Faculty Driven Approach to Interdisciplinary Research Development

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College Snapshot

- One of ten academic colleges at Purdue

- Six schools/departments
  - School of Engineering Technology
  - School of Aviation and Transportation Technology
  - School of Construction Management Technology
  - Department of Computer Information Technology
  - Department of Computer Graphics Technology
  - Department of Technology, Leadership, and Innovation

- 150 T/TT faculty

- 740 graduate students

- 4,000 undergraduate students
Global Megatrends & Social Challenges
Interdisciplinary Solutions are Required

9.6 Billion
People by 2050.

50% Increase in energy demand by 2050

60% Global population middle class

70% Increase in food production by 2030

Increasing Global conflict and security concerns

Realizing the Digital Enterprise

Future Work & Learning

Holistic Safety & Security

We rally around these trends to form research impact areas (RIAs) whose resources and culture enable research growth.
Three areas – one vision: impact global grand challenges through interdisciplinary research

Research Impact Areas

- Three common goals:
  - Create communities of researchers based on trust
  - Faculty mentoring
  - Increase research activity & prominence

- RIAs have faculty co-leads, appointed as Dean’s Fellows
- Participating members determine allocation of resources – seed grants, conference travel, hosting external speakers
- Focus on new, interdisciplinary collaborations
- External research awards doubled in 3 years
Research growth

A faculty-driven approach to culture change leads to success. Faculty are empowered to make internal funding decisions and lead change. Faculty are incentivized and rewarded for participating in the change effort. Faculty are supported administratively from shared resources (admin assistant, research development professional, research PM).

RESEARCH IMPACT AREAS (RIAs)

- **61%** ENGAGEMENT
  - T/TT Faculty activity participating in RIAs

- **35** COLLABS
  - New interdisciplinary collaborations established

- **3.5-fold** ROI
  - FY18-19 Internal investments lead to external grants and publications

Faculty Collaborate for Impact

Research Awards in Millions

RIAs launched

FY15 FY16 FY17 FY18 FY19 FY20

(0 5 10 15 20 25 30 35)

(10 11 14 32 19 338)