The Space Between:
Building the
Infrastructure for Entrepreneurship
in Emerging Domains of Activity

Jennifer L. Woolley, Ph.D., M.B.A.
Santa Clara University
jwoolley@scu.edu or jenniferwoolley@yahoo.com

Small Business and Entrepreneurship during an Economic Recovery
Nov 9-10, 2011

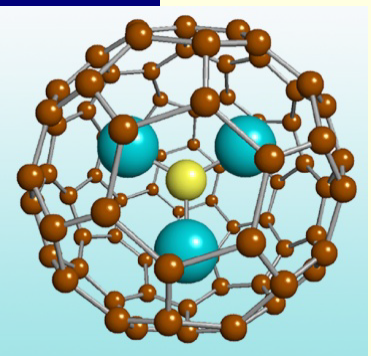
The Federal Reserve Board
FEDERAL RESERVE BANK of ATLANTA
Ewing Marion KAUFFMAN Foundation

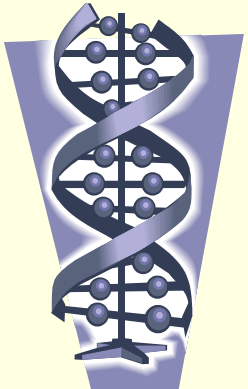
Infrastructure for Entrepreneurship

TECHNOLOGY Innovation

Market

Infrastructure





Infrastructure for Entrepreneurship

What do we know?

Infrastructure for Entrepreneurship

Public Resource Endowments

Proprietary Functions

Institutional Arrangements

Infrastructure for Entrepreneurship

- The study:
- Nanotechnology
  - > 12,000 pages
  - > 40 interviews

Government agencies
Universities
Conferences

Associations and groups
Media
Firms – new and old

- Researchers, entrepreneurs, policy makers…

Infrastructure for Entrepreneurship

Nanotechnology

Jos. A. Bank	Yamaha
Dockers	GM
L.L. Bean	Samsonite
Eddie Bauer	J.C. Penney
Land's End	Babolat
Calloway	Easton
Adidas	Brooks Brothers

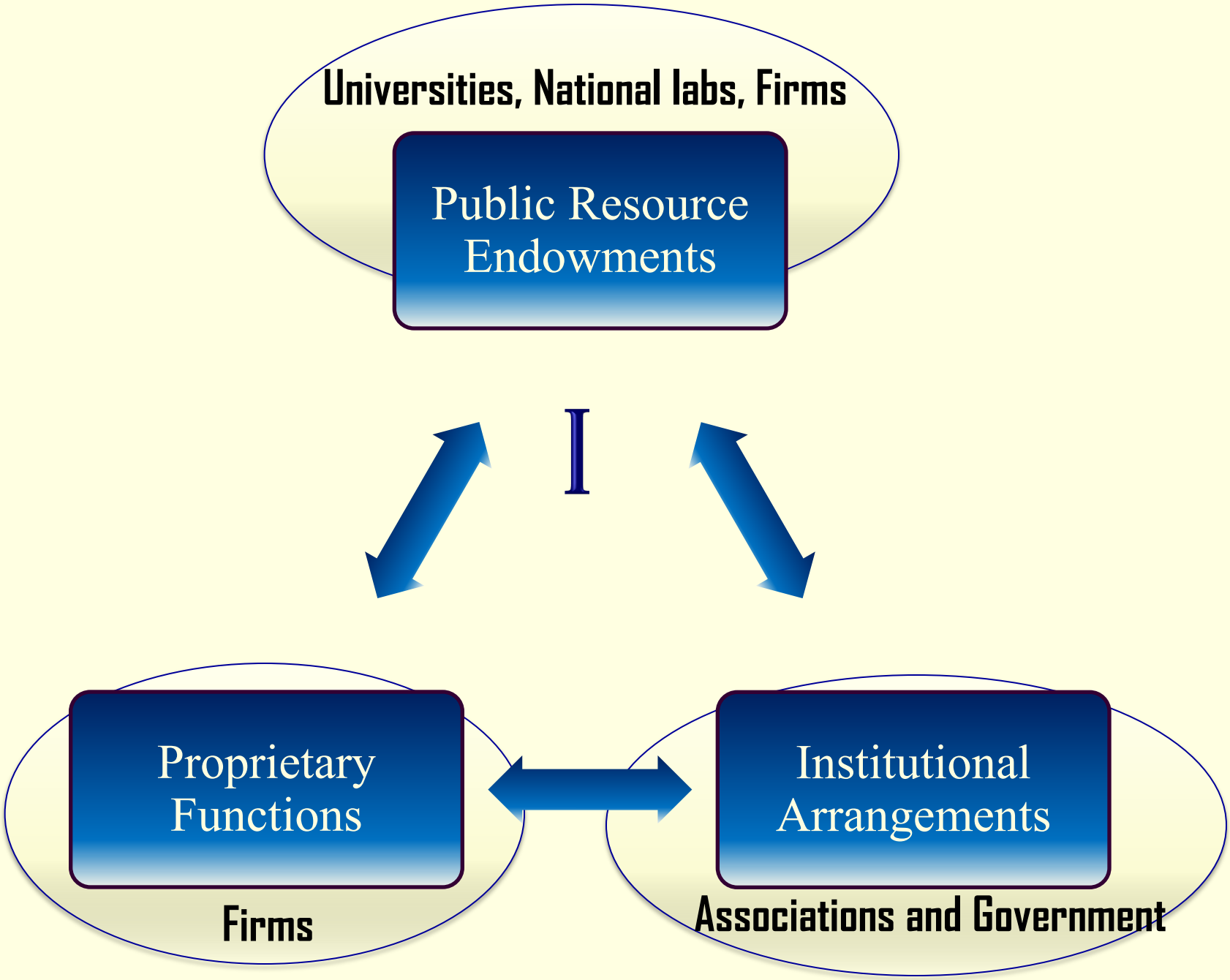
Bergdorf Goodman

…….

Infrastructure for Entrepreneurship

Findings

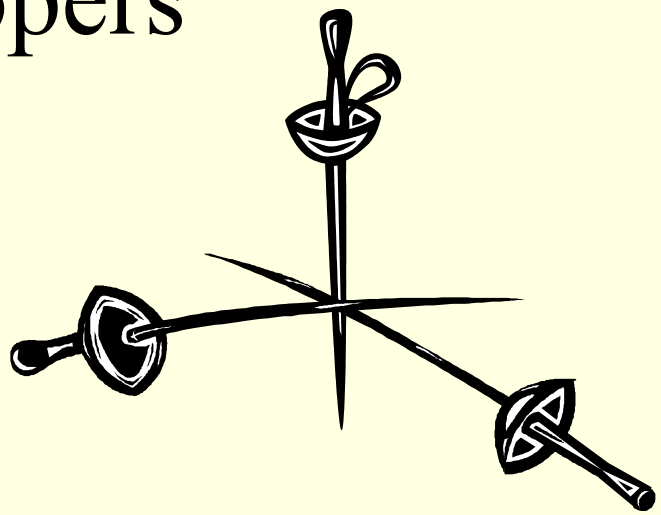
- Infrastructure components
- Infrastructure developers


Universities, National labs, Firms
Public Resource Endowments
I
Proprietary Functions
Firms
Institutional Arrangements
Associations and Government

Infrastructure for Entrepreneurship

Findings

- Infrastructure components
- Infrastructure developers
- All for one
- One for all
- Early entrepreneurs



Infrastructure for Entrepreneurship

Implications

- Developers roles
- Interaction
- Myopia
- Upstream

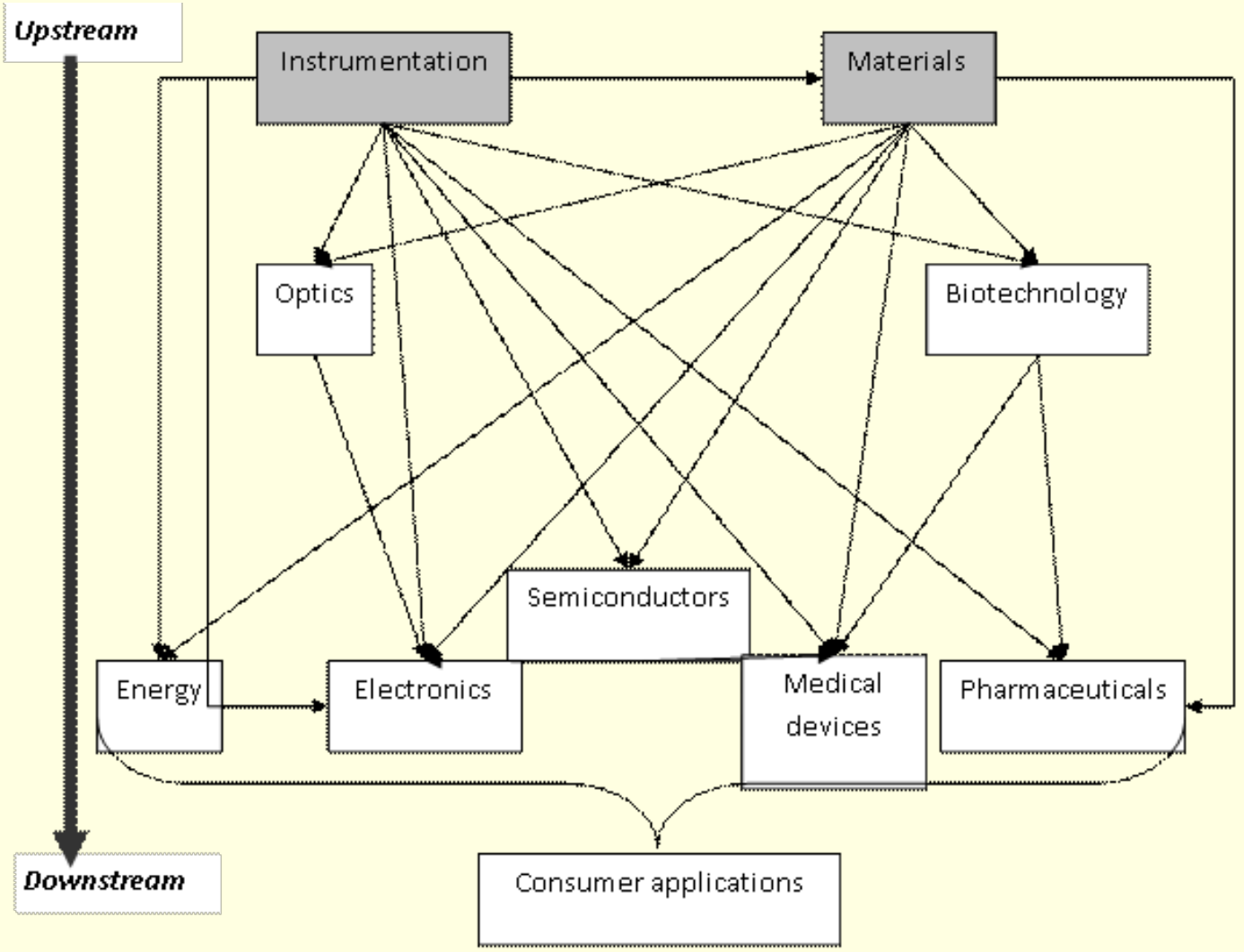
Infrastructure for Entrepreneurship

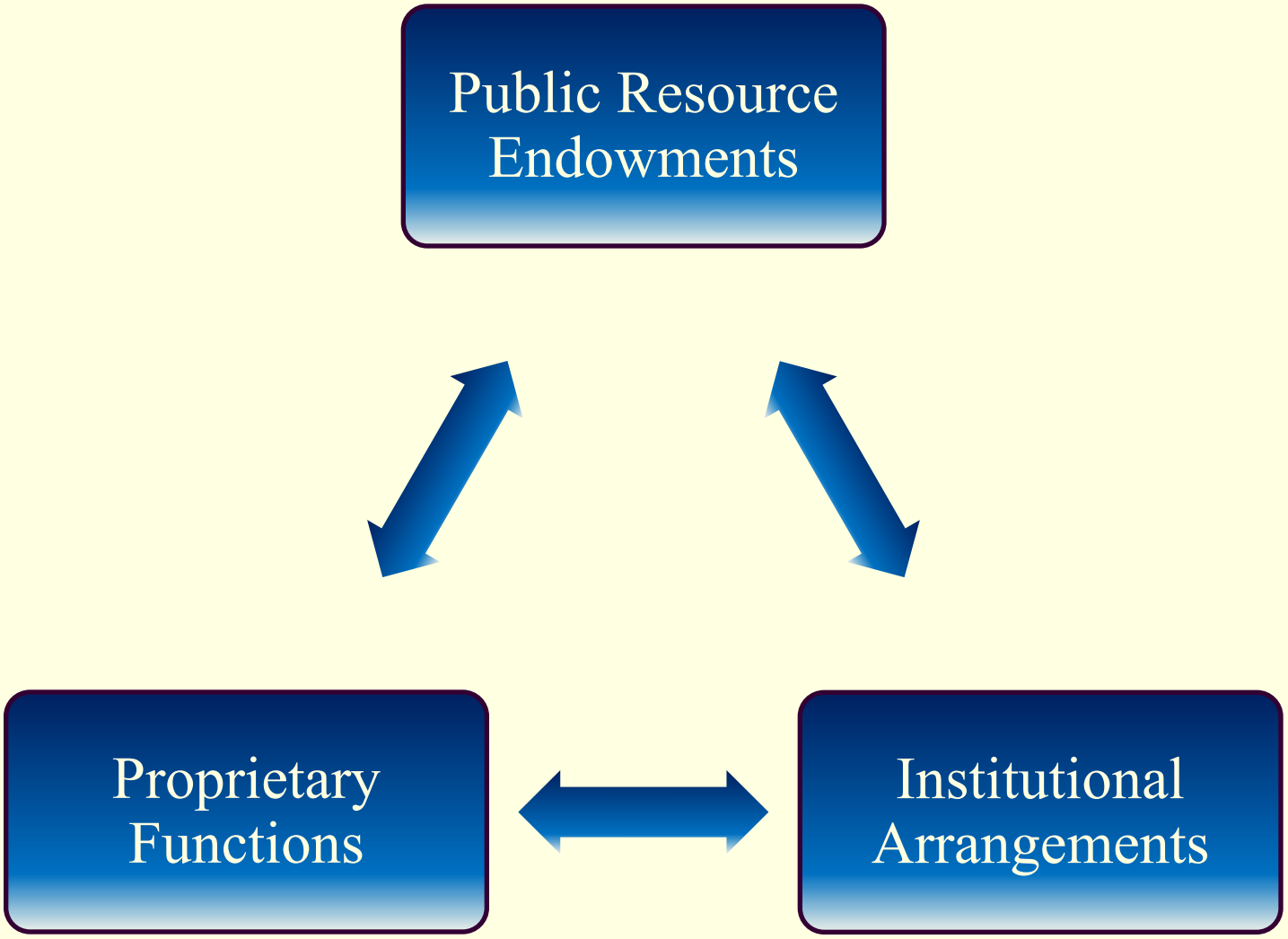
THANK YOU!!!

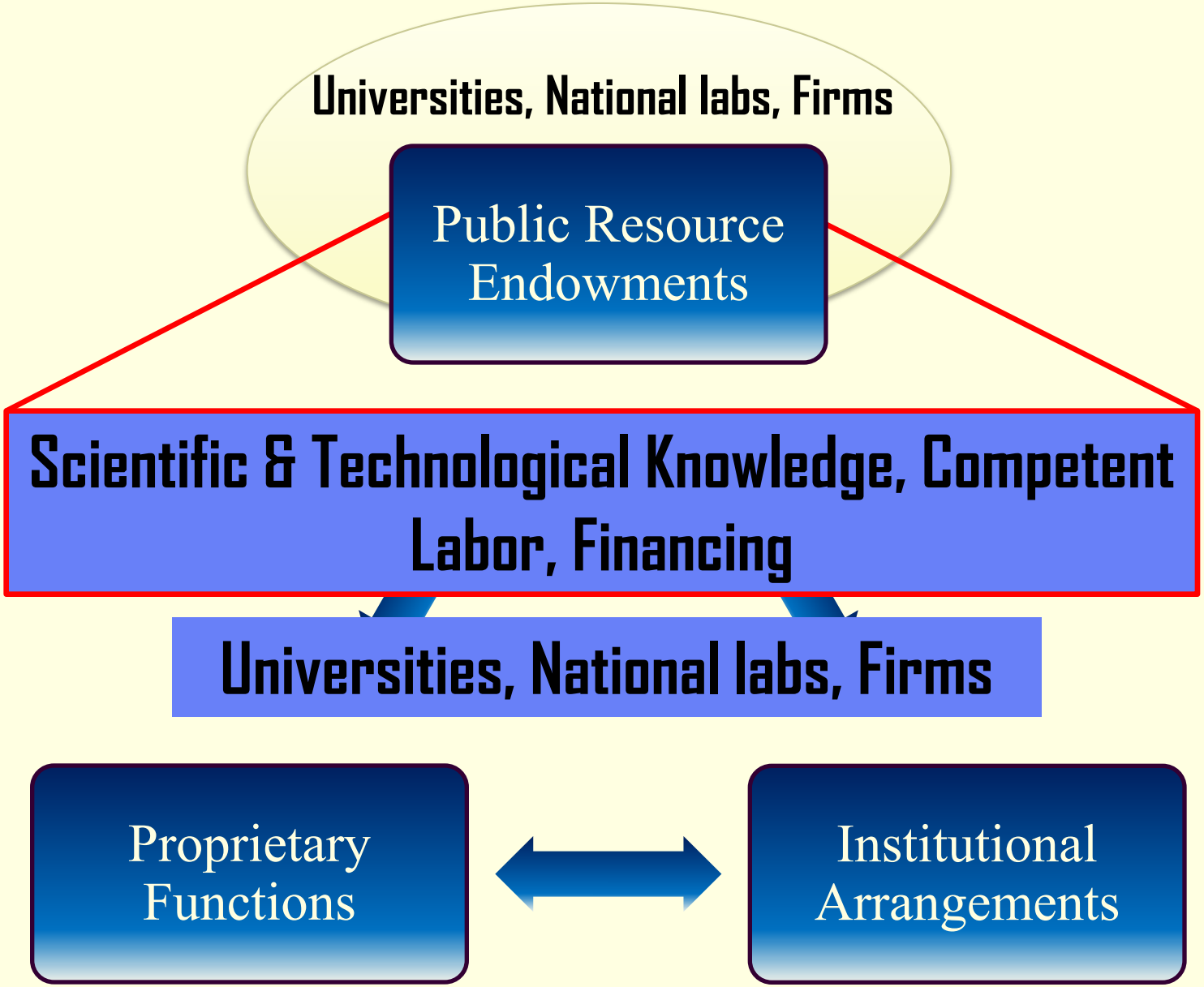
Jennifer L. Woolley
jwoolley@scu.edu
jenniferwoolley@yahoo.com

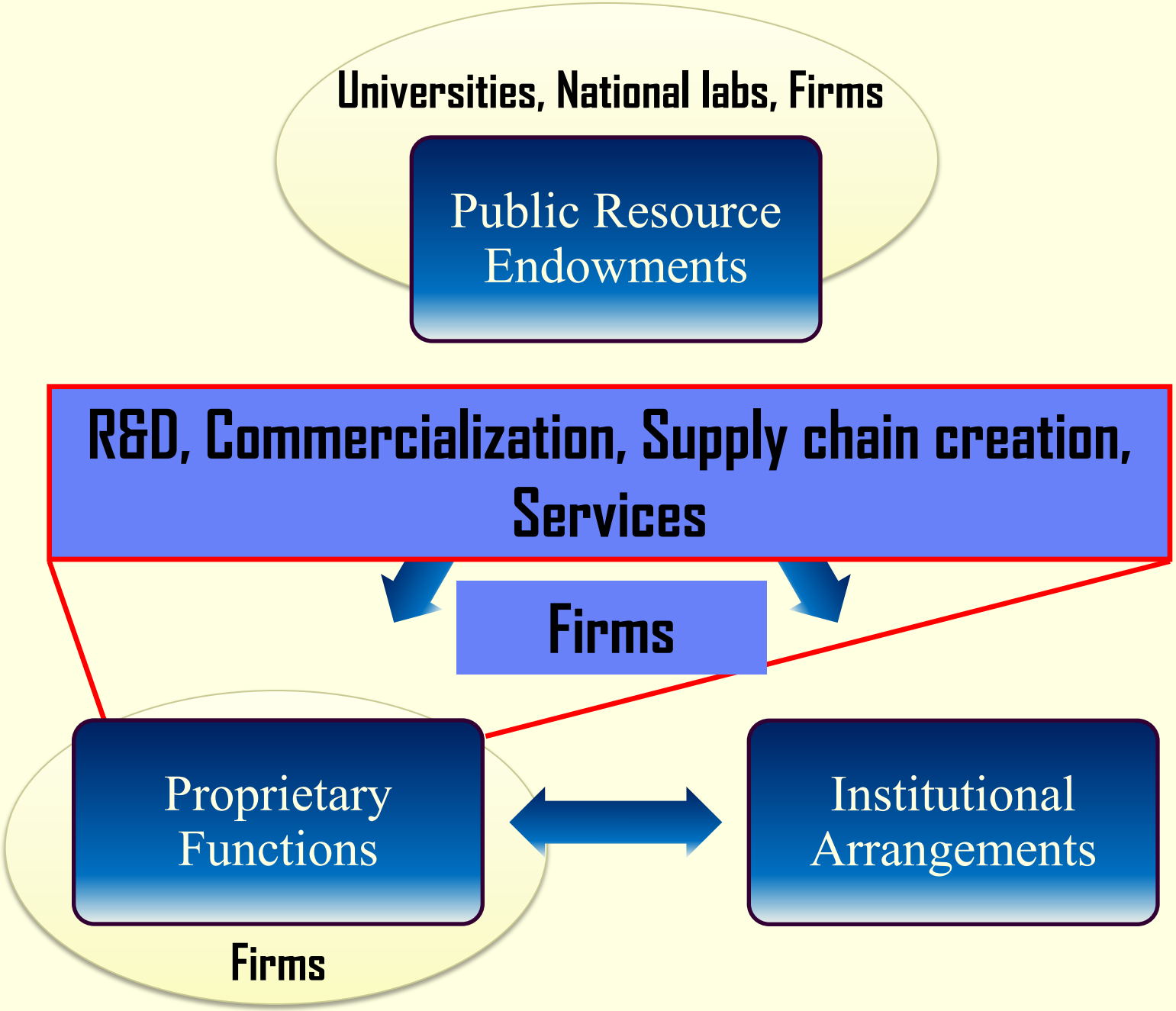
Santa Clara University

Infrastructure for Entrepreneurship




Public Resource Endowments
Proprietary Functions
Institutional Arrangements


Universities, National labs, Firms
Public Resource Endowments
Scientific & Technological Knowledge, Competent Labor, Financing
Universities, National labs, Firms
Proprietary Functions
Institutional Arrangements


Universities, National labs, Firms
Public Resource Endowments
R&D, Commercialization, Supply chain creation, Services
Firms
Proprietary Functions
Institutional Arrangements
Firms

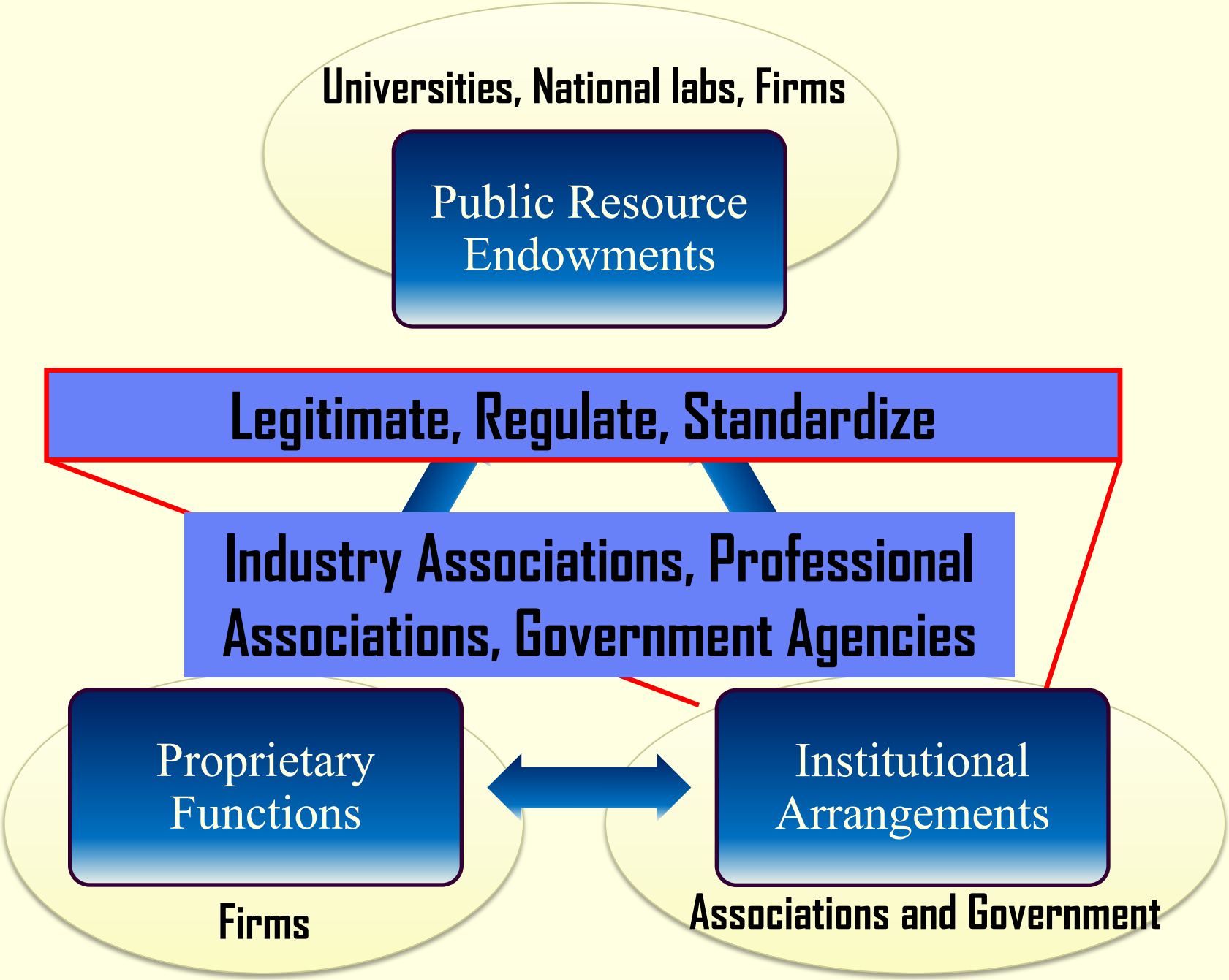
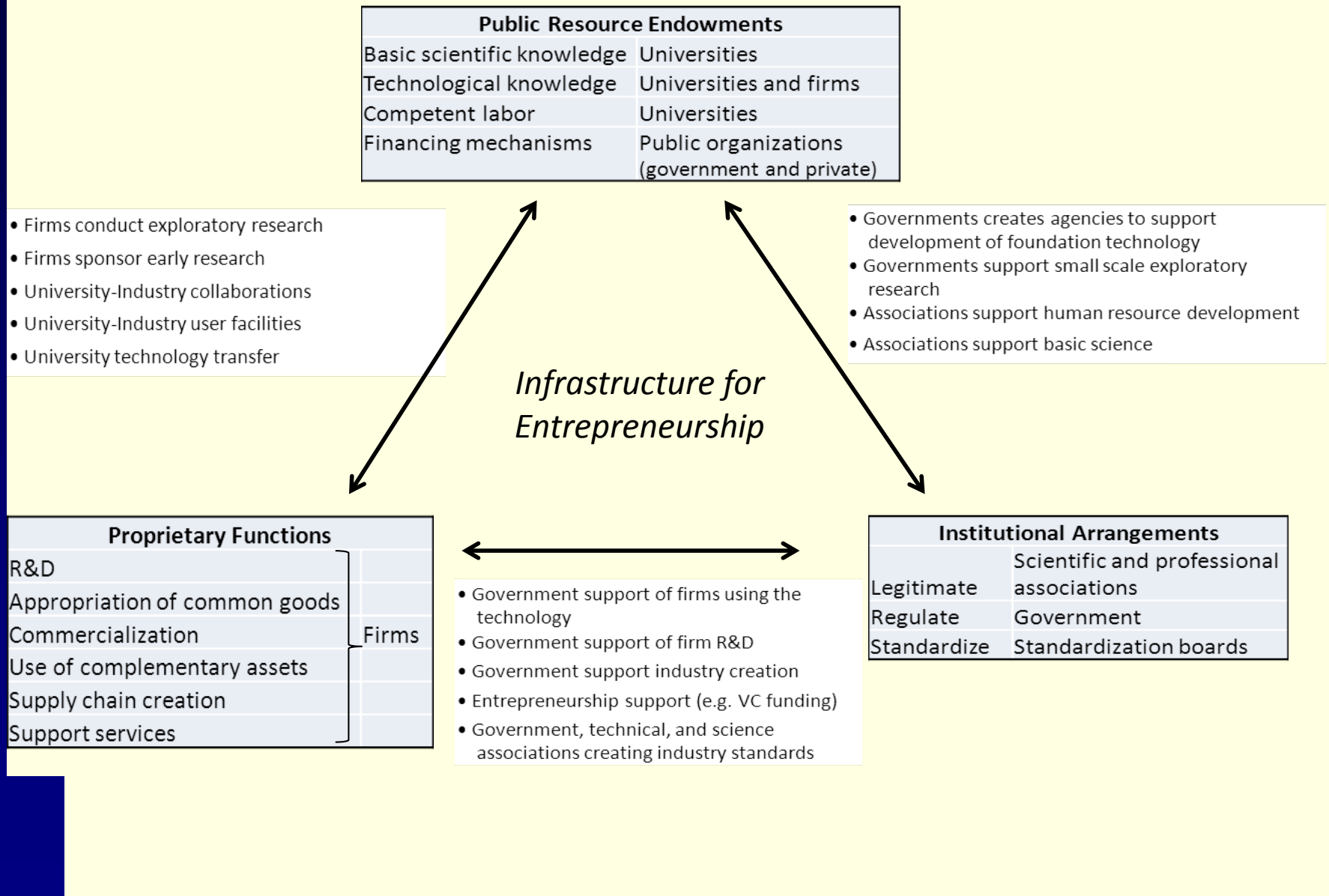
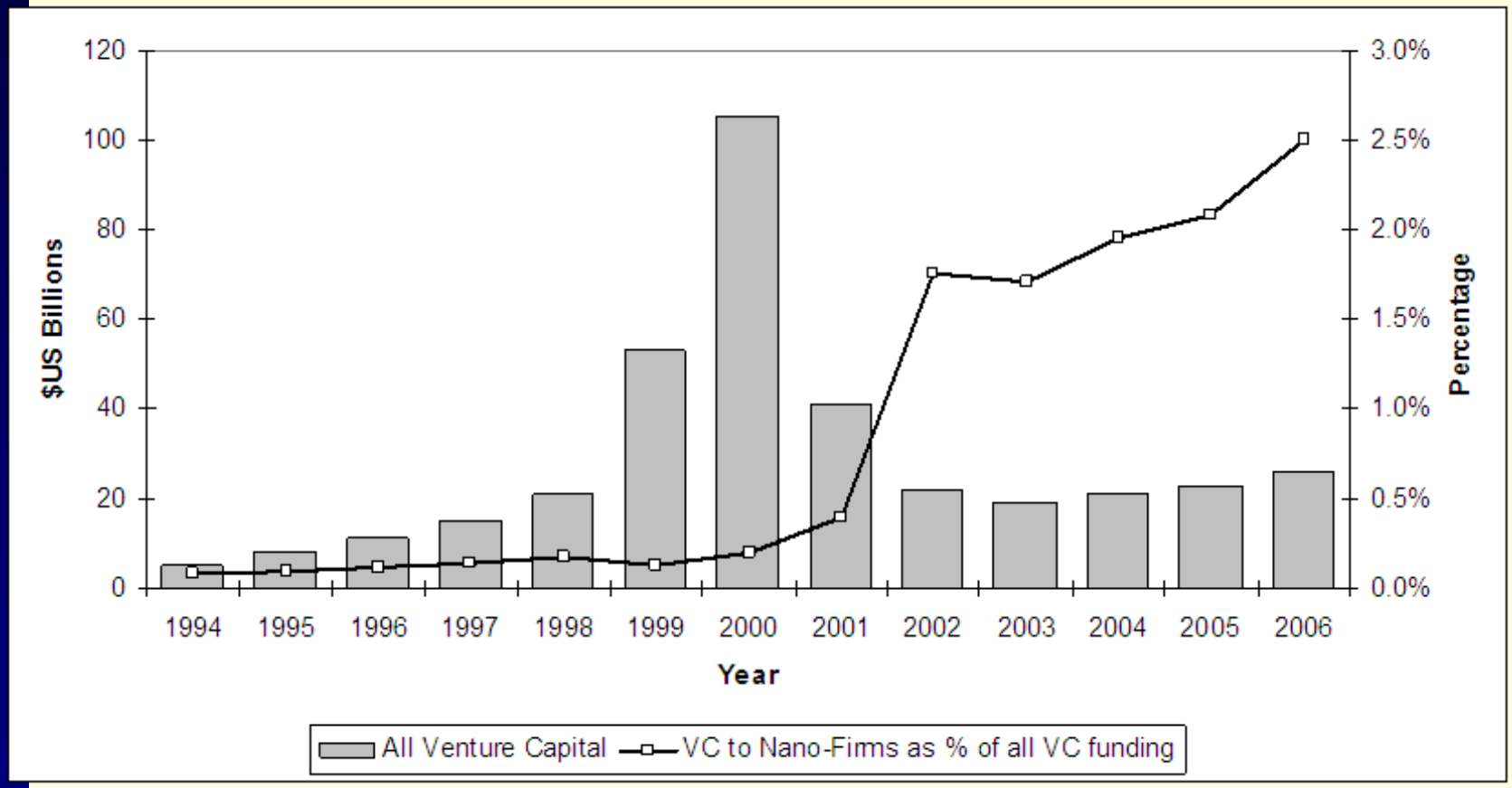

Universities, National labs, Firms
Public Resource Endowments
Legitimate, Regulate, Standardize
Industry Associations, Professional Associations, Government Agencies
Proprietary Functions
Institutional Arrangements
Firms
Associations and Government

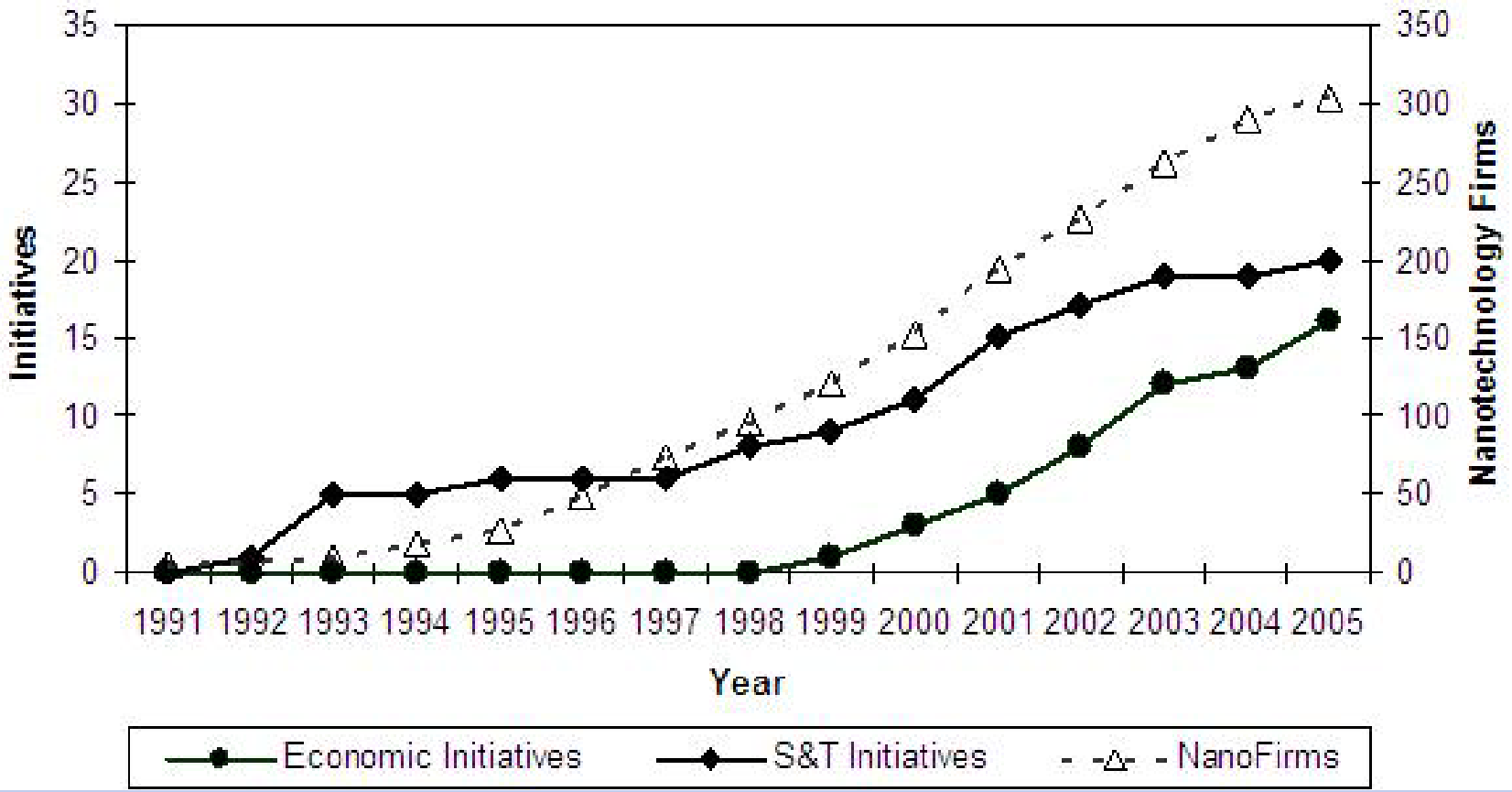
FIGURE 4
Infrastructure for Entrepreneurship Configuration



Venture Capital to Nanotechnology Firms as a Percentage of All Venture Capital Funding, Annually (1994-2006)

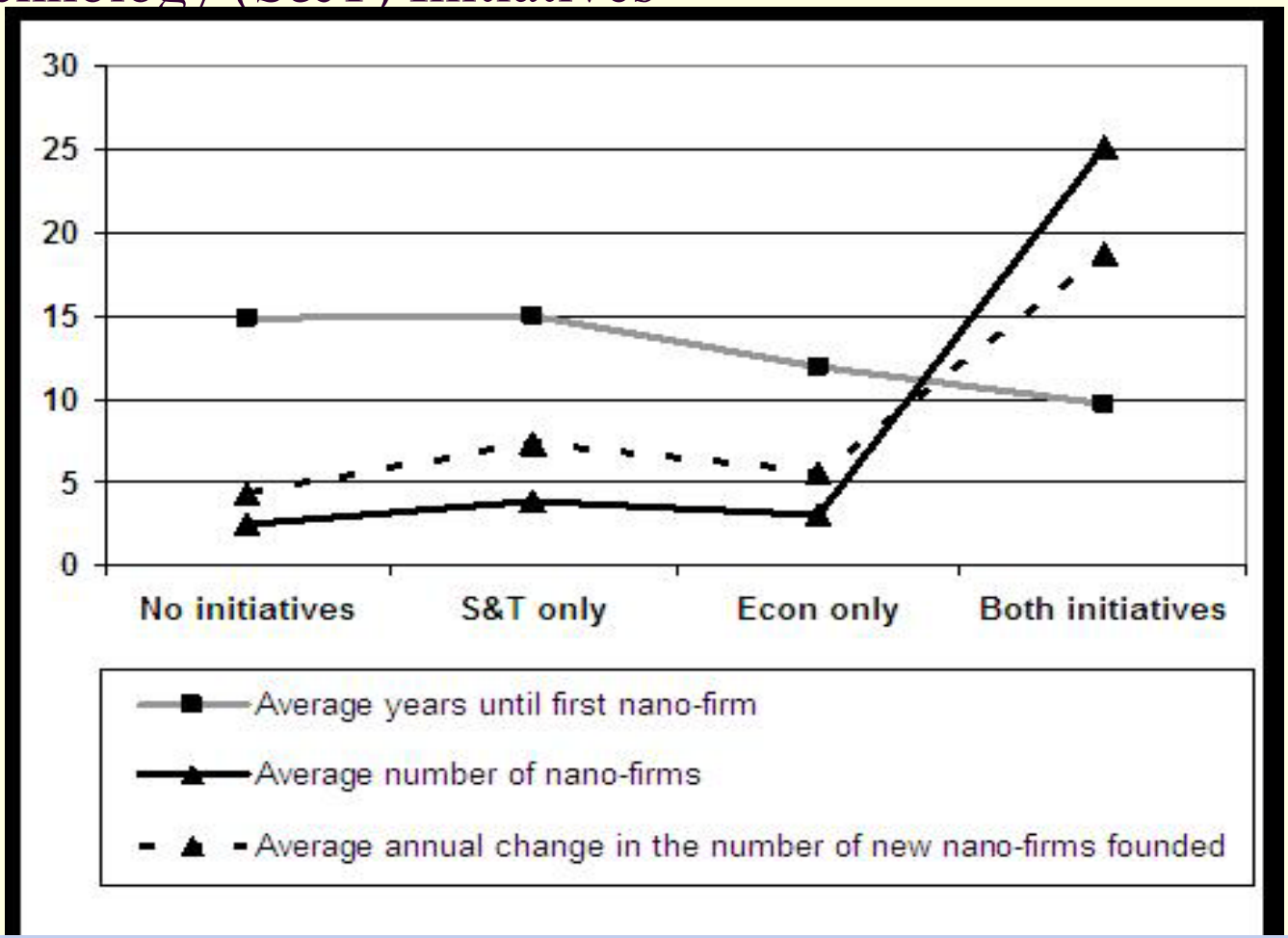


Science & Technology (S&T) and Economic Initiatives and Nanotechnology Firms, 1991-2005 (cumulative)



Woolley, J.L. & Rottner, R.M. 2008. “Innovation Policy and Nanotechnology Entrepreneurship.” Entrepreneurship Theory and Practice.

Summary of Nanotechnology Entrepreneurship in States with and without Nanotechnology Economic or Science & Technology (S&T) Initiatives



Woolley, J.L. & Rottner, R.M. 2008. “Innovation Policy and Nanotechnology Entrepreneurship.” Entrepreneurship Theory and Practice.

Timing and STI Policy in Nascent Domains

- The earlier a country invests in STI policy, the higher their number of related patents.
- Countries with *higher* investments in *early* STI policy have *lower* related patenting activity over time.
- Countries with *higher* investments in *later* STI policy have *higher* related long-term patenting activity.
- The amounts of early and later funding interact such that high investments at both stages hurt the countries long-term patenting activity.

Infrastructure for Entrepreneurship