

II. F. Institutional Efficiency and Effectiveness

Institutional Efficiency and Effectiveness

The University's goal is to be a client-focused organization providing services that are tailored to meet clients' needs and expectations. It invests to develop services that are readily accessible, timely, efficient, effective, and of highest quality. The University hopes to be recognized as an innovator and leading-edge user of technology and staff development to achieve service excellence. It intends to excel in effective institutional resource management. This goal applies to the University's technological infrastructure, service improvement, and management systems.

To focus priorities and measure progress, the following measures have been established:

- 1) using technologies to improve the academic infrastructure and service delivery; and
- 2) managing resources in ways that result in successful mission-driven activities, efficient operations, and fiscally responsible budget planning.

In addition to these traditional measures, President Bruininks has established a new Enhanced Service and Productivity Initiative in an effort to leverage recent investments in technology systems, heighten awareness of the competitive marketplace, aggressively recommit to the highest level of service to our students, streamline key business practices, and seize opportunities for revenue generation through better use of physical and human resources.

Specifically, the initiative encompasses four overarching goals:

- 1) enhance the service quality in central or campus-based units that deliver high volume transactions and services to students;
- 2) further leverage the University's investment in enterprise-wide technology systems;
- 3) identify opportunities to bolster the University's internal economy; and
- 4) ensure that non-academic service/support units that deliver a broad range of services in support of the University's mission operate with quality, efficiency, and appropriate levels of service for the constituent groups they serve.

To increase substantially the number of students, faculty, and staff who benefit from information technology, over the past four years a total of over \$15 million has been invested through the Compact Process in technology. Another \$9.3 million has been invested to improve the academic technology infrastructure.

In light of higher tuition rates and declining state support, the University now more than ever needs to place the highest priority on fiscal resourcefulness, institutional efficiency, and quality student services to remain competitive in the changing market. With capabilities now made available by new technologies, and with a history of strong working partnerships that exist among faculty, staff, and administration, we can think creatively about ways the University can seize natural opportunities to enhance service and productivity while at the same time reducing unnecessary costs across the entire University of Minnesota system.

Use technologies to improve the academic infrastructure and service delivery.

Indicators: domain popularity; email usage; satisfaction ratings

Trends.

**Chart A
Use of Centrally Supported Web and Email Technology**

40 million/day	University Web page hits from outside the institution
100 million/day	Other on-campus to off-campus, or off-campus to on-campus, computer communication sessions (Email, file transfer, etc.)
586,000/day	Enterprise System hits per day (One-Stop, etc.)
647,000/day	Email messages delivered to students, faculty, staff
1.4 million/day	Email queries and transactions

Source: Office of Information Technology

Domain popularity

- The University of Minnesota’s electronic domain (umn.edu) is a valuable institutional property/asset because it is the foundation upon which the University builds its Web presence to the world.
- The University of Minnesota is ranked fifth in the Big Ten and 12th among all universities by “unique audience” visits. The University is ranked first in the Big Ten and eighth among all universities by “pages viewed.” (Source: *Nielson/Netratings US Audience Measurement by Universities, August 2002*)

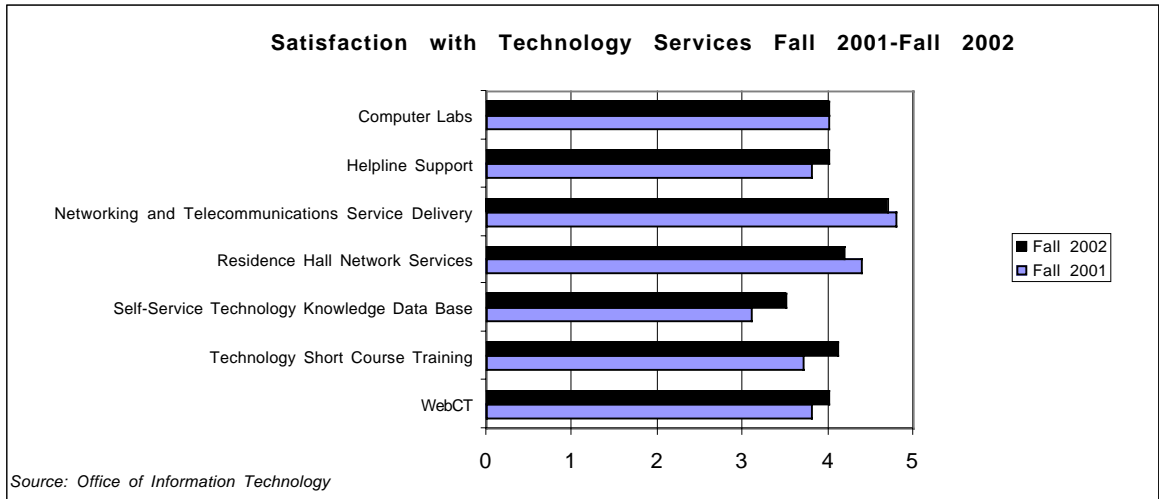
Email usage

- The University’s central email servers deliver 647,000 messages per day.
- The servers handle approximately 1.4 million mail queries/requests per day.

Customer satisfaction

- The Office of Information Technology facilitates year-round continuous customer satisfaction surveys. Results are folded into the strategic planning process and are used to make service adjustments.
- Satisfaction ratings are based on a five-point Likert scale where “1” is the lowest rating and “5” is the highest.

Chart B



- Satisfaction with technology services increased in four out of seven areas from fall 2001 to fall 2002.
- The greatest improvement was satisfaction with the self-service technology knowledge data base, which went up 13 percent.
- Only two areas, networking and telecommunications service delivery and residence hall network services, had lower scores in 2002 than in 2001. Satisfaction in these areas declined 2 percent and 5 percent, respectively.

Technology and Service Improvements

Leveraging Technology Investments

Through the Compact Process from 1999 to 2002, over \$16 million has been invested in technology to strengthen support for student services and classroom technology, faculty development and staff training, access, and other service and management improvements. The goal is to increase substantially the numbers of faculty, students, and staff who benefit from information technology. Examples of these investments are:

**Chart C
Technology Investments**

Priorities	Outcomes
Digital Libraries	Hired seven new digital librarians. Significant increases in our digital holdings and access to on-line databases. Invested further in Digital Library labs.
Technology enhanced classrooms	Currently have over 150 technology enhanced central classrooms on the Twin Cities campus and an additional 50 on the coordinate campuses, representing over 60 percent of our total inventory.
Digital Media Center	Center created to assist faculty with technology enhanced learning and research; 800 – 1,000 to be involved over four years.
Technology enhanced learning grants	Support for nearly 300 faculty led projects using technology enhanced learning. All projects leverage collegiate resources as well.

Source: Office of Budget and Finance

Another \$9.3 million has been invested in the academic technology infrastructure. Examples:

**Chart D
Technology Infrastructure Investments**

Priorities	Outcomes
Student modem pool	Ensures internet access with almost no wait time for all students. Supports greatly expanded help-line services.
ITV and streaming video	Support and expansion of distance education technologies. Conversion to streaming video.
Grants management system	Implementation has increased efficiency of grant processing and information for principle investigators
WebCT	Meet demand from faculty for WebCT support

Source: Office of Budget and Finance

Admissions.

- 80 percent of all admission applications were handled electronically in 2000-01.

Paperless Financial Aid Process.

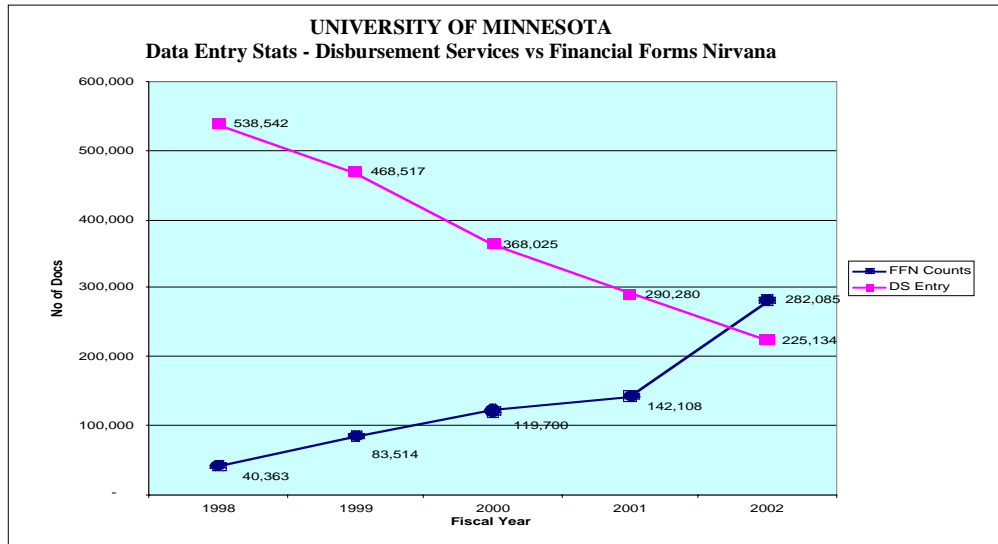
- The University of Minnesota is the first institution in the country to offer a financial aid process that is paperless from beginning to end.
- The University received the 2002 Educause “Award for Excellence in Administrative Information Systems” for its implementation of paperless financial aid.
- In fall 2002, 91 percent of all financial aid applications were automated, up from 84 percent in spring 2002.

Financial FormsNirvana (FFN).

FormsNirvana is a tool developed internally at the University of Minnesota that can be used to create, route, approve, and process information electronically.

- The FFN application is a “front end” to the University’s general ledger, allowing financial transactions to be prepared, validated, routed, reviewed, and approved electronically. The main advantage to using FFN is that it allows more accurate and timely preparation and approval of financial transactions by departments, thus resulting in better internal controls and improved service delivery. A rollout of FFN was begun in FY 2001, with the goal of achieving at least 95 percent usage for all documents available in FFN. As more departments begin using FFN, paper transaction processing via central systems and units will decrease.
- As of June 30, 2002, FFN usage was approximately 87.9 percent for those transactions capable of being processed in FFN.
- For fiscal years 1998-2002, FFN usage has resulted in a 58 percent decrease in the number of documents that were processed centrally, or approximately 313,000 documents annually.
- Central data entry staffing levels have been reduced by approximately 56 percent (10 FTEs) over this period, resulting in cumulative cost savings of approximately \$800,000.
- The following graph illustrates the increase in FFN usage, and the decrease in reliance on central data entry, for fiscal years 1998-2002.

Chart E



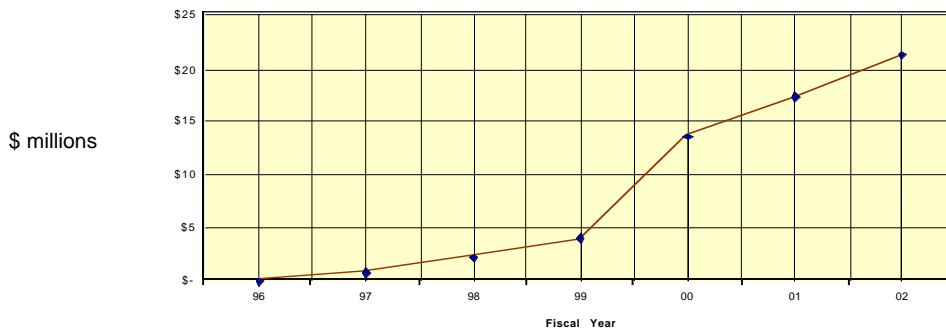
Source: Controller's Office

Procurement

- The University has invested in technology to reduce the cost of procuring many goods and services.
- The University's Purchasing Card program, which has been in existence since 1996, allows departments to purchase certain goods, supplies, and standard services using a University purchasing (charge) card issued to a University employee.
- Administrative procedures have been streamlined for purchasing card activity. Web technology allows coding and approval of the purchase to be performed online, within the buyer's department, resulting in a procurement process that is faster, cheaper, and easier.
- The following graph illustrates the dollar volume increase in purchases made with the purchasing card over the last six years.

Chart F

UNIVERSITY OF MINNESOTA
Purchasing Card Activity
FY 1996 - 2002



Source: Controller's Office

Human Resources Self Service (HRSS).

- On-line pay statements, which eliminate the need to print pay statements for employees who use direct deposit services, were introduced at the University in July 2002. Web-based pay statements were referenced 111,564 times in July 2002 and 113,191 times in August 2002.

Portal

In spring 2001, the University began to provide faculty and staff users the tools to access information and perform routine transactions, organized in a way that makes sense to the individual user. Through a web-based technology called a "portal" every faculty or staff member is able to construct a personalized screen that lets them have immediate access to content that is most important to them – from viewing balances in their health care reimbursement account to seeing their paycheck. A variety of transactions that now require forms to be signed and sent through various offices will be able to be completed electronically and directly by the user, cutting out non-value added steps.

Electronic Grants Management System (EGMS)

The EGMS application allows principle investigators to prepare a sponsored project proposal electronically and route it for approvals within the University. Currently, EGMS may be used for preparing some National Institutes of Health and National Science Foundation grant applications. Templates for additional sponsors are now being developed. Additionally, grants management forms for conflict-of-interest disclosures and consulting disclosures are available.

University Web Strategy.

In fall 2002, the University will introduce a new design and structure for its top-level Web sites, as well as new, customizable Web portals designed for both internal and external audiences. Portals will allow users to create personalized, dynamic Web pages with information “channels” they select from around the University. Channels will include general information (news headlines, sports scores, event postings) or individualized content (class assignments, syllabi, financial account balances). Portals will also provide an infrastructure for users to develop learning communities around specific areas of interest. This type of functionality will enhance our service culture and help users learn more about University research, expertise, and other available resources.

The Academic Health Center launched the first University portal using this new Web architecture in fall 2002. Early services include using the portal framework to inform Medical School students about information specific to their year of study; conducting compliance training related to the Health Insurance Portability and Accountability Act for all AHC employees; and creating communities of learners around specific health-related issues. A more comprehensive, University-wide portal will be launched in 2003.

Revising the overall look and functionality of our Web sites—including secondary pages and collegiate-level home pages—will allow us to develop stronger, deeper relationships with both internal and external users; to better serve our various constituencies; and to increase design continuity and visual identity, making the user experience more consistently satisfying. In addition, the internal work being done to launch the new design and architecture will result in more effective sharing of resources, expertise, and content, thereby increasing the return on investment in Web development activities while decreasing redundancy in time, effort, and financial expenditures.

WebCT.

- WebCT is the University's standard Web-based course management system, providing an environment for faculty to develop complete Web-based courses and enhanced classroom courses with Web services such as online syllabi, discussion groups, and quizzes.
- In spring 2002, 611 courses used WebCT, with a total enrollment of 44,924. This represents a 7 percent increase in enrollment over spring 2001.
- Institutional efficiencies are optimized by also using WebCT for training, seminars, research groups, and committees.

Web One-Stop Service.

Recent patterns of Web use peaked in late fall through mid-spring of 2002, and then declined during the early summer, reflecting variations in the academic cycle.

**Chart G
One-Stop**

<u>Web page</u>	<u>URL</u>	<u>Aug 02</u>	<u>Jul 02</u>	<u>Jun 02</u>
Course Guide	onestop.umn.edu/guide	416,278	214,110	220,180
Class Schedule	onestop.umn.edu/schedule	1,222,746	647,554	750,980
Section Status	onestop.umn.edu/sectionstatus	161,162	80,830	88,698
Web Site Search	search.umn.edu/	192,456	153,887	134,975
Student Evaluation of Teaching	www.umn.edu/tc/course-eval	1,601	868	985
One-Stop Department Lookup	www.umn.edu/tc/onestop/depts.cgi	40,818	33,432	31,641
Total		2,035,061	1,130,681	1,227,459

Source: Office of Information Technology

Portfolio

Developed by the University of Minnesota Duluth, Portfolio is a Web-based application that creates efficiencies, effectiveness, and data-driven intelligence in the undergraduate advising process. By leveraging feeds from PeopleSoft, students can declare and demonstrate personal and academic achievements, then electronically share their portfolio with colleagues, faculty, advisors, and prospective employers as an electronic resume. The Portfolio Web site is <http://portfolio.umn.edu/>

**Chart H
Portfolio**

	Number of Users	
	July 2002	August 2002
Crookston	548	557
Duluth	5,121	5,234
Morris	432	466
Twin Cities	10,228	10,615
Other, not identified by campus	1,163	1,143
Total	17,091	18,015

Manage resources in ways that result in successful mission-driven activities, efficient operations, and fiscally responsible budget planning.

Indicators: instructional cost profiles

Instructional Cost Profiles

Instructional cost profiles will be included in the 2003-2004 report.

Implications for 2003-2004 Planning and Initiatives

Questions for future consideration:

- What infrastructure do we need to build today to meet the teaching, learning, and service needs of the future?
- What type of technology support and investments will faculty need to remain competitive?
- What standards should be established for core areas of performance related to fiscal and human resources?
- For example, through the Compact Process, individual colleges may designate additional measures to assess the impact of technology on efficiency, satisfaction, and effectiveness.

These may include:

- Comparisons of student satisfaction with electronic and paper class scheduling.
- Comparisons of learning outcomes between classes that use, and that do not use, learning technologies.