Academic Technology Planning Framework
Summary

Overview

From May through July 2002, the Office of the University Provost and the provost's Academic and Administrative Technology Committee (AATC) sponsored ACADIT, an intensive project to develop a framework for development of the university's academic technology efforts over the next three to five years. Huron Consulting was engaged to gather and analyze data and commentary from UofL faculty, staff, and administrators. This summary outlines ACADIT results under the following headings:

I. Key Results: Findings, Recommendations, and Action Items
II. Institutional Strategy and Academic Technology
III. Current Assessment of Academic Technology
IV. Sixteen Immediate-Action Initiatives
V. Funding Strategies

Appendix A outlines the ACADIT process. The text of the Huron Consulting report is available by request from the Office of the University Provost.

I. Key Results

Findings

- UofL lacks effective, university-wide technology planning
- Lack of appropriate business practices prevents the University from tracking investments in academic technology
- Fewer than half of faculty are served by active Unit technology committees; fewer than one-third belong to Units with an active technology plan; and fewer than one-fourth of the faculty are in Units with a technology replacement program
- About 20% of the classrooms have basic hardware for a technology-supported pedagogy: an Ethernet connection, projection system and screen, and computer.

Recommendations

- Revise business practices and tracking mechanisms to allow for tracking support and funding levels for academic technology
- Adopt common standards for classroom technologies and increase the number of classrooms meeting these standards

- Increase attention to research computing and assess the current state of research computing and recommend enhancements
- Increase central planning, decision-making, and funding for academic information technology to support the goals of the University
- Reform the technology support structure to assure reasonable, practical and accessible support for academic technology to meet the university's mission
- Create and sustain a thorough, goal-oriented and needs-based technology training program for faculty, staff and students

Action Items

- Secure administrative confirmation of the ACADIT vision and priorities
- Implement immediate-action items
- Continue planning for and design of long-term development items
- Validate current technology-enabled classrooms inventory; update University-wide scheduling system to enhance the pedagogical use of existing facilities and resources
- Improve communication, coordination, and integration among academic technology service providers
- Address academic technology support issues (including Tier I concerns)
- Reform AATC (or constitute a new University-wide committee) with planning and governance authority for academic technology
- Define additional academic technology standards, target performance metrics, and implementation plans, including resource requirements
- Reform budgeting models for academic technology development and define budgets for long-term initiatives

II. Institutional Strategy and Academic Technology

The University of Louisville is currently engaged in strategic efforts that will enable it to become one of the nation's premier metropolitan research institutions. Defining an academic technology planning framework and process is one of those efforts and directly supports the University's goals as described in the *Strategy for Excellence* and *Challenge for Excellence*, which identify five strategic themes to the focus of the University's planning efforts:

> **I. The Educational Experience.** Create a responsive, challenging and supportive educational environment characterized by high expectations, respect for diversity and intercultural understanding, and engaged and purposeful thinking.
> **II. Research, Creative, and Scholarly Activities.** Concentrate energy and resources to advance areas of programmatic strength identified in the *Challenge for Excellence*.
> **III. Accessibility, Diversity, Equity, and Communication.** Develop a seamless system of access and create a culture that promotes and supports race and gender diversity, inclusively, equity, and open communication.
> **IV. Partnerships and Collaborative Programs.** Encourage interdepartmental and inter-unit collaboration in support of interdisciplinary teaching, research and service; cooperate with external agencies and other institutions of postsecondary education to leverage the resources of the university and its partners for mutual benefit.

V. Institutional Effectiveness of Programs and Services. Improve the effectiveness and accountability of programs and services in fulfilling the mission and vision of the university and communicate its successes within the university community and to the public at large.

A Vision for Academic Technology

AATC has endorsed a vision statement to place technology in the service of this strategic plan, noting that technology resources—the obvious elements of hardware and software, but also the ongoing training, support, experience, and insight of the members of the university community—must be used and integrated into all academic, research, administrative, and support functions. To achieve this vision, high minimum thresholds for technology should be established and implemented for faculty, staff, and students.

Academic Technology Goals

Under this vision, the ACADIT project identified these goals for the immediate and long-term development of academic technology that will address the themes of the *Challenge for Excellence*:

- Ensure governance and planning for academic technologies and support services throughout the University.
- Improve communication, coordination, and integration among the University's academic technology system and service providers.
- Enhance student access to technology resources that support their learning and research.
- Investigate and implement effective means of providing print and electronic media resources for all customers of the University Libraries.
- Develop and support programs to deliver instruction in a technology-enhanced medium.
- Enhance, maintain, and support the University's technology-enhanced teaching, learning, and research environments.
- Employ and coordinate resources to provide technology support for the University community's academic technology systems and users.
- Provide the technologies, systems, and services necessary to support and expand the University's research endeavors.
- Provide the technical infrastructure necessary to support the teaching, learning, research, and patient care missions of the University.
- Empower faculty, staff, and students to use technology to meet learning objectives, institutional goals, and personal needs in a technologically complex world.
- Empower faculty in redesigning teaching, learning, and research environments to include current and emerging technologies.
- Facilitate the regular renewal of the University's computing resources to ensure operability and compatibility.
- Develop and maintain a consistent, functionally rich University-wide web and portal infrastructure.

III. Current Academic Technology Assessment

Discussions with stakeholders and analysis of the university's resources and initiatives underlie the following conclusions about the current status of academic technology at the university:

- Academic technology governance and planning are largely uncoordinated on a University-wide basis today; most academic units fund technology initiatives locally with one-time or year-end funds.
- The central IT unit, the University Libraries, the Delphi Center, Undergraduate Studies, Student Affairs, the Office of Distance and Continuing Education, and the individual academic units provide academic technology services. Improved communication, coordination, and integration among academic technology service providers are greatly needed – both users and other service providers are unaware of the academic technology services available.
- Most students currently have access to adequate computing resources; because the individual units manage the majority of student computing labs, however, some discrepancies exist in resource quality.
- The University Libraries are an asset to the user community. Current library systems and databases are robust; integration of these resources with the University's administrative systems is needed. Opportunities also exist to integrate information literacy standards into academic programs more fully.
- Less than 25% of the University's classrooms are equipped to meet a standard that may be perceived as "minimum technical infrastructure" at peer institutions. As individual academic units are independently responsible for improving these resources, little consistency exists University-wide.
- The University has established several technology-enhanced learning offerings; however, it has done so largely based on the inputs of sponsoring agencies. Conducting a market assessment for these offerings and creating a University-wide strategy for this area are needed steps.
- The availability and quality of support for academic technology vary widely across the University; several departments are insufficiently supported, primarily due to not having fully and consistently implemented the Tier I support structure.
- The University's research community appears to be responsible for funding and supporting its own technology needs. The lack of access to and support for research technologies affects the University's competitiveness when applying for and conducting research.
- A robust, reliable core network and technical infrastructure are in place. User demands to implement greater desktop connectivity and emerging technologies (e.g., wireless network) have been hindered by the lack of available resources.
- Most units coordinate technology training on a local, as-needed basis. Some redundancies exist in this service model; providing an online tool to facilitate anytime, anywhere may be merited.
- The University's web presence is highly variable in terms of look, feel, and depth of functionality. University-wide efforts to improve the effectiveness of this resource as a marketing tool are underway. The implementation of self-service functionality through

the PeopleSoft Portal continues and will greatly enhance faculty, staff, and student access to desired functionality.

- The individual academic units coordinate the renewal and replacement of their own computing resources. Many of the units have not established ongoing funds to facilitate this process – in these units, a greater percentage of computing resources need replacing.
- No comprehensive structure for faculty development exists. Although the Delphi Center assists faculty wishing to employ online instructional tools, a more comprehensive unit is desired.

Details concerning resources inventories and service providers appear as Appendices B and C.

IV. Immediate-Action Initiatives

Implementing the following immediate-action initiatives should represent little or no incremental cost to the University, based on the following assumptions:

--Utilizing internal resources' time and effort is assumed to be cost-neutral

--Costs do not account for current budgets or sunk costs; costs represent incremental increases over current budgets

--Existing funding for all current and pending technology initiatives remains constant; no funds are diverted from existing initiative budgets to pursue the initiatives of this report

--All estimated costs assume University-wide coordination of implementation efforts; pursuit of these action items independently by the various academic units will result in increased cost to the University

--Costs assume the University chooses to implement all action items with internal resources; use of external assistance will increase the resources required

--The estimated total costs do not include any costs related to interest, inflation, or the time value of money

--The resources required to implement the remaining action items recommended in this report cannot be estimated at this time due to the lack of a comprehensive inventory of the University's current academic technology resources and the lack of a specific series of targets for enhancing these resources. Precise implementation costs for these action items will be determined later in the planning process.

Initiatives for Immediate Action
1) Validate inventory of current technology resources in learning spaces.
2) Update University scheduling database with revised classroom inventory results (Schedule 25).
3) Define standards/levels of standards for all learning spaces (e.g., minimum configuration, advanced standards, etc.).
4) Confirm initial assessment of adequacy of current academic technology service provision model.
5) Confirm initial assessment of adequacy of current processes and resources used to communicate available academic technology functions, systems, and services.
6) Finalize and communicate University-wide vision and priorities for academic technology systems, services, and processes.
7) Complete and communicate the University-wide Academic Technology Plan.
8) Complete and communicate unit-specific Academic Technology Plans.

9) Identify ongoing funding and resources at both the central and unit levels to achieve the goals and objectives of the Academic Technology Plans.
10) Define and implement proceses for and frequency of updates to central and unit Academic Technologies and Support Services Plans.
11) Propose and inaugurate a governance body, reporting to the Provost, on academic technology issues.
12) Appoint a governance committee chairperson and planning project manager.
13) Inaugurate unit-based technology planning and governance committees.
14) Define agenda and resultant organizational structure of governance sub-committees and task forces.
15) Assign roles and responsibilities to members of the governance committee, sub-committees/task forces.
16) Create a sub-committee/task force within the governance committee to address research computing issues.

An estimated implementation timeline for these immediate-action initiatives is attached as Appendix D. The complete list of initiatives, including long-projects yet to be designed in detail, appears as Appendix E.

V. Funding Strategies

During this planning effort, the project team conducted research about academic technology funding strategies employed by other higher education institutions. Adopting a coherent set of such strategies will remedy the central issue of budgeting and resource allocation that ACADIT participants identified at every level of discussion:

- Build life-cycle replacement funding into planning at every level of investment in technology, including personnel, departmental and central systems, and network hardware and software (Indiana University).
- Develop a cost recovery system, such as paying an annual fee while a student to guarantee life-long access to learning programs. (Virginia Tech).
- Obtain new funding from the state legislature for technology upgrades for both academic and administrative units (University of Illinois).
- Encourage the build-up of adequate support staff for the distributed computing environment across the campus through cost sharing. The incentives must benefit those

units that have already invested in staff support as well as units that have not (The Ohio State University).
- Work with faculty who are at the cutting edge of technology uses to identify internal and external funding sources that will allow the implementation of their concepts (University of Pittsburgh).
- Encourage departments to make appropriate investments in above-base-level needs by establishing a central equipment fund - these funds would be available to colleges on a 50% matching basis to assist them in meeting the maintenance, support, and operational costs of computing-intensive activities (The Ohio State University).

Appendix A: ACADIT Process

This appendix summarizes the process, directed by Huron Consulting, that was used during the ACADIT project to develop the Academic Technology Planning Framework. The final report of the consultants is available through the Office of the University Provost.

The project team completed the following tasks:

- Established a business case for change related to the use of academic technology
- Developed an initial, University-wide vision and objectives for academic technology
- Developed a framework to facilitate ongoing academic technology planning
- Recommended action items to support the University's achievement of its academic technology vision and objectives
- Identified top priority academic technology projects to focus on in next academic year
- Identified opportunities to achieve "quick wins" related to academic technology
- Identified academic technology areas where further planning is required
- Developed implementation timeline for top priority recommendations

Project Scope & Objectives

This project reviewed the institution's current academic technology resources, systems, and processes to develop a framework for academic technology resource planning in conjunction with the AATC.

These objectives were accomplished through an inventory of current academic IT resources, research on academic technologies planning efforts at peer institutions, and focus groups on these topics:

- Academic technology governance & planning
- Classroom technologies
- Coordination, communication, and integration
- Library technologies

- Networking and Technical Infrastructure
- Research Computing
- Student technology resources
- Technology-enhanced learning
- Technology support
- Technology training

Appendix B: Resources Inventory

To create an inventory of the resources currently deployed to support the academic technology functions of the University, a survey instrument was distributed to 11 of the academic units of the University; all surveys were completed and returned by the units. Additional feedback was received from the Office of the Vice President of Information Technology and the Libraries. Some units were unable to provide detailed responses to this survey. This signals the need to change business processes related to tracking of academic technology resources.

Inventory highlights:

Academic Technology Resources

- The University spent in excess of $ 6.3 million on academic technology in the 2001-2002 academic year; this figure includes some spending on enterprise-wide functions that support academic users, such as networking, server management, and electronic databases maintained by the libraries.
- Approximately 129 FTEs are currently deployed University-wide to support academic technology.

Student Technology Resources

- There are 83 computing labs across campus, which house 1,250 computers; 46% of these resources are available to all students. Central IT is responsible for managing and maintaining about 15% of these lab resources.

Technology Planning & Purchases

- Nine of 12 academic units (45% of FTEs) surveyed have active technology committees. 7 of 12 (29% of FTEs) academic units surveyed have an information and instructional technology plan; all units that have such plans follow their plan.
- Seven of 13 academic units (21% of FTEs) surveyed have active technology replacement programs. These technology replacement programs play an important role in maintaining current resources within these units.

Networking & Technical Infrastructure

- 2 of 12 academic units (10% of FTEs) surveyed have implemented a wireless network, although these networks are of different designs and are not compatible. Three of the 10 remaining academic units (14% of FTEs of units who have not implemented) have plans to implement a wireless network in the next 2-3 years.

- Only a few departments in a few units have implemented a laptop requirement. None of the academic units surveyed has plans to implement a laptop requirement at this time.
- One of the 12 academic units surveyed (56% of FTEs – the School of Medicine) has implemented a PDA requirement. None of the remaining academic units surveyed has plans to do so.
- Based on survey results, 31% of FTEs reported having 100mb desktop connections; 56% of FTEs require these connections.

Technology Training

- Seven of 12 academic units (30% of FTEs) surveyed have implemented student training programs, 5 of 12 academic units (26% of FTEs) surveyed have implemented faculty training programs, and 6 of 12 academic units (26% of FTEs) surveyed have implemented staff training programs.

Instructional Technology

- About 23% of faculty use a distance or online technology component in their teaching.
- No unit has a formal faculty reward/recognition program related to distance and online learning.
- An average of 68% of faculty FTEs in the academic units surveyed use classroom technologies; one unit formally recognizes faculty for the use of classroom technologies.
- Based on a University-conducted inventory, 22% of classrooms are equipped with a minimum of an Ethernet connection, projection system and screen, and computer.