Provost’s Forum: Goal 4 Update

Grant McGimpsey
Goal 4: Discovery

Enhance discovery at a level consistent with most research intensive universities (Carnegie R1)

• Metric #4: Research Expenditures
• Goal by 2022: [$120] million – internal and external funding sources
• Captain: Vice President for Research & Economic Development (VPRED)
Action Steps

1. Designate champions for each grand challenge
2. Accurately capture faculty time devoted to research through Page 2
3. Recruit and retain star research faculty in areas of study related to grand challenges.
4. Increase the number of non-faculty post-doctoral researchers in support of grand challenges.
5. Identify select high-potential research-based PhD programs
6. Create department and college level expectations and evaluation for research, scholarship and creative activities
7. Invest in high performance computing, cyber security and data analytic capabilities and infrastructure.
Action Step 1: Progress

Designate champions for each grand challenge who assemble representatives from select colleges to define and drive research goals for each grand challenge. (Kennedy, McGimpsey, GC Champions)
Action Step 1: Progress

**Grand Challenges:** Generate opportunity for the state by diversifying its economy and addressing societal grand challenges through cutting-edge research.

1. Promote energy security and environmental sustainability (Champion: Tom Erickson)
2. Address health challenges through basic, clinical and translational discovery (Champion: Colin Combs)
3. Help rural communities solve their unique health and social problems (Champion: Thomasine Heitkamp)
4. Drive the world-changing developments of Unmanned Aircraft Systems and do so in a way that reflects UND’s values (Champion: Mark Askelson (Interim))
5. Effectively, efficiently, and ethically produce, manage, and securely use information in the age of big data (Champion: Hesham El-Rewini)
Action Step 1: Progress

Promote energy security and environmental sustainability
(Champion: Tom Erickson)

– Team members: Michael Mann (Institute for Energy Studies); Edward Steadman (EERC); Bo Wood (Political Science and Public Admin); Kathryn Rand (Law); Brad Rundquist (Geography/Arts and Sciences); Soizik Laguette (Earth Systems Science and Policy)

– New Seed Funding Program
  • http://und.edu/research/about/grand-challenges/energy-grand-challenge-seed-funding-program.cfm
  • ~20 proposal received for first round; decisions due soon
Action Step 1: Progress

Address health challenges through basic, clinical and translational discovery (Champion: Colin Combs)

- Team Members: Holly Brown-Borg (Biomedical Sciences); Seema Somji (Pathology); Maridee Shogren (Nursing); Diane Darland (Biology); Julia Zhao (Chemistry); Sima Noghanian (Electrical Engineering)

- New Seed Funding Program:
  - [http://und.edu/research/about/grand-challenges/und-health-challenges-seed-funding.cfm](http://und.edu/research/about/grand-challenges/und-health-challenges-seed-funding.cfm)
  - Deadline December 11.
Action Step 1: Progress

Help rural communities solve their unique health and social problems (Champion: Thomasine Heitkamp)

– Team Members: Amir Alakaam (Nutrition and Dietetics); Laura Hand (Public Admin/Public Health); Ashley Hutchison (Counseling Psych); Joelie Ruthig (Psych); Shwanda Schroeder (Public Health); Chih Ming Tan (Economics)

– November 14 Kickoff Event
  • Hosted panel discussion with representatives from SAMHSA, HRSA, USDA, HUD, WICHE, OASH
  • Over 90 UND and regional attendees, mostly faculty

– New seed funding program
  • [http://und.edu/research/about/grand-challenges/helping-rural-communities-solve-unique-health-social-problems-seed-funding.cfm](http://und.edu/research/about/grand-challenges/helping-rural-communities-solve-unique-health-social-problems-seed-funding.cfm)
  • Due December 4
Action Step 1: Progress

Drive the world-changing developments of Unmanned Aircraft Systems and do so in a way that reflects UND’s values (Champion: Mark Askelson (Interim))

- Team Members: Chris Theisen (Atmospheric Sciences/NPUASTS); Tom Petros (Psych); Ric Ferraro (Psych); John Bridewell (Aviation); Paul Snyder (Aviation); Zach Waller (Aviation); Gary Ullrich (Aviation); Will Semke (Mechanical Engineering); Naima Kaabouch (Electrical Engineering); Prakash Ranganathan (Electrical Engineering); Marcelin Zahui (Mechanical Engineering); Forest Ames (Mechanical Engineering)
- November 16 RIAS Kickoff Meeting with Industry Executives and Public Sector Officials
- New Seed Funding Program:
  - Due January 10
Action Step 1: Progress

Effectively, efficiently, and ethically produce, manage, and securely use information in the age of big data (Champion: Hesham El-Rewini; Grant McGimpsey)

— Different approach

• Proposal prepared to build data analytics/science cluster
• Investing in Infrastructure to increase computational power and storage with particular emphasis on image analysis, machine learning, AI (i.e., those areas that are closely linked with UAS)
Action Step 1: Progress

Additional investment to help drive Grand Challenges and other research leading to Carnegie R1 goal.

- Post-Doctoral Program, Phase 2.
  - Up to 10 2-year post docs to be awarded
  - Received 39 proposals (up from 30 last year)
  - Decisions are pending and will be announced next week.
Action Step 2: Progress

Accurately capture faculty time devoted to research through Page 2 with aim to redirect more faculty time to discipline level research productivity. (John Mihelich – Faculty Fellow, VPRED Data Team)

- All Page 2’s for FY18 have been collected and Research percent effort tabulated
- Inclusion of faculty salary and benefits data yields anticipated Page 2 research effort expenditures for FY18 of $22M+
- Currently broken down by college. Will be further broken down by department and information will be provided to deans and chairs in order to enable decision-making about level of research effort to be expected
Action Step 4: Progress

Increase the number of non-faculty post-doctoral researchers in support of grand challenges. (Mihelich, McGimpsey)

– Post-Doctoral Program, Phase 2, Goals:
  • Internally fund 20 post-doctorals on an ongoing basis
  • Enable higher success rate for external proposals that in turn will fund more post-doctorals

– Enable more rapid and streamlined post-doctoral hiring process
Action Step 6: Progress

Create department and college level expectations and evaluation for discipline dependent products of research, scholarship and creative activities and integrate into promotion, tenure and evaluation criteria. (Mihelich, Dave Flynn – Faculty Fellow)

– Data gathering (Dave Flynn, Faculty Fellow)
  • Simplify Digital Measures to ease use by faculty
  • Enable easy extraction of data from Digital Measures