# Leveraging ecosystem innovation to unlock the value of disruptive technologies

ESBRI & Norrlandsnavet Webinar





Vinit Parida,
Professor
Business Model Innovation,
Digital Servitization &
Circular Economy

Arun Madanaguli,
Postdoctoral Researcher
Digitalization, Platforms,
Sustainability





Patricia Garcia,
Postdoctoral Researcher
Digital Servitization,
Business Model Innovation

Researchers from the subject of Entrepreneurship & Innovation at Luleå University of Technology



News and blogs



250~ Academic Publications



30~ Industry Publications



Policy contributions

At the **DigIn Center**, we support digital business model innovation in **Swedish industrial** ecosystems



At NorrlandsNavet,
we support the
competitiveness and
operations of SMEs in the
North of Sweden



## Familjen Kamprads stiftelse

The Kamprad Family Foundation for Entrepreneurship, Research & Charity

## Technological disruption

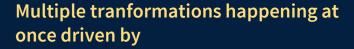




**Connectivity 6G** 



Electrification



- Changing customer needs
- Technology development
- Competition





Data has become a valuable resource



Sustainability has become prominent



Transition towards zero touch solutions

#### Multiple changes needed

- Redefining strategy
- Redefining business models
- Redefining skills and competencies
- Redefining ecosystems and partnerships



International Mining Epiroc and MineRP bring the mine digital twin & ERP

together to create a digital triplet

Epiroc recently announced the conclusion of the acquisition of the software company MineRP and has followed up with some commentary on...



#### How Sweden Turned Into a Climate **Tech Funding Champion**

In large part thanks to startups Northvolt and H2 Green Steel, Sweden's climate tech investments soared by 224% this quarter, pushing the country ahead of the UK, France and Germany in global rankings

Incumbent – Start-up collaboration for Digital **Innovation** 

#### **ACCELERATING GLOBAL INNOVATION BASED ON SWEDISH COLLABORATION CULTURE**

MobilityXlab offers startups and emerging companies with pioneering ideas within mobility and connectivity the opportunity to accelerate with our six partner companies: CEVT, Ericsson, Magna, Polestar, Volvo Group and Zenseact.



Scania ventures has an entrepreneurial mission to explore and commercialize new business models that lie beyond Scania's core capabilities.

#### Identifying new business ideas

Scania Ventures is set up to help position Scania for the future transport ecosystem. It is identifying outside the current core. Scania Ventures is sharpening venture building capabilities to build scalable ventures that will become future key businesses and create new profit pools for Scania.

#### What is Ericsson ONE?

business ideas. We give our talented people the chance to develop these ideas and build successful and expertise we help make their startups a success

using a lot of their time to secure funding. We offer serious investment in both people and product or of their own company. Our diverse team of experts provide hands-on conching, support and advice

Anyone from within Ericsson is welcome to submit an idea at any time



## SWEDISH UNICORN POLARIUM REDUCES DIESEL DEPENDENCY IN

etting up a factory in South Africa was made possible by Polarium's cooperation with American Tower Corporation (ATC), an owner and operator of wireless and broadcast communications infrastructure, established in the region. Since 2017, Polarium has helped ATC

### **Innovative Digital Solutions**



Large Incumbents





large and small firms

Solutions emerging from the critical usage of digital technologies during the innovation process between



**Start-ups** 

#### **Research Insights**



Development project with LKAB generates a new product : Load Finder

Large incumbent firms struggle to reach a successful digital innovation with start-ups

#### What hinders digital innovation with start-ups?



> Siloed structure

"In these divisions [...] we are talking to the same start-up from **two different angles**, and [...], **the left-hand doesn't know what the right one is doing**." Incumbent informant

Rigidity of incumbents' structure challenges digital innovation milestones

Complex and slow due diligence

"I can think of **near-failures** where it took **months to get everyone signed** [...], it needs to **comply** with the terms and conditions of this **legal entity**." Incumbent informant

Barriers for large incumbents

#### What hinders digital innovation with start-ups?



Incumbents' analog culture threatens digital innovation outcomes

Low readiness to fast-paced innovation

Lack of incentives to take ownership

"It's something relatively **new** that we can have collaboration on a more **project-by-project basis**, and that acquisition or investment is not the only outcome that we could have." Incumbent informant

"It's one of I don't know three, four **other things that I'm also doing** [...] frankly speaking if I stopped doing this, I don't know if somebody will ask **why nothing is happening**." Incumbent informant

Barriers for large incumbents

#### What hinders digital innovation with start-ups?



> Eternal proof-of-concept

"In terms of working with **digital transformation** as a project [...] That gap is
very much related to the culture and how
they work with digital content. [...] how
willing they are of **letting go of old habits**."
Start-up informant

Incumbents' established processes compete against digital innovation priorities

Resource allocation

"We have big things coming in, and we can't source the resources. [...] I would say the difficult part is with the R&D organization, because they set down their execution plan, and those engineers are planned every hour" Incumbent informant

Barriers for large incumbents

#### How to best leverage digital innovation with start-ups?













#### Involve diverse stakeholders early

- Distribute responsibilities
- Define engagement points
- Secure commitment & resources

#### **Empower innovation champions**

- Allocate time and resources
- Promote their success stories

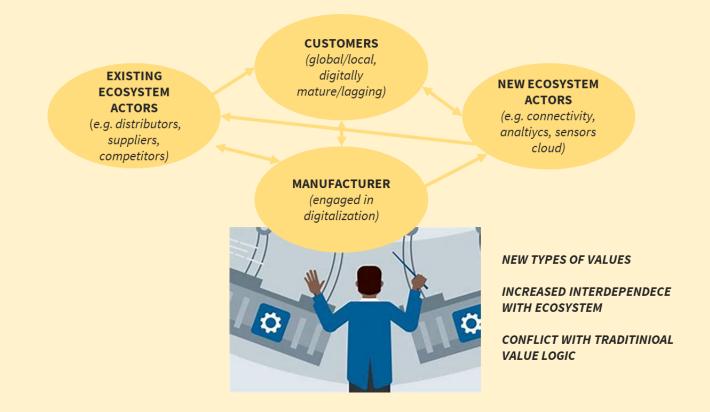


#### **Fast-track collaboration routines**

- Decentralise processes
- Simplify engagement rules
- Continuous small wins & momentum

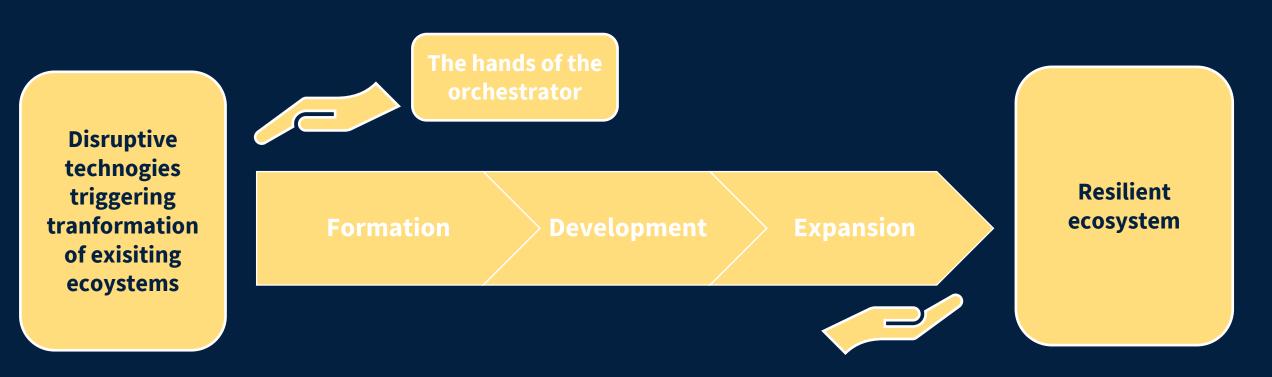
Enablers for large incumbents

The distinguishing feature of an ecosystem is the presence of a central orchestrator (in our case, the manufacturer) who sets the system-level goal, defines the hierarchical differentiation of members' roles, and establishes standards and interfaces.



Sjödin, D., Parida, V., & Visnjic, I. (2022). How Can Large Manufacturers Digitalize Their Business Models? A Framework for Orchestrating Industrial Ecosystems. *California Management Review* 

## **Innovation Ecosystem Orchestrator**



Kolagar, M., Parida, V., & Sjödin, D. (2022). Ecosystem transformation for digital servitization: A systematic review, integrative framework, and future research agenda. *Journal of Business Research*, 146, 176-200.

#### **Ecosystem Orchestration**



#### **Formation**

Ecosystem formation phase highlights the need to define the vision of the ecosystem



#### **Key activities**

- Initiating the ecosystem vision.
- Mapping appropriate partnerships.
- Incentivising, joint engagement of ecosystem



**Industrial Example** 





ABB Ability™ platform

ABB partnership with Microsoft to explore Gen Al

#### **Ecosystem Orchestration**

**Formation** 

Development

Expansion

Kolagar, M., Parida, V., & Sjödin, D. (2022). Ecosystem transformation for digital servitization: A systematic review, integrative framework, and future research agenda. *Journal of Business Research*, *146*, 176-200.



#### **Development**

The ecosystem orchestration phase defines the orchestration principles, distributes different roles among ecosystem actors, and ensures their alignment.



#### **Key activities**

- Defining governance principles
- Ecosystem role distribution
- Ensuring actors value creation, and capture alignment



#### **Industrial Example**







Volvo CampX

#### **Ecosystem Orchestration**

**Formation** 

**Development** 

Expansion

Kolagar, M., Parida, V., & Sjödin, D. (2022). Ecosystem transformation for digital servitization: A systematic review, integrative framework, and future research agenda. *Journal of Business Research*, *146*, 176-200.





Ecosystem expansion, embraces continuous evaluation and adaptation to revitalize the collaborations, seize opportunities, and strengthen the bonds between ecosystem actors.



#### **Key activities**

- Continuous ecosystem evaluation and adaption
- Revitalizating ecosystem collaboration
- Strengthening the ecosystem bonds



**Industrial Example** 



Ericsson's 5G partnership network

#### **Ecosystem Orchestration**

**Formation** 

Development

**Expansion** 

Kolagar, M., Parida, V., & Sjödin, D. (2022). Ecosystem transformation for digital servitization: A systematic review, integrative framework, and future research agenda. *Journal of Business Research*, *146*, 176-200.

## **Key Takeaways**

DISRUPTIVE TECHNOLOGIES: THE MOMENT IS NOW

BETTER TOGETHER: LEARN TO COMPETE AS AN ECOSYSTEM

ORCHESTRATION: EVOLVE WITH THE ECOSYSTEM



Early bird catches the worm





Survival of the fittest

## Thank you for your attention!

#### ESBRI & Norrlandsnavet Webinar

Get in touch with us...

vinit.parida@ltu.se

arun.thirumalesh.madanaguli@ltu.se

patricia.garcia@ltu.se