

The Marathon that Feels Like a Sprint: Executing Successful “Grand Challenge” Initiatives

Cristin Dorgelo, Former OSTP

Jennifer Lyon Gardner, Univ. of Texas - Austin

Michelle Popowitz, UCLA

Cassandra Rauser, UCLA

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Presentation Team

Cristin Dorgelo

- ▶ 17 years in innovation and technology; has led multiple Grand Challenges
- ▶ Former White House Office of Science and Technology Policy Chief of Staff
- ▶ Former XPRIZE Foundation Vice President of Prize Operations

Jennifer Lyon Gardner, PhD, CRA

- ▶ 10 years in RD
- ▶ Current position: Assistant Vice President for Research, UT-Austin
- ▶ Executive Director, UT Austin Bridging Barriers initiative

Michelle Popowitz, JD, MPH

- ▶ 6 years in RD, 15 years at UCLA
- ▶ Current position: Assistant Vice Chancellor for Research, UCLA
- ▶ Co-Founder & Executive Director, UCLA Grand Challenges initiative

Cassandra Rauser, PhD

- ▶ 8 years in RD
- ▶ Current position: Director, Sustainable LA Grand Challenge, UCLA

What Do We Mean by “Grand Challenge”?

In recent years, a growing number of individuals and organizations—including universities—have decided to identify and pursue ambitious yet achievable goals, often known as “Grand Challenges” or “moonshots.”

- ▶ Significant potential impact in areas of national and global priority
- ▶ Compelling, motivating, and able to capture the general public’s imagination
- ▶ “Goldilocks” level of specificity and focus
- ▶ Ideally, framed as a “SMART” goal
- ▶ Can catalyze and harness innovation and advances in science and technology
- ▶ Serve as a “North Star” for cross-sector and multidisciplinary collaboration

“By defining our goal more clearly, by making it seem more manageable and less remote, we can help all peoples to see it, to draw hope from it, and to move irresistibly toward it.”

- *President John F. Kennedy, June 10, 1963*

“...we’re pursuing...grand challenges like making solar energy as cheap as coal or making electric vehicles as affordable as the ones that run on gas. They are ambitious goals, but they’re achievable. And we’re encouraging companies and research universities and other organizations to get involved and make progress.

- *President Barack Obama, April 2, 2013*

“I want to die on Mars. Just not on impact.”

- *Elon Musk, March 9, 2013*

Why Should a University Take on a Grand Challenge Initiative?

- ▶ Rally research communities around a very large, interdisciplinary, top-priority research effort
- ▶ Attract new investment/resources
- ▶ Raise public profile of existing capabilities and demonstrate value of university research
- ▶ Engage campus community (students, staff, and faculty)
- ▶ Connect with partners, broader community, and the public
- ▶ Lead and contribute to solving a major societal challenge through application of research
- ▶ Inspire and empower the next generation of change-makers to tackle tough problems at home and abroad

Different Ways to Approach a University-Led Grand Challenge

Topic

- ▶ Preselected by administration
- ▶ Open to faculty/researchers to propose ideas
- ▶ Developed with external partners/donors or the public
- ▶ Blend

Structure of Initiative

- ▶ School/discipline specific
- ▶ Campus-wide
- ▶ Start-up
- ▶ Involving student research opportunities, programming, and course work
- ▶ Pursued with external collaborators
- ▶ Incorporated as part of Strategic Plan

Degree of Community/Outside Involvement

- ▶ Solicit ideas from community
- ▶ Advisory boards; external review of proposed GC ideas and plans
- ▶ Establish partnerships

Five Topics for Discussion

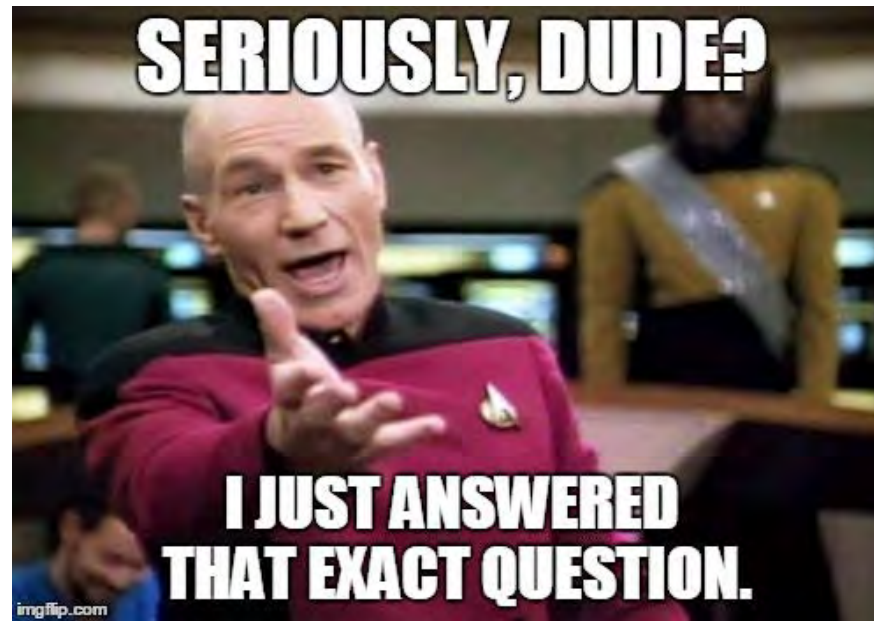
1. Inviting suitable Grand Challenge topics
2. Cultivate growth of a topic into a truly “grand” scale effort
3. Enlarge the circle but keep momentum
4. Define path forward while maintaining trust and transparency
5. Provide necessary support to reach stated goals

1. Inviting Suitable GC Topics



1. Inviting Suitable GC Topics: Lessons Learned & Recommended Strategies

- ▶ Define, communicate, repeat:
 - ▶ Research
 - ▶ Grand Challenges
 - ▶ Process
 - ▶ Goals
 - ▶ Expectations
- ▶ Even with exhaustive communication, expect the first round of “grand ideas” pitched by researchers to be not-so-grand



2. Cultivate Growth of a Topic into a Truly “Grand” Scale Effort



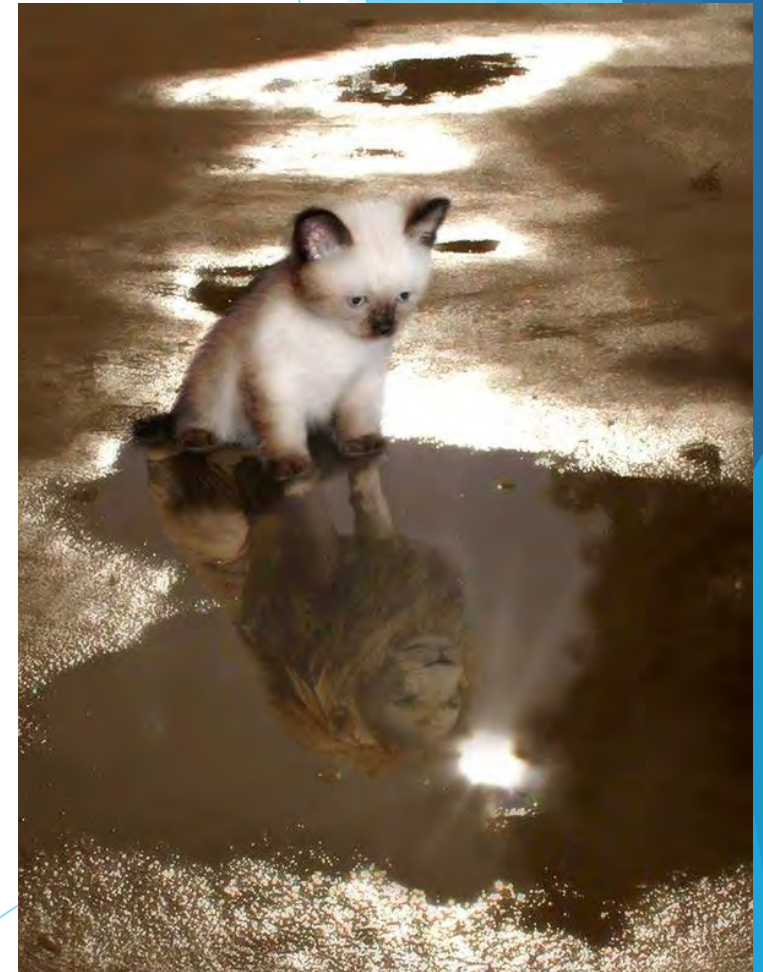
What people think it looks like.



What it really looks like.

2. Cultivate Growth of a Topic into a Truly “Grand” Scale Effort: Lessons Learned & Recommended Strategies

- ▶ Define aspirational vs. literal goals
- ▶ Hold MANY face-to-face meetings
- ▶ Include non-experts
- ▶ Ask (nag) about perspectives currently missing
- ▶ Allow time for reflection between meetings
- ▶ Give homework assignments
- ▶ Listen for clues as to how you can support thought leaders
- ▶ Remain agile



Keys to Encourage Progress



3. Enlarge the Circle but Keep Momentum



Growing the
core expertise

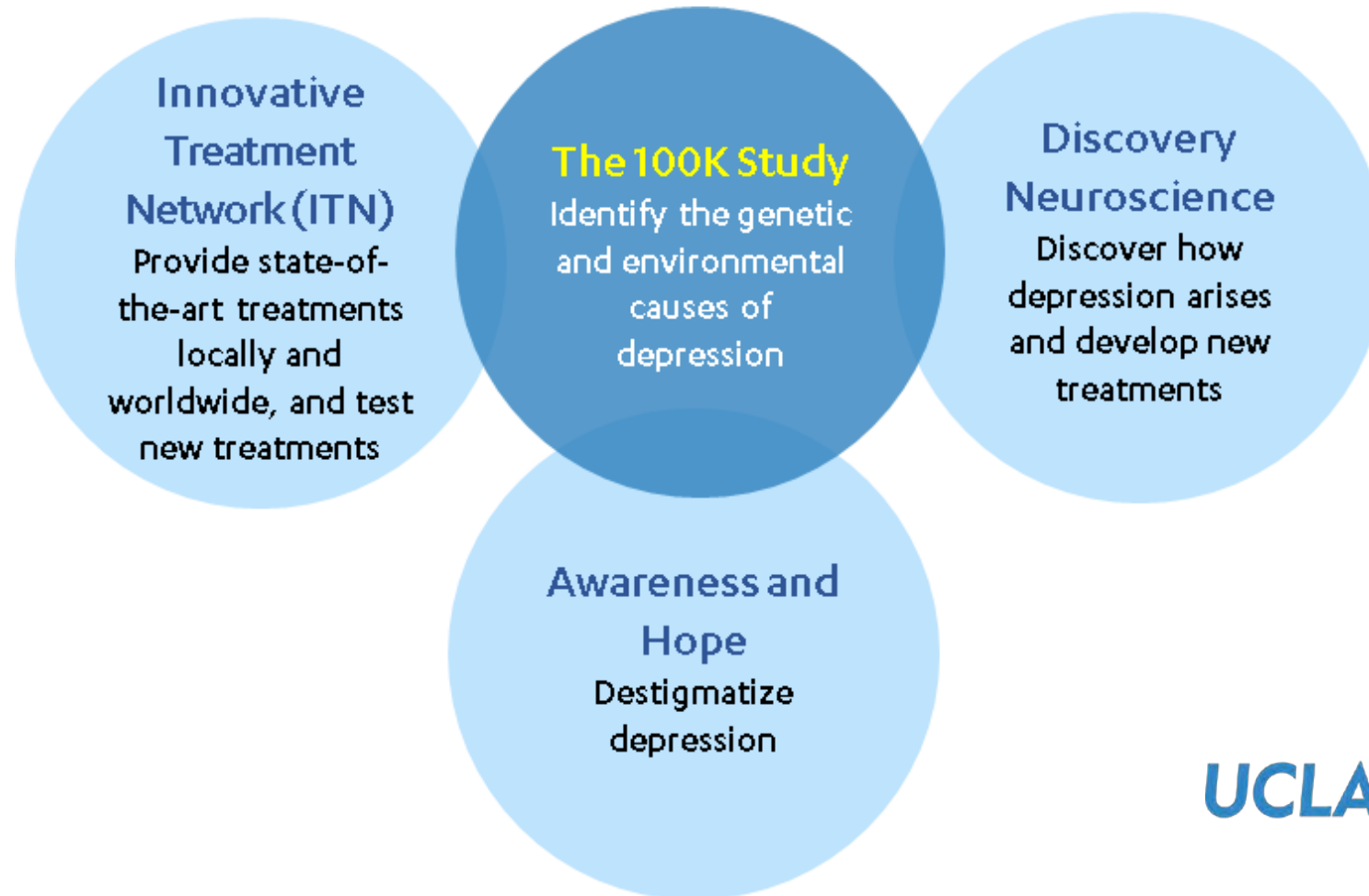




Jumping to Lead

TOGETHER
EVERYONE
ACHIEVES
MORE

Depression Grand Challenge Structure



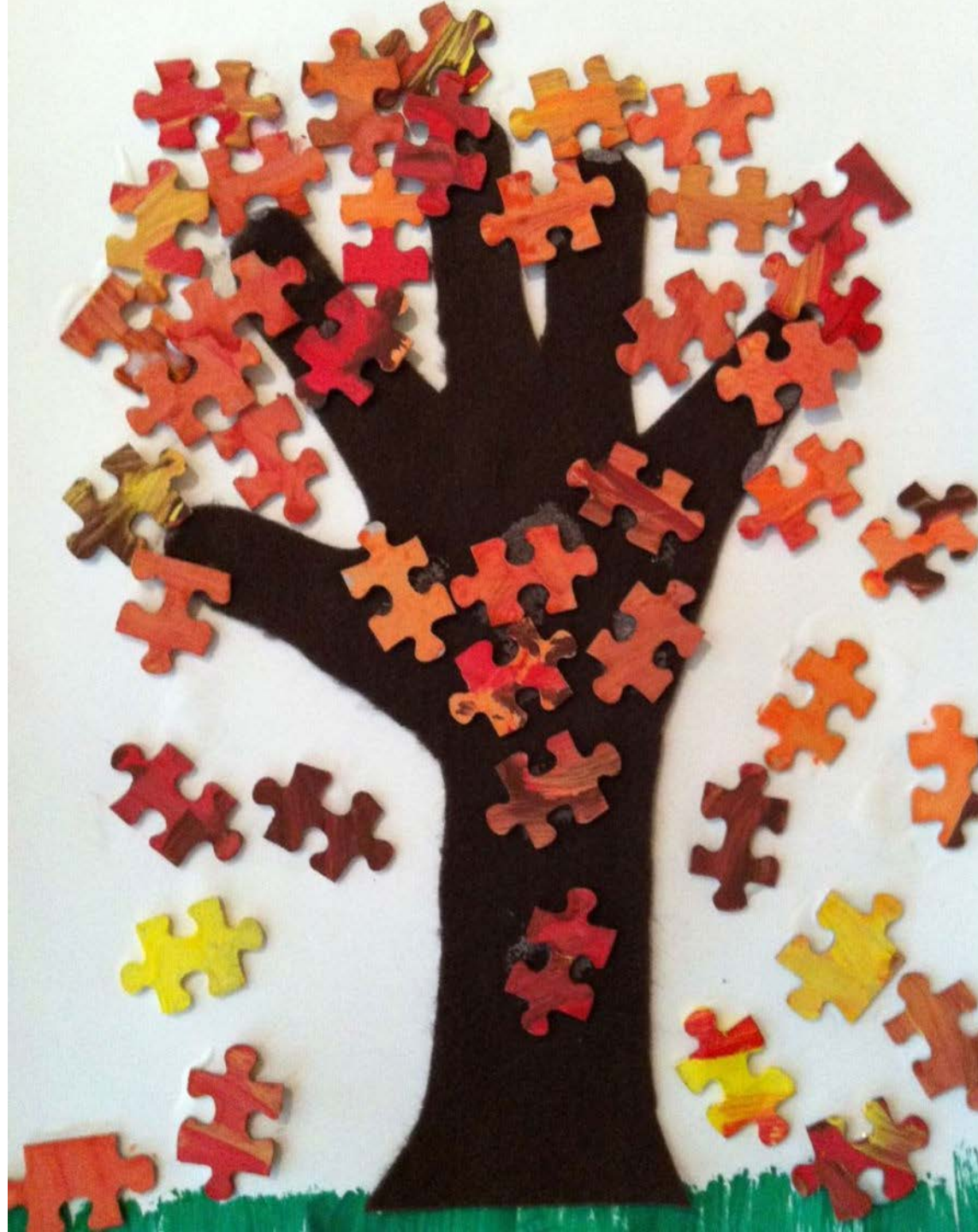
Team Characteristics

- Shared vision
- Mutual respect
- Solution-oriented
- Resilient
- Receptive to feedback
- Inspired



Non-Academic Partners...

so many possibilities



- ▶ Campus Units
 - ▶ Library
 - ▶ Alumni Relations
 - ▶ Government Relations
 - ▶ Graduate Division
 - ▶ Undergraduate Education
 - ▶ Media Relations
 - ▶ International Relations
- ▶ Community Organizations
- ▶ Donors
- ▶ Government Entities
- ▶ Industry
- ▶ Inventors
- ▶ Students
- ▶ Volunteers



Finding
alignment
opportunities

Focusing
on what
we want
to
achieve



Enlarge the
Circle but Keep
Momentum

Lessons Learned & Recommended Strategies

1. Identify dedicated leaders with a shared vision
2. Pre-screen additions to the team
3. Make sure all know the message points
4. Develop a method for assessing partnerships
5. Be protective of time before committing
6. Periodic check-ins and re-centering
7. Maintain communication with stakeholders

Defining the Path Forward while Maintaining Trust and Transparency and Providing the Necessary Support to Reach Stated Goals



UCLA Sustainable LA Grand Challenge

Goal:

Transition Los Angeles County to 100% Renewable Energy, 100% Locally Sourced Water, and Enhanced Ecosystem Health and Human Health and Well-being by 2050.



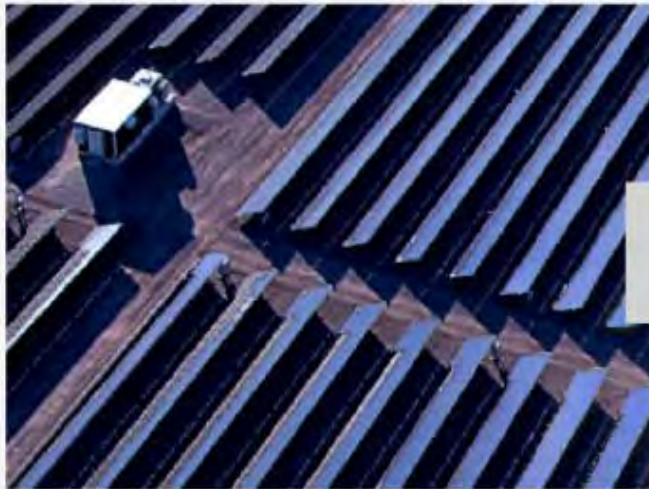
From GOALS to a PLAN to reach those GOALS

Leadership Council

Steering Committee

External Scholarly and
Technical Advisory Committee

Interdisciplinary Research Committees



Energy



Water



Ecosystem Health

Spatial & Discipline Integration

4. Maintain Trust and Transparency



4. Maintain Trust and Transparency: Lessons Learned & Recommended Strategies

- ▶ Listen to any grievances
- ▶ Establish a “we are on the same team” relationship
- ▶ Work together
- ▶ Provide numerous opportunities for input
- ▶ Majority rules



4. Maintain Trust and Transparency: Lessons Learned & Recommended Strategies

- ▶ Communicate clearly and often
- ▶ Engage early and broadly
- ▶ Establish legitimacy and effectiveness
- ▶ Be Responsive



5. Provide Necessary Support to Reach Stated Goals





5. Provide Necessary Support to Reach Stated Goals: Lessons Learned & Recommended Strategies



UCLA Grand Challenges
Depression

[#blueforhope](#)

- ▶ Money
- ▶ Time
- ▶ Recognition
- ▶ Career development (or advancement)
- ▶ Other support

Building a Community of Practice

Join us! Seeking input and engagement here at NORDP and months ahead for a new community of practice for leaders of university-led Grand Challenge programs.

Goals for community of practice:

- Capture lessons learned and best practices
- Learn about successful collaborations with government, industry, or philanthropy
- Discuss what questions Grand Challenge planning processes should be designed to answer
- Evaluate attributes of successful programs
- Consider how Grand Challenge programs can most effectively involve students, including through coursework
- Identify funding pathways and approaches
- Raise awareness among the public, industry, philanthropy, and local and state governments about these initiatives and opportunities for participation
- Discuss how to maintain momentum and frame interim milestones in light of the fact that the time horizon for solving Grand Challenges is long

Express Interest at: <https://goo.gl/dsKV89>