8: Efficiency and Effectiveness

Colleges and universities are expected to be good stewards of public resources. With declining state support for higher education, mounting health care and other costs, and rising competition for quality faculty, staff, and students, institutions need to be more creative than ever in addressing these significant financial challenges. In an effort to fulfill their missions and sustain their future viability, universities must embody the values of efficient and effective management.

In this state and national context, the University is placing a high priority on fiscal resourcefulness, institutional efficiency, and quality student services.

A. Enhanced Service and Productivity

With capabilities made available by new technologies, and with a history of strong working partnerships that exist among faculty, staff, and administration, the University launched in 2002 the Enhanced Service and Productivity Initiative. This initiative encompasses four broad goals:

- create a system-wide culture of customer service excellence,
- identify opportunities where resources can be used to bolster the University's internal economy,
- develop approaches for how the University can regularly monitor the effectiveness of key service and support areas, and
- identify innovations that transform University business practices.

The initiative's four focus areas are:

Continuous Improvement Process: Enhance the service quality in central or campus-based units that deliver high-volume transactions and services to students.

Technology Initiative: Further leverage the University's investment in enterprise-wide technology systems.

Internal Economy Initiative: Identify opportunities to bolster the University's internal economy.

Great Service Initiative: Ensure that non-academic service and support units provide quality, efficiency, and appropriate levels of service for their clients.

Some early successes include:

- Students now access grades, tuition and fee billings, financial aid, and loan information online. They also apply for housing, pay their bills, and complete dozens of other transactions on the Web.
- A new electronic course scheduling system is expected to increase greatly the efficient use of classroom space across the Twin Cities campus.
- 50 cash registers atop mobile kiosks greatly increase service during rush times.

B. Information Technology Initiatives

The Office of Information Technology (OIT) on the University of Minnesota – Twin Cities campus works collaboratively with units across the University on initiatives designed to improve the efficiency and effectiveness of the institution and demonstrate leadership in the higher education community. Several of these initiatives are listed below with related accomplishments for the previous year.

***e*Portfolio:** OIT's support of ePortfolio (a secure website for saving, organizing, viewing and sharing educational and promotional achievement records) resulted in an initiative announced in February 2003 by the University of Minnesota – Duluth. In conjunction with other colleges and universities (e.g., University of Michigan and University of Delaware) the University of Minnesota has released *e*Portfolio as open-source software. In the first few months, over 500 institutions worldwide have expressed an interest in this technology; over 28,000 *e*Portfolios are in active use across the four University campuses.

PeopleSoft 8 Upgrade: OIT successfully upgraded to PeopleSoft version 8 software. This upgrade has enabled Web functionality for all PeopleSoft users and offers more self-services features and automation for University staff and students. The mainframe DARS system was upgraded to a Windows-based system called DARWIN. Both projects were completed under budget and on schedule.

Imaging: In a Twin Cities-Duluth campus collaboration, OIT delivered an imaging system designed to have a major impact on the institution.

The digitization of paper records will yield efficiencies, reduce costs, and save space – and improve services through near-instant search and retrieval capabilities. For example, since its inception, imaging automation has helped the Twin Cities campus admissions office process 18 percent more applications with fewer staff.

Portal: In collaboration with the AHC, EVPP and University Relations, OIT delivered a next generation enterprise portal that offers customizable, elective user channels and links. The portal allows the University to deliver customized information, provide access to University resources, and facilitate instruction system-wide.

During the first nine months of 2003, the portal was used to deliver the federally mandated HIPAA (Health Insurance Portability and Accountability Act) training to nearly 19,000 individuals in a cost-effective manner. This level of training compliance would not have been achieved without the portal capability.

Return on Investment Methodology: Work continues to develop a methodology that will allow the University of Minnesota to better understand the costs and benefits of implemented systems. As this initiative continues to develop, the University's governance committees are given detailed, impact-related forecast data that enable sound decisions with prudent priority.

Technology Expenditures

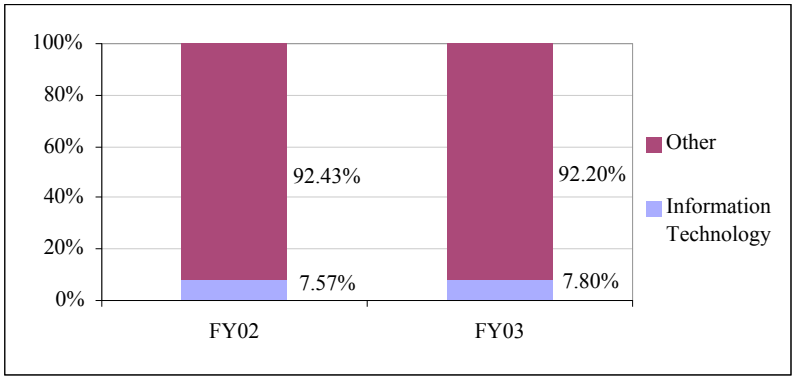
The University of Minnesota recently developed the capacity to track its overall information technology expenditures. The data encompass all of the institution's academic, administrative, research, and outreach technology-related expenditures.

FY 2002 is considered to be a benchmark year because: 1) technical employees at the University were classified into broad-banded technical positions that can now be reported,

and 2) new technology-related expense categories were added to the financial system to enable more accurate reporting capabilities.

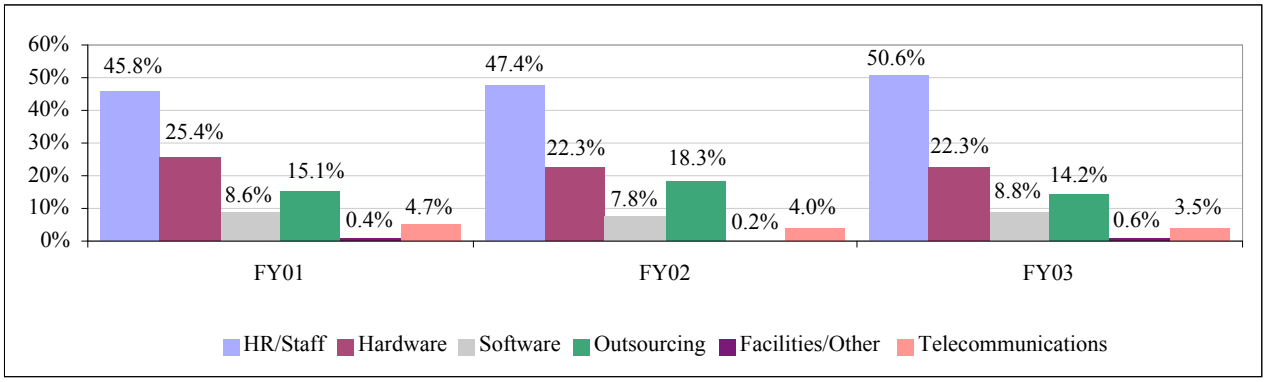
These findings are summarized in Figures 8-1 and 8-2.

Figure 8-1. Information technology as a percentage of total budget, FY2002 and 2003.



Office of Information Technology, University of Minnesota – Twin Cities.

Figure 8-2. University of Minnesota information technology spending, FY2001-03.



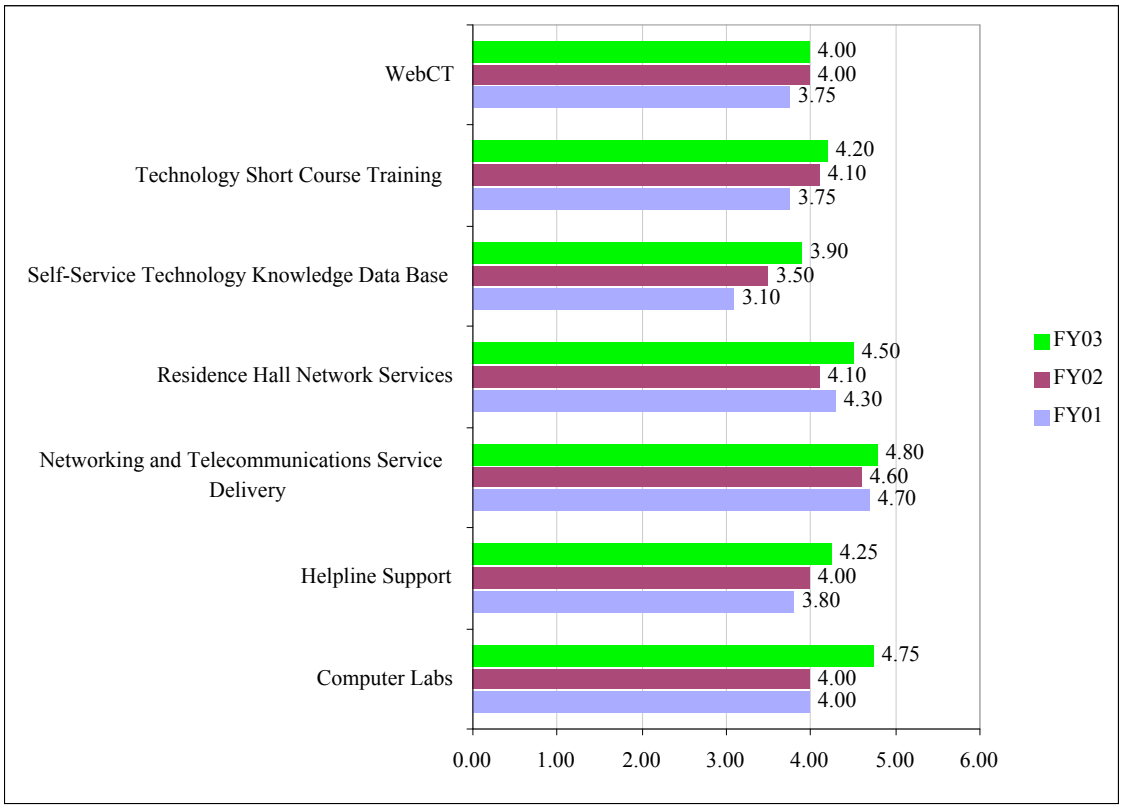
Source: Office of Information Technology, University of Minnesota – Twin Cities.

Customer Satisfaction

Satisfaction with technology services increased in six of seven key technology categories as compared to the previous year, as shown in Figure 8-3.

The greatest improvement was in satisfaction with computer labs – a direct correlation to the opening of new laboratories in Walter Library and Coffman Union.

Figure 8-3. Customer satisfaction with Office of Information Technology services, University of Minnesota – Twin Cities, FY2001-03.



Source: Office of Information Technology, University of Minnesota – Twin Cities.

Note: Data are shown on a five-point Likert scale. 1=least positive, 5=most positive.

C. Technology-Enhanced Learning (TEL)

Technology-Enhanced Learning (TEL) is the term the University of Minnesota uses to describe distributed education, instructional technology, and the University's focus on using technology to support its core teaching mission. The TEL Council was created in 2001 to integrate technology strategically and efficiently throughout the system. In addition, TEL activities are planned and carried out throughout the University of Minnesota at the collegiate, departmental, and individual levels. All TEL efforts are designed to help students develop greater knowledge and understanding through improved access to the intellectual assets of the University and through innovative instructional strategies.

TEL initiatives rely on the University of Minnesota's robust and flexible infrastructure of bandwidth, storage capacity, authentication, and disaster recovery mechanisms. Examples of this infrastructure capacity and efficiency improvement efforts include:

Network Connections: There are 45,072 network connections on the University of Minnesota campuses – 6,292 of which serve students in residence halls and 5,700 of which are on the Duluth, Morris, Rochester, and Crookston campuses.

Wireless Networking Coverage: In 2002 over 200 wireless access points existed on the Twin Cities campus and wireless services provided by the Office of Information Technology were found in more than 70 common/public areas. In 2003, there are over 380 wireless access points that provide services to classrooms and common/public spaces in over 80 University buildings.

ITV and Online Classes: The University of Minnesota's Interactive Television (UM-ITV) system links all five campuses using two-way video and audio links so that instructors and students can see and hear each other. Because UM-ITV can connect with other state, national, and international systems, it effectively links the University of Minnesota to the developing global distance education network. Online classes are another option for students in remote locations and for students who desire the flexibility this type of learning offers.

Table 8-1 shows statistics for online and ITV classes for the period from summer 2002 through spring 2003 at all locations except University of Minnesota – Duluth.

Online Evaluations: The University of Minnesota is pilot testing a Web-based course evaluation system to provide instructors and department heads timely and less expensive feedback for course and teaching effectiveness improvements.

Software Licensing: In 1999, the University began providing faculty with a TEL Faculty Toolkit containing free or reduced-cost software. In 2003, a three-year agreement between the University of Minnesota and Microsoft Corporation was signed to provide a suite of Microsoft's most popular software for use on University-owned computers. Having a centrally supported suite of software for faculty results in financial savings by eliminating the need for multiple and more costly site licenses. It also simplifies support by streamlining technical assistance and troubleshooting. Finally, it facilitates TEL initiatives by providing a common set of tools faculty can count on and which can serve as the basis for the development of best practices.

WebCT: WebCT is course management software that is used extensively across the University. By the spring term of 2003, there were:

- 1,735 sites for courses, training, seminars, research groups, committees, and tests;
- 28,693 student users (56% of enrolled students); and
- 55,215 student seats (A single student enrolled in two courses counts as two student seats).

Table 8-1. University of Minnesota online and ITV course statistics, 2002-03.

	Online	ITV
Total number of courses	85	123
Enrollment	1,625	1,243
Credits	3,346	4,123
Tuition dollars	$829,905	$899,400

Source: Office of Executive Vice President and Provost, University of Minnesota.

D. Efficiency of Facilities

The University of Minnesota has more than 700 buildings on its campuses, six research and outreach centers, and three biological and forestry field stations. With more than 25 million square feet of space, one of the country's largest libraries, and some of the world's most sophisticated research laboratories, the sound stewardship of the University's facilities is essential to achieving excellence in its mission.

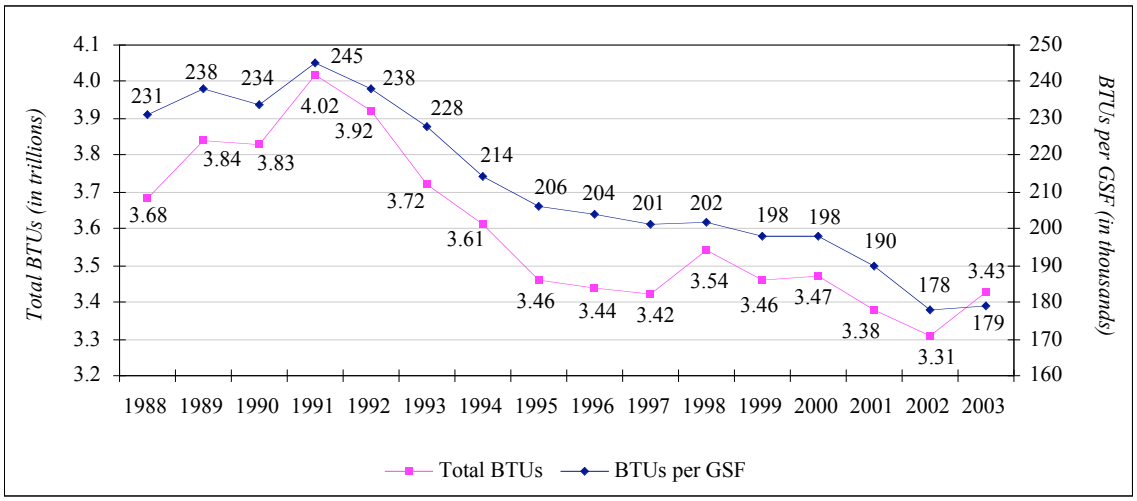
Energy Conservation

Conservation measures have allowed total energy consumption to be reduced by about 15 percent since FY 1991. These savings have been realized despite:

- an overall net increase in space;
- new space being more sophisticated and having higher energy consumption than decommissioned space;
- significant growth in the number of computers and associated equipment.

Figure 8-4 shows the reduction in energy usage from FY 1988 through FY 2003.

Figure 8-4. University of Minnesota – Twin Cities energy usage (weather normalized), FY 1988 – FY 2003.



Source: Office of University Services, University of Minnesota.

Facilities Stewardship Proficiency

On the Twin Cities campus, data gathered from the Office of Facilities Management's externally benchmarked job standards and work order records will be used in future years to develop an overall productivity measure for maintenance and repair operations. This information will be used to compare efficiency and performance against nationally recognized standards. These benchmark data will be available in 2004-05.

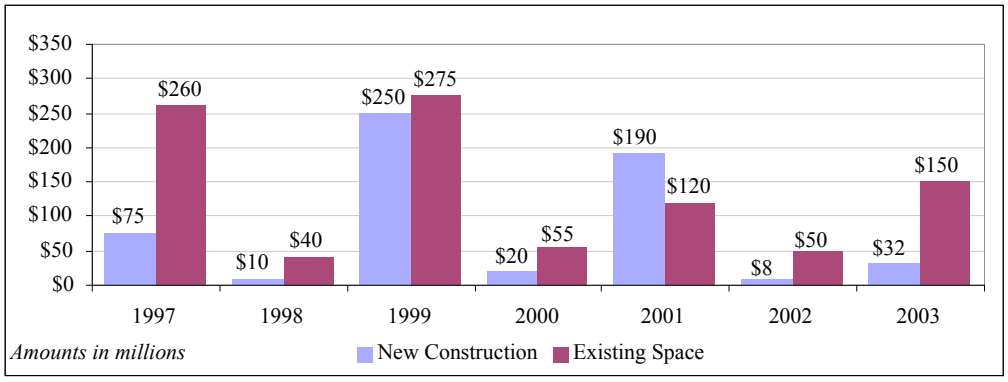
Capital Projects

The past six years have shown unprecedented investment in the physical environment of the Twin Cities campus. In FY 2001 alone, 376 approved projects were valued at $962 million.

The number of projects completed over the past four years has increased significantly: 131 in 1999, 115 in 2000, 181 in 2001, and 250 in 2002. Twenty-four projects remain in process with a value of $788 million.

Figure 8-5 shows annual capital investment in existing space and new construction from FY 1997 to 2003. In five of the past six years, capital budget funds for renovation of existing space have exceeded funds for new construction. Over this period, investment in new construction has been less than one-third the investment in renovation of existing space.

Figure 8-5. Annual capital investment in existing space and new construction, University of Minnesota – Twin Cities, FY 1997-2003.



Source: University Services, University of Minnesota.

Capital project outcomes are monitored to determine if work is progressing and completed according to plan. Review of the 250 capital projects completed during FY 2003 shows that:

- A positive balance was returned on 156 of the projects (63 percent);
- 71 projects were completed within budget (29 percent);
- 14 projects needed additional funds to cover a deficit (6 percent);
- 4 projects were cancelled (2 percent);
- 45 percent of projects were completed on time, a 5 percent improvement over FY 2002.

Two other significant examples of efficiencies achieved on the Twin Cities campus include:

- The Department of Facilities Management realized $5.7 million in recurring annual cost savings in 2003 through structural changes in organization and improved service delivery processes.
- U-Pass and Metropass provide students, faculty, and staff with unlimited access to Metro Transit bus service at discounted rates. U-Pass is funded for FY 2003 and 2004 by a federal Congestion Mitigation Air Quality grant. These initiatives aim to increase transit use at the University by at least 40 percent over two years, thereby reducing carbon monoxide emissions, vehicle miles traveled, and single-occupancy trips.

  Over the past four years, U-Pass sales increased steadily from 8,055 in fall 2000 to 14,091 in fall 2003. Similarly, Metropass sales showed an increase from 1,182 in fall 2000 to 1,569 in fall 2003.