

# Indiana University Grand Challenges

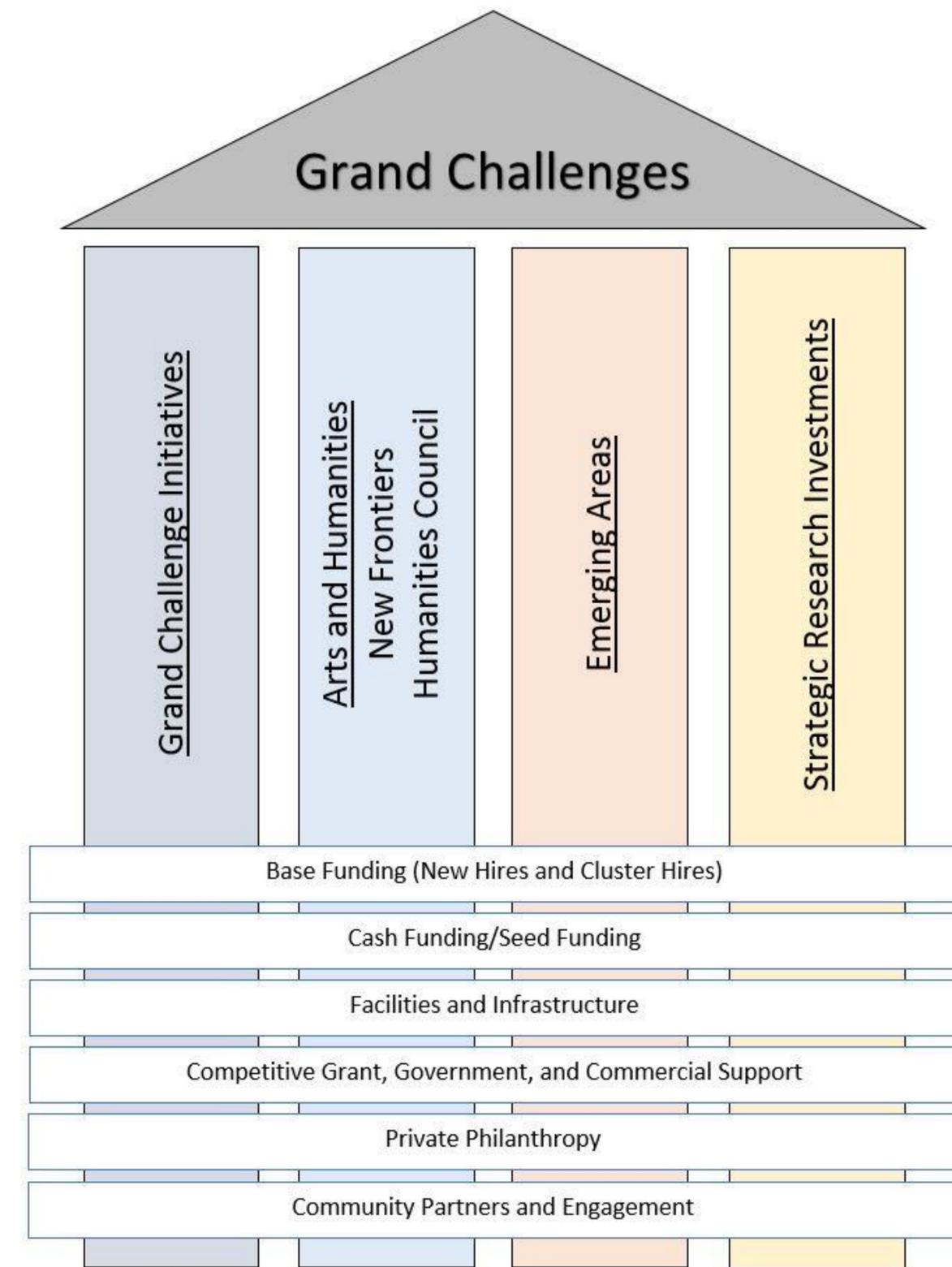
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APLU Identifying and Solving Research Grand Challenges  
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# Grand Challenges

- Grand Challenges were a prominent feature of strategic plans on the Indianapolis and Bloomington campuses, and of IU's Bicentennial Strategic Plan (2015)
- In the words of President Michael McRobbie, Grand Challenge investments will be “few, large, focused, and measured by their impact.”
- Key part of a collection of strategic research initiatives.



# Scope

- Over the next five years, the university anticipates investing \$300 million in existing and new resources—the most significant investment in IU’s research infrastructure in the university’s history.
- Includes “base” funding (i.e., funding that continues indefinitely) for as many as 175 new faculty lines.
- Includes “cash” funding (i.e., must be spent within five years of the award) for faculty startup packages, graduate students, postdoctoral fellows, equipment, facilities, travel, and other expenses necessary for the research.
- Each Grand Challenge Initiative likely to involve ~30 faculty hires and \$30-50 million in additional funding.

# Goals

- To improve in tangible ways the quality of life of the people of Indiana and the world and the economic vitality of the state of Indiana.
- To transform Indiana University through strategic hires and by significantly enhancing the volume, quality, impact, and reputation of research at IU.
- To provide critical, strategic investment in the research infrastructure at IU.
- To improve IU's ability to compete successfully for more ambitious and diverse external research support.
- To facilitate collaboration that enables IU to leverage its extensive and diverse resources in pursuit of common goals (this is true whether or not a proposal is selected).
- To create valuable intellectual property, make it available to the public through appropriate commercialization, and create new sources of revenue for IU.

# Criteria

- Addresses a compelling problem or challenge, the resolution of which would significantly affect the people of Indiana and beyond.
- Has defined, achievable goals that deliver tangible benefits to the people of Indiana and beyond.
- Strategically leverages IU strengths and existing resources.
- Requires a multidisciplinary team that reaches across departments, schools, and, in most cases, campuses.
- Can attract the external competitive, philanthropic, corporate, and/or government funding necessary to sustain the work to successful completion.

# Process

- In 2015-16, facilitate the collaborative development of a diverse array of initial proposals, select five for further development as Grand Challenge Initiatives, and ultimately select two or three as initial Grand Challenge Initiatives in time for implementation to begin by Fall 2016.
  - Preliminary proposals
  - Invited full proposals
- Proposals not selected this year may be revised and resubmitted in the future, or considered for other types of funding.
- Significant collaboration from campus/school research staff and academic and administrative offices.

# Process (cont'd)

- Review by university-wide Grand Challenges Review Committee, comprising research faculty, supplemented by external, campus, and/or school reviews as necessary.
- Community Advisory Board, comprising leaders from industry, government, and not-for-profit organizations throughout Indiana, will provide guidance for program and the selection, implementation, and review of specific initiatives.
- Recommendations by Grand Challenges Steering Committee.
- Decisions by President.

# Timing

- Initial proposals due November 9, 2015 (we received 21, involving more than 400 faculty in 20 schools on four campuses).
- Decision by President announced January 8, 2016.
- Selected potential Grand Challenge full proposals due April 18, 2016.
- Decision by President announced by June 17, 2016.
- Initial implementation by Fall 2016.

# Administration Principles

- A commitment to being nimble and flexible in the implementation of Grand Challenges.
- A commitment to being strategic in the investment of Grand Challenges funding.
- A commitment to administrative efficiency and cost-effectiveness.
- No shifting of funds between campuses without the explicit consent of campus leadership involved.
- A concerted effort to reduce and, if possible, eliminate internal administrative barriers to collaboration and effective implementation.

# Observations

1. Impact matters. Whether impact on the public, on communities, on the economy, or on quality of life, impact is the focus of the Grand Challenges program. That impact may be achieved through basic research leading to scientific breakthroughs or significant advances in other fields, but it must ultimately be felt outside of the university or the academy. Proposals must not only be explicit about impact, but must also include translational elements that would demonstrate impact.

# Observations (cont'd)

2. Grand Challenge Initiatives by definition must be highly interdisciplinary. One of the goals of IU's Grand Challenges program is to help develop and support the habits of cross-disciplinary collaboration. This will require collaborating across campuses and, in most cases, between campuses. To help support the most creative, ambitious collaborations, additional funding will be available for initiatives that involve more than one campus or collaboration between IU and Purdue.

# Observations (cont'd)

3. Grand Challenge proposals must include a plan for sustainability. Despite the university's significant investment, the scale of Grand Challenge Initiatives should be such that they will require external funding to complete. That funding could come from NSF or NIH, but proposals should also consider the potential for funding from other government agencies at all levels and other sources of funding such as foundations, businesses, or private philanthropy.

# Observations (cont'd)

4. Grand Challenge proposals must involve partnerships with organizations outside of the university. The involvement of industry, professionals, government offices, community organizations, foundations, and others can strengthen research, help enhance its relevance, and demonstrate its impact in the community.

# Observations (cont'd)

5. Grand Challenge proposals will be developed and administered in a more open and collaborative way than traditional research awards. The resources come from an array of sources. All applicants, and especially those invited to complete full proposals, will have access to resources provided by the IU Foundation, the Vice President for Engagement, the Vice President for Information Technology, and the Vice President for Public Affairs and Government Relations, as well as the Provost/Chancellor and Deans. Proposals will be posted online ([grandchallenges.iu.edu](http://grandchallenges.iu.edu)) to facilitate collaboration and transparency. And support for successful proposals will be administered in partnership with the research team and school, campus, and university administration.

Thank you.

[grandchallenges.iu.edu](http://grandchallenges.iu.edu)

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