



Using an IT Governance Structure to Achieve Alignment at the University of Cincinnati

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The mission of the EDUCAUSE Center for Applied Research is to foster better decision making by conducting and disseminating research and analysis about the role and implications of information technology in higher education. ECAR will systematically address many of the challenges brought more sharply into focus by information technologies.

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Preface

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

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

In its most recent research, ECAR will publish a comprehensive gathering of information on IT alignment in higher education in *Information Technology Alignment in Higher Education*.¹ The research was undertaken in phases, described below.

Literature Review

A review of the relevant literature helped us define the study's major elements and create a working set of hypotheses.

Online Survey

The EDUCAUSE staff sent an e-mail invitation with the Web address of an online survey to 1,483 institutions belonging to EDUCAUSE. Senior college and university administrators from 483 institutions (464 U.S. institutions and 19 Canadian institutions) responded to the survey. The majority of respondents were chief information officers (CIOs) and other IT leaders. The 483 responses were used as the respondent base for *Information Technology Alignment in Higher Education*.

Telephone Interviews

Researchers conducted intensive telephone interviews with 22 IT executives, managers, and faculty members at 22 institutions.

Case Studies

Researchers conducted this in-depth case study to complement the core study. We assume readers of this case study will also read the primary study, which provides a general context for the individual case study findings. We undertook this case study to examine how the University of Cincinnati's IT governance structure creates alignment at a large, decentralized research institution.

ECAR owes a debt of gratitude to Michael Calhoun, assistant vice president, systems and operations; Paul Czarnecki, public information manager and associate to the CIO; Robert Faaborg, associate professor of philosophy; Mark Faulkner, executive director, network and telecommunication services; Howard Jackson, vice president for research and university dean for advanced studies; Thomas Koerner, strategic systems integrator; Dale McGirr, vice president for finance; Michael Lieberman, dean, instructional and research computing; Karen Monzel, associate dean, school of design, architecture, art and planning; Anthony Perzigian, senior vice president and provost for baccalaureate and graduate education; Fred Siff, vice president and chief information officer; Sunny Saelinger, professor of molecular genetics; Amin Shafie, assistant director, systems and operations; and Gregory Vehr, vice president for government relations and university communications.

Introduction

In a large, decentralized research institution, alignment is a hard goal to achieve. Individual colleges frequently operate as independent entities, creating distinct organizational cultures and managing many academic, research, and administrative activities locally. Yet one increasingly common thread runs through diverse collegial and institutional activities: information technology. If leveraged effectively, IT can be a unifying force that supports a broader institutional identity and contributes to institutional alignment.

This occurs at the University of Cincinnati (UC). "The whole area of IT is now something of a congealing force, with similar needs and challenges across the university, so we need similar forums to bring these things together," explained Anthony Perzigian, senior vice president and provost for baccalaureate and graduate education. Through its governance structure, UC's IT organization has become

a cohesive element in a diverse research university consisting of 17 distinct two- and four-year colleges. Four working committees, representing academic, administrative, and infrastructural IT interests, revolve around an executive IT steering committee. Committee participation creates a structured opportunity for all the different constituents to discuss institutional concerns. The involvement of several president's cabinet members in individual working committees and the executive IT steering committee ensures the structure's validity and stature.

The Information Technology Committee Structure works for two primary reasons. The first is the committees' institutional focus. "We regard our work as business functional projects that the business community drives—not IT projects," said Michael Calhoun, assistant vice president, systems and operations. "The committees are positioned as enablers for the community. IT does not drive changes. For example, IT did not decide to implement a new financial system. Many people were involved in the decision, the vast majority of whom were in the business units, not in the IT organization." Second, president's cabinet members function on an IT steering committee, ensuring alignment between the IT organization and the university's strategies, goals, and activities.

Gregory Vehr, vice president for government relations and university communications, summarized the Information Technology Committee Structure's impact. "UC functions in a very silo mentality," he explained. "The university's history is that it's an amalgam of many colleges that have come together to form the university, yet maintain their own identity outside the University of Cincinnati. This governance process breaks down the silos and reinforces the importance of general communications in regards to IT. Everyone becomes more knowledgeable about what is available from an IT perspective and how

pervasive IT is in everything that we do. It is a real challenge here to try to create a system that works as well as it does. We could probably use the IT governance structure as a model for how we should operate in general.”

University of Cincinnati Background

Founded in 1819, the University of Cincinnati consists of 17 four-year and two-year colleges including the College of Allied Health Sciences; College of Applied Science; College of Business; College Conservatory of Music; College of Design, Architecture, Art and Planning; College of Education, Criminal Justice and Human Services; College of Engineering; College of Law; College of Medicine; College of Nursing; College of Pharmacy; McMicken College of Arts and Sciences; School of Social Work; Raymond Walters College; and Clermont College. UC academic programs in music, medicine, design, architecture, and the sciences rank among the nation’s top 10. In recent years, the University of Cincinnati has emphasized its research activities. Research funding in fiscal year 2003 topped \$300 million in grants and contracts, increasing more than 18 percent over the previous year and ranking 47th in the country in funded research.

The campus is also geographically dispersed. It consists of a main academic campus often called West Campus, a medical campus known as East Campus, a branch campus in suburban Blue Ash, and a rural branch campus in Clermont County just east of Cincinnati. Altogether, the university enrolled more than 33,000 students in 2003–2004, including more than 19,000 full-time undergraduate students and 5,000 graduate students.

The institution strongly supports technology use in education. Built into the faculty’s union (American Association of University Professors) contract is a \$500,000 annual fund for faculty development skills in new

areas of research and teaching. Perzigian estimates that since 1995 the fund has spent \$7.5 million, 80 percent of which was allocated to support pedagogy and faculty teaching skills, especially in instructional use of technology. He believes the program has dramatically influenced the whole teaching and learning environment, creating a positive environment for course management systems, electronic classrooms, and other e-learning activities. The Faculty Technology Resource Center and the Center for Enhanced Teaching and Learning provide technological and pedagogical assistance to faculty. UC also revised college-level tenure and promotion documents to give explicit credits in the university reward structure for instructional technology applications in the teaching and learning environment.

Currently, two planning processes are in advanced stages. First, a master building initiative to transform the central campus into a 24-hour hub for living, learning, and working is concluding. Begun in 1989, the plan calls for the creation of more green space, classrooms, research labs, and a student-oriented pedestrian mall called Main Street. “The university made a very conscious decision to diversify and to use well-known superior architects to design buildings,” Vehr said. “It was all to celebrate the diversity of opportunity here, the diversity of people.”²

The second planning process follows the appointment of the first new UC president in almost 20 years. On October 1, 2003, Nancy Zimpher became the 25th president of the University of Cincinnati—and its first woman president. She previously served as chancellor of the University of Wisconsin–Milwaukee and held a faculty position in the University of Wisconsin–Milwaukee School of Education.

One of Zimpher’s first initiatives has been to articulate an academic vision that complements the university’s master building plan. In 2004, UC launched an institution-wide

academic planning process, continuing UC's forward-thinking tradition that outgoing president Joseph A. Steger fostered. In 1994, Steger issued a report called "Harnessing the Intellect" that identified certain globalization, technology, and interdisciplinary priorities and initiatives for the university. Steger "was dedicated to change management," said Dale McGirr, vice president for finance and former chair of the Institutional Management Technology Committee. "He respected UC's history, but the question was how to get to tomorrow. He was always challenging people to get out of the trenches and look 10 or 15 years out. At UC it is not radical to embrace technology or facilities master planning. Our new president is just as dedicated to this process as the previous president."

Evolution of the Central IT Structure

"Harnessing the Intellect" identified IT's importance in UC's vision, but a successful structure was implemented later. In the mid to late 1990s, many at the university were dissatisfied with UC's central IT organization (then called CITS), feeling it was inward looking and unresponsive to user needs and expectations. UC hired Charlie Moran, a consultant at Blackwell Consulting Services, an IBM Higher Education business partner, to review the situation. Moran recommended that UC redefine its IT leader position. As a result, UC created the position of vice president and CIO, also a member of the president's cabinet. The VP/CIO required experience in both academic and administrative computing as well as teaching. "UC believed in the synergy that a combined academic and administrative computing center offers," McGirr said. "So our IT leader needs to manage both and to work the synergies back and forth. Also important was broad experience and dedication to the use of technology in pedagogy to gain faculty acceptance."

Fred Siff joined the University of Cincinnati in 1998 as its first vice president and CIO. He was also appointed professor in information systems in the College of Business Administration. Six months later he reorganized central computing into four areas and named the new organization UCit.³

- ◆ Business Affairs, the UC community's telecommunications services liaison, establishes service request work orders and maintains billing for faculty, staff, and students for communication services such as telephones, voice mail, long distance, calling cards, cellular phones, and pagers. It also handles all contractual and human resources matters.
- ◆ Educational Services, now Instructional and Research Computing, manages faculty and student computing resources, including student computer labs, electronic classrooms, and the Faculty Technology Resources Center.
- ◆ Network and Telecommunication Services handles design, implementation, and maintenance of the data and telephone network and related infrastructure.
- ◆ Systems and Operations provides IT services to all administrative units and has primary responsibility for managing UC's entire administrative data environment.

University of Cincinnati IT Governance Structure

Moran also believed the UC community felt disenfranchised from its IT operation. To give all university constituents input into the enterprise-oriented IT issues the UCit organization manages, he recommended the creation of a new IT governance structure, the Information Technology Committee Structure (see Figure 1). Unique department IT activities were not to be funneled through the governance structure.

Siff implemented the proposed structure,⁴ which, he explained, "provides a university-

wide technology council that blends both academic and administrative representatives and treats the technical backbone as its own genre.” He added, “The committees deal with a mixture of both enterprise-level IT strategy and tactics. Each of the governance structures also shadows an IT organizational unit. So the committee on which an IT director sits becomes an advisory group, helping to direct his or her activities.”

The Information Technology Committee Structure consists of four working committees and one oversight committee.

- ◆ The Academic Technology Planning Committee serves as a sounding board for general academic concerns about technology applications. It considers policy and technical issues regarding IT in instruction, research, and academic management, including electronic classrooms, course management systems, IT support issues, and student technology fee allocations. Members include representatives from the provost’s office; faculty, including the faculty senate IT committee chair; deans; the university librarian; and a UCit representative. Anthony

Perzigian, senior vice president and provost for baccalaureate and graduate education, chairs the committee.

- ◆ The E-Communication Planning Committee examines Web and other technology-related communication issues across the university. Chaired by Greg Vehr, vice president for governmental relations and university communications, representatives from public relations, communications, human resources, student affairs, and UCit also participate. This committee considers Web, portal, e-communications, and e-commerce issues.
- ◆ The Infrastructure Technology Planning Committee plans for all university-wide technology infrastructure requirements and makes recommendations. This committee consists of associate deans, faculty, a college librarian, a UCit representative, and an associate provost. Howard Jackson, vice president for research and university dean for advanced studies, presides over this committee. Issues include wireless, security technology, directory structures, licensing issues, and network infrastructure.

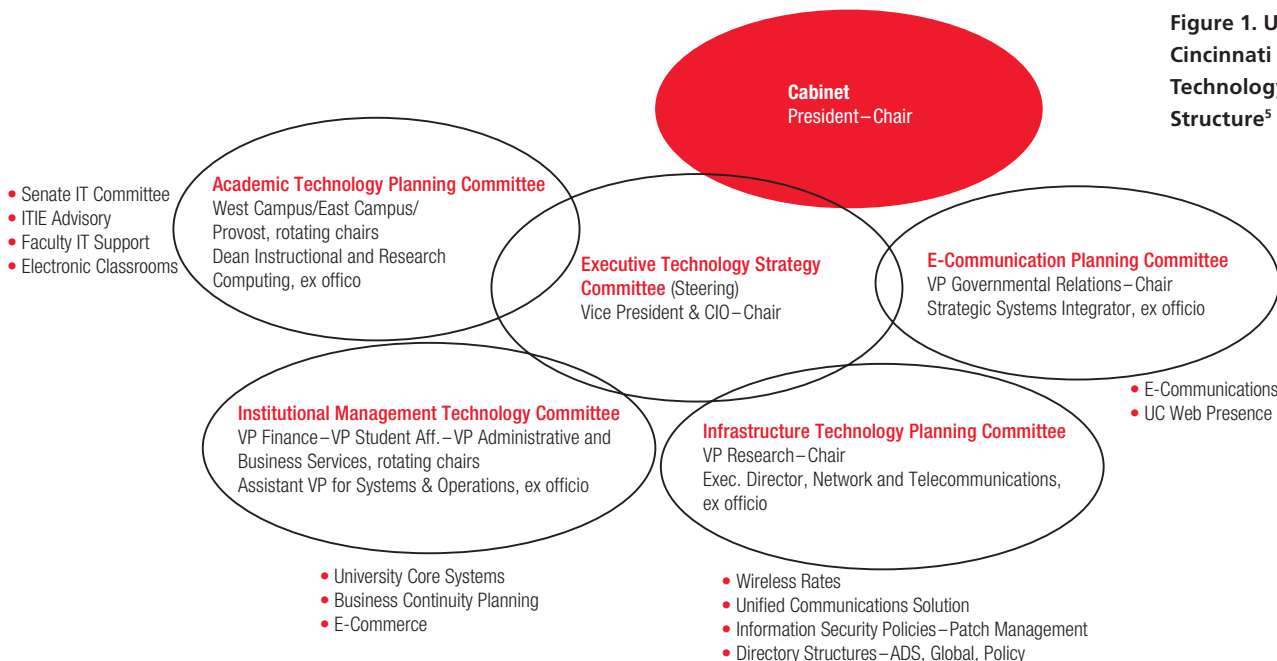


Figure 1. University of Cincinnati Information Technology Committee Structure⁵

- ◆ The Institutional Management Technology Committee established a philosophy and methodology to prioritize and manage institutional management systems and data. Representatives from human resources, finance, student affairs, institutional research, and UCit sit on this committee. James Tucker, vice president, administrative and business services, currently chairs the committee.
- ◆ The Executive Technology Strategy Committee sets and prioritizes IT-related policies and projects that the four other committees propose. “The executive steering committee provides the ability for all these bubbles to touch at different times and provides a forum for us to know the others’ activities,” said Vehr. Chaired by Siff, the committee comprises VP working committee chairs, other vice presidents and president’s cabinet members, the faculty senate chair, and a college dean representing the council of deans.

Because of the broad participation and focus, “it is neither a user-, a provider-, or technology-controlled process,” McGirr said. “You get a good dynamic going between the functional provider, technical provider, and the primary users because they all realize that the objective of the conversation is not to define control, but to get the best combined outcome.”

The committees meet on a regular schedule. This system was intentionally designed so that the executive steering committee sets and assigns the agenda down to the working committees. If the working committees want to pursue other issues, they justify how their proposed project is consistent with the overall agenda. “There is always a connection between the work and the agenda,” explained McGirr. “We want to validate projects before they create a lot of work.” Working committees have no resource power; rather,

they report and recommend to the executive steering committee, which can, to an extent, make allocations and decisions or present the recommendation to the president’s cabinet for action.

The committee structure continues to evolve as needed. The E-Communication Planning Committee evolved out of a perceived need to unify electronic communication media and policies across the institution. The executive steering committee also created three short-term, well-defined task forces that report through the process, have UCit director-level representation, and will disband upon completion of their charters:

- ◆ The Human Resources System Replacement Project will study the requirements for a new human resources management system.
- ◆ The Information Access, Security, and Privacy Task Force will make university policy recommendations for appropriate procedures and safeguards for security and access to and use of student, employee, and other university information.
- ◆ The Research Administration Systems Study Project will evaluate the requirements for a new grants management system connected with the recent selection of the SAP financial system.

Key Information Technology Committee Structure Elements

Siff kept the same committee structure originally designed by Blackwell Consulting but added two key modifications.

Executive-Level Engagement

Siff strongly believes in the importance of a cabinet-level IT position. “You cannot do the right job if the IT leader is not on the cabinet,” he explained. “You just can’t communicate with the people who need to hear it. The other executives have to see you as

an equal colleague. This means having an understanding of the business of the institution and helping other people to conduct business better.”

Siff also realized that true IT governance cannot occur if the institution’s decision makers are not involved in the process, so he designed the committee structure to engage them. Several members characterized the president’s cabinet as collaborative, and Siff leveraged this attitude and his own cabinet-level position to recruit his fellow members to participate in the Information Technology Committee Structure. “The cabinet is tied into this governance process,” he explained. “The majority of the people on the executive steering committee sit on the president’s cabinet. If they are not engaged, I do whatever is necessary to engage them. So when the president’s cabinet considers an Executive Technology Strategy Committee recommendation, a significant representation of the cabinet has looked at it already.” A university vice president chairs each working committee, and each committee chair participates on the Executive Technology Strategy Committee.

Siff has also made it as easy as possible for his colleagues to engage by using their time as efficiently as possible. For example:

- ◆ An IT director serves as a liaison on each committee. This person preps the issues, provides backup research and material, and assists with meeting preparation and activity recording. Everyone comes to meetings thoroughly prepared to use the time effectively.
- ◆ Other UCit resources are available to lessen the chairs’ burden. Besides his liaison work with the Executive Technology Strategy Committee, Paul Czarnecki, public information manager and associate to the CIO, facilitates any governance-related communication with the general campus. For example, he coordinated

the Infrastructure Technology Planning Committee’s comment process with the university community on a network connection policy.

- ◆ Committees meet regularly (generally bimonthly), but only if there are business or action items. Thus, each meeting is productive and does not waste participants’ valuable time.
- ◆ When issues come up for review at committee meetings, they are “posed in such a manner as to make important decisions and be actionable, not just talk,” explained Siff. “All items have strategic value, if they are not specifically strategic. We make them policy-level decisions: policies on e-mail, policies on responsible use, and so on. I realize that my colleagues are not going to get deeply involved in IT, but they are decision makers.”

As a result, “the Executive Technology Strategy Committee meetings are very friendly and very effective because already we know each other so well,” said Howard Jackson, vice president for research and university dean for advanced studies. “The brilliance in involving the high-level people was to convince them that it is important and it will not be ridiculously time-consuming. Sophisticated people manage these committees, so the committee output is going to be fairly sophisticated. When all the Executive Technology Strategy Committee members meet, they are pretty confident that their time will be effectively spent deciding policy-level issues. If we do this right, we will have an infrastructure that is not only supportive but forward-looking.”

Indeed, fellow cabinet members also benefit from the experience. “As chair of the Academic Technology Planning Committee, I receive inputs that I normally would not receive,” Perzigian said. “For example, the chair of the Faculty Senate IT Committee sits on my committee. Meeting with the diverse univer-

sity constituencies at the same table provides good snapshots of campus-wide issues.”

Participant Selection Process

While the committee structure provides an IT governance medium, the people who fill the structure are just as important. Selection depends on the committee agenda and the desire to create a relationship among participants that will ensure the right chemistry. Each summer, Siff and the working committee chairs create the committee agendas and select committee members for the upcoming year to ensure “that all of these committees form a coherent whole,” Siff explained. “If you have one college on one committee, you have to include other colleges on the other committees so everyone buys into it.”

Siff and the chairs strive to create broad representation on the committees. For example, the deans’ representative on the Executive Technology Strategy Committee is not the head of the deans’ council who sits on the president’s cabinet. In the Academic Technology Planning Committee, several slots are “automatic: an IT representative, faculty senate representative, the vice provost for faculty development, and university librarian,” Perzigian said. “But I am also sensitive to our university structure—the mix of two- and four-year colleges, and Medical Center representation/East Campus involvement.”

Jackson believes IT expertise is required, too. “You need a couple of people who are really technically state-of-the-art to keep you on track and put perspective on issues,” he explained. “But you also need faculty who can articulate broader IT needs across the campus—even if they are unfamiliar with possible technical solutions.” Mark Faulkner, executive director, network and telecommunication services, believes a strategic perspective is important. “Members should not focus on day-to-day issues; rather, they should see the vision, the strategy, and connect those dots.”

Information Technology Committee Structure and the Colleges

The Information Technology Committee Structure depends on broad university participation to gain support and ensure central IT’s effectiveness in a diverse institutional culture. But it is a very top-down-oriented process. The decentralized university seemed to the UC leadership to require an IT structure that understands and meets university needs. That, in turn, means providing leadership that serves the whole community even in its diversity. Vice President and CIO Fred Siff’s motto is “Deliver, deliver, deliver.” Leadership, in his eyes, succeeds when the community recognizes that the central IT operation provides what is needed.

UC’s IT operations mirror those of many decentralized research institutions. The colleges tend to be independent, focusing inward on their own operations rather than outward to the university as a whole. However, general consensus does exist and university goals are recognized. “The global pieces about interest in research and in service to our undergraduate and graduate students are in place,” said Jackson. “There is good cooperation across the vice presidents.” But the individual colleges’ missions and cultures differ; for example, some are selective, whereas others strive to be inclusive. This can make it hard to create comprehensive IT policies that address their specific needs.

Many UC colleges maintain their own IT organizations, offering local resources such as computer labs, help desks, and electronic classrooms. For example, in the past, individual colleges have implemented their own course management systems or contemplated installing their own communications systems. But colleges are now more open to central IT management, especially when significant financial resources are required to operate their local IT resources. “The better the uni-

versity, the more research funding, and the more decentralization,” Siff said. “Many of the individual colleges have considerable financial resources of their own. But if the center works and colleges see that it works for them, people will not fight the center.”

A good example is the rising cost to maintain state-of-the-art electronic classrooms. Some colleges have begun negotiations to transfer control of the college classrooms to the university to upgrade them to the UCit electronic classroom standards. But individual colleges are not willing to relinquish all control. For example, they still want to handle computer upgrades and replacement policies locally. Grassroots technical support groups, consisting of knowledgeable faculty and staff, and college-level IT committees augment college IT departments.

Functioning in a Decentralized Environment

So how does the Information Technology Committee Structure function in a decentralized environment? First, the importance of cabinet representation in the Executive Technology Strategy Committee cannot be underestimated. Second, Michael Lieberman provides an important conduit to faculty technology requirements around UC. Lieberman has dual responsibilities. As dean of instructional and research computing and head of UCit’s instructional and research computing department, he oversees all IT support functions for faculty and staff, including computer labs, electronic classrooms, course management system, and faculty instructional technology support. As a faculty member in the Department of Molecular Genetics, Biochemistry, and Microbiology at the College of Medicine, Lieberman understands faculty members’ IT needs. He also participates on numerous IT-related committees at UC.

Finally, the Academic Technology Planning Committee plays an important unifying role

also, facilitating both top-down and bottom-up involvement. In a decentralized university culture, support for IT varies with each dean. “If the dean is committed to improving IT within their college, it will happen,” said Michael Lieberman, dean, instructional and research computing. “The provost, however, will make a difference. The Academic Technology Planning Committee—and its chair, the provost—gives legitimacy to IT projects and policies, which facilitates the college deans’ buy-in.”

Perzigian also recruits representatives from the dean community for his committee, including the university librarian, whom he uses “as the voice of the deans on IT issues. As a dean, she participates on the deans’ council and functions as an important conduit from all the colleges.” In addition, the committee’s advisory subcommittees—for example, electronic classrooms and course management systems—collect input and filter it up, using personal interactions or formal surveys.

Faculty Involvement

Another pipeline to faculty needs is the Faculty Senate Information Technology Committee. It meets six times per year to provide a centralized forum for faculty to report and provide feedback on current IT initiatives or policies, discuss IT-related problems, and educate members on some aspect of IT. It comprises four faculty senate members and an IT representative from each of the 17 UC colleges.

“What I found really gratifying about the committee meetings was learning about IT activities at the college level,” said Karen Monzel, associate dean, school of design, architecture, art and planning and former Faculty Senate IT Committee chair. “We learned so much from each other. Committee members also represent a wide variety of users, from power users to mainstream users. Both viewpoints were helpful to gauge

IT needs for the general university community and then to discuss solutions.”

The Faculty Senate IT Committee is connected to the UCit department in two ways. A UCit member sits on the committee, which can then pass along concerns to the UCit organization. The Faculty Senate IT Committee chair participates on the Academic Technology Planning Committee.

The average faculty member’s awareness of and actual involvement in the Information Technology Committee Structure likely remains limited, especially among the nearly 4,000 full- and part-time faculty members at UC. UCit publishes *UCit Now*, an online newsletter, and *UC Currents*, a faculty-oriented online publication. As Perzigian described, awareness is spotty at best. “If you asked a random faculty member to diagram the IT governance structure, they would know that we have a vice president of information technology, several IT support resources for faculty, the electronic classroom conversions, and the recent changes in the tenure process that promote technology and teaching,” he said.

“There is a problem with back-and-forth communications and access to the faculty to learn their needs,” stated Robert Faaborg, associate professor of philosophy, former chair of the faculty senate, and former representative to the Executive Technology Strategy Committee. He believes the average faculty member is not likely to fill out online surveys for IT input unless prompted by department heads. Monzel characterized the biggest problem as Faculty Senate IT Committee members’ difficulty in getting representatives from the local colleges.

But the university community is most likely aware of the Information Technology Committee Structure’s results. “I don’t think that they are aware of the IT governance structure itself, but they see resources and incentives, the classroom transformation into electronic

classrooms, and the courseware management system implementation,” Perzigian said.

Monzel and Faaborg concurred. “Ninety-nine percent of the faculty members don’t know about the IT governance structure at the university, but I got almost no complaints about our course management system, network access, and computer lab use,” Faaborg said. “Students and faculty who use them are very satisfied, but the problem is that it is not adequately used by any means: 10 percent of what the potential use could be.”

Monzel attributed any discontent to the lack of resources for computer upgrades or software. “I think probably the most frustrating thing for faculty is equipment costs and waiting to receive a new computer,” she stated. “But over the last two years I have noticed less and less discontent among the faculty in general about IT issues.” These faculty comments seem to justify Siff’s motto, “Deliver, deliver, deliver.”

The Committee Structure’s Impact on IT Operations

While the IT strategic committees have an institutional focus, significant UCit staff resources contribute to their success. Each working committee has a UCit director who serves as a liaison from the IT governance structure to the UCit unit. The liaison personnel take on much of the burden of the individual working committees. Duties—agenda-setting assistance, documenting results, issue research, and follow-up—vary by committee.

Time commitments vary, too. UCit’s strategic systems integrator, Thomas Koerner, who serves on two working committees, noted that his time commitments fluctuate, ramping up as a meeting approaches. “It peaks around a week or a week and a half before a committee meeting, when I consult with the chair about the agenda, communication, and meeting preparation,” he explained. He estimated he

spends 20 percent of his time to work on both committees. Department heads like Michael Calhoun, assistant vice president, systems and operations, might spend 2 to 10 percent of their time on committee work but delegate other assignments around their organization. Calhoun estimates that sometimes total department involvement reaches two FTEs per month. Politically sensitive assignments—like formulating policies on e-mail usage or Social Security numbers—require more of his personal time also.

Committee liaison duties have advantages for IT staff. They provide leadership training. Liaison people work with different institution constituencies, including UC vice presidents, and gain a better understanding of their role and work in an institutional and business context. “I go into my liaison role with the perspective that I need to be a businessperson first and IT person second,” Mark Faulkner, executive director, network and telecommunications services, stated. “It is difficult because you are discussing IT issues, but you have to translate and communicate their business value effectively. You only have an hour every couple of months to go in there and make your point. I view it as a continuous issue of credibility.” Calhoun concurred. “It is a good avenue to link the business strategies and business directions of the university to technical strategies that we are employing behind the scenes,” he said. “We use this also as an opportunity to educate the non-IT committee members about the capabilities that information technology brings.”

As an example, Faulkner described how his work on the Infrastructure Technology Planning Committee helped him to think more strategically. UCit, with university approval, created a new wireless charge rate. When he presented it to the Infrastructure Technology Planning Committee, they appreciated the rate expenses but wanted the model to be more forward-thinking. Because the institutional

goal is a 100 percent wireless community, the committee members felt the model should encourage people to adopt wireless connectivity in their environments. “We look at things at the 10,000-foot level, look forward and give suggestions about scenarios that would make the rate model relevant or not in the future,” Jackson explained. “This is hard time to find in day-to-day activities, so this project encourages Faulkner to do that.”

Committee work also broadens the IT staff members’ technical expertise. “The Infrastructure Technology Planning Committee may cover areas outside my responsibility from an operational perspective: Microsoft licensing, directory structures,” Faulkner said. “But as they get brought to the committee, I need a fair amount of familiarity with those issues so I can advise them.”

Overall, Siff believes, “The governance structure creates a respected IT organization, which helps staff members’ career development because we are doing interesting things. A lot of central IT organizations are marginalized, but at UCit, we are not doing plumbing; IT is not a boring thing.”

The committee structure does sometimes create a source of frustration among the IT staff. “Some staff members expressed impatience in purchasing a new e-mail system when I explained that approval must go through the committee process,” stated Amin Shafie, assistant director, systems and operations. “It depends on the person’s political awareness and their awareness of how the university works. But it can become a management challenge; you have to exercise patience.”

On the other hand, committee approval is worth the wait because “every committee is chaired by a cabinet-level vice president,” said Calhoun. “You know that once a decision is made, it is rock solid and it is aligned with the university goals, strengths, and financial priorities.”

The Committee Structure's Institutional Impact

The Information Technology Committee Structure has helped UC implement numerous IT initiatives including core services, electronic classrooms, and course management systems.

Aligning Buildings and Bytes: Creating a Core IT Service Funding Model

UC's massive building initiative is profoundly changing the institution's image and aura. An administrative system's scope and complexity mirror a construction initiative somewhat. Both need a strong philosophical guide for two reasons:

- ◆ Individual activity has institutional impact. Fifteen years ago deans were hiring their own consultants to do site studies to determine where to locate their buildings. McGirr created the master building initiative in part to avoid having random building sites around the institution. "It is not unlike individual areas' implementing and operating their own network without a central guiding force," stated McGirr. "The parallels are pretty similar."
- ◆ An administrative system and a building initiative are both ongoing capital expenditures. All administrative systems require replacement. Instead of budgeting \$10 or \$15 million during the one or two years of implementation, the goal is to allocate a cost every year, reserving it until the system requires replacement.

The Information Technology Committee Structure enabled Siff as CIO and McGirr as CFO and then chair of the Institutional Management Technology Committee to leverage their relationship for UC's benefit. They formed a compact to treat UCit's systems almost as an extension of the master building initiative and to apply similar purposeful planning and

control mechanisms to UCit system replenishments. "The project management character and the payment systems are the same in that it allows layered project management and governance, enabling the institution to prioritize projects," McGirr stated. The result is a finance model that budgets how to replenish UCit's systems for the next 15 years.

The Institutional Management Technology Committee created procedures and criteria to determine the annual contribution to this replenishment fund and the areas allowed to draw from it. The first step was to create a set of criteria to define the university core application services eligible for this funding model (Table 1). Several systems were designated core systems: the course management system; the enterprise-wide financial, human resource, and student administration system; the room/resource scheduling system; the chemical inventory tracking system; and the university debit card system.

The Institutional Management Technology Committee's next step was to create a 15-year spreadsheet of estimated costs. The committee forecast \$22 to \$25 million likely spending for the core systems over 10 years, then identified about \$1.3 million of annual funding from several remnants to pay for various enterprise systems.

Finally, the committee determined the core system replacement sequence, staging major administrative system replacement on a trailing basis—that is, conducting a needs assessment and vendor selection for one while implementing the other. For example, the committee recommended replacing the financial system next even though the human resources system is older and uses a system virtually unsupported by the vendor. The human resources system was currently stable, using a system patch, whereas the financial system was better prepared for replacement, having undergone a thorough needs analysis for its replacement.

Table 1. Core System Criteria⁶

Criterion	Description
Impact	Importance to the university's mission(s) and operation. How essential is the system to the whole institution?
Interdependency	The level of reliance either on or from other core systems. The number of different organizations using and relying on the system to meet critical business requirements. The overall level of complexity.
Total cost	The magnitude of recurring and nonrecurring system costs could dictate that it falls under central oversight.
Operational efficiency	Certain business operations should be managed centrally, not from a limited viewpoint and not duplicated within the institution. Also, more efficient business solutions might become available, which would justify the replacement of one or more existing systems.
Access and availability	The degree to which the entire university community can or must be served.
Longevity	The system's expected or necessary life span. Generally, short-lived systems aren't considered essential in this context.
Other	Certain systems, like the student information system, are obviously essential and mission critical, but less obvious examples—even small systems—could be viewed as mission critical, depending on function, necessary degree of oversight, legal mandates, or level of risk exposure to the institution.

While the core system managers now know the funding to replace their systems is available, they must justify its replacement priority. "The financial support derived from core system designation is worth the reporting that comes along with it," contended McGirr. "The Institutional Management Technology Committee's methodology allowed us to financially stage replacements in a priority sense and fund them as a cost of business. The idea is that this is not discretionary; rather, you fund these initiatives in a palatable way that does not create periodic budget crises."

The funding model's current drawback is that it deals only with core system implementation, not maintenance once it is in place. The next goal is to reconsider the model in light of those needs and requirements.

Electronic Classrooms

One institutional goal is to redefine the classroom by creating state-of-the-art facili-

ties to enhance student learning. Technology serves to upgrade physical classrooms and expand faculty members' abilities to interact with students. At one of its first meetings, the Academic Technology Planning Committee determined that no coherent plan existed for electronic classroom implementation in university-controlled classrooms. So the committee created an electronic classroom subcommittee that includes faculty from various colleges, electronic classroom support service personnel, and the UC electronic classroom planner. The subcommittee created a set of requirements for each electronic classroom, and the Academic Technology Planning Committee approved the requirements. The electronic classroom planner and the university architects office created a document describing the requirements, which was presented to and approved by the Executive Technology Strategy Committee.

Each year the electronic classroom subcommittee updates the electronic classroom requirements on the basis of results from annual surveys directed to all faculty members who have used an electronic classroom each quarter. The survey generates a 60 percent to 80 percent response rate.

As a result, Lieberman said, “We have had no complaints for the most part as to how the classrooms work or operate. The major complaint is there are not enough electronic classrooms in which to teach. Most of the college-controlled rooms are not electronic. They see the university-controlled electronic classrooms and they want to get in there and teach.” As noted earlier, the UCit program has encouraged some colleges to negotiate transfer of their classrooms to university control in order to upgrade their classrooms. This is an example of how the community will rely on the center—it delivers rather than mandates.

Course Management System Evolution

The UC course management system’s history is not atypical. Early on, the university developed its own course management system, which a faculty committee initially supported over purchasing a commercial system. The College of Pharmacy was an early WebCT adopter. As UC’s homegrown system gained popularity, it was not robust enough to handle the additional usage. Eventually, the same faculty committee recommended that UC purchase the Blackboard course management system. The College of Pharmacy eventually determined it was more effective for them to switch to the UCit-supported Blackboard system than to support its WebCT system locally.

The Academic Technology Planning Committee created a subcommittee to manage Blackboard issues. The first step was to understand usage across the university, so

committee members solicited feedback from colleagues at their individual colleges. UCit provided usage statistics by college, enabling the committee to focus on low adopters.

The Faculty Senate IT Committee also encouraged Blackboard adoption among the faculty. “We strategized on how to get the faculty to buy into it,” said Monzel. “We just needed to get the word out to people as to what Blackboard could do. It was interesting that by the end of the year, it was not much of an issue. Faculty members adopted it.” Lieberman believes “the Faculty Senate IT Committee was very instrumental in getting Blackboard adopted throughout the university.”

Monzel believes the single course management implementation is a unifying element. “Now you can talk to anyone on campus about their Blackboard usage,” she explained. “You’re talking the same language, and you can get new insights on it.” There are now more than 2,800 courses on Blackboard each quarter, more than 80 percent of all students have at least one course on it, and more than 1,000 instructors use it regularly. The Academic Technology Planning Committee continues to foster adoption by facilitating more electronic classrooms.

Lessons Learned

The current UCit organization and the critical Information Technology Committee Structure offer numerous lessons—primarily strengths, and a few weaknesses.

Unifying Element

Participation by both academics and administrators in the structure has helped to coalesce the IT components. “Historically there had been an adversarial relationship between the academic side and the administrative side. Technology is changed, and now they’re both working more closely together,” Shafie said.

A Facilitated Budgeting Process

The governance structure also feeds directly into the budgeting process. All policies and initiatives bubble up to the Executive Technology Strategy Committee—and, in turn, directly into the president's cabinet. If an IT initiative needs extra funding, it has the stamp of approval already from three or four vice presidents who are involved on the Executive Technology Strategy Committee. This is particularly important, given higher education's challenging financial times. For example, the core systems funding pool has been protected from several UC budget cuts. Funding IT, which seems to be a problem in many institutions, has been addressed at UC with significant satisfaction within the leadership.

A Systematic Method to Prioritize IT Initiatives

"One great value in the structure is having a coherent system in place by which the university can prioritize projects," Perzigian explained. "Things bubble up around the university. This is a coherent system of committees where groups can bring their issues to the table and get them evaluated in very systematically in a cross-vice-presidential way to prioritize these projects. It has given us the ability not only to respond to crises, but to operate more prudently and strategically over the five- or 10-year horizon for the big-ticket items and initiatives."

McGirr concurred. "It levels the playing field," he said. "We make decisions on purpose, not in a political, emotional, under-informed process. People understand the rationale; they may not buy it, but they know the rationale." The faculty leadership's comments suggest that this important and hard-to-reach constituency recognizes that the committee structure's products benefit the institution.

A Systematic Approach to Initiating Projects

"The governance structure helps when initiating projects because you can see the critical path for approval," Shafie believes. "It increases UCit's willingness to take initiatives because you have a very good picture of how it is going to play out, and you know the university perceives it to be a strategic goal."

A Clear Project Management Direction

As IT liaisons gain a clearer understanding of IT's alignment with the institution, they can communicate this to their staff. "You feel like you have a very clear direction with which you can go back and manage your operational and tactical staff," said Faulkner. "You can articulate the strategy, the direction, and how the IT organization needs to implement it to makes sense for our culture, environment, and users."

Promote Common Understanding

"UCit understands the university's business needs and objectives," said Calhoun. "The business people understand the technical needs that have to be met. Then we work together to get them done. These committees really are a way for IT to formally interact with people from all around the institution in a constant way."

Faulkner concurred. "We get a sense of whether IT is truly meeting the university needs," he said. "You get very candid feedback. I have the ability to take a strawman concept to the Infrastructure Technology Planning Committee, even when I don't have all the answers initially. Over several months we can formulate something that really makes sense to the community." The committee structure's benefits clearly stem primarily from the communication process within the committees.

Reduce Political Issues

The structure brings a sense of order to the IT decision process because the structure and cross-institutional participation create buy-in. Once a decision is made, there is no other level or recourse beyond this committee structure, which ultimately includes the cabinet. For example, the new university e-mail policy now designates e-mail as an official form of communication, which created significant political issues. "The new policy shut down the places where the student could just supply an e-mail address. Instead, the university e-mail address is embedded," explained Shafie. "Some of the major units felt it was too much work, unnecessary, and troublesome. But the fact that the organization's highest levels measured the policy's pros and cons diffused a lot of the political situation. They know this project requires their participation because it completed the committee approval process. It is not someone's pet project, but an institutional project they have to support."

Broaden Participants' Thinking

"You would think the tendency is for people to fight for their own turf," said Koerner. "But it is surprising to me how people are not oriented that way. They do get engaged and look more broadly than just their own neighborhood." Over time, this outward thinking expands across the university. "As we turn people over in the committees, you get more people who get exposed to the broader social perspective," Calhoun explained. "Some may start their committee tenure with a local viewpoint, but they will come out of it with a much wider perspective."

IT Organization Credibility Counts

Before implementing an IT governance structure can be implemented, IT must be a

respected institutional organization. "There are a lot of reasons why that does not always happen, but you have to make all the bromides true," Siff stated. "The most important thing to credibility is to deliver, deliver, and deliver, and create the situation where people really believe they are empowered and engaged. IT must operate in a mature business model that looks out five or 10 years, not lurching from crisis to crisis."

Executive Relationships Count

The Information Technology Committee Structure provides a venue to enhance relations among the president's cabinet members, thus facilitating IT's alignment with the institution. For example, the CIO and the general counsel co-chaired an initiative on Social Security number usage and co-issued the final policy, validating both the CIO position and the Information Technology Committee Structure.

Slow Approval Process May Encourage Local Solutions

"The biggest negative that I see is the timing of working through the committee process," stated Faulkner. "Many of the colleges and departments are not willing to wait for the enterprise solutions to come out. They see an issue, and they want to go out and operationalize it. On certain issues, I have to put on my committee hat and say we do not have a policy in this area. In some cases, the horses get out of the barn and people implement their own solutions. In the long run, that adds to the complexity and difficulties of the UCit role as we bring those horses back into the barn."

A Bureaucratic (and Sometimes Confusing) Structure

"It can appear to be bureaucratic," stated Koerner, "but we live in a bureaucratic envi-

ronment here. We have tried to organize it as well as we can, but the committee acronyms can confuse people. There can be some confusion if you are not dealing with it on a regular basis.” Many people at UC—faculty and administrators—seem to accept the products of the committee structure even if they lack a detailed understanding of how the structure appears or operates, and that is not unreasonable for an \$800-million-a-year operation.

Challenges

Up until now, the Information Technology Committee Structure executed IT governance in an institution without a formal institutional plan. As the master building initiative winds down, UC President Nancy Zimpher has identified the creation of an institutional academic plan as a top priority, and in January 2004 she kicked off an academic master plan initiative.⁷ Initial conversations throughout the institution about the vision for the twenty-first century began with a series of general meetings around the institution. Retreats to envision scenarios have also been held. President Zimpher plans to discuss the institutional academic plan at her inauguration on May 21, 2004.

It is uncertain how the Information Technology Committee Structure will formally participate in the process, but as the institution contemplates transformative issues and identifies emerging themes, IT is certain to factor heavily in the vision’s realization. Additionally, the president’s cabinet serves as the academic master plan’s steering committee, and the working committee chairs for the Information Technology Committee Structure serve on the president’s cabinet.

UCit, however, did develop its own IT strategic plan to help the UC community understand IT’s long-term direction. The Information Technology Committees reviewed the draft plan. The plan has been published

only online; a paper version does not exist.⁸

“It gives some reality to the bromide that the IT strategic plan is a living document,” said Siff. “People can track our progress through the links.” Four areas of focus are

- ◆ reinventing the classroom,
- ◆ streamlining business operations,
- ◆ creating a connectivity cloud across the campus, and
- ◆ increasing community involvement.

The elements, reflecting the plan’s online format, suggest a basic flexibility that will let UCit respond to the developing academic master plan.

As for the Information Technology Committee Structure itself, Siff does not know how the governance structure will evolve. “It is a system that works. We get the right people, and we deal with the right issues in a time-efficient manner,” he stated. Yet in some ways the structure continues to evolve. UCit added a new working committee based on a general consensus of need. In September 2003, UCit added a new element to the structure—three task forces to study specific issues and report back through the current governance structure and then disband once they’ve met their mission. Each year the new committee participants and agenda keep the governance structure fresh.

The Information Technology Committee Structure works “because it brings the different UC entities together on a periodic basis to share information,” said Vehr. “It filters down into the institution further through the subcommittees to enable people to feel that their concerns are being heard and making its way up the chain. It is an opportunity of shared governance where no one is necessarily the decision maker. Rather, it is a group of people who are trying to put the information together to make the best decision for the university as a whole. There is group buy-in and group participation.”

Endnotes

1. B. Albrecht et al., *Information Technology Alignment in Higher Education* (Boulder, Colo.: EDUCAUSE Center for Applied Research, Research Study, Vol. 3, 2004), publication scheduled for summer 2004, <http://www.educause.edu/ir/library/pdf/ecar_sos/ers0403/>.
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5. University of Cincinnati Information Technologies, *University of Cincinnati Information Technology Committee Structure*, <<http://www.ucit.uc.edu/committees/ITcommitteeChart.pdf>>.
6. Institutional Management Technology Committee, *Core System Criteria Document*, University of Cincinnati, June 2002.
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