



Business model innovation opportunities for Swedish industry

Vinit Parida, Professor
David Sjödin, Associate Professor
Entrepreneurship and Innovation
Luleå University of Technology

Examples of prior/current projects and partners

- **Faste Excellence Center** (Vinnova 2006-2016)
 - Functional products, Win-Win relationship, risk management, business models
- **CiiR Centre for Interorganizational Innovation Research** (Vinnova 2010-2016)
 - Regional development, ICT, internationalization and SMEs
- **Global Product Service System** (Vinnova 2014-2016)
 - Global markets, delivery network, value co-creation
- **Circular Business Models** (Vinnova 2015-2017)
 - Sustainability, circular economy, eco-system actors, advanced services, business models
- **Advanced Service Business Models for SMEs in Process industry** (Interreg Nord 2016-2019)
 - SMEs, Business models, digitalization, advanced services, multi-actor network, international market,
- **DigIn – Digital innovation of business models** (Vinnova, 2016-2019)
 - Business model innovation, digitalization, advanced services, industrial ecosystems



Societal Challenges as Opportunities

**Digitalization
as Enabler**



**Business Model
Innovation**



**Sustainable
Industry**



Industrial Ecosystem



What is digitalization?

Smart and connected products



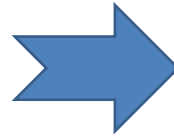
Sensors collect operational data



Connectivity shares data effectively among units



Analysis, optimization and storage in the cloud provided increased knowledge

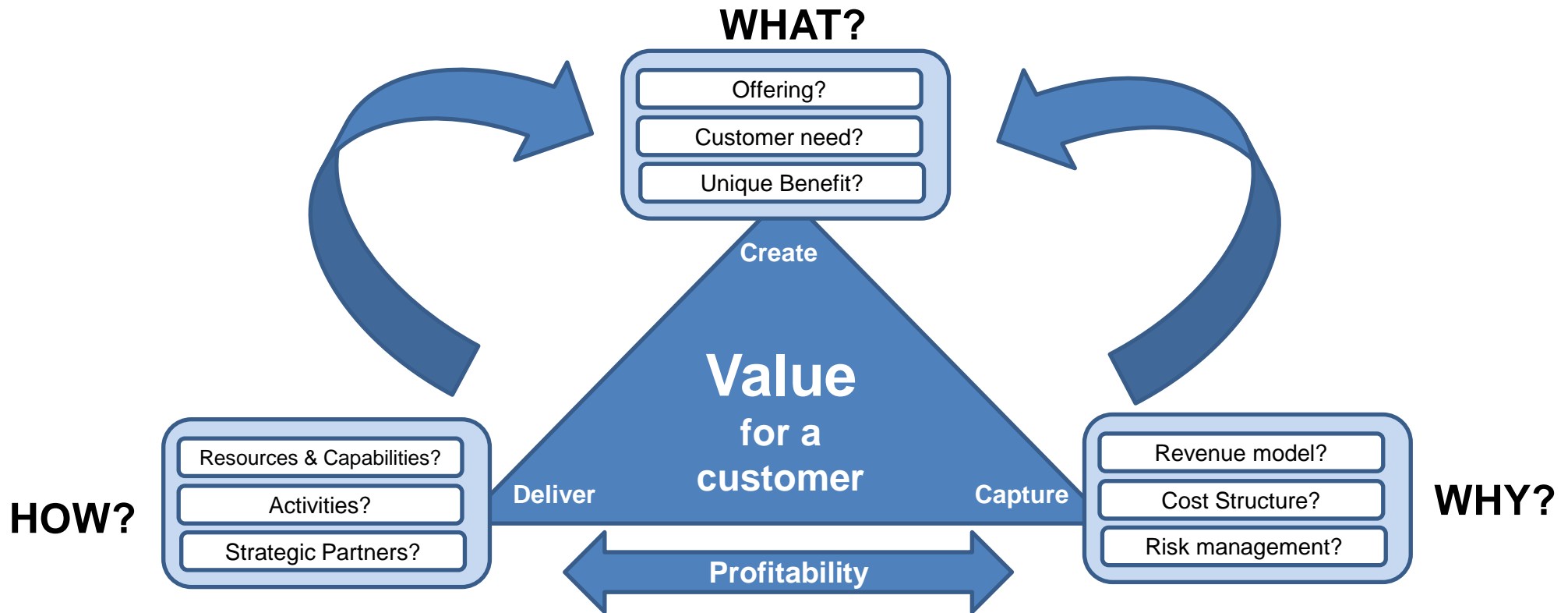


“The use of digital technologies to change a business model and provide new revenue and value-producing opportunities”

(Gartner report 2015)

What is a business model?

A business model describe how a firm creates, delivers and captures value



A powerful business model ensures that all elements work together

Value creation challenge

Komatsu Forest : Performance based contract (Example)



Under which conditions is it relevant to offer outcome based services?

OPERATIONS		COMPETENCES
Critical	Non-critical	
Core Operations Operations viewed as a source of competitive advantage. Restricted involvement of provider and focus on internal development and knowledge protection. Example: Alpha's pelletizing process where provider involvement is restricted.	Open Operation (2) Potential for strategic partnerships with providers by sharing operational responsibility and competence development costs. Example: Betas sieve re-manufacturing workshop which is run in collaboration with the sieve manufacturer.	Core
Open Operation (1) Potential for strategic partnerships with providers by capitalizing on their competence and aligning business models. Example: Zetas contract entailing responsibility for operating and maintaining conveyors for mining customers.	Outsourcing Provider involvement characterized by competition as they provide the opportunity for cost saving and supporting operational efficiency. Example: Lambda provision of machine tools used in re-furbishing press tools for Gamma	Complimentary

Framework for classifying customer operations for value co-creation

Value delivery challenge

Lindbäcks: Smart and sustainable housing solutions (Example)



How can we build digital capabilities to support delivery of advanced services?

DIGITALIZATION CAPABILITIES DEVELOPMENT		
STEP 1	STEP 2	STEP 3
<ul style="list-style-type: none">Invest in building of intelligent and connected functionalitiesAutomated basic data analysis and support for service innovationTrain local front-end units to use the information for generating customer value	<ul style="list-style-type: none">Invest in digital platform infrastructureBuild skills in advanced analysis of customer usage data at front-end unitsUse digitalization platforms for offering proactive services to customers across global markets	<ul style="list-style-type: none">Build database for developing customer centric service innovation portfolioConnect usage data with customer relationship management system for customizable offersOpen proprietary digitalization platforms to external partners for functionality development

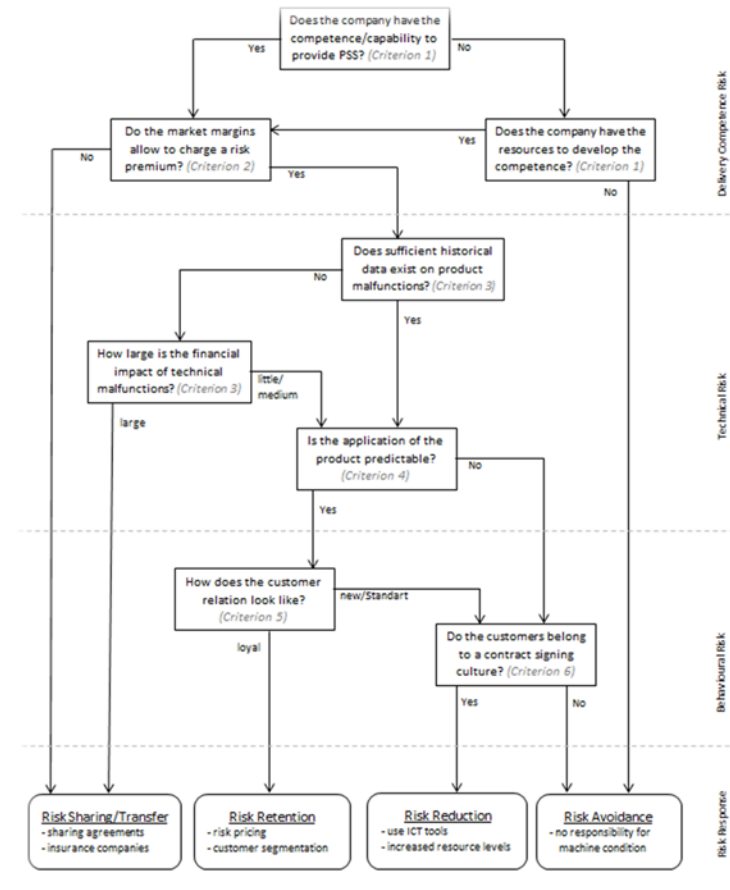
Framework for development of digital capabilities

Value capturing challenge

Volvo CE: Electrified equipment with uptime guarantees (Example)

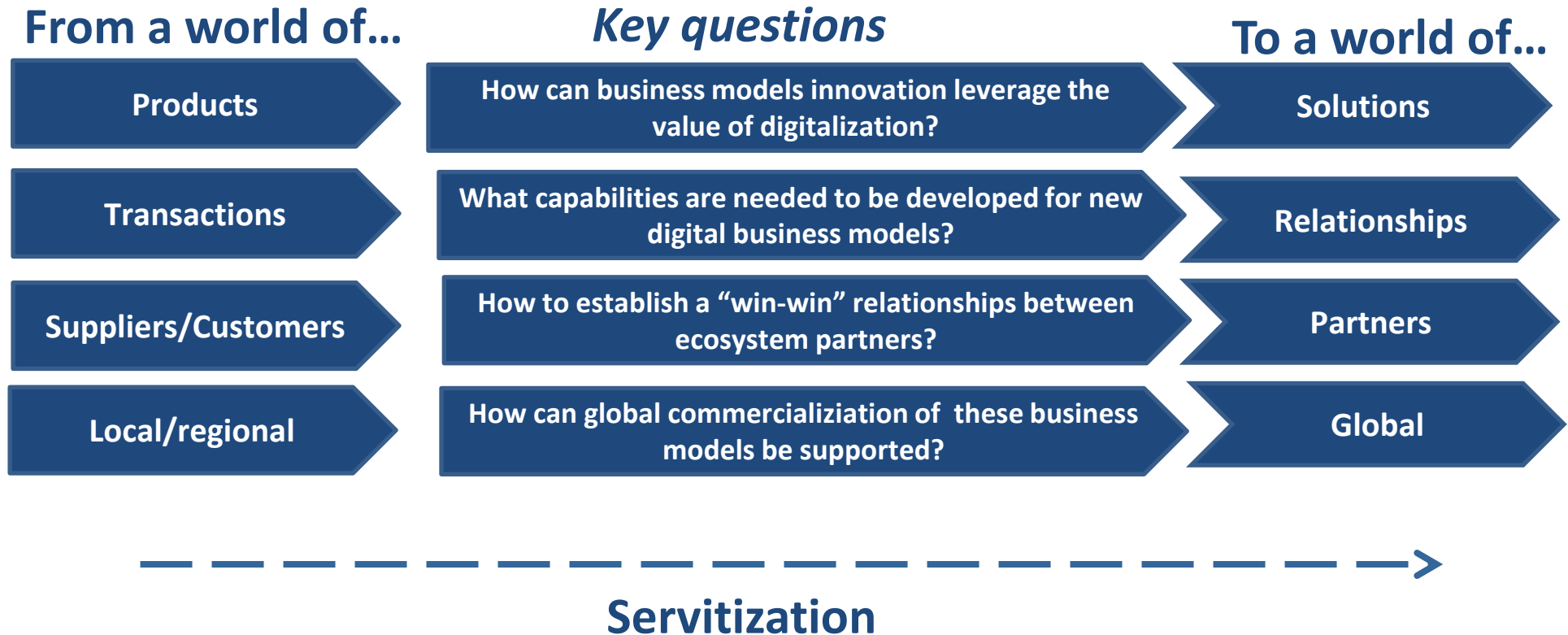


How can risk be managed for outcome based services?



Risk management framework

Opportunities for regional growth





Thank You!

For more information conact:

Vinit Parida, Professor

Tel: +46 920 492469; Email: vinit.parida@ltu.se

David Sjödin, Associate Professor

Tel: +46 920 491819; email:

david.ronnberg.sjodin@ltu.se

Entrepreneurship and Innovation

Luleå University of Technology