

7: Public Engagement – Access and Outreach

As a publicly supported, land-grant institution, the University of Minnesota has an obligation to fill an essential outreach and public service function for the state.

The University’s mission statement specifies this obligation to: “Extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.”

This historic public service mission has, more recently, been coined “public engagement,” and there are concerted efforts within higher education to more precisely define the role and measure the results of colleges’ and universities’ public engagement responsibilities.

The Committee on Institutional Cooperation (CIC), comprised of Big Ten universities and the University of Chicago, has endorsed a definition of public engagement, which the

University of Minnesota has adopted for the purposes of organizing and evaluating its efforts in this area:

“Public engagement is the partnership of university knowledge and resources with those of the public and private sectors to:

- enrich scholarship and research,
- enhance curriculum teaching and learning,
- prepare citizen scholars,
- endorse democratic values and civic responsibility,
- address critical societal issues, and
- contribute to the public good.”

This section of the report details the contributions to the state of the University’s technology commercialization activities, the University of Minnesota Extension Service, the University Libraries, and the Research and Outreach Centers. It also provides information on the University’s economic and social impact on the state, an overview of the University’s Council on Public Engagement, and a summary of the findings from the latest citizen satisfaction survey, conducted in December 2004.

A. Technology Commercialization

An integral part of the University’s land-grant mission is to seek practical application for research results to benefit the public and support regional economic vitality. University faculty and researchers are increasingly active

in disclosing new technologies and negotiating licenses of the University’s intellectual property. This process is important as a contribution to the state’s economy. It also

generates revenue that can be reinvested in future research development.

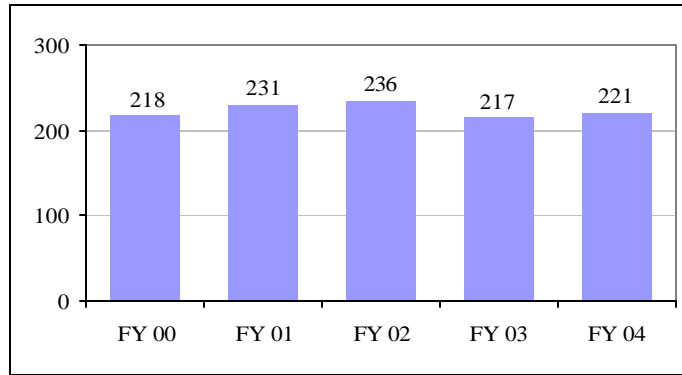
Figures 7-1 – 7-5 summarize the University’s technology commercialization activity over the past five years. Of particular note:

- Licensing activity (Figure 7-3) increased substantially during FY 2004, reversing the

downward trend of the past several years. The number of start-ups has declined every year since FY 2000.

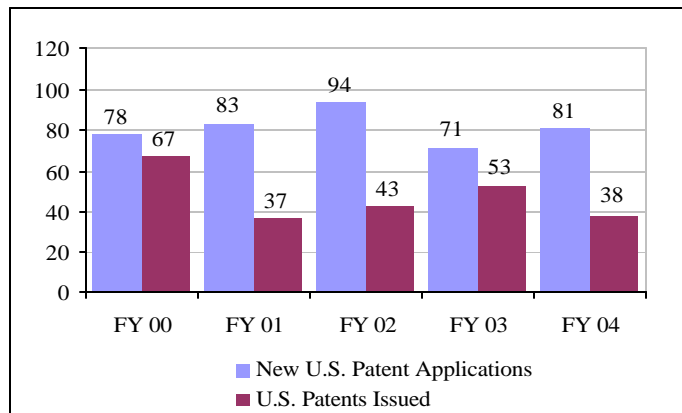
- The number of active license agreements (Figure 7-4) has grown to 648. The increase of 59 during FY 2004 is the largest increase over the past six years.

Figure 7-1. Number of new inventions and technologies disclosed to the University of Minnesota, 2000-2004.



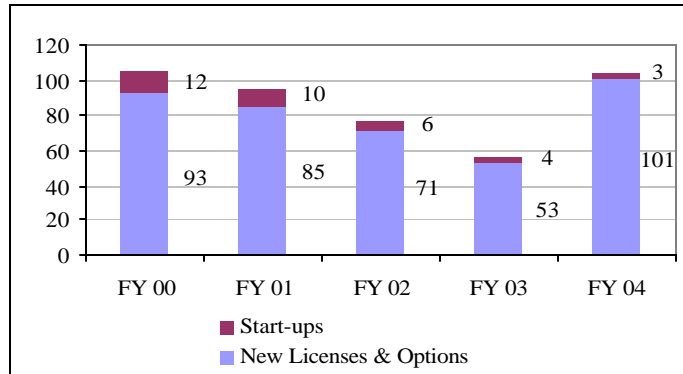
Source: Office of Patents and Technology Marketing, University of Minnesota

Figure 7-2. U.S. patent applications and patents issued, 2000-2004.



Source: Office of Patents and Technology Marketing, University of Minnesota

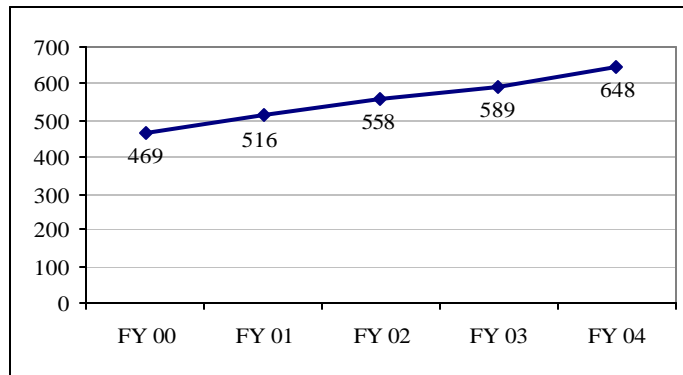
Figure 7-3. Start-ups, new licenses, and options, 2000-2004.



Source: Office of Patents and Technology Marketing, University of Minnesota

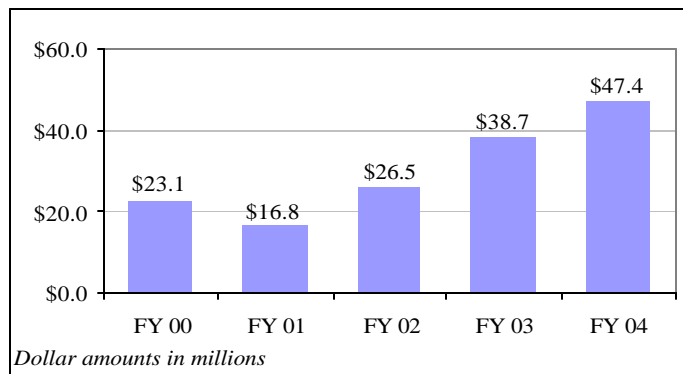
Note: Includes agreements that transfer technology rights to companies, including options but not including end user licenses for software.

Figure 7-4. Total active technology commercialization agreements, 2000-2004.



Source: Office of Patents and Technology Marketing, University of Minnesota

Figure 7-5. Technology commercialization gross revenues, in millions, 2000-2004.



Source: Office of Patents and Technology Marketing, University of Minnesota

Note: Includes all financial returns from licensing, except for licensee reimbursements of the University's patent costs.

Table 7-1 shows licensing and patent activity for the University and the top 10 institutions nationally for FY 2003.

The University of Minnesota’s licensing income increased 45 percent from FY 2002 to FY 2003, and the University moved from 12th to 5th place among all institutions in this measure. Its 3rd place rank among public institutions in FY 2003 also represents a move up from 6th place in the previous year.

The number of patent applications filed by the University was down 7 percent in FY 2003. However, 25 percent more patents were issued for the University in FY 2003 than in FY 2002.

Table 7-2 shows the University’s licensing income and the average licensing income for the top 10 institutions nationally during 1999-2003. Licensing revenue at the University of Minnesota has grown dramatically over the past five years and its rank has gone up among all institutions as well as among public institutions.

The University out-performed the average year-to-year growth in every year except 2001, when its income fell more than the average for all institutions (but not as much as the average for public institutions only).

Table 7-1. Licensing revenues and patent activity for top 10 public and private institutions, FY 2003.

Rank		Institution	Licensing income	Licenses, options executed	Start-up companies formed	Patent applications filed	Patents issued
All	Public Only						
1		New York University	85,933,234	24	4	125	21
2	1	University of California System	61,119,000	208	22	874	323
3		Stanford University	43,154,111	128	12	334	117
4	2	University of Wisconsin – Madison	37,573,468	177	0	193	87
5	3	University of Minnesota	37,492,778	56	4	158	54
6	4	University of Florida	35,248,485	55	10	257	50
7	5	University of Washington	29,131,798	67	3	123	46
8		University of Rochester	26,741,537	12	2	172	22
9		California Institute of Technology	25,359,000	39	7	396	169
10	6	Michigan State University	24,462,676	28	1	78	39
12	7	Florida State University	24,023,189	12	2	41	18
14	8	University of Massachusetts	19,786,300	40	1	121	18
17	9	SUNY Research Foundation	13,726,454	34	4	188	51
18	10	Wayne State University	13,690,981	5	1	38	9

Source: Association of University Technology Managers, 2004.

Note: In some cases an institution may have included data from more than one of its campuses without indicating that.

Table 7-2. Average licensing income for top 10 public and private research universities and University of Minnesota, FY 1999-2003.

	1999	2000	2001	2002	2003	5-Year Change
Top 10 Public/Private Average % Change	\$39,638,061	\$70,982,091 +79.1%	\$51,039,411 -28.1%	\$56,772,491 +11.2%	\$40,621,609 -28.4%	+2.5%
Top 10 Public Only Average % Change	\$25,483,998	\$49,087,180 +92.6%	\$28,963,976 -41.0%	\$31,964,514 +10.4%	\$29,625,513 -7.3%	+16.3%
U of M – Twin Cities % Change	\$5,662,088	\$22,689,725 +300.7%	\$16,033,780 -29.3%	\$25,870,843 +61.4%	\$37,492,778 +44.9%	+562.2%
Public/Private Rank	23 rd	14 th	13 th	12 th	5 th	
Public Only Rank	9 th	7 th	7 th	6 th	3 rd	

Source: Association of University Technology Managers, 2000-2004.

Note: Columbia University, which ranked first or second in licensing revenues during 1999-2002, chose not to release its information publicly for 2003. This may have affected the University's rank compared to all institutions but would have had no effect on its 3rd place rank among public institutions.

B. University of Minnesota Extension Service

The University of Minnesota Extension Service is committed to delivering high-quality, relevant educational programs and information to Minnesota citizens and communities. Its statewide network of researchers, educators, and volunteers addresses critical needs by focusing on issues where research-based education can make a difference.

Funding Sources: Extension Service funding comes from a variety of sources. State funding is comprised of the State Special and an O & M allocation from the University. Federal funding consists of a formula allocation and funding for a number of specific, earmarked projects. The majority of county funds are spent locally for county office expenses such as support staff, office equipment, and supplies. In addition, the Extension Service derives revenue from a variety of public and private grants, gifts, fees, and sales. Figure 7-6 shows the distribution of state, federal, and county funding since 1994. The Extension Service has faced significant budget challenges. Federal funding has remained flat for over 10 years. Accounting

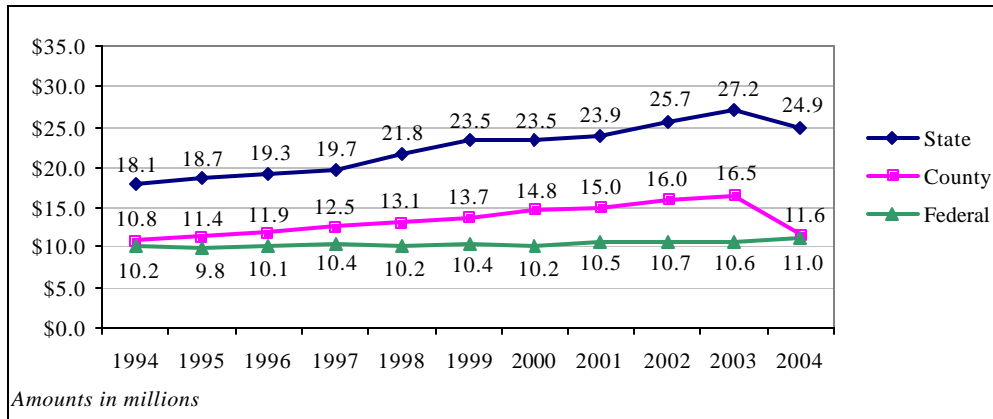
for inflation, the Extension Service has lost significant purchasing power with its federal funding.

The state's recent budget shortfalls have resulted in the loss of nearly \$7 million. Extension's state allocation in 2004 was over \$2 million less than its 2003 allocation.

As a result of these funding pressures and budget reductions, the Extension Service developed a delivery model that provides access to high-quality programs and services by creating 18 regional centers throughout the state. Included is a staffing plan that provides clearer lines of supervision and more accountability for performance.

The Extension Service is making significant investments in technology at the 18 regional centers. This will improve connections with the University's campuses, expand access to information, and put the Extension Service in a position to take better advantage of the University's technology capabilities for improved communications and new efficiencies.

Figure 7-6. Extension Service sources of revenue, 1994-2004.



Source: University of Minnesota Extension Service.

Outreach Activities: Examples and measures of Extension’s impact on the state and its citizens include the following during 2003 (percentage change from 2002 in parentheses):

- 309,794 educational services provided, including participation in group educational activities and events, one-on-one consultations;
- 597,593 Extension educational materials sold; (-32 percent)
- 6,385,700 visits to the Extension Web site; (+23 percent)
- 650,000 visits to INFO-U Web documents; (+8 percent)
- 28,000 INFO-U phone line calls; (-18 percent)
- 2,400 INFO-U Hmong, Somali, and Spanish language phone line calls (+33 percent)
- 653,342 visits to the Yard & Garden Web site; (+48 percent)
- 27,196 youth in 4-H clubs; (+1 percent)
- 144,540 youth in 4-H Youth Development programs; (-14 percent)
- 11,233 4-H Youth Development adult volunteers; (-4 percent)
- 1,037,299 estimated hours donated by 4-H adult volunteers; (-4 percent)
- \$17,156,928: value of hours donated by 4-H adult volunteers; (+1 percent)
- 2,310 Master Gardener volunteers; (+8 percent)
- 91,000 hours donated by Master Gardener volunteers; (+3 percent)
- \$1,564,290 value of hours donated by Master Gardener volunteers; (+18 percent)
- 41,687 participants in Nutrition Education programs. (-7 percent)

C. University Libraries

The Libraries make a crucial contribution to the University's public engagement activities. In 2003, they responded to over 186,000 reference questions and offered over 1,100 class sessions. The Libraries' instructional programs help University students and other users navigate the rich physical and electronic collections available.

Among the Libraries' most significant programs are:

Interlibrary Loans: Among North American research libraries, the University of Minnesota ranks first in the provision of interlibrary loans of library materials.

The University Libraries have played a lead role in the implementation and management of the **Minnesota Library Information Network (MnLINK)**, a statewide virtual library that electronically links public, academic, K-12, and government libraries.

MINITEX, a cooperative library organization based at the University of Minnesota Libraries, serves libraries in Minnesota, North Dakota, and South Dakota. In 2003, it processed requests for 273,509 books and articles for interlibrary resource sharing among more than 200 Minnesota libraries of all types. MINITEX helps participating libraries save hundreds of thousands of dollars by cooperative purchasing programs. As more publishing moves to electronic form, MINITEX plays a lead role in licensing electronic content for libraries throughout the state. These large-scale licenses provide access to resources that would be beyond the means of individual libraries.

The **Minnesota Library Access Center (MLAC)**, administered by the University Libraries, supports libraries throughout Minnesota by providing efficient, climate-controlled storage for important, but infrequently used collections.

InfoPoint, the Libraries' premier digital reference service, provides information services seven days a week for users through a single online point of access. Since the service was implemented in 1998, traffic has increased over 400 percent.

The University's **Government Publications Library** serves as the Regional Depository Library for Minnesota and South Dakota.

The University Libraries' online catalog, **MNCAT**, provides Minnesotans free and convenient access to more than 6 million volumes in the Libraries' collections.

The Libraries cooperate with **K-12 schools** throughout the state, many of which send classes of students to the University Libraries to work on research projects.

The **Borchert Map Library** provides access to any walk-in client to a variety of geographic resources, including U.S. Geological Survey maps of Minnesota as well as nearly 331,000 aerial photographs of the state, including photographs of all counties in Minnesota from 1936 to date.

ESTIS (Engineering, Science, and Technology Information Service) and **BIS** (Biomedical Information Service) provide fee-based research services and resources from the Libraries' collections for unaffiliated users and Minnesota organizations, including small business.

D. Research and Outreach Centers

Six Research and Outreach Centers (ROCs) strategically located throughout Minnesota are key units of the College of Agricultural, Food, and Environmental Sciences that extend its research to all regions of the state.

The ROCs conduct site-specific, coordinated research and outreach programs in cooperation with several colleges and departments within the University of Minnesota. By focusing on regional strengths and issues, the ROCs function as an integrated unit to address the diverse agricultural and rural needs of Minnesota.

The ROCs take advantage of their unique geographical locations to conduct interdisciplinary research, to engage in teaching, and to transfer research-based knowledge to citizens. The ROCs are also linked to the University of Minnesota Extension Service and to regional Extension educators.

The six ROCs are:

North Central ROC, Grand Rapids: In addition to traditional crop and livestock research and outreach activities, scientists at this ROC use their 873-acre site to conduct research in agricultural engineering, environmental issues, forestry, by-product utilization, small fruit and vegetable crops, tourism and travel, and wild rice.

Northwest ROC, Crookston: This ROC is situated on 1,500 acres adjacent to the University of Minnesota – Crookston campus. In addition to providing experiential learning for students enrolled in agriculture programs at UMC, the center serves the surrounding area with prairie management research and crop

research in sugar beets, potatoes, wheat, and barley.

Southern ROC, Waseca: This center occupies a 955-acre site in an area that produces over one-third of Minnesota's cash farm sales. Research focuses on groundwater and surface water quality as well as animal product technology for swine and dairy, with a major emphasis on waste management and odor reduction.

Southwest ROC, Lamberton: The 828-acre site of this center includes the Elwell Agroecology Farm, where research emphasizes cropping systems that efficiently cycle water, nutrients, and energy while enhancing profitability. Scientists at the center also conduct research on water quality, soil structural degradation, and soybean pathogens.

UMore Park, Rosemount: Research programs at this center focus on precision agricultural methods, carbon sequestration, and biological methods for potato pest control. Scientists at the 7,500-acre site also investigate strategies for weed management and maintain ongoing research on swine and poultry. The site also hosts a new immigrant agricultural program.

West Central ROC, Morris: Research and education on this 1,200-acre site focus on environmental management of crop and livestock agricultural systems, swine production, and forage-based livestock systems. The work is a collaboration among community partners and University of Minnesota – Morris faculty from the departments of animal science, agronomy, applied economics, agricultural engineering, and soil, water, and climate.

E. State Economic Impact

The University of Minnesota has a significant impact on the state economy. A 2002 economic impact study conducted under the auspices of the Humphrey Institute of Public Affairs showed that the University:

- received 98 percent of all sponsored research grants awarded in the state;
- created 39 jobs for every \$1 million spent on research;
- developed more than 230 patents in the past five years and currently holds nearly 600 active technology transfer agreements;
- ranks 6th in start-up companies among 142 research universities;
- spent \$800 million on sales to vendors (January 2000 – September 2002);

- paid \$995 million in salary to 39,039 employees in FY2002; and
- has 213,573 University alumni living in Minnesota.

In addition:

- University alumni have founded 1,200 technology companies in Minnesota that employ 10,000 people and contribute \$30 billion to the state's annual economy.
- University employees generated \$178 million in tax revenue in 2000.
- University employees spent \$729 million, students spent \$363 million, and visitors to the University spent \$463 million – for more than \$1.5 billion in 2000.

F. State Social Impact

Among the more important social impacts of the University of Minnesota are the following examples:

- granted 12,356 degrees in 2003-04.
- enrolled 65,247 students in fall 2004.
- Over the years, graduated more than 17,000 health professionals – Medical School, 5,425 (more than half the state total); School of Dentistry, 2,768 (about 75 percent of the state total); School of Nursing, 3,153 (majority of advanced-practice nurses); College of Veterinary

Medicine, 3,453; College of Pharmacy, 2,502.

- ranked 11th in the nation in total number of Ph.D. degrees awarded in 2003.
- University Libraries system (16th largest in North America) is accessible to every Minnesotan.
- 23 percent of Minnesotans use Extension Service.
- nearly half of state residents connect with the University through sporting and cultural events.

G. Council on Public Engagement

The University of Minnesota’s Council on Public Engagement (COPE) seeks to incorporate public engagement as a permanent and pervasive priority in teaching, learning, and research activities throughout the University and to enlist support for public engagement among all segments of the University and in the larger community.

Currently, the Council has five working groups addressing:

Partnerships: To identify and promote conditions for successful, interactive, mutually beneficial partnerships as the main basis for the University’s connections to external groups, organizations, and communities.

Innovations: To identify opportunities to develop new programs, as well as support continuation and expansion of existing programs that are effective in involving students, faculty, alumni, and others in engaged activities.

Communication: To develop, implement, and evaluate the results of a more robust internal and external communications strategy focused on themes of publicly engaged research and scholarship, teaching and learning, and community partnerships.

Recognition: To develop, implement, and evaluate the results of an integrated strategy for embedding recognition of publicly engaged work more deeply within institutional processes for incentives, rewards, and awards.

Assessment: To develop appropriate and feasible measures of the University efforts in publicly engaged teaching, learning, and research, and the impacts and outcomes of those efforts.

Among COPE’s 2003-04 accomplishments:

- assisting President Bruininks in implementing his “engaged university” goal;
- coordinating with the leaders of the President’s Interdisciplinary Initiatives in recognizing, communicating, and assessing their public impact;
- including public engagement as a formal part of the University’s annual budget and planning process;
- establishing a network of college liaisons to communicate examples of each unit’s engaged activities, nominate candidates for public engagement awards, develop appropriate assessment measures, and institute effective incentives and rewards for engaged work;
- awarding 18 seed grants for innovative projects that integrate public scholarship, civic learning, and community partnerships; that are multi-disciplinary in approach with multi-unit participation; that involve undergraduate students, graduate students, or research assistants; that are sustainable with long-term impact and institutional support; or that meet other criteria for strengthening public engagement across the University;
- launching a news channel on the University’s portal, creating a COPE Web site, and sponsoring a nationally distributed electronic newsletter that features stories about public engagement at the University;
- ongoing discussions with academic departments to incorporate public engagement more explicitly in recruitment of new faculty, annual merit reviews, and criteria for promotion and tenure;

- establishing the Community Engagement Scholar Program to recognize by transcript notation students with significant involvement in community service/service learning;
- developing strategies for increasing student engagement as part of freshman orientation;
- contributing to Minnesota Campus Compact's civic engagement study that developed indicators to assist campuses in assessing their civic engagement;
- co-sponsoring two University-wide forums: "The University and Engaged Research: What Matters" and "Celebrating Community Partnerships;"
- co-sponsoring the Mary McEvoy Award for Outstanding Service.

Service Learning

One example of public engagement that involves University students and faculty in the life of the community is service learning. Service learning is a teaching strategy that integrates community-based learning experiences with the academic curriculum to enhance student learning and address community issues.

For example, on the Twin Cities campus, students participate in a wide variety of service-learning and other community-based learning opportunities throughout the metropolitan area. Faculty members support these students' active learning and connection to Twin Cities community and thereby underscore the land-grant mission of public service. Non-profit and governmental sector partners play key roles as co-educators, with faculty, while students contribute and help carry out the mission and goals of hundreds of organizations.

In 2002-03, over 70 courses in nine colleges provided opportunities for over 1,750 students to participate in service learning. Sixty-three faculty members and instructors taught courses integrating service learning. Results from the previous year were similar. In both years, faculty members were actively involved in the development of new courses with service-learning components.

Another example of student involvement in public engagement activities is the America Reads program, which places students as tutors with children in kindergarten through third grade across the Twin Cities. In just five years, the program has grown from 100 tutors to 650 tutors in 2003-04 serving over 2,500 elementary students at 31 sites.

H. Citizen Satisfaction

A December 2004 telephone survey of 603 Minnesota residents ages 25 and older, selected at random, gathered information about their attitudes and perceptions of the University of Minnesota, the state's funding of higher education, and tuition issues. Nearly half of all respondents reported a personal connection to the University of Minnesota, such as having a degree from the University, being the parent of a current or former University student, working with the

University on a professional basis, or attending sporting events at the University. In fact, 24 percent of respondents reported a connection through sports.

Table 7-4 shows overall citizen satisfaction with the University. About half of respondents indicated they were "very" or "somewhat" satisfied with the University. A significant percentage responded that they were "neutral" or unsure about their overall satisfaction.

Table 7-3. Citizen satisfaction with University of Minnesota, 2004.

Response	Percentage
Very satisfied	13%
Somewhat satisfied	37%
Somewhat dissatisfied	5%
Very dissatisfied	3%
Neutral	33%
Don't know	10%

Source: KRC Research, 2004.

Importance vs. Satisfaction: Respondents were asked to rate the importance of 13 goals for the University of Minnesota on a scale from 1 (not at all important) to 10 (very important). They also rated their satisfaction with the University’s performance on these goals from 1 (not at all satisfied) to 10 (very satisfied).

The most important goals were identified as providing high-quality graduate and professional education, providing high-quality undergraduate education, keeping tuition affordable, and being a good manager of financial resources. Satisfaction with the University’s performance was highest in the areas of having a world-class medical school and providing high-quality education at both the graduate/professional and undergraduate levels.

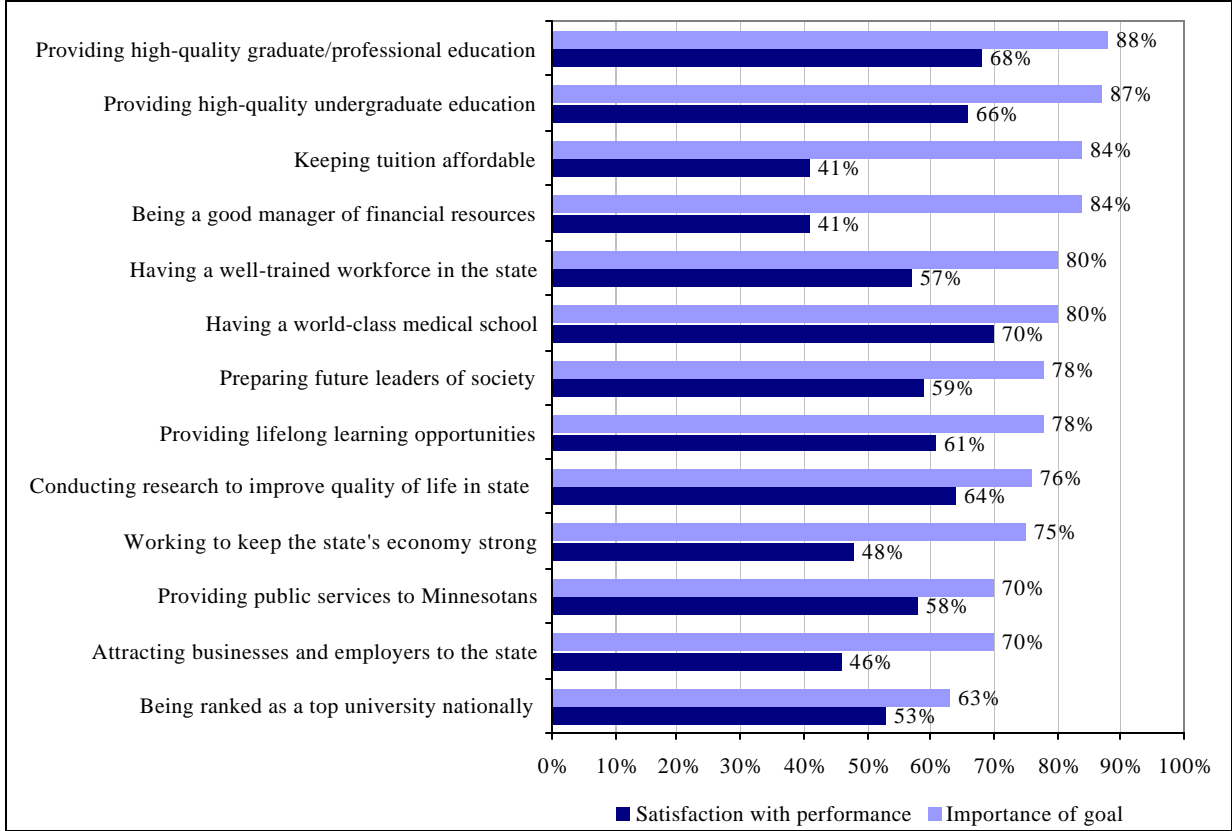
Figure 7-7 compares the percentage of respondents who rated a goal as “very” or “somewhat” important to the percentage who said they were “very” or “somewhat” satisfied with the University performance in that area.

The biggest gaps between performance and satisfaction were in keeping tuition affordable and being a good manager of financial resources.

This survey is slightly different from the citizen satisfaction survey conducted in 2003, but some observations can be made. The goals identified as top priorities – high-quality education, affordable tuition, and good management of financial resources – were the same in both surveys but percentages in 2004 were a few points higher.

Satisfaction in all areas is higher in 2004 than it was in 2003. In particular, satisfaction with the University’s management of financial resources rose from 30 percent in 2003 to 41 percent in 2004, while satisfaction with tuition affordability rose from 28 percent to 41 percent during the same period. The University has made strides in closing the gap between citizen priorities and satisfaction in almost all areas, but especially in these two areas.

Figure 7-7. Citizen impressions of University’s importance to the state compared to citizen satisfaction with performance, 2004.

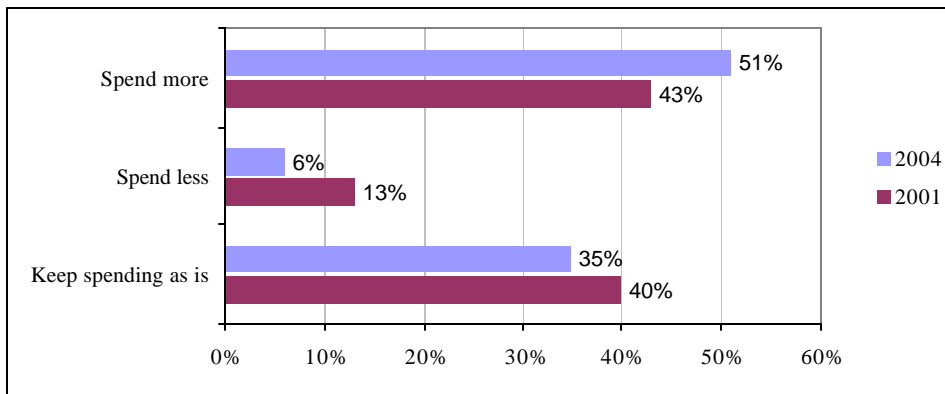


Source: KRC Research, 2004.

Several questions on the survey focused on funding concerns. As figure 7-8 shows, the survey revealed that support for more funding of public higher education has increased significantly since 2001. When asked if

Minnesota’s state government should spend more or less money on public colleges and universities, 51 percent of respondents indicated the state should spend more, an increase of 8 percent over 2001.

Figure 7-8. Citizen support for funding of public higher education, 2001 and 2004.



Source: KRC Research, 2004.

When asked specifically about research support, three quarters of respondents support allocating funds earmarked for research at the University of Minnesota.

Respondents were asked to select two things that would concern them the most if funding for the University were cut. Responses are shown in Table 7-4. Tuition increases are the top concern across all demographic groups.

Table 7-4. Citizen concerns about University funding reductions, 2004.

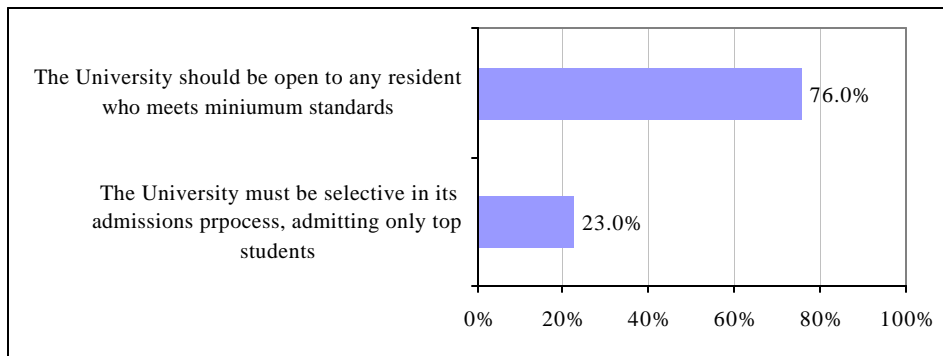
Possible Effect of Funding Cut	Top Concern	2 nd Concern
Double digit tuition increases	44%	14%
Elimination of programs, majors, departments	11%	19%
Less research conducted	10%	13%
Fewer community services	9%	11%
Loss of world-class faculty	8%	12%
Adverse effect on state's economy	6%	10%
Reduced student services	2%	7%
Other/none/don't know	10%	15%

Source: KRC Research, 2004.

Respondents were also asked whether the University of Minnesota should be open to any resident who meets minimum standards or whether it should be more selective and admit

only top students. As figure 7-9 shows, respondents chose educating Minnesotans rather than increasing the University's national profile by a margin of more than 3 to 1.

Figure 7-9. Citizen opinions on University access, 2004.



Source: KRC Research, 2004