

Learning Challenges in Virtualized SME

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Learning Challenges in Virtualized SME

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INTRODUCTION

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Who I am

Researcher

Technology-Enhanced Learning, Mobile Serious Games, Open Educational Resources

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Entrepreneur

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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 turn overs 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

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WHAT IS A VIRTUALIZED SME?

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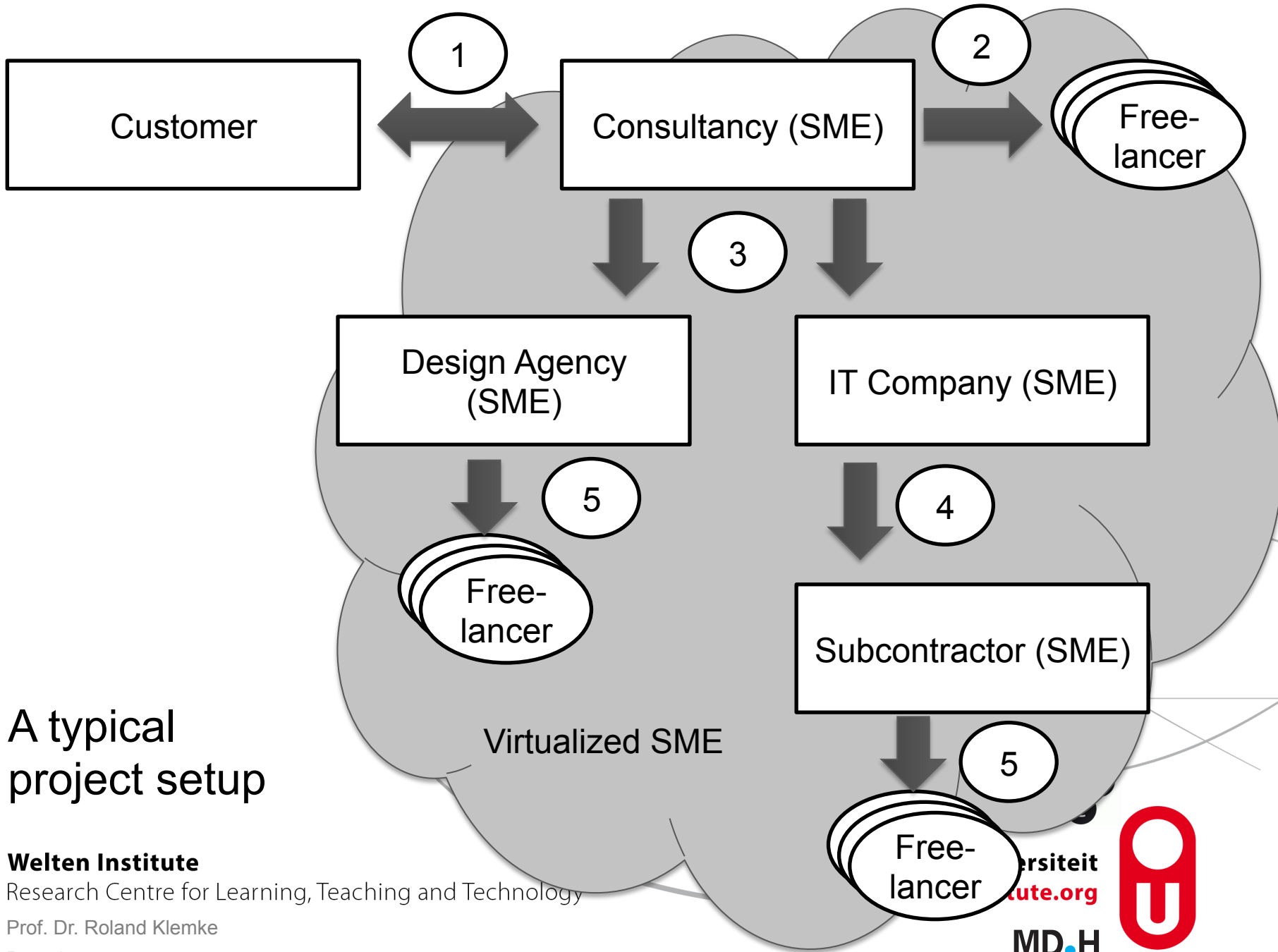
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A typical project setup

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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

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Customer



Consultancy (SME)

Expectations along value chain may vary and be inconsistent

SME may have overlapping competencies and conflicting interests

Des

(SME)

Communication
Documentation
Innovation
Learning & Training

Freelancers only appointed temporarily (special tasks, peak effort)

lancer

(E)

Complications & Challenges

Virtualized SME

Knowledge & Skills in the V-SME may be distributed unevenly

Free-lancer



LEARNING SITUATION AT VIRTUALIZED SME

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Customer

Consultancy (SME)

IT-SMEs do technology-oriented trainings, but not systematically

Customer is trained on delivered solution

Agency performs tool trainings

Freelancers are expected to have the right knowledge & skills

Mixture of learning requirements, training approaches, responsibilities, and infrastructures

Design

Factor (SME)

Learning Situation

Conflicts of knowledge sharing vs specialist profiles

No consistent learning infrastructure exists for virtualized SME

Subcontractor needs to estimate relevant skills for future projects

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Why are traditional learning offers not used by SME?

SME Requirement	Learning Offer
Short-term projects	Long-term oriented courses
Short planning period	Course schedules fixed ahead
Dynamic team constellations	Fixed course offers
Teams collaborate along value chain – not limited by organisational boundaries	Courses/Infrastructures often not offered across organisational boundaries



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?

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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)

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