

The Triple Helix:

University-Industry- Government Interactions

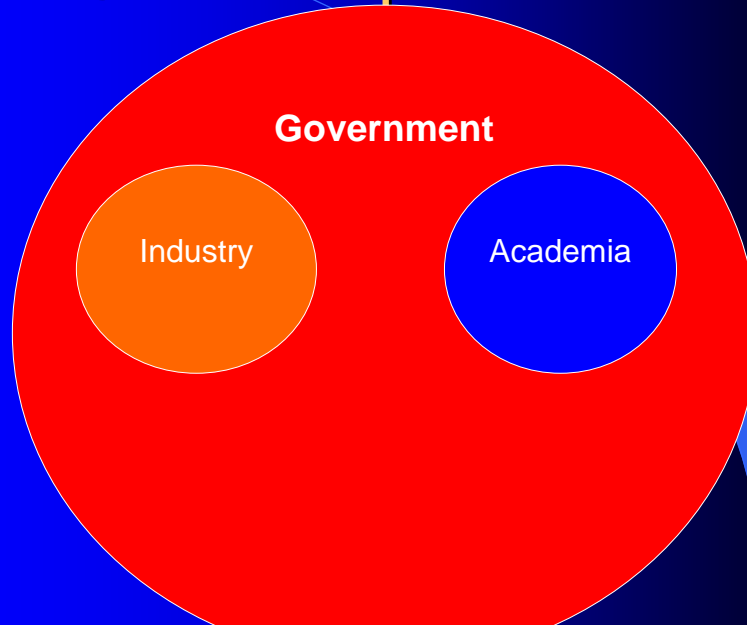
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Triple Helix Thesis

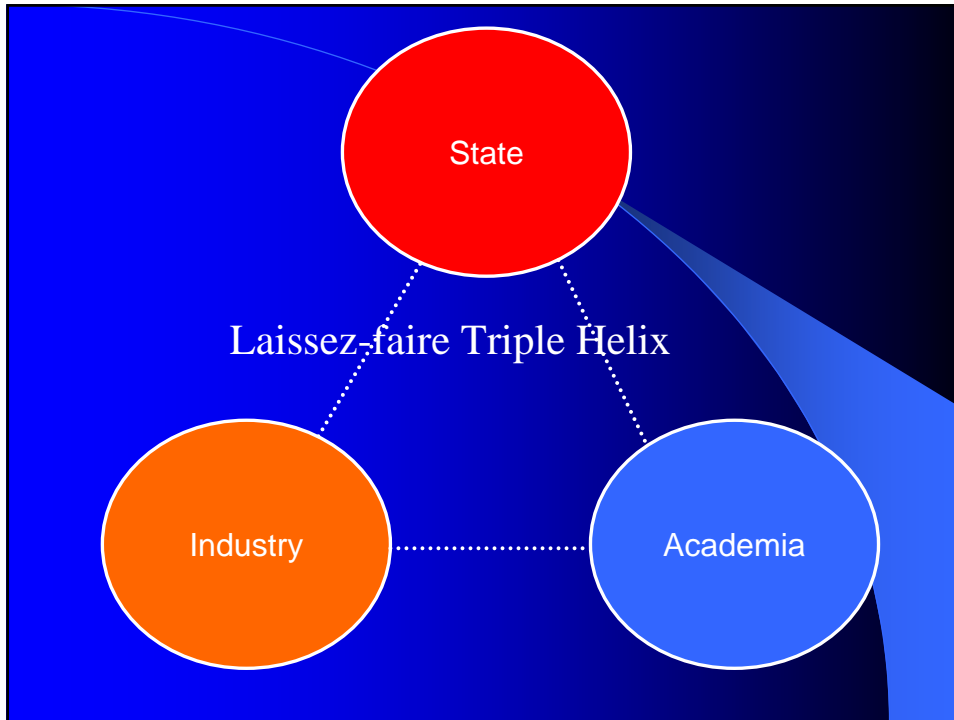
- University Plays leading role in Knowledge-based Society: shift from secondary to primary institutional sphere
- From Separate or Dominant to Overlapping Institutional Spheres
- Taking the role of the other e.g., university forming firms; government as venture capitalist; industry raising training to higher levels

Statist Triple Helix



Statist Triple Helix

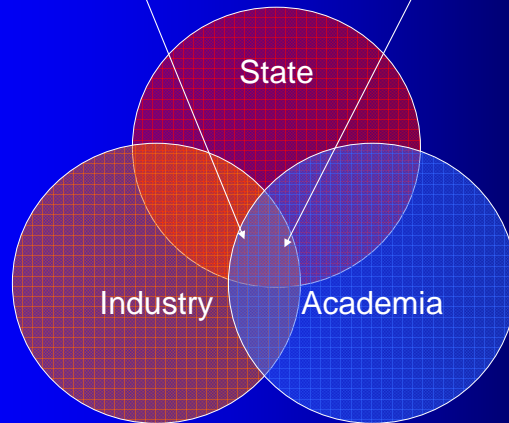
- Government dominates other spheres
- Top-down bureaucratic co-ordination
- Large project mentality
- Industry: national champions
- University: primarily teaching institution



Laissez-Faire Triple Helix Separate Spheres

- University: basic research and human resource provider
- Industry: Firms linked by market
- Government: limited to addressing market failures
- Individualistic mentality; heroic entrepreneur
- Interface Units Across strong boundaries

Hybrid Organizations and Actions
e.g. Incubator Movements



Competitive Advantage

UNIVERSITY

flow through of students
new inventors

INSTITUTE

permanent staff
depth of expertise

University Missions

The First Academic Revolution

late 19th century; ongoing

The Research University

research groups and centers

The Second Academic Revolution

20th century; ongoing

The Entrepreneurial University

new firms and networks

Bi-Evolution of University Missions

- Teaching: Individuals and Organizations
- Research: Individual and Group
- Economic and Social Development: Companies and Region

Knowledge Space

- Universities and Research Institutes
- Underutilized Potential
- Research Projects with economic and social relevance

Consensus Space

- Fora to Generate Ideas and Strategies
- Triple Helix Meeting Place
- e.g. New England Council; Niteroi Technopole; Amsterdam Knowledge Circle

Innovation Space

- Regional Innovation Organizer (RIO)
- Organizational Experiments
- Invention of Venture Capital Firm

MIT President Compton's Vision

- A University Based on Research Fields with Theoretical and Practical Relevance
- Encourage Emulation of Entrepreneurial Academics like Vannevar Bush
- Move from Patents to Firm-formation
- Systematize Firm Formation and Growth
- Invention of Venture Capital Firm

Regional Innovation Organizer (RIO)

- Regional Authority: governmental or quasi-governmental
- takes the lead in creating a consensus space bringing together triple helix actors
- Cases
- New England Council
- Joint Venture Silicon Valley

University of the Future

INCUBATION

- Incubators Integrated into Academic Units

RESEARCH

- Hybrid centers comprising academic, industry and government researchers

TEACHING

- Virtual classes including on-campus and off-campus participants