Driving Open Innovation
Learning from Three Cases

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Outline

• Open innovation in Knowledge-Intensive Firms

• Opening up Innovation
  • Rockwell Collins
  • EuroTel’s P-Dev Unit
  • OpenSource

• Takeaway
Knowledge-Intensive Firms

• We adopt Alvesson’s* definition of knowledge-intensive firms – *those in which most work is said to be of an intellectual nature and where well-educated, qualified employees form the major part of the workforce

• Case Domains - Avionics, Telecommunications and Software Development


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Rockwell Collins-brand aircraft electronics are installed in the cockpits of nearly every airline in the world and its airborne and ground-based communication systems transmit nearly 70 percent of all U.S. and allied military airborne communication.*

*http://www.rockwellcollins.com/about/history/index.html  
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Innovation at Rockwell Collins

• 1998 – Focus on Technology-enabled growth
  • Connect innovation to the business, but not be driven by the business

• A system of innovation
  • Technology panel based planning
  • Scorecard with sales growth leverage (SGL) at the core

\[
SGL = \frac{\text{Total 5 yr. R&D Expenditure (ATC)}}{\text{Projected Impact by BU’s (looking out 5 years)}}
\]
Synthetic Vision

• 1998 – AFRL research grant

• 1999 – NASA selects Rockwell Collins to develop synthetic vision for business and commercial aircraft

• 2002 – Synthetic Vision tested by USAF

• 2004 – Synthetic Vision demonstrated by NASA Team
  • Also demonstrated the modified weather radar

• SVS team honored with the 2006 Prometheus Inventor of the Year Award

• Integrated SVS into their ProLine Fusion line of products
Fostering Innovation

• The 10X program – Initiated in 2004 to foster disruptive thinking

  • Launched with a budget of USD 500,000
    – funded 8/46 ideas

  • Expanded to US Engineering in 2nd year with USD 1 Million
    - 70+ ideas

• Third year
  - 180 proposals
Open Innovation

• Initiated in 2005 to answer the question:

   *How do we collaborate smartly so that we can take ideas and come up with innovative solutions for our customers' problems, faster and cheaper than our competitors?*

• Fighting the NIH syndrome to drive open innovation – transitioning from *invent & develop* to *connect & develop*

• Established a Technology area council
Cognitive Radio

• Leveraging Adapt4 technology
  • Demonstrate cognitive radio capability for legacy military equipment

• David Baugh – 2007 Q4 Open Innovator Award Winner
EuroTel

- Tension between the business units
  - Minimization of P-Dev’s innovation capabilities

- Vertical disintegration
  - From developing hardware and software to COTS

- Multiple channels
  - Outsourcing
  - Near Shoring
  - Global Development
  - Students

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P-Dev’s Innovation Challenges

• EuroTel does not perceive P-Dev to be the source of innovation

• Diminishing of domain expertise
  • Downsizing and retirement

• Increased offshoring
  • Expect to leverage supplier capabilities, yet
  • Limited investment in supplier capabilities
OpenSource

• Developing open-source version of a ‘proprietary standard’

• Unusual case
  • reverse engineering
  • Corporate sponsored

• Team structure – core/floating/observers
  • Salaried employees
  • Pro-bono contributors
• Successful firms match their innovation strategy to their business model
  • Rockwell Collins focuses on both value creation and value capture, while OpenSource focuses on value capture

• Change management and leadership commitment are critical

• Engaged and Empowered employees both
  • Drive the innovation engine
  • Provide the strongest organization sense-making mechanisms


Research Overview

- Stakeholder Alignment
- Employee Empowerment
- Group and Organizational Learning
- Performance Measurement System

Institutionalizing Process Improvement

Building Innovation Systems

Leveraging Global Competence

Dynamic Enterprise Capabilities

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