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

Government

Industry

Academia

Trilateral Networks And Hybrid Organizations
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”
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 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?