Work Groups and Knowledge Sharing in a Global Organization
Work Groups and Knowledge Sharing

Service Improvement

– Gathered data from marketing employees in another division
– Held customer meeting to discuss ways to improve infrastructure

10 members (2 cities in China)
Project Mgt, Quality, Engineering
• Wireless Network Upgrade
Work Groups and Knowledge Sharing

Product Development
– Modified chip design borrowed from another organizational group
– Presented a technical paper on the results at company conference

9 members (US, Israel, Singapore)
• CAD, Applications, Engineering
  • Digital Signal Processing Device
Why create these work groups?

• **Projects** – require knowledge, skills, and abilities of members who are geographically dispersed and/or have functional expertise (DeSanctis & Monge, 1999; Jarvenpaa & Leidner, 1999; Maznevski & Chudoba, 2000)

  – **Geographic dispersion**: work force spread across manufacturing facilities, R&D labs, design centers, field offices, and headquarters

  – **Cross-functionality**: tasks demand specialized personnel for product specifications, service requirements, and customer needs
Costs of geographic dispersion

– Difficult to develop common understanding
– Trouble coordinating work at a distance

The Probability that two people will communicate as a function of the distance separating them (1-100 meters)
- Communication drops significantly after 100 feet (Allen, 1977)
Costs of cross-functionality

- Problems reconciling dissimilar points of view
- Challenging to integrate different ideas

“Thought-worlds” can inhibit product innovation (Dougherty, 1992)
Benefits of social networks

- External task communication / knowledge sharing
  (Tushman & Katz, 1980; Ancona & Caldwell, 1992, Hansen, 1999)

- Tap unique, non-redundant sources of knowledge
  (Burt, 1992; Granovetter, 1973; Lin, 2001)
Propositions

• (1) – the relationship between external knowledge sharing and performance will be stronger when work groups are dispersed

• (2) – the relationship between external knowledge sharing and performance will be stronger when work groups are cross-functional
Field Study

- **Research site** – Fortune 500 telecommunications company, 100,000+ employees, global operations

- **Data sources** – 20 group interviews, 182 group leader surveys, 957 group member surveys (73% response rate), and performance ratings

- **Project types** – product development, service improvement, process management, manufacturing operations
Work Groups

• Geographic dispersion
  Mean (SD) = 3.42 (1.13)
  Range (1.00-6.47)

• Cross-functionality
  Mean (SD) = 0.90 (0.47)
  Range (0.00-1.89)

1 - immediately next to
2 - same hallway
3 - different hallway
4 - different floor
5 - different building
6 - different city/state
7 - different country

* Engineering
* Manufacturing
* Quality
* IT
* Marketing
* HR
* Finance
Knowledge Sharing

Step 1: Face-to-face interviews (20 work groups)
- tacit/codified, stand-alone/dependent, examples

Step 2: Five categories (1:never – 5:a lot)
- (a) general overviews, (b) specific requirements, (c) analytical techniques, (d) progress reports, and (e) project results

Step 3: Aggregation
- Intragroup: Mean (SD) = 3.90 (0.39)
- External: Mean (SD) = 2.38 (0.58)
Performance

- 182 work groups rated in competition on dimensions of teamwork, problem selection, appropriateness of method, innovativeness, quality of results, and clarity of presentation

**Mean (SD) = 1.65 (0.68)**

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<tr>
<th>Region</th>
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Results

Hypothesis 1: Geographically Dispersed

Hypothesis 2: Cross-Functional

External Knowledge Sharing

Low   High

Low   High

Work Group Performance (mean)
• Dispersed, cross-functional work groups are increasingly common in global organizations

• There are coordination costs for dispersion and cross-functionality in work groups

• However, work groups can benefit when members share knowledge externally