

Connection One
IAB Meeting
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National Science Foundation

*Welcome to the Industry / University
Cooperative Research Centers*

I/UCRC: Mission and Vision

Mission:

- To contribute to the nation's research infrastructure base by **developing long-term partnerships** among industry, academe and government
- To **leverage NSF funds with industry** to support graduate students performing industrially relevant research

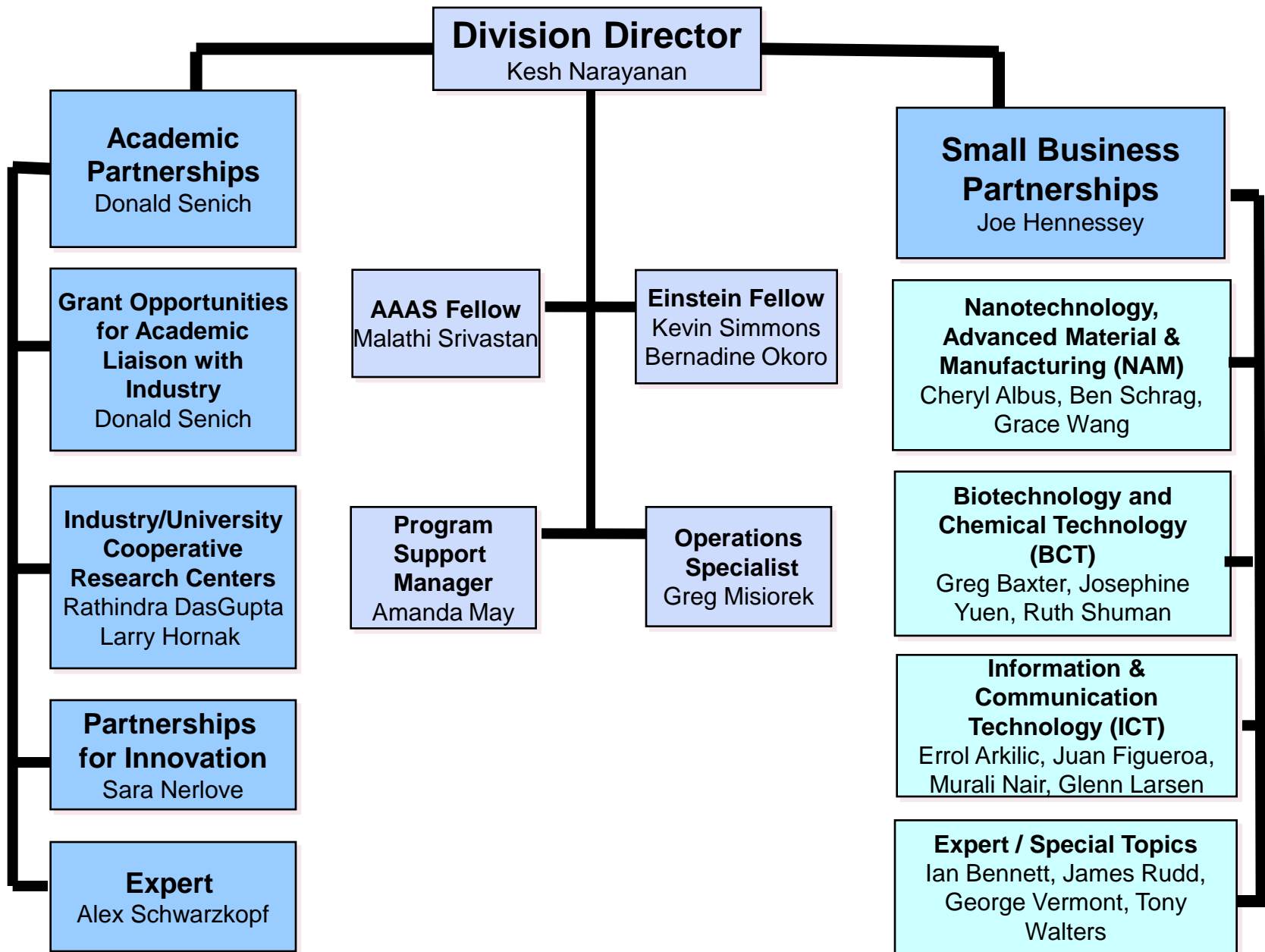
Vision:

- To **expand the innovation capacity** of our nation's competitive workforce through **partnerships** between industries and universities



Industrial Innovation and Partnerships

National Science Foundation
WHERE DISCOVERIES BEGIN



What does an I/UCRC offer?

Outcomes from a truly cooperatively defined, shared portfolio of precompetitive research

- **Industry driven** R&D projects
- Leveraging relatively small investment to reap far greater return via consortium-style research center
- Interaction with other key players in industry, peers and customers
- Access to intellectual property (**patents in use**)
- Access to pre-publication technical papers
- Access to world class facilities and researchers
- Access to students (**students hired**)
- **Transfer of research results to serve industry (impact assessment)**



Trust the IUCRC Model

- IUCRC model moves away from a one-on-one contracts



Disadvantages of Affiliates Model:

- sub-critical mass projects
- no sense of community
- value << sum of projects

-one-on-one decision-making

- collective ownership

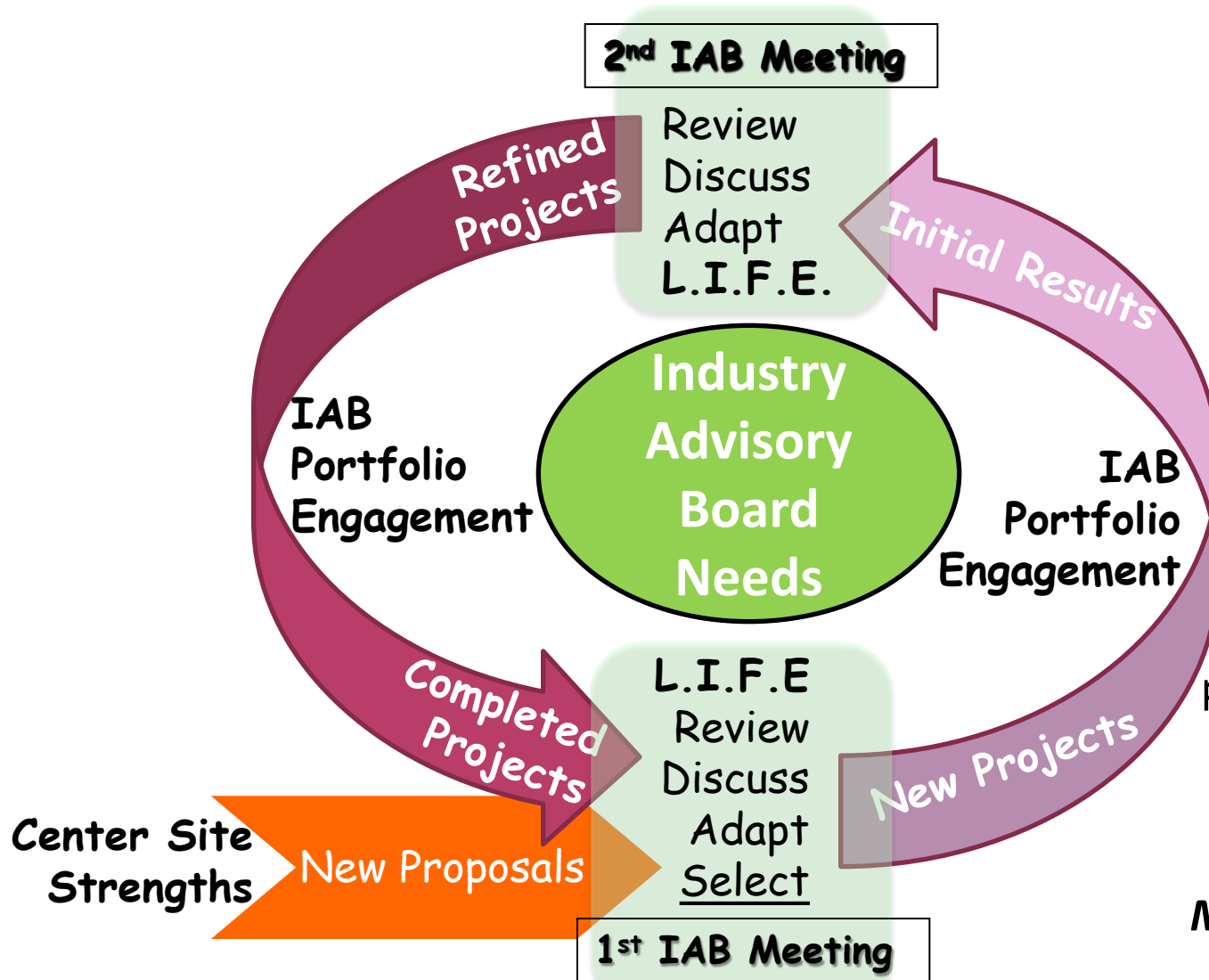
Advantages of the IUCRC Model:

- Conversation validates shared community needs
- Portfolio shaped, direction aligned with member needs
- Value across the portfolio Value >> sum of projects

Much more than collective ownership: Collective Value



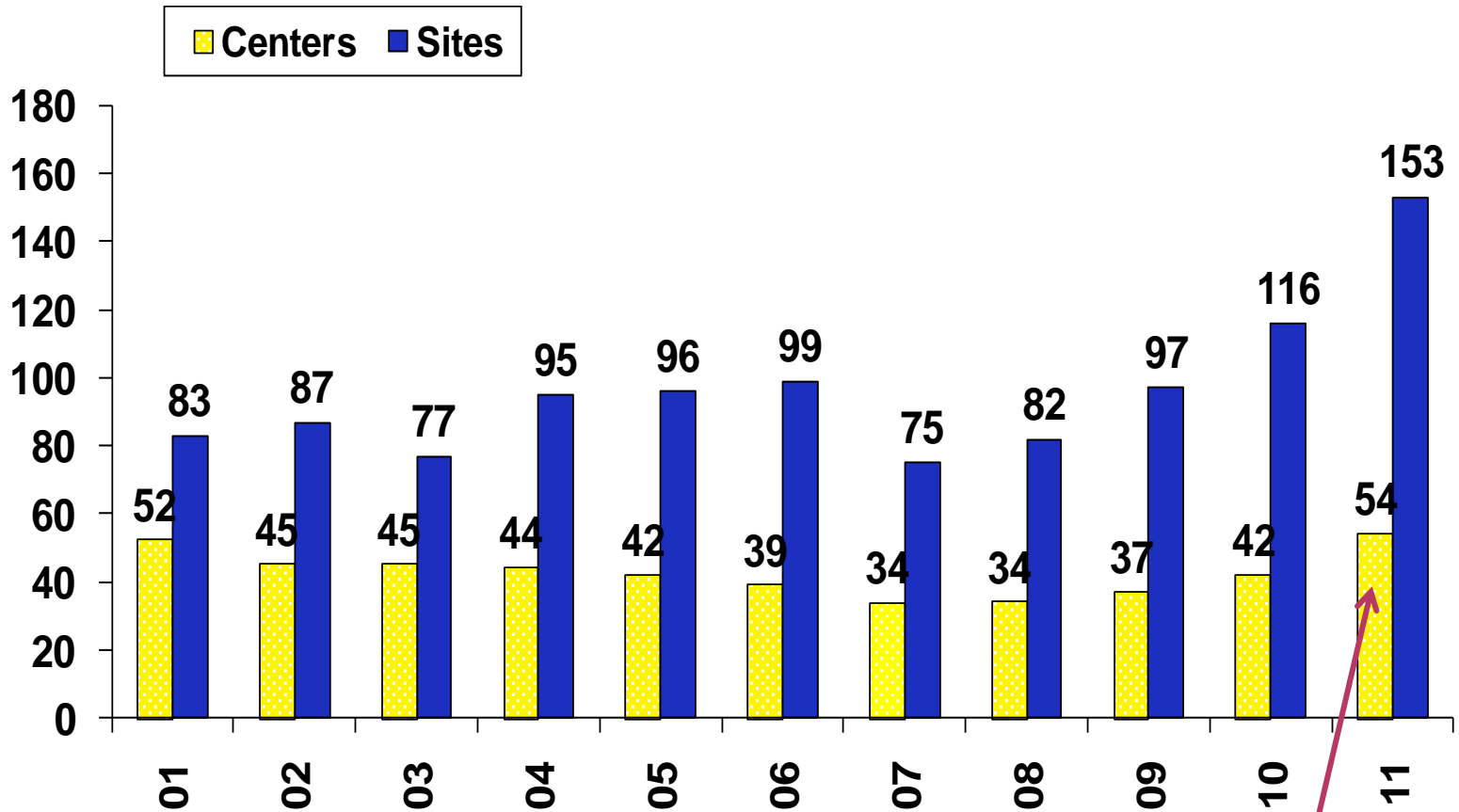
Priming the IUCRC Shared Portfolio



The co-operative process rapidly aligns the Shared Portfolio with **Member Needs** and **University strengths**



Active Centers and Sites by Year



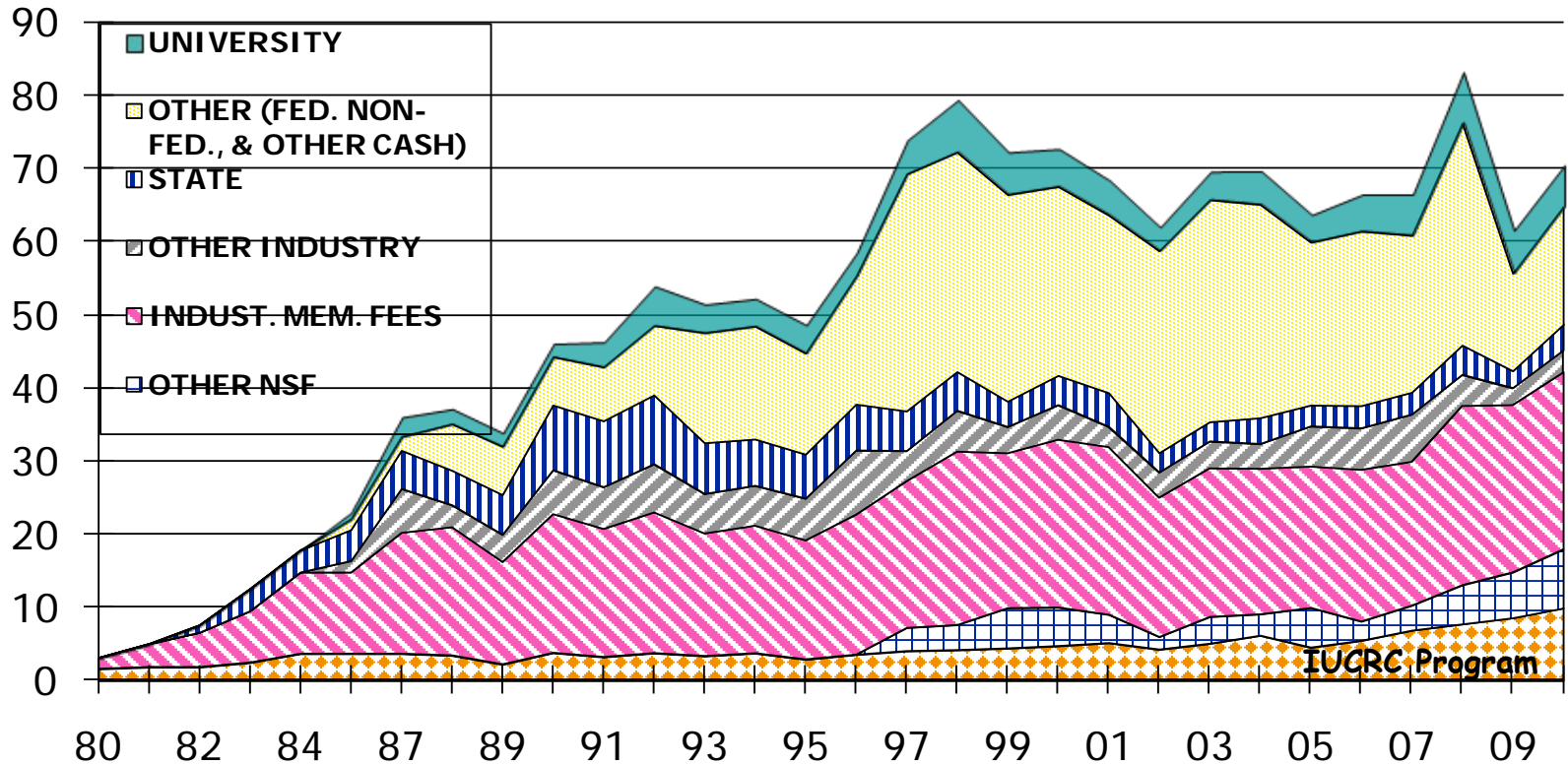
**INCREASE IN CENTERS AND SITES;
Active centers include 5 Phase III**

39 ENG
15 CISE



TOTAL FUNDING BY SOURCE BY YEAR IN DOLLARS

Millions



Industry/University Cooperative Research Centers

ENG Multi-University Centers

1. *Advanced Forestry*
2. *Advanced Packaging and Processing (III)*
3. *Bio Energy R & D*
4. *Composites Infrastructure*
5. *Ceramics Composites Optical Materials Center*
6. *Computational Materials Design*
7. *Design of Analog Digital Integrated Circuits (III)*
8. *Dielectrics*
9. *Electromagnetic Compatibility*
10. *Energy Harvesting*
11. *Friction Stir Processing*
12. *Fuel Cells*
13. *Grid-Connected Adv Power Elec*
14. *Health Org. & Transformation*
15. *Integrative Joining of Materials for Energy Applications*
16. *Laser and Plasma for Adv. Mfg.*
17. *Logistics and Distribution*
18. *Membrane Science, Engineering & Technology*
19. *Minimally Invasive Diagnostics*

ENG Multi -University Centers

20. *Next Generation Photovoltaics*
21. *Particulate and Surfactants*
22. *Pharmaceutical Development*
23. *Plug-In Hybrid Electric Vehicles*
24. *Precision Forming*
25. *Power Systems Engineering Research Center (III)*
26. *Resource Recovery & Recycling*
27. *Smart Vehicles Concepts*
28. *Silicon Solar*
29. *Small Satellite Technology*
30. *Connection One*
31. *Water and Environmental Technology*
32. *Water and Equipment Policy*
33. *Wood Based Composites*

ENG Single-University Centers

34. *Advanced Cutting Tools*
35. *Advanced Vehicle Electronics (III)*
36. *Biomolecular Interaction*
37. *Child Injury Studies*
38. *Electronic Micro-Cooling*
39. *Non-Destructive Evaluation (III)*

39 ACTIVE ENG CENTERS



Industry/University Cooperative Research Centers

CISE Multi-University Centers

1. **Advanced Knowledge Enablement**
2. ***Autonomic Computing***
3. ***e-Design***
4. **Embedded Systems**
5. **Experimental Computer Systems**
6. **Hybrid Multicore Productivity**
7. **Identification**
8. **Intelligent Maintenance**
9. **Intelligent Storage**
10. **Net-Centrics Systems**
11. ***Reconfigurable Computers***
12. **Search & Rescue Robots**
13. **Security and Software Engineering Research Center**
14. **Surveillance Theory**
15. ***Wireless Internet***

15 ACTIVE CISE CENTERS



Other Funding Opportunities for Connection One IUCRC

- CORBI Projects – Between I/UCRC Centers (NSF matching!)
- Fundamental Research (Industry Defined)
- Research Experience for Undergraduate Students (REU)
- Research Experience for Teachers (RET)
- Federal Government Interagency Exchange of Funds
- International Collaboration/Projects
- Supplemental Opportunity for SBIR/STTR Memberships



Connection One Status

- **Arizona State - Phase II; award expires August 31, 2012**
- **University of Arizona – Phase II; award expires June 30, 2013**
- **Ohio State University – Phase I; award expires July 31, 2011**
- **University of Hawaii – Phase II; award expires June 30, 2014**
- **RPI – Phase II proposal pending**



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<http://www.nsf.gov>

and:

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Note: The best way to contact us is via e-mail. Many are on the road frequently

