



Synergies for Societal Impact: University-Industry Partnerships in Research Grand Challenges

September 16, 2021 | 9:30 - 10:15 AM ET



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September 16, 2021



The University of Texas at Austin
Bridging Barriers
Office of the Vice President for Research



Grand challenges are “moonshot goals” – ambitious, yet achievable goals that leverage our university’s **interdisciplinary research community** to address urgent real-world problems.

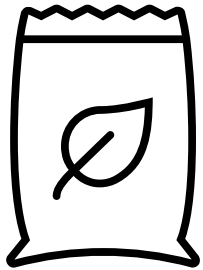
What barriers is “Bridging Barriers” bridging?

- Barriers between disciplines, techniques, and ways of thinking
- Barriers between fundamental knowledge and real world problems

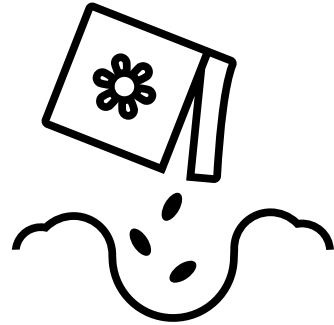
2016

2017

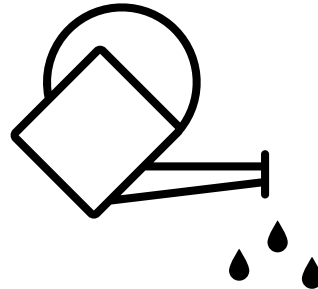
2018 ~ 2027



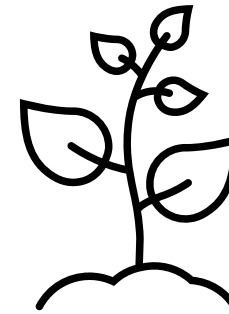
Solicit ideas
from research
community



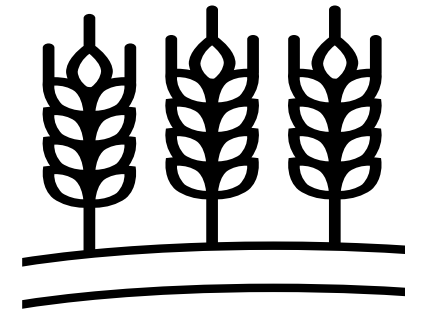
Sort into
themes and
working
groups



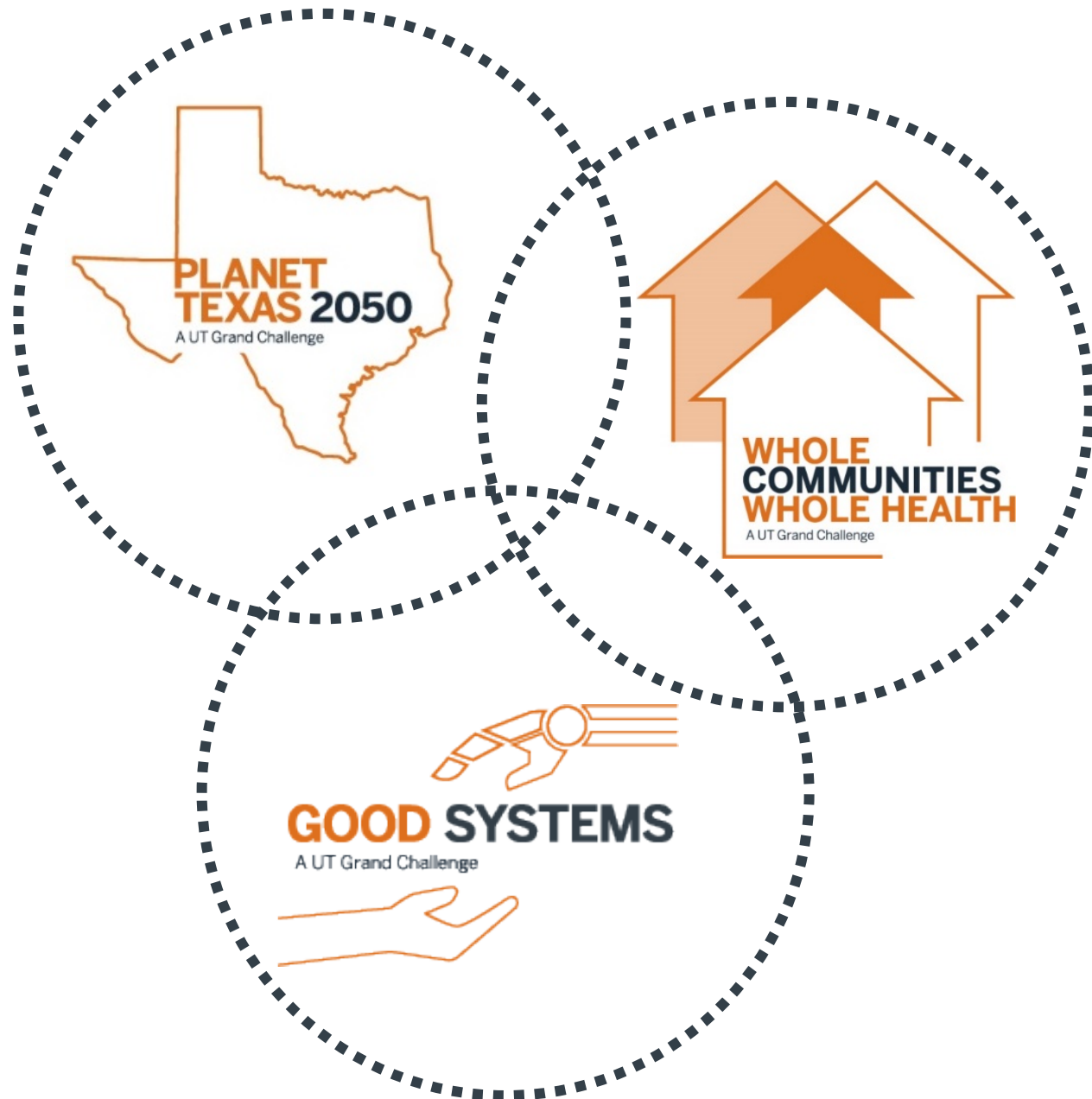
MANY
meetings to
synthesize
ideas



Teams
submitted
research
plans to be
launched



Three UT
Grand
Challenges
launched and
supported



Planet Texas 2050

Making Texas resilient is our grand challenge.

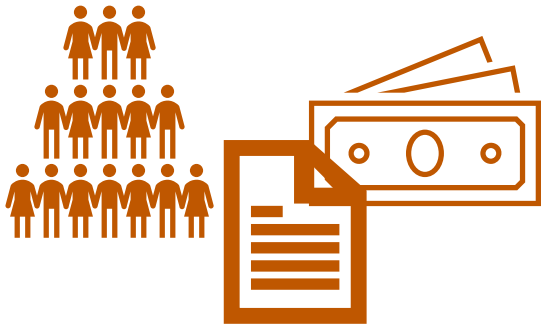
Whole Communities–Whole Health

Changing the way science helps society thrive is our grand challenge.

Good Systems

Designing AI technologies that benefit society is our grand challenge.

Each Grand Challenge receives university support to enable its success



Proposal development and fundraising support from VP Research and UT Development/Advancement



\$10M internal funding per GC over 8-10 years



Relationship management with external partners



Event hosting and logistics



Communication platforms to amplify impact and celebrate success

Planet Texas 2050 explores ways to make Texas more resilient to climate change, extreme weather, and rapid urbanization.

Research focus includes:

- Environmental shocks/stressors in TX metro areas
- Remote sensing and field studies to predict environmental change
- AI-enabled model integration & decision support
- Complex interactions of human-environmental systems (built and natural; past and future)
- Climate justice and community-engaged resilience research

planettexas2050.utexas.edu



UT involvement:

- 145+ researchers
- 40 departments/units

Key External Partners:

- Microsoft, Dow, ExxonMobil
- TX Disaster Information System
- TX General Land Office
- City of Austin Ofc. Sustainability
- Sustainability NGOs: EcoRise, Nature Conservancy, Go Austin!/Vamos Austin!

Whole Communities Whole Health is helping Central Texas families thrive by fundamentally rethinking the way longitudinal cohort studies are designed and executed.

Research focus includes:

- Biological and environmental measures to understand predictors of health outcomes
- Physiological impact of stress; mental health
- Child functioning, parenting; families of color
- New sensors & data collection modalities to ease participation burden & collect more relevant data
- Data processing, analytics, visualizations

wholecommunities.utexas.edu



UT involvement:

- 80+ researchers
- 22 departments/units

Key External Partners:

- Community Strategy Team (representing local organizations)
- Del Valle Independent School District
- Episcopal Health Foundation

Good Systems believes AI-based systems should be developed in accordance with broadly accepted values. These socially beneficial, AI-based technologies are what we call "good systems."

Research focus includes:

- Disinformation
- Fair and transparent AI
- Smart cities and the future of work
- Intersection of AI and racial justice
- Machine learning and robotics
- Public interest technology
- Ethical implications of AI (e.g., in surveillance)

goodsystems.utexas.edu



UT involvement:

- 130+ researchers
- 30 departments/units

Key External Partners:

- City of Austin
- Public Interest Technology University Network
- Micron Foundation
- Microsoft, Cisco, Amazon, Sony

Talent Challenges and Opportunities in Aerospace & Defense

September 16, 2021 | 10:45 - 11:30 AM ET



Moderator:
Cindy Mahler
Boeing



Georgios Athanasakopoulos
McKinsey & Company



Varun Marya
McKinsey & Company

THANK YOU!



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Strengthening
University-Industry
Partnerships