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# Triple Helix Fundamentals

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# Triple Helix Fundamentals

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*Everything You Always Wanted  
to Know About Trilateral  
Relationships But Were Afraid to Ask...*

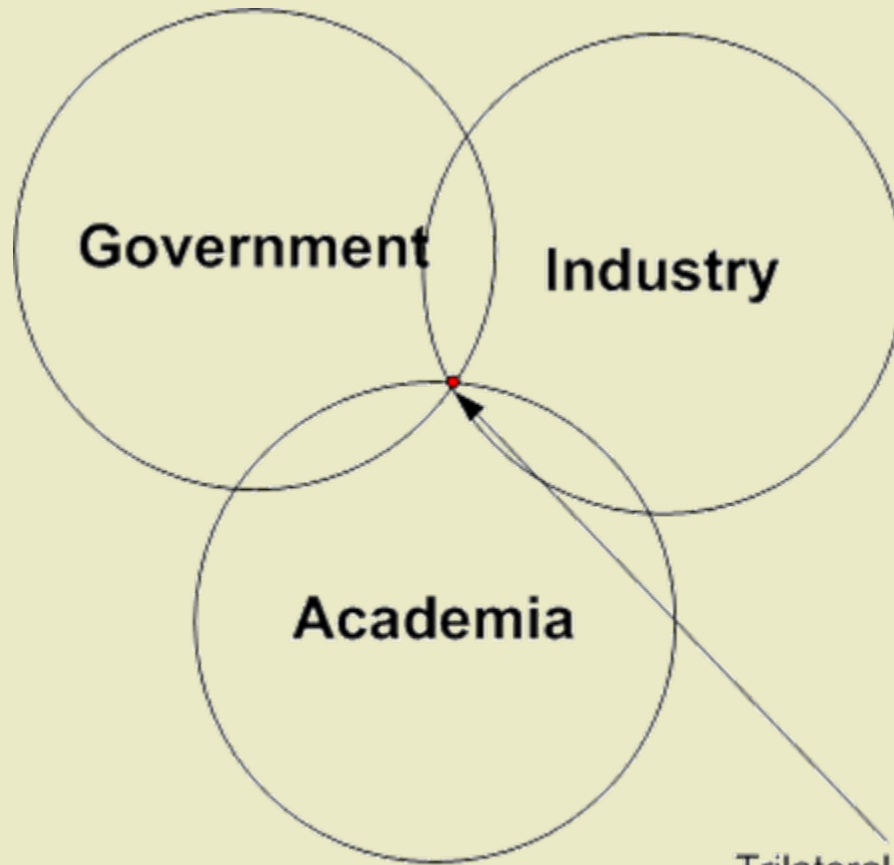


# The Triple Helix Paradigm

- Knowledge production is a necessary but not sufficient condition for innovation.
- How do we facilitate innovation in a knowledge-based, global economy?
- Triple-helix methodologies:
  - foster seamless, interdisciplinary collaboration amongst the public, private, and academic sectors; and
  - generate new knowledge, discoveries, and products that provide long-term economic and social benefits.



# Trilateral Networks



Trilateral Networks  
And  
Hybrid Organizations



# TRIPLE HELIX



# Government: Yoda



# Academia: Obi-Wan Kenobi



# Industry: Anakin Skywalker



# Cross-Sector Collaboration

- Cross-sector partnerships do not happen; they are built.
- No one sector alone has all the answers, or even all the competencies and skills.
- Each sector brings to the partnership a different set of values, priorities, and resources.



# Radical Interdisciplinarity

- Interdisciplinarity
  - Researchers work within disciplines/faculties
- Radical Interdisciplinarity
  - Researchers work across disciplinary boundaries
- Barriers to Interdisciplinarity
  - Common language for collaboration
  - Standard modes for conducting data collection, coding and statistical analysis
  - Lack of transparency; conflicts in collaborative output (e.g., authorship, IP, etc.)



# Building an Institute

- Congressionally Funded
- Accelerated Knowledge Integration
- Increased Intellectual Property Development
- Enhanced Transfer of Knowledge & Technology
- Applied Empiricism & Commercialization
- Innovation “Cluster” Sustainability
- Distributed Community of Practice
- A Focus on the “Public Good”



# Program Objectives

- During its first two years, the Institute will:
  - begin to quantify the value of triple-helix methodologies;
  - create a distributed, Triple Helix Community of Practice; and
  - facilitate research, exportable models, discoveries and products within the Pacific region.



# Questions to be Answered

- Are triple helix research collaborations more successful than other types of research models?
- Do triple helix research collaborations result in significantly more outcomes (e.g., licenses/patents, publications/presentations etc.) than other types of research models?
- Are there specific criteria that are associated with the successful performance of triple helix research collaborations?
- Can knowledge spillover be generated through a distributed (CoP) system?



# Phase 1: Megatrends

- Collection of trend data for 6 Pacific region locales focusing on 4 areas:
  - Economic trends
    - GDP, unemployment rate, median income, import/export, etc.
  - Ecological sustainability
    - range of medical services, hospital beds, health coverage, etc.
  - Technological progress
    - investments, funding sources, annual patents/licenses, etc.
  - Demographic development
    - gender, ethnicity, rural/urban, literacy rate, infant mortality rate, etc.



# Phase 1: Megatrends

- 10-year Summary Innovation Index will allow for longitudinal comparison of each locale.

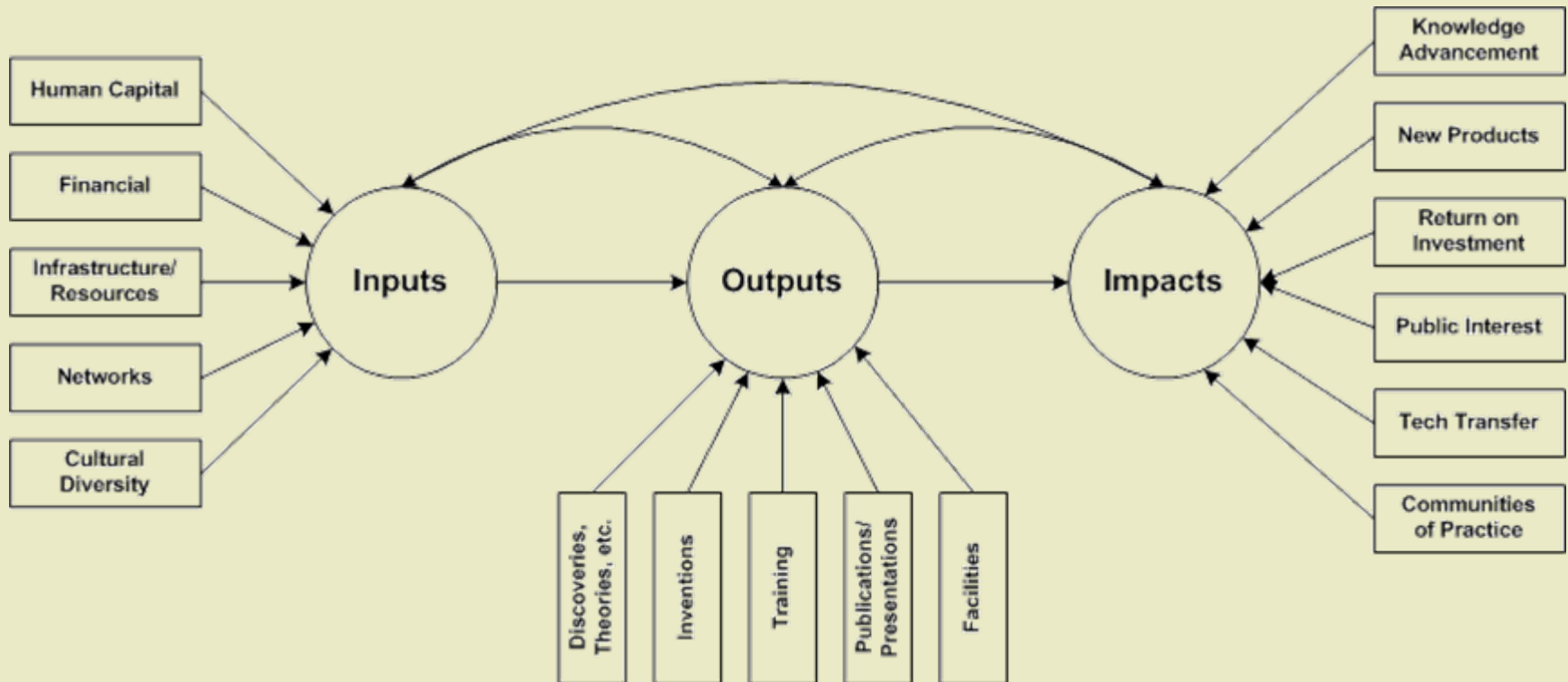


# Phase 2: Models Comparison

- Evaluate 7 types of research models and their application.
- A series of multivariate analysis will produce indices that best represent the Inputs, Outputs and Impacts of each research model.
- These indices will allow us to rank order the seven types of models.



# Phase 2: Models Comparison



# Phase 3: Distributed CoP

- Knowledge flows best and fastest in Communities of Practice.
- A CoP is a special network that emerges from a desire to share knowledge more effectively or build distributed systems among like-minded participants.
- CoPs provide link between knowledge and social capital.



# Phase 4: Validation

Pilot initiatives will test the capacity of triple helix strategies:

- Promote rapid commercialization of new products
- Generate industry spin-offs
- Identify economic returns, proxies of innovation and knowledge



# Benefits of Success

- Faster & smoother tech transfer processes
- Transparent means for managing conflicts of interest
- New, organic mechanisms for collaborations
- Evidence-based product development
- Exploitation of amassed data
- Research- and researcher-driven innovation
- New cultural alliances
- Access to more flexible structures for funding
- Translation of (empirical) knowledge into marketable products
- Quantifying the value of IP
- Determination of best practices across institutional variations
- Evaluation of best practices for commercialization and tech transfer
- Learning how to develop cross-sector value chains
- Improved computational methodologies for achieving economic and social benefits
- Building new networks for collaborative efforts
- Global access to scientific expertise



# Activity Session

- Triple Helix “speed dating”
- Networks analysis
- Construct a “networks of networks”
  - Can we devise a common focus?
- Within sector collaborations
  - what works well? what doesn’t?
- With-out sector collaborations
  - what works well? what doesn’t?



# Reed's Law

- (David P.) Reed's law states that the value of a social network (an open peer-to-peer information exchange) scales exponentially with the size of the network (i.e., the group forming value of the network doubles with each new connection).



# Knowledge Flows

- Successful blending of diverse perspectives yields new levels of knowledge.
- We can be smarter.
- We can create new lexicon, strategies, rhetoric and knowledge flows that will leverage our individual expertise to establish profitable, evidence-based solutions that promote the social good.



# Networks of Networks

- The goal is not a single, global network but a matrix of interlocking communities.
- People and information pass from one network to another under certain circumstances and enhance the work of each community.



# 3 Degrees of Separation

- We each participate in multiple networks
- “Six Degrees of Separation”
  - everyone is no more than six "steps" away from each person on Earth.
- If we can establish a sound and safe “network of networks,” we can reduce the degrees of separation for access to trusted partners, and improving efficiencies in our knowledge flow



# “Speed Dating” Questions

- Would you allow his person access to your networks?
- Why or why not?
- What was the most important factor in your decision? (e.g., access to money, power differential, appearance, similarity of background, common point of interest, etc.)
- How long did you take to make your decision?
- What would it take to change your mind?



First Annual

# Triple Helix Summit

February 12 – 13, 2007



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