Challenge the Engineering Mindset in Smart Service Innovation

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INTRODUCTION

"How can customer-orientation be integrated into smart service innovation of product-centric companies and existing challenges be overcome?"

Table 1. Challenges from Literature in Smart Service Innovation for Manufacturing Companies

Issue	Challenges
Servitization [1]	• Building a customer orientation vs. maintaining an engineering mindset • Exploring service innovation vs. exploiting product innovation
Service Innovation[2]	• Struggling with a product vs. a needed services innovation mindset
Digitization Paradoxon [3]	• Focusing too much on the technical possibilities rather than customer needs • Developing digital solutions with too little perceived customer value
Smart Service [4]	• Perceiving firm as a product-driven technology company • Emphasizing products over services • Lacking capabilities to understand customers and mapping needs to pain points
Smart Service [5]	• Inadequate service culture • Communicating the value of service solutions • Insufficient knowledge of customers' needs • Unclear value proposition of service solutions • Insufficient match of service solutions with customer expectations • Insufficient service solution development process

METHOD

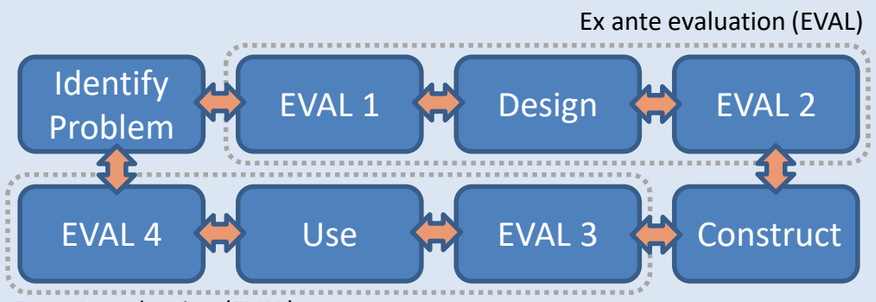

Figure 1. Approached Design Science Research (DSR)-Process [6]

Table 2. Design Science Research (DSR)-Grid [7]

Problem	Research Process	Solution
• Gain more customer orientation in smart service innovation	• Iterative DSR-Process • Early and recurring evaluation throughout the process	• Method for smart service innovation (online) • Smart service value propositions
Input	**Concepts**	**Output**
• Job and value mapping [8,9] • Hypotheses elicitation • Laddering-Interviews [10] • Value Proposition Pattern	• Service-Dominant logic • Service Design • Means-End Theory	• Effective targeting innovation efforts • Reshaped mental model [11]

RESULTS

Construct

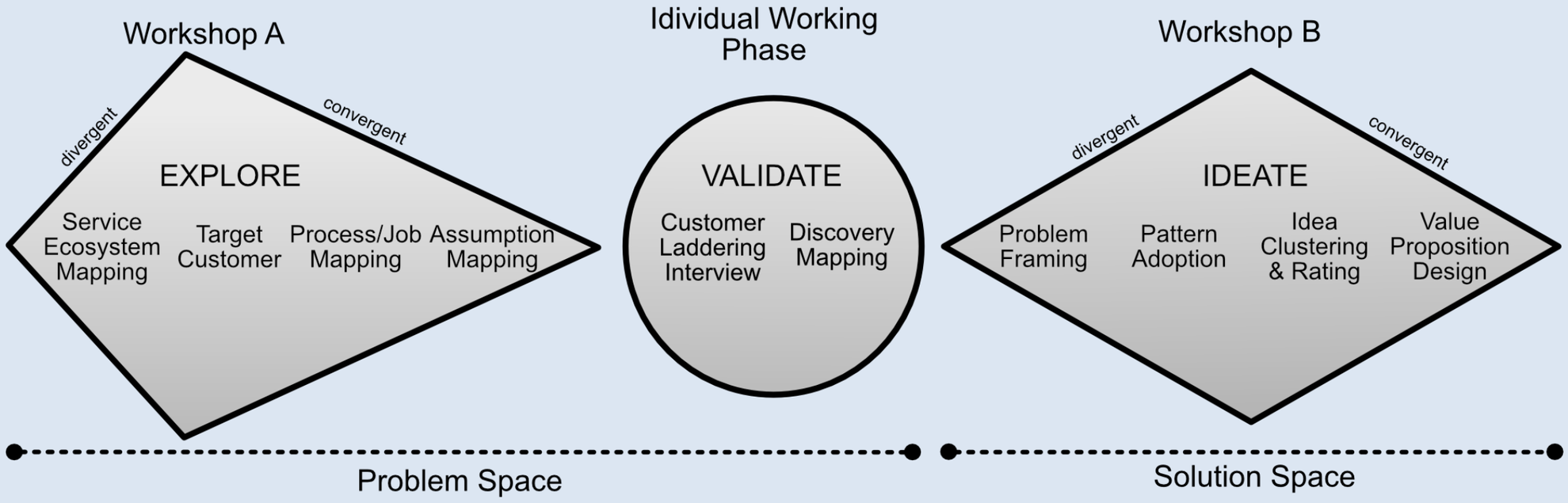

Figure 2. Design-Driven Smart Service Innovation (DDSSI)-Method

EVAL 4

*"Actually, it must be said quite honestly, we have so far developed something that only we [as a company] liked. [..] [And in Assumption Mapping] how many [assumptions] then finally emerged, I found a bit scary." (*Project Lead)

"[Pattern cards] they are awesome. I think they're great. That's really ingenious." (Senior Consultant)

"What I also really liked was that you don't use one toolbox or one methodology, but you mix several different methodologies together and take from each the one you need at the moment." (Technical Director)

"We always assume and usually do not go out to the customer and ask what is your problem. We (..) developed into the blue." (After-Sales Manager)

CONCLUSION

- The DDSSI-method for smart service innovation based on the design science research process addresses a mentioned research gap [12]
- Existing methods and approaches do not have to be reinvented, but logically linked
- DDSSI-method assists to overcome known hurdles of digital servitization
- Focus on Service Design process and on value propositions promotes customer orientation
- Participants of the virtually conducted workshops showed a shift in their mindset about service innovation and customer orientation

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[5] Klein et al. „Barriers to Smart Services for Manufacturing Companies – an Exploratory Study in the Capital Goods Industry". *Journal of Business & Industrial Marketing* 2018
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[9] Bettencourt, Lusch, & Vargo. „A Service Lens on Value Creation: Marketing's Role in Achieving Strategic Advantage". *California Management Review*, 2014.
[10] Jüttner et al. „Customer Service Experiences: Developing and Applying a Sequentialincident Laddering Technique". *European Journal of Marketing,* 2013
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[12] Teixeira et al. „Advancing Service Design Research with Design Science Research". *JOSM,* 2019

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