Learning Challenges in Virtualized SME

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INTRODUCTION
Who I am

Researcher
Technology-Enhanced Learning, Mobile Serious Games, Open Educational Resources
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Some Numbers First

SME in Germany

- 99.7% of all enterprises in Germany are SME
- 65.8% of all employees work in SME
- 37.5% of all turnovers are generated in SME
- 83% of all trainees are educated in SME!
- Focus here: small enterprises (below 10 employees, below 2 Million turnover) in innovative technology fields

Source: Institut für Mittelstandsforschung (IfM) Bonn: Schlüsselzahlen des Mittelstandes in Deutschland 2007/2008
WHAT IS A VIRTUALIZED SME?
A typical project setup

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Page 6
Characteristics of virtualized SME

• Exists only temporarily (e.g. for one specific project)
• Composed of heterogeneous SME and Freelancers
• Composition is often hidden to the customer, one SME is responsible for the whole process
• Working locations may vary (remote / local)
• One SME/Freelancer may be part of several virtualized SME simultaneously
CHALLENGES FOR VIRTUALIZED SME
Complications & Challenges

- SME may have overlapping competencies and conflicting interests
- Freelancers only appointed temporarily (special tasks, peak effort)
- Knowledge & Skills in the V-SME may be distributed unevenly
- Expectations along value chain may vary and be inconsistent

Virtualized SME

Communication
Documentation
Innovation
Learning & Training

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Page 9
LEARNING SITUATION AT VIRTUALIZED SME
Mixture of learning requirements, training approaches, responsibilities, and infrastructures.
LEARNING CHALLENGES FOR VIRTUALIZED SME
Why are traditional learning offers not used by SME?

<table>
<thead>
<tr>
<th>SME Requirement</th>
<th>Learning Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term projects</td>
<td>Long-term oriented courses</td>
</tr>
<tr>
<td>Short planning period</td>
<td>Course schedules fixed ahead</td>
</tr>
<tr>
<td>Dynamic team constellations</td>
<td>Fixed course offers</td>
</tr>
<tr>
<td>Teams collaborate along value chain – not limited by organizational boundaries</td>
<td>Courses/Infrastructures often not offered across organisational boundaries</td>
</tr>
</tbody>
</table>
Learning challenges for virtualized SME

• How to get a (new) team in production state fast?
• How to recognize individual learning needs given short project cycles and short setup times?
• How to manage learning processes and outcomes for virtualized SME?
  – Who maintains the learning profiles and outcomes?
  – Who is responsible for the process?
  – Who pays for it?
Some requirements for virtualized SME

• Flexibility:
  – course offers in various levels of granularity
  – no fixed schedules

• Standardised individual learning profiles, which belong to the learner and can be transferred across educational providers

• Shared process responsibility in virtualized SMEs

• Flexible educational business model (e.g. pay-per-use)
THANK YOU!

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