Leveraging Software Engineering to Solve the IT Issues of the Next Decade

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Werner Schaer
schaer@software.org

Content
- The Consortium: A Unique Business Model
- Emerging Knowledge Economy
- IT in 2005
- Technology Management Strategy
- Summary
The Consortium Constellation

Member-Focused Programs

Prioritized Needs
"Proposed" Technical Plan

Individual Member Company Needs

Common Needs
- Strategic Framework
- Technical Plan

Member Community

Products and Services
Proactive Technology Transfer Strategy
Sharing Lessons Learned
Collaborative Technology Development
Training
Consulting
Automated Processes & Methods
Integrating with Commercial Tools
Anymore, Anywhere Collaboration

Emerging Knowledge Economy

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Conventional Thinking</th>
<th>New Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Foundation</td>
<td>Newtonian Physics</td>
<td>Quantum Gravity</td>
</tr>
<tr>
<td>Time is</td>
<td>Monochronic, Linear</td>
<td>Polychronic</td>
</tr>
<tr>
<td>Information is</td>
<td>Ultimately Knowable</td>
<td>Infinite and Unbounded</td>
</tr>
<tr>
<td>Growth is</td>
<td>Linear, Managed</td>
<td>Organic and Chaotic</td>
</tr>
<tr>
<td>Managing means</td>
<td>Control, Predictability</td>
<td>Insight and participation</td>
</tr>
<tr>
<td>Workers are</td>
<td>Specialized and segmented</td>
<td>Multifaceted, always learning</td>
</tr>
<tr>
<td>Knowledge is</td>
<td>Individual</td>
<td>Collective</td>
</tr>
<tr>
<td>Organization is</td>
<td>By Design</td>
<td>Emergent</td>
</tr>
<tr>
<td>Change is</td>
<td>Something to worry about</td>
<td>All there is</td>
</tr>
</tbody>
</table>

Source: Knowledge Economics
IT in 2005

- Number of products
  - Fewer
- Enterprise architectures
  - Simpler, Ubiquitous
- Home-grown application development
  - Rarer
- Off-the-shelf applications
  - Ubiquitous
- Component-based development
  - Ubiquitous
- Centralized IT function
  - Providing bandwidth for Web applications
  - Low
- Prestige of centralized IT worker
  - No longer separate from business
- Other IT functions
  - Indistinguishable from typical business person
- Typical non-centralized IT worker
  - Honzo
- The mystique of IT
  - Gone

Source: Dalmalicm Technology Management Strategy

Technology Management Strategy

- Members Needs
  - Technology Trends
- DARPA Sponsored Research
- Outer Government, Academic and Industrial Research and Development

Leverage, Evolve, Industrialize

Transfer Best Commercial Practices

Developing Systems - Architecture, Engineering, and Integration Improvement

Technology to move beyond technology implementations
Managing Technology Portfolio

Component-Based Software Engineering

Requirements
- COTS & GOTS
- Components Technologies
- Component Evaluation
- Process & Prototype

Lifecycle Models
- ISSEP Tailoring
- Guidelines & Training
- Legacy Migration Process
- Guidelines & Training

Component-Based Software Engineering
- Architectural Frameworks
- Survey & Training
- DII CDE • Internet
- DCOM • CORBA

Component-Based Systems
I* The Consortium initiatives enables its members to leverage the leading edge IT to maintain and enhance their competitive business advantage in marketplace!

Summary

- Next decade will bring a profound Shift in Business IT Strategies
- The Consortium provides a Unique Business Model
  - Business-focused technology evolution and adoption
  - Major emphasis on technology transfer
  - Offering a large knowledge base of best practices in software and systems engineering methods, processes and technologies
- The Consortium initiatives enables its members to leverage the leading edge IT to maintain and enhance their competitive business advantage in marketplace