Managing the Innovation Process

Inter-Organizational Networks
Overview

• Take-Away

• Required Readings

• Supplemental Readings

• Caveats
Take-Away

- Innovation may benefit from a more open process
- Innovation can be sparked by knowledge brokers
- Innovation often resides in networks of firms
- Innovation is one product of strategic alliances
(Wolpert, 2002)

• “Breaking out of the innovation box”

• Open Innovation Will Be More Sustainable In Long Run
  (investment in innovation follows boom-bust cycle)

• Network Of Intermediaries
  (third-party companies that facilitate exchange of information)

• Intermediary Candidates
  (IBM alphaWorks, Xerox alphaAvenue, baby boomer retirees)
(Hargadon, 1998)

• “Firms as knowledge brokers: Lessons in pursuing continuous innovation”

• Knowledge Brokers
  (firms that span multiple markets and technology domains)

• Example Firms
  (IDEO, Design Continuum, Andersen, McKinsey & Co., HP, Boeing, Edison & Co., Elmer Sperry)

• Innovation Activities
  (access, learning, linking, implementation)
(Ahuja, 2000)

• “Collaboration networks, structural holes, and innovation: A longitudinal study”

• **Innovation Through Patents**
  (international chemicals industry)

• **Direct/Indirect Ties Positively Related to Innovation**
  (source of resources and information for firm)

• **Structural Holes Negatively Related to Innovation**
  (benefits of trust outweigh benefits of brokerage)
(Powell, et al., 1996)

- “Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology”

- Locus Of Innovation Resides In Networks Rather Than Firms (biotechnology industry)

- Network Examples (R&D, outside investors, clinical trials/evaluation, manufacturing, marketing/licensing, supply/distribution, investment/join venture)

- Experience And Centrality In Network Related To Success (relevant knowledge is widely distributed – outside of firm)
(Stuart, 1998)

• “Network positions and propensities to collaborate: An investigation of strategic alliance formation in a high-technology industry”

• Positions Of Firm Associated With Propensity to Collaborate (high-technology industry)

• Strategic Alliances (contractual asset pooling or resource exchange agreements)

• Formation Of Alliances Predicted By: (crowding – technological segments with many active firms) (prestige – track record of developing seminal inventions)
Caveats

• What are the incentives for firms to open innovation?
• When do knowledge brokers obstruct innovation?
• How do firms know which network ties will help?
• Are benefits from strategic alliances always equitable?