

Chapter 6: Organizational Innovations

Innovation and the Firm

- Innovation is not invention
 - Invention
 - The creation of an entirely new technology
 - Innovation
 - Taking known, existing technologies and putting them together in a new way with incremental changes
- Innovation and creative
 - Schumpeter

Organizational Innovations

- Organizational innovations
 - The successful implementation of creative ideas in organizations
- Creativity
 - The production of novel and useful ideas
- Organizational change
 - A difference in the form, quality, or condition of an organization over time
- Technology Cycles
 - Technology
 - The knowledge, tools, and techniques used to transform inputs (raw materials and information) into outputs (products and services)
 - Technology cycle
 - A cycle that begins with “birth” of a new technology and ends when that technology reaches its limits and is replaced by a newer, sustainably better technology
 - S-Curve pattern of Innovation
 - A pattern of technological innovation characterized by slow initial progress, then rapid progress, and then slow progress again as a technology matures and reaches its limits
 - Flat slope indicates that increased effort brings only small improvements in technological performance
 - Steeper slope indicated that small amounts of effort will result in significant increases in performance
- Innovation Steams
 - Patterns of innovation over time that can create sustainable competitive advantage
 - Technological discontinuity
 - The phase of an innovation stream in which a scientific advance or unique combination of existing technologies creates a significant breakthrough in performance or function
 - Discontinuous change

- The phase of a technology cycle characterized by technological substitution and design competition
- Technological substitution
 - The purchase of new technologies to replace older ones
 - Blockbuster to Netflix
- Design Competition
 - Competition between old and new technologies to establish a new technological standard or dominant design
 - Companies and consumers are reluctant to switch to a different technology during a design competition

Dominant Design

- A new technological design or process that becomes the accepted market standard
- Technologic outlook
 - Inability of a company to competitively sell its products because it relied on old technology or a nondominant design
 - Nokia, Motorola, BlackBerry
 - Signals a shift from design experimentation and competition to incremental change
- Incremental Change
 - The phase of a technology cycle in which companies innovate by lowering costs and improving the functioning and performance of the dominant technological design

Managing Innovation

- Managing Sources of Innovation
 - Starting point for managing innovation is to manage the sources of innovation, that is, where new ideas come from
- Creative work environment
 - Workplace cultures in which workers perceive that new ideas are welcomed, valued, and encouraged
 - Organizational Encouragement
 - Creativity occurs when management encourages risk taking and new ideas, supports and fairly evaluates new ideas, rewards and recognizes creativity, and encourages the sharing of new ideas throughout different parts of the company
 - Supervisory Encouragement
 - Occurs when supervisors provide clear goals, encourage open interaction with subordinates, and actively support development teams' work and ideas.

- Work Group Encouragement
 - Occurs when group members have diverse experience, education, and backgrounds and the group fosters mutual openness to ideas; positive, constructive challenge to ideas; and shared commitment to ideas
 - Freedom
 - Having autonomy over one's day-to-day work and a sense of ownership and control over one's ideas.
 - Numerous studies have indicated that creative ideas thrive under conditions of freedom
 - Lack of Organizational Impediments
 - Challenging Work
 - Requires effort, demands attention, and focus, and is perceived as important to others in the organization.
 - Flow
 - A psychological state of effortless in which you become completely absorbed in what you're doing and time seems to pass quickly
- Experimental Approach: Managing Innovation During Discontinuous Change

An approach to innovation that assumes a highly uncertain environment and uses intuition, flexible opinions, and hands-on experience to reduce uncertainty and accelerate learning and understanding

 - Design iteration
 - A cycle of repetition which a company test a prototype of a new product or service, improves on that design, and then builds and tests the improved prototype
 - Product Prototype
 - A full-scale working model that is being tested for design, function, and reliability
 - Testing
 - The systematic comparison of different product designs or design iterations
 - Milestone
 - Formal project review points used to asses progress and performance
 - Multifunctional teams
 - Work teams composed of people from different departments
 - Accelerate learning and understanding by mixing and integrating technical, marketing, and manufacturing activities.