Managing the Innovation Process

Organizational Features
Overview

• Take-Away

• Required Readings

• Supplemental Readings

• Caveats
Take-Away

• Innovation requires experimenting and prototyping

• Innovation relies on recognition of opportunities

• Innovation arises from knowledge creation in firm

• Innovation on a regular basis can prevent inertia
(Leonard-Barton, 1995)

• “Wellsprings of knowledge – Chapter 5: Experimenting and prototyping (pp. 111-134)”

• Experimenting And Prototyping
  (develop diverse portfolio of technological options)

• Real-world Examples
  (experimenting – encouraged alloy failures at J&J)
  (prototyping – camera ‘wrecking crews’ at Kodak)

• Creating A Climate For Experimenting and Prototyping
  (intelligent failure and role of failure in knowledge building)
(O'Connor & Rice, 2001)

• “Opportunity recognition and breakthrough innovation in large established firms”

• Opportunity Recognition
  (bridge that connects a breakthrough idea to the initial innovation evaluation process)

• Example Breakthroughs
  (Dupont’s Biomax material, GE’s digital X-ray technology, GM’s alternative power supply, IBM’s new microchip)

• Improving Odds of Recognizing Opportunity
  (gatherers, hunters, and radical innovation hub)
(Markides, 1997)

• “Strategic innovation”

• Strategic Innovation
  (breaking rules of the game to shift market share)

• Example Firms
  (Canon caught Xerox by focusing on quality not speed)
  (Apple caught IBM by focusing on pc not mainframe)
  (Southwest caught American by flying point-to-point not hubs)

• Redefining Business
  (share, reuse, and expand core competencies)
(Nonaka & Takeuchi, 1995)

- “The knowledge-creating company – Chapter 1: Introduction to knowledge in organizations (pp. 3-19)”

- **Organizational Knowledge Creation**
  (capability of a company as a whole to create new knowledge, disseminate it throughout organization, and embody it)

- **Japanese vs ‘Western’ Approach**
  (continuous, incremental, and spiral innovation)

- **Making Tacit Knowledge Explicit**
  (metaphor and analogy, personal to organizational level, ambiguity and redundancy)
(Tushman & O'Reilly, 1997)

- “Winning through innovation – Chapter 1: The tyranny of success (pp. 1-15)”

- Tyranny of Success  
  (success followed by failure; innovation followed by inertia)

- Innovation Streams  
  (systematically different kinds of innovation over time)

- Ambidextrous Organizations  
  (celebrate stability and incremental change as well as experimentation and discontinuous change simultaneously)
Caveats

• What about the large costs of experimentation?
• Who should be responsible for finding opportunities?
• How do employees convert tacit to explicit knowledge?
• Are ambidextrous organizations a reality?