2005 – 2006 Executive Summary
Program Reviews of UM-St. Louis Centers

Unit: Information Technology Services

Division:

Center Mission: Technology pervades life in the 21st century and enables modes of teaching and learning that were impossible even a few years ago. Therefore, while ITS activities have evolved along with the University's goals, the unit has also had to respond to the overall environment. At the most basic level, the priority is to ensure that the technical infrastructure works. The myriad electronic and mechanical components of an information technology system (from hardware to software, from individual machines to network servers) must work—reliably and cost effectively—or none of the other ITS goals are possible.

At UMSL, the role of ITS also includes support of technology for learning, research, and administration. ITS is therefore able to build on the foundation afforded by a solid infrastructure to directly support academic aims such as faculty and student success. Out of that work, ITS learns what needs to be done to develop the infrastructure further.

UMSL has the advantage of being large enough to attain reasonable economies of scale in the deployment of technology and yet is small enough that most IT functions can be centralized. So, the size of the university has helped to create a rare balance between effectiveness and cost efficiency.

ITS activities that serve this mission include

- Administration and maintenance of computing labs throughout campus, technology enhanced classrooms, web-based course and learning management tools (including MyGateway), and the online testing center;
- Maintenance of the data network, which provides access to learning and research materials, and the voice (telephone) network;
- Maintenance of the computing machinery that provides core services such as email, file storage, and web services for the entire campus;
- Maintenance of the high-performance computing cluster that supports research and teaching, the core of the High Performance Computing Collaboratory;
- Continual investigation of promising technologies that can support learning;
- Support programs including the Technology Support Center or "helpdesk," the Faculty Resource Center, student lab support, and support for faculty and staff computing needs including the Desktop Systems Plan;
- Partnership with Student Affairs on the implementation of Peoplesoft Student Administration modules;
- Development of computer applications that streamline administrative processes;
- Educational programs such as technology and career briefings, conferences (including the Fall Focus on Teaching and Technology Conference), workshops (including Teaching with Technology, Conversations about Teaching and Technology, Provost's Forum on Learning and Technology, and Technology Fridays), and short courses offered to students, faculty, and staff on applications including Microsoft Office applications and web applications

Strengths and distinguishing characteristics of the Unit's activities: The review report noted that ITS has effective leadership and management that is innovative and collaborative; it considered ITS management practices better than that of IT units at other UM campuses.

Stakeholders agreed that ITS generally provides exemplary service that is knowledgeable, responsive, and helpful. They noted that the staff size is small for its user population and that, therefore, productivity per employee is higher than at many other universities.

The review report also remarked on the robust infrastructure that ITS has built through early investments in campus IT development. ITS has also paid due attention to capital renewal within budget constraints. The report cited examples:

- the High Performance Computing (Beowulf) cluster resource
- MyGateway, based on the Blackboard course management system
- Desktop System Plan, a regular replacement program for desktops and laptops that makes it easy for faculty and staff to say current in technology

ITS is seen as a good collaborative partner that is willing to think "outside the box" and is accepting of ideas from outside the unit.

Assessment of the effectiveness of the Unit's activities overall:

The review report was very positive overall about the ITS organization and its effectiveness. Nevertheless, there is room for improvement, and ITS is committed to evolving to meet current and future challenges. The broad recommendations treated four areas:

I. Communications and feedback mechanisms: ITS needs to continue to improve its external and internal communications. Finding the right channels and the right methods will be a continuing challenge in a complex organization.

II. Staffing and training: ITS needs to formalize a recruitment plan that includes creative ways to attract and retain good staff; this includes continuing attention to staff training.

III. Infrastructure development: ITS should continue its investments in infrastructure, in particular expanding the capacity for high performance computing.

IV. Evaluation: In the self-study review, ITS identified the strategic need for better instruments to link its activities to outcomes for students and faculty. The review report suggests working with the Public Policy Research Center on appropriate surveys.

Long-range goals and strategies:

I. Support for the University Mission: ITS staff will continue to use their best professional judgment to bring forward relevant technological advances that can benefit the University's academic mission. While that judgment is tempered by the evident needs of campus constituents, ITS will also take a leadership role at times, becoming "gently provocative" in bringing new services or technologies to campus.

II. PeopleSoft/Oracle: The Student Administration system is truly critical to the mission. Student Affairs and ITS recognized early that a close partnership would increase the chances for a successful project, measured by outcomes that include: more efficient processes; freeing staff, students, and faculty from low-value processes; and enabling staff to help students succeed through appropriate financial aid, student advising, and early warning of student difficulties.

III. Process Change: Process change is a difficult endeavor, and the view of administrative software as an enabler for process change is new. ITS hopes to apply lessons from the model of cooperation in student administration to improve processes in other administrative areas. Overall outcomes will include streamlined administration, reduced bureaucracy, and increased self-service.

IV. Structured Application Software Development Processes: ITS has begun to adopt a more disciplined approach to application development, with more formal methodologies. During development, ITS aims to gather requirements, model use cases, use prototyping tools to rapidly match requirements to potential solutions, and document software for ease of maintenance. This discipline needs to be instituted without creating more bureaucracy for ITS and its users.

V. Project Management: As well as better software development methodologies, ITS will need to adopt better project management processes. Until recently, ITS has managed projects relatively informally. Because of the anticipated growth in demand, ITS will need more discipline in order to increase effectiveness.

VI. Need for improved instruments: ITS instruments need further development because the unit will need better metrics. ITS also relies heavily on surveys—the questions and formats need further development to focus on crucial issues. This development may include questions that directly probe the relationship between student success and use of technology as well as the quality of technical support.