

Discovery **to** Innovation

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Industrial Innovation and Partnerships

National Science Foundation

Innovations through Partnerships

NSF's Vision*

Advancing Discovery, **Innovation** and
Education beyond the frontiers of
knowledge, and empowering future
generations in science and engineering.

*NSF Strategic Plan FY 2006-2011

Innovations through Partnerships

NSF Investment* Leverage through Collaboration

- Strengthen nation's **collaborative advantage** by developing unique network and **innovative partnerships**
- Strengthen our **traditional partnerships** and develop **new collaboration** with other agencies, organizations and corporations, that can identify common goals that can unite and focus partnerships

*NSF Strategic Plan FY 2006-2011
Innovations through Partnerships

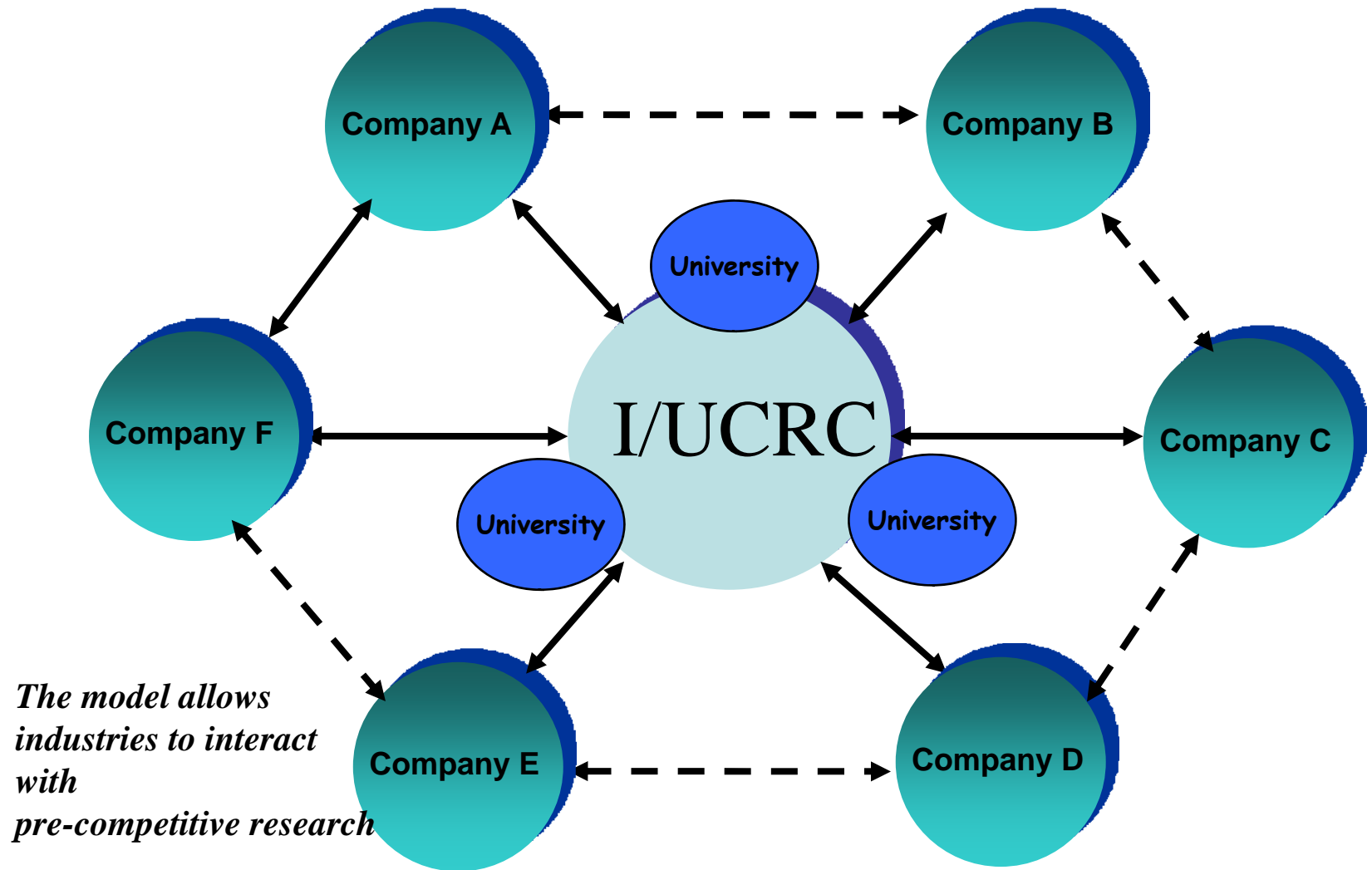
Discovery to Innovation

Partnerships

- **STC** – Science and Technology Centers
- **NSEC** – NanoScience and Engineering Centers
- **NNIN** – National NanoInfrastructure Networks
- **NRI** – NanoElectronics Research Initiative
- **PFI** – Partnerships for Innovation
- **GOALI** - Grant Opportunities for Academic Liaison with Industry
- **ERC** - Engineering Research Centers
- **MRSEC** – Materials Research S & E Centers
- **I/UCRC** - Industry/University Cooperative Research Centers
 - **STTR** - Small Business Technology Transfer
 - **SBIR** - Small Business Innovation Research

Innovations through Partnerships

The I/UCRC Model

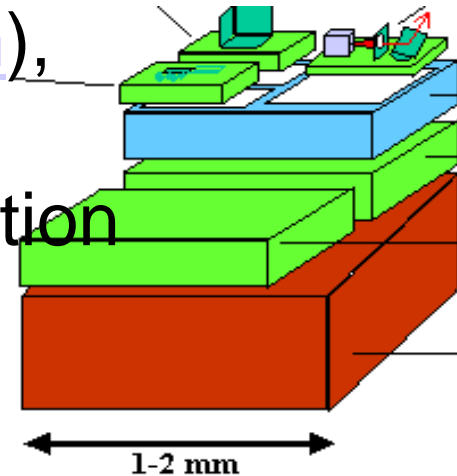


The model allows industries to interact with pre-competitive research

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Industry University Cooperative Research Centers (I/UCRC) – Kris Pister

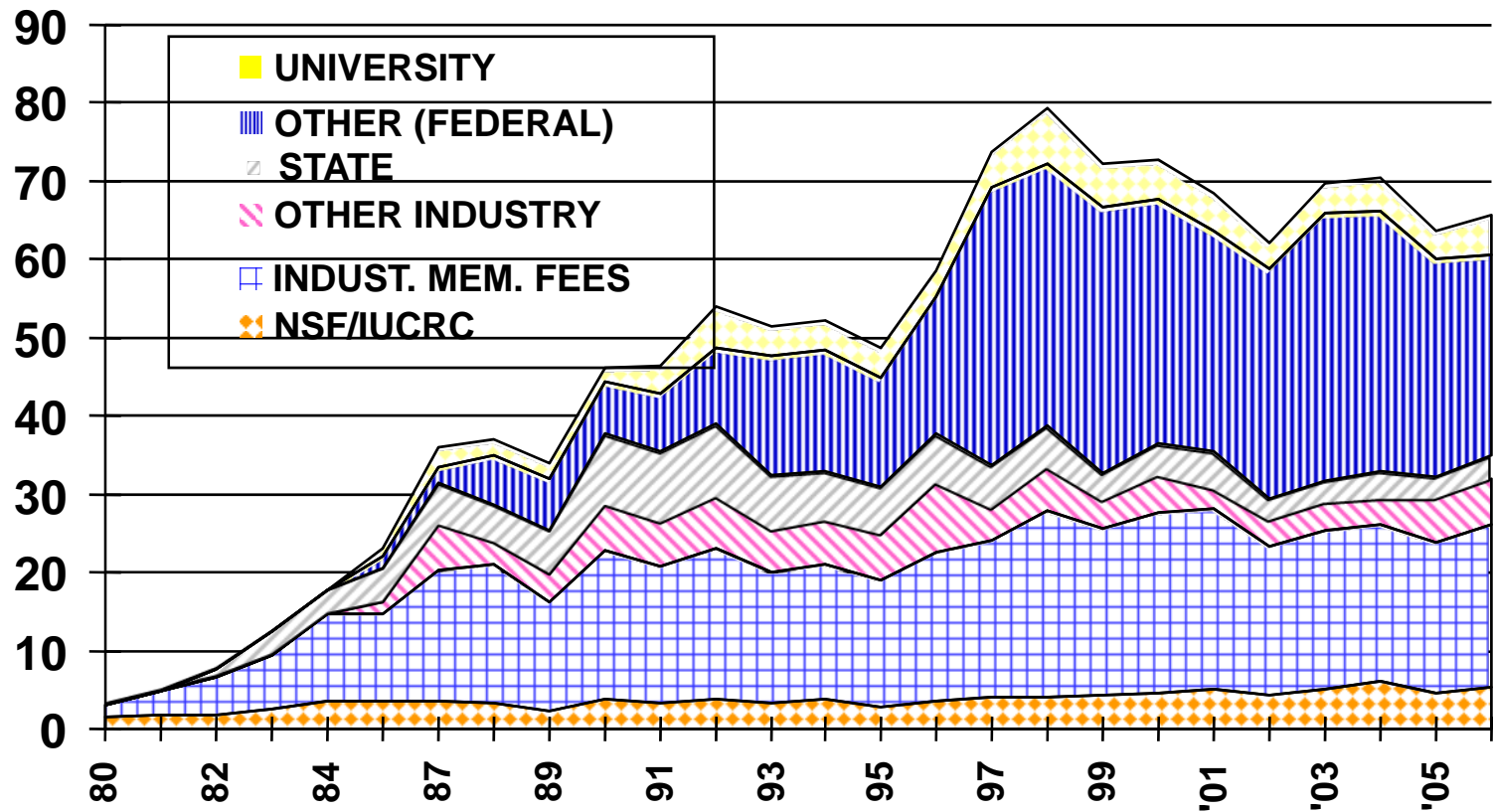
- **Center for Sensors and Actuators
U. C.- Berkeley / Dust Networks -**
Wireless sensors called “Smart Dust”
that can track troop movement or
traffic density for example.
- Hayward, Calif., – September 14, 2006 –
Dust Networks, (www.dustnetworks.com),
one of the recipients of The Wall Street
Journal's 2006 Global Technology Innovation
Awards.



Kris Pister, Student-Professor-Founder
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TOTAL FUNDING BY SOURCE BY YEAR IN DOLLARS

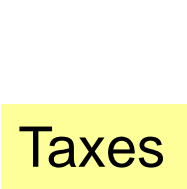
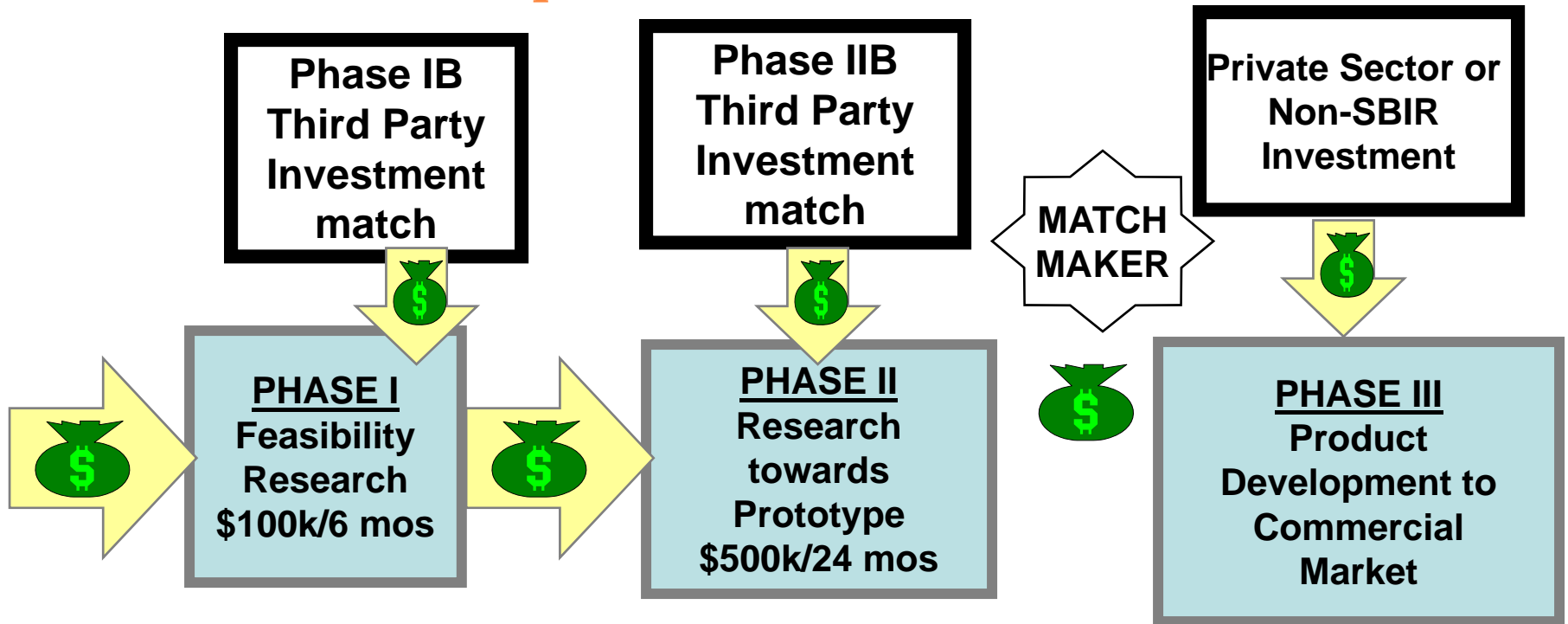
Millions



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NSF SBIR/STTR Innovation Model

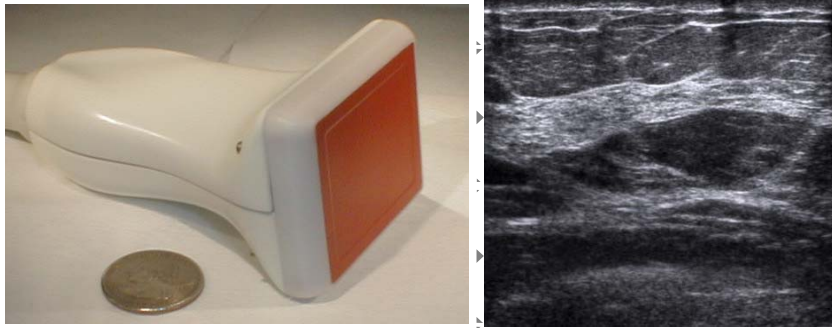
Unique to NSF



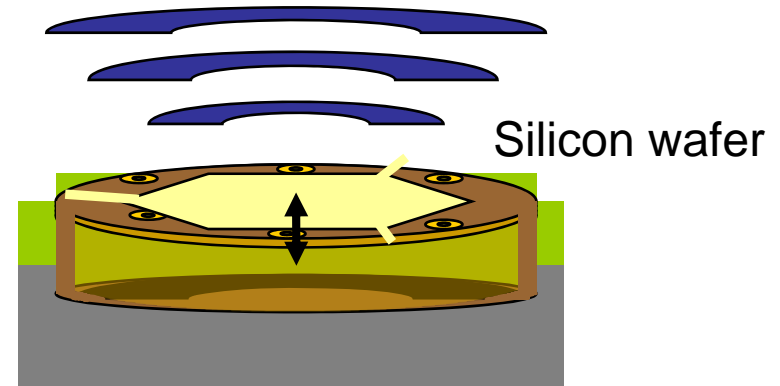
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Sensant

High Quality Dielectric films for
Novel Medical Ultrasound Probes



Develop transducers that have
stable charge trapping behavior



- Develop test structures and infrastructure to measure charging in suspended membrane
- Demonstrate stable high e-field behavior
- Demonstrate acceptable MTBF with zero dead elements

NSF Phase IIB Match

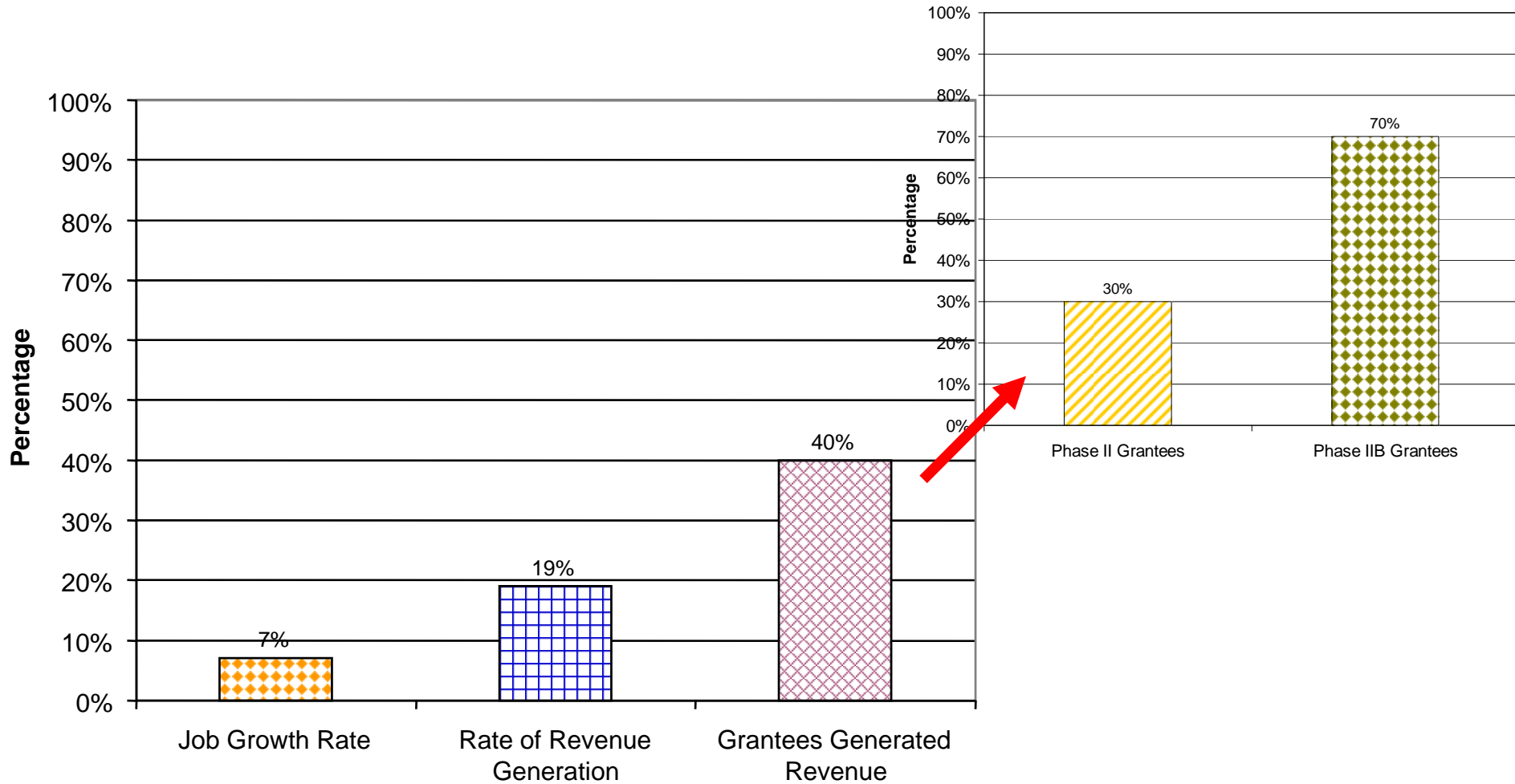
Angel Investors: \$1,250,000

**Acquired by
Siemens Medical**

Igal Ladaboum

***Innovations throu* Student-Founder-Corporate**

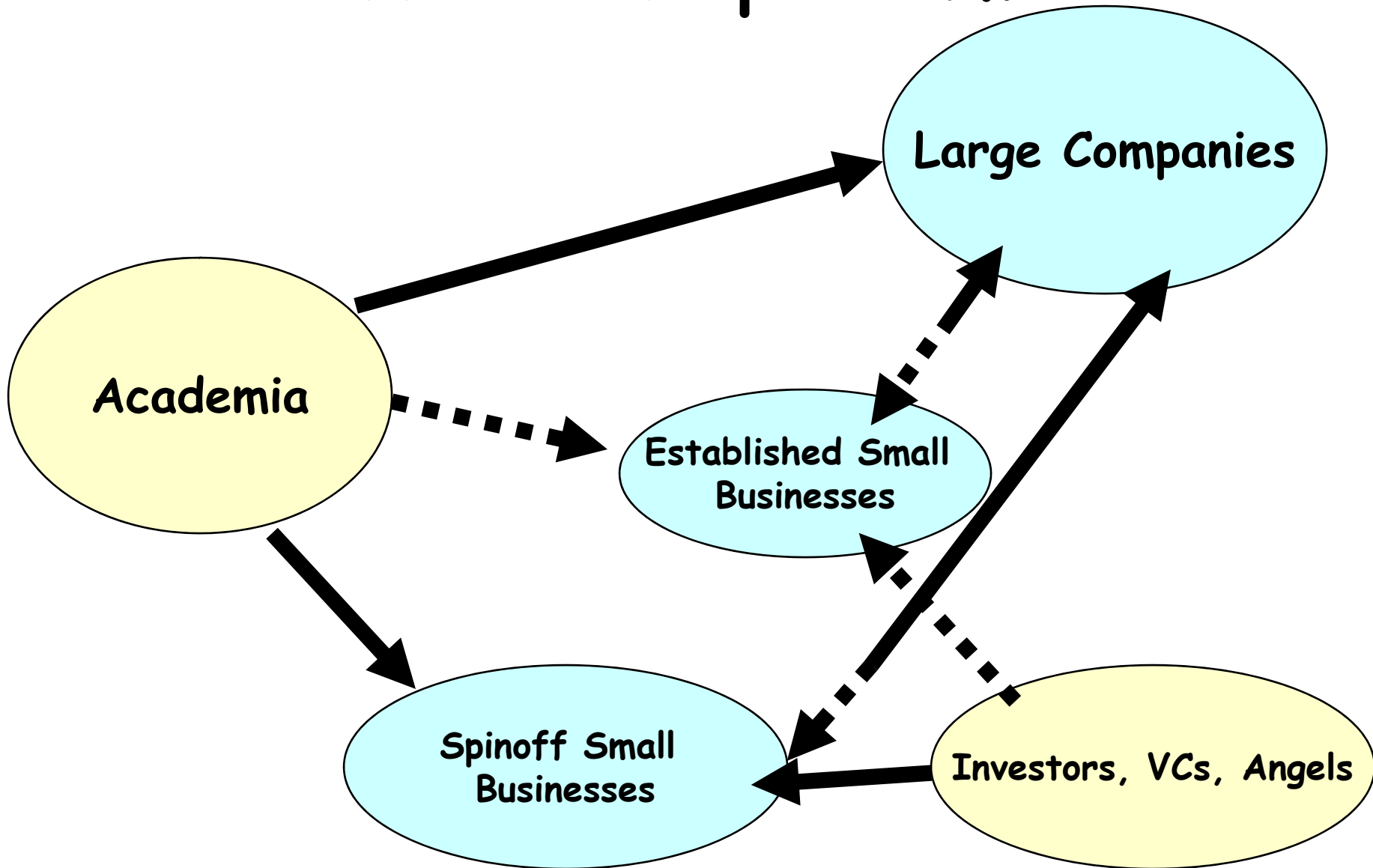
SBIR/STTR Commercialization Record



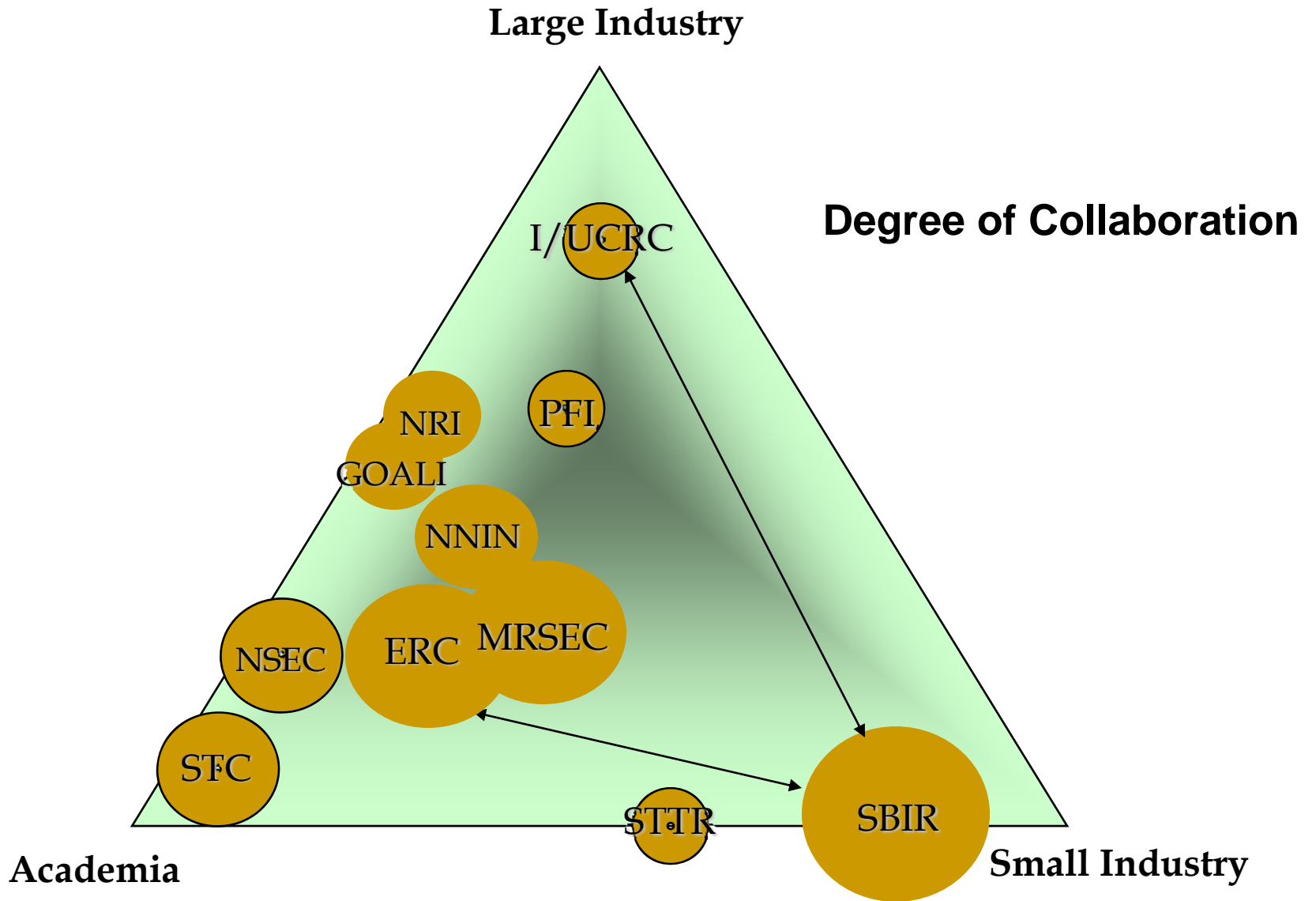
Innovations through

***Based on ~500 Phase II Grantees**

Innovation Spectrum



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Thank You!

Kesh Narayanan

Division of Industrial Innovation and
Partnerships

Directorate for Engineering
National Science Foundation

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