

September 15, 2005

TO: Provost's Academic Task Force on College Design: Science/Engineering  
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Wayne Gladfelter, Professor and Head, Department of Chemistry, IT  
Harry Orr, Professor, Department of Lab Medicine & Pathology, Medical School  
Mike Sadowsky, Professor, Department of Soil, Water, and Climate, COAFES  
Marc von Keitz, Director, Biotechnology Institute, CBS/IT

FROM: E. Thomas Sullivan, Senior Vice President for Academic Affairs and Provost

RE: Provost's Charge to Task Force on College Design: Science/Engineering

Thank you for agreeing to serve on the academic strategic positioning Task Force on College Design: Science/Engineering, under the leadership of co-chairs, Frank Bates, David Bernlohr, and Claudia Neuhauser. The efforts of this task force will be critical to the overall success of the University's transformative strategic positioning effort.

Attached are documents that, taken together, comprise the charge to your task force.

- Attachment A contains an articulation of the University's overall goal and assigns to the task force the responsibility of retaining an "eye on the prize." Each of the issues identified in Attachment A, which is part of the charge of every task force, must be addressed.
- Attachment B contains criteria to be addressed by each task force. These criteria are drawn from the action strategies identified in the strategic positioning report *Advancing the Public Good: Securing the University's Leadership Position in the 21<sup>st</sup> Century* (February 2005). It is critical that each task force consider how its work can further each of the five broad action strategies.
- Attachment C contains the mission and deliverables specific to your task force, along with the date on which your task force report and recommendations are due.
- Attachment D contains the criteria for decision making, taken directly from the February strategic positioning report. Each task force should use these criteria as a framework for decision making.
- Attachment E contains a diagram of the process to be used by each task force. Note in particular the periods of required consultation with stakeholders.

There are a number of resources available to you as you pursue your charge. These include the professional staff member assigned specifically to assist your task force, the Resource Alignment Team, a toolkit of documents and templates, and the professional staff of University Relations appointed to facilitate internal and external communication of progress through the strategic positioning process. The Resource Alignment Team is a consulting group charged with providing support to all task forces in the areas of cross-functional alignment, change management, and subject matter expertise as needed. Support also is available from the Steering Committee for your strategic area. Finally, Leanne Wirkkula has been appointed to serve as a liaison between the academic task forces and me. Leanne will be able to help task force co-chairs access needed support and assistance. Leanne may be reached at (612) 625-0563, [wirkkula@umn.edu](mailto:wirkkula@umn.edu).

The success of your task force will depend upon creative, forward-looking thought that maintains constant focus on the broad goals for the institution as a whole rather than the self interest of particular individuals or groups. Your effort will require consultation with all potentially affected stakeholders, from deans to students and everyone in between. It will require dedication and persistence. And together with the work of the other task forces, it will help guide the University on our journey to become one of the top three public research universities in the world.

Thank you for accepting this important challenge. I look forward to meeting with you at the kick-off work session hosted by President Bruininks this Friday, September 16.

Attachments: 5

- c: Craig Swan, Vice Provost for Undergraduate Education
- Jon Binks, Staff to the Task Force on College Design: Science/Engineering
- Sharon Reich Paulsen, Assistant Vice President and Chief of Staff
- Leanne Wirkkula, Assistant to the Provost

## **ATTACHMENT A**

### **Alignment of Task Force Efforts with Strategic Goals of the University**

The February 2005 strategic positioning report, *Advancing the Public Good: Securing the University's Leadership Position in the 21<sup>st</sup> Century*, announced that it was the University's goal to become one of the top three public research universities in the world. The report explained that, "[i]n reaching toward our goal, we continually will advance our vision, which is to improve the human condition through the advancement of knowledge." On March 11, 2005, the Board of Regents unanimously endorsed the strategic positioning report and the goal it articulated. Consider how the recommendations of your task force will contribute to the institutional goal of becoming one of the top three public research universities in the world.

- How should success in achieving your mission be defined and measured?
- What are potential incentives to achieving success?
- What are potential barriers to success? How can these barriers be overcome?

## ATTACHMENT B

### ALIGNMENT WITH STRATEGIC ACTION AREAS

Achieving our goal to be one of the top three public research universities in the world requires an academic and fiscal accountability framework and operating assumptions to drive the long-term strategic planning process for all campuses of the University of Minnesota. As it develops recommendations specific to its topic, each task force must consider the five strategic action areas identified in the strategic positioning report, *Advancing the Public Good: Securing the University's Leadership Position in the 21<sup>st</sup> Century*:

1. **Recruit, nurture, challenge, and educate outstanding students who are bright, curious, and highly motivated.**
  - How do the task force recommendations improve student results, including retention and graduation rates, learning, and satisfaction?
  - How do the recommendations support and advance diversity?
  - How are educational programs and curriculum enhanced?
  - How do we ensure that we are recruiting and retaining the best and brightest Minnesota students, as well as outstanding students nationally and internationally?
  
2. **Recruit, mentor, reward, and retain world-class faculty and staff who are innovative, energetic, and dedicated to the highest standards of excellence.**
  - How do the task force recommendations support diversity?
  - Are strategic academic directions and funding streams identified?
  - How do the recommendations reduce barriers to and actively advance interdisciplinary research and teaching?
  - How do the recommendations reduce barriers to and actively advance national and international research collaborations?
  - How do the recommendations provide for an environment that will attract, support, and reward faculty engaging in path-breaking research, world-class creative work, and innovative teaching?
  - How do the recommendations provide strategies for identifying and attracting faculty and staff of the highest quality and potential?
  - How do the recommendations provide for an environment that challenges, mentors, and inspires outstanding faculty and staff?
  - How do the recommendations recognize and reward distinguished performance and reputation?
  - How do the recommendations retain outstanding faculty and staff?
  - How do the recommendations provide strategies for enforcing across the University the standards for excellence articulated in the Tenure Code?
  
3. **Promote an effective organizational culture that is committed to excellence and responsive to change.**

- What metrics are in place to assess our progress, and what are the most meaningful measures?
- How do the task force recommendations improve University quality and increase its responsiveness to change?
- How do the recommendations engage faculty, staff, and students in the work of transforming the organizational culture?

4. **Exercise responsible stewardship by setting priorities, and enhancing and effectively utilizing resources and infrastructure.**

- How do the task force recommendations result in cost savings?
- How do the recommendations result in administrative efficiencies?
- Do the recommendations identify space needs and a proposed resolution to such needs?
- How do the recommendations integrate financial accounting systems?
- Do the recommendations provide a plan for sufficient research infrastructure to accommodate current and future academic directions?

5. **Communicate clearly and credibly with all of our constituencies and practice public engagement responsive to the public good.**

- Is there a plan for effectively communicating these recommendations internally?
- Are the development plans aligned with the academic priorities?
- Can alumni and friends of the University embrace and invest in these recommendations?
- How will we test the effectiveness and reach of our messages?

## ATTACHMENT C

### **College Design: Science/Engineering Report due: May 1, 2006**

#### *Mission:*

Advances in the biological sciences will transform the physical sciences, engineering, biomedical research, agriculture, and the environmental sciences. Critical to this transformation are strong connections between biology and the physical sciences, mathematics, and engineering. The University of Minnesota seeks to be a leader in promoting these new connections among the sciences, engineering, and related disciplines.

#### *Deliverables:*

- Recommendations regarding the optimal design, structure, and organization of the physical sciences, engineering, mathematics, biology and such related disciplines as biomedical research, agriculture, and the environmental sciences.
- Recommendations regarding how to identify and take maximum academic advantage of important future directions at the interface of the core disciplines.
- Recommendations regarding how to configure the sciences and engineering to best integrate and promote academic synergies, teaching, and research between academic units and across the Academic Health Center.
- Recommendations for a plan to optimally position the University of Minnesota to achieve prominence in the sciences, engineering, and health-related disciplines, consistent with the University's goal to become one of the top three public research universities in the world.
- Recommendations regarding how to promote strengths in the core disciplines of the Biological Sciences (CBS) and the Institute of Technology (IT) and basic science within the Medical School (MS).
- Recommendations regarding how science and engineering on campus also can be a model for the promotion of public engagement.

## ATTACHMENT D

### **Criteria for Decision Making<sup>1</sup>**

If the University is to become one of the top three public research universities in the world, and to achieve excellence in our coordinate campuses and other programs, we must more clearly align the University's mission to each of its colleges, departments, and other academic units as well as administrative functions and units. We need to ask what the essential support needs to be for core teaching, research, and public engagement and which programs and services no longer fit within our goals, reasonable expectations, and resources.

In order for the University of Minnesota to stay strong and vibrant we must be able to review programs and establish priorities based on well-established criteria. The criteria below, established over the past 20 years at the University, continue to provide a solid framework for such reviews. These seven criteria, taken together as a unified whole, offer useful measures to assess and improve the University.

#### **1. Centrality to Mission: A program or service is more highly valued if it contributes significantly to the core mission of the University.**

Each program or service should be evaluated in terms of its contribution to the University's core mission. Centrality, or proximity to the core mission, is measured by the degree to which a program contributes to the following inter-related mission components:

- Teaching and learning should be an essential component of a high-quality, holistic undergraduate education or a high-quality graduate/professional education focused on deepening and broadening knowledge for the welfare of society.
- Research, discovery, and creative work should contribute significantly to the University's overall excellence in creating and advancing knowledge and helping to stimulate and sustain related work elsewhere in the institution.
- Public engagement should relate to the University's teaching and research missions and make significant connections between the needs of Minnesota, its citizens, the nation, and the world, and the University's knowledge-based resources.

Funding of programs and services critical to the University's mission should be a priority.

#### *Key Questions*

- A. To what degree is the substance of the activity pertinent to agreed-upon program needs, goals, and mission?
- B. How essential is the program or activity to the University's core mission?

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<sup>1</sup> From *The University of Minnesota: Advancing the Public Good*, a report of the Strategic Positioning Work Group, February 2005. pp. 19-22.

**2. Quality, Productivity, and Impact: A program or service should meet objective and evaluative standards of high quality, productivity, public engagement, and impact.**

Traditional measures for evaluating programs in higher education should be rigorously applied. For example, the quality, diversity, productivity, public engagement, and impact of the faculty and staff can be measured by peer national ratings, publications, outside funding, surveys, competitive awards, community impact, and other indices that describe important results and impact. The University also must more fully develop its own benchmarks (through the University's annual *Accountability Report*) for measuring quality, productivity, public engagement, and impact.

*Key Questions:*

- A. What are the most appropriate measures to apply?
- B. Are measures being applied consistently and transparently?
- C. How do we measure the quality of a program or service?
- D. How do we measure output, taking into account a blend of qualitative and quantitative assessments?
- E. What is the impact of the program or service? How far does it reach?

**3. Uniqueness and Comparative Advantage: A program should be evaluated based on characteristics that make it an exceptional strength for the University compared to other programs in Minnesota or at other peer institutions.**

The University is committed to maintaining areas of distinctive strength that academic and administrative units have built over the years while recognizing new areas of potential advantage, particularly in interdisciplinary initiatives. This criterion is focused on high-quality foundation programs and services that build on the needs and resources of Minnesota, the nation, and the world as well as areas where further investment will yield significant return in intellectual quality and capital.

*Key Questions:*

- A. What is the rationale for the program/service at the University of Minnesota?
- B. Is the program/service a strength of the University in comparison to peer institutions?
- C. Does the program/service contribute to the comparative economic or cultural advantages of Minnesota?
- D. Is the program/service an essential component of a unique synergy of ideas and activities?
- E. What would the loss, reduction, addition, or expansion of the program/service mean to the University, the state, and the region?

**4. Enhancement of Academic Synergies: A program/service should be organized to promote and facilitate synergies that build relationships and interdisciplinary, multicultural, international and other collaborations.**

Programs and services should be structured to leverage and create new synergies and do so in a cost-efficient manner. Dynamic, accountable organizational structures can result in additional resources for the highest priority activities while creating efficiencies to maintain

core academic programs at a lower overall cost. This requires careful, strategic combinations of resources that enhance natural connections.

*Key Questions:*

- A. Will the proposed structure add value to the intellectual climate of the program/service as well as creating cost savings?
- B. Will the proposed structure better serve students, staff, and/or faculty?

**5. Demand and Resources: Evaluation of a program or service should consider current and projected demand and the potential and real availability of resources for funding program or service costs.**

Evaluation should include short- and long-term projections of change in demand for each program or service. Other indicators might include demographic and financial trends, number of applications, quality of acceptances, services performed in support of other programs, degrees awarded, instruction of students, or research undertaken for the solution of pressing problems of society. Programs or services should also be evaluated based on a reasonable generation of resources and to meet costs.

*Key Questions:*

- A. Do accurate measures project a rise or fall in demand for this program or service over the long term?
- B. Considering the University's core mission, is there a need for the program, as distinct from a simple measure of demand for the program?
- C. Does the program or service have sufficient resources to support it?

**6. Efficiency and Effectiveness: A program or service should be evaluated based on its effectiveness and how efficiently it operates.**

Programs and services should be operated to efficiently and effectively adapt to ongoing changing circumstances internally and externally. Consideration should be given to whether existing administrative functions and responsibilities could operate more efficiently and effectively through shared resources (e.g., student service at multiple levels, business processes, etc.). Consideration also should be given to leveraging human capital to most effectively use the special talents and expertise of faculty and staff. A critical aspect in evaluating programs/services is whether they achieve valued results and impact, in mission-related activities, in relationship to their costs.

*Key Questions:*

- A. Can valued functions be performed at less cost within a new structure or with the aid of alternative strategies (e.g., technology)?
- B. Will functions be performed more efficiently and effectively at the unit level, with shared coordination among units, or system-wide?
- C. Are the organizational outcomes achieved at acceptable levels of quality and cost?
- D. What is the next best alternative use of the resources?
- E. Does the program have a clear business plan and a balanced budget?
- F. Does it deliver service at the right level, in a timely manner, and at the right cost?

- G. Are we identifying core competencies and assigning responsibilities and designing structure based on them?
- H. Are decisions being made at a level where there is expertise, experience, and information?

**7. Development and Leveraging of Resources: Any new or existing program or service should be evaluated on its potential to develop new resources and leverage existing resources.**

Resources needed to support academic research, education, and public engagement are derived from a wide range of public and private sources, and may include more than monetary resources. Ongoing evaluation of priorities and related, internal shifts of resources to areas of higher priority may be required.

*Key Questions:*

- A. Will a revised or new program create new opportunities to expand the University's quality and range of public contributions?
- B. Is the program strongly connected to other academic units so that resources and opportunities are expanded for research, education, and connection of the University to public needs?
- C. Are there opportunities for additional resource growth and leveraging that we are not taking advantage of?
- D. Are revenues placed in the most appropriate organizational setting to achieve desired results?

