

# Service Value Creation in IoT-basierten Ökosystemen

asut IoT-Konferenz

9. September 2021

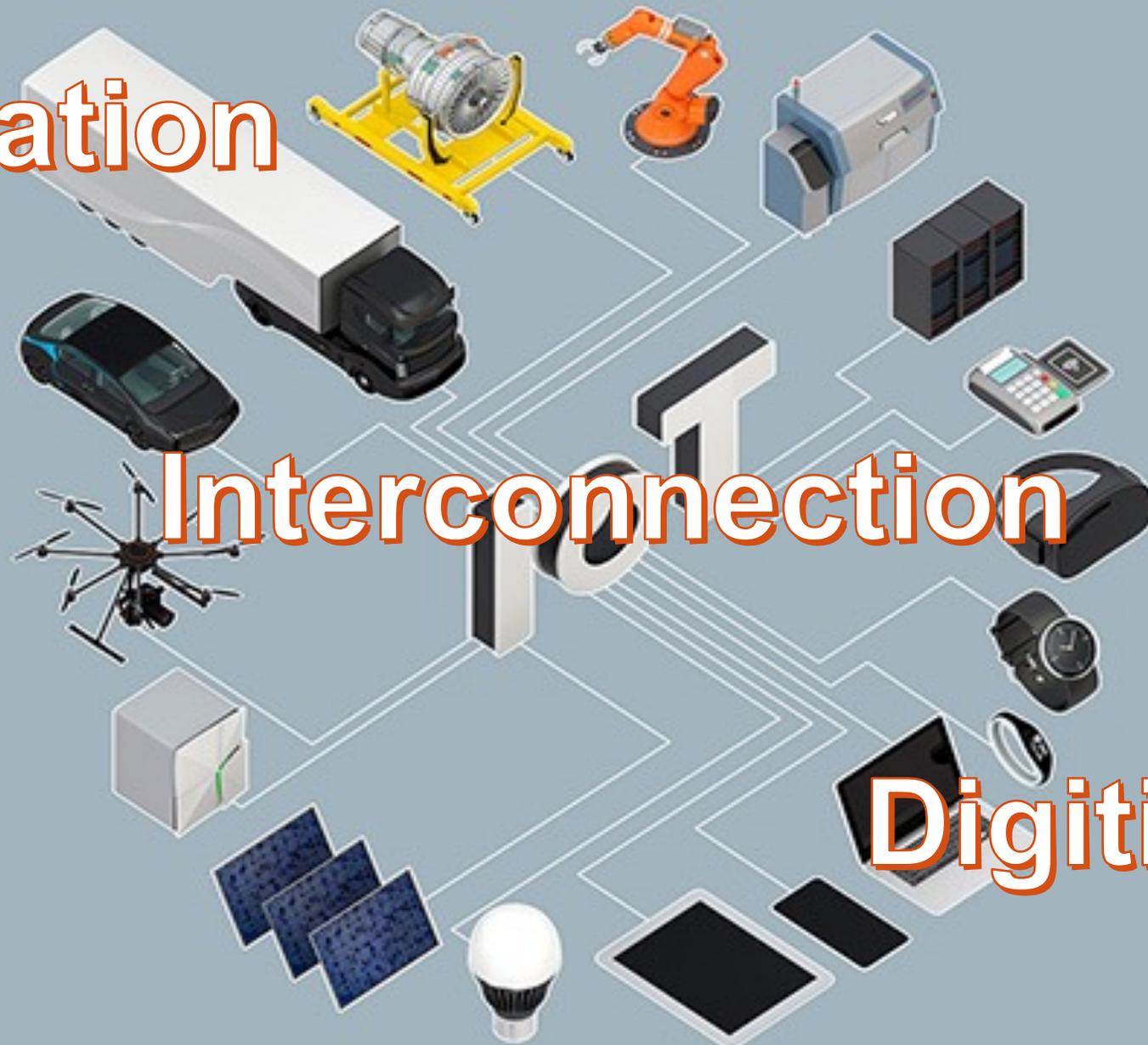
Dr. Jürg Meierhofer, ZHAW Plattform Industrie 4.0

<https://www.zhaw.ch/de/engineering/institute-zentren/idp/forschungsthemen/data-driven-service-engineering/>

<https://data-innovation.org/smart-services/>

# The fourth Industrial „Revolution“

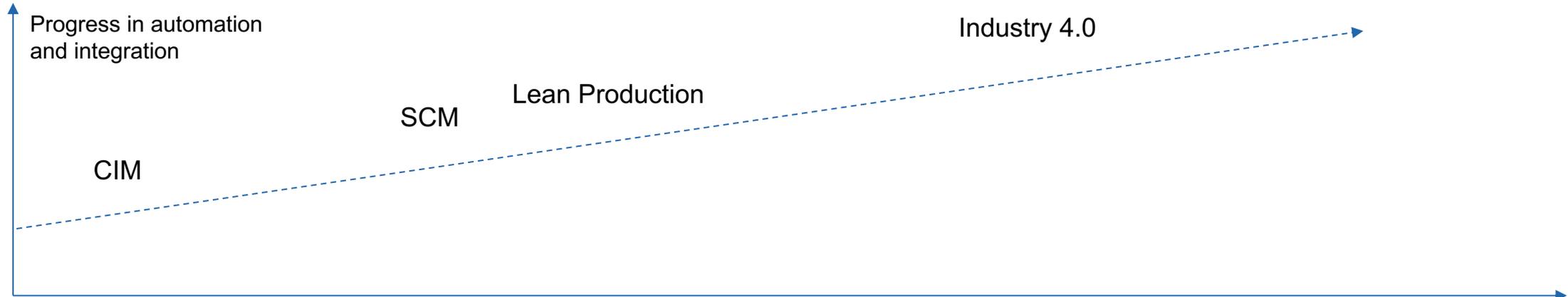
**Automation**



**Interconnection**

**Digitisation**

# Relation with Previous Approaches: CIM / SCM / Lean



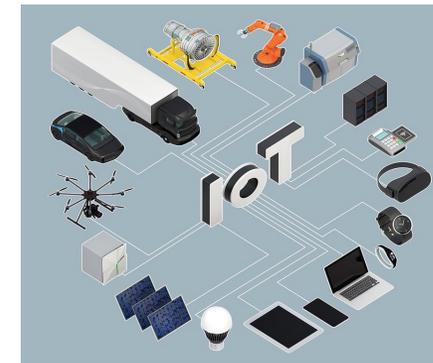
1980



2000



2010

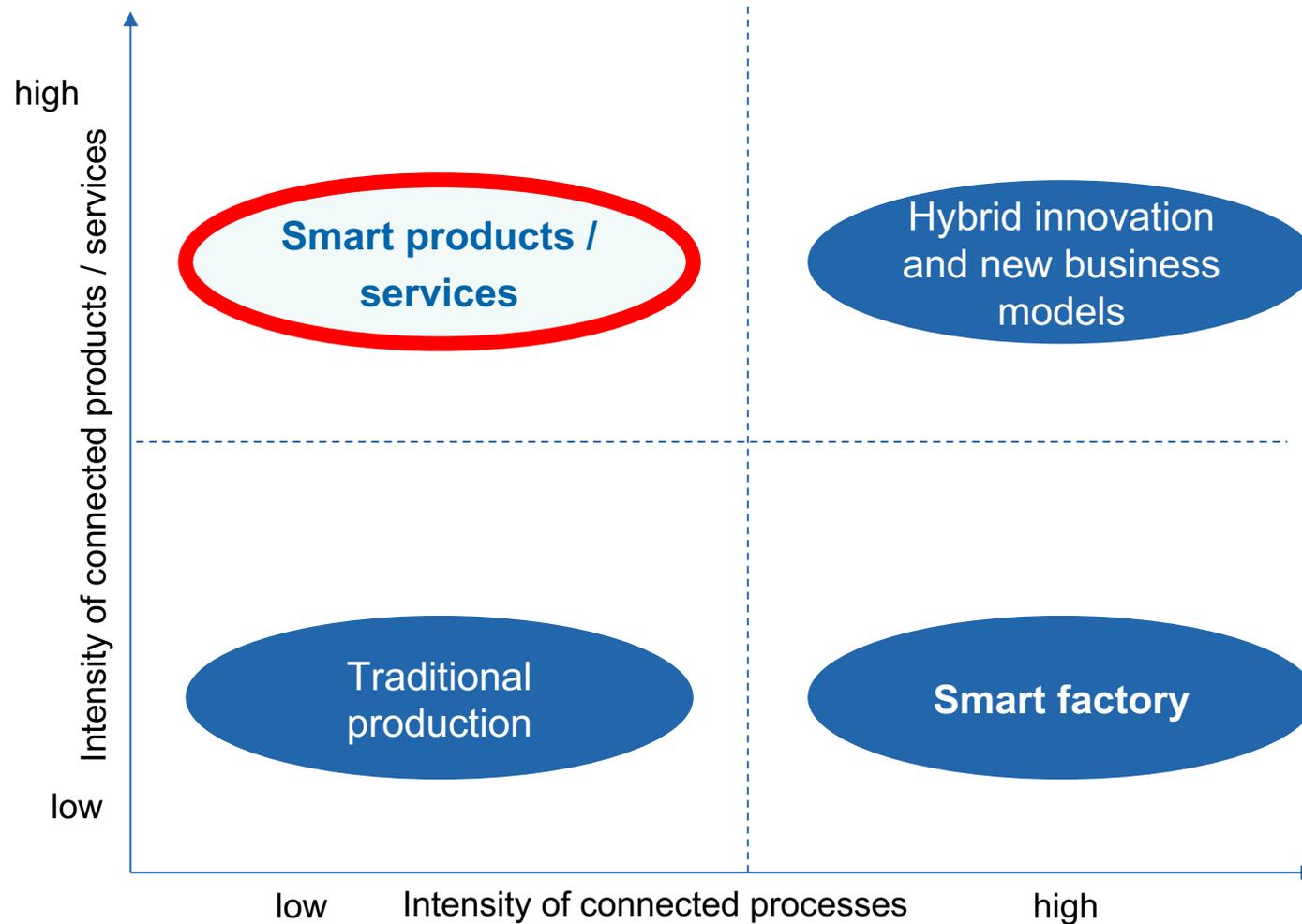


2020

Increasing availability, affordability of:

- IT infrastructure
- Data processing
- Communication infrastructure (internet)
- Sensors and actors
- Cloud computing
- Internet of things

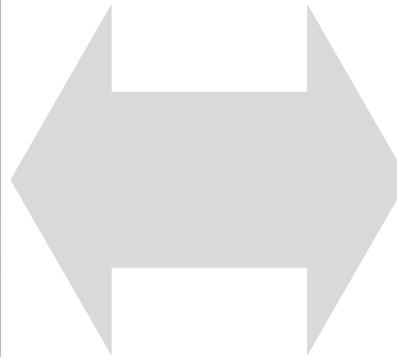
# Dimensions of Industry 4.0 / Digitalisation



# Product or Service?



Source: Mobility Genossenschaft



# Service - Value in Use

Newer term: „value in context“

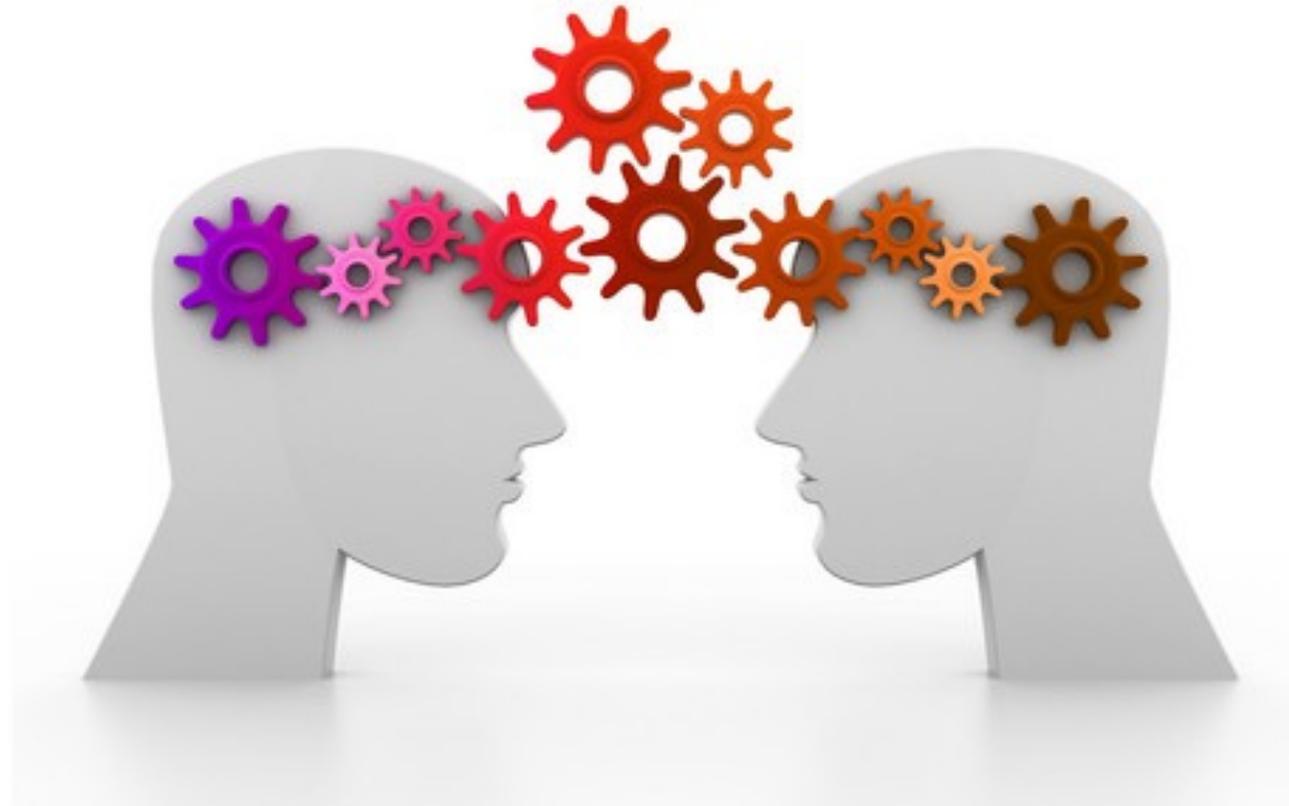
Value-in-use



Value-in-exchange

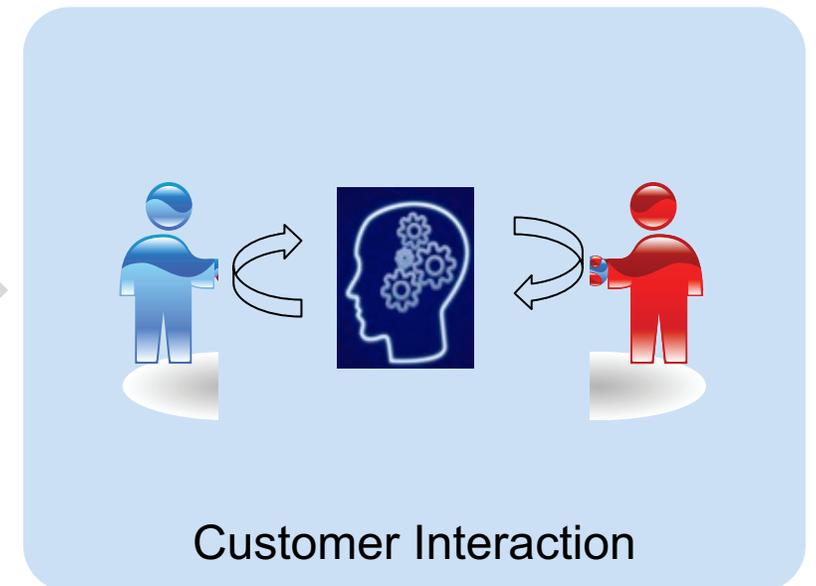
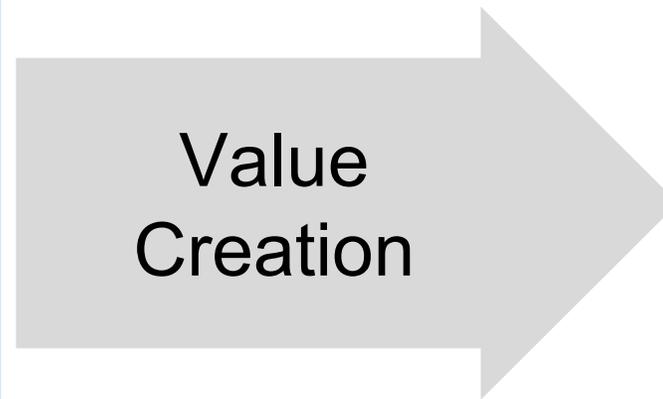
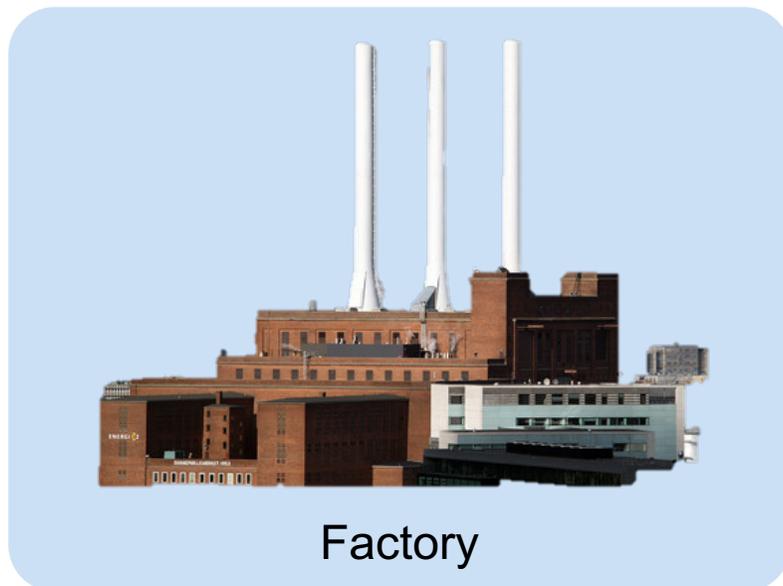


# Co-Creation, Co-Production in Services

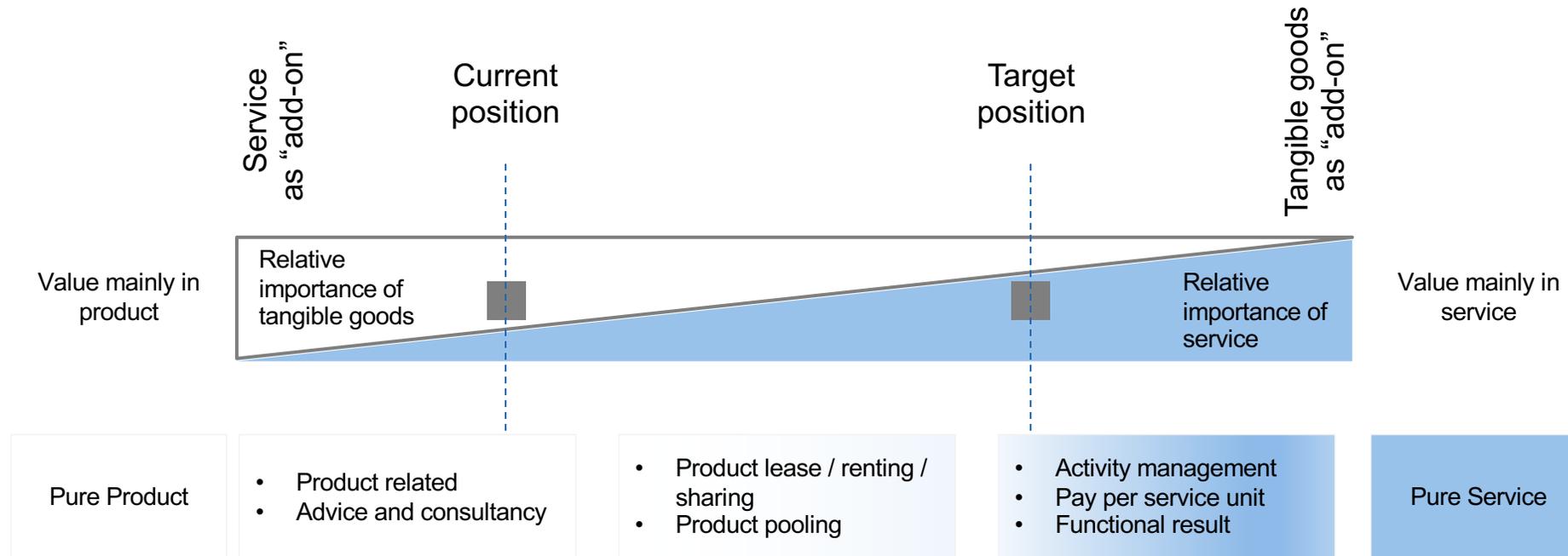


# Service-Dominant logic (S-D L)

service is considered the fundamental purpose of economic exchange (Lusch and Vargo)

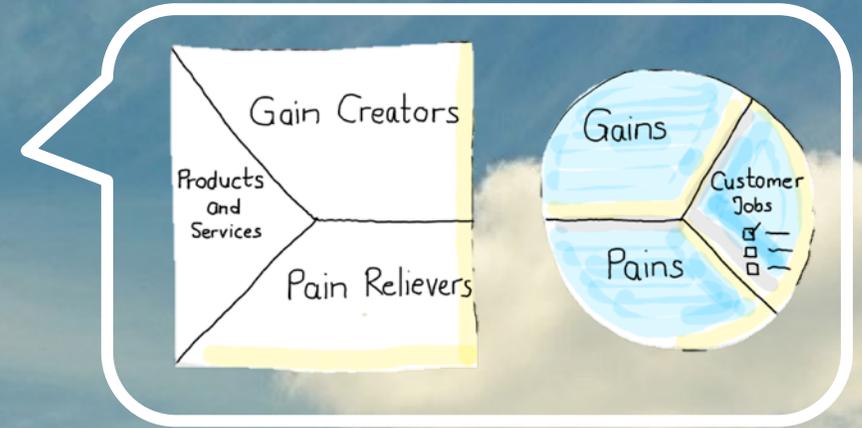


# Managing the transition



Angepasst von: Rogelio Oliva Robert Kallenberg, (2003), "Managing the transition from products to services", International Journal of Service Industry Management, Vol. 14 Iss 2 pp. 160 - 172.  
 Und  
 Tukker A., eight types of product– service system: eight ways to sustainability? Business Strategy and the Environment, Bus. Strat. Env. 13, 246–260 (2004)

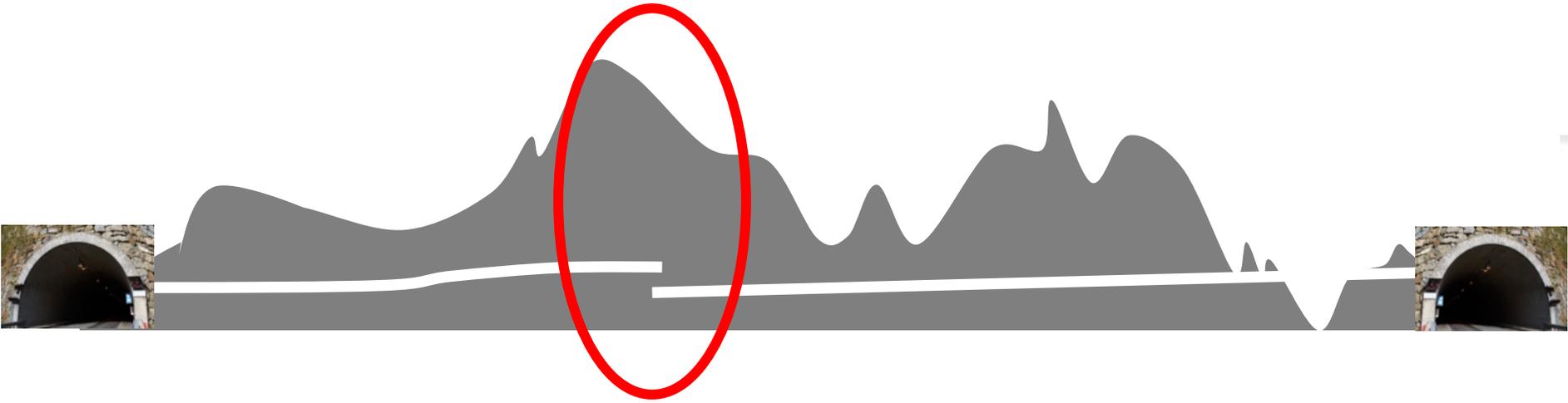
# What do customers need?



based on Osterwalder et al., 2014

# Where Technology meets Business

## Data Technology



## Customer



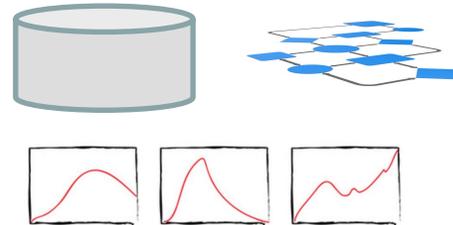
# The Shift to new Services

New Service-Models



Traditional Service-Models

Consulting, customization, condition monitoring, predictive maintenance, performance optimization



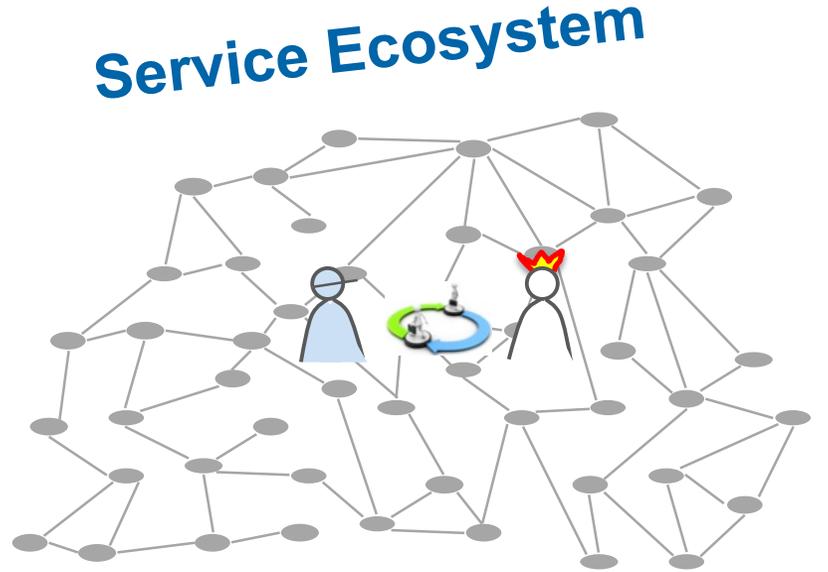
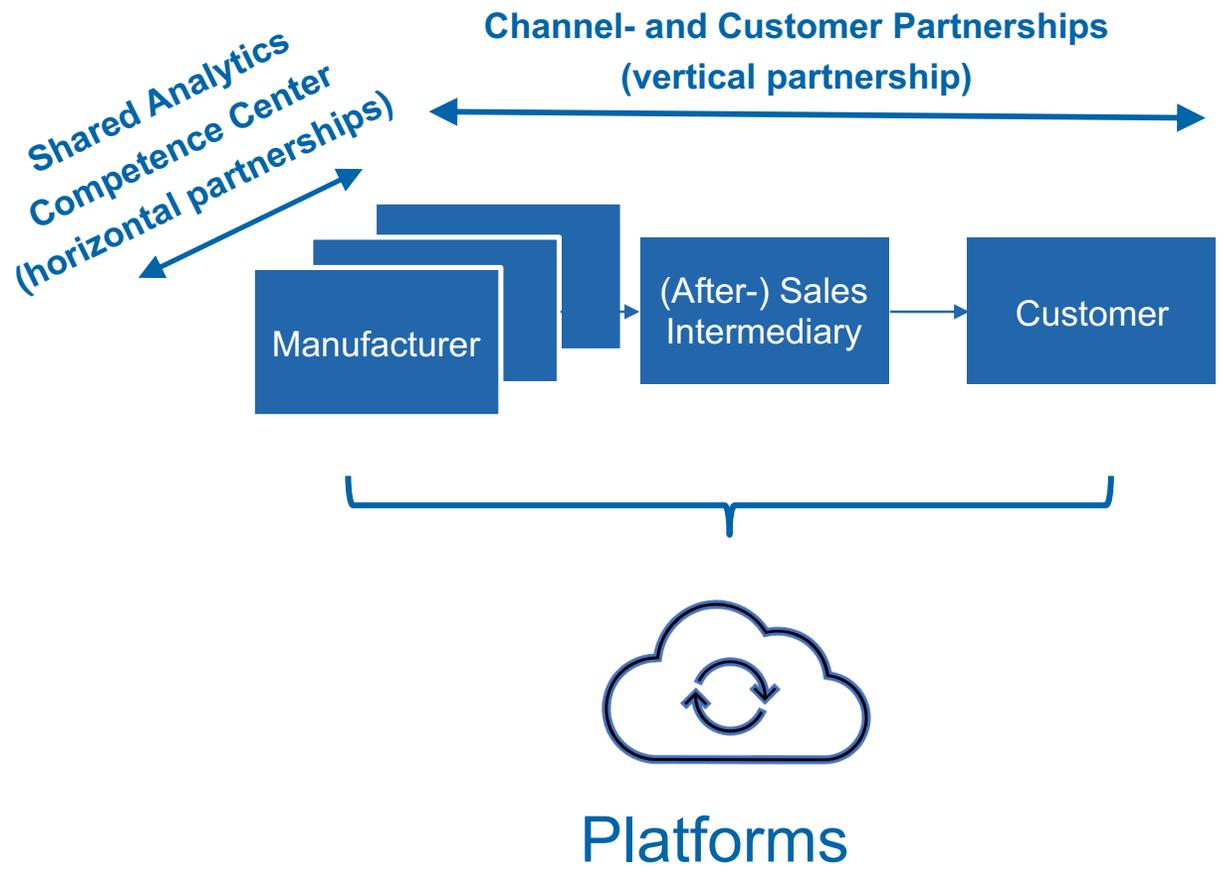
**Data-specific Challenges!**

Data, Analytics, Simulation

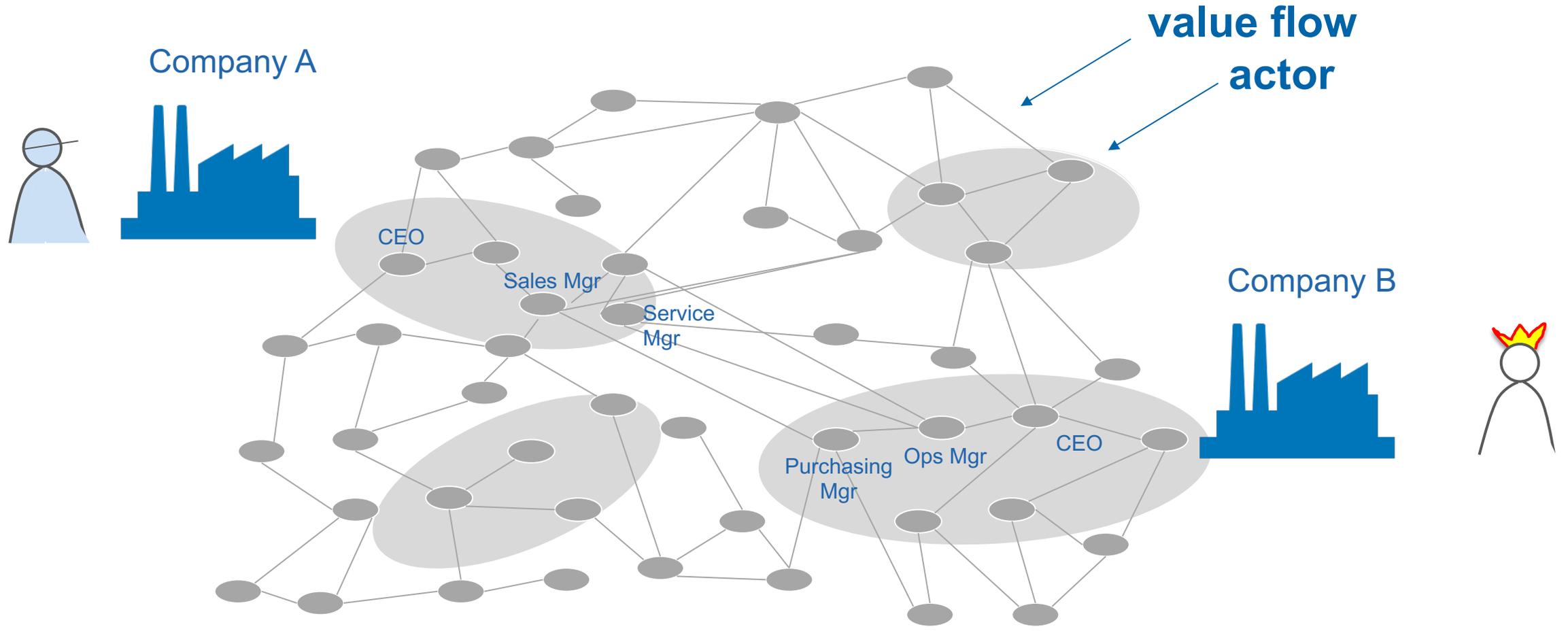
Bring into service, maintenance, repair, spare parts

simplified from: Kowalkowski, C., & Ulaga, W. (2017). Service strategy in action: A practical guide for growing your B2B service and solution business. Service Strategy Press.

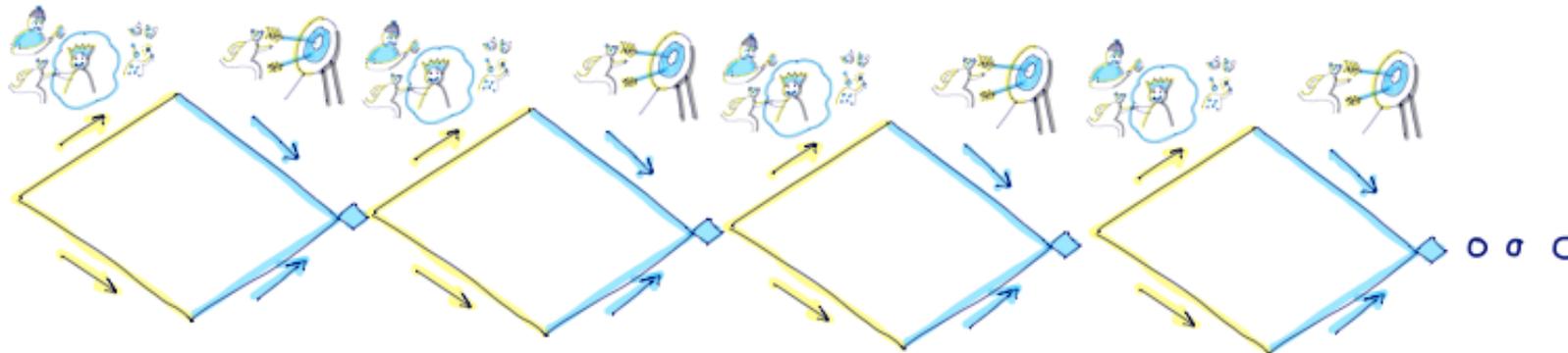
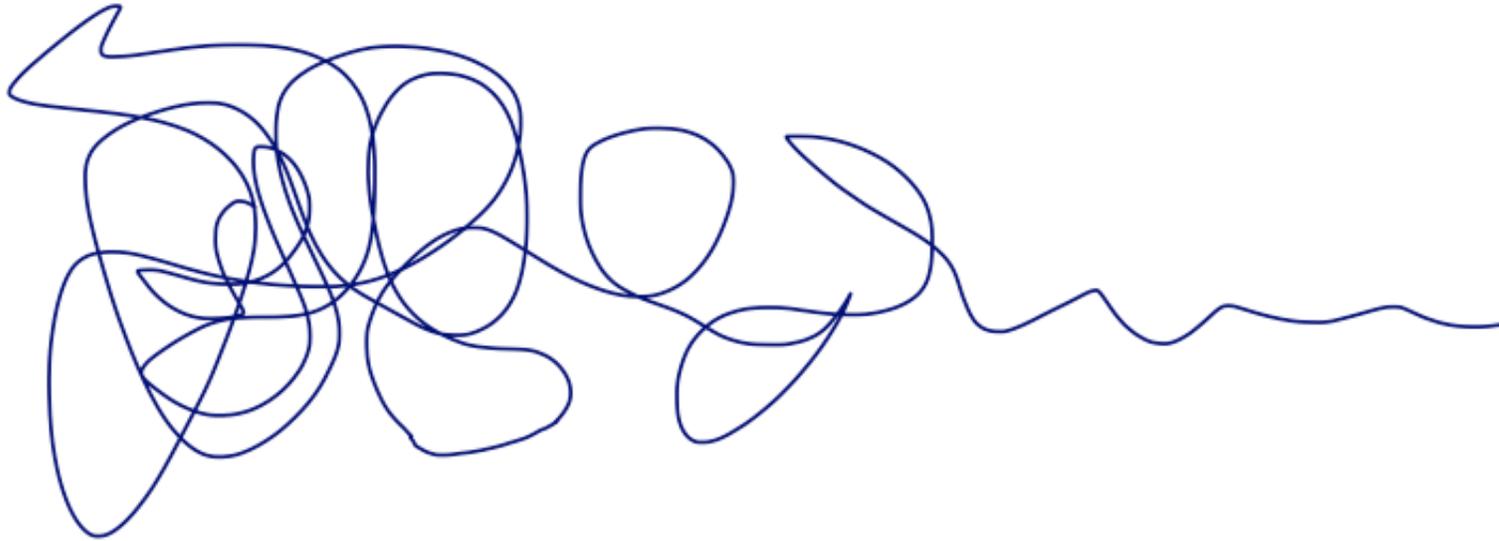
# Service Ecosystems



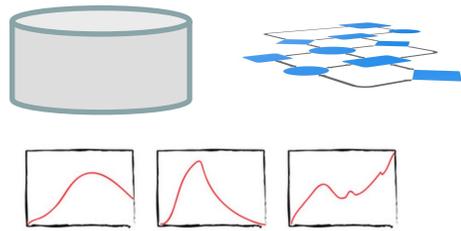
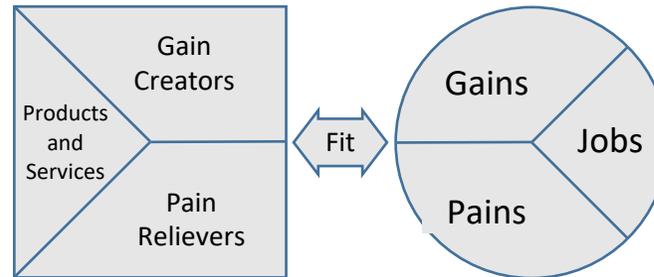
# Mapping Service Ecosystems



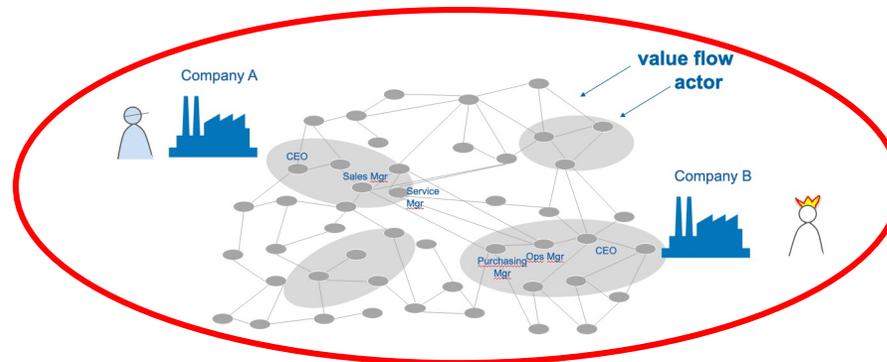
# Iterative Approaches



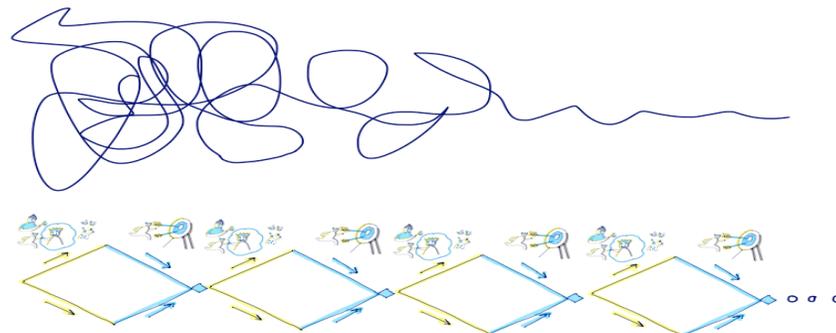
# Development of Data-Driven Ecosystems



Data, Analytics, Simulation



multiple actor analysis



- mutual actor-to-actor value creation
- multi-dimensional value design among actors
- socio-technical system (value creation for / by human and machine actors)
- role of orchestrator (platform)

# data innovation alliance

<https://data-innovation.org/>



data innovation alliance

Innovation

Members

Events

Expertise

News & Stories

About us

Member Area



## Where innovation becomes specific

Successful innovation happens when great ideas meet best-of-class expertise. Good solutions live from both inspiration and solid work. Data innovation alliance: Out-of-the-box thinkers and experienced developers join for creating innovations that change our world.

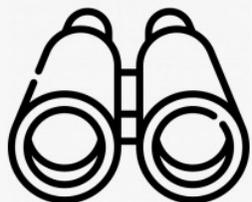
# Databooster Process

data**booster**



<https://databooster.ch/>

Scouting



Call



Shaping



Reshaping



Deep Dive



## Open Innovation & Design Thinking

# Databooster: Focus Topics

data**booster**



## Details

## Partners



Industry 4.0

Innovations through applied connectivity and digitalization. Focusing on multidisciplinary exchange and getting the right stakeholders onboard.

Industrie 2025



Smart Services

Design of new data-driven services in a range of industries, from pure services such as banking to services associated with products or capital goods in both the B2B and B2C segments.

Industrie 2025, SKDV, KVD, ADMA, ASAP, I4MS, KSRI



Language-based Human-Machine Interaction

Potential for innovation in process automation (e.g. voice bots), information distilling (fact extraction) and making information available (e.g. voice interfaces).

SwissText community, Swiss NLP



Spatial Data Analytics

Spatial data is of vital importance for many sectors, but still under-exploited. Innovation is needed in data creation, modeling and quality control.

GeoSummit, Swiss Data Cube, SGPF

<https://databooster.ch/>

# Contact



**Jürg Meierhofer**

Dr. sc. techn. ETH (PhD)  
Executive MBA  
ZHAW Platform Industry 4.0

Lecturer Service Engineering

Zurich University  
of Applied Sciences

**School of  
Engineering**

IDP Institute of Data Analysis  
and Process Design

Phone direct: +41 58 934 40 52  
juerg.meierhofer@zhaw.ch  
www.zhaw.ch/=meeo  
www.zhaw.ch/idp  
data-service-alliance.ch

Rosenstrasse 3, P.O. Box  
8401 Winterthur, Switzerland