

## Grand Challenges Research: Identifying Campus Priorities

May 2015

Dear Colleagues,

**Now is the time to identify the Grand Challenges that will further distinguish the Twin Cities campus.** The Grand Challenges will guide our interdisciplinary strengths toward solutions to some of society's most complex problems.

As your peers, we seek what only the faculty can provide—the innovative ideas that underpin the scholarly future of our institution. We invite you to contribute ideas that can translate into Grand Challenges, a major element of the Strategic Plan implementation.

The Provost's Grand Challenges Research Strategies Team, a group of 30 faculty members, developed the attached "Call for Ideas" that will be the basis for focused campus discussions to identify Grand Challenges.

Please review the simple form and:

- Submit your idea by *August 17, 2015, the second of two summer deadlines*. To have greater impact on shaping the discussion, please respond early!
- The Call for Ideas form is attached (copies may be downloaded at <https://strategic-planning.umn.edu/gc-research-process> . The Call outlines a simple template for submissions of no longer than two pages. Please email your submissions to [GCrsrch@umn.edu](mailto:GCrsrch@umn.edu).
- Campuswide forums will be held in September and October to engage faculty in more detailed discussions of the potential Grand Challenge ideas that have been submitted.
- Following final recommendations from the Grand Challenges Research Strategies Team, the Provost expects to announce the Grand Challenges by the end of the Fall 2015 semester.

We need your best ideas for complex, multifaceted Grand Challenges, not discrete research project proposals. A Grand Challenge idea will capture areas of scholarship in which the University already has strength, in which it has the potential to have global impact and enhanced local relevance, and in which it also has potential to make a deeper connection with the land grant commitment to engaged teaching and learning and reciprocal partnerships in the public and private sectors.

Three to five Grand Challenges will be identified, in addition to the three areas of existing strength already described in the Strategic Plan (related to food, industry/environment/climate change, and vibrant communities—[pages 33–35 of the plan](#)). Your contribution of ideas may expand upon these already-identified areas in new ways, or importantly, identify other potential areas in which the University can bring interdisciplinary strengths powerfully to bear on the critical problems of society.

Questions about the process and idea submissions can be directed to Raymond Duvall, chair of the Grand Challenges Research Strategies Team, at [rduvall@umn.edu](mailto:rduvall@umn.edu).

Thank you for your contributions of time and intellect.

The Provost's Grand Challenges Research Strategies Team\*

\*List of members is at <http://strategic-planning.umn.edu/p/grand-challenges-research-team.html>

**Call for Ideas**  
**A Process to Identify Potential Grand Challenges**  
Issued by Provost's Grand Challenges Research Strategies Team

May 2015

The Provost's Grand Challenges Research Strategies Team at the University of Minnesota seeks ideas from faculty that will help to identify Grand Challenges that enhance exceptional cross-disciplinary research strengths and expand collaborations for greater impact. This is a key component of the Strategic Plan for the Twin Cities campus, which envisions—as part of a larger project of institutional reinvigoration—that we will harness our research breadth and depth more powerfully to address some of society's most complex and consequential problems.

Grand Challenges are areas where the University will further excel as a research campus—areas where our breadth and depth is such that we are, or soon could be, a national and international leader. We are at an exciting juncture, at which the faculty can help to define the signature Grand Challenges foci of the institution for the near-term future.

**The first of a series of deadlines for submission of Grand Challenges ideas is Friday, June 26, 2015.**

To have greater impact on shaping the discussion, you are encouraged to submit as early as possible. If you are unable to meet the June 26 deadline with a full submission, please submit by that date a brief statement of intention to submit at a later date, indicating the rough contours of your idea.

**[Note: A second summer deadline has been set for Monday, August 17.]**

**In responding to this Call for Ideas, we ask that you, in no more than two pages (12-point font, singlespaced, 1-inch margins):**

- 1. Provide your contact information: name, title, departmental affiliation(s), email, and phone.**  
*NOTE: If this submission represents a team of faculty, provide contact information for the lead individual and the names of team members. Team submissions are not required, but we encourage you to have conversations with colleagues as you consider possible Grand Challenges that draw on a range of research strengths across the campus.*
- 2. Describe your idea for a Grand Challenge and its significance. In the narrative, be sure to describe the relationship of your idea to the Grand Challenges research criteria outlined in the Twin Cities Strategic Plan (pages 29–32; summary is attached).**
  - Global impact and local relevance
  - Build on current faculty strength and leadership
  - Disciplinary diversity
  - Impact on the University and its reputation
  - Suitability for a land-grant research university
  - Interconnection with education
  - Engagement of external constituencies
  - Sustainability over 10 years
- 3. Provide examples of one or more faculty (or groups of faculty) whose work has the potential to contribute to interdisciplinary advancement of the proposed Grand Challenge.**

Please email your submission to [GCrsrch@umn.edu](mailto:GCrsrch@umn.edu). Thank you!

University of Minnesota Twin Cities Strategic Plan

## **Grand Challenges—Research: Identifying Grand Challenges**

### **The Shape and Nature of Grand Challenges** [Strategic Planning Report, p. 28]

Grand challenges are generally understood as the most important and complex problems facing local communities, states, nations, and the world. The grand challenges are not only deep and difficult problems, but also *multifaceted* challenges, requiring expertise and ideas drawn from many spheres and disciplines in order to be effectively addressed.

### **Selecting Grand Challenges That are to be Designated Institutional Priorities** [pp. 28–30]

#### **University of Minnesota Grand Challenges Should:**

- Meet key criteria (outlined below)— factors that would make collaborations both transformative and strategic for the University.
- Reflect the University’s relative advantage in pursuing some challenges rather than others. All criteria should be considered; strength in some may compensate for weakness in others.
- Should involve a diverse cross-section of disciplines around a large problem that has both a societal impact and the potential to make contributions to individual fields of study.
- Have a local element—a reason it makes sense for our university to pursue it and for the policymakers and citizens of Minnesota to care about the outcome. At the same time, selected challenges should also clearly scale from local to global impact.

#### **Key Criteria for Grand Challenges**

- **Global impact and local relevance.** Should be a challenge of significant scale and complexity selected with an eye to long-term vision and expectation of globally significant results. Also must have local relevance, underscoring the U’s responsibility and commitment to produce knowledge benefiting the state and local communities.
- **Build on current faculty strength and leadership.** Should both fit and leverage existing scholarly strengths and emerge from what faculty are already pursuing, especially if faculty have opportunities to strengthen connections with faculty/students from other areas. *Grand-challenges leaders* should be chosen based on existing national and international reputations and clear evidence that their trajectory of contributions is rising.

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- **Disciplinary diversity.** Must have impact on and involve more than one academic discipline and expertise from multiple fields of knowledge. The U should take advantage of its exceptional breadth and look for opportunities to bring together diverse perspectives and methodologies.
- **Impact on the University and its reputation.** Should advance the University’s scholarly leadership in the challenge area, as well as its national and global status—looking broadly at the resources and strategic assets we would bring—faculty, staff, students, financial resources, collaborators and partners, and local assets or advantages.
- **Suitability for a land-grant research university.** Should involve challenges that fundamentally draw on our institution’s research power and creative activity; that foster open, shared advances in fundamental disciplines; and that bring together basic and applied research with education, outreach, and public engagement.
- **Interconnection with education.** Should engage students in innovative and groundbreaking ways. Should centrally involve graduate and professional students, integrate with curriculum, and provide experiential and intercultural learning opportunities for undergraduate students.
- **Engagement of external constituencies.** Should capitalize on U’s location in a vibrant and diverse state and metropolitan area and on our extensive network of national and international partners.
- **Sustainability.** Should be understood to involve support of that effort for at least 10 years—a timeline commensurate with the scale and complexity of these problems. Challenges should be evaluated based on our capacity to sustain effort over time (via grants, foundations, support from industry, state funding, University development efforts, or other sources).

### Framework for Selecting Grand Challenges [Next Steps, p. 78]

Grand Challenges Research implementation team to seed potential grand challenge areas, shape an iterative process to define institutional priorities, and recommend short- and long-term research implementation steps.

The complete Strategic Plan is online at [strategic-planning.umn.edu](http://strategic-planning.umn.edu).