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Deriving Business Value from IT: Converging IT Expenditures into Assets with Desired Impacts

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Abstract

The research reported in this paper examines how business value is being created and delivered by IT in large private organisations in Australia. The critical organisational governance and management activities and practices that contribute significantly to business value were identified and described, using a process model of Soh and Markus (1995) as a lens by which CIO statements were organised, understood and interpreted. Broad concepts associated with value delivery were identified, and the key elements of IT governance were then abstracted from these practices. The research also confirmed that a substantial change had been occurring over the past few years, with a rigorous focus on building capabilities and relationships with key business stakeholders apparent, with the deliberate intent of integrating IT investments with business change initiatives, and thus a business-centric focus was replacing what was perceived to have been a largely technological focus of previous years. However, while the broadly defined activities associated with strategy and evaluation were being paid close attention, CIOs were still at times hesitant and grappling with the issues associated with benefits realisation initiatives.

Keywords: Business value, IT Governance.

1   INTRODUCTION

As organisations struggle in hypercompetitive environments that characterise today's business landscapes, information technology (IT) is often held up as the way to avail oneself of the promises and opportunities of the digital, networked world (Sambamurthy 2002). IT now impacts on the nature and intensity of competition, the ways in which business is conducted, and the nature and ways in which individuals in organisations approach and complete their tasks and activities. IT is now inextricably bound up in day-to-day organisational routines and activities. Many organisations report that IT now represents the fastest growing area of capital expenditure (Strassman 1997, Willcocks and Lester 1999), and in some large, IT-dependent organisations, capital expenditure on IT can exceed 50% of total capital expenditures (van der Zee 2002). However, concerns are voiced about the value derived from IT expenditures, and whether or not organisations are achieving an acceptable payoff from their considerable investments (Willcocks 1996). For example, the literature reports repeated findings of the failure of IT to deliver the anticipated business benefits (Thorp 1998, Ward et al, 1996). However, there are conflicting findings in the research (Willcocks 1996, Willcocks and Lester 1999), and considerable doubts expressed about the efficacy of existing, explicit measures and measurement frameworks of the value of IT (van der Zee 2002). The problem compounds as the types of value associated with IT investment become associated more with revenue increase and other more esoteric benefits rather than cost displacement (Keen 1991), and hence business benefits tend to be more intangible, less direct, and more interwoven and diffused across a range of organisational activities. Indeed, as the pervasiveness and mobility of IT investments increase, this problem is likely to increase rather than diminish.

Peppard et al. (2000) note that when IT 'disappoints', and there is uncertainty amongst management as to its benefits and value to the organisation, the dominant perspective in the literature attributes these shortcomings to the IT function. Remedies, therefore, are also sought in the IT function, and the notion of value creation from IT investments is thus also attached to the IT function. When this is coupled with a techno-centric view of IT (that technology itself can deliver business value), then the 'remedies' are, in all likelihood, going to further disappoint with few desired organisational impacts and business benefits. There is a view, however, that internal organisational strategic thinking, processes and activities are key determinants of the delivery of value from IT investments, rather than the technology itself (Tallon et al. 2000). Further, the access to information and knowledge that is facilitated via IT and the ways information and IT are used to accomplish tasks, goals and objectives, are essential ingredients in the overall value creation process. Thinking from an organisational perspective (i.e. that information and IT are corporate resources, and thus need to be managed along with other valuable corporate resources), thus seems vital if IT is to be effectively utilised to support the achievement of organisational goals and thus deliver value to the organisation. Developing the organisation-wide capabilities and relationships necessary to exploit the IT resource effectively must become a priority for organisations, as must putting in place the requisite governance mechanisms (principles, structures, processes and procedures) to ensure that IT investments deliver the anticipated benefits and value to the organisation while IT-related risks are managed appropriately.

The research reported in this paper aims at understanding the ways in which organisations attempt to ensure that value is derived form their investments in IT. More specifically, the overarching objective was to gain insights and develop a better appreciation of an organisational perspective of the notion of business value from IT, and to identify and understand the management and governance structures, mechanisms, processes, and practices adopted by organisations which they believe enhance their ability to deliver and derive value from their IT investments. The paper is organised as follows. In the sections that follow, the literature on business value from IT and the role of IT governance in maximising the potential business value from IT investments is considered. In section 4, issues of research design and method are discussed, specifically how the Soh and Markus (1995) model was used as a lens by which to interpret the data collected from participants. In section 5, the research findings on the critical organisational governance and management activities and practices that

contribute significantly to business value are reported, with the subsequent discussion and analysis in section 6 resulting in the proposal of a model of the key elements of effective IT governance.

2   CREATING BUSINESS VALUE FROM IT

During the 1990s, a number of theoretical models appeared focused around addressing such issues (see Lucas 1993, Grabowski and Lee 1993, for example). Soh and Markus (1995) considered the features of each of these models and frameworks, from which they synthesized a process model to explain how IT creates business value, or the necessary chain of events if the desired outcome of delivering business value is to be accomplished. It is this work by Soh and Markus (1995) that influenced the research reported in this paper, and subsequent discussions of the literature in this area will be focused on this model (see Figure 1 below).
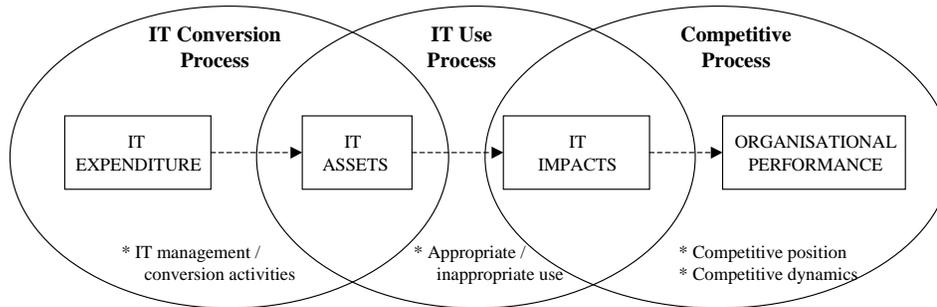

Figure 1:   A Process Model for the Creation of Business Value from IT (Soh and Markus 1995)

The gist of the argument underpinning this model can be succinctly articulated as follows. IT assets are created through expenditure on IT. Effectively converting money and other resources into an asset for the organisation is contingent upon a number of IT management activities, with formulating IS/IT strategy and ensuring alignment with business strategy, creating appropriate structures and mechanisms to implement strategy, establishing effective means of prioritizing requests for IT expenditure, and effectively managing IT development and/or acquisition projects, all argued to be pivotal to this conversion process. IT assets, however, will only have the desired impact in an organisation if they are used appropriately and potential benefits from these investments are proactively managed. Ensuring appropriate IT use in given contexts thus becomes the means by which IT assets create the desired IT impacts on the organisation. Appropriate redesign of business processes together with the appropriate restructuring of roles and responsibilities are important in this regard. However, whether or not IT impacts have the desired effect on organisational performance is contingent on a number of factors, many of which are outside the control of the organisation. For example, the nature of competition in the industry, the behaviour of competitors, the general state of the economy, and so on, will all impact on organisational performance. Thus, improvements to organisational performance through the impacts of IT may result only when general business conditions are favourable (Soh and Markus 1995).

3   CONSIDERATIONS OF IT GOVERNANCE

Closely allied to the concerns about the ability of IT to deliver value to the business, is the question of how best an organisation should organise its IT function and provide organisational IT services in order that the achievement of business goals and objectives are enhanced. Sambamurthy and Zmud (2000) discuss the organizing logic for IT activities, questioning how organisations should arrange their IT requirements in order to respond to current business and technological imperatives in contemporary environments. IT governance is concerned with just this: it refers to the range of mechanisms that an organisation implements and institutionalises in order that business value is derived form IT investments and IT-related risks are appropriately managed (Korac-Kakabadse and Kakabadse 2001, IT Governance Institute 2001). Shane et al. (1999) argue that the aim of effective IT

governance is to ensure that IT is managed from an organisation-wide perspective so that it contributes to the achievement of enterprise goals and objectives. Taking this further, Korac-Kakabadse and Kakabadse (2001) suggest that IT governance concentrates on the "relationships and processes to develop, direct and control IS/IT resources in order to achieve the enterprise's goals through value adding contributions, which account for balancing risk versus return". The aims of IT governance thus become to direct all IT endeavours in the organisation, to develop a vision and strategic direction for IT, to ensure that IT objectives are achieved, to ensure that IT-related risks are identified and managed appropriately, and to verify that an organisation's IT resources and capabilities are being exploited responsibility to deliver value to stakeholders in the organisation (IT Governance Institute 2001). From the description of the process model by Soh and Markus (1995) and the preceding definition and discussion about IT governance, it can be argued that IT governance plays an important role in supporting and ensuring the conversion processes (from IT expenditure to IT assets to IT impacts) are effectively accomplished within an organisation. Clearly, there are other factors at play given the complexity of modern organisations and the business contexts in which they operate.

4   RESEARCH METHOD AND DESIGN

Given the discussions and the arguments developed in the previous section, the overarching objective established for this research was to gain insights and develop a better appreciation of an organisational perspective of the notion of business value from IT, and to attempt to identify and understand the management and governance structures, mechanisms, processes, and practices adopted by organisations which they believe enhanced their ability to deliver and derive value from their IT investments. Eleven organisations form the basis for the discussion in this paper. The letters A through to K are used as pseudonyms for the companies involved, and illustrate the order in which interviews were conducted in those organisations. They were selected for two main reasons. Firstly, all eleven organisations, by their own admission, have gone through a 'sea change' with respect to their IT management and governance practices in recent years. The CIOs interviewed conceded that their organisation had undergone transformational change with respect to their arrangements for the exploitation of organisation-wide IT capabilities, repositioning themselves from being essentially techno-centric (the IT function is about technical things and does not know too much about the business) to business-centric (the IT function is well integrated with the strategic business units across the organisation and is considered a key business partner on strategic initiatives, of which IT will form an important part). Secondly, they were selected on the basis of availability and accessibility. Thus, sampling was somewhat based on convenience (Bryman 1989), in that organisations selected exhibited characteristics suited to our study, and were willing to participate in the research. However, the researchers did attempt to overlay selection of participants with the concept of theoretical sampling (Charmaz 1983). Theoretical sampling "means sampling aimed towards the development of the emerging theory" (Glaser and Strauss 1967). It seeks to identify conceptual categories appropriate to a given study. Sampling and analysis proceed in tandem so that the decision as to which item will be sampled next depends on the results of the cumulative analysis to that point. The next item selected may be one that the researcher has been lead to believe exhibits a category not yet sampled (i.e. an organisation in a very different industry was selected), it may be a counter example for a category sampled earlier (an organisation in a similar industry, but adopting different models for the provision of IT services was targeted), or it may fill out a category already identified (a number of organisations in the same industry were interviewed for comparative purposes) (Strauss and Corbin 1990). Sampling continues until saturation is reached, indicating that no new conceptual categories are coming to light, or that no new significant insights are continuing to emerge (Glaser and Strauss 1967, Charmaz 1983).

The research was exploratory, aimed at identifying and understanding the perceptions, beliefs, and espoused practices of Chief Information Officers (CIOs) with regards to the achievement of business value, and hence was interpretivist in nature. It was designed to consist of a series of qualitative, semi-structured (tending to unstructured) research interviews (Kvale 1996) with CIOs and senior

executives in a variety of large, established, successful organisations with mature and substantial investments in IT, and hence there was an expectation of sophistication in their use of IT. Between 1 and 6 interviews have been conducted in each organisation, with the corporate-level CIO interviewed as a minimum in each case, and in a number of cases, CIOs in large strategic business units, or other senior executives involved in executive-level decision making about the delivery of business value from IT have also been interviewed. The participating organisations are amongst the largest spenders on IT in the private sector in Australia, and were either all within the top 35 companies in Australia (Baker et al. 2002), or were Asia-Pacific subsidiaries of huge global companies that would be household names in many parts of the world.

Although eleven organisations may seem a relatively small sample from which to generalise findings, this number does fit within the guidelines established by Eisenhardt (1989), who recommends a sample of between 4 and 10 for in-depth qualitative case-based research. A diverse range of industries from which the organisations were drawn was included to enhance the generalisability of the findings (Eisenhardt 1989). Data collection was primarily through semi-structured interviews (Darke et al. 1998), each lasting between 60 and 150 minutes, and through analysis of internal corporate documents (Strategic Plans, IT Strategic Plans, Policy Statements and so on) or publicly available documents such as those published on corporate web sites. All interviews were recorded, transcribed, and subjected to qualitative content analysis in order that emergent issues, patterns of interest, and so on could be revealed (Darke et al. 1998), with particular attention paid to the CIOs' thoughts and statements about IT management and IT governance processes and issues. The specific approach used involved categorisation of responses into certain themes, some of which were inherent in the interview questions, and some of which emerged through the interviewees' responses to questions posed. The process model of Soh and Markus (1995) (see Figure 1) was used as the basis for our interpretations of the apposite activities, structures, mechanisms and processes in each organisation. Note that in this paper, only interviews that have been transcribed and analysed have been included. In fact, the researchers have now completed interviews in sixteen organisations, and the additional interviews proved to be broadly confirmatory of the data reported on in this paper. Interviews were conducted between October 2002 and August 2003. Broad demographics of the companies involved are detailed in Table 1 below. Where no information was offered or made available, a blank has been left in the table.

Company	Industry	IT Operating Budget	IT Capital expenditure	IT as % of capital expenditure	Years as CIO
A	Retail	$100m	$80-100m	12%	3
B	Pharmaceuticals	$4m	$4m	5%	12
C	Manufacturing	$35m	$7m	7%	6
D	Financial Services	$55m	$48	60%	4
E	Leisure/Entertainment	$50m	$15m	30%	5
F	Food & Beverage	$52m	$10m	-	3
G	Financial Services	$500m	$400m	70%	3
H	Financial Services	$400m	$250m	60%	5
I	Financial Services	$42m	$35m	55%	3
J	Food & Beverage	$28m	$74*	7-8%	1
K	Manufacturing	$58m	$35m	3%	1

(Note: All figures cited are expressed in A$, and for global companies, are for IT expenditures just in Australia)
* $66m of this was a one-of ERP acquisition and implementation

Table 1:   Company Demographics

The broad research objectives which shaped the interviews were motivated by the Soh and Markus (1995) model, and can be articulated as follows:

- To understand the notion of business value from an organisational perspective;
- To identify the organisational governance and management practices considered critical to the achievement of business value from IT;
- To seek a broad assessment from organisations on the extent to which they are now deriving value from IT investments; and
- To consider how managerial and governance practices have changed in their experience in the past 5-10 years

5   RESEARCH FINDINGS

5.1   The notion of business value

All CIOs interviewed were very clear when it came to business value: ultimately, they saw business value from IT as contributing ultimately to increased profitability. Most reported that this was an integral part of the transformation their organisation had been through with respect to IT: that their organisations had, in the past few years, moved quite dramatically from an obsession about costs (IT was viewed principally as a way of driving down costs) to a focus on value. IT was seen and managed as a way of adding value to the organisation, either through reducing costs, or by increasing efficiency, or by increasing effectiveness in the form of valued service from a range of perspectives (customers, suppliers, alliances, etc.), through IT-enablement of core business processes, or through increasing flexibility and responsiveness, or by taking advantage of new opportunities.

> *D: Well, ultimately, it comes back to improving your profit - getting your unit costs down or improving your customer and advisor satisfaction, and that often comes form better business processes.*

> *F: I have to be able to show that the benefits derived from an investment generates sufficient value over and above the original investment over a period of time…the Board insists on that…We don't worry so much about costs now - well, within reason - it's all about value*

5.2   IT Management and Governance practices generating business value

Table 2 below summarises the organisational management & governance activities and practices according to the Soh and Markus (1995) model. In the eleven organisations in our studies, these were identified form the transcripts as the practices contributing to the delivery of business value. Not every one of these was present in each organisation, but a substantial subset would have been, and some CIOs flagged particular practices as ones that they did not do, or did not do well, but which they regarded as important.

Phase	Practices
IT Expenditure to IT Assets	Identifying IT opportunities
	Formulating IT vision and strategy
	Aligning & embedding IT strategy in business strategy
	Building business case for IT investment opportunities, including evaluating proposals and identifying business benefits, and estimating time required to realise benefits
	Redesign of business processes, and assessing required business change
	Prioritizing & selecting IT investment proposals
	Identifying & managing IT related risk

	Project management – effectively managing all aspects associated with acquiring and/or developing desired information systems
IT Assets to IT Impacts	Post Implementation Reviews
	Implementation of business process change
	Measurement of achievement of goals and objectives for IT investments
	Management of the realisation of benefits from IT investments
	Evaluation of stakeholder satisfaction with IT
	Assessment of perceived value of IT investments
	Assessment of business change required to accommodate IT implementation
	Training and reskilling
	Restructuring of organisational roles & responsibilities to achieve organisational fit

Table 2:   Activities involved in delivering business value

The CIOs all believed that an important component of delivering value was to identify IT opportunities. In all the organisations included, the CIOs were very clear on the need for any proposed IT investment to be demonstrably supportive of business goals and objectives, and on the need for a compelling business case to be articulated before any IT investment would be contemplated.

> B: *Our investments today are targeted to support our strategic imperatives - so if their strategic imperatives are right then they're the things that count ... we've got to check the allocation to [IT] investments is consistent with our strategy which is consistent with our strategic imperatives*

> E: *So we've got a very strict business case preparation and authorization process that has as its basis the calculation of the return on the investment over an accepted period of time...I don't even accept productivity gains anymore. If someone tries to present a business case based on productivity gains then I want names of the people that aren't going to be working here anymore, what their salaries are, and what day they're going to be leaving...*

In all organisations, the ideas for IT investments in most circumstances originated either from the strategic business units (SBUs), or from joint interaction between IT and the SBUs, but did not arise from the IT department on its own. The only exception we discovered to this was in the case of IT infrastructure investment proposals, where this was more likely to have originated from within the IT department, where an organisational perspective was adopted. The initiation of IT investments is now largely regarded as a business responsibility, and the development of the early business case is seen also as a responsibility of the SBU, although IT does provide support and assistance in this process, particularly in terms of what is feasible, practicable, and "do-able" in terms of the organisation's current IT infrastructure, IT skill set, and existing IT capabilities.

> D: *We have business project managers or sponsors who put the business cases up...they're the ones who have said 'If I get to that cost, that functionality, I'll get that revenue or that cost cut'*

> G: *There's a process, and the process says that the project won't start before it's got a business project sponsor, and the project sponsor's first job is to actually establish a governance framework. And the governance framework will actually achieve the following: it will have a clear understanding of who's responsible for the benefits: it will have clear responsibilities and accountabilities and time frames, and so on...You don't start until you've got that in place!"*

Once an SBU believes it has built a compelling business case and a sponsor for the project has been identified, organisations in our sample then required the proposal to be scrutinized by a higher level entity or committee, usually associated with strategic planning. This might be a steering committee, it might be conducted within the corporate strategy department, or it might be an independent business project office, but all reported some higher level scrutiny of the SBU proposals. In some organisations, only large proposals went to the Board for scrutiny: in others, all initiatives regarded as

strategic went before the Board. All the CIOs interviewed reported formal IS/IT planning processes and mechanisms, with plans and strategies subject to more frequent reviews (3-6 monthly), where business goals, objectives, and priorities were re-evaluated, and then IS/IT initiatives re-evaluated in the light of possibly changing business initiatives. It was during this process that new proposals for IS/IT investments were considered, with very careful scrutiny of each proposal being conducted to ensure that any resultant IT investment would be aligned and consistent with strategic business imperatives. Similarly, during this revisiting of business priorities, it was not impossible for projects underway to be stopped, if a shift in business focus had occurred which would suggest that a particular IT initiative was no longer so important.

> A: in each area of our business, we've got business steering groups that, within the budget of that business group, will approve the projects - now they typically approve up to a project of about $1 million. We've then got an overall IT steering group which is chaired by our Chief Executive and that would approve the larger projects. When they are over a certain size they would end up going to the Board as well

CIOs reported that there was now a broad business focus for projects involving IT. The focus of the business case for projects was not simply limited to consideration of the introduction of new technology. Rather, a broader perspective that encompassed business process change was taken, where business processes redesign was interwoven with the IS/IT investment.

> K: another focus is that we do not just look at the technology, we look at business processes...we've defined information systems as information, systems, and related business processes

Projects that survived the scrutiny of the business case were then prioritised on the basis of the extent to which they were seen to be directly related to key business initiatives, and according to their perceived ability to deliver value to the business. Thus, although the projects surviving to were seen as aligned with business strategy, yet more rigorous assessment of the costs and the likely benefits was considered necessary. One CIO interviewed described this scrutiny as "applying a blowtorch to investment proposals". Typical of the sentiments expressed are the words of one manager who said, "We don't like surprises". The CIOs were very aware of the apparent ease with which IT projects could get out of control, and hence were careful in conducting rigorous investigation and analysis to prevent this from occurring wherever possible.

> E: IT investments...go through this sort of more detailed analysis process, and at that stage the business and the IT guys have got to - you've got to commit in - you've got to say - 'I will do this within this cost by this date and achieve this benefit' - so if it doesn't stand up to that more rigorous test - then it doesn't go ahead

At this phase, risk profiles were developed for all projects, as risk management was seen as one key aspect of successful projects. Projects at this stage were still subject to being terminated. Many of the CIOs stated that if there were still considerable doubts about the ability of the organisation to implement a viable system that delivered business value, they would have no hesitation in cancelling the project at this stage. Only when organisations were very confident that their investment proposals were relevant to the business requirements, and that they had been subjected to a rigorous evaluation process, did they proceed with the acquisition of the system, with CIOs facing the dilemmas of the build vs buy dichotomy. Thus systems could be sourced through an in-house development project, but more often, it involved procuring packages and customizing them to suit in-house business processes, possibly from a number of different vendors. Customisation was sometimes done in-house, but at other times was left to the software vendor, or recognised consultant, to do.

In seven of the eleven organisations interviewed for this research, the 'buy' model was the preferred, but not sole, approach. The reasons stated for this was generally packaged software was seen as a cheaper option, it was seen as more predictable, and it generally took less time to implement a working system. In the two organisations where the norm was to develop systems in-house, and in the

other organisations in those cases where they decided to build in-house rather than buy software, there were a number of compelling reasons why this was done. Firstly, CIOs reported that peculiarities of their business sometimes meant that purchasing systems was not appropriate. Many could identify internal business circumstances and processes that meant that available software packages were a very poor fit. Secondly, Australian corporate and tax law sometimes resulted in a poor fit of packaged software in terms of regulatory and reporting requirements. For highly innovative and strategic investments, packages were often not seen as appropriate. The final reason for a build option being preferred occurred when there was heavy IT involvement in the product/service mix of the company. In such cases, in-house development was often the preferred approach.

Irrespective of the build or procure decision, on-going evaluation and scrutiny of the acquisition process was the norm in these organisations. The specifics varied, but essentially involved either regular reviews by a steering committee, or involvement of a business project office that oversaw the progress of each IT project. During the acquisition phase, it was still possible for a project to be terminated if costs were found to be escalating, or business benefits becoming less likely to be realised, or the business need was changing, and so on. Some CIOs described a rigorous process of post-implementation reviews, driven by the business sponsors of the project, with some inputs from IT. Part of this was a review of typical measure of project management success (on time, within budget, to specification and quality requirements). In most of the organisations, post-implementation evaluation also involved measurement of the achievement of the goals and objectives for the IT investments, evaluating stakeholder satisfaction with the implemented system over time, and measuring the effects of business process changes.

> F: *We set milestones for each project then re-assess the investment on an ongoing basis…We're very very heavy on strict project management*

> J: *Yeah, we generally do post-implementation evaluation…not on time and budget issues. Oh no, it's more like "Did we achieve the business benefits and things like that?" It's on the positive side…and the achievement of benefits, or otherwise. Um, it'll be the IT people who pull together the review, but clearly it will need to draw on information and input from people right throughout the business*

However, many of the CIOs interviewed recognised the more important requirement to assess the delivery of business benefits (i.e. were the systems, once implemented, actually realizing the benefits identified pre-investment for the business?), but this was the area where there was most divergence in the organisations in our study. Only two of the eleven organisations reported formal, rigorous benefits realisation programmes, where serious attempts were made to measure benefits achieved over time. These two organisations linked expected benefits to performance measures of project sponsors and Business Unit budgets. So, for example, if a proposed system was claimed to be able to reduce operating costs in a particular business unit by 5% per annum, the operating budgets for that unit would be cut by 5% the following year, and the manager of that business unit would have his/her performance measures and rewards linked directly to the achievement of that 5% reduction.

> H: *So they say to me, "David, we've got this fantastic system for our business, it's going to reduce costs by 2% if you give me that system". I say "Go ahead, but I'm taking 2% out of your budget for next year." And the same thing on the revenue side, that would add to your budget. They've got to get it…it makes the investment proposals much more realistic and cautious…serious.*

Most other organisations recognised that this was an area where they needed to improve, and many stated that it was on their agendas as a "to do" item, conceding that this was an important area where they needed to improve. However, some of the managers were concerned about the resources required to undertake such a benefits realisation process.

> A: *We certainly do a post implementation review of all our projects but if the question is more around benefits, do we go back rigorously a year later or whatever and say 'okay compared*

to what we predicted how did we do?' I've got to say we haven't been strong on that as I think we should've been but the other factor of course is that there's always a lot changing in the business anyway, so it's very hard to attribute an improvement to one specific project...it tends to be look we think we've got 80% of the benefits from what we've already done - rather than put a whole heap of extra effort into chasing proportionately less benefits, let's stop, and accept that there is some weaknesses in what we've done but there are bigger opportunities elsewhere

The issue being grappled with here is that as CIOs, they felt torn between the potential to derive greater benefits from the existing investments, as opposed to diverting resources to exploiting other IT opportunities. Interestingly, most of the CIOs still tended to adopt the satisficing position (i.e. that delivering, say 80% of expected benefits was probably good enough and that the resources consumed in trying to achieve 100% or more would be better diverted elsewhere). The CIOs in this study were aware of proactive benefits realisation, and that looking to enabling business changes and activities could help achieve business benefits. However many CIOs admitted that this aspect of governance was not well established, and that they had not established an effective process of benefits realisation as part of the accepted routines of the organisation.

5.3   Delivering value to the organisation

The CIOs generally felt much more confident that IT in most cases could now be shown to be delivering value to the business. They were certainly more conscious of the need to be able to explicitly demonstrate value, and interestingly, a number of the CIOs felt that they had a responsibility to educate Boards in this regard. Without exception, our CIOs felt that the delivery of value had increased a great deal in recent years, but all conceded that there was more that could be done. Interestingly, a repeated comment was that rather than always looking to new investments, greater value could be delivered through better leveraging of existing substantial investments.

6   DISCUSSION

If the activity and practices identified in Table 2 and discussed in section 5 are categorised and synthesised, then arguably the model illustrated below in Figure 2. Thus, we would argue that at the very essence of the delivery of business value from IT are high level strategising, evaluation, and benefits realisation, all taken and interpreted broadly. This, the label 'strategy' in Figure 2, would be taken to embrace all those activities and processes involved in identifying opportunities, understanding the business strategy and being acutely aware of how the IT strategy and specific IT initiatives are aligned with business directions, understanding the business change project of which IT forms an important components, and so on. Similarly, by 'evaluation', we include literally a calculation of the worth of an initiative, but also the life cycle of evaluation practice (Willlcocks and Lester 1997) that should accompany an IT initiative from conception to its death, including risk identification and management, establishing and evaluating the achievement of goals and objectives, and the like. By 'benefits realisation', we refer to the suite of activities that is involved in establishing what benefits an imitative could offer, establishing ownership and accountabilities for those benefits, identifying necessary business change so that benefits can be realised, and then proactively managing such that there is certainty that identified benefits have been achieved and every opportunity taken to leverage additional unexpected benefits form IT investments (Ward et al. 1996). We would argue that our research suggests that business value emerges from the rigorous performance of this framework of processes and activities, overlaid with appropriate governance of the IT resource in an organisation.

Figure 2:   The emergence of business value

Governance seems to involve a range of interconnected and overlapping elements.   In the organisations we studied, it appeared that governance was a function of articulating a vision and principles about the role and potential contribution of IT in a particular organisation.   This was coupled with clear structures by which decision making accountabilities and responsibilities were formally identified.   Principles and decision making structures, however, needed to be implemented via clearly articulated processes over time.   But in addition, there was a concern, almost an obsession with many of our CIOs with building organisation wide IT capabilities and relationships, and adapting these over time, in order that appropriate systems and services could be delivered to the organisation, creating appropriate business value (see Figure 3 below).

Figure 3:   The Elements of IT Governance

Thus, it is our contention that good IT governance processes accomplish at least three broad objectives: they support an environment for the development, exercise and exploitation of IT resources and capabilities; they provide a framework for the fruitful exploration and explication of relationships between the IT function and the rest of the organisation; and they formally define, identify and underpin a series of organisational routines and procedures through which the business value of IT is realised and IT risk contained.

7   CONCLUSION

The research reported in this paper investigated the processes and practices by which organisations aim to achieve business value from their IT investments, studied from the perspective of CIOs in large, mature private companies, using the Soh and Markus (1995) model as a lens by which the statements of the CIOs were organised and interpreted. Our research revealed a vigorous interest in deriving value from IT, and substantial agreement on what was meant by business value. All CIOs argued that their organisations had undergone and were still going through a period of significant change with respect to IT, where the techno-centric behaviours of the past were being rejected by Boards, and a new, business-centric philosophy was emerging. This new perspective resulted in a focus on business change projects (with IT often a significant part of that change initiative), and on building relationships with key business stakeholders both internal and external to the organisation in order that excellent IT services could be provided organisation-wide. Our interpretation of the range of activities and practices reported by the CIOs that contributed to the delivery of value suggests that these can broadly be classified into those activities and practices associated with a concept of strategising, those

associated with a concept of evaluation, and those associated with a concept of benefits realisation. Through the interconnectedness and interdependencies of these three broad concepts, CIOs expressed increased confidence in their abilities to oversee the achievement of business value from IT. However, also critical to this process of delivering business value was the notion of governance of IT. The CIOs reported that governance had to do with control, but efforts to exercise control seemed to be realised through relationship building and architecting appropriate organisation-wide capabilities over time. Furthermore, governance was implemented through a series of principles, or statements of philosophy with respect to the role of IT in an organisation, through sound structures, where decision making roles, responsibilities and accountabilities were clearly defined, and then implemented through on-going processes, where elements associated with strategy, evaluation and benefits realisation were monitored and thoughtfully controlled. However, while the broadly defined activities associated with strategy and evaluation were being paid close attention, CIOs were still at times hesitant and grappling with the issues associated with benefits realisation initiatives. Our research suggests that business value was an emergent property of these interconnected and overlapping activities and behaviours. Although other researchers in the past have studied isolated elements in this process, our research provides an interesting, holistic view of the sum of activities involved in the delivery of business value from the perspective of CIOs.

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