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# Digitisation Model Innovation System

FH-Prof. Mag. DI Dr. Bernhard Heiden, MBA  
MMag. Bianca Tonino-Heiden  
FH-Prof. DI Dr. Erich Hartlieb  
Volodymyr Alieksieiev, B.Sc.

Studiengang Wirtschaftsingenieurwesen (WING/IEM) & Maschinenbau  
(MB), FH-Kärnten

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# Introduction

- Theory U by Scharmer (Scharmer 2011) → innovating system by a cycle
- Kalman (Kalman 1960) - observer, controller → observability, controlability

## Goal I

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- Introduce an Innovation Model for the Digitisation Case

# Digitisation Model Innovation System I

## *Emergence Principle:*

The region of instability is a region of mirroring.

## *Intermission Theorem:*

Intermission creates an emergent hybrid or historical  
intermittent higher orgitonal state or system.

# Digitisation Model Innovation System II

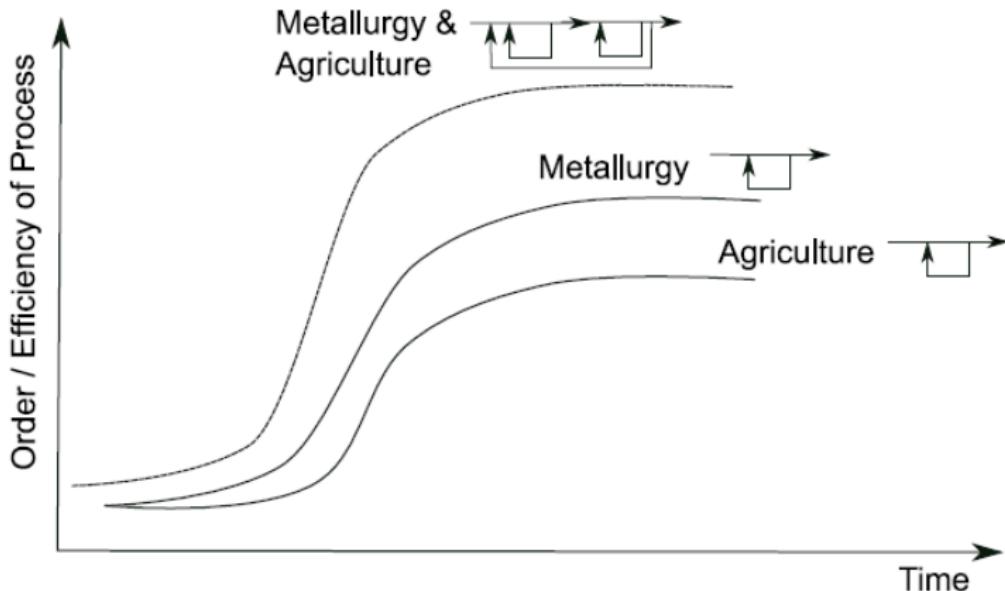


Figure 1: Basic hybridisation model (example adapted and extended from Rousseau (Rousseau 2019))

## Digitisation Model Innovation System III

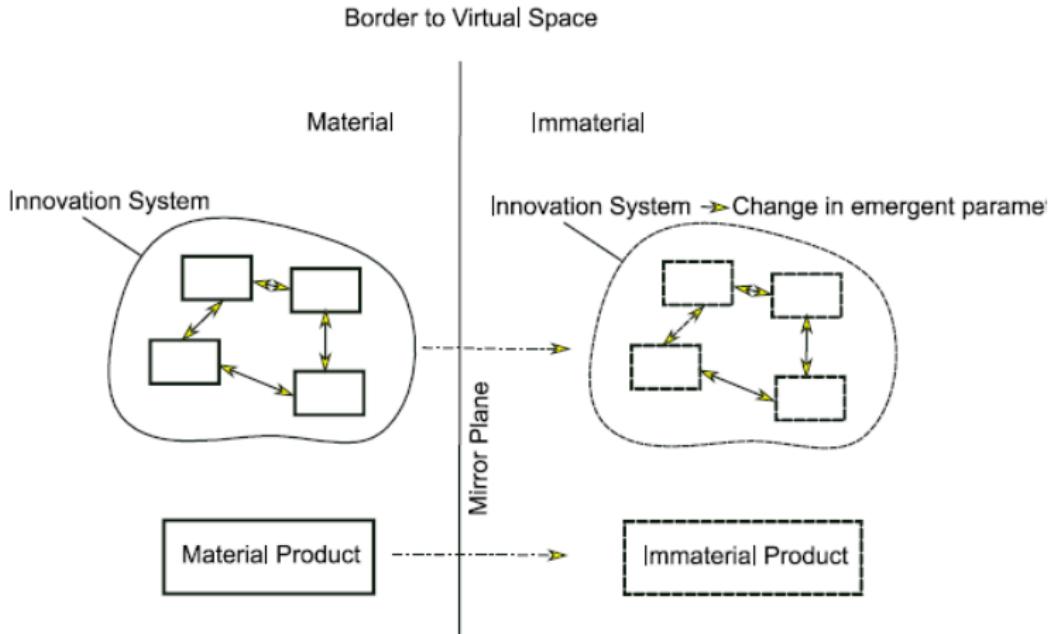


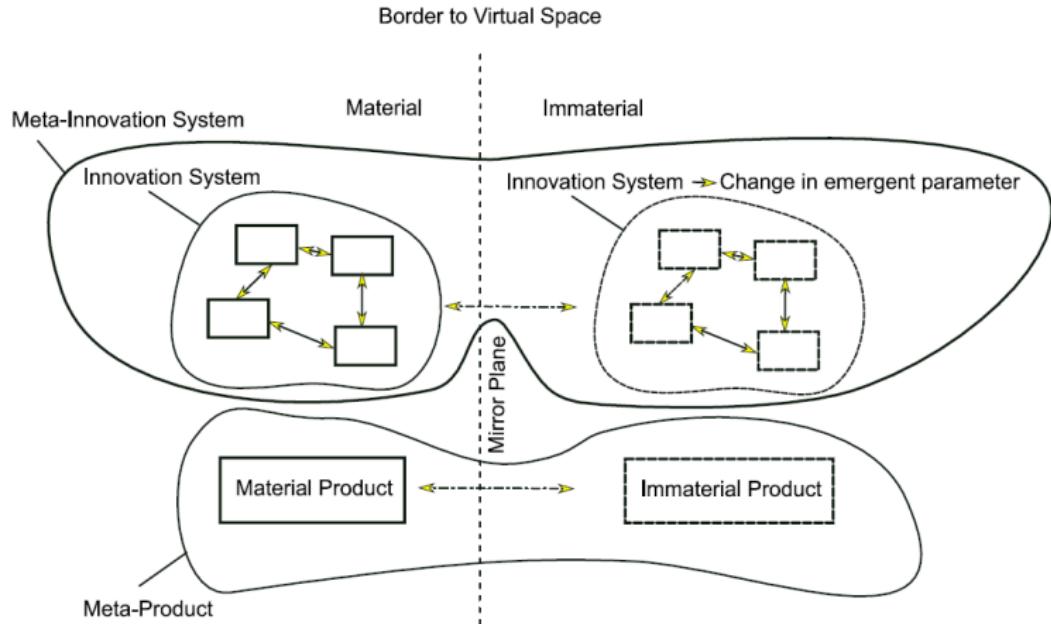
Figure 2: Continuous material-immaterial boundary for material, immaterial switch

# Digitisation Model Innovation System IV

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**Figure 3:** Intermittent material-immaterial boundary for hybrid product and innovation system. The meta-system is intrinsically hybridised, and by this potentially order increasing

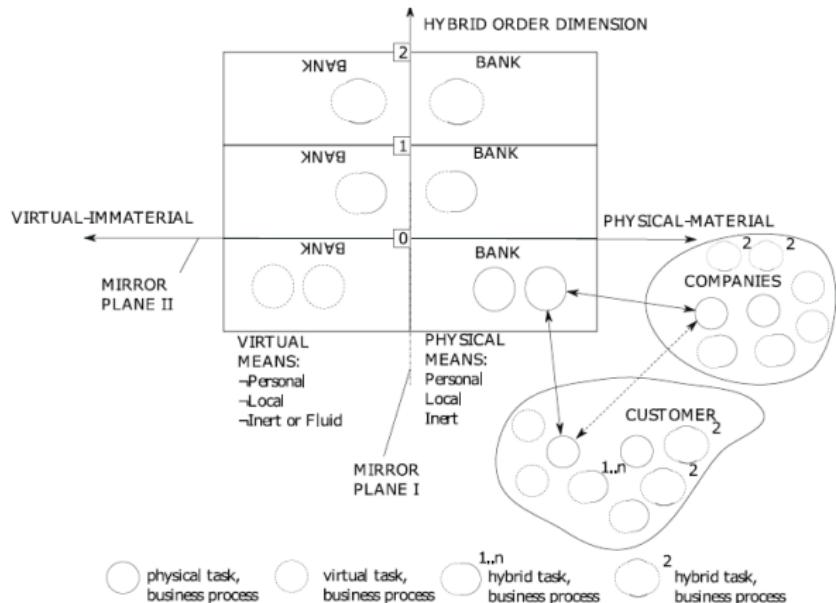


Figure 4: Bank application example for an ecosystem of business processes in material, immaterial, and hybrid order dimensions.

## Applications II

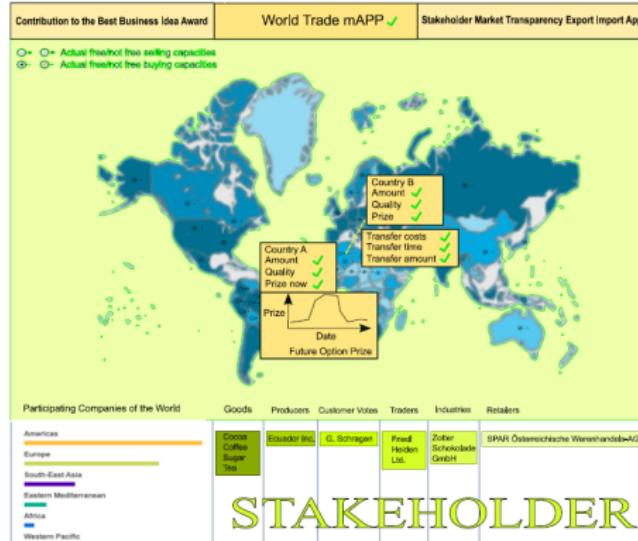


Figure 5: World Trade mAPP by Benedikt Friedl and Benedikt Heiden 2021.  
World map adapted from <https://covid19.who.int/>

## Applications III

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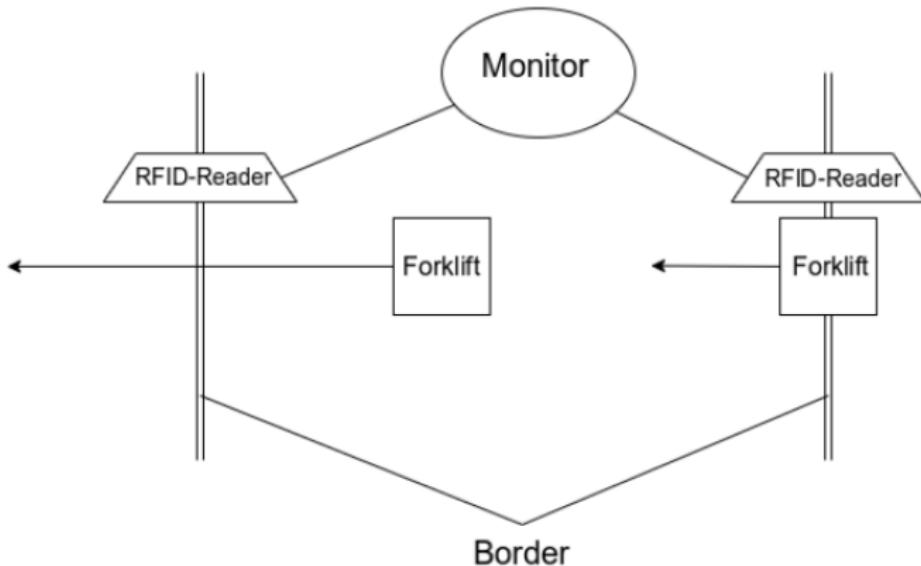


Figure 6: Intermission approach in RFID-based virtual-physical logistic cell

# Conclusions and Outlook I

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## Summary and Conclusions:

- Introduction of an Innovations Systems Model - Especially for Digitisation Applications
- Product Innovation and Process Innovation strongly coupled
- Three Examples

## Outlook:

- Investigation of causes and principles for emergence
- further examples
- role and function of borders and mirroring process → symmetry/asymmetry

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# Thank you cordially for your attention!



**FH-Prof. Mag. DI Dr. Bernhard Heiden<sup>1</sup>, MBA & MMag.  
Bianca Tonino-Heiden, FH-Prof. DI Dr. Erich Hartlieb, and  
Volodymyr Alieksieiev, B.Sc.**

<sup>1</sup>Professor for Production Engineering

E-Mail: [b.heiden@cuas.at](mailto:b.heiden@cuas.at)

PS.: The presentation can later also be found at:

<http://www.dr-heiden.com/Vortraege.htm>

# Literature I

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