

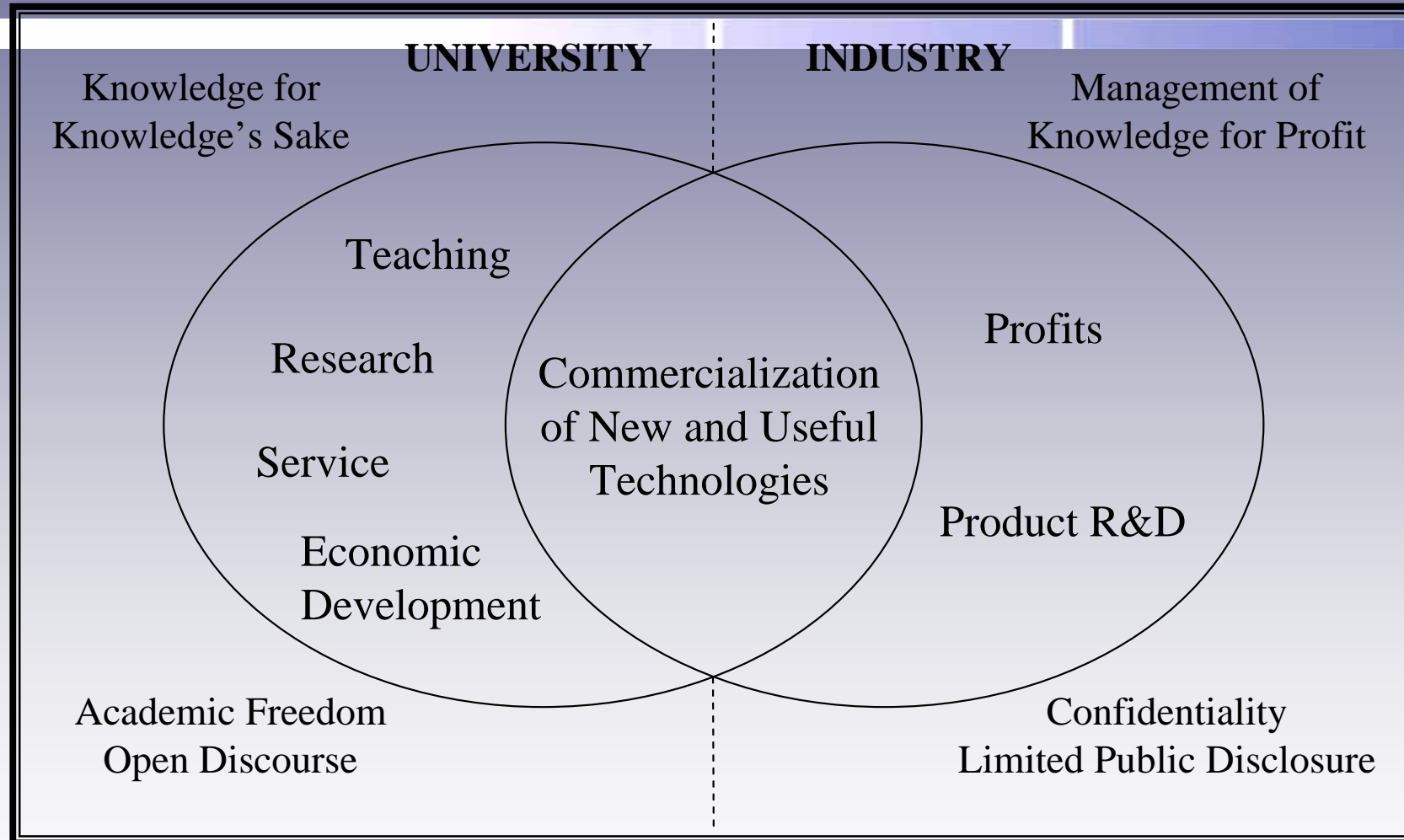
Models of University-Industry Cooperation

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Vice Provost for Intellectual Property and
Technology Transfer

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Bridging Cultures



Methods of Technology Transfer

- ❖ Training of students
- ❖ Publication of research results
- ❖ Faculty consulting
- ❖ Sponsored research
- ❖ Collaborative research
- ❖ Consortia
- ❖ Technology licensing
- ❖ Start-up companies
- ❖ Exchange of research materials

University Technology Transfer

- ❖ Obligation for receipt of government grants
- ❖ Facilitate the commercialization of research results for the public good
- ❖ Reward, retain, and recruit faculty
- ❖ Induce closer ties to industry
- ❖ Promote economic growth
- ❖ Generate income

The Bayh-Dole Act

- ❖ Public Law 96-517
Patent and Trademark Act of 1980
- ❖ Economic development – promote investment by the private sector in commercialization of federally funded research discoveries for the public good
- ❖ “Possibly the most inspired piece of legislation to be enacted in America over the last half-century.....” The Economist, December 14, 2002

Other Factors

- ❖ Technological advances in science-based and technology-intensive industries
 - ❑ Computer software
 - ❑ Advanced materials
 - ❑ Biotechnology
- ❖ Increased international competitiveness
- ❖ Slowing of public and private support for industrial R&D
- ❖ Increased importance of patent rights
 - ❑ Creation of Court of Appeals for the Federal Circuit
 - ❑ U.S. Supreme Court – Chakrabarty decision

Elements of a Technology-Based Economy

- ❖ Strong intellectual infrastructure
- ❖ Efficient mechanisms to transfer technology between people and institutions
- ❖ Excellent physical infrastructure
- ❖ Highly skilled technical workforce
- ❖ Good sources of capital
- ❖ Entrepreneurial culture
- ❖ Quality of life

University Research Tech. Transfer

Economic Development

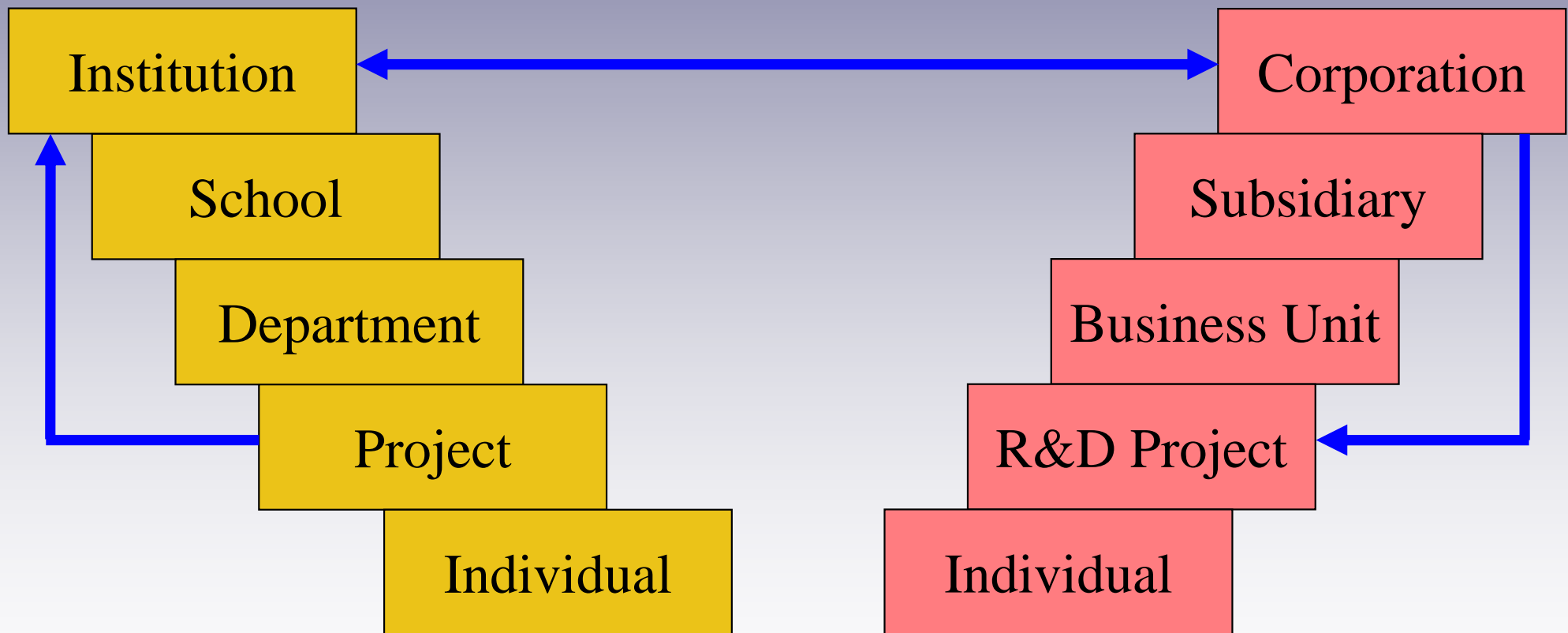
“University-industry technology transfer can be a stimulant, precursor or complement to building a high skills, high wage, state economy.”

- ❖ Increase in interdisciplinary research
- ❖ Emphasis on commercialization
- ❖ Encourage university-industry collaborations
- ❖ Federal research programs to promote national competitiveness through technology development
- ❖ State programs to promote technology development

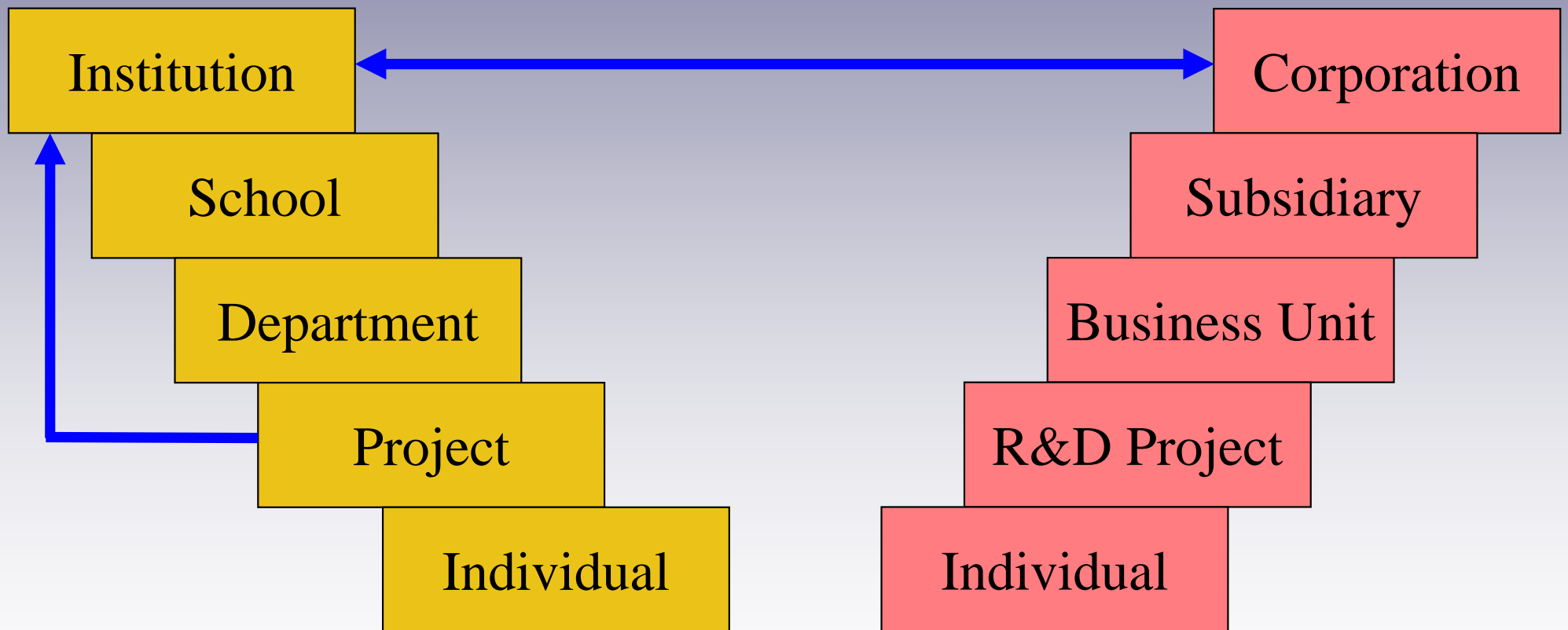
Models of University-Industry Cooperation

- ❖ Technology licensing
- ❖ Start-up companies
- ❖ Sponsored research agreements
- ❖ Consortia
- ❖ High-level research alliances
- ❖ High-level technology alliances
- ❖ Experiments

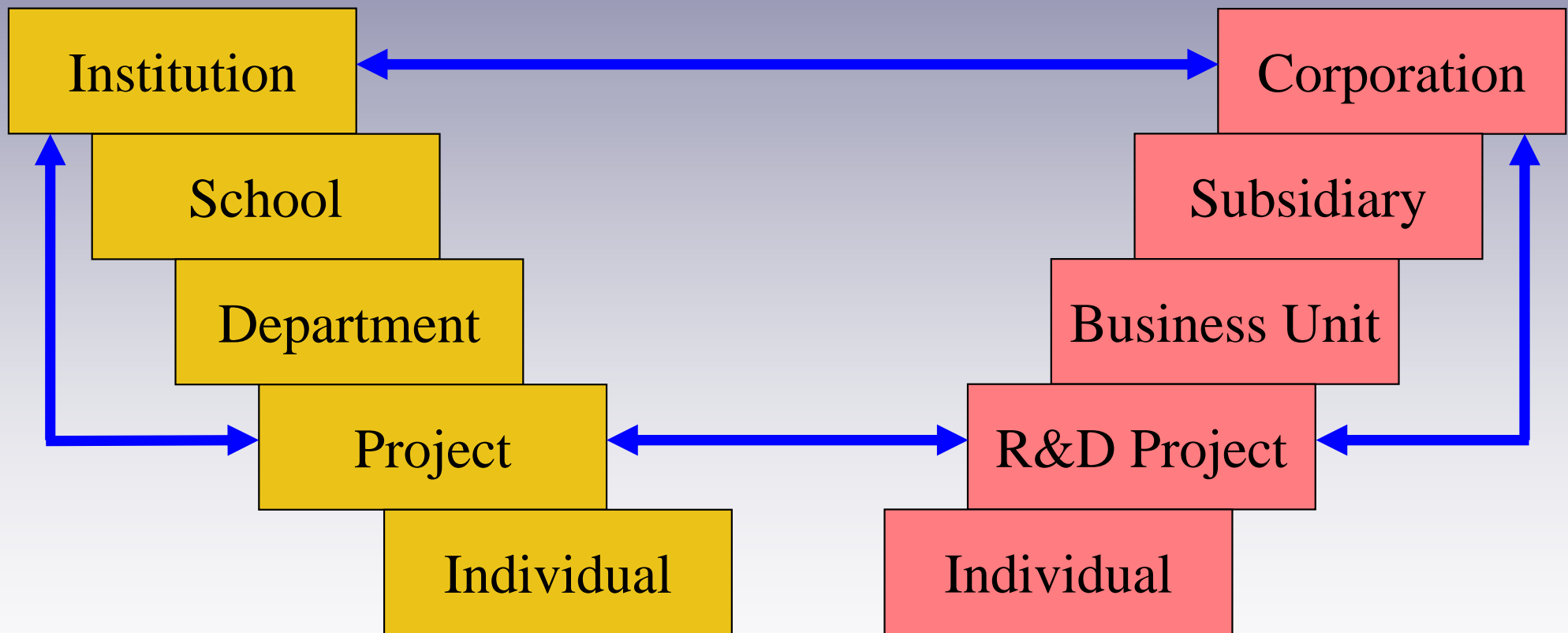
Technology Licensing



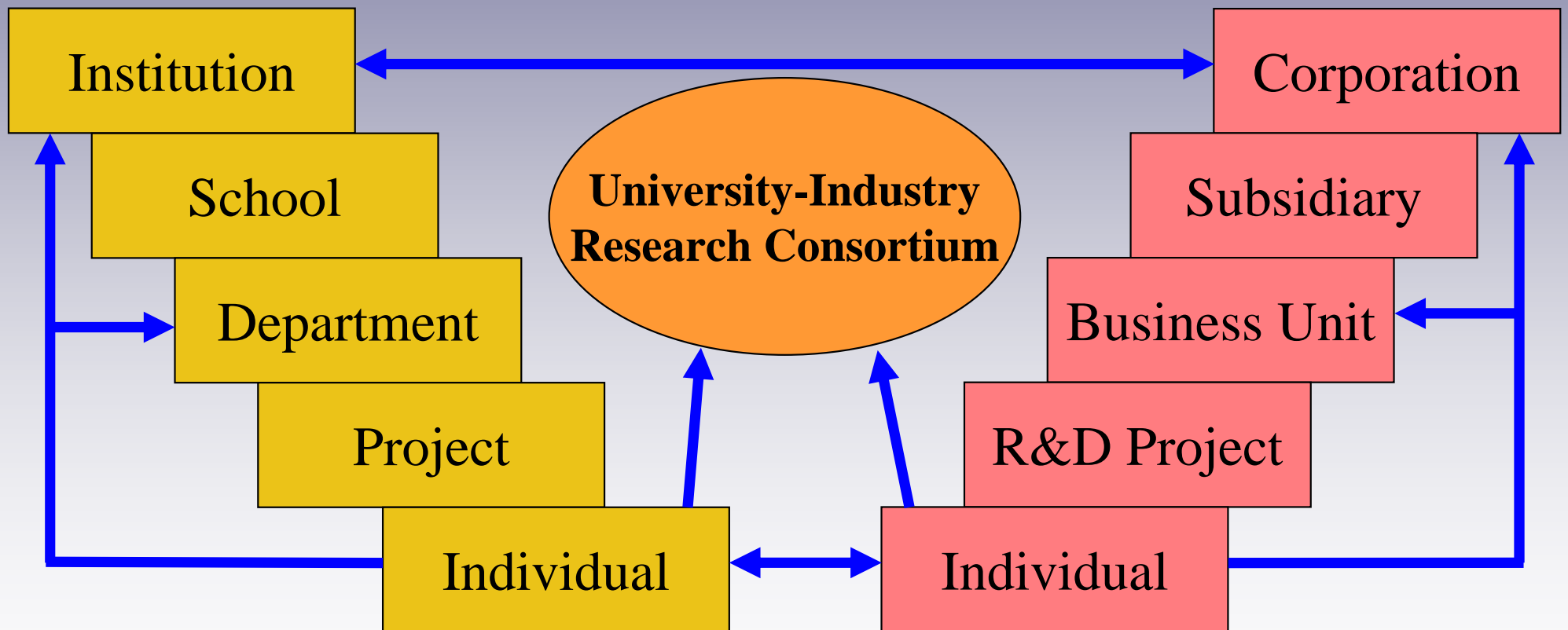
Start-Up Company



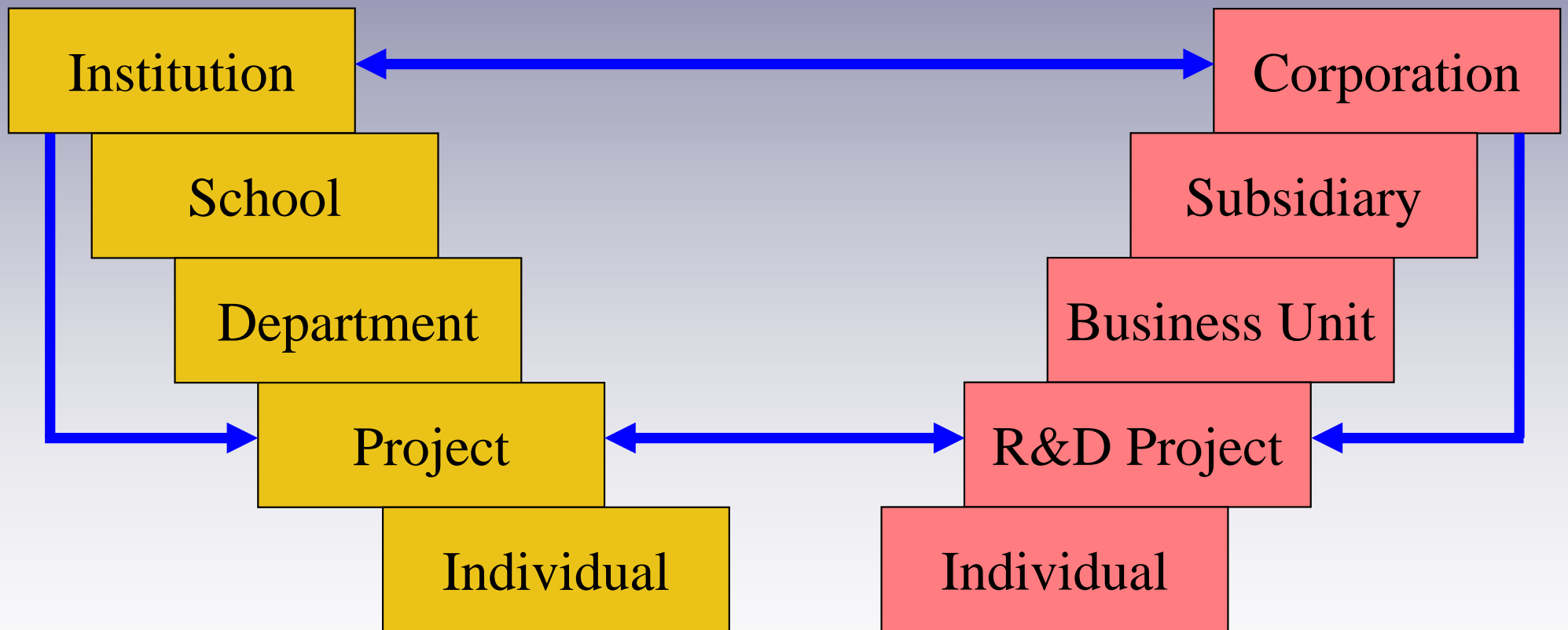
Sponsored Research Agreements



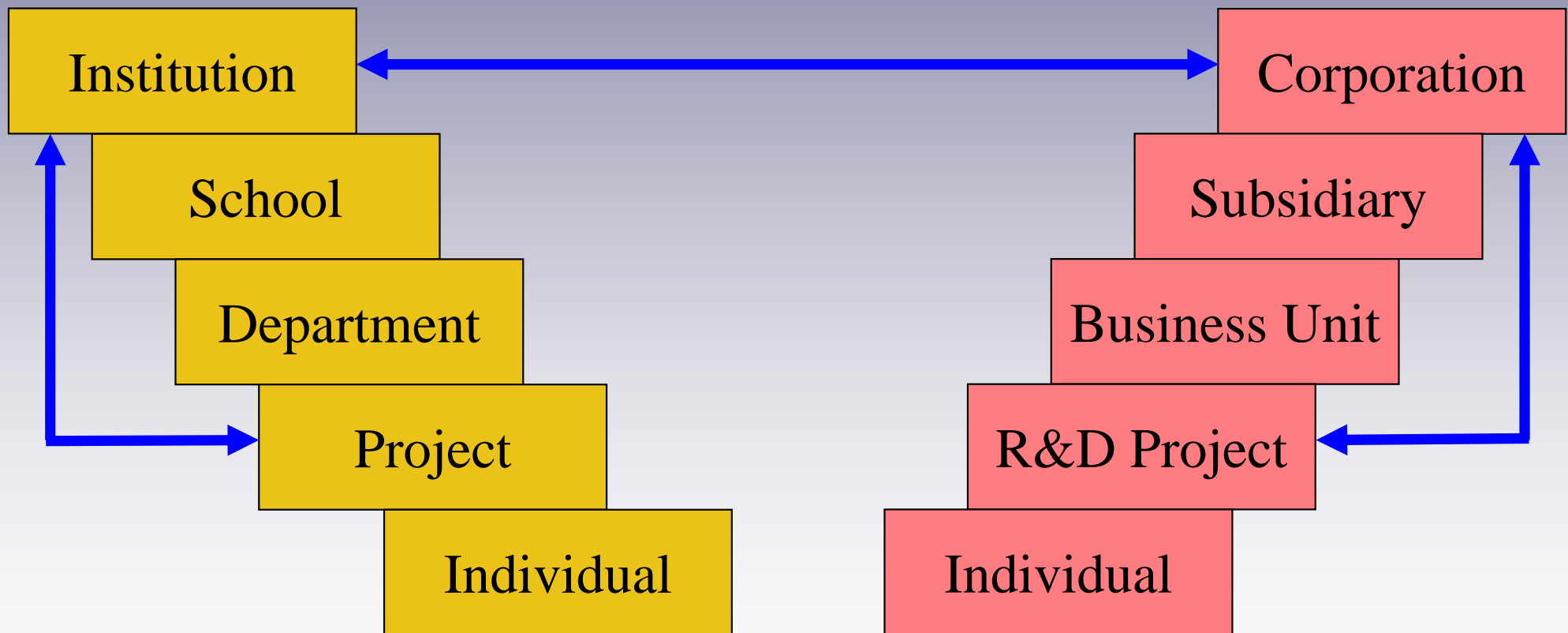
Consortia



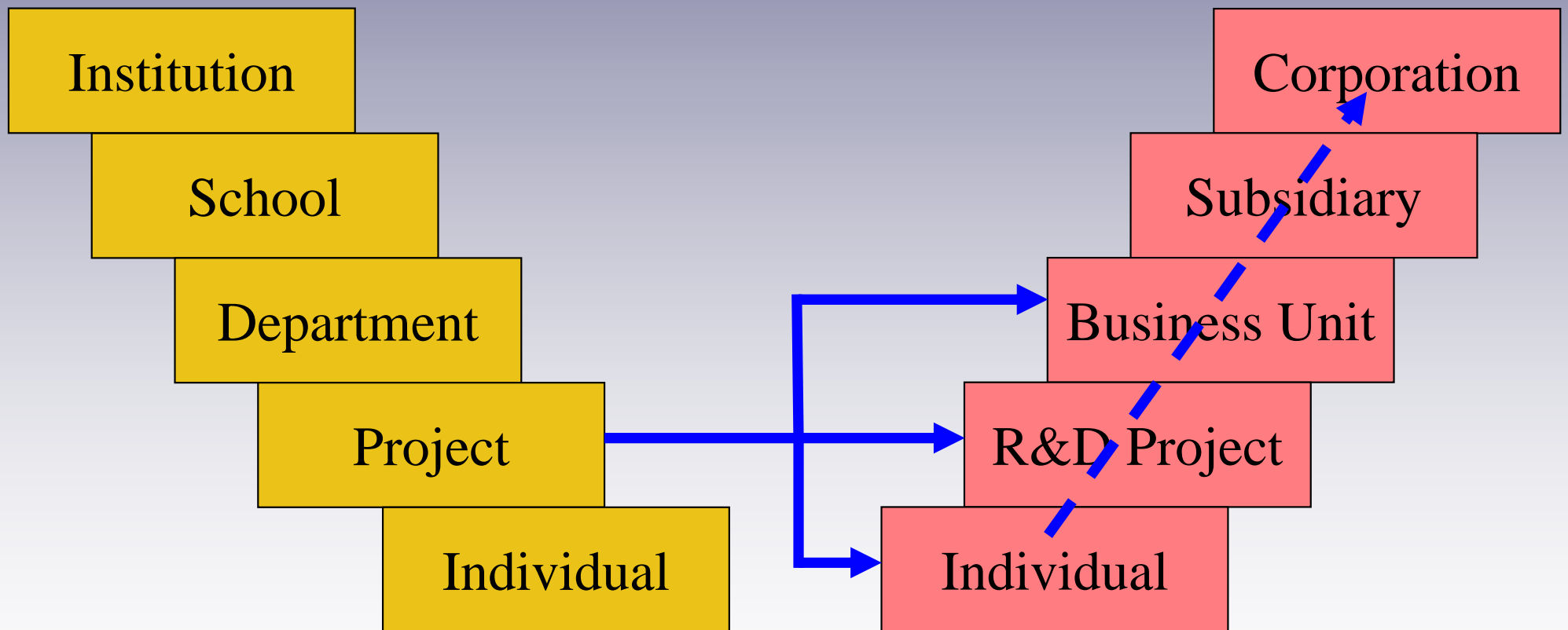
High-Level Research Alliances



High-Level Technology Alliances



Second Generation Models



Competing Factors

- ❖ Economic development
 - States, local leaders
- ❖ Federal gov't.
 - Largest funder, stewardship, Bayh-Dole
- ❖ Industry segments
 - Access, speed of response, work for hire
- ❖ Critics
 - Influence social outcomes, maintain core values of academia, patents stifle innovation

Summary

- ❖ Bridging different cultures
- ❖ Multiple outcomes require multiple models
- ❖ Different areas of technology may require different models
- ❖ Models have had mixed results
- ❖ Balancing expectations