UNDERSTANDING SMART SERVICE SYSTEMS TRANSFORMATION

A Socio-Technical Perspective

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AGENDA

PADERBORN UNIVERSITY

Understanding Smart Service Systems Transformation

I. Motivation

II. Theoretical Background

III. Research Method

IV. Smart Service Systems Transformation

   i. Case Description

   ii. A Socio-Technical Perspective on Smart Service Systems Transformation

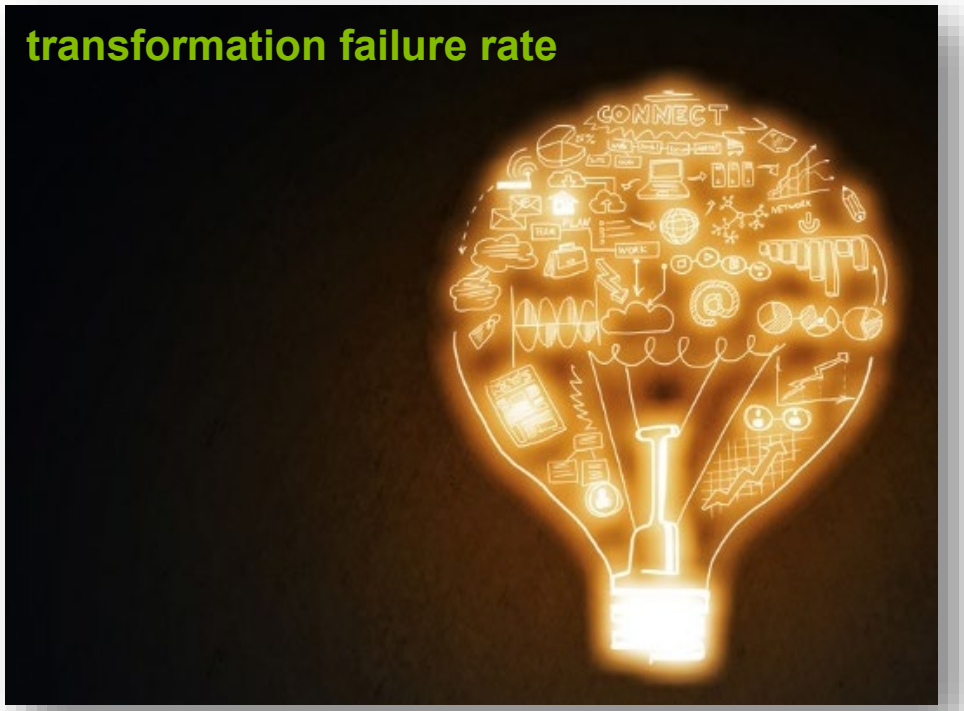
V. Conclusion and Outlook

MOTIVATION

New Technologies can Trigger a Domino Effect, Requiring Organizational Realignment

- Service system: all functions, processes, and activities need to be designed to support **value creation**
- Emergence and diffusion of digital technology → **Smart Service Systems** (SSS)
- Organizations often focus on acquiring and integrating technologies for designing new SSS
- Establishing a new SSS → substantial **organizational transformation process**
- Research Question: *"How can smart service systems transformation be described through a socio-technical perspective?"*

70 %



Edvardsson *et al.* (2011)
Baggio *et al.* (2019)

THEORETICAL BACKGROUND

SSS can be Incomplete or Incongruous, Creating Misfits in the Organizational Setting

- Smart products act as **boundary-objects** that collect, analyze, and use contextual data
- SSS Innovation through recombination of **operand and operant resources**
- Plethora of frameworks, models, and methods to formalize, analyze, and design SSS
- **However**: as a SSS constitutes a **socio-technical system**, many factors need to be considered that go beyond designing value propositions

Beverungen *et al.* (2019)
Beverungen *et al.* (2017)
Breidbach and Maglio (2015)

THEORETICAL BACKGROUND

Smart Service Systems are Socio-Technical Systems

- **Socio-technical theory** by Bostrom and Heinen (1977) provides a suitable lens for exploring the transformation in service organizations
- A change in one variable will cause changes in the other variables of a socio-technical system:
  - **Structure:** formal and informal element
  - **Tasks:** inter-organization, cross-functional processes
  - **Technology:** data and information technology
  - **People:** skills and capabilities

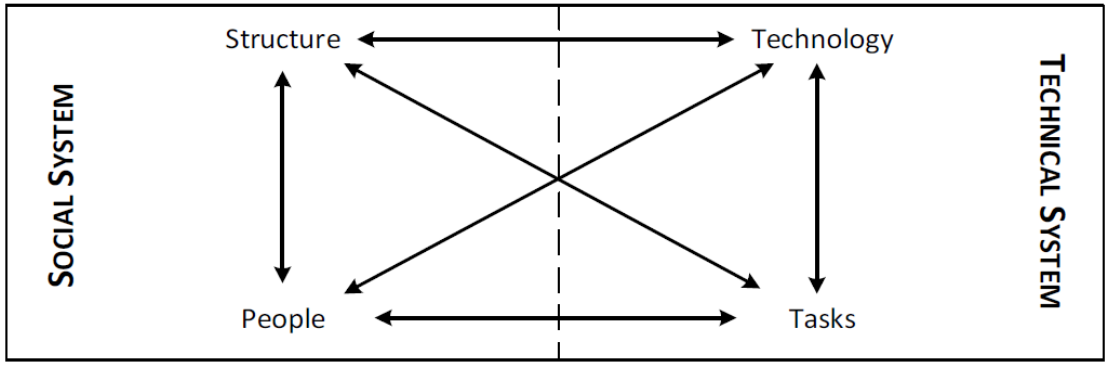


Figure 1. Complexity of Change in Socio-Technical Systems.

Bostrom and Heinen (1977)

RESEARCH METHOD

We Perform a Qualitative Research Approach

- **Case study research**
- Currently running **multiple case study** → here: exemplary case
- **Semi-structured interviews** and informal conversations as primary data sources
- **Further data:** internal documents of the organization, such as posters, presentations, and articles that describe the intended transformation phase and steps
- **Data triangulation**
- Category-coded content analysis

INTERVIEWEE's ID	INTERVIEWEE's POSITION	CORPORATE AFFILIATION [YEAR]	LENGTH [MIN]
IV1	Product Owner	11 years	53.07
IV2	Presales & Solution Architect	7 years	18.44
IV3	Account Team	2 years	31.08
IV4	HR Partner	18 years	25.33
IV5	Controlling	18 years	22.21
IV6	Agility Master	6 years	32.48
IV7	Senior Coach for Transformation	19 years	42.47
IV8	Head of HR Development	6 years	47.55
IV9	Account Team	5 years	44.53
TOTAL			319.16

Table 1. Interview Overview.

Yin (2017)
Eisenhardt (1989)
Mayring (2010)

CASE DESCRIPTION

Transformation Process from a rather Traditional Service Provider to a SSS Provider

- **Case:** conducted at a subsidiary of a large corporation—called "*Servivor*"—that establishes SSS in a B2B context
- **Smart Services:** e.g., holo assistants for repairing and smart chatbots for assisting customers.
- Number of employees: approx. 4,500
- Hierarchically organized → **radical transformation** to provide more customer-oriented services.
- Observation over a **two-year period**

CASE DESCRIPTION

A Socio-Technical Perspective on Smart Service Systems Transformation

- Six facets of SSS transformation:

- Insights how an organization can transform to enable value co-production and co-creation in SSS
- Nevertheless, "*There is no patent for transformation. Every company must find its own way. I can't adopt a solution to another business 1:1.*"

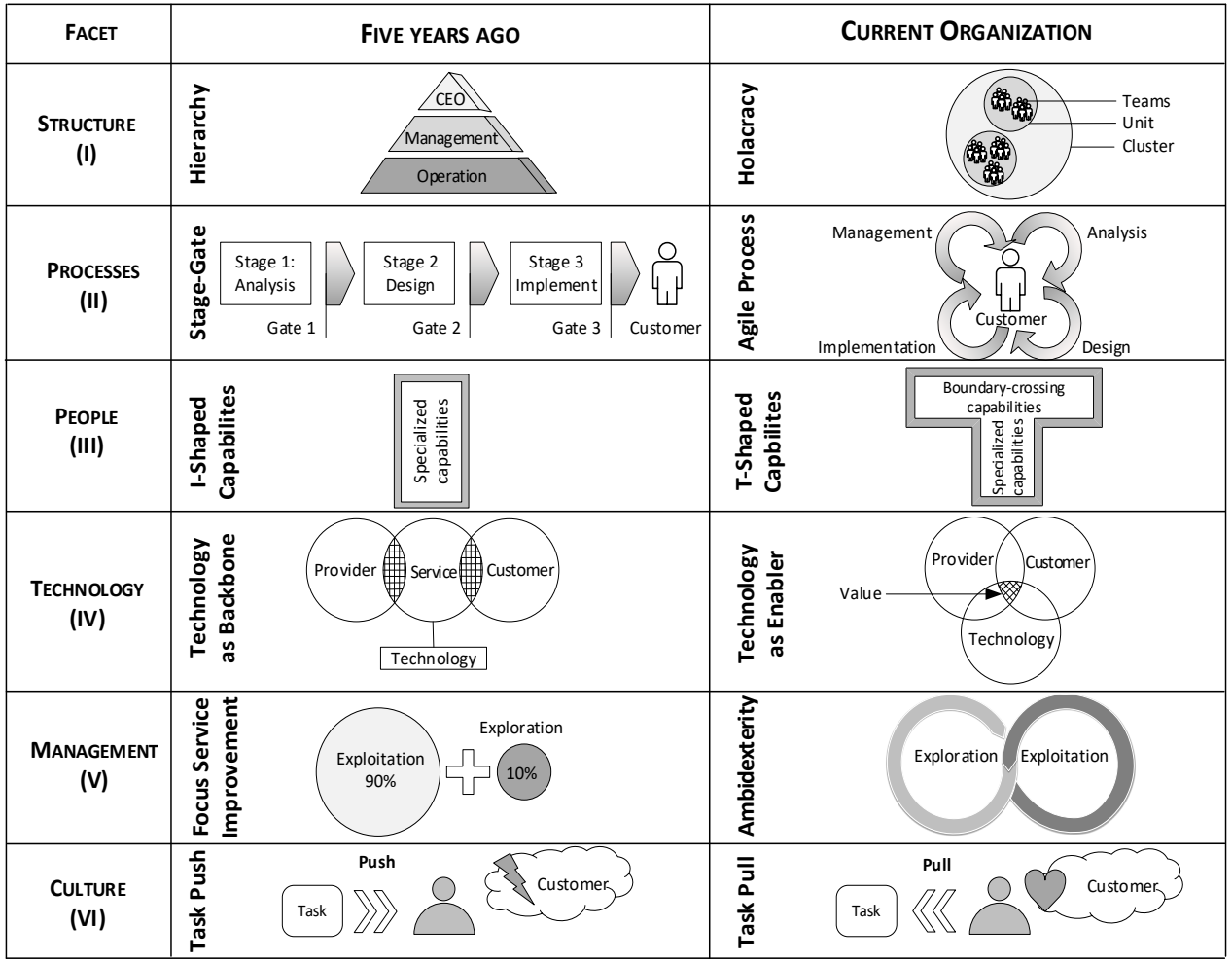


Figure 2. Cannibalization of Structures and Processes for SSS Transformation.

CONCLUSION AND OUTLOOK

Partial and Uncoordinated SSS Transformation can Lead to Organizational Discrepancies

- **Six facets** that need to be (re-)aligned in SSS transformation, i.e., structure, processes, people, technology, management, and culture.
- Cannibalize existing structures, discard old processes and outdated activities, and create new synergies through value networks
- Contribution:
  - **Research:** we provide a new analytical lens for service research in IS, namely that service engineering approaches should be extended with a subsequent transformation phase
  - **Management:** more in-depth understanding of areas that need to be adjusted and provide best practices
- Future Research:
  - **Continue data collection** following a multiple case study design (**purposeful and maximal variation sampling strategy**)
  - Key aspects for SSS transformation → model that illustrates different **transformation phases**

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