

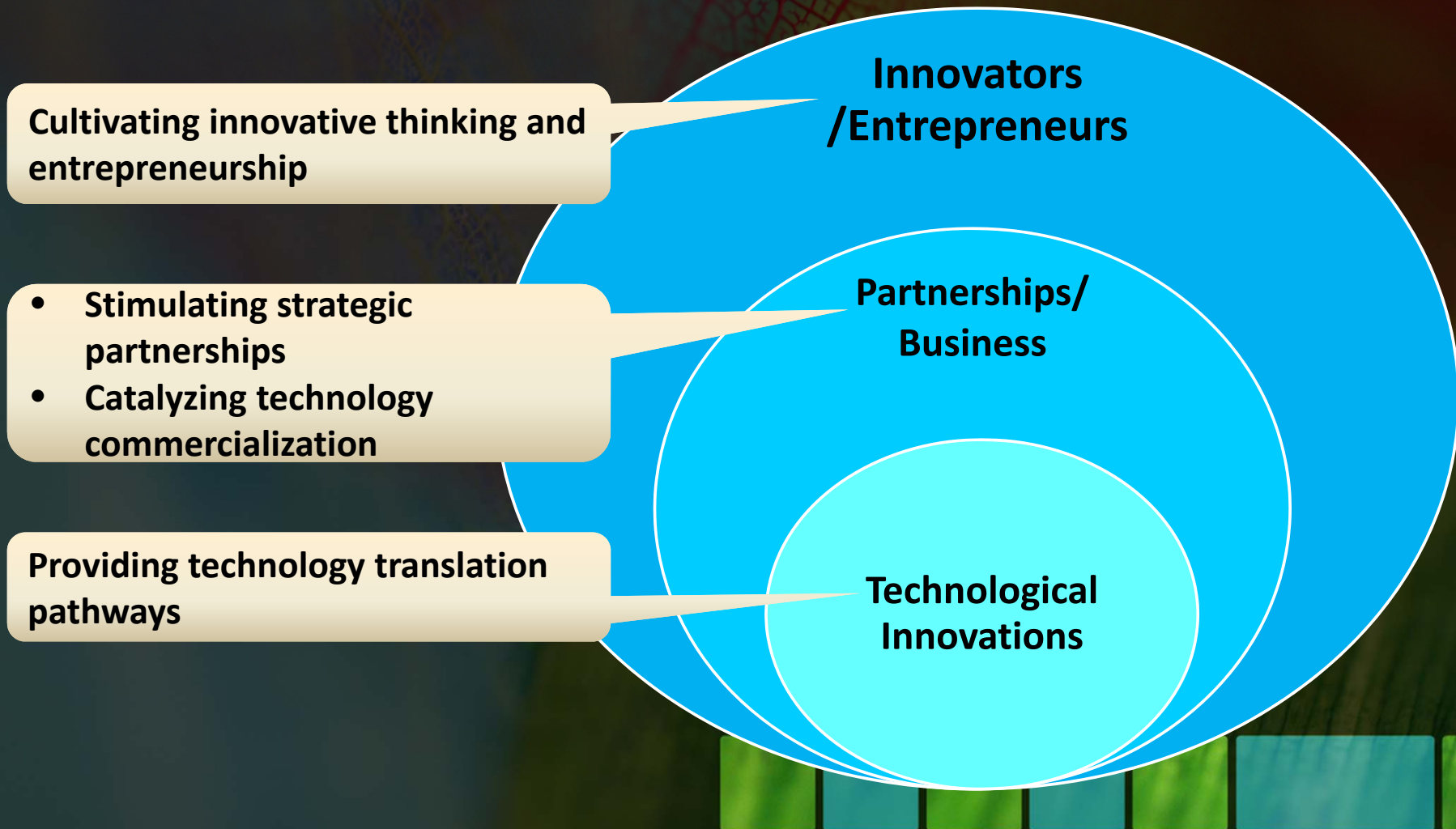
Industrial Innovation and Partnerships Overview

Spring 2014
ENG Advisory Committee Meeting

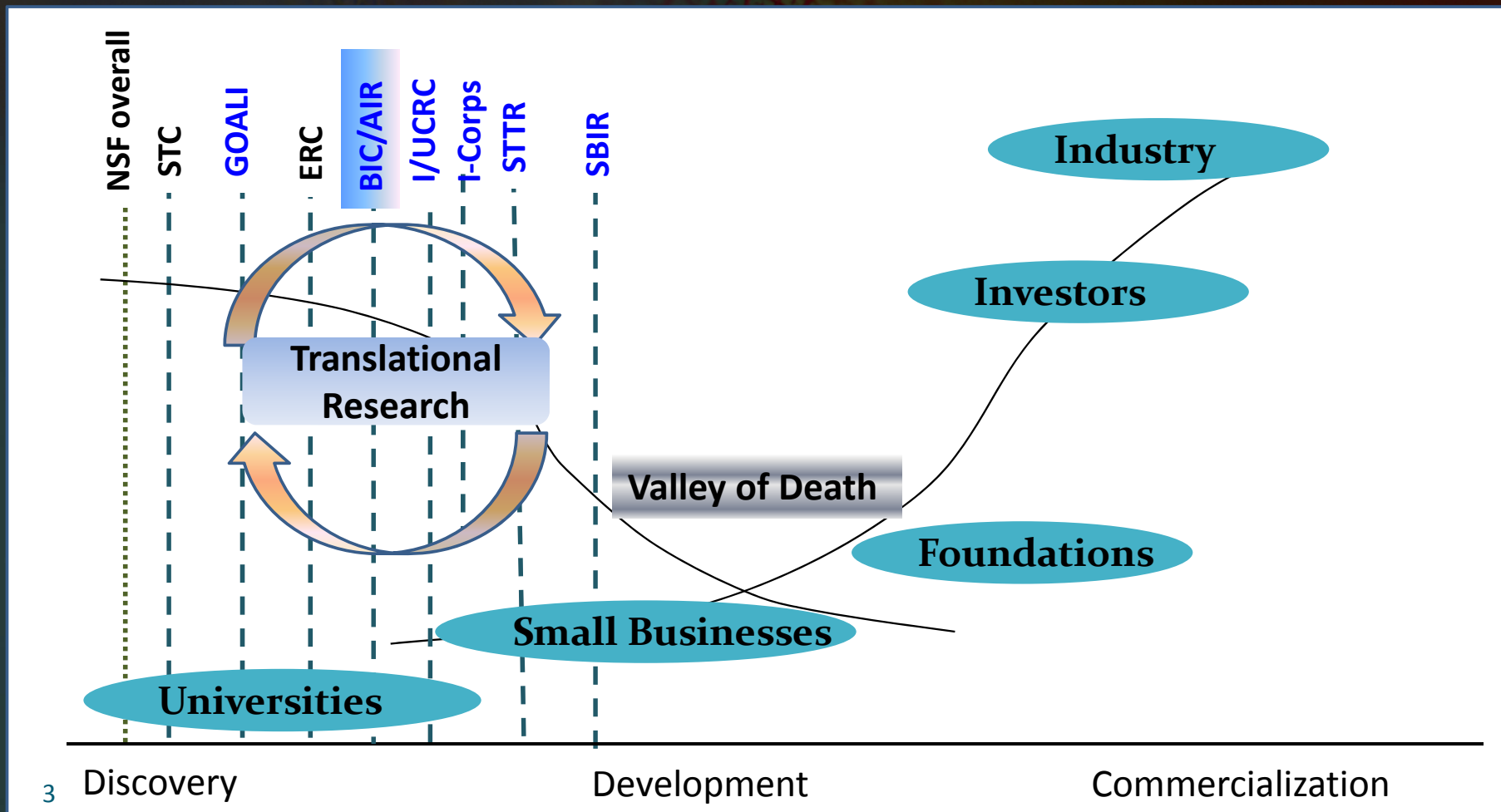


Grace Wang
Industrial Innovation and
Partnerships
Directorate for Engineering

Driving the Expansion of Innovation Capacity



Providing Technology Translation Pathways





Accelerating Innovation Research (AIR)

- To capitalize on NSF investment in basic research

NSF funding lineage required

Linking to previously NSF-funded basic research awards

- **TECHNOLOGY TRANSLATION (TT)**
 - Proofs-of-concept and/or pre-commercial prototypes
 - Promote entrepreneurial thinking among faculty and students
- **RESEARCH ALLIANCE (RA)**
 - Develop innovation ecosystem
 - Stimulate entrepreneurial & innovation activities





Small Business Technology Transfer (STTR)

- A vehicle for university technology commercialization
 - ✓ **Mandatory subcontract to universities**
 - ✓ Increased Phase I from \$150k to \$225k
 - ✓ Encourage the commercialization of previously NSF-funded basic research
- In June 2013 cycle
 - ✓ **54%** of STTR submissions showed NSF funding lineages
 - ✓ Linking to **321** previously NSF-funded basic research awards in one cycle



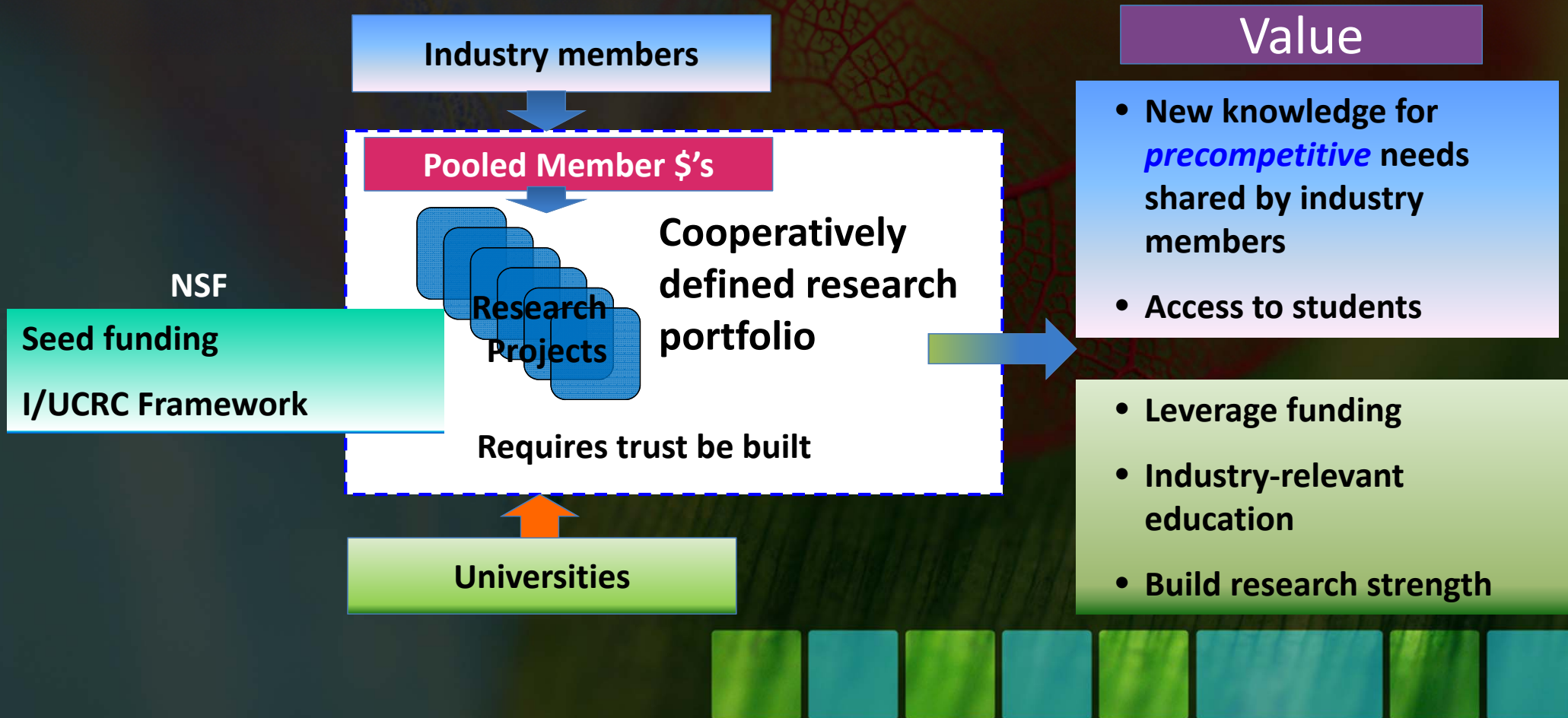


Stimulating Strategic Partnerships



Industry University Cooperative Research Centers (I/UCRC)

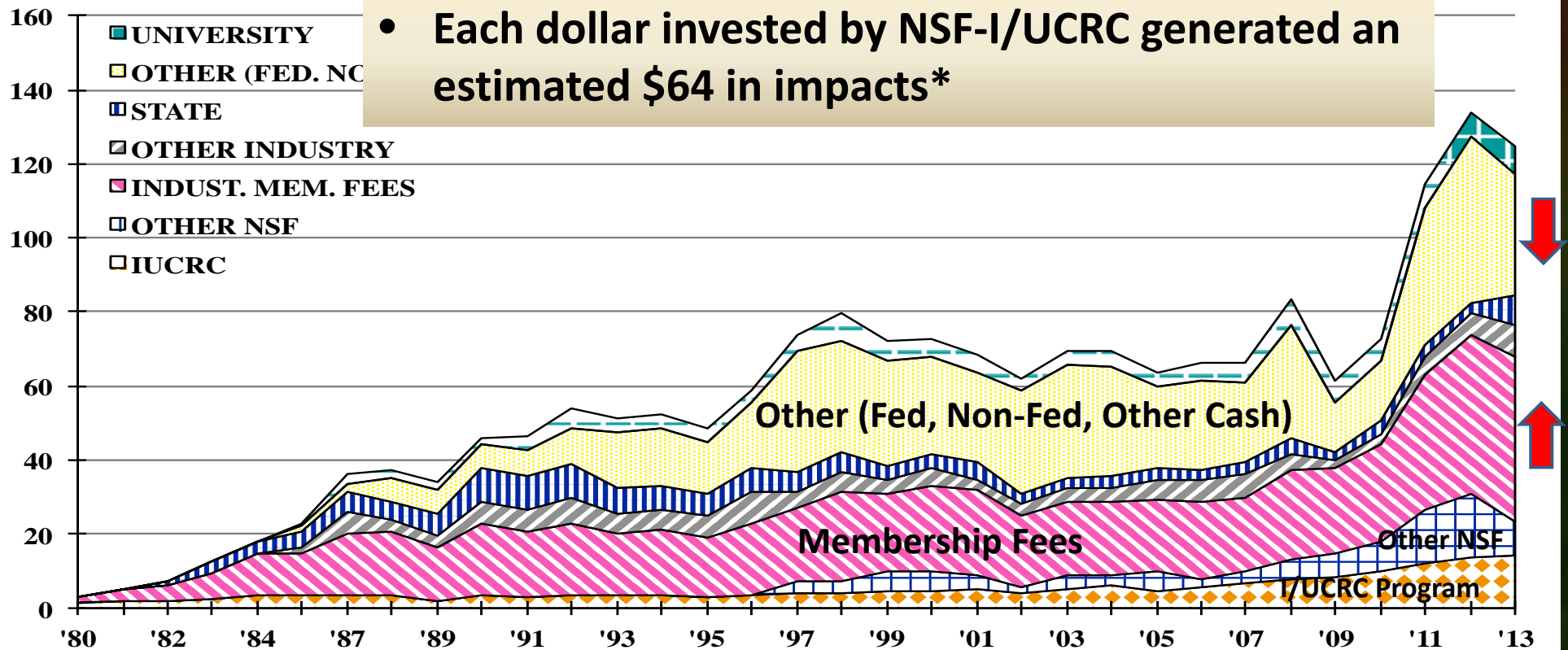
– Building Long-term U-I Partnerships



I/UCRC Program Impacts



- 8:1 Leveraging of Program funds in '13
- Each dollar invested by NSF-I/UCRC generated an estimated \$64 in impacts*

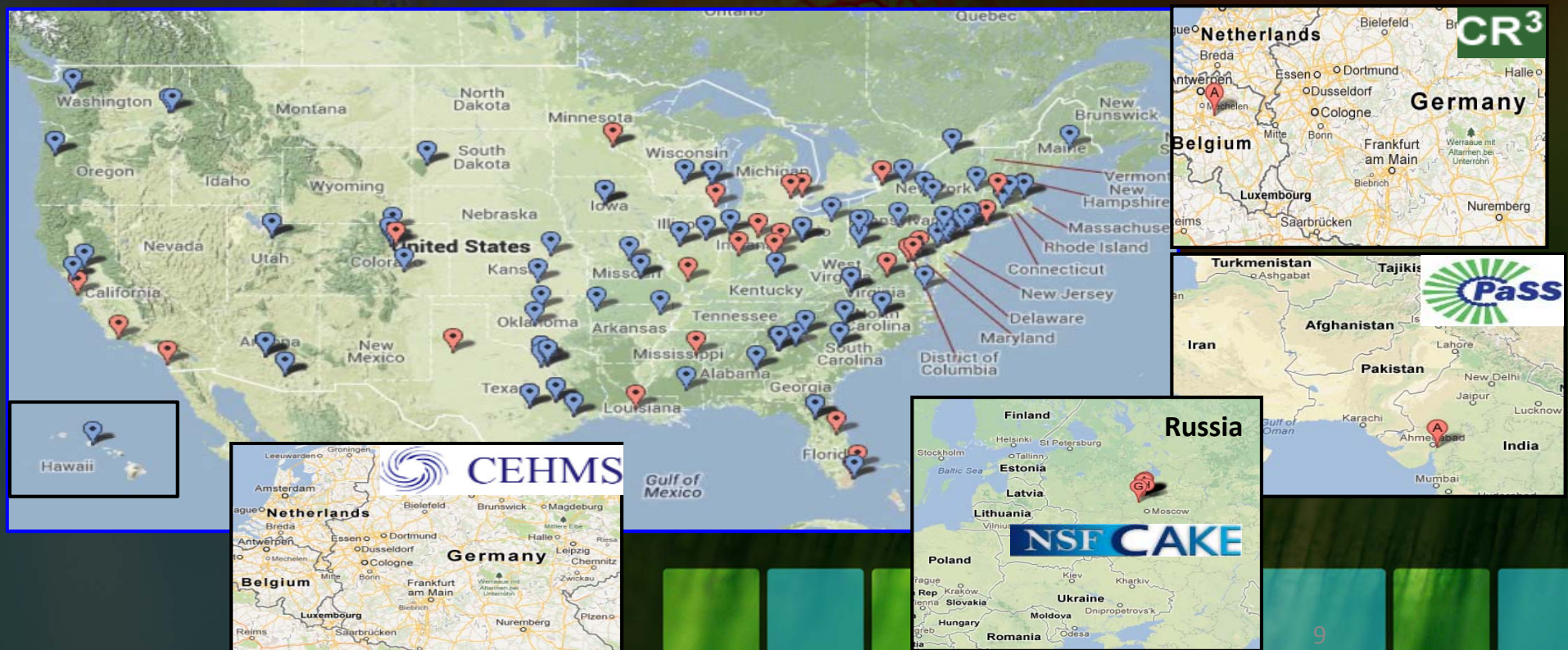


FY 2012-2013 NSF-I/UCRC Center Structure Database

*Based on case studies of three centers



- 67 centers, 191 sites (4 international sites)
- About 1,100 memberships
- 2077 students participated in 2013
- 30% of students graduated in 2013 were hired by industry members





Catalyzing Technology Commercialization



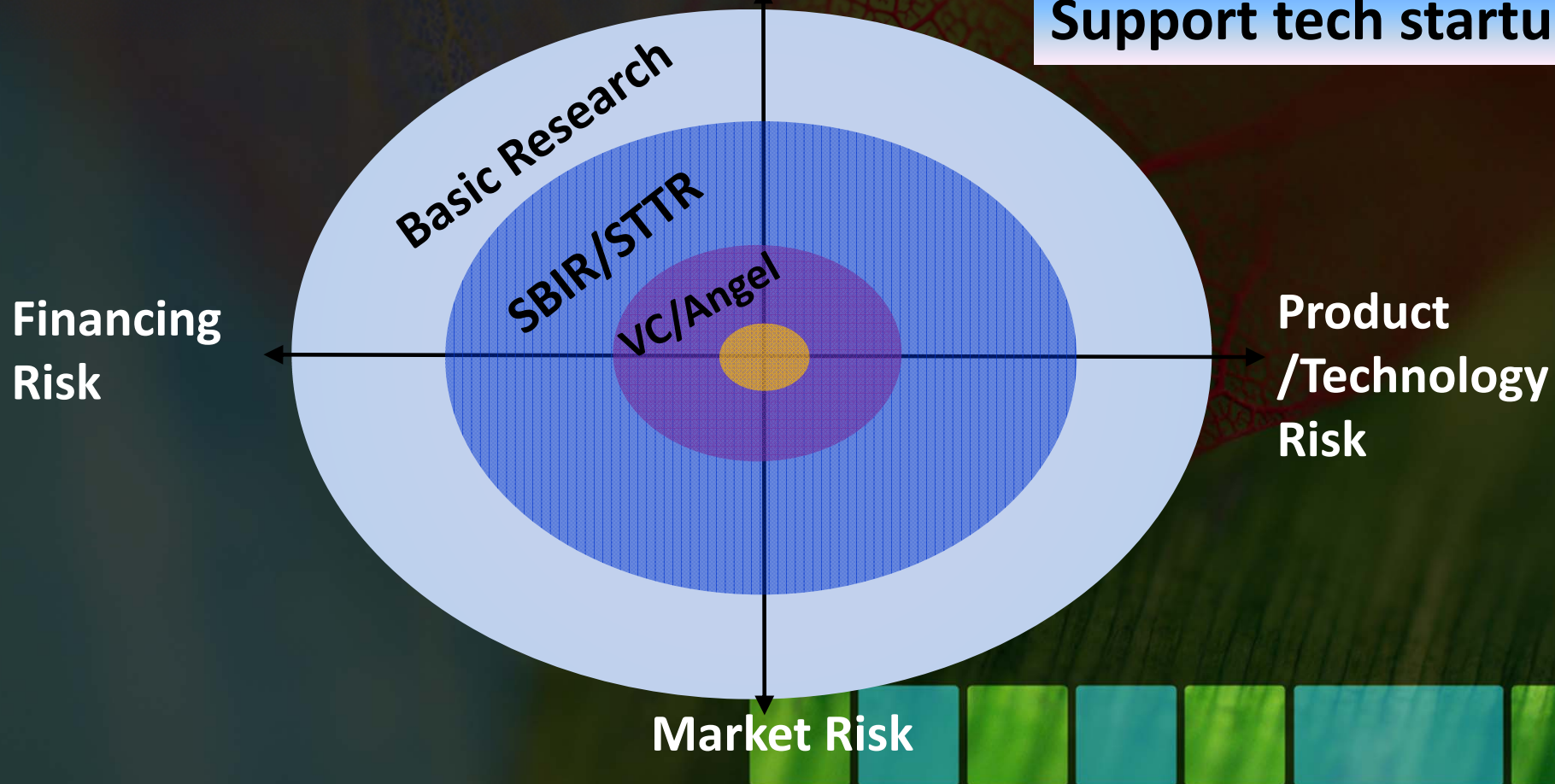
Positioning of NSF SBIR/STTR Program

– *Help Mitigate Technical , Business and People Risks*



Company/Team Risk

Support tech startups





Supporting High-Risk Tech Startups

- **FY2012 SBIR/STTR Phase I awardees**
 - ✓ 86% - 10 or fewer employees
 - ✓ 90% - 5 years old or younger
- **FY2013 SBIR/STTR Phase I awardees**
 - ✓ 81% - 10 or fewer employees
 - ✓ Median company age = 4 years





Connecting Our Grantees to Market Reality

- *Help mitigate market risk*

- Leverage large networks of other organizations
 - ✓ Providing opportunities to network with potential customers and investors
- Support SBIR/STTR grantees to attend selected tradeshows/venture fairs (CES ACA, ISTE, BIO, FETC etc.)
 - ✓ Partnering with **37** organizations
 - ✓ About **200** grantees at **50** events with 500K attendees (2013-2014)





Encourage Fundraising from Private Sectors - *Help mitigate financing risk*

- Phase IIB supplement
 - ✓ Match 50% of third-party investment up to \$500k
- Third-party investment that SBIR/STTR Phase II grantees collectively raised
 - ✓ **\$78 million in FY2012**
 - ✓ **\$83 million in FY2013**
- 19 acquisitions in last 2 years for >\$600 million acquisition value





Cultivating Innovative Thinking and Entrepreneurship





Innovation Corps (I-Corps)

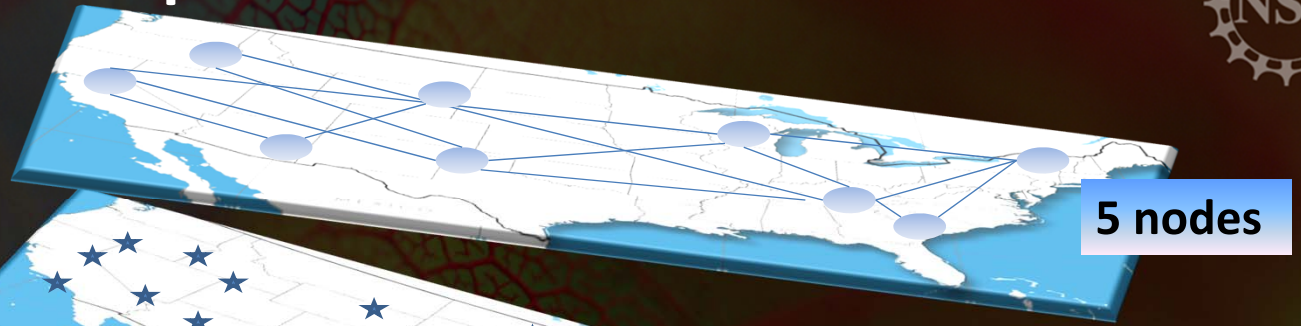
- Why I-Corps?
 - ❖ Capitalize on previously NSF-funded basic research
 - ❖ Cultivate entrepreneurial culture
- I-Corps approach
 - ❖ “Lean Launchpad” curriculum
 - ❖ Team: PI + Entrepreneurial Lead + Business Mentor
 - ❖ Experiential entrepreneurial education



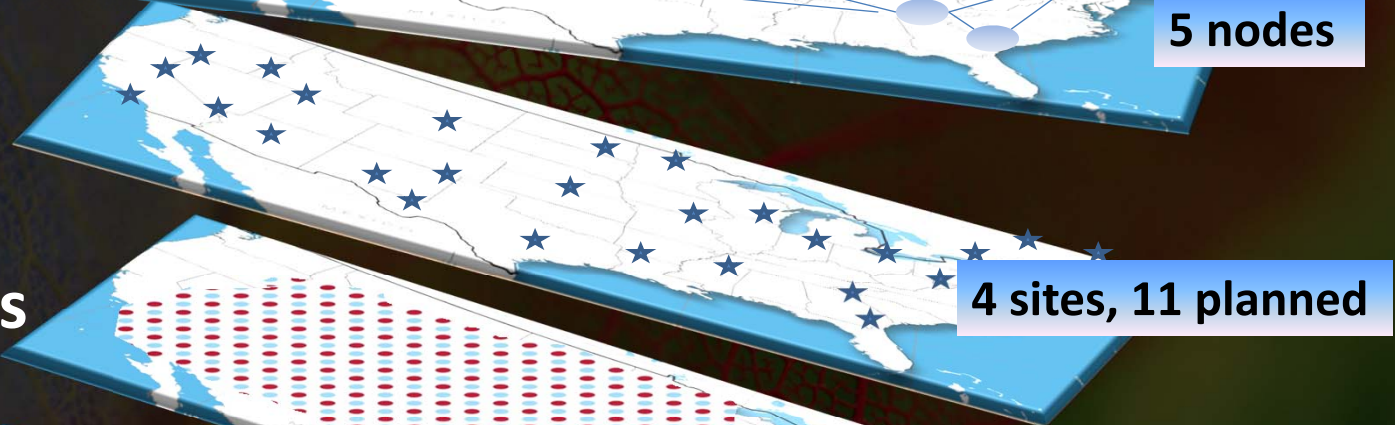
Building the Nation's I-Corps™ “Fabric”



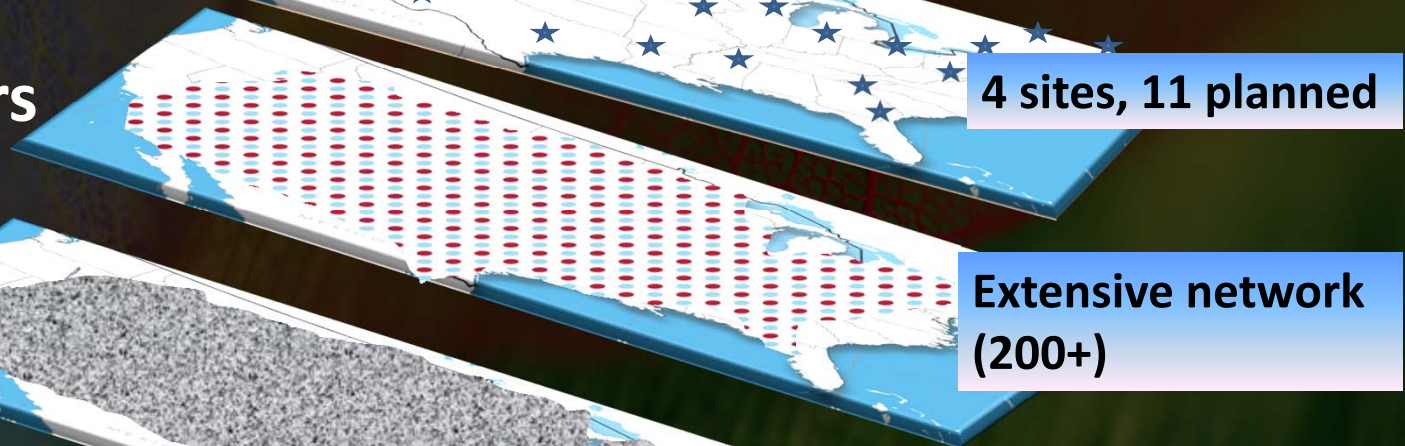
I-Corps™ Nodes



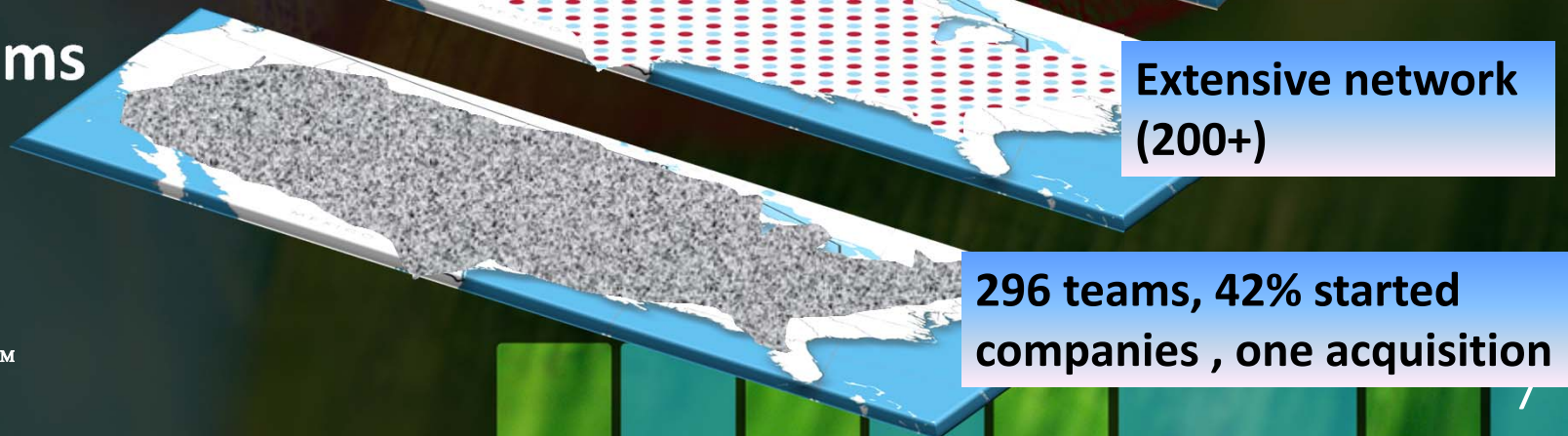
I-Corps™ Sites



I-Corps™ Mentors



I-Corps™ Teams



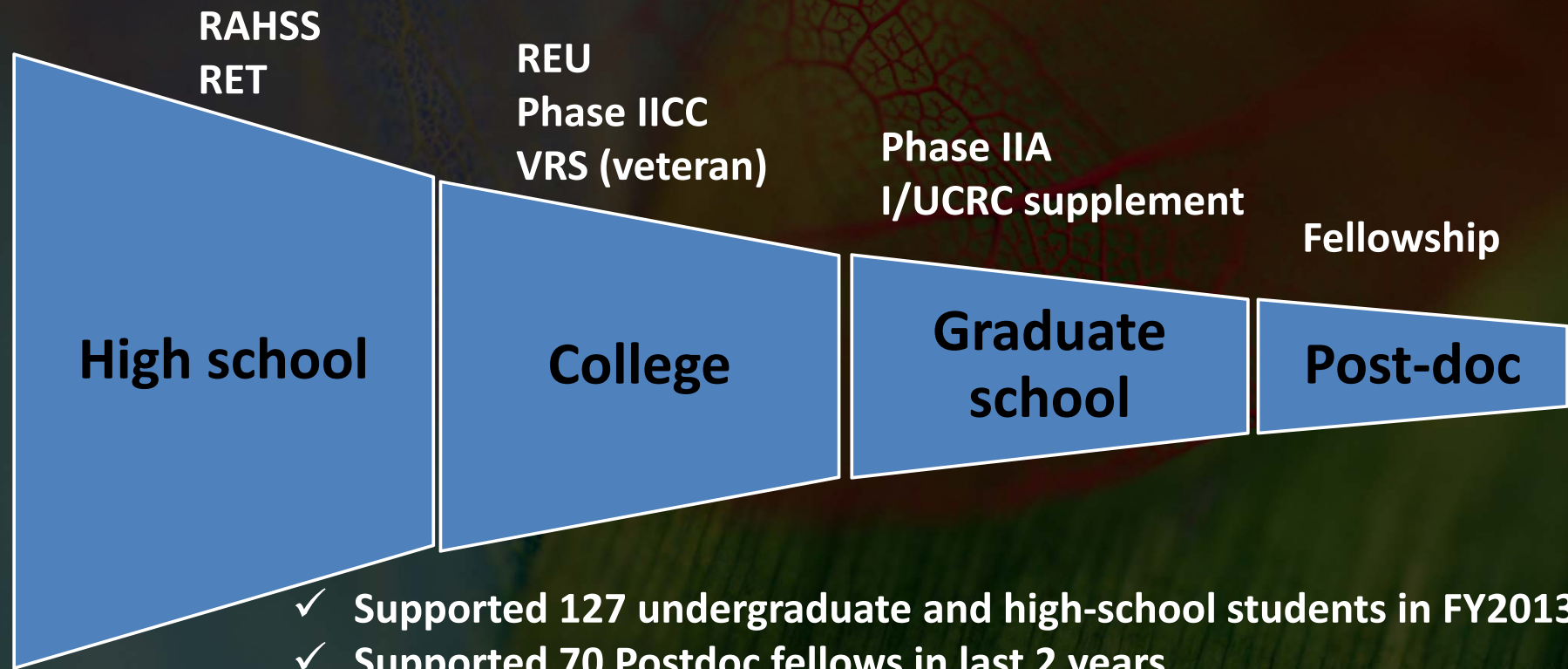
Cultivating Entrepreneurship



- Launched SBIR “Beat The Odds” boot-camp
 - ❖ 148 small businesses participated in 2013-14
 - ❖ I-Corps concept: customer discovery
 - ❖ Overwhelmingly positive feedback
- SBIR/STTR Grantees Conferences
 - ❖ Focus on entrepreneurial education
 - ❖ USPTO partnership



Providing Students with Real-Life Startup Experience (SBIR/STTR)





IIP by Numbers

- **FY2013**
 - ❖ **Total operation budget: ~\$202M**
 - ❖ **2216 proposals received**
 - ❖ **638 awards**
 - ❖ **96% of proposals were completed within 6 months**
- **Twitter: > 1,700 followers, about 35,000 accounts reached/week**
- **YouTube: 45 videos, more than 5,000 views**
- **ListServ: >1,800 subscribers**



Driving the Expansion of Innovation Capacity

