Effective Practices and Lessons Learned

Chapter 4 through 8 describe our findings about IT strategic planning and alignment practices in higher education institutions—from a content analysis of 57 IT plans found on the Web, an online survey of 483 institutions about their planning practices, and 22 in-depth interviews with CIOs. We have focused on each aspect of our navigational diagram, looking at institutional context and leadership, and IT governance, planning, and measurement. The sidebar (“Which Institutions Report More IT Alignment?”) summarizes findings about institutions that agree that their IT is aligned with campus priorities.

This chapter synthesizes the lessons we’ve learned and the effective practices that have emerged. While many of these insights may seem familiar, their recurrence underscores the importance of incorporating them into our portfolio of good practices. It is reassuring when data validates our existing ideas of effective practices. And it is even more instructive when our data reveals surprises, where we learn that, as Richard Katz, vice president

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of EDUCAUSE, might say, “What is common
wisdom is not always common wisdom.”

Balancing the Rigor of IT Alignment Processes with Institutional Culture

In classic higher education tradition, great
diversity exists in both institutional planning
processes and the resultant plans. Our case
studies, in-depth interviews, and study of IT
plans on the Web highlight this diversity. We
found differing relationships between insti-
tutional and IT planning; much variation in
plans’ focus, content, and scope; a multitude
of unique processes used to birth and carry
out a plan; and no consistent methods for as-
sessing or modifying processes and plans.

And in fact, common wisdom holds that
this is appropriate—that each institution cre-
ate an IT planning and alignment process that
makes best use of the institutional culture,
leadership, mission, funding, competitive
situation, and external conditions. However,
given that our respondents were not over-
whelmingly positive about the effectiveness
of their IT planning processes, it may be useful
to look at those institutions that have opted
to use more rigorous planning processes and
methodologies or even employ outside con-
sulting services—even though it may rankle
the existing culture. Respondents expressed
their views on these two approaches.

Reid Christenberry of Miami University
feels that “if there is an institutional planning
process—even if it is not rigorous or well de-
ﬁned—you are probably going to be much
more successful if you adapt your IT planning
process to the way the campus is accustomed
to planning. You should ﬁt IT planning into the
institutional mold, even if it means eliminating
terminology or dropping whole components
of what you have been accustomed to think-
ing is good planning practice. Otherwise, you
are ﬁghting an uphill cultural battle and you
will spend all your time arguing over process.
You have to be attuned to your institutional
culture before you can adapt a process for
your planning.”

Others also consciously tailor their plan-
ning processes to ﬁt their institutions. Bloom-
ﬁeld College’s Carole Carmody talks about her
small college community where, “especially
in summer, I take advantage of the fact that
we can just stop each other on the street and
chat about people’s needs and concerns. I get
feedback from people that one might not on
a larger campus.” UBC’s Ted Dodds addresses
the decentralization issue at his campus. “We
recognize that UBC, like many large research
universities, tends to be decentralized and
distributed in terms of resources, decision
making, accountability, etcetera. We want
to ﬁnd a way to enable that decentralized
environment to work effectively rather than
to superimpose upon it a planning process
that is more central. At the same, we want to
provide opportunities for collaboration among
the decentralized entities so we can move in
the same direction with a common purpose
and vision.”

Two of our case study institutions opted to
use external consultants. Shortly after being
appointed president of Calvin College, Gaylen
Byker brought in a team of consultants from
Purdue University to evaluate technology use
at the college and issue a report. The three-
member team, all of whom had earned un-
dergraduate degrees at Calvin, focused on the
college mission they had understood in their
years at the school. Their report led to the
strategic decision to create a new cabinet-level
CIO position. The new CIO then used the con-
sultants’ report as a road map for successful IT
planning at Calvin. The University of Cincinnati
used a consultant from Blackwell Consulting
Services who redeﬁned its IT leader position
and designed a new IT governance process.
focused on breaking down the silos and facilitating communication about IT, which in turn very positively changed the IT culture.

Perhaps we have gone too far in adapting our processes to fit our campus cultures and would be better served to take a more balanced approach. In any case, IT leadership would do well to remain open to processes that not only leverage the campus context and culture but also take full advantage of industry-wide best practices and external resources where advantageous.

**Institutional Vision and Priorities**

There is no doubt that an overall campus vision is important. A study of top-performing organizations found that a compelling and shared vision or mission was key to their success.\(^2\) And if constituents consider that vision worthy, they will embrace it more fully and it will more strongly impact the institution.\(^3\) A clear vision and mission help create a culture of participation and provide a natural backdrop for organizational alignment in general and IT alignment in specific.

Respondents are generally positive in this regard; 73.7 percent say that their campus has a clearly articulated vision (15 percent disagree), and 65.7 percent say they have clearly articulated priorities (18.3 percent disagree). Most important, respondents who do report clear institutional vision and priorities also report, more than others, that IT is aligned on their campus—both central IT alignment with institutional priorities and departmental alignment with institution-wide IT.

Several of our interviewees talked about the value of their campus vision to their IT planning efforts. UBC’s Dodds says, “Our president likens the need for a vision to the box cover of a jigsaw puzzle. You can’t put the jigsaw puzzle together unless you have the box cover. And that vision needs to be about people, not about technology, process, or outcomes. The reason that the university exists is not to have great IT or to run great networks. It is to further the academic mission of research and learning.” Dodds feels that “IT planning is most effective where there is a clear institutional vision.”

NYU’s Marilyn McMillan thinks about aligning IT with the institutional vision in terms of former U.S. Senator S. I. Hayakawa’s ladder of semantic abstraction. “The most concrete level is, for example, a specific cow, called Bessie,” McMillan explains. “Moving up the rungs of the abstraction ladder, you’d talk less specifically about a farm animal, and further up about an asset and at the top rung, wealth. But when you say ‘wealth,’ your listeners don’t necessarily all think, ‘of course, Bessie.’ Hayakawa notes that both ends of the ladder are important and that it is important to be clear about where you and your colleagues are on the ladder. Applying this to planning, the ‘wealth’ level is your institutional vision and principles. At the ‘Bessie’ level are specific project plans. You want your project plans aligned with your vision statement.” McMillan further describes her experience with IT planning “as constantly running up and down the ladder, from the possibilities inherent in the vision to the choices about projects and priorities. The rungs of the strategy ladder help keep the planning process flexible and relevant to the institution. The hard part in a university setting, especially where technology resources are widely distributed, is to keep all of the efforts aligned in some fashion.”

**Institution-Wide IT Planning**

Both the academic and practitioner literature are clear that the primary reason for IT strategic planning is to align technology with institutional goals and priorities. Our data support this idea in two ways. First, 76.0 percent
of respondents say that IT alignment is a top reason to plan. Second, a positive relationship exists between planning and IT alignment. Institutions that publish an institutional or an IT plan, or that engage continuously in planning activities, agree more that central IT alignment exists. Responding institutions that perceive their IT strategic planning process as effective also report more IT alignment.

What factors contribute to effective IT planning? Our data indicate that effective IT planning processes are reported at institutions that have a clear institutional vision and priorities, place emphasis on institutional planning, link the IT plan to the institutional budgetary process, and more often solicit input from and communicate with key constituents. Perhaps this is why IT planning is on the upswing, with 56.9 percent of institutions already having an IT plan and another 24.6 percent now developing their first IT plan.

All of our interviewees talked about their focus on institutional goals throughout IT planning. UC Berkeley’s Jack McCredie focuses on the campus academic plan. “The academic strategic plan provides the backdrop for our current IT planning cycle. Our IT plan will fully support this recently completed academic strategic plan. The academic plan referenced information technology in some sections, but not nearly enough that you could, for example, extract three paragraphs and consider that the IT strategic plan. Our campus IT plan will be a natural tie-in to the academic plan and keep the whole planning process alive.”

Joel Hartman of UCF describes the full integration between IT and campus planning. “We contribute to and then take all of our direction from the university’s plan. Our IT group does not sit down and write a separate IT plan. There is no document that describes IT activities, saying that over the next number of years we will develop x, y, and z. We do develop technical strategies to implement the university’s plan and then feed these activities back into the institutional planning process. By not having a separate IT plan, we escape having to get separate buy-in for an IT plan. At UCF they are the same thing.”

Similarly, Bridgewater State College’s Bill Davis says that he “serves with an institutional hat on nearly all the time. What IT planning does is force me to put on my division hat and become an advocate for my own division. There is tension between being an advocate for my division and making very sure that IT still supports the institutional mission. This causes me to increase the time I spend communicating with vice presidents, deans, chairs, and the president to make sure that IT continues to be perceived as a very important resource institution-wide and a strategic differentiator for the institution.”

When we polled our respondents who do not feel that IT is well aligned, the topic of institutional vision and priorities came up repeatedly. Wayne Powel, associate academic vice president and CIO, Gonzaga University, outlines his situation: “When we developed our IT plan 18 months ago, there wasn’t, and still isn’t, a set of institutional priorities with which we can dovetail. The result is a rather generic IT plan that focuses more on the university’s technology infrastructure than on developing specific services. That way, as institutional priorities are developed, we can tune the IT plan to the university’s, and we will not have wasted resources.” Mark Aldenderfer, UCSB, feels that “many institutional plans are filled with platitudes that offer little real guidance. Phrases such as ‘we wish to promote academic excellence’ and ‘we aspire to become a world-class educational institution’ are inspiring but of little practical value. What we need are institutional priorities that make it clear exactly what the platitudes mean. Does becoming
world-class mean creating a ubiquitous computing environment, and if so, how does that articulate with learning, teaching, and research?”

**Tracking the External Environment**

Strategic planning is greatly enhanced by a broad, deliberate, and formal look at external forces in the environment and how they might affect higher education. Henry Mintzberg states that this is one of the main reasons for planning, saying that “organizations must plan to ensure the future is taken into account—preparing for the inevitable, preempting the undesirable, and controlling the controllable.”

Not only is sidestepping potential negative impacts important, but also an understanding of environmental forces can surface a myriad of opportunities to be leveraged and used creatively.

Today, this need to understand the external world is becoming even greater—driven by increasing globalization and connectivity, the ever-accelerating pace of change, increasing complexity of the regulatory environment, new types of educational competition, rising potential for disruption, and a more volatile economic environment. These factors push organizations to become more agile and move toward a “sense-and-respond” adaptive organizational model.

As one survey respondent said, “My institution is moving away from formal planning mechanisms. We believe that planning is an ongoing process that must be done as part of daily management, not as a separate and distinct activity. Therefore, we are developing a set of processes and procedures, including scenario planning, that will provide guidance for continuous planning—for what might be over the horizon. We recognize that none of us can really predict or anticipate the future with any real degree of certainty.”

The IT leaders we interviewed did target some external areas for study, most often tracking technology directions. UBC’s Ted Dodds has formally integrated technology scanning into his IT organization with a new planning unit charged with conducting an ongoing industry watch of new technologies. Others track technology vendors closely or use consulting organizations to help understand technology futures. Some point to the poor track record for predicting what technologies will emerge and take hold and don’t try to do long-term technology forecasting. Instead, they focus on identifying the technological “preconditions” they think will be necessary to prepare for the next leap, whatever that may be.

Other areas of external scanning cited were legislative changes, economic forecasts, and higher education trends. While some institutions have official planning offices to help in some areas, perhaps CSU Chico’s Bill Post speaks for many when he says his primary mode of operation “is to maintain awareness of what is happening in both the broader technology industry and the higher education industry. For me personally, that means reading the literature and having your ear to the ground. A trend should not take you by surprise.” Or, as Anita Cassidy recommends in her popular book for the private sector, *A Practical Guide to Information Systems Strategic Planning*, “Keep asking and visiting and talking to employees of other similar and different organizations. Review magazines, articles, journals, and Web sites. Talk to vendors and consultants. Surf the Web. And talk to customers wherever they are.”

Indeed, the environmental tracking and forecasting practices described by our interviewees or mentioned in actual IT plans are largely informal and localized. Yet 57.8 percent of our survey respondents identified changes in the external environment as a top
trigger for changes in IT priorities. This gap between the external environment’s growing impact and the relatively scant effort going into environmental scanning tells us that higher education IT leaders would do well to carefully review their processes and practices for gathering and acting on such information. We are not alone. John Bryson noted in his *Strategic Planning for Public and Nonprofit Organizations* that “unfortunately, for various reasons, organizations typically are not very savvy about perceiving (environmental) changes quickly enough to respond effectively.” As a community, it is time for us to move to another level of sophistication in this regard.

**Linking IT Plans to the Institutional Budget**

The budgetary process is well recognized as a powerful tool for alignment. Our study substantiates this common wisdom, finding that most institutions do explicitly link their IT plans to the institutional budget (77.6 percent). And as one might expect, these specific institutions agree more than others that IT is aligned with institutional priorities. Interviewees described how this was done at their institutions.

CSU’s David Ernst mentioned that “CSU’s planning initiative arose from a group of campus presidents about 10 years ago who wanted to determine the best way to invest in IT across the CSU system. Knowing they were going to spend the money, whether they wanted to or not, the presidents thought it would be good to have a plan to guide their investments.” David Mash at Berklee College of Music describes his institution’s process: “We complete our budgets collegially; all the directors meet with the finance department. The finance department understands how our operating budgets relate to campus-wide and department projects. It helps us to work more collaboratively across department and division lines. My directors also understand how the college is balancing our needs with other areas. They understand where their piece fits into the entire institution. They are not just operating in a vacuum.”

As Bates College’s Gene Wiemers sums up, “The IT plan obviously needs to be tied to the institutional budget, so it has to be consistent with both the one-year and five-year college plans. It has to be realistic. The IT plan is not a wish list, pie in the sky, or an argument for more money. It is a plan that we intend to implement.”

**Institutional Leadership Engagement**

The president or chancellor is critical to creating a culture of strategic planning and alignment. In fact, Jerry Luftman’s research identifies senior executive support as the top enabler of IT alignment. In our study we found that in general, presidents take an active role in overall institutional planning—as champions, participants, or sponsors. Some interviewees spoke of the role of top leadership. Berklee’s David Mash talks about his outgoing president as “a rigorous planner who created a strong planning ethic at the college. He planned his retirement to coincide with the completion of our last strategic plan and the start of the new planning cycle. He announced his retirement two years before the end of the current planning cycle so the college could recruit the next president in time for him to review the previous plan and prepare for the next cycle.” Dick Leurig of Montgomery College Central Administration notes that his “president made planning part of the overall institution’s culture. If you look at many employee desks on campus, you will see a copy of the institutional strategic plan. It is thumb-worn and has stickers on it. As one administrator said, ‘It is not a coffee-table book. We use it around here. It is vibrant and current.’”
With respect to IT specifically, respondents were very positive about presidents’ engagement in IT, identifying them most often as strong supporters or willing enablers. Norma Holland points to Indiana University in this regard, saying that “the previous and current IU presidents believe that IT is a strategic asset. An institutional goal is to put ‘IU on the map in terms of technology.’ Former President Brand wanted to establish IU as a leader in absolute terms in the use and application of information technology. He really understood that IT is absolutely and critically important to higher education.”

**Involving and Communicating with Key Constituents**

Summarizing his research on IT alignment, Jerry Luftman observes that “a decade of research has found that the key is building the right relationships and processes.” Further, his study of inhibitors and enablers to IT alignment found that the top inhibitor was the lack of close relationships between IT and non-IT organizations and staff. Indeed, broad-based and meaningful involvement of campus leaders and constituents is central to aligning IT initiatives with overall campus goals and strategies. While this is generally accepted as “common wisdom,” our study underscores the importance of this practice.

In Chapter 5, we learned that perceived effectiveness of IT governance was related to involvement of key administrators, deans, and faculty, as well as the use of IT advisory committees. In Chapter 6, we also learned that perceived effectiveness of the IT planning processes was related to the extent of interaction with key constituents, both in terms of their providing input to central IT and being kept well informed of IT priorities. Finally, we saw that both perceived effective IT governance and effective IT strategic planning are associated with stronger IT alignment with institutional priorities.

Yet within this broad finding we see enormous variation in how institutions go about involving and communicating with their key constituents. Indeed, there are endless ways to assemble constituents and create processes. And again, successfully tailoring these processes to an institution is essential. As UC Santa Barbara’s Mark Aldenderfer advocates, “There is no single model for a campus to follow to find the governance structure best suited to its history, stated strategic goals, and the practical realities of campus politics. But the discussion on that structure must be public, open, and wide ranging. Without it, we go back to business as usual, and in today’s environment, we cannot afford to do this much longer.”

Our interviewees and survey respondents told us they make extensive use of the many traditional approaches for involving and communicating with constituents. These include IT committees; meetings with executives, deans, faculty, administrators, and staff; hall chats; lunches; written reports; facilitated sessions; consultants; suggestion boxes; and Web sites. In addition, institutions often create a unique approach for soliciting input from constituents. For example, Stephanie Reel of The Johns Hopkins University explains, “We spend quite a bit of time imagining the future in steering committees. Every four or five years, we complete a scenario-building exercise where faculty members describe, through writing or a presentation or other means, how their particular discipline will evolve over the next five to 10 years, and the enabling technology required to support their scenarios.”

The Berklee College of Music launched a program called 10,000 Ideas to solicit input from standing committees and other sources. The program also uses paper suggestions, town meetings, and a Web site for
posting ideas. A broad panel of students, faculty, administrators, trustees, alumni, and parents filtered the ideas into 10 themes, from which four categories of institutional projects emerged. “Every theme involves IT,” notes David Mash. “In each successive review, different people from the same constituencies participated to broaden the input into the process.” Mash further says that he wants to involve the extended community—the recording industry, the music products industry, and the technology industry through an external board.

Ted Dodds described UBC’s e-strategy of town hall meetings, held each year in June. “The initial one invited top-notch speakers from other peer institutions—no consultants, no salespeople, no vendors—just people who are friends of the family from other institutions to talk about their successes with either IT planning or other initiatives. We invited UCSD’s Steve Relyea to talk about the New Business Architecture, The University of Texas at Austin’s Randy Ebeling to discuss their portal, and the University of Minnesota’s Bob Kvavik to present their e-business efforts. UBC’s Richard Spencer rounded out the event by describing our own e-business initiatives. At present, the annual town hall meetings are internally focused where the presentations feature 25 to 30 departments that share their activities in a mini-internal conference.”

**Organizational Climate**

The importance of a stable or dynamic organizational climate for IT alignment is profound. Instability can occur for any number of reasons—pressures or events in the external environment as well as internal conditions such as top leadership challenges and budgetary crises. Organizations experiencing turbulence or volatility (20.4 percent) have very different perceptions about their IT alignment with institutional priorities. Where 88.5 percent of institutions claiming dynamic or stable environments agree that IT is aligned with institutional priorities, only 69.4 percent of institutions reporting turbulent or volatile environments say IT is aligned.

Institutions with unstable organizational climates are also less likely than others to feel that there is a clear institutional vision and priorities. Perhaps vision and priorities are compromised or in transition during times of upheaval. On the other hand, it may be that in organizations without clear vision and priorities, there is more feeling of instability and turbulence. One respondent speaks to the need for IT alignment on his campus and the lack of overall institutional vision and priorities when he asks, “How does central IT align its priorities with institutional priorities where there is little sense of the whole? Are we going to work on customer relationship management or try to integrate multiple e-mail systems? Are we going to continue to use ‘cat herding’ as our primary management tool? When will rising costs and shrinking budgets force rationalization and alignment of goals? Are we running our institutions, or are our institutions running us?” The respondent further observes, “It’s probably not simply a lack of clear vision and priorities. If you ask the administration, they would claim they have both; it’s the management of the execution.”

Institutions reporting less organizational stability also more often have a new president and are less likely to have that president positively engaged with IT. One respondent noted the importance of top leadership when she pointed out that their IT alignment efforts suffered because there had been no permanent top academic leader for several years. “The faculty now have a rather cavalier attitude about research accountability and activities. There is a ‘tail wagging the dog’ climate that has placed the faculty firmly in control of the campus despite the efforts of the president. The attitude is ‘don’t bother me with your technology until I need it, and then it is an emergency.’ IT’s greatest challenge continues
to be the lack of an academic–IT partnership that will advance student learning.”

Decades of study and experience with strategic planning and IT alignment have generated a comprehensive portfolio of textbook approaches, methods, and models, as well as a body of examples, recommendations, and effective practices. Yet these processes apparently still need supportive internal and external conditions to bring about maximum benefit. In the end, IT alignment may work best in a favorable organizational climate. This is important to recognize for those who do perceive their environments as turbulent, so that conscious attention can be given to developing compensating strategies to use within the organization.

**Measuring IT Performance**

We found relatively little emphasis placed on the assessment and measurement of IT performance. Nor was there much commonality of approaches or measures. We asked our interviewees about measurement of IT performance and found that there is growing interest in the use of measurement processes and metrics. While a few institutions have developed and use measurement processes extensively, IT leaders are increasingly thinking about how best to use metrics and assessment for IT. Some interesting uses of metrics follow.

Bridgewater State College’s Bill Davis uses his annual user survey both to communicate past performance and to encourage survey response. “The introduction summarizes what respondents discussed last year, how IT incorporated their comments into this year’s IT goals and planning, and what IT delivered in response. It tells the respondent that if they take the time to tell us their needs, IT incorporates them into our goals.”

CSU’s David Ernst tells his story: “We came up with success measures for our projects up front, not after the fact. Some of these were not the most precise metrics, but keep in mind the process was partially political. We developed metrics that made sense to not only the CSU, but also to the legislature and the state department of finance. Having the CSU agree to employ these measures was the most compelling argument to convince the legislature to appropriate a $350-million-dollar bond fund for our infrastructure build-out project. We are reporting to the legislature annually for 10 years on each one of our projects, based upon the metrics that we established up front.”

UCSD has been actively experimenting with and evolving metrics for many years, implementing the Balanced Scorecard, performance dashboards, and other measurement processes. Says Steve Relyea, “We try to develop metrics that are indicative of performance and use them as a guide to help us do what we should be doing, know where we are, and learn more about where we should be going. We started using metrics 10 years ago on a one-year basis, just to see the impact. Now, 10 years later, we have found metrics to be an integral part of our business processes and strategic planning. Initially, I thought the most valuable aspect would be in comparing ourselves to peer institutions. The greater value, however, is in comparing ourselves to our own past performance. This is the true ‘apples to apples’ comparison.”

Miami University’s Reid Christenberry uses a top-down approach. “As we develop the IT plan, we are retooling our IT organization to fully integrate the importance of alignment. We are creating top-down specifications of focal areas and performance objectives for IT units and staff that are in line with the strategic IT plan. We are propagating these down through the organization so that everyone on the staff understands how their performance relates to the implementation of our strategic goals. We want staff to understand their relevance to institutional undertakings and the
importance of their alignment with these initiatives. To dissociate from the historical perspective of performance assessment as a critique of personal behavior, we are moving away from the term ‘performance management review sessions’ and renaming it ‘quarterly alignment sessions.’ We are focusing on involving our managers in communication, management, and organizational alignment. Often, technical managers are ‘working’ managers, still actively involved with the technology as well as managing their staffs. Our goal is to help them understand their primary role is management.”

### Conclusion

Our data provide a snapshot of IT strategic planning and alignment perspectives and practices in higher education—in terms of campus planning activities, organizational climate, leadership involvement, IT governance, IT planning, and IT performance measurement. Our respondents bring extensive, varied leadership and planning experience to our study and come from very diverse institutional settings. It is most interesting, then, that we found so few meaningful differences among public and private institutions, Carnegie classifications, and institutions of varying size. The IT strategic planning and alignment practices and views, although admittedly tailored to institutional cultures, appear to reflect a commonality that crosses institutional boundaries.

### Endnotes

1. We also queried a number of respondents who reported nonalignment at their institution.
3. In the ECAR study Information Technology Leadership in Higher Education: The Condition of the Community, we found that respondents very often cited the mission of higher education—its contribution to society through teaching, research, and community service—as a motivating force for their choice of career at a college or university.