Introduction: Aligning IT in Higher Education

The goal of a strategic planning process should not be to make strategy but to build prepared minds that are capable of making sound strategic decisions.

—Sarah Kaplan and Eric D. Beinhocker

The Merriam-Webster Dictionary defines alignment as “the proper positioning or state of adjustment of parts, or an arrangement of groups or forces in relation to one another.”

For Philip Crosby, alignment is leadership’s essential purpose: “Leadership is deliberately causing people-driven actions in a planned fashion for the purpose of accomplishing the leader’s agenda.” The twenty-first century began in the United States with bursting of the dot-com bubble, followed by a sharp recession in the high-tech industry and the increasing “offshoring” of programming and other IT activities, culminating in a sharp national debate about whether or not “IT matters.”

At the heart of the debate over IT value are genuine concerns over the real complexities surrounding the alignment of IT investments with “the leader’s agenda.” In fact, the alignment of IT activities and organizational purposes is so problematic that one prominent survey of private-sector CIOs listed “aligning IS and corporate goals” as its respondents’ top concern in five of the last 10 survey years. Computer Sciences Corp. (CSC) reports that while IT “has become an increasingly critical component of business success, information systems executives must ensure that their plans are in sync with the strategies directing the overall enterprise.”

And without empirical evidence, we are willing to speculate that alignment is even more problematic in the idiosyncratic context of higher education and our unique and essential system of shared governance.

When asked what he did for a living when he was chief executive officer (vice chancellor) of Thames Valley University, Mike Fitzgerald replied without much hesitation, “I managed contradictions.” Contradictions in higher education abound. “Enhance academic quality and reduce costs.” “Increase access and maintain rigorous standards.” “Provide equal access and improve student retention.” “Grow enrollments and be rigorous while enhancing student satisfaction.” And so forth. Information technologists, of course, are also caught in the binds of contradictory priorities. We are expected simultaneously to promote universal connectivity through networks that are always on—at constantly decreasing costs; to be innovative in delivering mission-critical production services on a 24 x 7 basis; and to...
deliver demonstrable returns on investment without authority for influencing or controlling the institutional processes where value is derived!

Colleges and universities are highly complex organizations. IT leaders and practitioners often describe what they do in terms that most would understand: “we build and maintain networks,” or “we implement information systems,” and the like. When asked how they perform this work, these same leaders, like Fitzgerald, describe their methods in somewhat magical, metaphysical, or at least colorful ways: “I foster a dialogue,” or “I mediate conflicts,” or the perennial “I herd cats.” Social scientists would agree and have described colleges and universities as adhocracies, organic organizations, clans, and even organized anarchies. These institutions are characterized by problematic goals, unclear technology (in the broader sense of the word), and fluid participation. George Keller describes colleges and universities as “amiable and anarchic collectives of scholars overseen by a small contingent of dignified caretakers who toil at the unavoidable business edge.” The trouble with collectives, as Aristotle observed, is that when everyone owns everything, no one will take care of anything! And information technologies, of course, demand much caretaking.

Colleges and universities are unusually complex because they operate under two inherently different operating principles, philosophies, and structures. One is guided by professional administrators and holds sway over administrative affairs. The administration is accountable for the faithful stewardship of an institution’s physical, human, and financial resources. The other is guided by the faculty and is responsible for classroom activities, curriculum design, peer review, and other instructional affairs. In general, the faculty are responsible for the quality and content of the institution’s instructional program and the scope of its curriculum.

Those activities related predominantly to administrative operations more or less follow a mechanistic information processing organizational model found in many complex organizations. This model depends on rules, programs, procedures, and a hierarchy of authority and reward to alleviate complexity and uncertainty and to align the behaviors of the organization’s members. Often, organizations that operate within these principles are designed and tuned to avoid risks—of public embarrassment, financial misfeasance, or conflicts among the organization’s myriad stakeholders. In exchange for reduced risks, many administrative bureaucracies accept a somewhat slower rate of adaptability, a diminished penchant for innovation, and decreased efficiency of large-scale administrative operations in times of uncertainty.

In colleges and universities, to this organizational challenge is added the additional challenge of faculty governance. Faculty organizations look for all purposes like “adhocracies”: organizations optimized for innovation that rely nearly not at all on rules, programs, procedures, or plans. Adhocracies depend on project structures that can “fuse experts drawn from different specialties into smoothly functioning creative teams that are dominated by the experts’ pull to collaborate.” Social scientists believe all the distinctions of conventional structure disappear in the adhocracy and that “with power distributed throughout the structure, the distinction between the strategic apex (the executive leadership) and the rest of the structure blurs.” As one can imagine, participants in bureaucracies and adhocracies can be nearly incomprehensible to one another, creating unique challenges when goals and priorities span the enterprise. These challenges are further complicated by the profound differences between a scholar’s
uncompromising quest for truth in research and the administrator’s frequent trade-offs of perspective and compromise in the quest for organizational cohesion.

Information, information systems, and the IT infrastructure bisect and serve both the institution’s rule- and procedure-dependent administration and its purpose- and expert-driven faculty. So diverse are these elements of the academy that former University of California President Clark Kerr described colleges and universities as networks of cottage industries united by the common need for parking! So while college and university information technologists must operate production systems and networks in ways that meet the administrative mandates for access, affordability, and accountability, they must also craft plans and take actions that can win the support of a faculty preoccupied with innovation and academic excellence. Too often, administrative leaders appreciate innovation only when it is efficient. Faculty, on the other hand, may characterize investments in enterprise activities such as student services as reductions in funds for innovation or instruction! This tension is exacerbated by issues stemming from higher education’s accumulated deferred maintenance in IT. Backlogs of deferred maintenance force IT leaders to divide further their time, resources, attention, and priority to underperforming legacy systems.

The challenge, therefore, facing those charged with effecting action at the enterprise level in higher education is to align organizational plans, investments, priorities, and actions not only with institutional priorities emanating from the leadership but also with disparate faculty groups’ rapidly shifting goals. This last challenge is particularly vexing because the priorities of the professoriate align most frequently not with those of the institution but instead with networks of disciplinary colleagues scattered in colleges and universities across the globe. The already difficult task of aligning plans with “the leader’s agenda” is further compounded by higher education leaders’ propensity to leave their agendas unstated. These leaders are thought to “discover preferences through action more often than act on the basis of preferences.”

The impetus for this ECAR study began with the strong signal from the EDUCAUSE Current Issues Survey indicating our members’ perennial preoccupation with strategic planning. As ECAR researchers reviewed the field’s literature and discussed this preoccupation among ourselves and members of the higher education IT community, we came to understand better the complex and problematic nature of strategic IT planning in higher education.

The nature of the alignment problem has been an object of study by academics since the late 1970s, and the relationship between business planning and IT planning has emerged as an important cause of problems long associated with the implementation of information systems and technologies.

The importance of organizational issues, particularly the failure of IT planning to properly consider the organization’s broader goals and strategies, was the second most dominant factor in a model that studies IT cost and hardware and database implementation problems. This finding was confirmed in a study related specifically to IT uses in higher education that concludes that “alignment was positively associated with both perceived IT success and organizational performance. It therefore seems that organizations which match their IT capability to their critical success factors may not only be more successful in their IT utilization but may also perform better overall.”

Aligning IT plans with institutional purposes also presents cultural challenges.
President Morris W. Beverage of Lakeland Community College, for example, describes how the fundamentally differing perceptions about the pace of change in IT and in the academy complicate the already complex issues surrounding IT strategic planning in higher education specifically. In fact, differences in perceptions and expectations about the pace of change reflect only one of the differences that distinguish and separate higher education’s IT practitioners from the academy’s dominant culture (see Table 2-1).

For higher education IT practitioners, the alignment problem manifests itself early in the process of IT strategic planning. The nature and problem of IT strategic planning was framed in the provocative article “Is Strategic Planning for Technology an Oxymoron?” by Martin Ringle of Reed College and Daniel Updegrove of The University of Texas at Austin, and in the responding article by University of California at Berkeley CIO Jack McCredie. In conversations with more than 150 higher education technology officers, Ringle and Updegrove reveal the dominant motivations for strategic IT planning:

- aligning technology with other institutional priorities,
- disseminating knowledge about IT needs and constraints,
- building alliances with key decision makers,
- lobbying for (and obtaining) financial and other resources,
- addressing existing technology needs, and
- keeping an eye on the leading edge.

Ringle and Updegrove point out that these motivators have more to do with organizational issues than technological ones, a fact underscored by their observation that IT planning processes in higher education are most commonly triggered by the arrival of a new academic officer or chief information/technology officer. Their work claims that while a surprising number of CIOs and chief academic officers attribute planning failures to IT’s rate of evolution, IT practitioners primarily echo the academic literature, explaining failure in terms of

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<tr>
<th>IT Culture</th>
<th>Academic Culture</th>
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<td>Emergent profession</td>
<td>Mature profession</td>
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<tr>
<td>Change agent</td>
<td>Values tradition and skepticism</td>
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<tr>
<td>Institutional focus</td>
<td>Disciplinary focus</td>
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<tr>
<td>Focus on production</td>
<td>Focus on innovation</td>
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<td>Quest for consensus and alignment</td>
<td>Quest for truth</td>
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<td>Organizational anonymity</td>
<td>Reputation driven</td>
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<tr>
<td>Activities/services rendered transparent</td>
<td>Labyrinthine processes and practices</td>
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<td>Speed is a valued objective</td>
<td>Speed may be antithetical to quality</td>
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<td>Short life cycle for products, services, outcomes, and underlying technology</td>
<td>Work products designed to endure for years, decades, or even centuries</td>
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<td>Uses a highly idiosyncratic and technical language to communicate intentions</td>
<td>Uses a different highly idiosyncratic and technical language to communicate expectations</td>
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failure to tie technology to institutional mission and priorities,
failure to get the right people on board,
excessive focus on technical detail, and
lack of suitable (engaged) leadership.

This work and its conclusions provide the base camp for our research. These ideas find new currency in the work of University of Illinois at Chicago’s Dean Stanley Fish, who recently concluded that “the trouble with long-range planning is that it almost never works, in part because the object of your analysis will not stand still … in part because the focus on the long-range deflects attention from the short-term problems … in part because long-range planning usually has a history in any university … of skepticism and cynicism.”

As the ECAR research team peeled back the layers of higher education’s preoccupation with strategic planning, we confirmed that what our members were really placing under this umbrella was a complex set of strategic management activities that includes

- goal setting and IT planning,
- IT governance,
- communications, and
- measurement and evaluation.

As we probed further, we concluded that all of these strategic management activities were really techniques being deployed by IT leaders in higher education at least in part to achieve goal alignment and project discipline in their complex and loosely coupled institutions.

For the purpose of this study, we treat IT strategic planning, IT governance, communication, and measurement as elements of an overall leadership process (and less frequently, a product such as a plan) designed to align

- IT priorities with the institution’s broader goals and objectives;
- the institution’s technical directions and/ or IT organization with technical trends shaping the behavior of other social, governmental, or commercial institutions;
- intentions with resources;
- current conditions and capabilities with future expectations and possibilities;
- motivations and intentions of those who deliver IT services with those of key stakeholders who depend on and consume those services; and
- expectations of services to be delivered with constraints and opportunities associated with them.

Therefore, we organized this research, hence this publication, to highlight the state of the practice of higher education’s IT planning, governance, communications, and measurement and assessment activities. We also discuss at some length the organization and environmental contexts in which these activities are carried out. Finally, to reinforce leadership’s centrality to the success of any programs designed to foster alignment, we’ve devoted separate analysis to leadership’s role in fostering or hindering the alignment of IT investments with institutional priorities and plans.

Endnotes


13. Ibid., p. 302.

14. K. E. Weick, op. cit., p. 27.


