Creating Global, Multi-lateral, Knowledge-Sharing Communities of Practice

Funded by the National Science Foundation: VOSS (Virtual Organizations as Sociotechnical Systems) Program

How Can Multi-national Organizations reap benefits from Global Network?
How to create knowledge sharing connections that transcend boundaries?

Employee A

- Improved performance: individual, project, organizational level
- UK-based
- Structural Engineer
- Buildings BG
- Grade 1
- Gen Y
- Sustainability CoP

Employee B

- India-based
- Sustainability Science
- Infrastructure BG
- Grade 8
- Boomer
- Sustainability CoP

BOUNDARIES
Research Method

Quantitative
• Surveys
• Social Network Analysis

Qualitative
• Interviews
• Qualitative Analysis

Build Theory of KSC emergence

Mechanics, Dynamics & Attributes:
- Visualizations
- Calculations

How? Why?
Connected; Why not?
- Explanations

Case Study Context

• Sustainability CoP: 1,333 employees
• 37 employees representing 32 offices from 19 different countries completed ego-centric network surveys.
• Questions include:
  – “What individuals have you exchanged job-related sustainability knowledge (project- or organization- related) with?” according to various frequency of exchange
  – How do you exchange knowledge? (Method of knowledge exchange)
  – Reciprocity (Directional flow of knowledge)
  – Attribute data obtained from organization
• Result: Network with 412 KSC amongst 320 individuals
KSN based upon annual knowledge exchange

KSC based upon quarterly knowledge exchange
KSC based upon weekly knowledge exchange

Effects of Frequency of Knowledge Exchange on Boundary-Spanning KSC

<table>
<thead>
<tr>
<th>Frequency of Knowledge Exchange</th>
<th>Yearly</th>
<th>Quarterly</th>
<th>Monthly</th>
<th>Weekly</th>
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<tbody>
<tr>
<td>Total KSC</td>
<td>n=412</td>
<td>n=181</td>
<td>n=139</td>
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</table>
Effects of Organizational “Mothership” on KSN

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<th>3%</th>
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<td>Total KSC per region</td>
<td>44</td>
<td>47</td>
<td>27</td>
<td>18</td>
<td>8</td>
<td>17</td>
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</tbody>
</table>

Majority KSC within each region: Intra-regional
2nd most frequent: KSC with UK

KSC based upon weekly knowledge exchange

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EPOC 2011 * Jaenick-Will
Reasons for not connecting

- Institutional
  - Lack of shared culture, approach, contextual knowledge, time-zone
- Organizational
  - Structure (business groups, regions)
  - Resource funding (Hourly charge rate)
- Personal
  - Shyness due to language skills
  - Ignoring/ Prioritizing local requests

Reasons for connections

- Project-based
  - Technical specialty
  - Regional knowledge or specialty
  - Prior experience
    “Problemistic search” leading to project-based solution and increased referential knowledge
- Familiarity-based
  - Prior in-person experience
    Project-specific or strategic and keeping up-to-date
“Stable” KSC:
- Familiarity-based KSC with shared knowledge
- Discuss strategic directions + project-based needs
- May lead to repeated, bi-directional knowledge flow

“Turbulent” KSC:
- Project-based KSC
- Lack of shared understanding
- May lead to non-repeated, uni-directional knowledge flow

Uncovering

• What boundary is the most difficult to transcend?
• How to connect across boundaries:
  – Strategies at Organizational, CoP, Project and Individual levels
• Expanding beyond connections to knowledge flow in organizations: multi-lateral reach
• Expanding to multiple CoPs (6+) within 4+ organizations
mahalo 고맙습니다

thank you

merci 谢谢 danke

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