in particular increased (Motohashi and Nezu, 1997). The major purpose of ITG is to develop the organisation's capacity to align the goals, objectives and strategies of the IT organisation to the business as it adapts to the ever changing external environment that the organisation operates in (Brown et al., 2006), and is the driving force behind the effective use of IT to add value to the organisation (Parent and Reich, 2009; Willson and Pollard, 2009). Ross (2003, p. 15)

stated that "Without governance business executives may find themselves with expensive, but limiting, technology base", highlighting the need for more precise coordination between the business and IT organisation to achieve strategic alignment. Increasingly, executives are realising that "getting IT right" is not about the technology, but about getting the shared governance right (Peterson, 2004).

Authors such as Ali and Green (2007), Raghupathi (2007), Willson and Pollard (2009), and Prasad et al. (2010) have echoed similar themes for ITG being of critical importance to organisations for reasons such as increasing IT investment returns, adding value to the business, greater levels of transparency and accountability within the organisation. Robinson (2005) noted that comprehensive ITG structures and processes allow the organisation to develop regulatory and legal compliance, operational excellence and optimal risk management. Less quoted reasons of the importance of ITG are the consequences that can result from ITG failures, ranging from the relatively benign impact of the organisations simply not realising benefits from their IT investments (Ali and Green, 2007) to the existence of the organisation can be threatened in extreme cases.

At the beginning of the decade, there were a number of spectacular business collapses (e.g. Enron, WorldCom, HIH) involving governance failures by the organisations board. As result of these failures, governments around the world started introducing regulations to improve governance within organisations, such as the Sarbanes-Oxley Act (2002) (SOX) in the United States. SOX bought about an increased focus upon corporate governance in general (Brown and Grant, 2005), and in particular upon internal controls which had been voluntary prior to SOX (Damianides, 2005). While not as large as the failures in the US, Australia has also had significant examples of governance failures, including failure of ITG, that resulted in significant financial losses for the organisation such as the NAB, which suffered lost AUD $4.46 billion and precipitated the resignation of six directors and seven executive officers in 2004 (Thomson and Jain, 2006) or lead to the collapses of organisations such as HIH and OneTel (Ali and Green, 2007).

Despite regulations and the increased focus upon governance by organisations, governance failures continue to occur at great cost to the organisation and wider community. Contemporary examples of ITG failures include unauthorised trading by Royal Bank of Scotland (RBS) employees in 2008 brought the bank to the brink of collapse (Daily Mail, 2009) and resulted in fines of £5.6 million (Financial Services Authority, 2010); Marin County (US) and Deloitte in dispute over the perceived failure of the ERP implementation that industry commentators such as Krigsman (2010) are attributing this to "Marin's apparent lack of organizational and governance maturity, and its inability to absorb business transformation changes associated with this implementation, seem to be a basic driver underlying this failure.", and more recently in Australia, the Virgin Blue brand was severely damaged when a computer system failure in September 2010 severely disrupted flights for 11 days, with Virgin Blue considering taking legal actions against the supplier of the IT system that failed (CIO, 2010).

2.2 IT Governance Framework

The literature has common themes of structures which oversee ITG, process that facilitate ITG, and relational mechanism which enable ITG (De Haes and Va Grembergen, 2005; Willson and Pollard, 2009) and these appear in many of the ITG frameworks. As De Haes and Va Grembergen (2004) state, structures and processes alone are insufficient for effective ITG, as relational mechanisms are critical for the business and IT organisation to understand each other and work together towards common goal. De Haes and Van Grembergen (2009b) found that relational aspects were critical during the initial stages of ITG implementation, becoming less important as practices become established and embedded in the organisation. The three (3) most popular ITG frameworks are COBIT, ITIL and ISO.

COBIT is maintained by the ITG Institute (ITGI) with the current version [COBIT 4.0] providing a comprehensive ITG framework (Van Grembergen and De Haes, 2009). COBIT has become the de facto IT governance standard due to it having the greatest breadth and depth of any of the currently ITG frameworks (Robinson, 2005).

ITIL was developed by the UK Office of Government Commerce (OGC), with current release [ITIL v3] focusing on the integration of IT with the business (Van Grembergen and De Haes, 2009, p. 138). Due to its focus on service delivery, ITIL is not as broad as COBIT in its scope (Nabiollahi and Sahibuddin, 2008). ITIL is frequently used by IT organisations that focus on service management (Cater-Steel and Pollard, 2008).

The ISO "Corporate governance of information technology" (ISO/IEC 38500:2008) standard provides guiding principles for the effective, efficient and acceptable use of IT in organisations. As with many ISO standards, ISO/IEC 38500 is descriptive rather than prescriptive, defining the desired outcomes of effective ITG and leaving the implementation to the individual organisation. The standard can be used to create a framework for best practice in relation to information security (Robinson, 2005), and is gaining recognition and support amongst ITG practitioners.

Authors such as Korac-Kakabadse and Kakabadse (2001), Gillies (2005), Higgins and Sinclair (2008), Tugas (2009), and Willson and Pollard (2009) have noted that there is no single ITG model suites all organisations, and the available frameworks serve as a starting point for organisations to create a ITG framework that will be compatible with their organisational structure, strategy, history and culture. (Korac-Kakabadse and Kakabadse, 2001; Tugas, 2009) The corporate governance model in turn determines the ITG model and its role and contribution to the organisation. Good ITG practices allow flexible integration of IT strategy with the business strategy and the alignment reflects the role of ITG in supporting the business. ITG should not be independent of the broader corporate governance structure or the everyday activities of the organisation (Gillies, 2005). Best practices for ITG requires that the strategic IT decision making process and monitoring protocols to be both formalised and institutionalised before the alignment of the IT organisation with the business will be realised (De Haes and Van Grembergen, 2009b).

Schwarz and Hirschheim (2003) noted that how the IT organisation should structure itself is one of most enduring problems faced by CIO's, and how the IT organisation is structured will influence the structure of the ITG that is implemented. The authors found that the most successful IT organisational structures set strategy and budgets centrally, but allowed local units the freedom to respond to business units.

Galliers (2003) stressed the importance of the relationship between the CIO and other C-level officers as a board team in the IT strategic adoption, noting that communication amongst the senior managers who govern the IT is critical when IT is treated as a strategic unit, a viewed similar to Weill and Ross (2004) who stressed that effective ITG is dependent upon the people who make the decisions. Rau (2004) recommended two corporate-level IT governing entities, the first focusing upon the strategic aspects of ITG (long term view), and the second focused upon the management and control of ITG (short term view). In practice, usually only the largest or most IT-dependent organisations achieve this separation (Rau, 2004). Prasad et al. (2010) found that the effectiveness of ITG initiatives driven by the IT steering committee is related to the level of their IT capability, with positive relationships between IT-related capabilities and internal process-level performance.

2.3   Strategic Alignment Maturity (SAM)

The Henderson and Venkatraman (1993) SAM model highlighted the importance of the alignment between the external and internal business domains, and the external and internal IT domains. Despite the acceptance of the SAM model, the ability to measure the maturity level of alignment remained unclear for some time following publication of the Henderson and Venkatraman (1993) article. Luftman (2000) developed the SAM Assessment Tool, the primary objective of which was to identify specific recommendations for improving business/IT alignment. The assessment recognises five (5) levels of maturity from Ad-hoc (level 1) to Optimised (level 5) across six (6) criteria of Communications, Value Measurement, Governance, Partnership, Scope, and Skills. Using this tool, in survey by Luftman (2000) found that organisations with high maturity rating performed better across a range of business and organisation measures than less mature companies, concluding that an organisation's alignment maturity provided an excellent vehicle for understanding and improving the business IT relationship. Luftman (2000) noted that achieving alignment is an *evolutionary* and

dynamic process, as the IT organisation and business adapt their strategies in concert to achieve the organisational objectives.

Authors such as Avison et al. (2004), Melville et al. (2004), Shore (2006), and Ariyachandra and Frolick (2008) have also suggested that without alignment between business and IT, the organisation may not be competitive or successful. De Haes and Van Grembergen (2009a) found that there was a clear relationship between maturity of ITG practices and alignment of the business and IT organisation. For ITG to positively impact upon the organisation, a minimum of seven specific COBIT practices need to be implemented with maturity level of two (2).

Tarafdar and Qrunfleh (2009) indicated that organisations have difficulty achieving alignment for four principal reasons, that can be summarised as lack of flexibility to modify strategy midstream; strategic plans inconsistent with IT capabilities; lack of understanding of the strategic business plans by middle and junior management; and inconsistent measures used by the business and IT to measure the actual and expected outcomes of IT strategy. Tarafdar and Qrunfleh (2009) expanded upon the strategic alignment model to include a second dimension of tactical alignment which is the organisations ability to respond quickly (tactically) to changing business circumstances. Tarafdar and Qrunfleh (2009) concluded that achieving both Strategic and Tactical IT and business alignment is critical in order for the organisation to benefit from the use of IT.

2.4   IT Governance in Australia

The earliest (identified) ITG research specifically relating to Australian companies was by Sohal and Fitzpatrick (2002) who surveyed the senior IT officer in a number of Australian organisations regarding the ITG and IT management practices within the organisation. Sohal and Fitzpatrick (2002) found that the more involved senior management was in IT decisions, the more likely the acceptance of the role IT played in the success of their organisation, and more likely that the IT organisational structure was centralised. Subsequent case studies concluded that ITG processes contributed to the performance of the organisation and the use of relational mechanisms contributed to a positive view of the IT organisation within the business (Schwarz and Hirschheim, 2003; Bowen et al., 2007); and organisations with good ITG processes experienced better results from their IT investments and capabilities Marshall and McKay (2004).

A number of authors have focused upon particular aspects of ITG in Australian organisations. Gwillim et al. (2005) found that in the absence of strong ITG processes, managers were disinclined to undertake a Post implementation Review (PIR) at the conclusion of a project, if they perceived negative political consequences form the PIR irrespective of the success or otherwise of the project achieving its objectives. Robb and Parent (2009) noted the impact of the different regulatory requirements upon the behaviour of organisations in Australia and Canada. In Canada, SOX placed the locus of responsibility rested upon the CIO and the punitive nature of the legalisation resulted in practice of subsidiary organisations being created in order to limit liability to the subsidiary organisation rather than the parent organisation. In Australia, this practice is less common since subsidiary organisations can not be used by organisations to limit the responsibility of directors.

An interesting finding from research by Schwarz and Hirschheim (2003) was that IT strategies focused upon cost containment did not automatically translate into an effective relationship between the IT organisations and organisations business units. Willson and Pollard (2009) found that the success of ITG in the organisation was reliant on complex relationships between its history and present operations, the performance management across the organisation, the ability to create and engender staff loyalty and support for a shared strategic vision, and the involvement and commitment of all levels of management. Surveys by Ali (2006) and Ali and Green (2007) of members of ISACA found that the existence of ethics and a culture of compliance in IT, corporate communication systems and IT strategy committee had the greatest impact upon the effectiveness of ITG in the organisation.

3 RESEARCH METHODOLOGY

3.1 Research Objectives

The objective of the research was to examine and compare aspects of ITG within selected Australian companies from the viewpoint of the senior IT officer (e.g. CIO) or a direct report. These companies varied from those with a domestic focus to those with regional or global operations. The research focused upon the following perspectives:

- How does the IT organisation believe that it is viewed by the business?
- Does the CIO hold position in executive or reports to a C-level executive?
- What ITG framework has been implemented within the company?
- Is the ITG supporting the business?
- At what strategic alignment level does the IT organisation perceive that it has achieved with the business?

3.2 Research Methods

3.2.1 Survey Questionnaire

The organisations approached were representative of a range of sizes (number of employees), the number of countries they operated in, and being publically listed or private. Contacts within the organisations were utilised to gain access to the head of the IT organisation or a direct report where possible. The questionnaire had four sections that focused upon gathering the following information:

- Section 1: General information regarding the company, such as organisations structure, number of employees, governance mechanisms and business challenges
- Section 2: General information regarding the IT organisations. The questions in this section mirrored Section 1, intended to provide confirmation of whether the IT organisation was aligned with the business structure, strategy and challenges.
- Section 3: The ITG processes employed by the organisations.
- Section 4: The alignment between the business and IT organisation.

Based upon answers provided and availability of respondents, selected organisations were subsequently interviewed regarding their ITG practices based upon the 34 COBIT practices. This subsequent survey also served to validate the results from the first questionnaire to confirm that the responses reflected actual practice rather than how the organisations would like to be performing ITG. Also, the survey responses were also validated using informal sources within the organisations when available.

3.2.2 Archival Analysis of Annual Reports

ASX regulations require publically listed Australian companies to include in their annual reports details of their enterprise governance. In practice this information rarely includes explicit mention of IT unless there is a major IT related project underway, such as an ERP rollout. Annual reports were reviewed to validate questionnaire responses and source additional company information.

3.3 Limitations of Research

This research project was subject to the following limitations

- The results are based upon the viewpoint of a single individual from the IT organisation, usually the CIO or a direct report.
- The availability of targeted respondents (CIO's and direct report) was extremely limited, which placed constraints upon the number of questions and level of detail that could be asked if we were to gain their participation.

4   RESULTS

4.1   Description of Organisations Surveyed

Of ten (10) organisations approached, eight (8) initially agreed to participate, with four (4) organisations ultimately returning completed questionnaires. The key characteristics of the organisations that returned the questionnaire are summarised in Table 1.

Org.	Industry Sector	Total Employees	Revenue (AUD$)	Geography
A.1	Financial	100 - 1,000	$200 M	Regional
A.2	Commercial Services & Supplies	10,000+	$3,200 M	Global
A.3	Commercial Services & Supplies	100 - 1,000	$30 M	National
A.4	Commercial Services & Supplies	1,000 - 10,000	$425 M	Global

Table 1:   Summary of organisations that returned completed questionnaires. The Industry sectors are broad categories, while geography refers to the geographical extent of their operations and not the number of countries that they have a presence in.

The survey was completed by the CIO for organisations A.1 and A.2. For A.4, a direct report of the CIO completed the questionnaire which was then reviewed by the CIO before being returned. In organisation A.3, the survey was completed by the CFO as the organisation IT department reports directly to the CFO, who reports to the CEO. The contact within one organisation that initially agreed to participate ultimately declined to participate after receiving the questionnaire citing insufficient level of knowledge to complete it.

4.2   Survey Questionnaire Results

4.2.1   IT Organisation

Table 2 provides a summary of the key aspects of the IT organisation in each company. For the three (3) largest organisations, the head of IT organisation has the title CIO and reports directly to the CEO. The organisations were divided between centralised and decentralised IT organisations, but predominately organised along functional lines. (e.g. infrastructure, ERP, project office) serving the business.

While all respondents included the traditional IT activities such as architecture and infrastructure support as principal purpose of the IT organisation, organisation A.1 included supporting the strategic positioning of the business, and championing best practices, as explicit responsibilities of the IT organisation.

Code	A.1	A.2	A.3	A.4
Title of IT Head	CIO	CIO	IT Manager	CIO
Reports to	CEO	CEO	CFO	CEO
IT Org Structure	Centralised	Centralised	Decentralised	Decentralised
	Functional	Functional	Functional	Business Unit
# IT Emp. (approx.)	100	170	2	60
IT Budget (AUD$)	$20 M	$46 M	$0.5 M	$14 M
Formal ITG Policy	Yes	No	No	Yes
ITG Framework	Custom	ITIL	DNE	COBIT / ITIL

Table 2:   Summary of the key aspects of the IT organisations (DNE Does Not exist).

4.2.2   ITG Frameworks

A.1 and A.4 had formal ITG policies with ITG framework that were not explicitly based upon a single ramework. In the case of A.2, while there were no formal ITG polices in place, their ITG practices were based upon ITIL framework. Various ITG structural elements, such as program steering committees, strategic committees, project (re)prioritisation meetings, business/IT meetings are used

by the three organisations to varying degrees. Organisation A.3 had neither formal ITG polces or practices.

Organisation A.4 has undergone considerable growth and internal reorganisation, including consolidating previously autonomous IT departments. The organisation has commenced a process of formalising ITG practices, indicating that its ITG policy will be based upon a blend of COBIT and the AS8015/AS8016 standards, while the ITG practices will be based upon COBIT and ITIL. The organisation currently lacks tools and processes to measure IT performance.

4.2.3   ITG Performance

The ITG performance of organisations was measured using the Weill and Ross (2004) criteria (Equation 1). Each organisation rated four (4) specific ITG objectives, in regard to how important each objective was to the organisation, and how effective the objective was being met. The four ITG objectives related to IT cost, contribution to business growth, IT asset utilisation, and flexibility to respond to business changes. The organisations were provided with the opportunity to nominate additional ITG objectives, however none of the organisations nominated additional ITG objectives.

$$20 * \left(\frac{\sum_{n=1}^{4}(\text{Importance}_n * \text{Effectiveness}_n)}{\sum_{n=1}^{4} \text{Importance}_n} \right)$$

Equation 1:   ITG performance calculation adapted from Weill and Ross (2004).

Table 3 shows the importance that each organisation placed upon each ITG objective, how effective they considered they were in achieving the objective, and the overall ITG performance score according to Equation 1. Based upon these criteria, the ITG processes for A.1 can be considered as supporting the business in regard to the objectives that are important to the business. Organisation A.1 scored highest in ITG performance as had made significant effort in establishing the practices within the organisation. The lowest scoring organisations either had no established practices (A.3), or it was too early in ITG journey for the practices to have had measurable impact (A.4).

Objective	Cost of IT		IT for Growth		Asset Utilisation		Business Flexibility		ITG Perf
	I	E	I	E	I	E	I	E	
A.1	5	5	5	5	3	5	5	3	90
A.2	4	2	4	2	3	2	4	2	40
A.3	1	1	1	1	1	1	1	1	20
A.4	3	1	5	1	5	1	4	1	20

Table 3:   Survey results of the Level of importance, the effectiveness for each ITG objective, and the overall ITG performance according to Equation 1. Note that organisation A.2 did not provide responses to these questions and the scores for these organisations were interpolated using responses from the initial and second questionnaire. Key I = Importance, E = Effectiveness.

4.2.4   Strategic Alignment and Business Relationship

Table 4 shows the IT maturity and IT business relationship. A.1 reported the highest alignment between the business and IT organisation, a rating that was supported by other responses provided in the questionnaire such as the IT organisation being tightly aligned with the business, and IT being an enabler of business processes and capabilities. A.2 indicated that they believed that they had established processes that aligned IT with the business, while A.4 was committed to the processes. The level of the IT business relationship was consistent with the ITG maturity (i.e. within one level) with the exception of A.1. In A.1 the difference can be attributed to the ITG processes being new and business not having fully recognised the benefits from ITG.

Organisations with lower IT strategic alignment ratings (Level 1 or 2) had a higher rating for IT business relationship, in contrast to the organisations with higher IT strategic alignment ratings (Levels 3, 4 or 5) which had a lower rating for IT business relationship. This is consistent with De Haes and Van Grembergen (2009b) who indicated that in the early stages of ITG, it is the relational aspects that are of greater importance and practice. Once processes become established and embedded within the organisation, the relative importance of the relational aspects decreases.

	A.1	**A.2**	**A.3**	**A.4**
IT Strategic Alignment	5	3	1	2
IT Business Relationship	3	2	2	3

Table 4: *IT strategic alignment and relationship to the business for each organisation.*

The responses of A.1 and A.2 indicate that IT is considered a business enabler to transform the business strategy. This indicates that the strategic fit between the business and IT in those organisations is well established with a clear link between business planning processes and IT planning processes. Tarafdar and Qrunfleh (2009) state that the level of CIO contribution to the business strategic planning exercise is a positive indicator of strategic alignment. The seniority of the CIO role within organisations A.1, A.2 and A.4 and other responses are indicative of a high level of involvement by the CIO in the strategic business processes. Organisation A.1 use of monthly review meeting to reprioritise projects subject to emerging market opportunities indicates a tactical alignment capability consistent with Tarafdar and Qrunfleh (2009). The responses from other organisations did not provide similar evidence of tactical alignment capability. Figure 1 shows the relative alignment of each organisation based upon responses received using Tarafdar and Qrunfleh (2009) two dimensions of alignment.
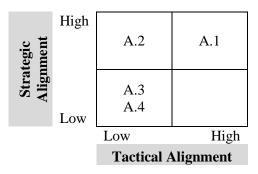

Figure 1: *The relative quadrant that each organisation would be placed in using the Tarafdar and Qrunfleh (2009) two dimensional alignment grid based upon survey responses.*

4.2.5 Alignment of Business and IT Vision and Mission Statements

Sohal and Fitzpatrick (2002) and Tarafdar and Qrunfleh (2009) both indicated that the presence and relevance of vision and mission statements for the IT organisations that are linked to the business vision and mission statements can be indicators of the strategic alignment of the IT organisation with the business. A.4 has separate vision and mission statements for the IT organisations that supported the business statements, with clear linkage to the equivalent business statements. A.1 and A.2 do not have specific statements for the IT organisation, considering the mission and vision statements from the business as being sufficient.

4.2.6 ITG Maturity

Table 5 shows the respondents view of their ITG maturity of their IT organisation and an independent assessment of the ITG maturity based upon the responses each organisation provided in the questionnaire. The maturity for A.2 was determined from an interview with the CIO where each of the 34 COBIT criteria was rated. For the remaining organisations, the maturity was assessed using

the various responses provided. It is noted that the relative ITG maturity of each organisation as shown in Table 5 broadly matches the relation ITG performance as shown in Table 3.

	A.1	A.2	A.3	A.4
Respondent Self Analysis	4.0	-	1.0	2.0
Researcher Assessment	2.4	2.7	1.1	1.4

Table 5:   *The organisational ITG maturity based upon respondent self evaluation and analysis of questionnaire responses. Organisations A.2 did not provide self assessment of ITG maturity.*

5   CONCLUSION

One respondent who initially agreed to participate but subsequently withdrew citing inability to answer questions regarding ITG within the business. This respondent is a middle level Information System manager (two levels below the CIO) within a multinational organisation. The stated reason for declining would appear to indicate that the reality for many middle level managers is that they are probably only aware of the organisations governance processes in a superficial manners as described by Tarafdar and Qrunfleh (2009). This raises that risk that as they complete their day to day activities, they may make decisions that are inconsistent with the organisations broader strategy. This highlights the importance that not only must the senior leadership team have a clear understanding of the organisations ITG, but that it must be communicated throughout all levels of management that have IT management responsibilities within the organisation.

Schwarz and Hirschheim (2003) stated that if organisations focused upon implementing sound ITG strategy, it would assist senior executives not only manage IT related activities, but also the relationship between IT and the rest of the organisation, thereby fostering a more successful IT organisation. The responses from the three organisations with ITG practices indicate that this is a goal of their ITG practices. Interesting to note the seniority of the CIO role within the organisations, where the CIO is a direct report of the CEO. This appears consistent with the importance of the role that authors such as Galliers (2003) and Weill and Ross (2004) have stressed for the CIO.

With exception of A.3, all respondents considered that their ITG initiative must positively contribute to the firm's core operations. Importantly they also view ITG as an integral component of the organisations overall governance activities rather than simply an activity of IT organisation. To ensure these goals, each organisation has implemented various committees that have responsibility to maintain a business focus for IT initiatives with cross business representation from the organisation.

It is interesting to note that of the three (3) organisations with ITG practices, two (2) used the frameworks with strong ITIL element, which is consistent with the importance these organisations have placed upon servicing the business. The remaining organisation has implemented a custom ITG framework to meet their needs. These results are consistent with views of Korac-Kakabadse and Kakabadse (2001), Gillies (2005), Higgins and Sinclair (2008) and Willson and Pollard (2009) that the common frameworks should be viewed as a starting point as organisations develop ITG practices that suite their organisational needs.

The results indicate that the emphasis an organisations places upon ITG practices increases with the organisations size, intensity of IT use, a result that is consistent with results of Sohal and Fitzpatrick (2002). It is a natural assumption that those organisations most likely to implement ITG will be those with greatest need, an assumption that is consistent with the findings of our research. The one organisation (A.3) that did not have extensive ITG practices was a small organisation with few IT resources, simple IT systems that can be managed without need for formal ITG processes. At this point in the evolution of A.3, it has neither the need nor resources to implement formal ITG practices. While organisation A.1 could also be considered a small organisation without need for formal ITG practices, it operates in financial services sector and preparing for a sale or float, both factors driving the implementation of formal ITG practices. A.2 and A.4 are large organisations with high reliance

upon complex IT systems to support its business, and consequently have implemented ITG practices of varying levels of maturity. The organisation with the highest ITG maturity level (A.2) is a large organisation with global operations and ITG practices that have been in place for over five (5) years.

The results indicate that the surveyed organisations share a common ITG challenge of getting the business to recognise the benefits of strategic alignment of IT with the business. This highlights the need for continual communications between the IT organisations and the business.

Acknowledgements

References

Ali, S 2006. 'Effective Information Technology Governance Mechanisms: An Australian Study', *Gadjah Mada International Journal of Business,* vol.8**,** no.1, pp69-102.

Ali, S & Green, P 2007. 'IT Governance Mechanisms in Public Sector Organisations: An Australian Context', *Journal of Global Information Management,* vol.15**,** no.4, pp41-63.

Ariyachandra, TR & Frolick, MN 2008. 'Critical Success Factors in Business Performance Management—Striving for Success', *Information Systems Management,* vol.25**,** no.2, pp113-120.

Avison, D, Jones, J, Powell, P & Wilson, D 2004. 'Using and validating the strategic alignment model', *The Journal of Strategic Information Systems,* vol.13**,** no.3, pp223-246.

Bowen, PL, Cheung, M-YD & Rohde, FH 2007. 'Enhancing IT governance practices: A model and case study of an organization's efforts', *International Journal of Accounting Information Systems,* vol.8**,** no.3, pp191-221.

Brown, AE & Grant, GG 2005. 'Framing the Frameworks: A Review of IT Governance Research', *Communications of AIS,* vol.2005**,** no.15, pp696-712.

Brown, W, Rahman, M & Hacker, T 2006. 'Home page usability and credibility: A comparison of the fastest growing companies to the Fortune 30 and the implications to IT governance', *Information Management & Computer Security,* vol.14**,** no.3, pp252-269.

Cater-Steel, A & Pollard, C Year, 'Conflicting views on ITIL Implementation: Managed as a Project - or Business as Usual?', in *Proceedings of 2008 International Conference on Information ResourcesManagement (Conf-IRM)*, Niagara Falls, Canada, 18–20 May 2008.

CIO 2010, *Virgin system crash cost up to $20m* [Online]. accessed 16 October 2010, http://www.cio.com.au/article/363843/virgin_system_crash_cost_up_20m.

Daily Mail 2009, *RBS traders 'bought £34bn of toxic debt without telling board'* [Online]. Daily Mail, accessed 3rd October 2010, http://www.dailymail.co.uk/news/article-1163664/RBS-traders-bought-34bn-toxic-debt-telling-board.html.

Damianides, M 2005. 'Sarbanes-Oxley and IT Governance: New Guidance on IT Control and Compliance', *Information Systems Management,* vol.22**,** no.1, pp77-85.

De Haes, S & Va Grembergen, W 2004. 'IT Governance and Its Mechanisms', *Journal of Information System,* vol.1**,** no.1, pp1-7.

De Haes, S & Va Grembergen, W Year, 'IT Governance Structures, Processes and Relational Mechanisms: Achieving IT/ Business Alignment in a Major Belgian Financial Group. In R. H. Sprague, Jr. (Ed.)', in *Proceedings of the 38th Hawaii International Conference on System Sciences*, Big Island, Hawaii, 3–6. January 2005.

De Haes, S & Van Grembergen, W 2009a. 'An Exploratory Study into IT Governance Implementations and its Impact on Business/IT Alignment', *Information Systems Management,* vol.26**,** no.2, pp123-137.

De Haes, S & Van Grembergen, WN 2009b. 'Exploring the relationship between IT governance practices and business/IT alignment through extreme case analysis in Belgian mid-to-large size financial enterprises', *Journal of Enterprise Information Management,* vol.22**,** no.5, pp615-637.

Financial Services Authority 2010, *DECISION NOTICE* [Online]. London, accessed 3rd October 2010, http://www.fsa.gov.uk/pubs/other/rbs_group.pdf.

Galliers, RD 2003. 'Change as Crisis or Growth? Toward a Trans-disciplinary View of Information Systems as a Field of Study: A Response to Benbasat and Zmud's Call for Returning to the IT Artifact', *Journal of the Association for Information Systems,* vol.4**,** no.6, pp337-351.

Gillies, C 2005. 'IT Governance - Are Boards and Business Executives Interested Onlooker or Committed Participants?', *Australian Accounting Review,* vol.15**,** no.3, pp5-10.

Gwillim, D, Dovey, K & Wieder, B 2005. 'The politics of post-implementation reviews', *Information Systems Journal,* vol.15**,** no.4, pp307-319.

Henderson, JC & Venkatraman, N 1993. 'Strategic alignment: Leveraging information technology for transforming organizations', *IBM Systems Journal,* vol.32**,** no.1, pp4-16.

Higgins, LN & Sinclair, DT 2008. 'A new look at IT governance', *Journal of Corporate Accounting & Finance (Wiley),* vol.19**,** no.5, pp31-36.

ITGI 2007, *Case Studies/Best Practices* [Online]. accessed accessed 20/09/2010, http://www.itgi.org/Template_ITGIdad8.html?Section=ITGI&CONTENTID=57318&TEMPLATE=/ContentManagement/ContentDisplay.cfm.

Korac-Kakabadse, N & Kakabadse, A 2001. 'IS/IT governance: Need for an integrated model', *Corporate Governance,* vol.1**,** no.4, pp9-11.

Krigsman, M 2010, *Understanding Marin County's $30 million ERP failure* [Online]. ZDNet, accessed 05/10/2010, http://www.zdnet.com/blog/projectfailures/understanding-marin-countys-30-million-erp-failure/10678.

Luftman, J 2000. 'Assessing Business-IT Alignment Maturity', *Communication of the Association for Information Systems,* vol.14**,** no.4, pp3-20.

Marshall, P & McKay, J 2004. 'Strategic It Planning, Evaluation And Benefits Management: The basis For Effective It Governance', *Australasian Journal of Information Systems,* vol.11**,** no.2, pp14-26.

Melville, N, Kraemer, K & Gurbaxani, V 2004. 'Information Technology and Organizational Performance: An Integrative Model of IT Business Value', *MIS Quarterly,* vol.28**,** no.2, pp283-322.

Motohashi, K & Nezu, R 1997. 'Why do countries perform differently?', *Organisation for Economic Cooperation and Development. The OECD Observer***,** no.206, pp19-22.

Nabiollahi, A & Sahibuddin, SB Year, 'Considering service strategy in ITIL V3 as a framework for IT governance', in *International Symposium on Information Technology 2008, ITSim, August 26, 2008 - August 29, 2008*, Kuala Lumpur, Malaysia: Inst. of Elec. and Elec. Eng. Computer Society, IEEE.

Parent, M & Reich, BH 2009. 'Governing Information Technology Risk', *California Management Review; Berkeley,* vol.51**,** no.3, pp134-152.

Peterson, R 2004. 'Crafting Information Technology Governance', *Information Systems Management,* vol.21**,** no.4, pp7-22.

Prasad, A, Heales, J & Green, P 2010. 'A capabilities-based approach to obtaining a deeper understanding of information technology governance effectiveness: Evidence from IT steering committees', *International Journal of Accounting Information Systems,* vol.In Press, Corrected Proof.

Raghupathi, W 2007. 'Corporate governance of IT: A framework for development', *Communications of the ACM,* vol.50**,** no.8, pp94-99.

Rau, KG 2004. 'Effective Governance of IT: Design Objectives, Roles, and Relationships', *Information Systems Management,* vol.21**,** no.4, pp35-42.

Robb, A & Parent, M 2009. 'Understanding IT governance: a case of two financial mutuals.(Research Note)(information technology)(Report)', *Journal of Global Information Management,* vol.17**,** no.3, pp59-77.

Robinson, N 2005. 'IT excellent starts with governance', *Journal of Investment Compliance,* vol.6**,** no.3, pp45-49.

Ross, J 2003. 'Creating a Strategic IT Architecture Competency: Learning in Stages', *MIS Quarterly Executive,* vol.2**,** no.1, pp31-43.

Schwarz, A & Hirschheim, R 2003. 'An extended platform logic perspective of IT governance: managing perceptions and activities of IT', *The Journal of Strategic Information Systems,* vol.12**,** no.2, pp129-166.

Shore, B 2006. 'ENTERPRISE INTEGRATION: Across the Globally Disbursed Service Organization', *Communications of the ACM,* vol.49**,** no.6, pp102-106.

Sohal, AS & Fitzpatrick, P 2002. 'IT governance and management in large Australian organisations', *International Journal of Production Economics,* vol.75**,** no.1-2, pp97-112.

Tarafdar, M & Qrunfleh, S 2009. 'IT-Business Alignment: A Two-Level Analysis', *Information Systems Management,* vol.26**,** no.4, pp338-349.

Thomson, D & Jain, A 2006. 'Corporate Governance Failure And Its Impact On National Australia Bank's Performance', *Journal of Business Case Studies,* vol.2**,** no.1, pp41-56.

Tugas, F 2009. 'Assessing the level of information technology (IT) processes performance and capability maturity in the Philippine food, beverage, and tobacco (FBT) industry using the COBIT framework', *Information and Management Sciences,* vol.13**,** no.2, pp68-73.

Van Grembergen, W & De Haes, S 2009, *Enterprise Governance of Information Technology : Achieving Strategic Alignment and Value,* Springer Science, New York.

Ward, J & Daniel, E 2006, *Benefits Management Delivering Value from IS & IT Investments,* John Wiley & Sons, Ltd, Chichester, West Sussex, England.

Weill, P & Ross, J 2004, *IT governance: How Top Performers Manage IT Decision Rights for Superior Results,* Harvard Business School, Boston.

Willson, P & Pollard, C 2009. 'Exploring IT Governance in Theory and Practice in a Large Multi-National Organisation in Australia', *Information Systems Management,* vol.26**,** no.2, pp98–109.