

# IT Governance at QUT

Warren Fraser and Robyn Tweedale

Queensland University of Technology

[w.fraser@qut.edu.au](mailto:w.fraser@qut.edu.au), [r.tweedale@qut.edu.au](mailto:r.tweedale@qut.edu.au)

Since 1999, QUT has invested considerable effort in developing its IT Governance practices, procedures and capability. This paper will outline and discuss key aspects of that effort. A Vice-Chancellor chaired, strategic governance committee has been established. Annual production of an IT Portfolio provides an analysis of QUT's IT expenditure and provides informational context to inform IT governance. Central IT funding provision has been aligned with "bricks and mortar" capital expenditure in an Asset Management Plan. An over-arching project registry and surrounding "gating" processes and procedures are in place for centrally funded IT projects. The paper will also discuss the issues and contention surrounding determination of central IT expenditure and consider future development of the IT Governance agenda at QUT.

## 1 Introduction

Information Technology governance is generally acknowledged to be critical to the successful development and maintenance of IT infrastructure in organisations, including universities. Queensland University of Technology (QUT) has been working for several years to develop a governance model for IT, including an executive governance committee, designated project managers and strategic planning and management processes. This model has enhanced QUT's ability to develop an effective IT infrastructure, strategically integrated with the physical infrastructure development and overseen by governance representatives from across the university.

We would like to firstly outline the principal elements of the governance model at QUT and then report the results of some recent research into IT governance and management at QUT. We hope that this model may be useful to other higher education institutions in understanding the processes, advantages and issues with IT governance.

## 2 Elements of IT Governance at QUT

### 2.1 Information Technology Strategic Governance Committee

The Information Technology Strategic Governance Committee (ITSGC) is the focal point for IT planning at QUT.

The membership of the committee is quite consciously set at a senior level. Senior University Officers include the Vice Chancellor, Deputy Vice Chancellor, Pro-Vice Chancellor (Information and Academic Services) (PVC(IAS)), Registrar and 2 Deans

Whilst the Vice Chancellor is the Chair, the majority of the submissions and meeting-to-meeting actions are the responsibility of the PVC(IAS). The PVC(IAS) position has many similarities to a corporate CIO position. The position has line reporting responsibility for much of the University's IT and very strong influence over IT developments which occur outside direct line reporting authority.

The two Deans play a key role ensuring that academic business outcomes are held firmly in mind in discussion of IT initiatives.

Non-staff representation on the committee is also important. Non-staff members are:

- A nominee of the Vice Chancellor drawn from industry – currently a CIO of a publicly-listed, Brisbane-based bank and insurer.
- A Council member – currently a former Faculty of Information Technology student of QUT and now Chief Executive Officer of a Brisbane based IT business.

While these external members are not heavy contributors to debate, their contributions have been pivotal to the strategic direction taken in several cases. The “out-of-sector” background that these members bring to the table provides an important questioning of assumptions that would otherwise not occur.

The Director of IT Services and Project Portfolio Manager are not officially members of the committee but have, in practice, become regular attendees. The Project Portfolio Manager reports to the Director, IT Services and works closely with the PVC(IAS). The Project Portfolio Manager drafts many of the submissions to the committee.

It is interesting to note the committee has no student representative which is arguably a failing.

The committee’s Terms of Reference indicates the committee:

- Monitors and reviews the portfolio of QUT information technology investments
- Monitors and reviews University direction and strategic deployment of information technology across all teaching and learning research and administrative activities including infrastructure planning
- Reviews and accesses project management activities underway for the achievement of QUT goals and objectives
- Monitors and reviews the QUT Asset Plan
- Monitors and reviews information technology issues as appropriate

A review of progress of major projects is undertaken each meeting. This takes the form of a scan through the project registry index (see Section 2.2). Discussion naturally focuses on projects which are reporting issues, however members often question aspects of other projects. A review is also undertaken of a financial report for central IT infrastructure and projects (see Section 2.3).

Strategic Briefings have become an important component of meetings. These are very concise documents, normally just one page in length, about a specific technology or issue. In many cases these provide an opportunity to discuss IT initiatives at a very early stage of consideration – well before they evolve into fully scoped and costed projects. These discussions often provide an important and early steering of “corporate thought” on issues. Example topics from recent briefings include wireless networking and the E-locker concept (generic web based file storage i.e. WebDAV). Security is a regular topic for strategic briefing, reflecting the broader IT industry interest in this issue.

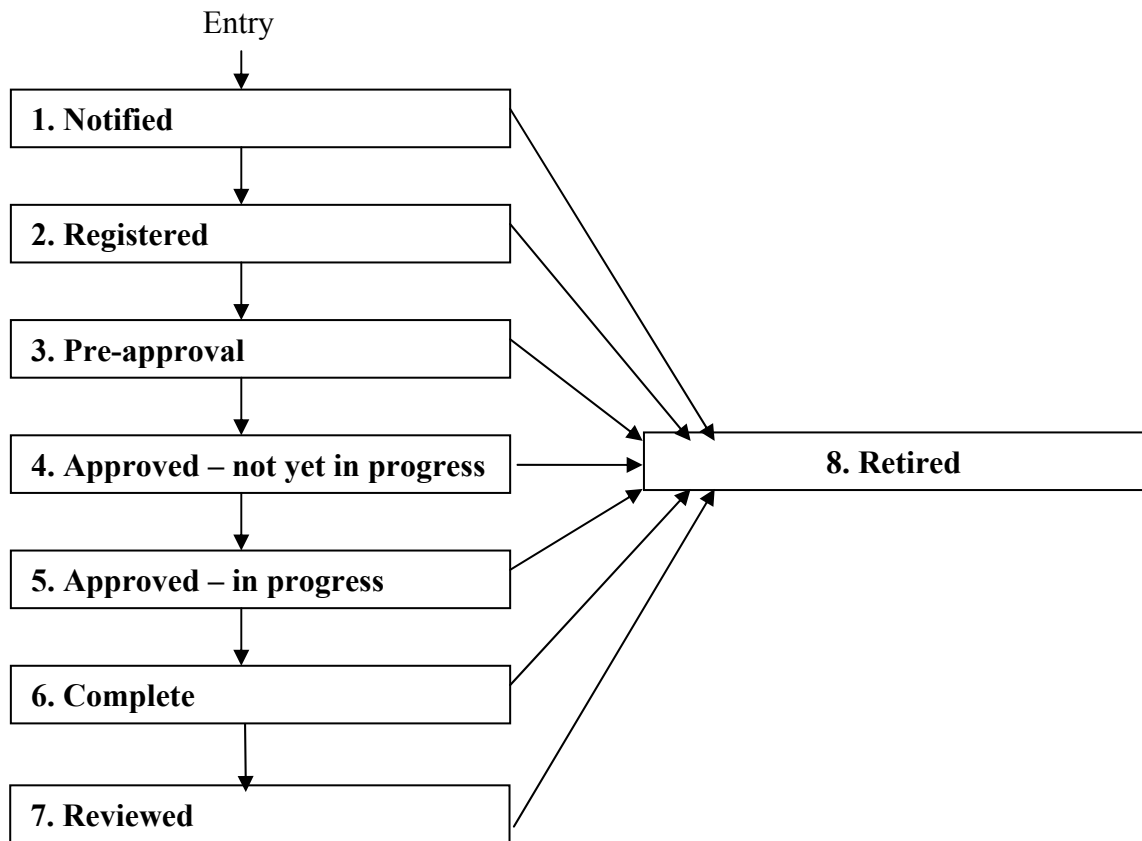
A strong emphasis in the second half of each year is determination of allocation of subsequent year central IT funds. This is discussed in more detail in Section 2.3 Asset Management Plan.

## **2.2 Project Registry and Framework**

The Project Registry is a key tool of QUT’s IT Governance activities. At the simplest level it provides a very brief report of IT projects underway in the University. An extract from the Project Registry Index is shown at Appendix 1. At the time of formulation of the Project Registry Index, considerable effort went into establishing a clear and coherent strategic focus. As an example, the column headed “outcomes” has the potential to have a range of quite divergent styles if the content were simply sourced from each project manager. The Project Portfolio Manager is responsible for authoring the text to ensure it is coherent, concise and strategically oriented. In the case of the “outcome” column this takes the form of a statement that indicates the beneficiaries and how they benefit. For example, the Messaging Project has:

*The University community benefits from improved email system reliability, capacity and operational efficiency. Staff will benefit from introduction of remote email access via the web and improvements in the area of email list administration.*

The project registry also provides an over-arching framework tracking the life cycle of projects. There are a number of different phases.



**Figure 1: Project Registry Phases**

Another key component of the Project Registry is the distinction between major and minor projects. Minor projects can be approved by the PVC(IAS), whereas major projects are approved by ITSGC.

The last column of the Project Registry Index is “status/issues” This column is updated quarterly. Coloured “smiley” faces are used to give a quick indication of status, i.e.



Green



Yellow



Red

The following table is extracted from the Project Registry Framework.

Colour	Description	Reporting Action
Green	There are no significant issues. The project is progressing as planned.	None.
Yellow	There is one or more issues which threaten the success of the project however the project manager and/or steering group do not perceive it as having reached the "red" threshold. No governance action is sought.	The issue(s) will be briefly outlined in the Project Registry Index.
Red	There is one or more significant issues which threaten the success of the project to the extent of: <ul style="list-style-type: none"> <li>• 30% or greater cost overrun;</li> <li>• 30% or greater timeline overrun;</li> <li>• likely failure to deliver a significant component of anticipated project outcomes;</li> <li>• significant external factors emerge which prompt reassessment e.g. vendor takeover, merger or bankruptcy which raises questions as to their product's viability.</li> </ul>	The Project Manager and/or Steering Group will prepare a submission to ITSGC (for major projects) or the PVC (IAS) (for minor projects) outlining the issue(s) and providing a recommendation and rationale for its management.

**Table 1: Project Status Colour**

The Project Portfolio Manager requests advice from project managers at the end of each quarter. ITSGC reviews each quarterly update to keep informed and provide direction where appropriate. A summary of changes document is prepared to draw attention to significant issues and easily identify quarterly changes (the index is over 30 pages long).

The Project Registry has improved communication and provided a vehicle for improving university-wide knowledge of significant projects. It has also provided an effective gating mechanism at the initiation and approval phases of the project life cycle. The Project Registry does not specifically address how to handle programs (i.e collections of related projects). This is arguably a significant failing and its intended to address this in 2003 in a revision for a broader university-wide Project Management Framework.

### 2.3 Asset Management Plan

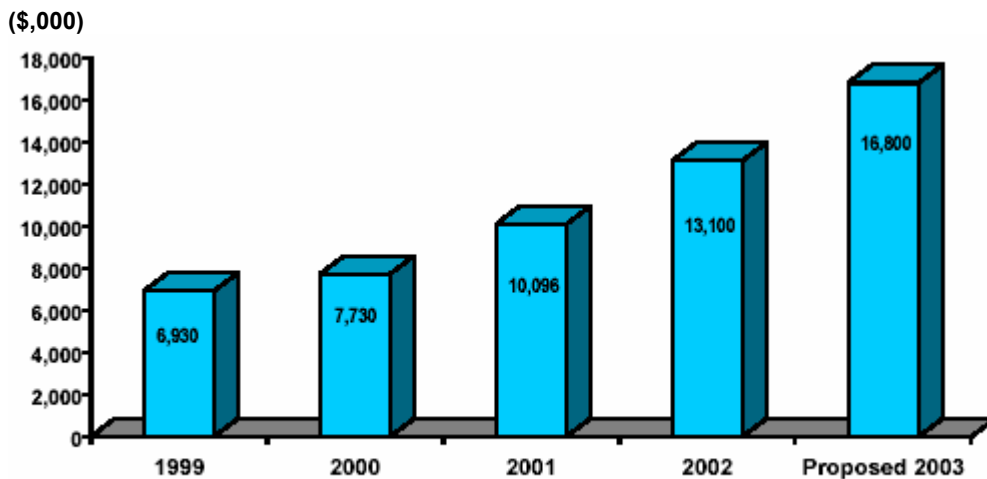
Each year the University prepares an asset management plan covering the next five years. The scope of the plan includes both physical and virtual assets i.e.:

- Major building projects
- University minor works
- Faculty minor works
- Deferred maintenance (physical)
- University IT Infrastructure and projects (referred to as AMP(IT))

An important reason for establishing a plan which covers both physical and virtual assets is advantage of being able to consider and prioritise without the restrictions of inflexible funding “buckets”. The following text from the AMP 2003 – 2007 addresses this issue.

*The planning framework for this asset management plan provides a forum in which to consider and prioritise issues across a diverse range of areas in which all physical and virtual assets exist in tandem to support the business objectives of the organisation. Taking this holistic and collective view of assets provides a more appropriate perspective for asset planning, resourcing and management from which the University can consider issues such as the relative merit in undertaking a new IT initiative versus a major building renovation. The broader context of the asset management plan allows the University freedom to consider, determine and achieve the vision of the integrated, physical and virtual University it wishes to become.*

In practice, historical funding precedents have significant inertia. Nevertheless, there has been at least one case where funds have been shifted into the AMP(IT) because of critical and urgent demands. It is also worth noting that there has been a consistent increase in overall funding for the AMP(IT) over the years of its existence. The following graph illustrates this point.



Note: 2003 funding includes \$2.8 million for a PABX replacement.

**Figure 2: AMP(IT) Funding Growth**

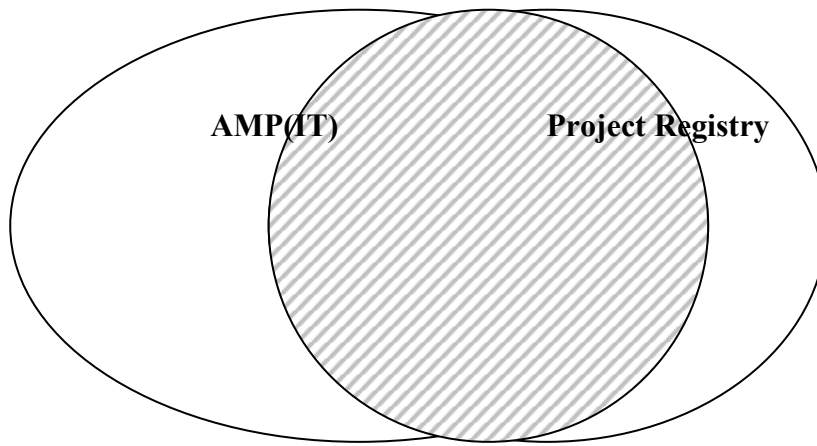
Another important factor of the AMP(IT) is that it consolidated a number of previous funding “buckets” which existed in 2000 and before i.e.:

2000 Funding Program	\$ Million
IT Strategy	1.98
IT Maintenance	0.50
IT Contract Maintenance	1.60
CASMAC	2.00
IT Infrastructure	1.60

**Table 2: Pre AMP(IT) Funding Sources**

The integration of these funds into the AMP(IT) has allowed a more strategic approach reducing inappropriate compartmentalisation.

The correlation between the Project Registry and AMP(IT) deserves mention. The following diagram illustrates the relationship.



**Figure 3: AMP(IT) – Project Registry Relationship**

Most of the projects in the Project Registry are funded by AMP(IT) mechanisms (i.e. the shaded area in the diagram). There are however projects in the Project Registry which are not funded from AMP(IT) but are still significant in terms of University IT Strategy. The most obvious example is the online teaching (OLT) initiative which has a separate funding source. Conversely, a substantial component of the AMP(IT) is non-project in nature and is therefore not in the Project Registry. Examples include: contract maintenance (which encompasses central software licensing costs) and rolling equipment upgrades for central student laboratories and central lecture theatres.

The process for determination of allocation of AMP(IT) has evolved over the last three years. In 2002 a group of five staff prepared recommendations for ITSGC consideration. The positions of the staff in the group were:

- Director, IT Services
- Project Portfolio Manager (Associate Director, IT Services)
- Administrative Systems Coordinator (Associate Director level position in The Registrar Division.
- University Budget Manager (Associate Director, Finance and Resource Planning)
- Corporate Information Systems Manager (Associate Director, IT Services)

This group developed a Business Case Proforma which was completed by project/activity stakeholders. The proforma prompts for a number of issues including a brief description of the initiative, costing, timeframe, brief cost/benefit statement and impact of not doing. An iterative process then followed with a draft budget being cast and stakeholders being asked to clarify the impact of that budget. The budget was then re-cast in light of feedback, and so on. Great care was taken to ensure balancing of resources. The allocation to the different areas needs to be linked, coherent and provide an end-to-end outcome. For example, the business area for an administrative system development needs staff resources to progress the initiative. The initiative may also require database administration resources from the Corporate Information Systems area. In addition, there may be some requirement to boost central host capacity.

## **2.4 IT Portfolio**

The IT Portfolio is an analysis of QUT's Information Technology investments over a calendar year. Central as well as distributed IT investments are included. The purpose of the IT Portfolio is to provide informational context to inform future IT investment decisions and IT Governance in general.

The IT Portfolio includes expenditure on information technology support and development, staffing, equipment and software. The analysis is shown through a number of different dimensions:

- IT service type
- Maintenance (investment to maintain current IT services) versus development (to extend and enhance IT services)
- Funding source

Expanding on the first point, the IT service types are:

1. Network and associated core infrastructure services and facilities
2. Core network applications
3. Telephones
4. Call Centre services
5. Staff desk equipment support
6. Teaching, learning and assessment support
7. Research support
8. Corporate system IT support
9. Support liaison and leadership
10. Server management

The IT Portfolio is, in many cases an informed estimate. It is not considered to have the accuracy of a financial system report although where possible it does. The information is based on data and estimates collected from Faculties and Divisions across the University. The entire portfolio consists of approximately 20 tables. One of the key tables is shown in Appendix 2.

A related development is the undertaking of an Activity Based Costing (ABC) analysis of the IT Services Department in 2001 and 2002. This activity has refined the costing model of the IT Portfolio. Plans for wider deployment of Activity Based Costing are being considered in the University's Division of Finance and Resource Planning.

The establishment of the IT Portfolio has provided improved understanding of IT expenditure within the University. It has provided Executive level staff of the University with the context and a summary level of understanding of typical annual IT expenditure. An important aspect that is not encompassed within the IT Portfolio is any comparison to other Universities or organisations outside the higher education sector. It's hoped to pursue benchmarking opportunities throughout the remainder of 2003 in conjunction with CAUDIT via the EduCAUSE Core Data Survey.

### **3 QUT Research on IT Governance**

#### **3.1 Context of Research**

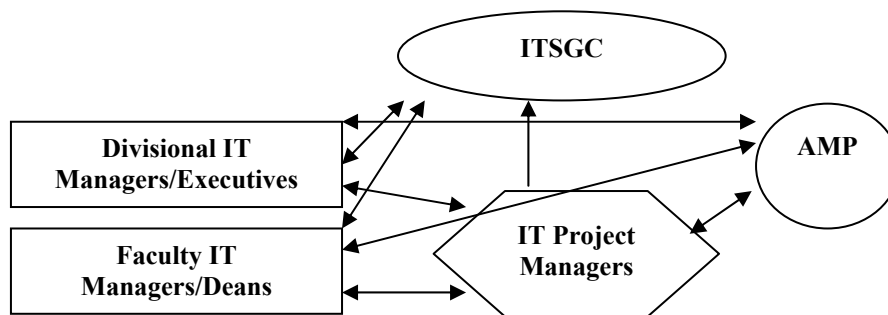
We have outlined the origin and current development of the IT governance model at QUT. In 2001, the model attracted interest from the Department of Education Science & Training (DEST) and QUT was encouraged to apply for a research grant under the DEST Higher Education Evaluations & Investigations Programme (EIP). QUT was successful in obtaining the EIP grant to research the QUT IT planning and governance model. Robyn Tweedale was employed in 2001 and 2002 to conduct the research as a case study, to be reported via DEST to the Australian higher education community. The report will be published shortly.

Robyn Tweedale also extended the research case study with survey research and comparisons to literature models to complete a Master of Information Technology (Research) at QUT. The thesis is currently under examination. We will now report some of the key findings and outcomes of the research, particularly in relation to IT governance and how IT governance is enhancing QUT's systems and resources.

#### **3.2 Methodology of Research**

The research was conducted with a rigorous case study methodology, based on Yin's (1994) seminal Case Study Protocol and design. QUT documentation was examined, such as plans and management reports, committee agendas and minutes, IT project proposals and documentation, and budget planning and reporting documents. The documentation provided the origin and background of the governance approaches and practices and evidence of how the governance model was operating. Interviews were conducted with 26 staff across QUT. The interviews were conducted with many levels of staff, from senior QUT executives and external members of IT Strategic Governance Committee (ITSGC), to senior managers and faculty deans involved in IT planning and governance, to IT managers and project

managers involved in day-to-day IT planning and implementations. Four ITSGC meetings were observed, with particular attention on the governance process and the discussions of integrated IT planning and strategic IT management.



**Figure 4: IT Governance Stakeholder Interaction**

The case study method led to the initial determination of the origins and development of the model at QUT for IT planning, management and governance.

The case study also led to confirmation of the research propositions about the success and limitations of the governance model. The extended research considered empirical and anecdotal evidence from the literature to provide the necessary background and issues in IT governance and planning for the national and international context. The literature also provided support for many of the assumptions behind the implementation of the QUT governance and planning model. One primary source of relevant research was from a survey developed by King and Teo (1996;1997) who evaluated the level of integration of IT planning with organisational planning as a key indicator of successful IT planning and implementation. This research was later extended into the U.S. higher education sector by another researcher (Lesko, 1999).

The survey was adapted and revised for use within QUT as a single organisation and to provide both quantitative and qualitative evidence of the integration of IT planning with university planning and the correlation of this integration to the success of IT planning at QUT. Integration of IT planning with organisational planning is generally advocated, although not at the expense of innovation or flexibility of the IT infrastructure. The questionnaire assessed the level of integration as it is perceived by IT managers and university executives, and against benchmarks that have been shown to provide statistically significant indicators of IT planning integration and satisfaction with IT planning. Spearman Rho correlation coefficients were calculated for statistical analysis and comparison to previous research.

<i>Survey Data</i>	<i>Design</i>	<i>Reporting</i>	<i>Analysis</i>
<b>Perceived Level of Integration (IT Planning with University Planning)</b>	Choice of four levels	Mean for each respondent group & overall mean	Correlation to average of benchmark measures of integration
<b>Benchmark Measures of Integration (IT Planning with University Planning)</b>	Five benchmarks on four-point scale; Five benchmarks on seven-point scale	Mean for each respondent group & overall mean	Correlation of benchmark measures of integration; Correlation to perceived level of integration; Correlation to average of benchmark measures of effectiveness
<b>Benchmark Measures of IT Planning Effectiveness</b>	Four benchmarks on seven-point scale	Mean for each respondent group & overall mean	Correlation of benchmark measures of effectiveness; Correlation to average of benchmark measures of integration
<b>Comments &amp; Examples</b>	For each response & overall	Selected representative of positive & negative	



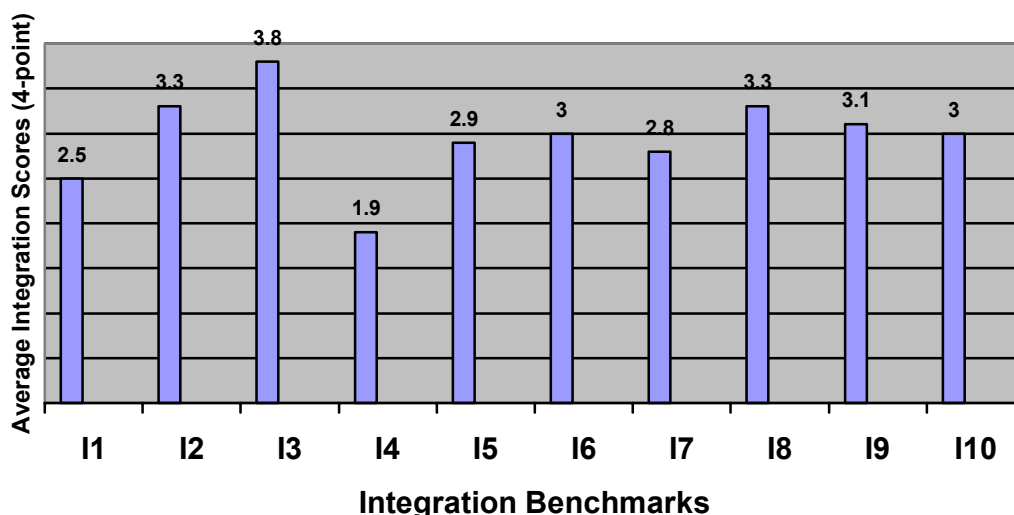
### 3.3 Research Results

#### 3.3.1 IT Integration Results

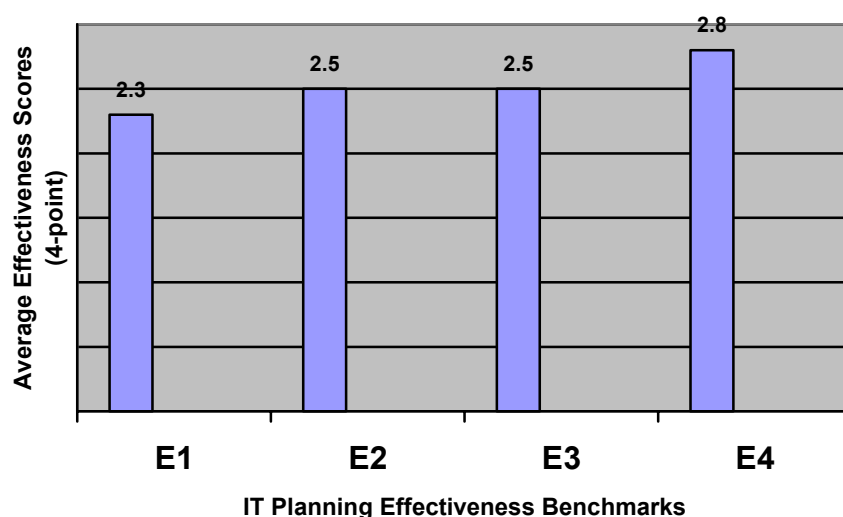
The survey revealed detailed perceptions about the real integration of IT planning and governance with university planning and management processes. In general governance was perceived very highly, with the Pro-Vice-Chancellor (Information & Academic Services) seen as an integral member of QUT planning processes and a figurehead for IT planning in the senior executive of QUT. The overall figures for perceived level of integration and the benchmark measures for integration and satisfaction with IT planning are shown in the table below.

Survey Data	Mean	Correlations	Analysis/Comments
<b>Perceived Level of Integration (IT Planning with University Planning)</b>	2.4	Perceived/Benchmarks Rho=0.506 (p=.004)	Integration between 'Sequential' and 'Reciprocal' High correlation confirms actual level of integration
<b>Benchmark Measures of Integration (IT Planning with University Planning)</b>	2.8 3.9 (2.5)	Between Benchmarks 17/45 significant Integration/Effectiveness Rho=0.497 (p=.004)	Integration close to 'Reciprocal' (IT Planning both supports and influences university planning) High correlation of integration to planning effectiveness
<b>Benchmark Measures of IT Planning Effectiveness</b>	3.9 (2.5)	Between Benchmarks 5/6 significant Integration/Effectiveness Rho=0.497 (p=.004)	Overall effectiveness perceived only as moderate Significant predictors of IT planning effectiveness in these 4 benchmarks

The individual results for the benchmarks are particularly relevant, as they demonstrate clearly the strengths and weaknesses that exist in the QUT IT governance model. Most interesting is the excellent result for benchmark I3, which shows that the role of the Pro-Vice-Chancellor (Information & Academic Services) in IT planning is as an integral member of senior university management. The lowest result for planning effectiveness is for benchmark E1, showing that IT planning processes are not smooth and efficient. This is unsurprising, as the processes are still immature and developing. The benchmark E4, on the other hand shows a more positive perception that IT planning processes lead to improved quality for QUT. One anomalous result may be seen with the positive result in benchmark I8 for student participation in IT planning processes. This is despite the lack of a student representative on either the ITSGC or the subordinate committee with the faculty computer officers and IT Services consultants. Evidently student representation is coming through alternative mechanisms.



Integration Benchmarks	Measures
I1	Whether IT planning facilitates work processes, facilitates university planning, influences university planning, or is joint with university planning
I2	Whether IT functions are technical in nature, facilitate university strategy, influence university strategy, or are joint with university strategy
I3	Whether the role of the Pro-Vice-Chancellor (Information & Academic Services) in IT planning is as a functional administrator, an IT implementation expert, an IT strategy expert, or an integral member of senior university management
I4	Whether performance measures for IT are their operational efficiency, their contribution to QUT strategy, their quality of inputs to strategy formulation, or their long-term impact on QUT
I5	Whether the triggers for IT development are automation of work processes, consideration of QUT goals, consideration of goals and possibilities, or the critical role in QUT strategy
I6	The frequency of participation in IT planning of the top QUT management staff
I7	The frequency of participation in IT planning of staff
I8	The frequency of participation in IT planning of students
I9	The frequency of the Pro-Vice-Chancellor (Information & Academic Services) in general and physical planning
I10	The frequency of consideration of new technologies in IT planning

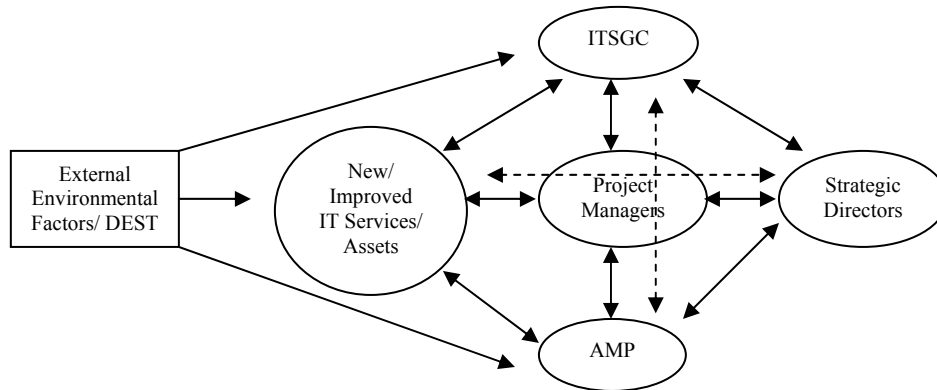


Effectiveness Benchmarks	Measures
E1	Whether the IT planning and governance model can be characterised as smooth-running and efficient
E2	Whether the IT planning and governance model can be characterised as well-informed about its impact on the university
E3	Whether the IT planning and governance model can be characterised as aware of the implications and assumptions implicit in the processes
E4	Whether the IT planning and governance model can be characterised as a process that leads to improved quality for the university

The correlation of the integration benchmarks average to the average of the IT planning effectiveness is very significant ( $Rho=0.497$ ;  $p=0.004$ ). This correlation indicates a definite relationship between integration and planning effectiveness. Although not necessarily a causal link, this relationship clearly demonstrates that a higher level of integration of IT planning within the university is positively related to a higher level of IT planning effectiveness.

### 3.3.2 IT Governance Results

It is clear from the research that the advent of ITSGC has been a very significant step forward for QUT. It has provided a forum for discussion of IT planning priorities and development within the context of other university priorities. All major and minor IT projects are now considered by the same staff who are involved in top-level planning for other resources, including human resources, and determine the strategic goals for QUT. ITSGC is playing a vital role in the cycle of planning, development and implementation of IT within the university.



**Figure 5: ITSGC Context**

ITSGC is still struggling with the strategic significance of IT within the university, and its relative importance to other initiatives. Additionally, many staff involved in IT planning and development are still unclear as to the role of ITSGC in ongoing priority setting and in budget allocation, once a project has been approved. The research clearly demonstrates that ITSGC must communicate more effectively with the wider organisation and must embed strongly the processes for IT project approval, maintenance and development.

*The VC has been very active in his support. The Registrar has played a strong role in project sponsorship and is a role model for this role to other project sponsors. The Deans of Faculty of IT and Faculty of Business are playing key roles and have been very supportive. Discussions within ITSGC illustrate that the Committee members are learning very rapidly about the strategic role they need to play.*

(Quotes are anonymous and have been edited to protect privacy)

The research clearly demonstrates that governance and management is more effective and accountable to strategic plans and budget allocations. IT implementations are much more visible across the entire university. However, greater accountability is still required on terms of return on investment, with evaluation of implementations still lacking within the university. Additionally, planning processes lack a "whole of life" focus, and require greater emphasis on maintenance and ongoing development, rather than a simple project framework.

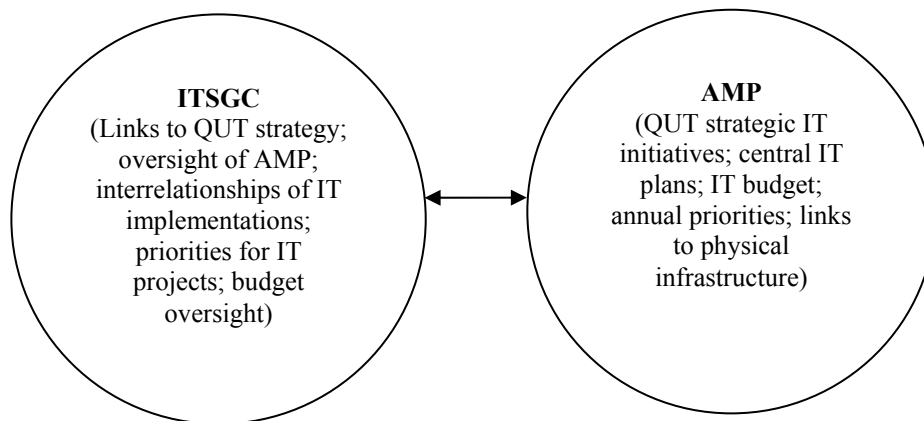
*There's a lot more education that needs to occur all round. The technical people don't really understand what the business is doing. They think they do but they don't and the business people don't really understand what's involved in producing some of the technological benefits, or there's some learning that needs to occur...*

*I think that all projects that are in here should have end-to-end costs. The reality is that anything that ends up on this [Project Registry] has to have a technical component to it. So therefore we need to cost the business, the technology and the change control of implementing it in the organisation.*

## 4 Conclusions and Futures

### 4.1 Connecting the Systems at QUT

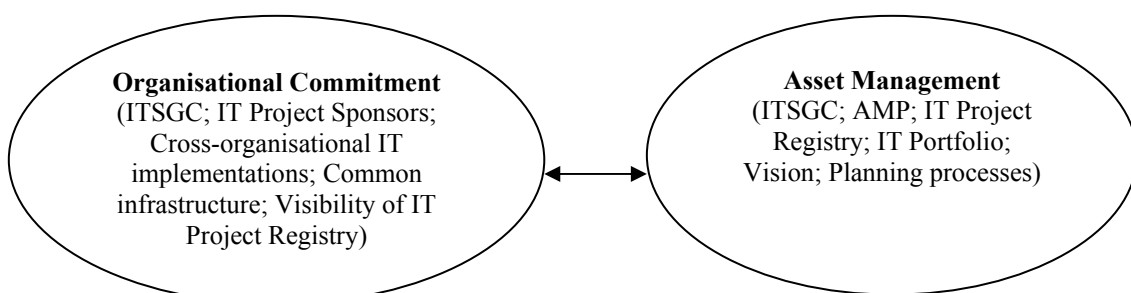
The results of the research indicate that QUT is enhancing its ability to connect the systems through strategic governance. It is clear from this research that QUT has achieved benefits from the adoption of the IT governance model. There is increased integration of IT planning and management with university planning and management, as well as clear links between IT and university strategy. The IT budget has been consolidated and linked through ITSGC to the planning process, thus increasing visibility and adoption of IT innovation across QUT. The Asset Management Plan (AMP) and planning processes are ensuring close links between IT planning and QUT strategy. ITSGC, with its links to QUT Council, external industry and QUT faculties and divisions, ensures strategic oversight of IT development and implementations. ITSGC ensures systematic priorities are set for IT projects and that budget oversight is coordinated with physical infrastructure maintenance and development.



However, some problems still exist. ITSGC processes are still immature and require some refinement in regard to communication and definition of roles in priority setting. There is a clear lack of organisational vision for IT, and many staff are still unclear as to the strategic goals for IT on a long term basis. More flexibility is still required within the AMP to link IT planning and budget more closely with physical infrastructure planning and budget, and other university planning processes. Additional rigour is required in IT management processes, requiring a whole-of-life focus and performance measurement of IT implementations for increased accountability and future planning.

### 4.2 Harnessing the Resources at QUT

Harnessing the resources is an ongoing issue at QUT. Significant advances have been made in the form of ensuring organisational commitment to the strategic development of IT resources, using executive project sponsors, IT strategic governance and with the IT Project Registry and the AMP providing the entire organisation with a clear picture of central IT developments and innovation. IT management processes have been reformed to provide greater accountability and a clearer framework for IT project planning and management. A more common infrastructure for IT has developed as a result of the IT Portfolio. This has ensured greater interoperability and equity in IT assets, staffing and systems.



### 4.3 Futures for IT Governance

QUT has made significant strides forward with the IT governance model. However, gaps still exist and problems are still apparent. QUT must now concentrate on fully "Connecting the Systems" by:

- Filling the vacuum of an IT Vision & Strategy - Through many comments from the research and also from other surveys, including the recent Division of Information & Academic Services Quinquennial Review, it is apparent that QUT desperately needs a vision for its IT future. Many staff are still unclear as to the university's IT directions and this vacuum is the source of confusion and miscommunication.
- Ongoing system funding - Life-cycle planning must involve funding for ongoing systems development and maintenance. No longer can the "straight-jacket" of project planning fully sustain the planning processes for IT at QUT.
- Increasing contract maintenance costs - It is clear that contract maintenance costs are increasing, and this requirement must be built strategically into the budget.

QUT must also concentrate on more effectively "Harnessing the Resources" by:

- Evolving the IT Portfolio into a more effective benchmarking tool. QUT must work with CAUDIT & EDUCAUSE Core Data Service to develop a consistent Australian framework for IT benchmarking across the higher education sector. Only with this clear framework can universities begin to assess needs, strengths and weaknesses in their IT infrastructure.
- The QUT Audit Section conducted the review of the IT Project Management Framework in 2002. This review raised key issues and clear concerns about project management processes and practises that are also reinforced by the research results. Issues such as increased consistency, clearer communication and information dissemination processes, clearer budget guidelines and more consistent priority setting must be addressed.
- Another issue to emerge resoundingly is that of ensuring measurement of outcomes of IT implementations, or benefits realisation. It is clear from the research results and from comments and perceptions that QUT is lacking in measurement processes and must ensure this is addressed as a priority.
- QUT has begun to investigate the implementation of consistent and comprehensive project management software. It is hoped that the implementation of software for IT project management will address some of the issues with processes and procedures, as well as addressing concerns of consistency and measurement.

Overall the IT governance processes at QUT demonstrate significant benefits for QUT. The processes, at the time of the research, appeared to be unique in the Australian higher education sector, and other Australian universities may benefit from the study of QUT IT governance. Elements of the QUT model may be adapted and adopted by other universities with similar contexts and structures.

## Appendix 1 – Extract of Project Registry Index....

### QUT Information Technology Strategic Governance Committee (ITSGC) Project Registry Index

As at: 31/12/02

**Phase:** *Approved - In Progress*

**Scope:** *Major*

Ref.	Title	Outcomes	Description	Participants	Funding	Status/Issues
2001-06	<b>Prospective Student Database</b>	The University will be able to improve the management of its relationships with potential students resulting in higher demand for QUT course entry.	Investigate and recommend on options for a centralised database to manage and track interactions with potential students from the moment of first contact with QUT. Funding will be reviewed when options are determined.	<b>Sponsor</b> Sandra Harding (Bus) <b>Manager</b> Dearne Tronc (DAS) <b>Team</b> Ray Morley (Student Admin)	AMP 2001 (via CI) - \$100K  AMP 2002 - \$164K (+ \$57K carry-over from 2001)  AMP 2003 \$140K Carry over \$107.5K	<b>31/12/02</b>  The project is progressing as planned, albeit still behind schedule. Activities planned for 2002 are now expected to be completed by the end of Feb 2003. This slippage does not impact upon budget, as there are sufficient funds within the existing budget to complete 2002 planned activities to the revised timeline.
2001-07	<b>SMARTA</b>	University staff, particularly decision-makers, will benefit from a common, streamlined infrastructure to gather, integrate, and disseminate data across the University. Appropriate, meaningful, timely and accurate data will be provided to staff desktops in a form that each specific group requires.	SMARTA will build on the investments already made by QUT to utilise 'best of breed' applications in establishing a data repository that will extract, store and report data using ORACLE based technologies. Three priority subject areas will be delivered as part of the next stage of SMARTA: 1) Load Management Information; 2) Research Information; 3) International and Domestic Fee Paying Student Information.  In addition to the technical solution, SMARTA will also improve business processes associated with the delivery of the three subject areas.	<b>Sponsor</b> <b>Sponsor</b> Peter Sullivan (F&RP) <b>Manager</b> Wayne McCullough (F&RP) <b>Team</b> Sam Nielsen Georgette Aravena-Delorme Gorica Cupic	2000/1 - \$500K  AMP 2001 - \$300K AMP 2002 - \$308K (+\$71K carry over from 2001). AMP 2003 - \$350K (+\$18K carryover)	<b>31/12/2002</b>  Full student rollout completed and now available. Work underway on coding for automation of DEST submission 3 and 1. Finance data phase 1 completed. HR and Quantum reports now available through Business Objects Infrastructure. Work now underway on Research Master and further HR data uptake, as well as additional Business Objects reports for Student data, and uptake of historical data. Research Master implementation was moved to 2003 due to RM system not being fully ready.



## Appendix 2 – Extract of IT Portfolio....

**QUT IT Portfolio 2001**

**Scope: QUT Source: All**

(Estimates Only)

Service Type	Maintenance (\$,000)									Development (\$,000)							Total	
	IT Services		University AMP(IT) Projects					Other Faculty & Division	Subtotal	IT Services		University AMP(IT) Projects				Subtotal		
	Operating Grant	Cost Recoveries	Existing Infrastructure Maintenance	Network Backbone & Access Dev	Standardisation & Asset Management	QUT Virtual University Initiatives	Corporate System Development			Operating Grant	Cost Recoveries	Existing Infrastructure Maintenance	Network Backbone	Standardisation & Asset Management	QUT Virtual University Initiatives			Corporate System Development
<b>Network</b> eg: installation & changes, dial-in, internet access	1,334	687	835	0	61	0	0		2,917	429		0	621	56	0	0	1,106	4,023
<b>Core Network Applications</b> eg: email, diary, QUT virtual, core WWW pages	691		293	218	0	256	0	716	2,173	200		0	254	0	273	0	727	2,900
<b>Telephones</b> eg: installation & changes, mobiles	41	1,385	249	0	20	0	0		1,695	16		0	0	20	0	0	36	1,731
<b>Call Centre</b> eg: telephone operators, staff & p/g student helpdesk	454		17	0	0	0	0		471	81		0	0	0	0	0	81	552
<b>Desktop Support (for Staff)</b> eg: installation, problem solving, software purchasing, site licenses	427	846	17	0	48	0	0	6,440	7,777	172		0	0	48	0	0	220	7,997
<b>Teaching, Learning &amp; Assessment Support</b> eg: student helpdesk, PC labs, Library electronic services, OLT	84		1,059	0	0	0	63	5,009	6,215	0		0	0	0	655	252	907	7,122
<b>Research Support</b> eg: high performance computing, data visualisation lab, expo, researchers centre PC lab	352		219	238	0	35	0	1,431	2,275	135		0	0	0	30	0	165	2,440
<b>Corporate Systems IT Support</b> eg: Callista, Human Resources, Finance, Research, ID Card, Alumni	1,146		777	0	0	147	1,911		3,981	234		43	0	0	415	3,585	4,277	8,258
<b>Server Management</b> eg: LAN server administration	159	74	85	0	0	0	0		318	0		0	0	0	0	0	0	318
<b>Leadership, Support &amp; Liaison</b> eg: IT planning, helpdesk, training, strategic & operational partnerships	515		0	0	0	0	0	716	1,231	507		0	0	0	0	0	507	1,738
<b>Total</b>	5,203	2,992	3,550	456	129	438	1,974	14,311	29,053	1,774	0	43	875	124	1,372	3,837	8,025	37,078

### **Appendix 3 - Glossary of Acronyms**

AMP	Asset Management Plan
CMIC	Corporate Management Information Committee
DEST	Department of Education, Science and Training (Australia)
DETYA	Department of Education, Training and Youth Affairs (Australia)
IS	Information systems
IT	Information technology
ITSGC	Information Technology Strategic Governance Committee
OLT	Online Teaching (system)
PC	Personal computer
QUT	Queensland University of Technology
ROI	Return on investment
VC	QUT Vice-Chancellor



## References:

- King, W. R., & Teo, T. S. H. (1997). Integration between business planning and information systems planning: validating a stage hypothesis. *Decision Sciences*, 28(2), 279-308.
- Lesko, C. J. (1999). The integration of institutional and technology planning efforts in the North Carolina Community College system: a four-stage model approach. Unpublished Doctor of Philosophy, Walden University, Minneapolis.
- Teo, T. S. H., & King, W. R. (1996). Assessing the impact of integrating business planning and IS planning. *Information & Management*, 30, 309-321.
- Tweedale, R. (2002) Integration of information technology and physical asset planning and management: a case study of Queensland University of Technology. (Department of Education, Training and Youth Affairs, Higher Education Division, Evaluations and Investigations Programme). [Not yet published].
- Yin, R. K. (1994). *Case study research: design and methods* (2nd ed.). Thousand Oaks: Sage.