

Technology and Economic Development: Promoting the Formation of New Nanotechnology Start-up Companies

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3 May 2003

Why Emphasize Entrepreneurship?

- Breakthrough technologies in energy or nanotechnology are often best developed by small groups of highly-skilled, risk-taking individuals.
- Many students in fields relating to the energy sector (e.g., chemistry) will be employed in start-up companies. ACS data showed that approximately 50% of doctoral students in chemistry going to the for-profit sector took jobs in companies of 50 or fewer employees.

Background: A Little History...

- In every geographical cluster of high tech firms, three ingredients are present:
 - Entrepreneurship “infrastructure” organizations
 - Investment funding (e.g., venture capital)
 - Universities as catalysts

Universities as Catalysts

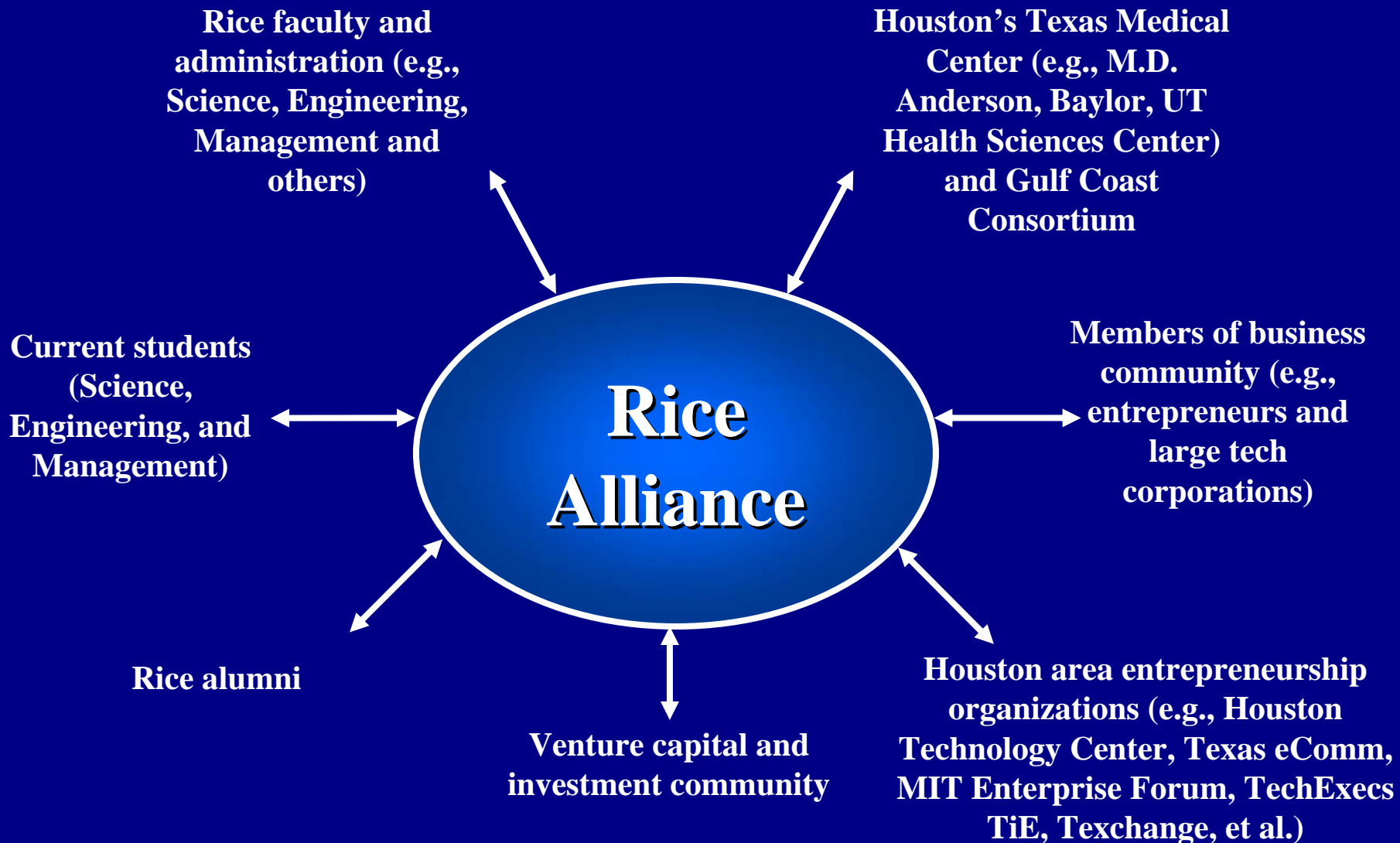
- In every geographical cluster, universities have played a fundamental role:
 - Silicon Valley: Stanford and UC Berkeley
 - Boston's Route 128: MIT
 - Research Triangle: UNC, Duke, NC State
 - Austin: U. of Texas

Mission of the Alliance

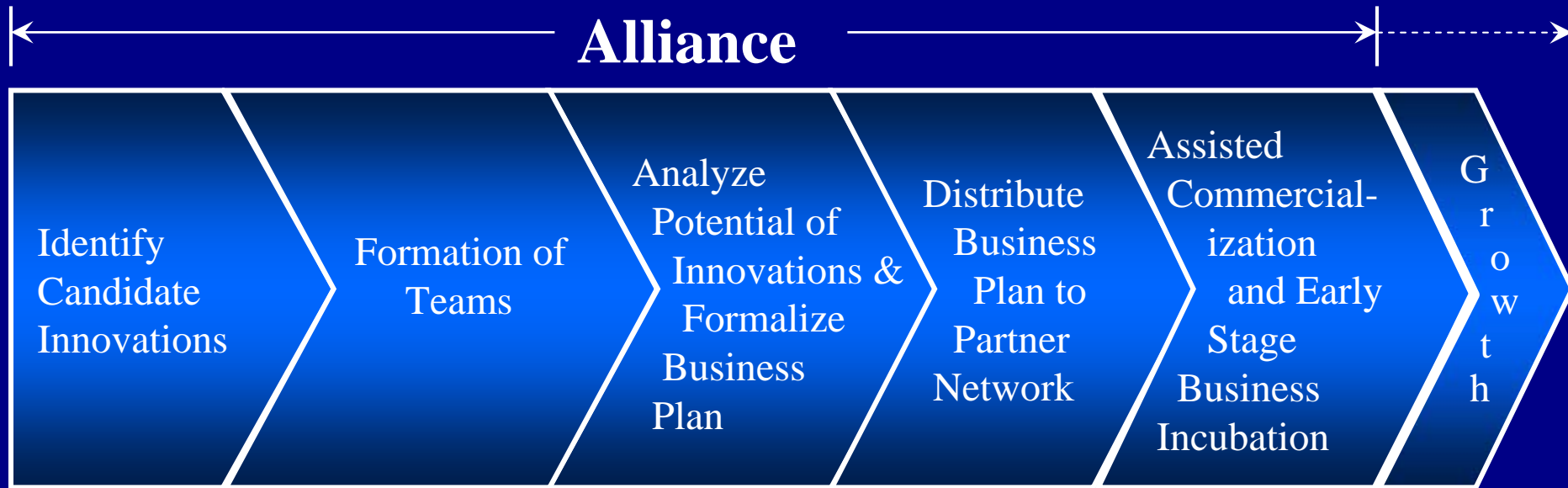
Create the authoritative initiative at Rice to:

- Coordinate a forum for exchange among the science, engineering, and entrepreneurship communities
- Develop and actively facilitate team-based approaches for the study of and creation of new entrepreneurial business concepts, new jobs, and new sources of wealth for Rice and the U.S. economy

Rice Alliance as Catalyst



From Innovation to Start-up Firm



- Alliance identifies technical innovations via OTT and alumni network

- Networking opportunities for linking technical talent with business talent

- Courses on entrepreneurship and related courses
- “Business Thought Leader Speakers”

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- Venture capitalists, angels, and alumni
- “Southwest Business Plan Competition”

- Infusion of additional technical and/or management talent
- Prototype or “beta version” development

Alliance's Entrepreneurship Education Workshop: October 2003

- Equip researchers with knowledge of the process of company formation.
- Articulate what are appropriate roles for scientists and engineers in start-up companies.
- Promote proper interactions between academic researchers and members of the financial investment community.

Alliance Forum Events

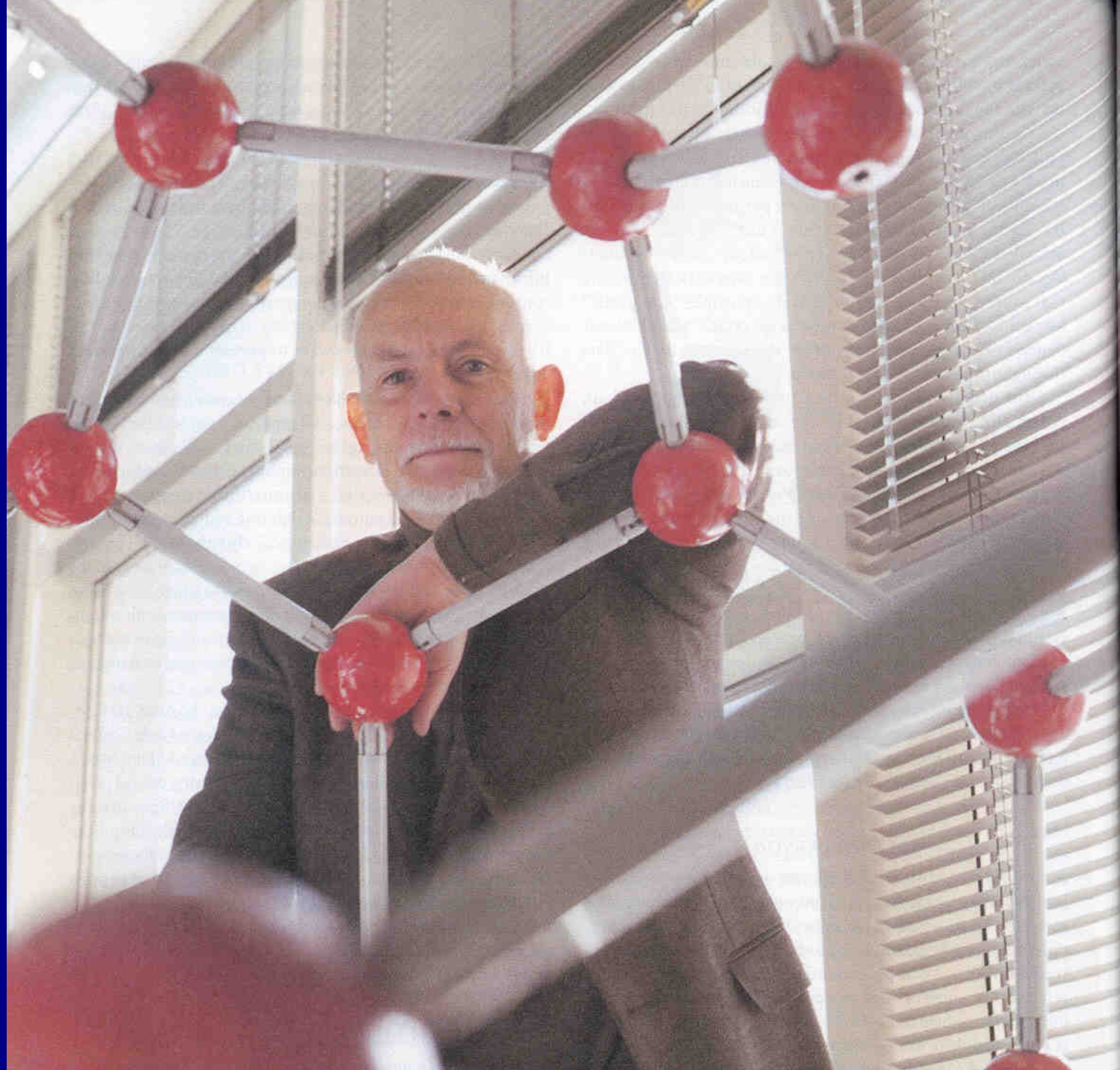
- All Alliance events are open to the public and promote interaction among business persons, technologists, and investors
- Entrepreneurs who present at Forum events get access to a "talent pool" of potential collaborators, mentors, and investors
- Forum events welcome involvement of individuals from large technology companies as well as service providers such as attorneys, accountants, and consultants

The Rice Alliance: Commercializing New Technological Discoveries

- Alliance has assisted the launch of 115 new technology businesses during its first three years of operation: Energy, nanotechnology, biotech, and information technology.
- The Rice Alliance has provided support to nanotechnology startups.

Nanotechnology Firms Founded at Rice and Supported by the Alliance

- Three nanotech startup firms that have been assisted by the Rice Alliance:
 - Molecular Electronics Corp. (\$8M in angel funding)
 - Nanospectra Biosciences, Inc. (Small Business Innovation Research funding; raised angel funding)
 - Carbon Nanotechnologies, Inc. (\$30M in two rounds of funding)



Houston Can Lead the Nation in Commercializing Nanotechnology

- Second annual Rice Alliance “Technology Innovation Forum” on nanotechnology, 24 January 2003
- Annual Center for Biological and Environmental Nanotechnology “Nanodays” conference.
- Energy Innovation Forum, autumn of 2003
- Get involved: <http://www.alliance.rice.edu>