Governance isn’t just about governments. In recent years, financial scandal and a new web of accounting and privacy regulations have brought renewed interest to questions of how corporate and other entities govern themselves—that is, how they distribute high-level decision-making authority and pursue strategic objectives aligned with the interests of shareholders and other stakeholders. A good deal of this activity grew out of painful lessons learned in the dot-com collapse, and more generally out of the social and economic transformations brought by the Internet. So it’s not surprising that along with the renaissance of interest in corporate governance there’s been a particular flowering of attention to how organizations should govern the expensive, complex, indispensable, strategy-enabling domain of information technology (IT).

ECAR’s study of IT governance in higher education is partly a reflection of this broader interest and partly the result of a more parochial concern about what appears to be the exploding “politicization” of IT on campuses. Today, IT systems have a heavy impact on how every manner of work gets done, and they shape the campus experience almost as much as the institution’s physical grounds. IT’s constituents are not only numerous, they’re also increasingly confident and vocal about their technology-related views. It’s neither feasible nor desirable for CIOs, or even top institutional leaders, to make high-level IT decisions without a lot of input and acceptance from affected stakeholders.

This may help explain why the item “governance, organization, and leadership” has consistently stood among the top-10 issues of strategic importance every year from 2004 to 2008, as measured in EDUCAUSE’s annual member surveys of interest in current IT issues. Over the same period, it has also stood among the top-five matters to which CIOs devote their time.

It’s not hard to imagine where much of this time goes: Other survey-topping issues such as security, funding, administrative systems, and strategic planning affect so many constituents and have so many resource implications that collecting advice and achieving the “buy-in” so crucial to success is a major part of getting each done. IT governance is a forum for doing just that. Our study aims to provide CIOs with information about the state of higher education IT governance and to identify practices that are associated with good IT governance outcomes.

Defining IT Governance

In IT as in other contexts, governance is the process that sets top-level goals, assigns
responsibility for meeting them, and assesses the results. The definition we use in this study comes from MIT researchers Peter Weill and Jeanne Ross: IT governance means “specifying the decision rights and accountability framework to encourage desirable behavior in using IT.”

More informally, IT governance (ITG) describes who makes which decisions, who provides input and analyzes the issues, who sets priorities, and who settles disputes when there is no clear consensus. Good governance processes will be actively designed and well understood by participants and will foster timely decisions that are communicated effectively. Ultimately, the “desirable behavior” in using IT that our definition mentions means behavior that is aligned with, and helps achieve, institutional strategic goals. Finally, in our view, IT governance is concerned with the whole enterprise IT function, not just the central IT organization.

It’s important to distinguish between IT governance and IT management. Although IT governance should have a pervasive influence, it is not concerned with the details of executing decisions or with day-to-day operations. Nor is it a collection of policies, but rather a process for creating policies. As Weill and Ross put it, “IT governance is not about making specific decisions—management does that—but rather determines who systematically makes and contributes to those decisions.”

**Methodology**

Our study of IT governance took a multi-part approach that consisted of

- a literature review to identify issues and establish research questions;
- consultation with higher education leaders active in IT governance to identify and validate survey questions;
- a quantitative web-based survey of EDUCAUSE member institutions that received 438 responses, 83% of which were from the institutions’ senior-most IT leader;
- a shorter quantitative web-based survey for participants in IT governance who work outside central IT, to which we received 216 responses from 59 institutions;
- qualitative interviews with 28 IT leaders; and
- two case studies looking at IT governance development and maturation at the University of California, Berkeley, and Queensland University of Technology.

**Key Findings**

Our study focused on how respondent institutions organized input and decision making relating to high-level IT decisions, what mechanisms and processes they used, and what practices were associated with IT governance performance and effectiveness. The survey questions in our primary (CIO) survey covered

- respondents’ perceptions of how mature IT governance was at their institutions;
- the overall institutional context for IT governance, including drivers, barriers, and participant knowledge about ITG;
- how frequently different kinds of ITG participants provided input and took part in decision making for each of five different types of IT decisions;
- committees and other mechanisms involved in IT governance;
- IT governance involvement in budget processes and project review;
- use of IT performance measurement and review in ITG processes; and
- respondent perceptions of ITG performance and effectiveness.

In certain questions and in our qualitative interviews, we also examined the “practical politics” of IT governance, asking respondents what factors they felt drove participation in
ITG processes, how they allocated committee memberships and chair assignments, and what they thought accounted for successful and unsuccessful ITG outcomes. In the following section, we summarize and synthesize our main findings.

**IT Governance Maturity**

Virtually all of our respondent institutions reported some kind of IT governance, though most said it was at a relatively low level of maturity. As Figure 1-1 shows, on a six-level maturity scale, only a handful of respondents characterized their institution’s ITG maturity as nonexistent, but almost 6 in 10 chose the next two levels, initial (ITG is informal and uncoordinated) or repeatable (ITG processes follow a regular pattern). Only about 16% chose the two highest levels, managed (ITG processes are monitored and measured) and optimized (employing ITG best practices).

It may be that some institutions deliberately choose not to pursue higher levels of ITG maturity. However, we found that greater ITG maturity was associated with many desirable institutional characteristics. For example, respondents reporting higher levels of ITG maturity also tended to report stronger agreement that their institutions were able to develop and implement important IT decisions and coordinate the activities of IT personnel throughout the institution. They also tended to rate ITG performance and overall effectiveness higher.

Although a slight majority of all respondents agreed that IT governance had been actively designed at their institutions, those in the top-two maturity levels agreed much more strongly (mean 4.49, where 1 = strongly disagree and 5 = strongly agree) than those in the bottom two (mean 2.51). This suggests that, at least in some cases, low maturity may be due to inattention to ITG rather than being a deliberate design choice.

**Institutional Context for IT Governance**

CIOs predominantly hold the IT governance portfolio: 8 in 10 respondents agreed that IT governance was perceived to be the responsibility of the CIO at their institutions. Another result suggests that one of the
challenges often attached to this responsibility is working with ITG participants who aren’t entirely familiar with the process. Respondents averaged a less than neutral response (mean 2.68) on our 5-point scale when asked about their agreement that IT governance could be accurately described by all relevant executives, deans, and department heads. Agreement, however, rose dramatically with levels of ITG maturity.

Respondents were generally optimistic about IT’s alignment with institutional business and academic goals (mean agreement 4.00 and 3.86, respectively). Perhaps this was because about 7 in 10 agreed that their institutions had clearly articulated strategic priorities. Agreement about alignment was higher still, however, among institutions reporting higher levels of IT maturity.

These positive responses about IT alignment seemed to be echoed in our results regarding the top drivers for pursuing IT governance. Asked to name the top-three drivers at their institutions, respondents collectively gave answers that might appear in an ITG textbook: Aligning IT with institutional goals was the most frequently cited driver by a considerable margin, and promoting an institution-wide view of IT was next. Respondents also, however, balanced these responses with practical politics. Ranked next after the top-two drivers were more “people-oriented” drivers such as encouraging and collecting community input and demonstrating transparency in decision making. A decentralized or informal institutional culture and lack of participation from necessary parties were the top barriers.

Participation

True to higher education’s reputation for shared governance and decentralization, we found involvement in IT governance to be diverse and widespread, though differentiated by frequency of participation. When we asked respondents to tell us how frequently assorted types of participants (IT managers, presidents, cabinet executives, students, faculty, and so on) provided input and took part in decision making for different types of IT decisions, we found few cases where the majority response was “very rarely or never” for input, and not a lot more for decision making.

Senior central IT leaders and managers were easily the most active category of participant across all decision types. Cabinet-level executives had the second-highest mean frequency of participation in decisions relating to fundamental IT principles and IT investment and prioritization, while local IT managers had the second-highest participation in IT architecture and infrastructure decisions. IT principles, architecture, and infrastructure were the most restrictive categories for decision making; the latter two especially were dominated by IT participants. Applications and IT investment and prioritization reflected more frequent participation from various participant types and from different levels of the organization; in each of these areas, a total of five different participant types had mean decision-making frequencies at or above the scale midpoint of 3.0.

When we averaged frequency of participation across all five decision types, central and local IT stood at the top for mean frequency of participation in decision making (see Figure 1-2). Cabinet executives were the only other participant with a mean overall decision-making participation frequency above 3.0, though several other categories had means above 3.0 for providing input.

Boards were conspicuous for their low levels of reported input and decision making, which in both cases averaged below 2.0 on our 5-point scale. This agrees with a general pattern of quantitative and qualitative results that suggest low board involvement in IT governance. On the other hand, it’s important to note that our respondents characterized frequency of participation, not influence. We presume that boards are highly influential in the rare occasions when they get involved.
Does higher education’s habit of inclusiveness work against IT governance effectiveness? Our data suggest just the opposite among our respondent institutions. Those reporting higher ITG maturity levels tended to have higher, not lower, mean frequencies of participation for most IT governance participants. Institutions reporting a greater number of frequent participations in ITG (participant types rated 4 or 5 on our 5-point scale) agreed more strongly that IT was aligned with business and academic goals, that ITG was actively designed, and that key participants could accurately describe ITG. Finally, where an institution’s overall average frequency of participation across all participant and decision types was higher, the institution also tended to report higher overall IT governance effectiveness.

**IT Governance Committees**

IT governance-related committees were abundantly present among our respondent institutions. Two-thirds reported having an IT steering committee (ITSC) responsible for oversight of major IT policies and initiatives, and similar numbers reported the existence of administrative, teaching/learning-related, and initiative-specific committees. Only about one in five institutions had a board of trustees technology subcommittee.

Virtually all IT steering committees had an advisory role, and about three in four set priorities. Slender majorities had policy-setting powers and the power to adjudicate conflicts, but only about one in four respondents said the ITSC authorized funding. Agreement about ITSC effectiveness was higher where the ITSC had priority-setting and/or policy-setting powers.

**Project Review and Institutional Budget Process**

Only about 4 in 10 institutions reported that IT governance included a process for formal review and approval of IT projects. Where one existed, projects chosen for review were almost universally evaluated for
alignment with institutional IT goals, and 8 out of 10 respondents said their institutions evaluated them for compliance with IT architectural standards. Most institutions required a post-completion assessment as well. The relatively low incidence of project review was noteworthy, since institutions that had such a process did better on a wide range of other measures.

IT governance involvement in the institutional budgetary process was somewhat more widespread than project review: About 6 in 10 respondents reported such involvement. As with project review, budget process involvement was positively associated with a number of good outcomes including, as we report below, overall ITG effectiveness.

Measurement and Review

The use of IT performance measurements to inform and shape IT governance is commonly recommended in the ITG advisory literature. Our survey results confirmed a strong association between the use of measurement and assorted governance-related outcomes, including overall ITG effectiveness.

But our respondents also seemed to recognize much potential for improvement in this area. Only 40% said that their institution agreed on measurable goals for IT, and only 28% said that the institution regularly reviewed the effectiveness of ITG processes. Regarding the statement that their institution incorporated measurement and reporting in the ITG process, respondents averaged a 2.93 response, slightly below neutral on our 5-point agreement scale.

Our findings suggest that the incorporation of measurement into IT governance is a fertile area for institutions looking for ways to improve ITG maturity and performance. Incorporation of measurement, like most of our other metrics-related items, was strongly associated with clear articulation of institutional strategic priorities, the ability to implement important IT decisions and coordinate IT personnel throughout the institution, active design of ITG, and overall ITG effectiveness.

IT Governance Performance and Effectiveness

Respondents painted a generally optimistic portrait of how well IT governance worked at their institutions. We asked them to assess it in several different ways. First, we asked them to rate the importance of four institutional performance goals (cost-effective use of IT, and effective use of IT to enhance teaching and learning, research, and administrative processes), as well as the influence ITG had on producing each goal at their institutions. We used these responses to calculate an ITG performance score that ranged from a low of 20 to a high of 100. We also asked them their level of agreement with the statement that IT governance was effective overall at their institutions, using our familiar 5-point agreement scale (1 = strongly disagree, 5 = strongly agree).

The calculated performance scores and the overall effectiveness ratings were strongly correlated. The median performance score was 70 and the mean was 67.7 on the 20-to-100 scale, while the mean overall effectiveness was 3.64, slightly above the midway point between a neutral (= 3) and an agree (= 4) response.

Despite these generally positive results, we did find much variation among institutions in these ITG outcomes, and strong associations with certain ITG mechanisms, processes, and characteristics. Among the items strongly associated with higher performance scores and overall effectiveness ratings were:

- greater ITG maturity,
- active design of IT governance,
- greater overall frequency of participation in input and decision making,
- incorporation of measurement and reporting in ITG,
- ability of key participants to describe ITG accurately, and
participation in the institutional budget process and in formal IT project review. Table 1-1 shows the differences in mean overall ITG effectiveness for selected items in this list.

One factor often mentioned in our qualitative interviews as a key to ITG success was CIO membership in the institutional cabinet. Although we did find that cabinet membership was modestly associated with higher overall ITG effectiveness, as well as greater mean frequency of participation by the president and cabinet officers in ITG decisions, the effect was not as strong as any of the associations mentioned above.

At the same time, our respondents seem to think that IT structures and processes can take an institution only so far. When asked what typically was responsible for successful IT governance outcomes, respondents’ top-four choices all dealt with relationships, ranking considerably above such items as formal IT structures and performance metrics.

### CIOs and Other IT Governance Participants

Besides the primary survey of IT administrators (mostly CIOs) at 438 institutions, our study included a brief survey on ITG performance and effectiveness among other IT governance participants (mostly institutional executives) working outside central IT. Participating CIOs invited up to five other ITG participants to take the second survey. Our analysis compared CIO and executive answers at the 45 institutions from which we received responses to both surveys.

The results generally allay fears that CIOs and their executive colleagues in ITG live in different universes. The two groups rated overall ITG effectiveness in similarly positive ways, and though there were some differences in their assessments of specific factors of ITG performance, their mean overall performance scores did not differ significantly. Executives did not agree quite as strongly as CIOs that IT was aligned with business goals,

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Agreement Level</th>
<th>ITG is effective overall.</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITG at my institution has been actively designed.</td>
<td>Strongly disagree/disagree</td>
<td>3.02</td>
<td>1.061</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>3.50</td>
<td>1.074</td>
</tr>
<tr>
<td></td>
<td>Agree/strongly agree</td>
<td>3.98</td>
<td>0.810</td>
</tr>
<tr>
<td>We incorporate measurement and reporting in our IT governance process.</td>
<td>Strongly disagree/disagree</td>
<td>3.25</td>
<td>1.134</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>3.69</td>
<td>0.869</td>
</tr>
<tr>
<td></td>
<td>Agree/strongly agree</td>
<td>4.03</td>
<td>0.756</td>
</tr>
<tr>
<td>IT governance can be accurately described by all relevant executives,</td>
<td>Strongly disagree/disagree</td>
<td>3.16</td>
<td>1.069</td>
</tr>
<tr>
<td>deans, and department heads.</td>
<td>Neutral</td>
<td>3.83</td>
<td>0.789</td>
</tr>
<tr>
<td></td>
<td>Agree/strongly agree</td>
<td>4.31</td>
<td>0.617</td>
</tr>
<tr>
<td>Does IT governance at your institution participate in institutional</td>
<td>No</td>
<td>3.24</td>
<td>1.076</td>
</tr>
<tr>
<td>budgetary processes?</td>
<td>Yes</td>
<td>3.93</td>
<td>0.853</td>
</tr>
<tr>
<td>Does IT governance involve formal review and approval of IT projects</td>
<td>No</td>
<td>3.42</td>
<td>1.052</td>
</tr>
<tr>
<td>at your institution?</td>
<td>Yes</td>
<td>3.97</td>
<td>0.848</td>
</tr>
</tbody>
</table>

*Scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree
but they still averaged a near-agree (mean 3.87) response, and they gave higher average ratings to the incorporation of measurement into ITG.

**Conclusion**

Our study is not the story of an IT governance house on fire. Majorities of our respondents agreed that their institution’s IT governance processes made timely decisions, balanced institutional and local/departmental needs, and were effective overall. While few institutions claimed to be in the top tiers of IT governance maturity, it might be argued that given these outcome measures, lower and midrange levels are good enough.

But two lines of argument suggest that many institutions—and not just the low performers—should fortify IT governance by pursuing higher maturity and better performance. First, nothing about IT is getting less political. Already IT touches virtually every constituency on campus, but the needs those constituents want satisfied, and the technology options available to them, continue to expand in ways that suggest that decisions about information and IT will become still more complex. Cloud computing, software as a service, research cyberinfrastructure, enterprise data management, mobility, privacy regulation, and security are all factors that will put greater stress on the often informal IT governance structures now in place.

What’s more, our research suggests that there’s a good deal that IT leaders can do to improve IT governance performance. Our results can’t demonstrate which way causality runs, but good IT governance outcomes are disproportionately found alongside many practices that are within the practical control of IT administrators. Two stand out because of the relatively poor marks institutions gave themselves in each: the incorporation of IT performance measurement and review into the governance process, and the ability of relevant participants to accurately describe IT governance. Better metrics and improved engagement with key participants (perhaps, as many of our qualitative interviewees suggested, by recasting IT issues into the business and academic issues those participants respond best to) may be good places to start when looking for a path toward greater ITG maturity. Actively designing ITG processes rather than just letting them happen is another marker of success. And where institutional realities permit, ITG participation in the budget process and in formal IT project review may both contribute to better ITG performance by empowering it to turn priorities into realities.

Finally, our study suggests that higher education IT administrators can and should work within the cultural norms of inclusivity and shared decision making that typify colleges and universities. Tempting as it may sometimes be to yearn for an IT function fully governed within the IT shop, we found that institutions reporting higher ITG maturity and effectiveness also reported more, not less, participation across constituencies. IT governance that effectively harnesses the creative power of the campus community through an enlightened combination of process and politics may be higher education IT’s best chance to advance a proud tradition of innovation and service.

**Endnotes**
