

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 developed a working 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, 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 2003.

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

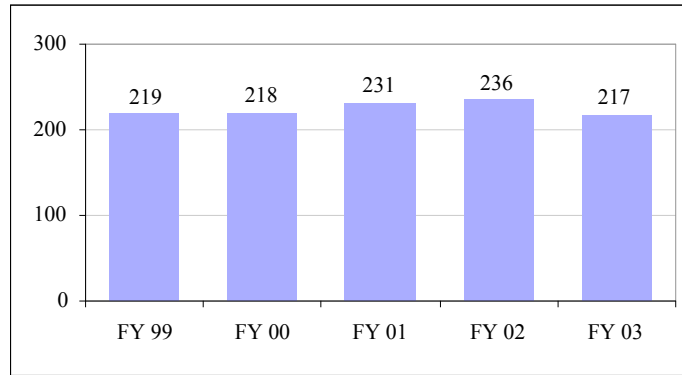
generates revenue that can be reinvested in future research development.

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

Table 7-1 shows licensing and patent activity for the University and the top 10 institutions nationally for FY 2002.

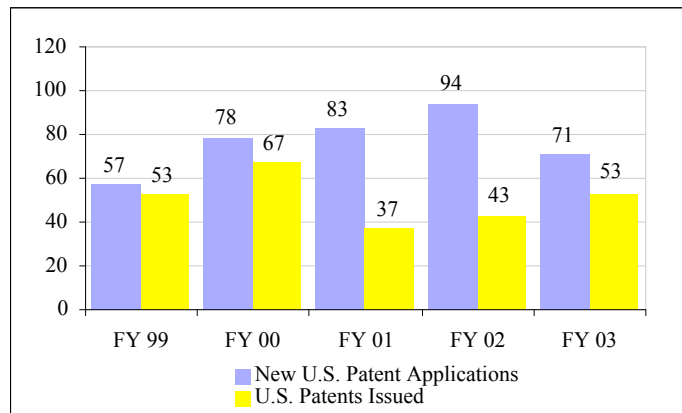
Table 7-2 shows the University’s licensing income and the average licensing income for the top 10 institutions nationally during 1998-2002.

Figure 7-1. Number of new inventions and technologies disclosed to the University of Minnesota, 1999-2003.



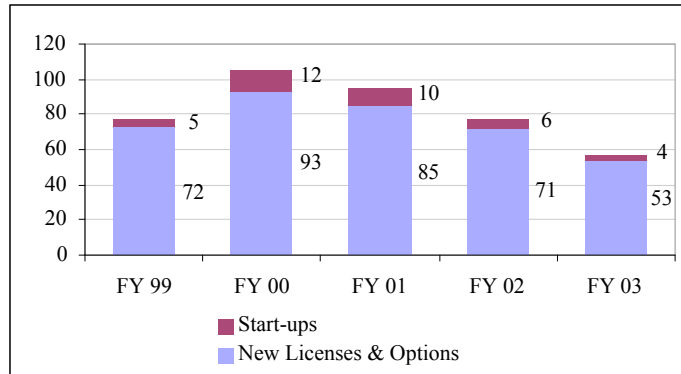
Source: Office of Patents and Technology Marketing, University of Minnesota

Figure 7-2. U.S. patent applications and patents issued, 1999-2003.



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

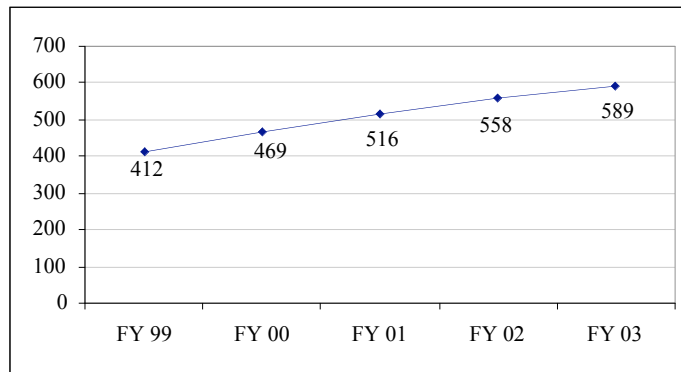
Figure 7-3. Start-ups, new licenses, and options, 1999-2003.



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

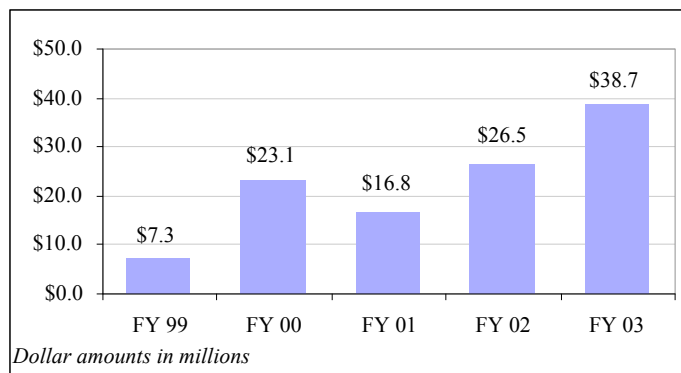
Note: Includes agreements that transfer technology rights to companies, including options but not including end user licenses for software.

Figure 7-4. Total active technology commercialization agreements, 1999-2003.



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

Figure 7-5. Technology commercialization gross revenues, in millions, 1999-2003.



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. Licensing revenues and patent activity for top 10 institutions and University of Minnesota, FY 2002.

Rank	Institution	Licensing income	Licenses, options executed	Start-up companies formed	Patent applications filed	Patents issued
1	Columbia University	\$155,653,442	55	8	191	60
2	University of California System	82,048,000	222	23	884	300
3	New York University	62,700,209	19	1	93	27
4	Florida State University	52,077,120	9	2	34	15
5	Stanford University	50,176,009	106	13	324	96
6	University of Rochester	42,095,533	7	4	107	19
7	University of Wisconsin – Madison	32,060,854	156	4	204	87
8	University of Florida	31,597,753	59	5	207	62
9	Michigan State University	29,758,071	22	0	60	43
10	Emory University	29,557,917	28	4	88	25
12	University of Minnesota	25,870,843	71	6	170	43

Source: Association of University Technology Managers, 2003.

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 1998-2002.

	1998	1999	2000	2001	2002	5-Year Change
Nat'l Top 10 Average % Change	\$37,074,415	\$39,638,361 +6.9%	\$70,982,009 +79.1%	\$51,039,411 -28.1%	\$56,772,491 +11.2%	+53.1%
U of M – Twin Cities Nat'l Rank % Change	\$3,199,373 33 rd	\$5,662,088 23 rd +77.0%	\$22,689,725 14 th +300.7%	\$16,033,780 13 th -29.3%	\$25,870,843 12 th +61.4%	+708.6%

Source: *The Top American Research Universities*: The Center, University of Florida, 2003.

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.

Tables 7-3 and 7-4 show FY 2002 revenue sources and distribution of revenue by program area, based on academic staff full-time equivalents (FTE)s.

Table 7-3. Extension Service revenue, FY 2002.

Source	Amount	Percent
State	\$26,003,000	42%
County	16,097,000	26
Federal	10,525,000	17
Grants, gifts, indirect cost recovery	6,810,000	11
Fees, sales	2,476,000	4
Total:	\$61,911,000	100%

Source: University of Minnesota Extension Service.

Table 7-4. Extension Service distribution of revenue, FY 2002.

Source	Amount	Percent
Food and agriculture	\$16,531,000	27%
Youth	11,571,000	19
Family	8,816,000	14
Environment	7,714,000	12
Food nutrition grant	6,810,000	11
Community	6,061,000	10
Administration	4,408,000	7
Total:	\$61,911,000	100%

Source: University of Minnesota Extension Service.

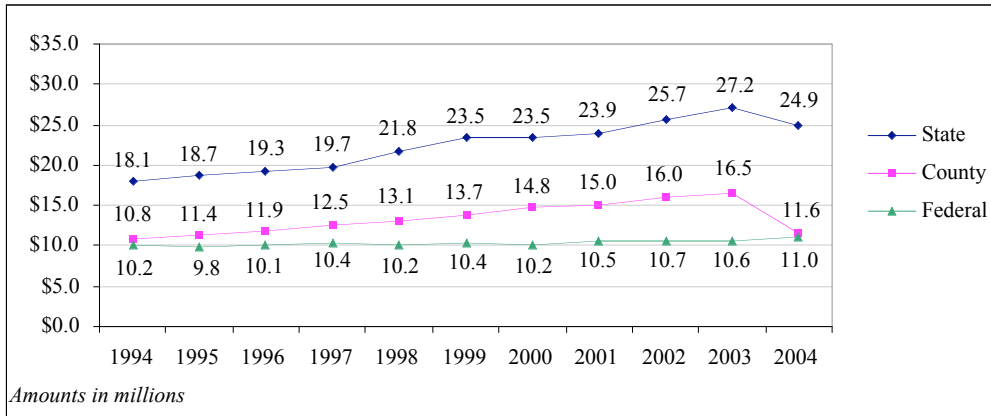
Figure 7-6 shows the distribution of state, federal, and county funding since 1994. The Extension Service has faced significant budget challenges. Federal funding has remained flat for over 10 years. Accounting for inflation, the Extension Service has lost significant purchasing power with its federal 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. While county governments are finalizing their 2004 Extension allocations, indications are that counties will be investing approximately \$4.9 million less in Extension than in 2003.

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 2002:

- 1,097,000 educational services provided, including participation in group educational activities and events, one-on-one consultations, and responses to individual inquiries;
- 873,783 Extension educational materials sold;
- 5,200,000 visits to the Extension Web site;
- 600,000 visits to INFO-U Web documents;
- 34,000 INFO-U phone line calls;
- 440,000 visits to the Yard & Garden Web site;
- 27,000 youth in 4-H clubs;
- 168,000 youth in 4-H Youth Development programs;
- 11,700 4-H Youth Development adult volunteers;
- 1,080,180 estimated hours donated by 4-H adult volunteers;
- \$17,000,000: value of hours donated by 4-H adult volunteers;
- 2,146 Master Gardener volunteers;
- 88,400 hours donated by Master Gardener volunteers;
- \$1,326,000 value of hours donated by Master Gardener volunteers; and
- 45,000 participants in Nutrition Education programs.

C. 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.

D. 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:

- generated \$513 million through research in 2003;
- 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.

E. State Social Impact

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

- Granted 11,508 degrees in 2002-03.
- Enrolled 63,769 students in fall 2003.
- Over the years, graduated more than 13,000 health professionals – Medical School, 5,213 (more than half the state total); School of Dentistry, 2,687 (about 75 percent of the state total); School of Nursing, 2,903 (majority of advanced-practice nurses); College of Veterinary

Medicine, 1,182; College of Pharmacy, 2,367.

- Ranked 9th in the nation in total number of Ph.D. degrees awarded.
- University Libraries system (17th 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.

E. 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.

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.

F. Citizen Satisfaction

A December 2003 telephone survey of 400 Minnesota residents ages 25-64, selected at random, gathered information about their perception of state funding of education, the role of college and universities, and the University of Minnesota's performance.

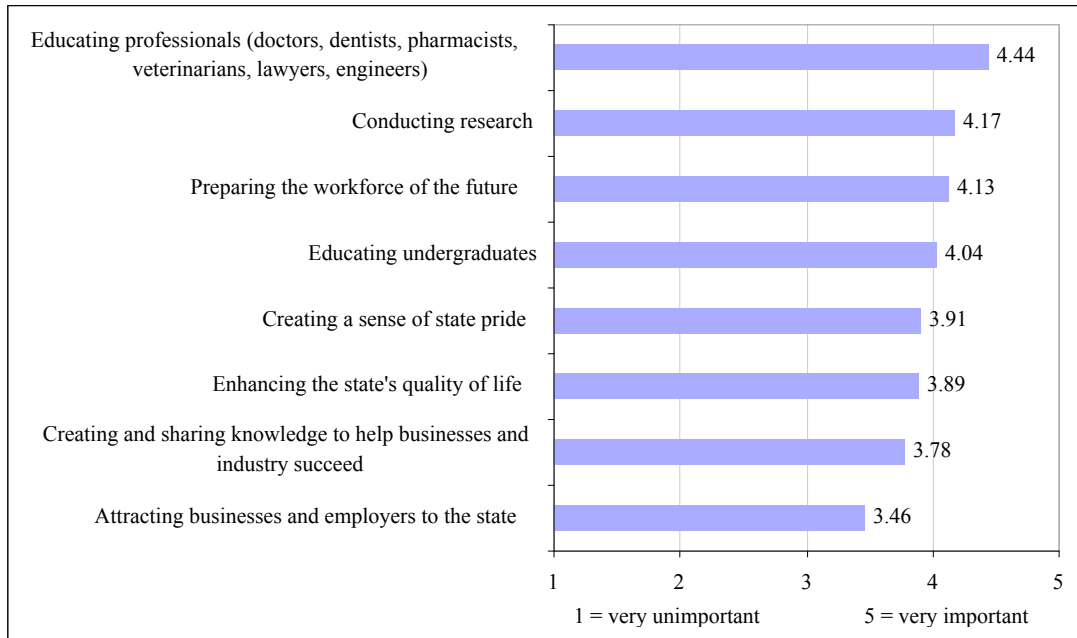
Information Sources: The largest percentage of respondents (34 percent) identified friends, family, or word of mouth as the one information source that most strongly influenced their impression of the University, followed by newspapers (17 percent), and television (15 percent). When asked to identify all other sources for more information

about the University, 65 percent indicated they would visit the University's Web site.

University's Importance to Minnesota: The survey presented eight roles for the University

and asked respondents to rate the importance of each on a five-point scale. Results (average scores) are shown in Figure 7-7.

Figure 7-7. Citizen impressions of University's importance to the state, 2003.



Source: University Relations; Frank N. Magid Associates, Inc.

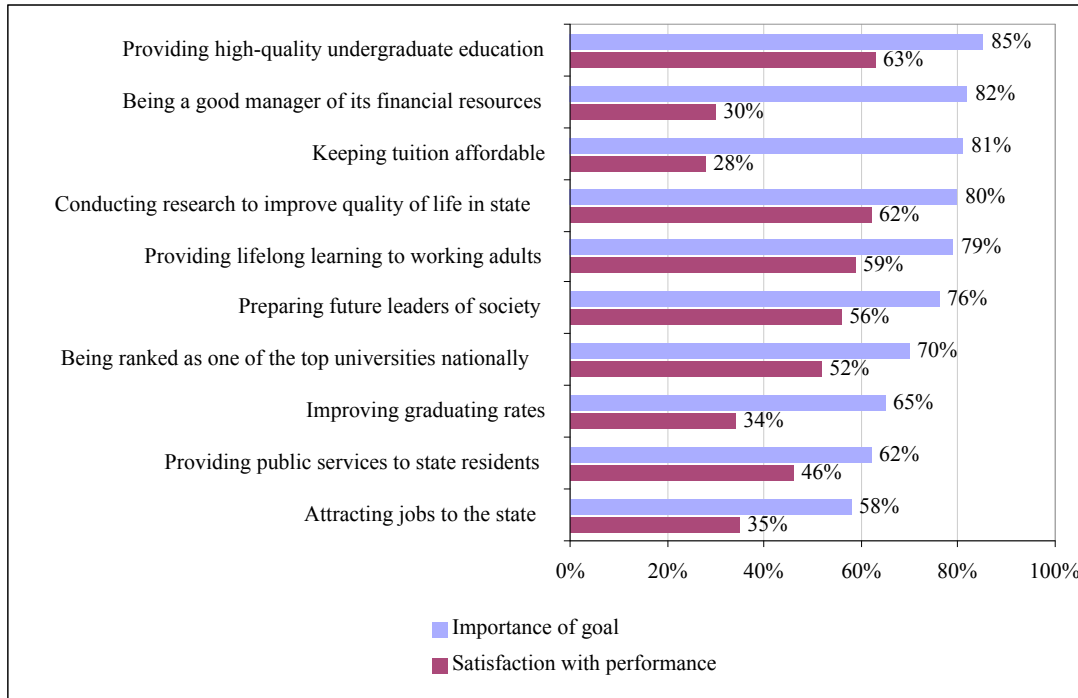
Importance vs. Satisfaction: Respondents were asked to rate the importance of 10 goals for the University of Minnesota on a scale from 1 (very unimportant) to 5 (very important). They also rated their satisfaction with the University's performance on these goals on a scale from 1 (very dissatisfied) to 5 (very satisfied).

The most important goals were identified as providing high-quality undergraduate education, being a good manager of financial resources, and keeping tuition affordable. Satisfaction with the University's performance

was highest in the areas of providing high-quality undergraduate education, conducting research to improve quality of life in the state, and providing lifelong learning opportunities to working adults.

Figure 7-8 compares the percentage of respondents who rated a goal as a "4" or a "5" to the percentage who rated their satisfaction with the University's performance as a "4" or a "5." The biggest gaps between importance of goal and satisfaction with performance were in keeping tuition affordable and being a good manager of financial resources.

Figure 7-8. Citizen impressions of University’s importance to the state compared to citizen satisfaction, 2003.



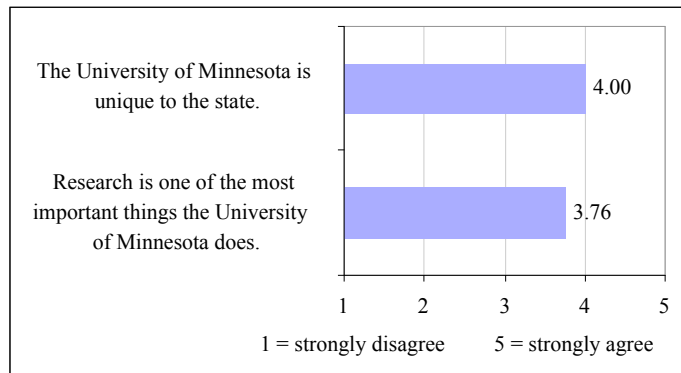
Source: University Relations; Frank N. Magid Associates, Inc.

Role of Research University: Of the 400 individuals who were surveyed, 255 understood the difference between a research university and other public colleges and universities, which indicates a need to better

educate the public about the role of a research university.

The average scores in Figure 7-9 represent only the respondents who could distinguish a research university from other institutions.

Figure 7-9. Public understanding of the University of Minnesota’s role as a research institution.



Source: University Relations; Frank N. Magid Associates, Inc.

State Support: The survey also revealed significant misunderstanding about state funding of the University’s budget. As shown

in Table 7-5, 46 percent of respondents estimated that the state provides more funding than it actually does.

Table 7-5. Citizen estimates of current state funding of the University of Minnesota's budget.

Estimate	Percentage of Respondents
None	2%
1-9%	3%
10-19%	4%
20-29%	13%
30-39% ¹	12%
40-49%	12%
50-59%	12%
60-69%	9%
70-79%	7%
80-89%	3%
90-99%	2%
100%	1%
	20% were unable to make an estimate.

Source: University Relations; Frank N. Magid Associates, Inc.

¹ The state actually funds about one-third of the University's budget.