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?