

Managing the Innovation Process

Cross-Functionality

Overview

- Take-Away
- Required Readings
- Supplemental Readings
- Caveats

Take-Away

- Innovation can be fostered by heavyweights
- Innovation can be hindered by thought worlds
- Innovation relies on team functional diversity
- Innovation requires organizational adaptation

(Clark & Wheelwright, 1992)

- *“Organizing and leading "heavyweight" development teams”*
- Types of Development Project Teams
(functional, lightweight, heavyweight, tiger/autonomous)
- Heavy-Weight Structures Are Most Effective
(example – Motorola’s Bandit line of pagers)
- Change Required in Fundamental Behavior
(example – Fred / Team A vs Jim / Team B)

(Dougherty, 1992)

- *“Interpretive barriers to successful product innovation in large firms”*
- Linking Technology/Market With Product Design
(contribute to innovation and new product success)
- Departmental Thought Worlds
(technical, field, manufacturing, planning)
- Organizational Routines
(interdepartmental relations, market definition, product standards)

(Ancona & Caldwell, 1992)

- *“Demography and design: Predictors of new product team performance”*
- High-Technology Industry
(increasing reliance on new product teams – e.g., photo)
- Designing Cross-Functional Teams
(should there be more or less diversity– of which types?)
- Functional Diversity Related to External Communication
(external communication related to manager performance)

(Eisenhardt & Tabrizi, 1995)

- *“Accelerating adaptive processes: Product innovation in the global computer industry”*
- Global Computer Industry
(product innovation facilitates adaptation)
- Inertial Organizations vs Malleable Organizations
(slow shifts vs punctuated equilibrium and fast change)
- Compression Model vs Experiential Model
(squeezing well-known vs improvising uncertain process)

(Griffin & Hauser, 1992)

- *“Patterns of communication among marketing, engineering, and manufacturing”*
- Automobile Industry
(parallel component projects, e.g., headlight and taillight)
- Marketing, Engineering, Manufacturing
(new product development in two different teams)
- Phase-Review vs. Quality Function Deployment (QFD)
(traditional vs. Japanese development process)

Caveats

- What if you don't have access to heavyweights?
- When do thought worlds help knowledge acquisition?
- Is too much functional diversity harmful?
- How does time pressure affect functional integration?