WORKSHOP ON BUSINESS MODELS FOR DIGITALIZATION

Vinit Parida, David Sjödin, Mats Pettersson, and Mikael Miglis

Luleå University of Technology, Ericsson and ABB

AGENDA FOR THE DAY

- 14:30 –15:10 Research presentation DigIn Project- Digital Innovation of Business Models
- 15:10-15:40 Industry presentations from Ericsson and ABB
- 15:40 –16:20 Workshop about how to profit from digital business models
- 16:20-16:30 Key take away and conclusion

DIGITAL BUSINESS MODEL INNOVATION IN THE SWEDISH INDUSTRIAL ECOSYSTEM

OPPORTUNITIES, CHALLENGES AND LESSON LEARNED

Vinit Parida and David Sjödin

Entrepreneurship and Innovation, Luleå University of Technology

AGENDA

- About us
- What is digital business model innovation and why is it important?
- 3 traps in digitalization
- 5 lessons for digital business model innovation
- Key takeaways

ABOUT US

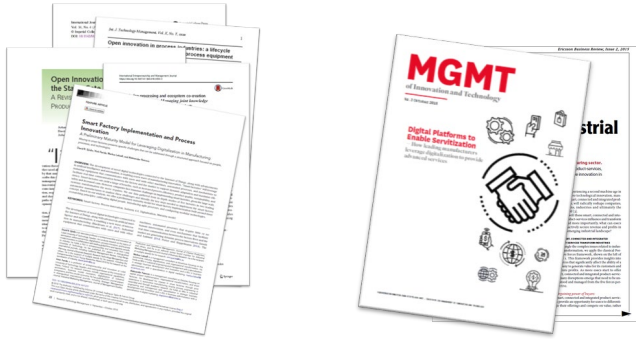
Vinit Parida
Professor

David Sjödin
Associate Professor

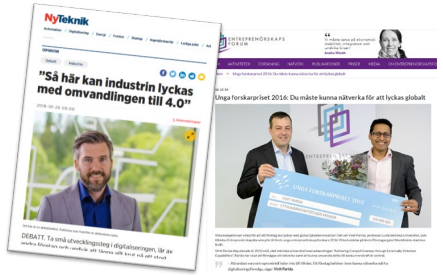
Research Interests

- Servitization and advanced service innovation
- Business model innovation
- Digitalization of industrial ecosystems
- Open innovation and managing collaborative innovation projects
- Circular economy and sustainable industry

Research Outputs



200~ Academic Publications 30~ Industry Publications



News and blogs

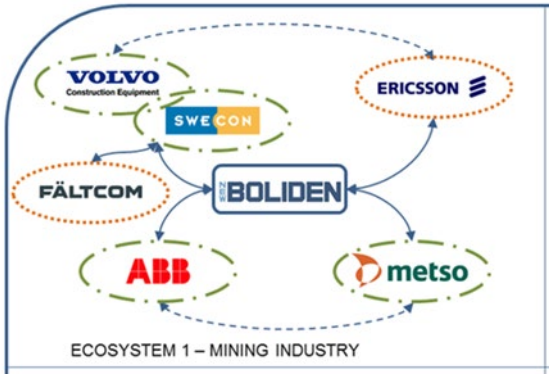
Research Funding

Vinnova, Formas, Kampard Family Foundation, Ragnar Söderbergs foundation, EU Commision, Handelsbanken foundation, Norwegian Research Council, Tekes

RESEARCH BACKGROUND

- 200 plus interviews during last 3 years on the topic of digital business model innovation in B2B setting (Sweden and globally)
- Leading a team with national and international researchers through multi-years industry research projects in Sweden
  - Involving numerous companies from mining, forestry, construction, manufacturing, telecom, transportation, and maritime industrial ecosystems

Industrial ecosystem



NEW LOGIC FOR DIGITAL BUSINESS MODEL

Digitalization as Enabler

Business Model Innovation

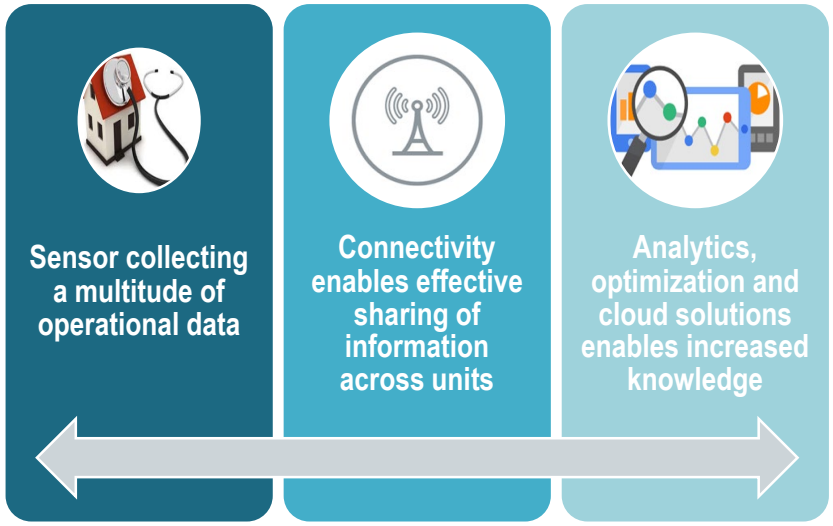
Sustainable Industry

Industrial Ecosystem

WHAT IS DIGITALIZATION?

Enabling digital technologies

- Internet of things
- Automation
- Remote monitoring
- Predictive maintenance
- Artificiell intelligens
- Smart contracts
- Big Data
- Cloud analytics
- Digitala avancerade tjänster
- …



A digital transformation

""*The use of digital technologies to change a* ***business model*** *and* ***provide new revenue*** *and* ***value-producing opportunities*** *in* ***industrial ecosystem***"

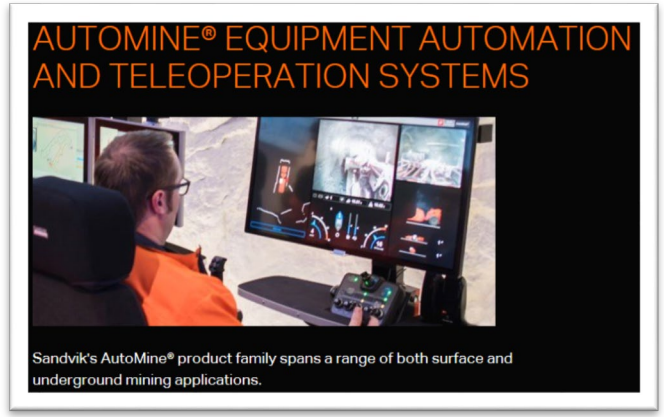
(Gartner report 2015; Parida, Sjödin and Reim, 2019)

Parida, V.; Sjödin, D.; Reim, W. Reviewing Literature on Digitalization, Business Model Innovation, and Sustainable Industry: Past Achievements and Future Promises. Sustainability 2019, 11, 391.

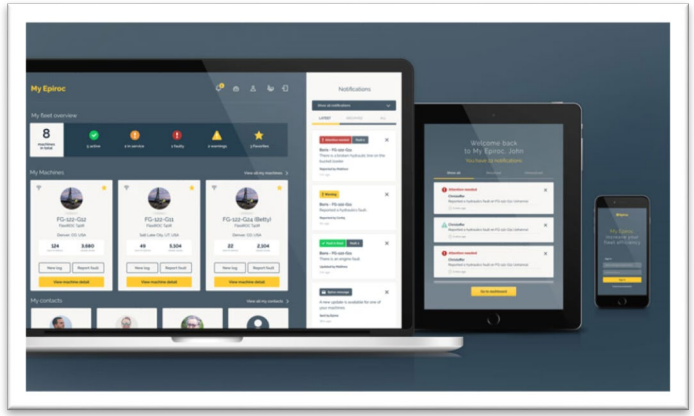
EXAMPLES OF DIGITAL SOLUTIONS

Fleet management solution

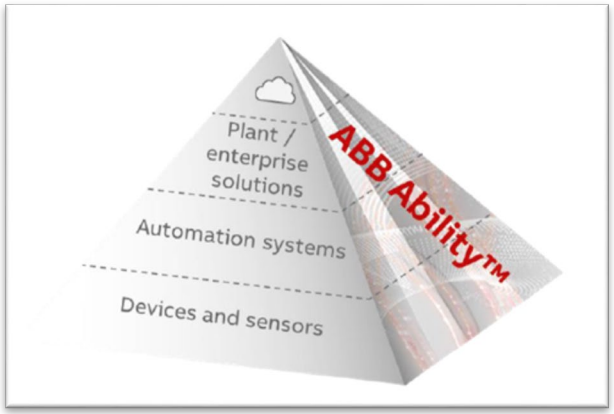
Preventive maintenance contract



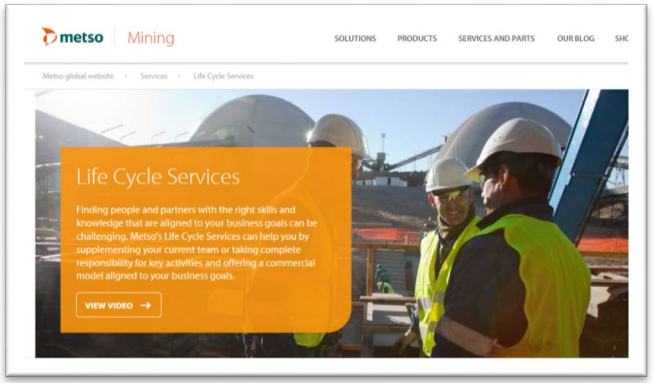
Autonomous mining equipment solution



Digital platform solution



Portfolio of digital solution



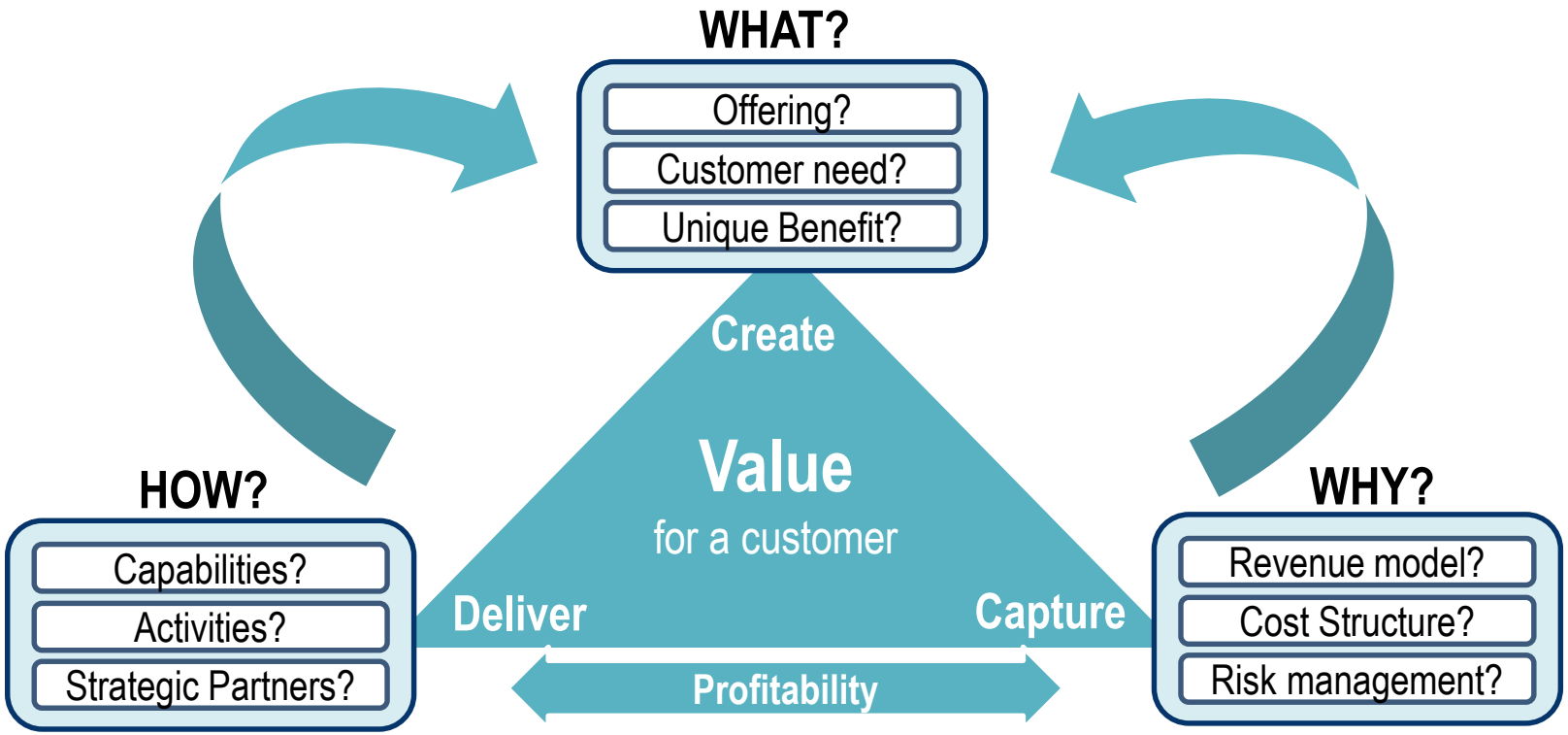
Life Cycle Services/Cost-per-ton contract

Site management solution

WHAT IS A BUSINESS MODEL?

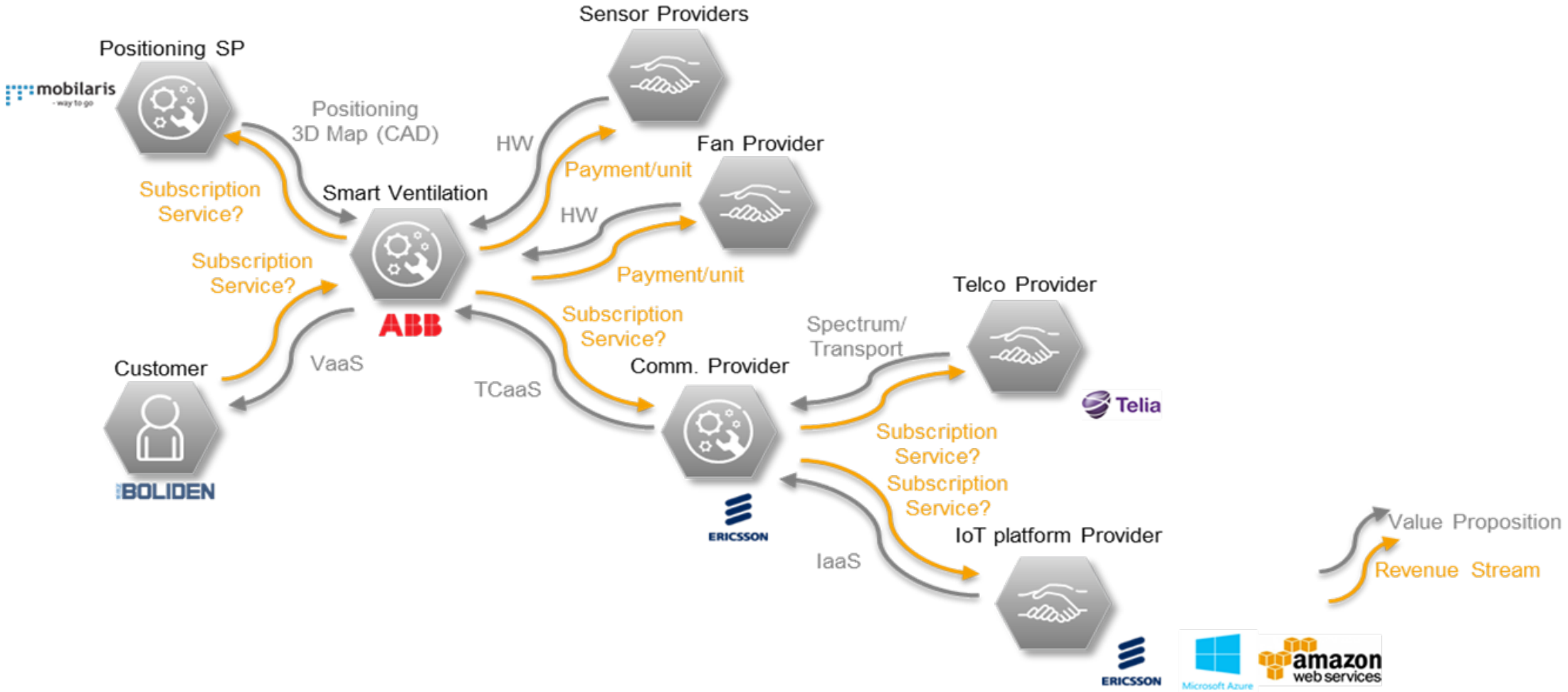
A business model define the ways an organization creates, delivers and captures value

Osterwalder and Pigneur (2010)



A powerful business model ensures that all elements work together

HYPOTHETICAL CASE FOR ECOSYSTEM BUSINESS MODELLING



3 TRAPS IN DIGITALIZATION

1. TOO SLOW DIGITAL TRANSFORMATION

The largest risk with digitalization is to do nothing…

Concrete actions are needed….
"It's like we are waiting for someone to take the baton and come up with a holistic solution"

72% of global CEOs believe the next 3 years will be more critical for their industry than the last 50 years

Forbes Insights, CEO Outlook

2. DEVELOPMENT OF DIGITAL SOLUTIONS WITHOUT UNDERSTANDING CUSTOMER VALUE

Too much technology, too little business…

- Engineers are often **too enthusiastic in solving technological** problems
- Challenge to **understand** the specific **customer or end-users needs**
- Often lacking in ability to **critically evaluate** what customer is willing to pay for.

*"..I am sure that their system is highly advanced with a lot of functionalities. But what I want to see is **how does these functionalities apply to our business and how will it make it more profitable**… and that they have not been able to achieve." (Dissapointed customer)*

3. SELLING DIGITAL SOLUTIONS WITHOUT UNDERSTANDING BUSINESS MODEL CONSEQUENCES

Companies often **fail to fully consider the business model implications** of digital customer opportunities.

Hidden and unexpects costs :

Changed customer behaviors?

New (costly) delivery processes?

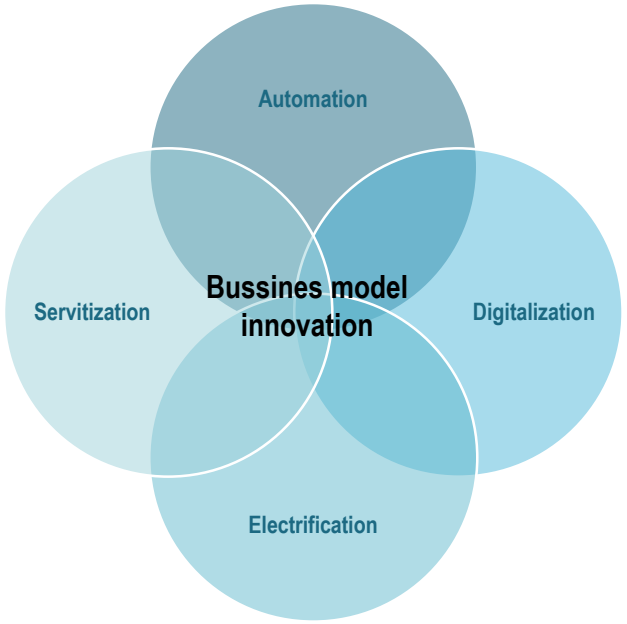
Operation and maintenance over multiple years?

Cannibalization of existing business model?

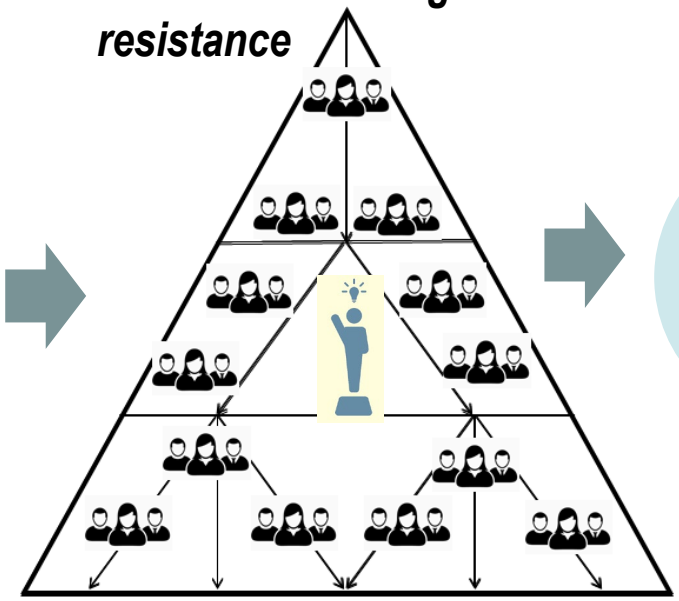
5 LESSONS FOR DIGITAL BUSINESS MODEL INNOVATION

1. PEOPLE DRIVES CHANGE

Technological + Business Shifts



Creating opportunities for innovation and *organizational resistance*



Evangelizing – Preaching awareness and convincing others

Leveraging – Capitalizing on existing resources

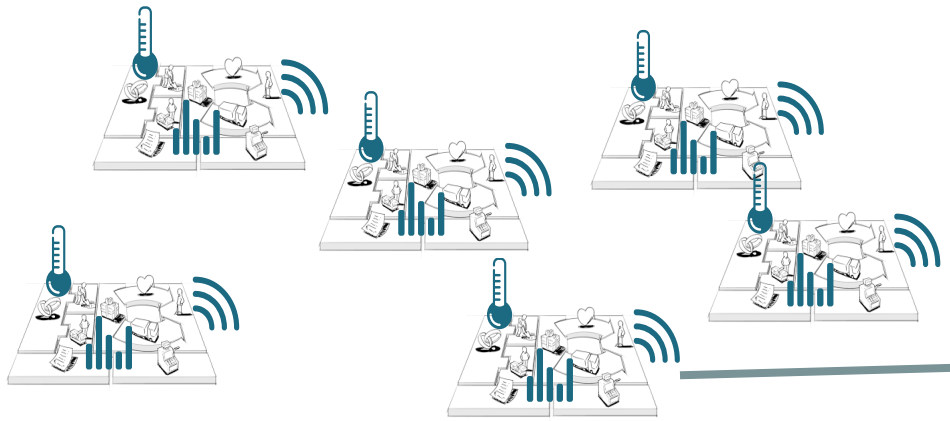
How does individuals cope with organizational resistance?

Bootlegging - Working covertly and without authorization

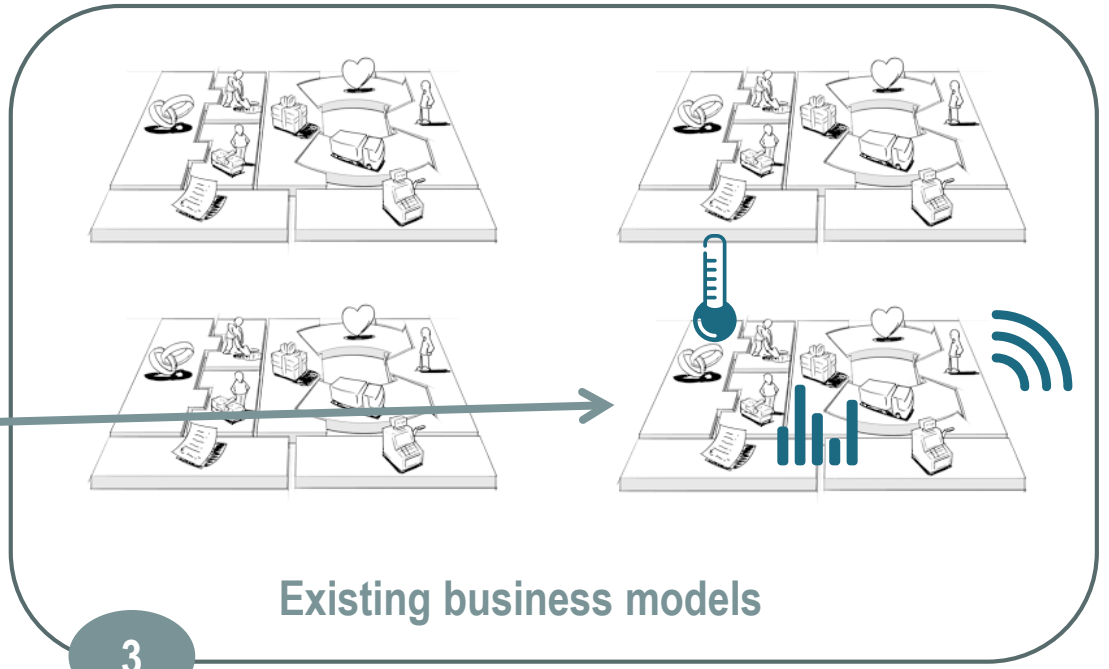
Collaborating - Using collegial or legal authority to overcome obstacles

Lenka, S., Parida, V., Sjödin, D. R., & Wincent, J. (2018). Exploring the microfoundations of servitization: How individual actions overcome organizational resistance. *Journal of Business Research*, *88*, 328-336.

2. ASSESS DIGITAL OPPORTUNITIES



Digital business model innovation opportunities



Existing business models

New business model

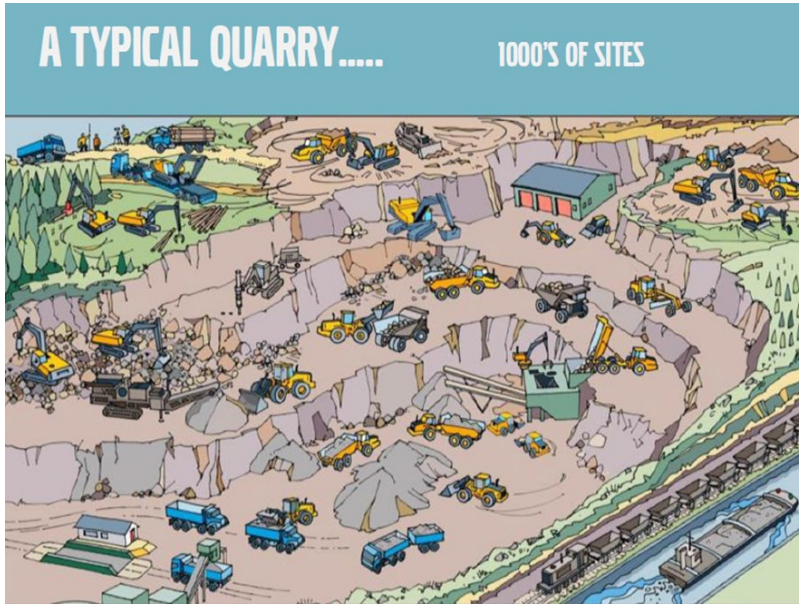
1 2 3

BUSINESS MODEL ASSESMENT FRAMEWORK			
PHASES	PHASE 1: OPPORTUNITY ASSESSMENT	PHASE 2: RISK ANALYSIS	PHASE 3: FINANCIAL MODELLING
PURPOSE	The purpose of this phase is to conduct a systematic assessment of the of the customer opportunity against the preferred alternative business model	To secure informed business decisions related to the additional business risks related to the introduction of a new alternative business model opportunity	To gain better understanding of the commercial dynamics and consequences on the alternative business model as well as the impact on existing business
STEPS	**Step 1:** Conduct customer opportunity screening	**Step 4:** Identify alternative business model opportunity risks	**Step 7:** Analyse financial parameters
	Step 2: Assess extent of business model elements change	**Step 5:** Analyse and revise the alternative business model to mitigate risk	**Step 8:** Conduct a sensitivity and scenario analysis
	Step 3: Evaluate consequences on existing business model	**Step 6:** Formalize contractual risk control mechanisms for alternative business model	**Step 9:** Perform a reference case comparison
OUTPUT	A high-level assessment of the alternative business model opportunity including: • Comprehensive analysis of customer opportunity • Evaluation of the scope of business model element changes • Identification of potential negative impact on the existing business models	A detailed assessment of the alternative business model opportunity including: • Identification and qualification of risks related to the alternative business model • Suggestions for mitigation responses on identified risks by adapting the alternative business model • A formalized template for the contract covering key risks	A detailed assessment of the alternative business model opportunity including: • A comprehensive assessment of the alternative business model's sensitivity • Alternative scenarios with risk/uncertainty estimates • Financial projections including comparison with traditional model

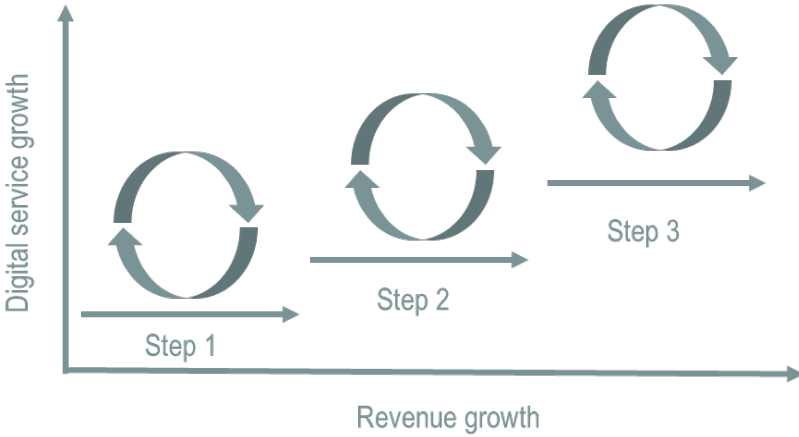
GO / NO-GO
for the new business model

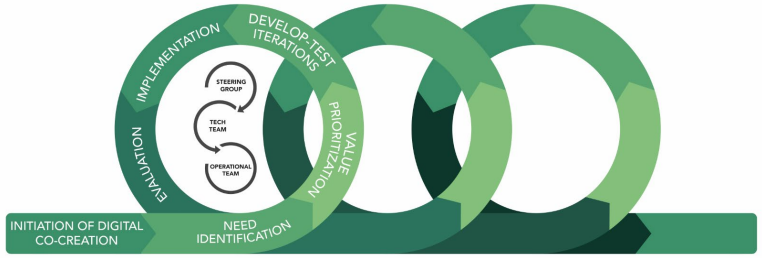
Sundén, L., Parida, V. and Sjödin, D.R. 'Exploiting digitalization opportunities through business models: Empirical insights from leading Swedish manufacturing companies' Servitization Spring Conference 2018, Copenhagen, Denmark.

3. INNOVATE THROUGH MICRO SERVICE APPROACH

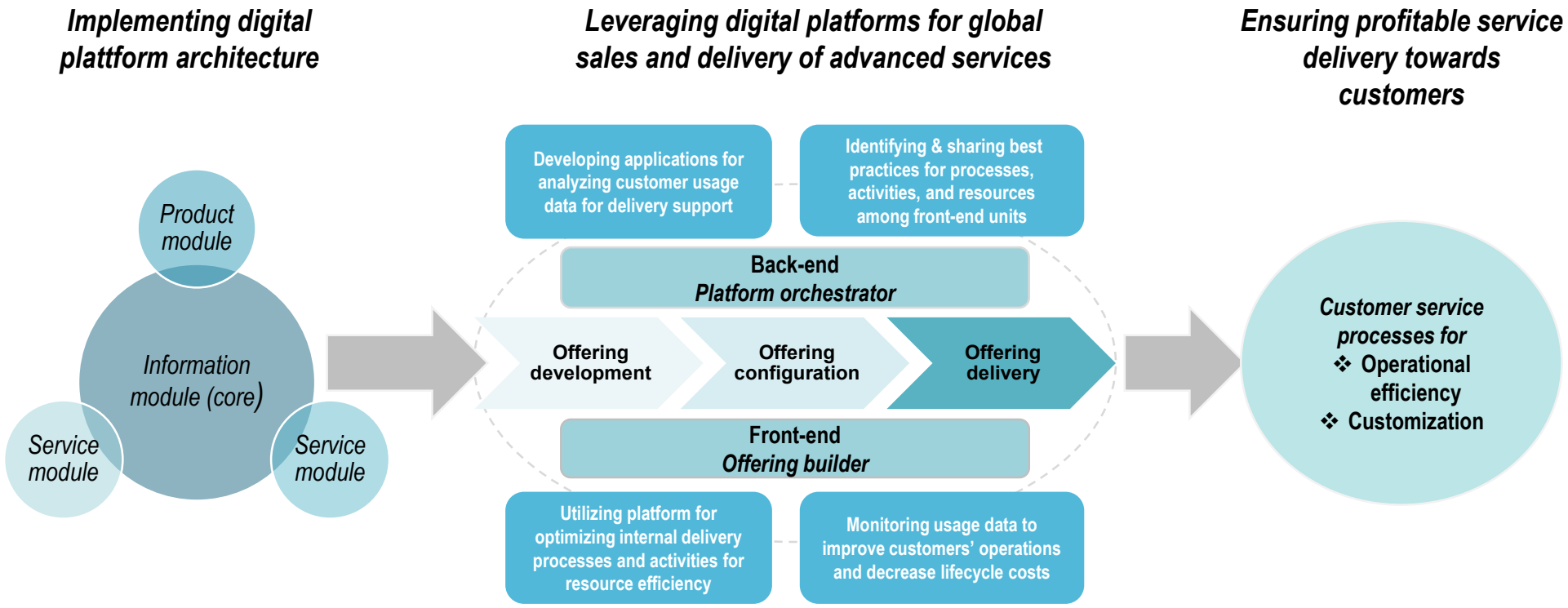


1. Identify main dilemmas
   - Inadequate weight at loading (+/- 10%)
   - Inadequate CO2 reporting
   - Avoid traffic issues at loading site
   - Optimal pace at loading
   - Lacking information on daily disturbances on machine/truck/dumper
   - Inadequate data quality from the loaders/transporters
   - Lacking traceability on unloaded material
2. Selecting dilemmas
   - High business communication possibility
   - Quick turnaround time with solution and effect
   - Building on internal competences (predominantly)
3. Developing and implementing the solution
4. Next rounds of identifying main dilemmas and co-development (aiming for a more complex problem)





4. LEVERAGE DIGITAL PLATFORMS IN VALUE DELIVERY



Cenamor, J., Sjödin, D. R., & Parida, V. (2017). Adopting a platform approach in servitization: Leveraging the value of digitalization. *International Journal of Production Economics*, *192*, 54-65.

5. USE CONTRACTING TO ALIGN PARTNER INCENTIVES

3 Clearly defined and measurable desired outcomes

2 Focus on *what*, not how

4 Pricing model with incentives optimizing the business

Lower cost for customer

1 Focus on *results*, not single transactions

5 Governance structure creating insight rather than oversight

Relational Contracting

What's In It For We?

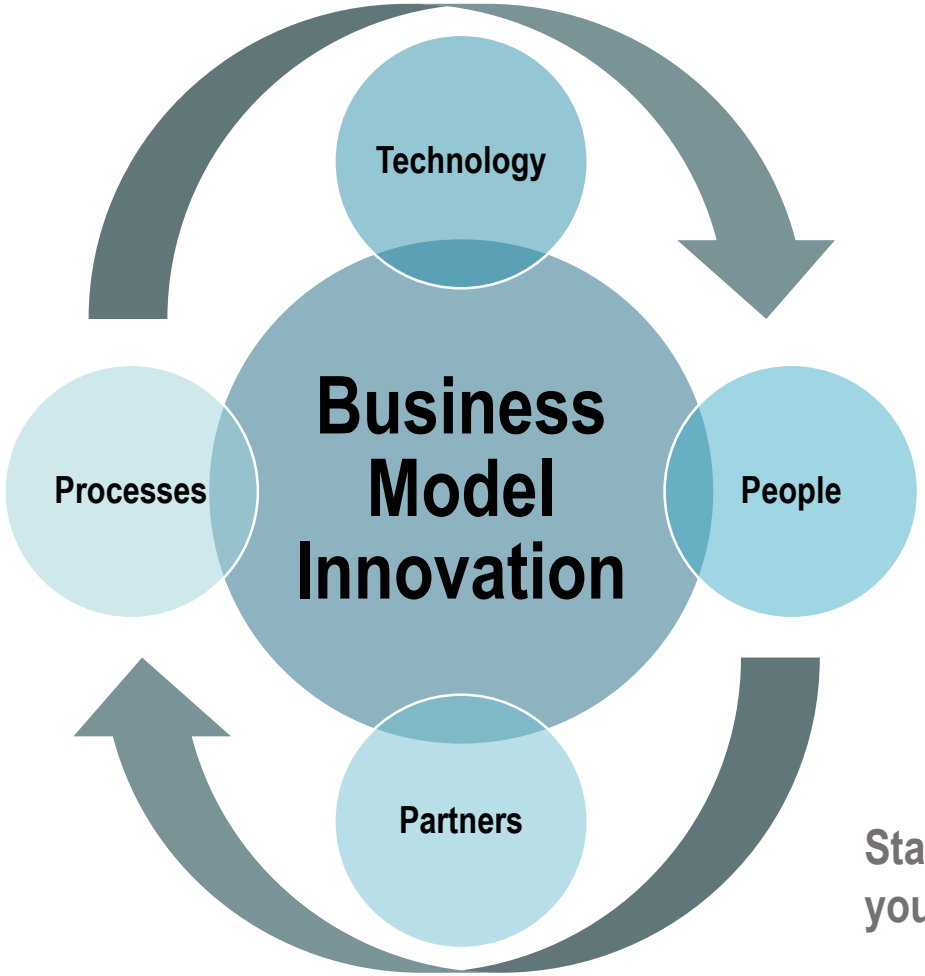
Higher quality/innovation for customer

Better business for supplier

KEY TAKEAWAY

*Digitalization is more than developing new technology. A successful implementation requires **complex** interactions between **technology, processes, people and business models** both within the **company** and externally in the **ecosystem**.*

Digitalization opportunities



Successful digitalization

- Increased value creation
- New revenue streams
- Efficient processes
- Profitable relationships
- Sustainable benefits
- Societal benefits

Start looking for opportunities and involve your ecosystem partners……

THANK YOU!

For more information about DigIn contact:

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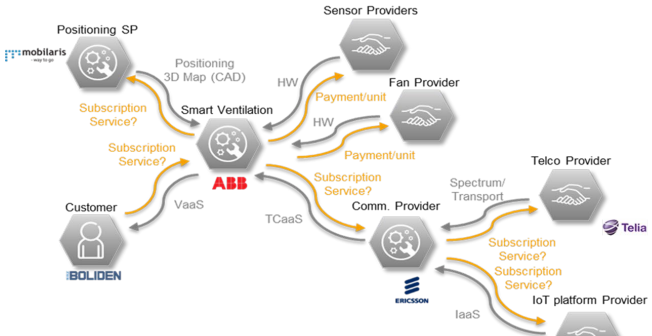
David Sjödin david.sjodin@ltu.se +46730463206

WORKSHOP ECOSYSTEM BUSINESS MODELING

- Digitialization offers many opportunities for business model innovation… but it requires more involvement of ecosystem partners… and this is not easy
- Key challenges for digital business model innovation in ecosystems:
  1. How to create vaule among multiple actors?
  2. How to ensure value delivery in complex ecosystems?
  3. How to ensure fair value capturing among multiple actors?

Workshop task group discussion:

- ***How can companies adress these challenges? Pick one or two and discuss. Can you think of any solutions, best practices or sucess stories?***
  - Discuss 30 minutes in groups
  - Write down notes & be prepared to present key insights when we come back)

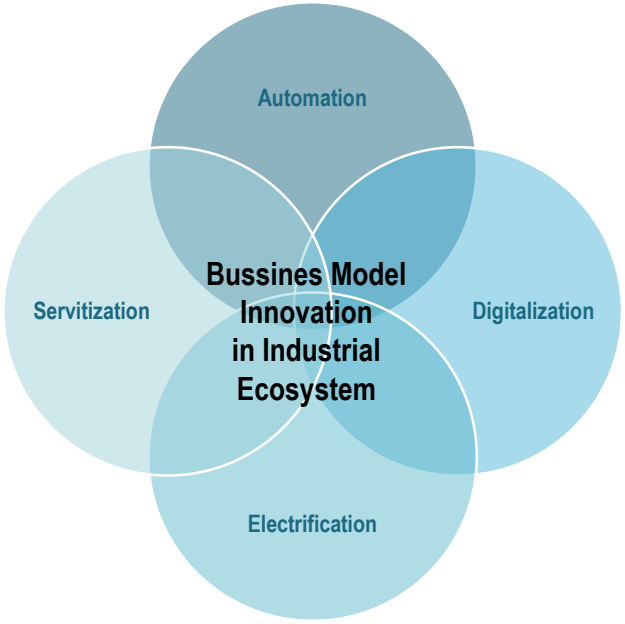


DIGIN RESEARCH COLLABORATION

To support digital business model innovation in Swedish industrial ecosystems

Project application for Vinnova stage 3 in progress

Technological + Business Shifts in Industrial Ecosystems



1. **Examining business opportunities and challenges with digitalization and new business models**

2. **Capability development and investigation of partnering opportunities within ecosystem**

3. **Supporting business model innovation activities and ecosystem collaboration towards commercialization**