Best Practices in information processing
Lu Yuan, Oscar Tomico
open innovation vs. closed innovation

Open innovation examples
Attitudes towards closed vs open innovation

Knowledge sharing in open innovation

source google images
Data, information and knowledge

source google images
Data as raw facts

source google images
Information as data conceptualization and categorization

source google images
Knowledge as information contextualization and personalization

source google images
Relations between data, information & knowledge

Data processing towards knowledge

Source: Boisot Max, Agusti Canals (2004). Data, information, and knowledge: have we got it right?. Journal of Evolutionary Economics 14:43–67
Knowledge sharing challenges: content & process
Data is like food. We used to be calorie poor and now the problem is obesity. We used to be data poor, now the problem is data obesity.” – Hal Varian, Chief Economist, Google.

large volume tacit/explicit data/information/knowledge collected and represented in diverse media by individual stakeholder & network

Data obesity & Media Richness
<table>
<thead>
<tr>
<th>Tacit knowledge</th>
<th>Explicit knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inexpressible in a codifiable form</td>
<td>Codifiable</td>
</tr>
<tr>
<td>Subjective</td>
<td>Objective</td>
</tr>
<tr>
<td>Personal</td>
<td>Impersonal</td>
</tr>
<tr>
<td>Context specific</td>
<td>Context independent</td>
</tr>
<tr>
<td>Difficult to share</td>
<td>Easy to share</td>
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</tbody>
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Characteristics of knowledge

Process: Motivating, Realizing, Boundary crossing


Knowledge sharing is give and take, when there is sufficient added value to motivate sharing?
Efficient knowledge sharing

source google images
Boundary crossing - stakeholder differences: culture (organizational/ demographical), needs, expectations, industrial background, competitive liaisons/backgrounds, motivational aspects, hierarchy, ...
<table>
<thead>
<tr>
<th>Process oriented theoretical knowledge sharing principles</th>
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<table>
<thead>
<tr>
<th>Methodology</th>
<th>Efficiency</th>
<th>Motivation</th>
<th>Boundary crossing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personnel Transfer</strong></td>
<td>Aware of other competencies and knowledge</td>
<td>Gain in understanding different perspective</td>
<td>New relations</td>
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<tr>
<td><strong>Printed and Electronic media</strong></td>
<td>Supporting exchange of explicit knowledge <strong>Negative:</strong> Difficulty codifying complex knowledge</td>
<td></td>
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<tr>
<td><strong>Knowledge brokers</strong></td>
<td></td>
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<tr>
<td><strong>Direct communications</strong></td>
<td>Transferring tacit knowledge</td>
<td>Stronger network identity</td>
<td>Bringing stakeholders together</td>
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<tr>
<td><strong>Goal alignment</strong></td>
<td>Goal orientation</td>
<td>Stimulating trust</td>
<td>Ability to create links between different communities/networks</td>
</tr>
<tr>
<td><strong>Interpersonal relationship</strong></td>
<td>Increased acceptance</td>
<td><strong>Negative:</strong> Injustice</td>
<td></td>
</tr>
<tr>
<td><strong>Rules and Agreements</strong></td>
<td>Increasing absorptive capacity</td>
<td>Creating commitment</td>
<td></td>
</tr>
<tr>
<td><strong>Partner selection</strong></td>
<td></td>
<td><strong>Negative:</strong> Bureaucracy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Negative:</strong> Creating distrust</td>
<td></td>
</tr>
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<td>Stimulating absorptive capacity</td>
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<td></td>
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</tr>
</tbody>
</table>

Case 1: Internal Open Innovation, IOP Data Fusion project at Philips Healthcare
Make development process more transparent – lower metaphorical walls
Multi-stakeholder open innovation: example from ambient experience hospital
(http://youtu.be/NrWGKogw6P0)
Content oriented advanced IT solutions

Source: IOP data fusion project Enterprise Search Engines
Content oriented data visualization tools

Source: Hans Rosling, videos on TED
datamind

share for quality
Case 2: External Open Innovation, Crisp Smart Textile Services project
Multi-stakeholder collaboration
Co-reflection workshop: matching expectations and expertise
Co-design workshop: determining strategic directions
Value network

Goals
- Video introduction
- Expertise and goals
- Developing directions

Results
- Learning
- New insights

Common ground

Goals
- Objects and post-its
- Physical mappings
- Exchanging skills

Results
- Common interests
- Approach

Shared ownership

Goals
- Name badges
- Presentations
- Physical results

Results
- Frustrations
- New knowledge
DB108 - Designing Open Innovation Spaces
Conclusions
Design as knowledge creation

Source: Shelley Evenson and Hugh Dubberly, Design as Learning—or “Knowledge Creation”—the SECI Model, Interactions magazine Volume XVIII January - February 2011
Knowledge sharing in context

Knowledge sharing in different Ba

Questions?