Queensland University of Technology: Three Generations of IT Governance (and Counting)

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Preface

The EDUCAUSE Center for Applied Research (ECAR) produces research to promote effective decisions regarding the selection, development, deployment, management, socialization, and use of information technologies in higher education. ECAR research includes

- research bulletins—short summary analyses of key information technology (IT) issues;
- research studies—in-depth applied research on complex and consequential technologies and practices;
- case studies—institution-specific reports designed to exemplify important themes, trends, and experiences in the management of IT investments and activities; and
- roadmaps—designed to help senior executives quickly grasp the core of important technology issues.

As part of its 2008 research agenda, ECAR recently published a study, *Process and Politics: IT Governance in Higher Education*, by Ronald Yanosky with Jack McCredie. The study examines the extent of participation in IT governance by campus leaders and constituents; the use of IT governance mechanisms such as IT steering committees, project review, and performance measurement; and practices associated with good IT governance outcomes.

Literature Review

The literature review helped identify and clarify issues, suggest hypotheses for testing, and provide supportive secondary evidence. Besides examining articles and studies from journalistic, academic, and IT practitioner sources, we consulted with practicing CIOs experienced in IT governance to develop study objectives and survey questions.

Online Survey

We designed and administered a web-based survey that was distributed to institutional representatives (mostly senior IT leaders) at 1,648 EDUCAUSE member institutions in June and July 2007. We received 438 responses to the survey (a 26.6% response rate). In addition, a second and shorter companion survey of non-IT executives was distributed via invitations from CIOs at 59 partner institutions; we received responses from 216 executives at 45 institutions.

Interviews

We conducted follow-up telephone interviews with 28 senior IT leaders from a mix of institutions to gain deeper insights into findings from the quantitative analysis and to capture additional ideas and viewpoints.

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Case Studies

ECAR researchers conducted this in-depth case study to complement the core study. We assume that readers of this case study will also read the primary study, which provides a general context for the individual case study findings. We undertook this case study of Queensland University of Technology to demonstrate how the underlying elements of a mature governance process facilitate the strategic development of IT services. ECAR owes a debt of gratitude to Kerrie Bianchi, Faculty Manager, Faculty of Built Environment and Engineering; Sherrena Buckby, Lecturer, Faculty of Business; Tom Cochrane, Deputy Vice Chancellor, Technology, Information, and Learning Support; Nicky McCallister, Service Manager, Help Desks; Jack Sandhu, IT Coordinator, Law Faculty; Judy Stokker, Director, Library Services; Neil Thelander, Director, Information Technology Services; Kathy Wheeler, Executive Officer, Technology, Information, and Learning Support; and Lena Wong, Manager, Electronic Recordkeeping Implementation Project. These individuals shared their time and provided the insights into activities at QUT that made this case study possible.

Introduction

IT governance (ITG) has been defined as “the leadership and organisational structures and processes” that ensure that IT “sustains and extends the organisation’s strategies and goals.” Alternatively, it has been characterized as “specifying the decision rights and accountability framework to encourage desirable behavior in using IT.” Each definition conjures up images of organizational charts filled with boxes and lines, committees, and boards. But successful ITG requires so much more than structure. Underpinning it are engaged people who drive the process as well as the project management and financial tools that assist with decision making. When all are aligned and calibrated correctly, the result is an environment conducive to the strategic development of IT services.

But reaching this optimal balance takes patience and practice. Higher education institutions are inherently complex, and strategies don’t stand still any more than technologies do. In this case study, we look at how Queensland University of Technology (QUT) has carried on a sustained program of ITG development for almost a decade in order to create a mature set of institutional supports for ITG, a layered advisory and decision-making structure that feeds innovation, and a network of involved governance participants, with an ultimate goal of developing strategically a set of optimal IT services for the university.

QUT has labored at ITG across leadership and strategic changes, creating the underlying governance elements, tweaking the process as necessary, and engaging the university along the way. The result is ITG characterized by Neil Thelander, director, Information Technology Services, as “relationships underpinned by lightweight process frameworks in order to extract value from technology tools. Too often, an institution creates an overweight governance process that fails to correct the dysfunctional use of its technology. What fundamentally needs to occur is that key IT staff and everyone in the value chain must develop interpersonal relationships and trust, which are then underpinned and sustained with process scaffolds that are as lightweight as possible.” This case study examines the development of QUT’s ITG, discussing its evolution, introducing its underlying elements, describing the process at work, exploring its impact, and, finally, outlining lessons learned.

Background

Located in Brisbane, Australia, QUT traces its origin back to 1849, with the establishment of the Brisbane School of Arts. Through the years, the institution evolved several times, eventually
becoming Queensland Institute of Technology (QIT) in 1965 and then Queensland University of Technology in January 1989. QUT joined with the Brisbane College of Advanced Education in May 1990, retaining the former’s name. Today, QUT’s enrollment is approximately 40,000 students who study in the university’s nine faculties—Built Environment and Engineering, Business, Creative Industries, Education, Health, Information Technology, Law, Humanities, and Science—as well as its International College. QUT’s research income reached AUS$36.7 million (roughly $35 million U.S.) in 2005.

Organizationally, QUT’s vice chancellor (VC) is the university’s chief executive officer and receives direct reports from eight divisions: Academic; Administrative Services; Finance and Resource Planning; International and Development; Research and Commercialization; Teaching Quality; Technology, Information, and Learning Support; and University Registrar. Tom Cochrane, deputy vice chancellor, leads the Technology, Information, and Learning Support (TILS) division. Thelander heads QUT’s Information Technology Services (ITS) area. Five sections make up ITS: Infrastructure Services, Client Quality Services, IT Security, High-Performance Computing and Research Support, and Enterprise Information Services. Thelander reports directly to Cochrane.

**ITG’s Development**

This section recounts the history and development of QUT’s ITG, referencing its underlying elements when appropriate. The next sections detail these elements further, followed by a discussion of how governance and its underlying elements work together.

**General Dissatisfaction Creates an Improvement Opportunity**

QUT’s ITG activities stem from “a natural tension between the need for institutional coherence, and the natural pull of strong faculty resource allocation patterns.” In the late 1990s, this tension caused a general sense of dissatisfaction with QUT’s computing services. A central department provided IT services, but a devolved desktop support environment existed in the faculties. Part of the problem stemmed from the QUT funding stream. “Faculties are funded first, then strategic issues, and then divisions like TILS,” explains Kathy Wheeler, executive officer of the TILS division and manager of the Project Portfolio Office. “With that level of freedom in the faculties to manage their own budget, each could employ their own staff to buy and implement the technology needed to conduct their business. Consequently, each faculty pursued their own strategy and there was no standard operating environment for the university.”

Cochrane investigated the situation further and, with the vice chancellor’s approval, initiated an external review with a consultant, who identified two causal problems. The first was a lack of communication. The ITS leadership needed to connect more rigorously to the rest of the university to embed IT in the businesses. In other words, the businesses were not talking to IT, and vice versa. Second, the rest of the university had to acknowledge that it had to operate differently in order to develop an institutional focus to get the best value from the central ITS department. The consultant further recommended hiring an IT leader with change management experience to bring about this transformation.

Subsequently, Thelander came on board to head a new IT services organization and viewed the situation accordingly. “Some people clam up when dealing with a dysfunctional IT group, but Tom [Cochrane] and I chose to view it as an opportunity to get more strategic value out of the IT function,” states Thelander. The result is an ongoing initiative to create an ITG process that strives to “help the QUT community be productive by building good processes that enable value from technology.” Three generations of governance have since ensued.
First-Generation Governance: Building the Elements

The first generation was characterized by building. “It was about getting a few basics in place: to establish awareness across the university for IT goals, to modify the university’s view of ITS, to enhance IT governance and strategic leadership, to assemble a network of IT and business leaders across the university, and to construct a portfolio or asset management view of IT,” states Thelander.

Cochrane and Thelander set out to do just that. They created the underlying elements of QUT’s governance process, with the Project Registry tracking IT projects, the Project Management Framework ensuring a consistent development process for projects that fall under the ITG’s jurisdiction, IT Investment and Expenditure Analysis analyzing QUT’s IT expenditures over a calendar year, and the Project Portfolio Office managing these elements. They formed a university network of IT supporters to build awareness, encourage engagement in IT, and increase participation in decision making about IT projects. Thelander began to increase ITS staff members’ empathy for the IT service users. The next section describes these elements in further detail.

Eventually, in 2000, this group formalized into the Information Technology Strategic Governance Committee (ITSGC). The vice chancellor chaired the ITSGC, which included the deputy vice chancellor of the TILS division, the registrar, two deans, and two external members (a VC-nominated member from the business community and a QUT council member). The director of ITS and the Project Portfolio Office manager attended the meetings, though they were not members of the committee and played a support role. Members fully owned the decisions they made about IT investments and strategy.

Second-Generation Governance: Increasing Awareness and Engagement

The second generation began after the arrival of VC Peter Coald rake in 2003. One of his visions was to integrate virtual and physical elements of the university—for example, creating a hybrid physical and virtual learning environment for the university. Wireless technology was seen as a gateway to the virtual resources; hence, hundreds of access points were rolled out across the campus. This vision resulted in a transformation of ITG. IT and capital infrastructure subcommittees were created and brought under the control of a newly formed Physical and Virtual Steering Committee advising the VC. This gave it a different leadership mix than the former (and now disbanded) ITSGC.

Despite these changes, the second generation also built on governance elements carried over from the first generation that were beginning to have institutional impact. One example is information sharing facilitated by IT Investment and Expenditure Analysis, the Project Registry, and the Asset Management Plan (IT), discussed further in the Elements section. “The faculty awareness of these things started to drive improvement processes at a faculty-bought, faculty-managed level,” states Thelander. “The information created a competitiveness among faculties that started to drive demand or interest in IT services. In many cases these reforms were informed by investment analysis. We provided a trusted source of comparative information across the various significant organizations of the university.” In one instance, faculties began to compete with each other on maintaining the best student/PC ratios for their computer labs.

Community engagement efforts began to bear fruit, too. The university network of IT supporters “started to develop a connectedness between them, myself, and Tom [Cochrane] and the leadership,” states
Thelander. “They were sufficiently and formally engaged, and accepted corporate responsibility for IT-related items, which are outside their silo of responsibility.” For them, IT’s context began to expand beyond the individual faculty or division to encompass the university at large. The faculties’ student/PC ratios competition eventually morphed into a proposal to guarantee a three-year refreshment cycle for all student lab PCs in the faculties. To this day, the faculties’ executive deans still maintain this cycle.

The central IT staff began to develop a much richer understanding of the client IT experience, prompting greater awareness of unmet user needs and development of their own institutional context of IT. After suffering through a stint on the help desk at the start of a semester, a network applications manager identified a need for a university-wide group to ensure a smooth student experience during this critical time period. This led to the creation of the Smooth Start group, which emerged as a strategic preplanning group. “It began with a small objective of planning the start of the semester to minimize problems as quickly as possible, but other actions originated from this group,” states Thelander. QUT now has a moratorium on changes to the university IT system four weeks immediately before and after the start of a semester so that new students are not subjected to any turbulence around their experiences with IT services. “The result is quite observable,” states Thelander. “Since we implemented this policy, students give us high marks on their experiences with IT. Now the staff comprehends that the students’ IT service experience encompasses all relevant university areas, and it is only through participating with the rest of the university that ITS can ensure a service’s quality.”

Third-Generation Governance: Focused Engagement Encourages Action

Two university reorganizations provided an opportunity to further refine ITG. First, the Physical and Virtual Steering Committee and its underlying subcommittees disbanded in 2006 after undertaking a self-assessment and concluding that they were adding little value to the existing asset management planning process for IT. With the dissolution of this committee and its IT and capital infrastructure subcommittees came the need to retool the governance structure.

Second, a university initiative called the Business Services Improvement Program was designed to consolidate and coordinate horizontal university-wide activities by creating a central organization that manages staff located centrally and others embedded within each faculty and division. Initial events centered on marketing activities. In 2007, the focus turned to IT, and ITS transformed its organization accordingly, guided by a new service management framework. This changed the reporting relationship of approximately 80 IT staff—mainly user support positions—from their local faculty or division to the central ITS organization. Central IT staff members now work with the clients in three ways: The “reds” directly support clients and are entirely connected to the central IT support desk; the “greens” support the delivery of infrastructure; the “blues” report to local faculties/divisions and have a dotted-line responsibility to the central IT organization. Central IT staff members now work with the clients in three ways: The “reds” directly support clients and are entirely connected to the central IT support desk; the “greens” support the delivery of infrastructure; the “blues” report to local faculties/divisions and have a dotted-line responsibility to the central IT organization. The role of these locally based IT coordinators is to manage a portfolio of relationships with leading academics and staff to identify new service opportunities and process improvements.

On the basis of these two reorganizations and experience with generation two, generation three was specifically designed to increase involvement of stakeholders from other divisions and faculties and to improve the visibility of IT processes. It uses a services-based, integrated model with enhanced but selective IT centralization and a generally higher profile for ITS. It consists of three layers: communities of
practice that feed ideas and suggestions to advisory groups for evaluation, which in turn present their recommendations to the Information Technology Governance Committee (ITGC) for decision making.

Service users and providers with similar issues, abilities, and interests throughout the university are now connected through the governance process. For example, “red” user support issues feed into the Service Delivery Advisory Group; “green” infrastructure issues feed into the Infrastructure Advisory Committee. Communities of practice are connected to a relevant advisory group, too. “Traditionally we were faculty-based and decentralized. Now questions and issues that are common across faculties go to the same area for resolution,” states Sherrena Buckby, lecturer, Faculty of Business. “There is clear communications up towards an advisory group.” More information about the ITG structure follows in the next section.

**ITG’s Underlying Elements**

A discussion of QUT’s ITG requires an understanding of its five underlying, interlinked elements that work together to drive the process. The five elements are

- an IT strategic plan that directs governance activities and is tightly aligned with the institutional strategic plan;
- financial management reports that support IT decision making through the ITG process, ensuring that IT spending campus-wide is transparent;
- a campus Project Portfolio Office that provides a focal support point for both the governance committees and the campus at large, responsible for the overall coordination of the financial management reports and IT project initiation and tracking and acting as a general campus resource in these areas;
- a three-layer governance structure that functions as a conduit for ideas and decision making, consisting of an oversight ITG committee at the top, a myriad of campus committees and communities of practice at the bottom, and five thematic advisory groups that liaise between the two; and
- an extended IT community that engages through broad campus representation on ITG committees, extensive user involvement in IT efforts, and an established set of one-on-one meetings between critical university and IT leaders.

This section describes the five elements in greater detail.

**IT Strategic Plan Provides Direction and Alignment**


The IT strategic plans formally recognize that “to achieve the IT Vision of the QUT Blueprint objectives requires considerable attention to planning and governance.” Consequently, QUT’s ITG process refers to the IT Strategy 2007–2011 again and again to evaluate an individual IT project or activity against
long-term strategic goals. The close alignment between the IT and university strategy plans helps to ensure that they promote the institution’s best interests, too.

**Project Portfolio Office Provides Governance Focal Point**

Good ITG doesn’t just approve projects and let them go; it has to track them as they unfold to make sure that institutional goals are being met. As with any university, QUT had a myriad of IT projects under way both centrally and within its faculties, prompting a need for good project management and tracking. In 2000, ITS established the Project Portfolio Office to coordinate its portfolio of IT projects, to help ensure the alignment of the university and IT planning efforts, and to assist the ITG committees. In a decentralized and complex university such as QUT, the Project Portfolio Office provides a focal point for IT project tracking and information dissemination. It participates in ITG in numerous ways, but above all it helps ITG to assemble a coherent picture of how well the institution’s projects in toto are serving the strategic imperatives that justify them.

**Project Management Framework**

First, the Project Portfolio Office administers QUT’s Project Management Framework (http://www.its.qut.edu.au/pp/framework/PMFandtemplatesv4.2.pdf). Based upon

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**Table 1. Alignment between QUT Goals and ITS Strategies**

<table>
<thead>
<tr>
<th>QUT Goal</th>
<th>Representative IT Strategy 2007–2011</th>
<th>IT Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build our research capacity in selected areas.</td>
<td>Continue the implementation of an e-research strategy by capitalizing on QUT’s access to high-performance computing and connection to the research world through the access grid.</td>
<td>Documented use of high-performance computing.</td>
</tr>
<tr>
<td>Strengthen our reputation for quality teaching and learning and provide among the best learning environments in Australia.</td>
<td>Implement QUT’s new Student Management System, including the agreed integration with other QUT systems and engaging academic and professional staff inputs.</td>
<td>Successful implementation of the new system through QUT’s governance process.</td>
</tr>
<tr>
<td>Strengthen the “real world” positioning in teaching and research through better partnerships across internal and external boundaries.</td>
<td>Strengthen QUT’s connectedness to industries and communities through better ties to workplace learning and supervision of QUT students by providing employers and workplace supervisors access to QUT’s systems and data where agreed or necessary while maintaining appropriate levels of security.</td>
<td>Metrics on the number of workplace e-mail alias redirects, number of virtual private network installations, IP addresses, and related data.</td>
</tr>
<tr>
<td>Integrate technology into our teaching, research, business/support functions, and infrastructure.</td>
<td>Continue to refine the university’s ITG process by confirming an explicit enterprise architecture and processes for its use as a governance tool and by providing for its annual review and refresh.</td>
<td>The use of the enterprise architecture in QUT’s ITG processes.</td>
</tr>
<tr>
<td>Develop environments that foster and reward high-quality scholarship and that build a sense of community.</td>
<td>Provide access to administrative and academic information by expanding QUT Virtual to encourage customizable and integrated self-service for corporate processes and business-to-business activities.</td>
<td>Annual reporting on the expansion of QUT Virtual Services.</td>
</tr>
</tbody>
</table>
Project Management Institute guidelines, the framework provides a streamlined, consistent, and standard project management methodology for projects that fall under jurisdiction of QUT’s ITG. It is mandatory for projects reviewed by the ITG process to follow the Project Management Framework, but the framework is designed so that other university areas can adopt it, too. The framework delineates a five-step process:

- **Initiating**: The project manager notifies the Project Portfolio Office about a forthcoming project and submits a proposal for review that defines the project. The proposal serves as the project’s base document.
- **Planning**: The project’s objectives are defined and a plan is created with the Project Portfolio Office’s consultation to outline and to manage the project. Depending on the project’s nature, the project plan may contain a work breakdown structure diagram or Gantt chart, a risk management plan, a quality plan, and/or a communication plan.
- **Executing**: The project plans are implemented.
- **Controlling**: The project plans are monitored and measured regularly through project status reports to ensure that project objectives are met as scheduled, and corrective action is taken if variances emerge.
- **Closing**: The project is formally ended and reviewed.

To ensure standardization, the Project Portfolio Office provides templates for any documentation required to fulfill these steps. Project managers click, download, and utilize online versions of these templates for their projects. The framework, however, is flexible, acknowledging projects’ varying complexities. “You have to find that middle ground where people are not scared to use it and yet it is still helpful,” states Wheeler. “We made a conscious decision to make mandatory those parts of the Project Management Framework that we consider a minimum for handling an appropriate level of governance within a project.” Project managers must complete the original proposal that triggers the governance review process and the activity completion template at a project’s closure. Other templates exist, but depending on the project, they may be used or not. “We have received requests over the years to create a ‘lite’ version of the Project Management Framework,” continues Wheeler. “But rather than re-creating all the templates and managing two sets of templates, we prefer to streamline the mandatory process, with the option to use the other templates in consultation with us.”

The framework is especially important, too, since the Project Portfolio Office did not, until recently, employ actual project managers; all projects were managed from the organization responsible for the project. However, it did fund a two-year contract position in 2007 to manage a portfolio of projects during that time. The person is employed by the Project Portfolio Office but reports to the business area undertaking the project. Most projects, however, are still managed by a staff person outside the Project Portfolio Office. The project framework guides this project manager through the process.

**Project Registry**

Second, the Project Portfolio Office administers the Project Registry, which tracks centrally funded IT projects from initiation to completion as they move through the ITG processes. The Project Registry provides information that includes project title, benefits, description, participants, funding, and status/issues (http://www.its.qut.edu.au/pp/projects/registry/). Project managers feed the Project Registry by reporting quarterly to the Project Portfolio Office about the project status and activities.
**Management of the IT Portfolio**

Third, the Project Portfolio Office manages the IT Investment and Expenditure Analysis (aka the IT Portfolio), which tracks QUT’s IT investments. More information about the IT Portfolio follows in the Financial Management Reporting section.

**Project Management Training and Information Resources**

Finally, because of the devolved nature of funded projects, the Project Portfolio Office holds training sessions to ensure that project managers and its steering committee members understand their roles, responsibilities, and documentation requirements. The office also serves as a university resource about project management practices.

The Project Portfolio Office and its activities continue to evolve in conjunction with organizational maturation and project management needs. The office has expanded to four people to handle its growing activities. In 2008, the Project Portfolio Office moved from reporting through ITS to reporting directly to the divisional office (TILS division) to reflect its broadening organizational role and improve the transparency of the governance processes. In the future, Wheeler hopes to expand the Project Registry to include more IT projects funded by sources outside the governance process—for example, by Commonwealth government or by grants. A long-term goal is to have a register of all project activity at QUT, not just the IT projects. The Project Management Framework is refreshed periodically, too. Following a review of problems associated with a recent project, project managers are mandated now to submit status reports quarterly. “In the past, status reports came into the Project Portfolio Office in an ad hoc fashion, making it possible to hide or water down issues associated with the project,” states Wheeler. “So we hope to negate that issue with this current change.” The project framework is available for institutions to adopt, and the Project Portfolio Office maintains a register of external users to inform them about updates and releases.

**Financial Management Reporting Facilitates Decision Making**

When Thelander joined QUT in 1999, no understanding existed about the total IT expenditures across the university; IT derived its funding from numerous individual “buckets.” “When I arrived, the then VC, Dennis Gibson, made it clear to me that he wanted me to be accountable for IT across the entire university, not just for the running of an IT services department,” recalls Thelander. “My response was, How can we capture all these funding buckets? We needed a more progressive handle on the resources being expended on IT and how we were spending the money.” Eventually, this was accomplished in two ways: tying into the QUT Asset Management Plan and creating an IT Portfolio of Investment.

**Asset Management Plan**

Today, IT is funded in three ways at QUT. First, it receives funds directly from the TILS division. Second, the individual faculties and divisions identify funds for IT support. Third, funds are available from the university’s Asset Management Plan (AMP), an annually reviewed five-year plan that tracks major capital expenses in building, deferred maintenance, other university and faculty projects, and university IT infrastructure projects. The IT component of the AMP is known as the Asset Management Program Information Technology, or AMP (IT).

The Finance and Resource Planning division created the AMP in 1999, as part of a number of financial reforms in the interest of better fiscal management. The AMP created a single investment program for physical and virtual infrastructures from preexisting separate sources. For example, before the
AMP (IT), IT funding originated from a mix of six to eight funding sources, including strategy, maintenance, and infrastructure; each followed its own rules. The university AMP is financed at present under a complex income structure, including Commonwealth grants, grant funding related specifically to AMP projects, fees and charges income, and investment income. Its amount is set by the Finance and Resource Planning division and is calculated annually as a fixed percentage of income, which varies on the basis of student enrollment, institutional investments, and other factors.

Through the years, QUT has affirmed its support of ITS, increasing the AMP (IT) allocation from AU$9.9 million in 1999 to its current allocation of AU$18 million. The ITG process allocates the AMP (IT) funds by evaluating project proposals and requests for support and contract maintenance associated with new or changing systems. The Project Portfolio Office monitors AMP (IT)’s financial status, generating fiscal reports monthly (http://www.its.qut.edu.au/pp/projects/ampitmonitoring.jsp).

**IT Investment and Expenditure Analysis**

Since 2000, the Project Portfolio Office has managed its entire IT portfolio in a continuous process that links IT assets to IT investments and projects. The IT Investment and Expenditure Analysis (the IT Portfolio) is an analysis of QUT’s expenditures for IT support and development, staffing, equipment, and software over a calendar year. Its purpose is to provide informational context to inform future IT investment decisions and ITG in general. Analysis is done in several dimensions: by IT service type, by maintenance versus development, and by funding source (http://www.its.qut.edu.au/pp/projects/portfolio/).

The information in the analysis is based on data and estimates collected by the Project Portfolio Office from QUT’s faculties and divisions. Each year, the Project Portfolio Office surveys those groups to understand their staffing, IT infrastructures, equipment, and software in place. “The analysis is a snapshot of where university-wide IT investments lie, because IT is so dispersed,” states Wheeler. “But the IT Portfolio has raised the profile of what IT investments we spend our money on at the university.”

The Project Registry and the IT Portfolio function “as two linked cycles, to deliver our business and IT strategy,” states Thelander. “Projects generate new or modified assets (and services), which become part of the ongoing IT Portfolio until they are transformed again by a future project.”

**A Three-Layered ITG Structure Manages Ideas and Activities**

As noted earlier, since 2007, QUT has used a three-tier governance structure that is headed by the “IT Governance Committee with thematic advisory groups that increase university engagement and enrich decision making. The new IT advisory groups also aggregate a large number of existing groups and streamline authoritative advice. These thematic advisory groups are also connected to the less formal but essential communities of practice at QUT.” These communities of practice include IT-specific committees for, say, web development, as well as individual faculty and staff working on local IT projects.

QUT’s ITG structure tackles broader issues of alignment with university strategic plans, project review, investment prioritization, and policy issues. The communities of practice provide ideas and suggestions for the advisory groups to evaluate; these in turn submit formal recommendations for the ITGC to decide on. Figure 1 illustrates QUT’s current ITG structure.

**Communities of Practice**

At the bottom layer of QUT’s new governance structure, the communities
of practice “provide a grassroots voice,” states Buckby. They tap into the university’s engagement in IT and the ITS staff’s engagement with its clients. Formal IT-related groups around the campus, like the previously discussed Smooth Start group, and informal bands of users, like early adopters of Microsoft SharePoint, feed suggestions, new service proposals, and project ideas into the governance process. “These are the places for active conversations for embedding information and communications technology [ICT] into those particular areas, and the [governance structure] provides oversight of how we prioritize those investments and determine the best way to spend our support effort,” states Thelander.

**Advisory Committees**

The middle layer consists of five advisory groups. Four represent different aspects of IT services: innovation, infrastructure, service delivery, and information management. Relevant communities of practice link directly to each advisory group. The fifth advisory group plays a different role, evaluating potential IT projects under consideration for funding through the ITG process.

Each advisory group operates within its specified and documented statement of purpose and responsibilities, membership, tenure, frequency of meetings, and reporting. Building on the QUT community’s engagement in IT, the chairs of the five advisory groups are faculty members or non-IT staff; they receive advice from a “buddy,” a TILS staff member who serves on the group,
too. “It is critical to get your membership right in terms of knowledge, expertise, and engagement so your committee will be effective,” states Judy Stokker, director of Library Services and chair of the Information Management Advisory Group. Each group’s membership is inclusive of the university, representing the relevant client and service provider communities to provide an institutional perspective and a balance of technical and functional knowledge. For example, nine people serve on the Service Delivery Advisory Group: a chair, a faculty manager representative, a divisional executive officer representative, a research institute manager representative, and a faculty IT coordinator representative; all serve two-year terms. A student representative serves for one year. Three ex officio members from TILS—the director of Integrated Help Services, the manager of IT Support, and the manager of Client Quality Services—sit on the group.

The five advisory groups tackle a number of different tasks that enable the ITGC to focus on strategic decision making. Since its inception, the Service Delivery Advisory Group has reviewed help desk statistics and service logs to identify potential problems. Consequently, the group determined that 80% of help desk calls relate to password problems and proposed a policy change requiring a mandatory challenge response with sign-in so that users can resolve password-related problems on their own more easily, which the ITGC later endorsed. The group has tracked closely the creation of new service-level agreements (SLAs) in the faculties, reviewing them to ensure consistency by each service provider across the university. “The advisory group members represent a broad cross section of the university,” states Kerrie Bianchi, faculty manager, Faculty of Built Environment and Engineering, and chair of the Service Delivery Advisory Group. “Our review process encompasses different perspectives.”

The five advisory groups also consider ideas that bubble up from the communities of practice, locally based IT coordinators, and others. At this point “a convergence between those who can specify and describe the problem with those who understand and can suggest resolution directions occurs,” states Cochrane. Some issues are resolved at the advisory group level, though if a decision affects policy or project funding, it goes through the review process detailed later in the case study.

As noted earlier, the fifth advisory group, the Projects and Systems Advisory Group, performs a slightly different function. It plays a pivotal role in the IT project review process. The Projects and Systems Advisory Group scrutinizes IT projects currently under consideration for AMP (IT) funding. So although it is one of five advisory groups, it has a slightly elevated position because of its authority to challenge IT project proposals. However, the relationships between the five advisory groups are fluid. “There are a lot links and overlaps between things different advisory groups are talking about,” states Bianchi. “For example, my advisory group looks at service delivery and another advisory group focuses on information management, and there are some links between the two.”

**ITGC**

The ITGC is at the top layer of governance, deciding IT policy and project funding. It is chaired by the deputy vice chancellor of the TILS division; other members include an executive dean, a researcher from the university professoriate, an assistant dean, and two faculty/institute administrative managers—all nominated by the Vice Chancellor’s Advisory Committee. Several ex officio members include the directors of ITS, Corporate Finance, Library Services, Integrated Help Services, and Infrastructure Services in the Faculty of Information Technology, as well as the administrative systems coordinator in the Division of Administrative Services. Finally, the deputy vice chancellor of the TILS division nominates one external member from an appropriate professional occupational
background. In the past, a CIO or CEO from a Queensland-based organization filled this slot; currently, it is an external consultant from Gartner. “Having that external view is particularly important because you can get a bit insular when it is only QUT people around the table,” states Wheeler.

The ITGC has approximately six meetings annually, at which it considers project proposals for funding. Cochrane estimates that the ITGC reviews 10 to 20 projects annually. A standing ITGC meeting agenda item is a progress review of the IT strategic plan. Each advisory group chair submits a report about its activities and issues to the ITGC, creating “a reporting up and filtering down and across process,” according to Bianchi. Members hear presentations about ongoing projects and review the project registry. “It is really the only forum to hear about all the IT happening across the university,” states Buckby. “Neil [Thelander] and Tom [Cochrane] are aware of it all, but the other people who attend may not be. This is an important means to keep everyone in the loop.” To improve information sharing, Wheeler notes that a wiki space for ITG is under construction, containing subpages for each advisory group and the ITGC. Formal documentation relating to the ITGC and its decisions is also stored in the university’s electronic records management system.

Finally, in his dual role of committee chair and member of the Vice Chancellor’s Advisory Committee, the deputy vice chancellor is the ITGC representative to the university leadership. His presence at both tables ensures continued IT alignment with university goals and that IT perspective is represented on broader university strategies and initiatives.

**An Extended IT Community Creates Governance Engagement and Buy-In**

All the other governance elements are for naught unless the university actively engages the governance process. Thelander believes firmly that effective IT management encompasses people as well as technology. “We need dynamic engagement with the core university activities of research, learning and teaching, and administration and with the wider leadership of the university to be successful with IT,” he states. And eventually an engaged constituency, he believes, also prompts greater involvement and interest in ITG—a belief that’s consistent with ECAR’s ITG research, which shows that broad participation is positively associated with ITG effectiveness. Throughout his tenure at QUT, Thelander has practiced what he preaches in a number of ways.

**Building University Leaders’ Buy-In**

When Thelander arrived at QUT, he and Cochrane identified about 20 key staff across the university who were characterized as various critical friends, partners, or allies. Thelander began to schedule half-hour sessions with them, a practice he continues to this day. Thelander estimates that this activity occupies about 40% of his time. “It is a huge time commitment,” he states, “but it enables me to have direct contact with every key member of the leadership of the university. I have had wonderful experiences with trusted relationships.” He specifically cites the time “the former registrar and I sorted out a problem with a price tag of $50,000 while standing in the queue for the automatic teller machine.”

Over time, these relationships matured, and a more formal IT leadership capability across the entire university emerged. These key leaders began to function as “mini CIOs” for each of their organization units. “We did it in a very soft way,” states Thelander. “We did not draw structure charts; rather, we did it on a personal level to discuss how we could help each other meet our performance agreements. One of my strengths is to identify anyone who had a passion for giving a criticism and then co-opting them to become part of our process of governance or service delivery.”
Creating Effective IT Staff Engagement with Users

Thelander also advanced ITS’s outreach to the university to engage his staff with the broader community. “The university saw ITS as disconnected, and somewhat alien,” states Thelander. “It was felt that we did not understand the university’s activities, and therefore we did not provide what was needed to deliver the university’s core mission of teaching and learning, research, and administration.”

To understand the user experience, ITS began to hire students to work within IT, not only as a source of labor but also as representatives of the user experience. Thelander also made it mandatory for all IT staff to experience working (temporarily) at the IT help desk to gain direct knowledge of IT service as experienced by students and staff. Finally, ITS used a university-wide consultative process when creating its IT vision and strategy document, meeting with every faculty and divisional head as well as their associated IT support and administrative staff. “We tried to engage the leaders to ensure that our proposed directions for IT met the appropriate business needs,” recalls Thelander. “I think it is the consultation process that made possible the successes of today.”

ITG in Action

The three levels of QUT’s current ITG model—the communities of practice, the five advisory groups, and the ITGC—combined with the governance elements described in the previous section enable the generation of IT-related ideas, issues, and actions from a broad university community, their evaluation by a pertinent advisory committee, and their sanction by an executive-level board. The Project Portfolio Office intercedes throughout—shepherding proposals, monitoring projects, and facilitating meetings—thereby enhancing the process’s efficiency. The process is generally as follows:

A community of practice, possibly in concert with another area, develops an idea for a project. In some cases, a faculty or division may have already piloted the concept, deeming it feasible to explore for a university-wide implementation. The group presents the concept to the most relevant advisory group, which considers its merits against a criteria of viable resources, degree of project maturity, and prioritization of issues in that particular area.

If the project is deemed viable, the Project Portfolio Office is notified. The project sponsor, with or without the Project Portfolio Office’s assistance, writes a formal proposal that complies with the Project Management Framework guidelines. “The proposal should clearly state key project information, including objectives, scope, scope issues, project assumptions as well as benefits, and the business value to QUT linked to success criteria and risks.” Upon formal submission, the Project Portfolio Office reviews the proposal accordingly and refers it to the Technical Infrastructure Development Group, a group of IT managers convened to evaluate any IT project’s impact on the QUT IT infrastructure.

If the project is found compliant, the Project Portfolio Office presents the proposal with its recommendations to the Projects and Systems Advisory Committee to review for project management and funding veracity. After this review, the Project Portfolio Office takes the feedback to the project sponsors, informing them of its endorsement for ITGC review or suggesting ways to improve the proposal for resubmission.

If the project is endorsed, the Project Portfolio Office submits the proposal for review and funding approval to the ITGC, which uses as its basis “those projects that provide the best value proposition for advancing [QUT’s] mission and goals according to the QUT Blueprint and the IT Vision and Strategy, taking into account financial costs and benefits.” If the ITGC approves the proposal, it releases
the funds from the AMP (IT); an expenditure above AU$500,000 requires the VC’s signoff. Then, the Project Portfolio Office, through the Project Registry, monitors the project throughout its implementation.

The process moves up and down. For example, currently, at the community level, a call for action regarding collaborative actions is starting to bubble up. Information Management Advisory Group members have observed more use of collaborative technologies, including wikis and SharePoint, around QUT. ITS is working with the group to understand and develop best practices and guidelines; early adopters have presented their ideas and views to the group. “There are different levels of knowledge and expertise among the campus users,” states Stokker. “We see that one of our priorities this year is to work with other advisory groups to explore infrastructure requirements and best-usage policies.” The results of these discussions will coalesce and move up to the ITGC for its consideration and decisions. The ITGC’s actions will filter back down to the university community in the form of policies and recommendations that impact the adoption and use of collaborative tools.

**ITG’s Impact**

QUT’s ITG aligns IT and institutional strategy and enables ITS to carry out associated actions and measures methodically, strategically, and in a way that minimizes risk. Finally, extensive user involvement throughout the ITG process facilitates adoption and acceptance of these actions, maintaining IT and university alignment down to the user level.

**Facilitation of New Technology Adoption**

The ITG process and its underlying elements are explicitly aligned with traditional phases of technology adoption and therefore facilitate the orderly and strategic adoption of new technologies and IT services.

First, in the experimental stage, pockets of technological innovation occur in different parts of the university and are eventually fed into the governance process. Successful local pilots or experiments may apply for project funding. “You conduct pilot in a small group, and if you think it has some benefit, then you pursue more formal funding and formalize the project,” states Jack Sandhu, IT coordinator of the Law Faculty. A knowledgeable advisory group member may introduce the activity for discussion, too.

Second, in the cultivation stage, the governance process unites the experimentation activities. Advisory group discussion and the project funding cycle evaluate whether and how to develop these activities in an organized, cohesive, and strategic fashion for the entire university. To facilitate this, the project proposal must describe its alignment and benefits to the university. The ITS Strategy 2007–2011 plan, the IT Investment and Expenditure Analysis, and the Project Registry provide broad pictures of the long-term IT direction, the current IT environment, and ongoing developmental activity—and thus offer an overarching view into which projects are linked. “A challenge is keeping abreast of all the different projects that are under way across the university and how they relate to each other,” states Stokker. “Our group trawls through the Project Registry to identify overlaps and to determine how projects work together or whether overlapping projects are needed.”

Third, in the implementation phase, the vetting process helps to ensure an IT service’s compatibility with the current university environment and fosters user buy-in. This, in turn, facilitates an IT service’s ongoing maintenance.

Examples of the innovation-governance connection follow in which local experimental activities transform into university-wide initiatives following the ITG stages of input, evaluation, and decision making:
The recent introduction of an MS Exchange Environment: “It hatched in an experiment space, piloted in the vice chancellor’s office, and eventually rolled up into a major university-wide project,” states Cochrane. “It was originally put on the table as a collaborative improvement exercise that evolved to a major Exchange rollout that took over a year.”

Reassessment of university e-mail services: Cochrane also describes the governance process’s role in developing longer-term strategies. “It mediates the space between the outside world and what you are able to achieve in an institution,” he states. He points to the rising competition between Google and Microsoft. The Faculty of Law is about to conduct a trial of Google Mail; the IT faculty is conducting a Microsoft trial. When both are finished, a discussion about their results at the university level may potentially change the university’s e-mail service strategy.

Second Life’s role in teaching and learning: The engineering faculty’s and the law faculty’s separate experiments with teaching in Second Life identified a need to create a cohesive university-wide development plan in 2008. “We are trying to bring those activities together so the university can be best aware of the opportunities and the risks associated with that kind of environment and to determine infrastructure improvements that would overcome any limitations,” states Cochrane. “It is a good example of innovation that suddenly needs to be addressed.”

Better Risk Management of Projects

The governance process facilitates risk management during both project evaluation and implementation. The thorough vetting of projects up front “minimizes the risk of developing a system project that is adverse to our environment,” states Cochrane. “There have not been any fiascos because of our coherent view.” Indeed, Sandhu states, “If you put a project through a project notification and governance process, it highlights its impact on the university, the other areas it impacts, and the resources that you will call upon. It makes sure we have efficiencies across the faculties and divisions by avoiding the duplication of processes or infrastructure. We get bang for our buck from our budget.”

During project implementation, the Project Management Framework provides focus, tools, and resources to identify and negate problems early on. “In a way, the process lets project managers know that they have to keep up with the project,” states Lena Wong, manager of the Electronic Recordkeeping Implementation Project. “If something is not working, I can give a thorough account in my project status report. The Project Portfolio Office can follow up and offer us some advice to resolve the issues.” Other safeguards exist, too. The Project Portfolio Office tracks the status of all projects under way, providing an official record that anyone can access. The ITGC reviews the projects’ status at their meetings, too.

Indeed, Thelander notes that the governance process enables the university to develop “a risk-based approach to technology adoption that recognizes the different appetites for risk in different domains: higher risk in research, medium risk in teaching and learning, and risk-averse in administration.” It becomes another factor to plug into the ongoing project evaluation process.

More User Buy-In and Satisfaction

The governance process is designed to tap into the QUT community; users feel empowered to present their ideas and suggestions accordingly. Thelander cites “a large list of
projects because of the rich engagement of the IT leaders with the rest of QUT.” Bianchi believes that “The number of different areas that feed unsolicited information into the advisory groups is a good indication that there is an awareness of what we do.”

The governance process helps to address user issues post-implementation, too. Service support has improved because the governance process mandates the IT help desk’s notification of a forthcoming service introduction or change. “In the days before the governance process, someone got a brilliant idea during the day and just changed a service without notifying us,” states Nicky McCallister, service manager of the help desks. “Instead of flying blindly the next day, we are now aware of any issues and we can offer a more professional service.”

Bianchi accepted the chair of the Service Delivery Advisory Group after her faculty voiced dissatisfaction about the recent IT reorganization, which reassigned 10 out of 13 local IT staff members to the central IT organizations. As chair, she is actively engaged in monitoring the reorganization’s ongoing impact on the faculties. “The fact that I am involved is key,” Bianchi states. “It is part of the operational and strategic plans within our faculties to be sure we have IT services at an acceptable level.”

But some issues lie outside ITS control—and that can still raise challenges. For example, when the scholarships, finance, and web services development groups worked together to enhance a financial aid web-enabled service, the finance area complained of unexpected work after its implementation. Upon review, it was determined that the basic problem stemmed from a less-than-satisfactory communication within the finance area about the project. “No matter how well different areas of the university work together on a problem, if you have some relationship issues or management issues within a faculty, division, or department, they will intrude on the overall process,” states Cochrane. “It is hard to be accountable for those in any IT governance process. All you can do is to try to work on them with your colleagues.”

Lessons Learned

QUT’s involvement in ITG has lasted almost a decade, and the participants share many lessons that can apply broadly.

Monitor the IT-university alignment constantly to minimize risk.

Both the QUT Blueprint 2011 and Information Technology Strategy 2007–2011 “fit together well and trickle down to the IT governance process,” states Buckby. To foster alignment, sponsors must specify their project’s alignment to either or both documents in their project proposals. Both plans are used as selection criteria for project funding. This alignment minimizes risk because it helps to identify and to reject preclusively any project that could stray from the university vision.

Cochrane’s dual role on the ITGC and the Vice Chancellor’s Advisory Council help to maintain the IT-university alignment.

Governance is fluid.

Not only does QUT monitor alignment, but the university also has adapted its ITG process three times in line with university and technological change, thereby keeping it aligned and relevant. Generation three may not be the last iteration of QUT’s ITG either. “The interesting changes in technology make it hard to predict whether or not our current model is sustainable beyond three to five years,” states Cochrane.

An IT leader’s empathy fosters the university’s engagement in IT.

“The IT area demands leadership with emotional intelligence, not just knowledge of the technology,” states Thelander. “The IT leader needs an earnest understanding to convey to the main university community
that IT’s goal is to support them; you have to listen to their concerns in a genuine way. You have to consciously relinquish an older model of IT leadership.”

**Effective governance relies on an engaged community.**

Thelander practices what he preaches, having worked hard over the years to engage the QUT community in IT issues in a number of ways. As noted earlier, he estimates that he spends 40% of his time in face-to-face meetings with QUT leaders. This creates a broader awareness about IT’s strategic importance throughout the university and thus fosters the leaders’ engagement in ITG. “Our success relies upon our consultation process,” states Wheeler. “We try to be as inclusive and as accommodating as possible in terms of the underpinning governance support.”

Even IT critics are not disengaged. As observed previously, the lack of support in Bianchi’s faculty for the new IT structure motivated her to accept the chair of the Service Delivery Advisory Group. “I was chosen because my faculty has been rather vocal about the change,” she states. “This was an opportunity to get involved in the measurements and benefits of this new organizational structure, to turn an enemy into a friend, so to speak.”

On the service side, ITS staff members’ growing engagement with their clients feeds the governance process with new services, enhancements, and modifications. “IT operational managers really understand what is happening in their client division or group,” states Buckby. “The ability to communicate that up through the process is important.”

**A broad network sustains engagement and governance.**

Thelander may work quite devotedly on engaging university leaders one on one, but he recognizes the fragility of this strategy. Consequently, he continues to expand the net of IT supporters, welcoming the QUT’s leaders’ “trusted lieutenants” to his face-to-face meetings. Conversely, he is increasing ITS’s leadership presence in the university community. Thelander’s managers typically accompany him to meetings.

A broad network of engaged people ensures adequate resourcing of the governance process. “Work arises in the advisory groups, but people have their day jobs, too,” states Stokker. “Finding the resources and people is an ongoing task.” As the net of IT-engaged leaders grows, so does the pool of potential advisory group members.

**Transparency fosters trust in governance.**

A precondition for the project review process is to make visible all funds for IT development and support. “We try to improve transparency over time so it is clearly understood that funding for a project is based upon a project’s merit and strategic fit—not on personal relationships,” states Wheeler. The extensive online accessibility of ITG information, including the AMP (IT), the Project Management Framework, the Project Registry, and IT Investment and Expenditure Analysis reinforces transparency, which in turn fosters trust and encourages participation in the governance process.

**Strong project coordination is a lynchpin.**

The Project Portfolio Office is the governance process’s cohesive element. It shepherds the projects along, facilitates the meetings, and provides a centralized information source on IT project activity. “It has given the university a stronger sense of assurance that there is a central area that understands the full scope of IT activity,” states Cochrane. “It is an area where you can get a quick rendition about what is happening and how that relates to another activity.”
Communication can be difficult, but it is necessary.

ITS believes that effective communication of ITG decisions and processes is important, a belief consistent with ECAR’s ITG research and something that ITS finds hard to achieve. “Communication is the thing we do least well, but not for want of trying,” states Cochrane. “It is quite difficult to communicate in an environment where there is so much information and activity.” Indeed, Wong felt that a bit more communication was needed during the governance process’s inception a decade ago. “People questioned why we should follow this Project Management Framework,” she states. “We realize now, but it is only after the event. At the beginning, people may feel it is extra work and no gain.”

A decade later tells a different story. While planning the latest generation of governance, each of the advisory groups discussed its role and responsibilities at length through the ITGC to ensure consistency. A strong framework is in place to guide people through the project management process. “It is fairly well understood in the communities of practice that the Project Management Framework is here to stay, and it is one of the processes that they use,” states Wheeler. “It is now almost embedded in people’s psyche, and it is understood that if they want to formalize an IT-related idea, they should use the Project Portfolio Office to work out the project’s planning.” A robust online documentation thoroughly describes the various governance roles, resources, and processes. “The Information Management Advisory Group’s scope can be quite broad,” states Stokker. “One of our biggest challenges is to prioritize the important university issues, and our group’s scoping statement helps us to focus our activities.”

Perhaps more important is the fact that QUT’s governance process is mature, with actual experiences and examples of it in action. “One of the reasons it is so well known around QUT is that people have learned that in order to get your project funded, you have to go through the Project Portfolio Office,” states Wong. “That is a good way to get people to use the system.” McCallister suggests sharing with the institutional community examples of projects that completed the governance process and their consequential benefits to the university. “It is a process that has to be seen to be working before people will buy in,” she states.

Conclusion

Thelander describes ITG as a “rubric for us. People supported by process to get value out of technology tools. I can cite example after example when this has occurred. It is a mantra.” It is the collective underlying elements and process that make this rubric work. Bianchi states, “I am impressed with the way ITGC established a mix of formal and broad activity-based advisory groups that are able to feed into a more formalized structure. Things can be moved and can easily be reported up the line. The way the structure has been established—the top-level ITGC, the advisory groups, and a myriad of representative organizations coming into them—makes the process very broad and very transparent. I think every bit of what we do within IT now has a home.”

Endnotes

9. Ian McDonald, Graham Keys, and Joe Dascoli, “EA@QUT: The Journey Continues” (presentation at the QUT IT Leaders Group meeting, Brisbane, Australia, March 2008, p. 13)
11. Ibid., 3.

Citation for This Work