Designing and Implementing a Learning Organization-Oriented Information Technology Planning and Management Process

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#IT5515

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INTRODUCTION

Higher education is changing. Driven by the need to increase productivity, quality, and access while meeting the challenges of competition, universities, especially state-assisted institutions, are seeking ways to do more with less governmental support. Information Technology (IT) is perhaps the enabling tool that will bring transformative change (Oblinger & Rush, 1997). The organizations that have had primary managerial responsibility for IT implementation on many campuses need to change and be restructured if the technology is to live up to its potential.

This case study provides an overview of the process utilized in implementing a broad-based strategy to address the information technology needs of a large public university, the University of Memphis. It deals at length with the planning and creation of an IT governance structure and a strategic planning and management model. In this case, modern theories of organizational change and strategic planning were applied to the creation and improvement of the University's IT structure.

CASE QUESTIONS

- What IT changes are needed to significantly improve a large state-assisted urban campus?
- What organizational structures are necessary to enable meaningful IT decision making?
- What types of "people" changes need to occur and in what time frame?
- What are the major barriers in making planned IT change happen?

CASE NARRATIVE

Background

The University of Memphis (UoM) is the flagship institution of four-year universities within the Tennessee Board of Regents system of higher education. The campus of

approximately 20,000 students, with its primary location in the geographic center of the city, is ethnically, socially, and economically diverse. This regional, urban, doctoral granting institution is within a relatively short commute of 1.5 million residents of the mid-South. The institution has two campuses and a growing number of other locations offering courses. It consists of nine schools and colleges and five centers of excellence. The University employs about 2,400 faculty and staff members. An annual state and non-state budget of approximately $220 million meets educational and service needs.

The University of Memphis is a state-assisted institution governed by a state-regulated system office. As an urban university, it strives to provide a stimulating academic environment consisting of innovative undergraduate education and excellence in selected research areas and graduate programs. Exposure to diversity in the composition of the student body, faculty, staff, and administrators enhances educational experiences. The University responds to the challenging responsibility of being located in a culturally diverse region by developing a unique blend of teaching, research, and service that contributes to the general welfare and growth of the region.

Historical Context

Shortly after assuming the leadership of The University of Memphis in 1991, President V. Lane Rawlins recognized that the existing IT unit could not provide the vision and ongoing assistance needed to support the institution as it began a significant change process. Initially, he instituted self-studies and brought in an outside consultant to define the magnitude of needed change. This led to a decision to create a chief information officer (CIO) position and to combine various IT-related units into one.

Thus in the Fall of 1995, the President established a new division of Information Systems (IS) and created the position of Vice President for Information Systems & CIO (VP/CIO). The new unit had responsibility for networking, academic and administrative computing, and telecommunications. As chief information officer, the new Vice President also had responsibility for developing an IT strategic planning process, an associated governance structure, and a much-needed information policy for the institution.

The new IS organization was formed from units that had previously reported to either the Vice President for Business & Finance or the Provost, who each had IT staff with mid-manager or below levels of authority. The need to restructure and redirect the organization was evident. Experienced senior-level administrators were required, and several existing positions within the organization needed to be redefined. The need for different management principles, a renewed service orientation, team-based activities, and a planning focus would lead to a commitment to begin an organizational cultural change toward that of a learning organization.

A learning organization is one that continually expands its capacity to create its future. For such an organization, “adaptive learning” must be joined by “generative learning”—learning that enhances the capacity to create. Characteristics include shared visions, personal mastery, systems thinking, and team learning. Such organizations can also be defined as:

> [...] organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together (Senge, 1990, p. 3).

Shortly after appointment, the new VP/CIO initiated three major multi-year projects relating to information technology. The first involved completion of the basic network infrastructure for the University by connecting all offices and a proportion of classrooms and dormitories to the campus network and selected locations to Internet2. The second project was to develop an integrated, standardized academic system (including support roles) consisting of computing laboratories, classrooms, and faculty offices. The third initiative was to significantly decrease maintenance of the University administrative system by enhancing it with World Wide Web (WWW)-based access and eventually moving to a next-generation administrative system in an object-oriented and relational database environment.

During his tenure, the President appointed several new executive officers and senior administrators to work together with remaining long-term senior administrators and executives in a collegial and collaborative style for the betterment of the organization. The addition of strong executive support and leadership, along with experienced new academic leaders and staff, is allowing needed changes to occur at a more rapid pace than would otherwise be realized (Penrod, 1998).

Restructuring the IT Unit

The requirement to move ahead with significant system upgrades while restructuring the IT unit necessitated an IT strategic planning and management process closely coupled with a well-understood IT decision-making structure. It was equally important to link the IT planning and management model to existing institutional processes such as planning, budgeting, and personnel administration. Additionally, a learning organization component was critical to ensure that adaptive change would occur within the staff.

When the CIO arrived, the institution lagged behind its regional and national peers in IT infrastructure and, consequently, in usage. There was a lack of direct state funding to support institutional IT requirements, in addition to a need for internal restructuring of IT financial support. The first action was the development of both an operational and linked capital budget. Initially, a reserve account and year-end funds addressed major IT-related administrative costs and upgrades. Now the capital budget is directly linked to the operational budget, and meaningful ongoing planning for administrative and infrastructure needs may be conducted.

Students historically paid a very modest technology access fee (TAF) of up to $15 per semester. In the fall of 1997, this fee increased to $50 per semester; then in 1998, it was raised to $100. This enhanced fee provides a steady source of revenue allowing ongoing modernization of academic computing and instructional networking.

The University Strategic Plan called for a concerted effort to enhance the overall image and regional stature of the institution. Because of historical issues—a commuter campus environment and statewide reduction of higher education funding over the last decade—the university often suffered from an image that does not match the quality of existing programs and offerings that are available in certain disciplines. Strategies were devised to address this and to continue to increase overall quality—especially in five designated areas that included information technology, health sciences, international programs, performing arts, and undergraduate academic achievement.

Introducing any significant change in organizational culture is always difficult. An attempt to aggressively move a university forward requires the creation of a plan of action. One of the first exercises in such an endeavor is to define the barriers that exist. Establishing

appropriately enhanced ongoing operational and capital budgets in a state university with severe budget constraints is difficult, even when there is presidential support. A major infusion of budget money for academic needs comes from increased fees, and student support was necessary to convince board members of that need.

Money, however, is not the only resource necessary. Initiating a formal IT planning process linked to the institutional planning process was a place to begin. Furthermore, linking IT planning directly to individual behavioral change, management style and practice, and unit and personnel evaluation set the stage for productive use of existing and additional budget allocations. Moving from a traditional data processing-oriented structure to one aimed toward 21st century management processes requires a change in organizational culture. Senge's (1990) learning organization theory provides an appropriate methodology to bring such change. Adaptive change in people requires the individual to determine that he/she wishes to change. If change is truly to occur, it is imperative for organizational changes to be apparent as well. Personal empowerment, professional development opportunities, team-based activities, involvement in decision making, and the linking of personal and organizational values are examples of unit changes that provide a stimulus to motivate individuals.

Against this backdrop, the president authorized creation of the new IS unit and supports its development to help position the University for the future. The need for such action is crucial:

> We are entering a second era of information technology in which the…applications of computers, the nature of technology itself, and the leadership for use of technology are all going through profound change. Organizations that cannot understand the new era and navigate a path through the transition are vulnerable and will be bypassed (Tapscott & Caston, 1993, p. 13).

The initial IS organization consisted of disparate units that had functioned as a divisional group for several months led by an outside consultant. Many had not engaged in any substantial professional development for some time and were not adequately equipped with desktop computing capabilities. Additionally, many individuals were long-term staff members of the university with little or no experience elsewhere. Almost without exception, they did not know what to expect from a new CIO or what the institution expected of them.

The University publication, *The Strategic Plan: Defining Excellence 1995-2000*, called for major IT advancements in both academic and administrative areas. It defined the need for a concerted effort to enhance the overall image and regional stature of the institution. For a variety of reasons, the University's image did not match the quality of programs and offerings that are available in certain disciplines. Responses devised by senior administrators to address this included the advancement of an information strategy. Near-unanimous agreement by senior executives and within the Information Systems Division indicated the need for change that was planned, bold, supported, and nurtured.

The president recognized the need for urgent change in sustaining institutional quality, and the CIO recognized that building a learning organization and implementing a strategic planning and management process were critical components to attaining that shared vision. It was neither necessary nor prudent to spend a lot of time analyzing that situation. Instead,

the IT governance structure, enabling quick decision-making, was established within the first three months of the CIO's appointment. The governance process immediately embraced and involved up to 100 key institutional players in a new direction for IT across the University.

The formal structure consists of a senior policy level council (a group with presidential designated decision-making authority) and advisory committees representing academic (primarily faculty), administrative, and student interests. In addition, various role-defined groups also have the opportunity to provide input into decisions that affect them (technical support providers, college-level committees, other administrative groups, etc.). Movement away from a fairly rigid bureaucratic structure within the central IS unit toward a coordinated but distributed organization was called for as rapidly as feasible. Finally, it was essential to define an appropriate role relationship between the central IT organization and other IT units located in academic and administrative departments.

The obvious need for a structural overhaul coupled with an expectation for developing future excellence called for a process of organizational alignment. Alignment takes place when a group of individuals works as one with a deeply shared sense of vision and purpose. Alignment of individuals can be powerful, but it is not enough. The organizational processes, systems, and structures must also be in alignment. When there is reasonable alignment in an organization, learning—individual learning, team learning, and organizational learning—results. It is a powerful energy source (Smith & Yanowitz, 1996). The President and CIO immediately developed, defined, and instituted this IT governance structure with overlapping membership, which began making institutional decisions and defining IT direction. To steer the effort, the president instituted a policy-level body, supported by three advisory committees—academic, administrative and student. The new structure called for the creation of a number of new councils and committees:

Information Technology Policy & Planning Council

This council is entrusted with the primary decision-making authority regarding IT issues. It provides a forum for discussion and approval of all institutional IT policies, IT-related standards, the IT Strategic Plan for the University, and IT issues that require policy-level deliberation. The Council works in conjunction with, and coordinates the activities of, student, academic, and administrative IT advisory committees. This body is also charged with responsibilities to help ensure good cross-functional communication and to ensure that agreed-upon IT plans are carried out. The Council consists of the campus Executive Officers, Deans, the President of the Student Government Association, Faculty and Staff Senate representatives, Internal Auditor, Chairs of Advisory Committees, the University Librarian, and the CIO. The President appoints the chairperson.

Information Technology Academic Advisory Committee

This group advises the CIO on IT matters related to academic issues; provides input to and reviews the academic sections of the *IT Strategic Plan*; establishes priorities of all IT academic projects brought before the committee; participates in the development of IT standards, guidelines, and procedures related to academic information technology; and helps facilitate communication across the campus on all IT-related matters. Membership includes students, representatives of each college, the Library, Research Institutes, the Provost, and the Faculty Senate.

Information Technology Student Advisory Committee

The students advise the CIO on matters related to information technology access for students, matters related to certain academic or administrative issues, and use of student technology fees. The committee helps facilitate communication to student groups across the campus on IT-related matters. Members include student leaders, both graduate and undergraduate.

Information Technology Administrative Advisory Committee

The committee advises the CIO on IT matters related to administrative issues; provides input to and reviews the administrative sections of the *IT Strategic Plan*; establishes priorities of all IT administrative projects brought before the committee; participates in the development of IT standards, guidelines, and procedures related to administrative information technology; and helps facilitate communication across the campus on all IT-related matters. This committee consists of representatives from the Provost's office, each vice presidential unit, the schools and colleges, a representative from the Staff Senate, and representatives from Information Systems.

IT Strategic Planning and Management Model

The IT strategic planning and management model also stressed the necessity of a shared vision for the internal IS staff. From this staff of approximately 100, about 65 percent voluntarily met throughout the fall of 1995 to collectively begin the process of aligning their services and skills with the aggressive initiatives that faced them and to begin building a shared sense of vision, understanding, and buy-in.

The first alignment process was to assess individual core values and then to derive a values statement for the new organization for which there was a consensus commitment. A number of exercises from *The Fifth Discipline Fieldbook* (Senge et al., 1994, pp. 193-234, 297-350), including "Personal Mastery" and "Shared Vision," were used. This resulted in a list of 13 values for the IS organization, which are now posted in each unit office. The fundamental purpose of IS, a broad-based extended mission statement, and a three- to five-year futures scenario were also derived for the new division. The outcome of this initial planning stage was the development of six institutional strategies designed to provide guidelines for moving to the envisioned future. Each of these "pieces" was initially developed by the IS staff in draft form then discussed, modified, and approved by the governance structure. The exercise and rapid defining of institutional strategies, while not without some controversy, serve as the linchpin to future efforts and provide focus to initiatives that have institutional ramifications and require a great degree of collaboration and leadership at all levels.

Planned and bold steps by the institution were required to contend with its peer competitors. Because major shifts in education are being realized by all institutions of learning—older, nontraditional students, virtual classrooms, more learning by discovery, instructors as facilitators of learning, and distributed campuses—it was critical that changes be strategically planned. It was necessary to recognize the relationship between the institution and its IT environment, to make difficult decisions concerning the institution's desired IT future, and to realize the ultimate purpose of IT planning—which is decision making to support the good of the institution (Shirley, 1988).

During the fall of 1995, meetings were held with all college deans and administrative unit heads to understand the current environment and discuss future needs and

initiatives. Input was sought during these visits on perceived institutional and IS divisional strengths and weaknesses that influence information technology implementation and support.

Within the IS division, planning centered on making a thorough self-examination and then exhibiting a willingness to make the sometimes difficult decisions to act upon identified changes. Examinations focused upon: how the unit was staffed; how the unit was budgeted and how those resources were utilized; what the physical facilities lacked and how existing facilities could best be utilized; what technologies were in place and what were necessary; what the competencies of the IT staff were and what were the needed competencies; what image was projected to clientele; what was the cultural climate in which the unit operated; and what were the services provided. Strengths and weaknesses in each of these areas and in the internal and external environment in which the unit operated were carefully analyzed.

In examining service offerings, the IS unit first reviewed new service concepts internally, then submitted them for review to the advisory committees, compared recommendations, and came to meaningful agreement. The examination of existing services helped determine which services to eliminate, how the staff felt about those decisions, and how clients felt about the decisions. Some services simply needed modification and some services were unchanged. Having completed that exercise, it was necessary to get the resources properly assigned and aligned to ensure delivery.

An aggressive decision to serve as a beta site for a new administrative systems support platform and outsourcing of University systems development personnel to provide training and leadership occurred during year two of the new administration. Elsewhere within the IS division, alignment of positions and incumbents was taking place. Certain individuals retooled their skills and transitioned successfully, others less so, and a few, not at all—who ended up leaving University employment.

Fiscal Support

External factors required addressing fiscal resource support. The University was suffering severe budgetary constraints, and the forecast for future state assistance continued to be bleak. However, this did not prevent significant IT progress. The University President actively sought funding through traditional avenues but was also very proactive in developing influential constituencies at local and regional levels.

One example of fiscal support and the decision-making process is the campus allocation of student technology access fees (TAFs) that now generate approximately $4 million annually. These fees, closely monitored at the system level, may only be used for purposes that directly benefit the instructional component. Fund usage is endorsed at the IT Policy & Planning Council level, but the real use determinations are made at an operational level. The Associate Vice President for IS, who has budgetary responsibility for TAF, works with IS staff and an infrastructure support group to develop a campus-wide "footprint" for infrastructure and academic computing resources. This proposal is discussed among the deans from not only a campus-wide perspective, but also how it affects individual colleges. Final recommendations are submitted to the IT Policy & Planning Council for endorsement and to the University Budget Committee for approval. This illustrates a process that pushes decision making to the lowest and most practical level, and has allowed significant and meaningful change to occur.

Human Resource Support

Human resource support is also a major concern. Developing and acquiring IT staff to support the new learning organization and the associated planning and management process entails a concerted and coordinated institutional approach. A process of staff self-examination identifies skills necessary for successful IS operation. Once the IT governance structure and the Information Systems staff agree upon desired outcomes and services, designated training and professional development exercises became points of focus. Units that have project responsibility define needs and identify individual training and development plans. The VP/CIO office carves out a significant allocation of the existing budget to support the retraining efforts. Distributed IT support at the college and administrative unit levels is also critical. The Policy & Planning Council collectively identified an institutional strategy that redefined more than 50 existing positions for localized IT support. These Local Support Providers (LSPs) are an important ad hoc working group that meet on a regular basis to discuss tactical roll-out issues such as scheduling, interdepartmental coordination, training, public relations (which must be coordinated), as well as common support concerns.

IS personnel are trained by the VP/CIO Office and professional consultants in what it means to be a learning organization and how that alters the way they work and make decisions—both individually and collectively. This requires them to work in different ways with clientele and builds levels of trust and confidence that had not existed before. This strengthens the IT planning process between constituencies by supporting a shared vision and common goals (DiBella & Nevis, 1998).

The idea of individual adaptive change, previously mentioned, pertains to both management and staff, and encompasses every IS employee. Managers must move from the stance of traditional bureaucrats and technical managers to that of managerial mentors and facilitators (with staff) and relationship managers (across the university). This means that individuals need to commit themselves to an unending path of learning. It also means that individuals must grow accustomed to rapid and ongoing personal change. Neither is easy to do for people who have worked many years in a bureaucratic environment. A change in organizational culture does not come quickly; full realization of a learning organization environment takes a minimum of five years and perhaps much longer (Schein, 1997). Perceptible changes in many individuals, however, are visible three years into the process.

Process Support

Process support is crucial to any change effort. A learning organization model can be successfully implemented only if processes are in place to support it. This can often prove to be one of the more challenging components to meaningful change. It may very well threaten existing internal structures, power, and influence. The IS staff is encouraged to think independently, let common sense be their guide, "communicate-communicate-communicate," "focus-focus-focus," and "just do it" when it makes sense. Query is fundamental and, in a culture where that had not been encouraged to any great degree, change comes slowly (Watkins & Marsick, 1993). Nevertheless, illogical bureaucratic chains-of-command are beginning to dissolve when confronted. Rules, regulations, and perceived constraints are continually analyzed within the decision-making context to make new and better corporate decisions (Mankin, Cohen & Bikson, 1996). Time does not allow consensus on some issues, so when a critical mass of support is secured, action is taken.

Recognition is an invaluable process support mechanism. Lead by a grassroots volunteer committee, the IS staff designed a rewards program that incorporated both contemporary and traditional methods of recognition. It allows recognition to occur at the time it is earned, encourages team values, supports innovation and risk-taking, and respects diversity. This highly successful program (which has very few "rules" associated with it and virtually eliminates collegial competition for competition's sake) helps bring together a staff that celebrates one another's successes (Hesselbein & Cohen, 1999). Another form of recognition is deriving more competitive compensation levels for IT staff through a rigorous exercise of benchmarking and using industry standards to define job roles and responsibilities. The IS organization works closely with Human Resources (HR) to assure equity and parity, and gives exhaustive attention to recruitment and retention mechanisms that work. All IT positions across the institution are linked to the area market.

Few processes can be as supportive as leadership-by-example. There can be little discontinuity between corporate lip service and daily practices, leaders must "walk the talk." Leaders cannot ignore the need for the skills required for managing change, and they can encourage creativity while they take the sting out of failure (Bennis & Beiderman, 1997). To help develop such abilities, the IS unit again works with the HR training department to provide professional development especially in "soft skill" areas. Areas such as conflict resolution, project, time, and stress management require continuous support.

Ongoing attention and focus create nurtured perceptions. "The primary function of culture management during a process of change is to implement and sustain changes" (Galpin, 1996, p. 54). The infusion of new planning and management practices and the associated behaviors expected of the IS staff are carefully and continuously supported from their introduction, thus allowing them to begin the embedding process into the organizational culture. Achieving and sustaining organizational change mandates that the culture of the organization be affected. Changes in organizational culture are supported by tangible reinforcements such as pay-for-performance in selected cases, reassignment of work to better align skill sets with tasks at hand, providing people with meaningful work, and continually communicating the big picture (Floyd & Wooldridge, 1996).

The old performance evaluation process within the Information Systems division has been significantly revised. Evaluations now include self-appraisals, supervisory reviews by line staff, and peer reviews at the management team level (Reddy, 1994). These reflective exercises promote meaningful dialogue between raters and individual staff on issues such as training and development. This allows a planning focus as well as an evaluative process to take place. Merit salary adjustments, when available, directly correlate to staff appraisal scores, and the organization takes great care to ensure equity across the division.

An ombudsperson program exists to provide an avenue for problem resolution when regular organizational channels do not meet an individual's needs or are not appropriate. After nomination by their peers, two individuals appointed by the CIO serve on a rotational two-year term as IS ombudspersons. Internal staff as well as clients are encouraged to utilize the services of the ombudspersons, and the program is publicized in each edition of the campus technology newsletter and on the IS Web site.

Every level within the organization needs leadership. The behaviors of those leaders (whether at the executive, management, or supervisory level) prove to have a tremendous impact on the success of managing change to support the IT strategic planning and management model (Hesselbein, Goldsmith & Beckhard, 1997).

ANALYSIS

Outcomes

The IT strategic planning and management model has met with early success. The fifth IT strategic plan is now in effect, and critical masses of decision makers across the institution have bought into the process. Meetings conducted twice annually with each major academic and administrative unit to determine IT need and solicit feedback work well. The academic deans meet regularly with the associate vice president for IS to specify academic IT needs and to make recommendations to the IT Policy and Planning Council for prioritization. The IS staff is also comfortable with the process and has met stated goals for completing objectives in each of the four prior plans (completing in excess of 90 percent of the initially stated objectives each year). Metrics for ongoing assessments of what constitutes satisfactory service are established and published on the Web monthly and discussed with client groups periodically. The overall IS productivity, as measured by the size of the IT infrastructure in relation to the number of full-time equivalent staff positions, has increased by a factor of five, and there is demonstrable progress on all three of the major IT initiatives that were initially set forth in 1995.

The initiative to move toward a learning organization culture is slow, as expected, but exhibits steady progress. A number of meaningful organizational adjustments are now in place including: providing at least three professional development opportunities for each staff member annually; establishing two ombudsperson roles; initiating ongoing focus groups; selecting, training, and implementing work teams; and creating a process to recognize and celebrate individual and team-based achievement. Regular ongoing workshops on learning organization principles and skills exist for staff members, and a mentoring process for managers is being introduced during this fiscal year. Both formal and informal assessment indicates that the staff is gaining skills and using them in providing service to the client community.

The governance process has been modified somewhat and defined in greater detail over the years (see below) and is functioning effectively and efficiently. The IT Policy and Planning Council meets approximately every six weeks during the regular academic year where it approves IT-related decisions of consequence to the entire University and establishes IT policy. The advisory committees meet monthly, review progress toward objectives, and make recommendations on selected issues. As previously noted, a year ago the institution was selected to participate in the "Institution-Wide Information Strategies" project sponsored by the Coalition for Networked Information.

The Budget Committee for the campus has steadily increased the proportion of institutional budget (augmented by the TAF) allocated for IT-related expenditures. Over a four-year period, that ratio has increased from approximately 3.5 percent to about 6 percent, enabling the University to be fully competitive with its designated peers. The University has moved from near the bottom of its 10 designated peers to near the top in this ratio and other benchmark ratings.

The IT organization is judged to be considerably stronger from both the addition of well-qualified professionals and by the elimination of some who were not performing up to their potential. A number of existing positions were upgraded and/or redefined to better fit the current needs of the institution. Of particular note in this regard is the shift of some half-dozen positions from primarily administrative functions to primarily academic support positions. A strategy for the IS unit to provide the main support for the IT infrastructure and

for distributed IT positions to be the primary routine desktop support was approved by the IT Policy and Planning Council in 1997. Since then, approximately 55 LSP positions have been created across the campus. This has enabled reasonably clear roles to be established for IS personnel and for the LSPs, which together provide an improved service level to the campus community.

Successes/Failures and Adjustments

In addition to the major successes noted above, one other should be stressed—support from the executive officers of the university. Without their broad-based level of support, the necessary involvement of faculty and staff would not have been so forthcoming. The failures have come from decisions related to implementation procedures rather than from the more global strategies. It was determined that participating as a beta test site would provide a way to move aggressively to a new administrative system. Once that decision was made, it became obvious that the existing staff needed to be upgraded and augmented to accomplish the goal. It was thought that outsourcing a portion of the staff to the vendor with whom the beta test was to be done would best accomplish this. Due to time constraints and certain legal reasons, the outsourcing decision could not be discussed with the staff until it was to be implemented. This proved to have been an unfortunate circumstance. As one might expect, the staff was initially shocked, then disturbed by the move. After several months, it became evident that the product scheduled for installation would not be the "next generation" system that was desired, and the beta involvement was ended. Shortly after that, by mutual agreement, the outsourced staff returned to the employment of the university. A great deal of time and energy has been exerted to repair the damage, and progress has been considerable, but lingering feelings are still evident at times. Fortunately, a new beta test is underway with a true next generation system, and staff training in new technologies is underway. This staff was also part of the first work teams formed.

Although the governance structure has become a major success, it got off to a rocky start. Appropriate care was not taken to define in enough detail the role of Policy and Planning Council members. It soon became obvious that some members were not carrying out their duties as expected and some were unhappy because they were not as involved in operational decisions as they had anticipated. This occurred simultaneously with the increased TAF, and some deans asked that the increased funds be directly allocated to academic units according to a formula. First, the Policy and Planning Council held a retreat with a facilitator to get all of the concerns from all parties out in the open for discussion. Secondly, the Provost and the CIO came to an agreement to set up a process that would involve all of the deans in helping to put forth recommendations for TAF usage, with the stipulation that it would focus on overall university priorities. Finally, based on the retreat results, the CIO drafted and the President approved a more detailed role definition for the Policy and Planning Council; at the same time, they reconstituted the Council membership to include all of the deans and vice presidents. This created a group that makes IT decisions—one that has the charge and the authority to see that decisions are carried out.

CONCLUSION

Several factors contributed to the renewal of the IS unit and the success of institutional IT strategies. Consistent support and the articulation of that support by the executive officers were essential. Implementing a flexible IT strategic planning and management model

purposefully linked to previously existing institutional processes set the stage for initial change and continues to define ongoing, progressive change. Another key component is the definition and evolution of an IT governance structure empowered to make decisions and charged to implement them. The reallocation of existing resources and the development of new funds to support IT initiatives is crucial to current and future success. The adaptation of learning organization principles to routine organizational operation and the infusion of them into the planning and management model seem to have begun a progression toward a new culture. Finally, the involvement of a broad array of people across the institution in governance, decision making, and team-based activities is leading to the "buy-in" so essential to long-term success.

After approximately four years, the IS Division is more than halfway through the timeframe required to acquire the characteristics of a learning organization. If the rate of progress to date can be sustained, the unit should be prepared to provide the quality of service needed by the university to meet goals of the early 21st century.

DISCUSSION QUESTIONS

1. What types of organizational changes have been brought about by information technology in your organization?
2. What are some of the barriers that make it difficult to effect information technology change? How is this different for administration, faculty, students, and support staff?
3. How important is governance structure in information technology strategic planning?

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