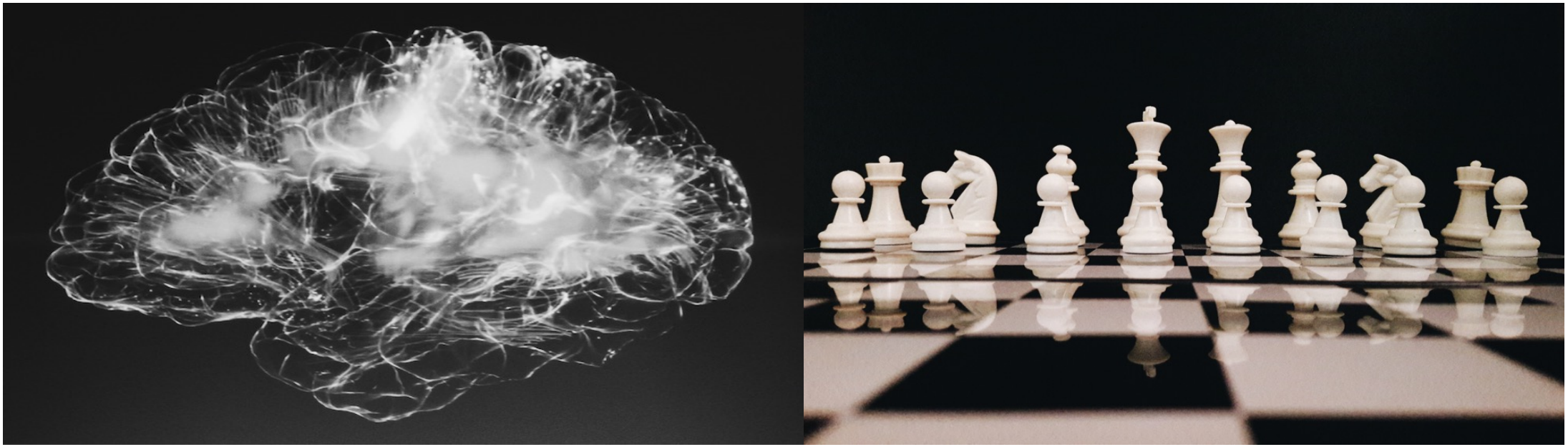

Data-driven Business Models in Manufacturing Industry – Trends and evolution directions

Professor Hannu Kärkkäinen (hannu.karkkainen@tuni.fi)

Faculty of Management and Business, Tampere University

DIMECC

Business Model Academy (BMA)

Helps you to build knowledge and tools by identifying, designing and implementing data driven business models

For whom

CEOs, CBOs

Mid-level/Senior managers

Head of Operations

Business owners

Innovation/R&D Managers

Four learning modules

1. **Introduction to data-driven business models**
2. **Current situation analysis**
3. **Enabling advanced data driven business models**
4. **Roadmapping data-driven business models**

Training Methods

Pre-work, Workshops, Individual work, Course project and Online coaching

Commitment needed

Four ½-day learning-sessions over three months.

Total effort about 45 hours of work, including the course project.

Already confirmed trainers

Prof. Hannu Kärkkäinen
Tampere University

Dr. Karan Menon
Tampere University

Olli Kuismanen,
Tamturbo Oy

More industry practitioners to be announced

Pricing per participant (VAT 0%)

3.500 € for DIMECC ecosystem members
4.000 € for others

Time & Location

Time: Sept. – Nov. 2023 **Location:** Tampere
Exact details to be agreed with enrolled participants

Registration and more information: Antti Karjaluoto, antti.karjaluoto@dimecc.com, +358 40 7725440

FAME Finnish Additive Manufacturing Ecosystem

FAMN Finnish Advanced Manufacturing Network

ONE SEA

SW4E SOFTWARE ENGINEERING ECOSYSTEM

VAMOS AUTONOMOUS MOBILITY IN SMART SPACES

Tampereen yliopisto

“The biggest threat to renewal is the human capacity for denial, especially when the future appears unpalatable. The future is surprisingly indifferent to our preferences.”
Gary Hamel

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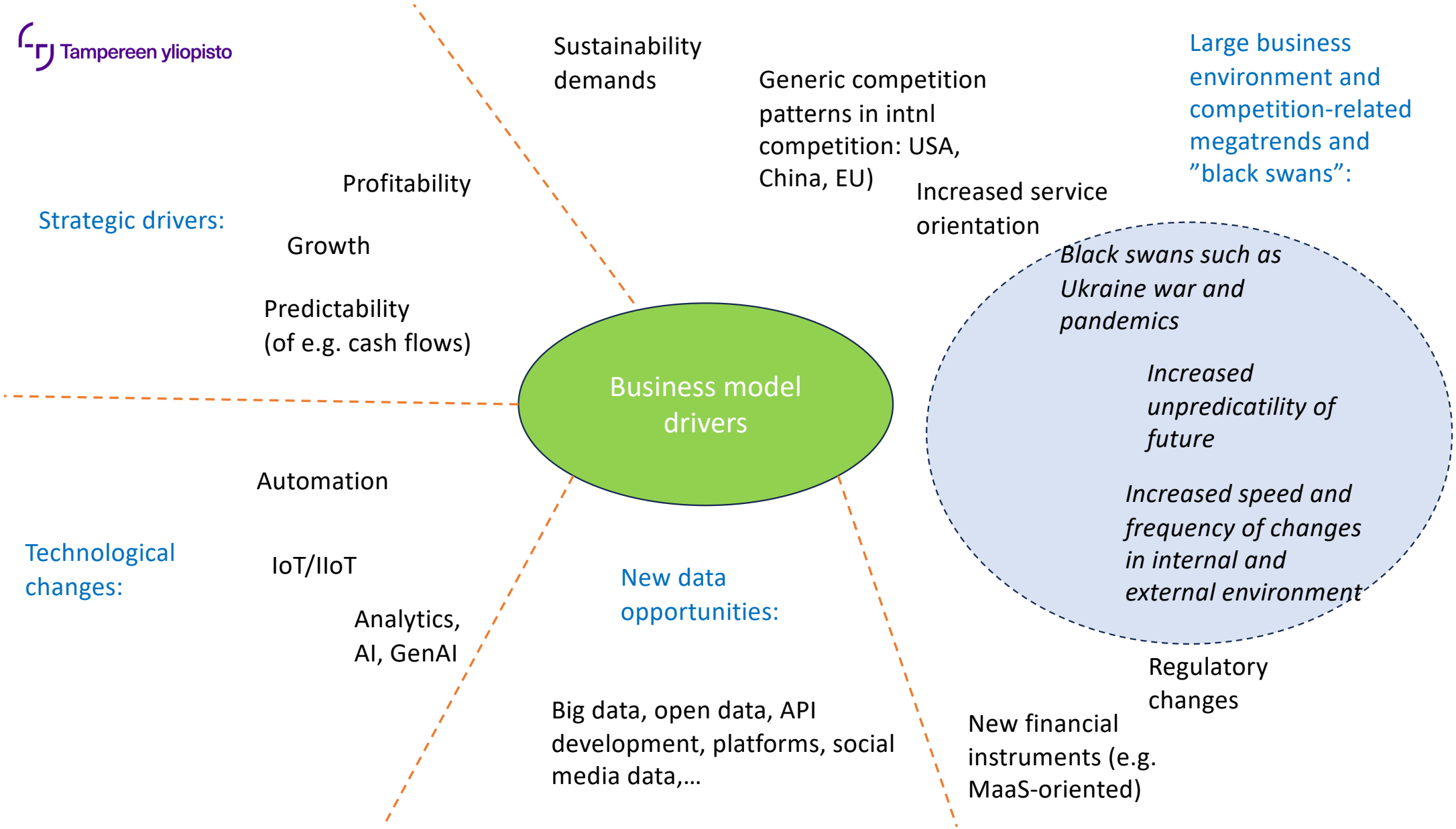
Business model is a managerial assumption that is (continuously) tested and iterated

- ”Business modeling is the managerial equivalent of the scientific method – you start with a hypothesis, which you then test in action and revise when necessary” (Magretta, 2002)
  - E.g. Bosch Accelerator Programme, Wolt, …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Sustainability demands
Generic competition patterns in intnl competition: USA, China, EU)
Large business environment and competition-related megatrends and ”black swans”:
Profitability
Strategic drivers:
Growth
Predictability (of e.g. cash flows)
Increased service orientation
Black swans such as Ukraine war and pandemics
Increased unpredicatility of future
Increased speed and frequency of changes in internal and external environment
Business model drivers
Automation
Technological changes:
IoT/IIoT
Analytics, AI, GenAI
New data opportunities:
Big data, open data, API development, platforms, social media data,…
Regulatory changes
New financial instruments (e.g. MaaS-oriented)

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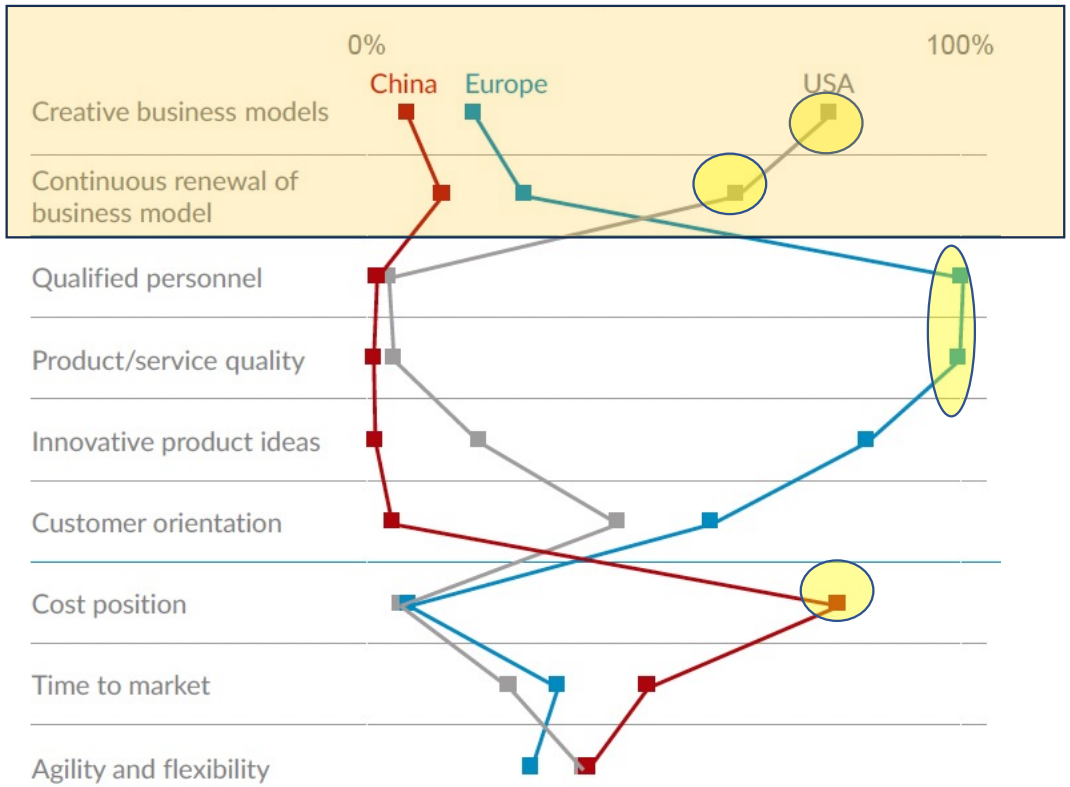
Business models and other competitive factors for machine builders

(McKinsey & VDMA)



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Considering the above: What should manufacturing companies pay attention to? Development directions of interest for BMs

- BM resilience
- BM modularity
- MaaS/OBC/PPX-models (and related hybrid BMs)
- Need to monitor and develop existing and new business models continuously
- Strategic long-term development of business model maturity

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Resilience of Business Models

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Business model resilience

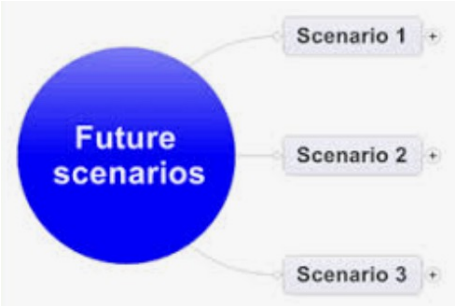
Central business model drivers, and related future anticipation

Business model Readiness (AS-IS, TO-BE)

Potential business model architecture and options

Business model transition and implementation

Business model related scenarios



Business model configuration and modularity (what might be possible)

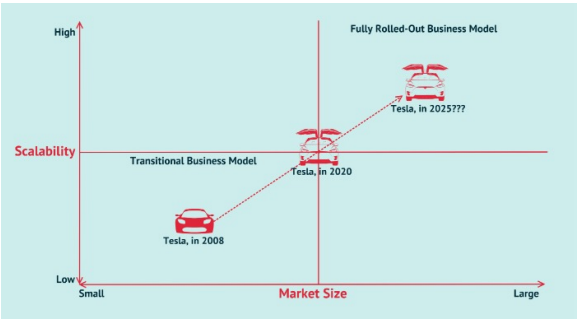
Characteristic Features		Options		
OWNERSHIP				
Ownership of Equipment	During the phase of use	Customer	Leasing Bank/financial institutions	Equipment Producer
	After the phase of use	Customer	Leasing Bank/financial institutions	Equipment Producer
Ownership of Software	During the phase of use	Customer	Leasing Bank/financial institutions	Equipment Producer
	After the phase of use	Customer	Leasing Bank/financial institutions	Equipment Producer
Ownership of Data	Production Optimization Related Data (Production Outcome)	Customer	Third Party (platforms or someone else)	Equipment Producer
	Service related Data (state of the machine)	Customer	Third Party (platforms or someone else)	Equipment Producer
OPERATIONS				
Machine Utilization Level		High	Medium	Low
Raw Materials / Consumables		Controlled by Equipment Producer	Controlled by Customer	Standardized (?)
Location of operation		Customer's Establishment	Shared infrastructure	Equipment Producer's establishment
Logistics		Customer	Third Party	Equipment Producer
Personnel	Manufacturing	Equipment Producer	Customer	Third Party (e.g., Data Scientists, Platform Consultants, etc.)
	Maintenance	Equipment Producer	Customer	Third Party (e.g., Data Scientists, Platform Consultants, etc.)
TRANSACTIONS				
Single/multiple customer operation		One Customer	Key Customers	All Customers
Payment Model		Fixed Rate	Hybrid Model	Pay for assets (equipment, software, etc.) / Pay-per-use/ Pay-per-outcome

Value Exchange Components	Data (Servers, Storage, Mobility)	Analytics	Expertise	Facility	Customization	Hardware	Personnel	Service	Maintenance	Software	Money

Business model maturity evaluation & development (MaaS example)

Governance	Risk Management	People & Culture	Processes	Technology	Data Analytics	Ecosystem Strategy
System governance	Risk identification	Competences	Production & design	Smart Product & factory	Data Collection & Storage	Identification of Partners & Roles
People governance	Risk analysis	Culture	Logistics	Connectivity	Data combination & processing	Organisational Alignment with network
Data & information governance	Risk mitigation	Leadership	Marketing & sales	Cloud	Data visualisation & application	Partner Cooperation

Business model (current/future) portfolio and roadmapping



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Modularity of Business Models

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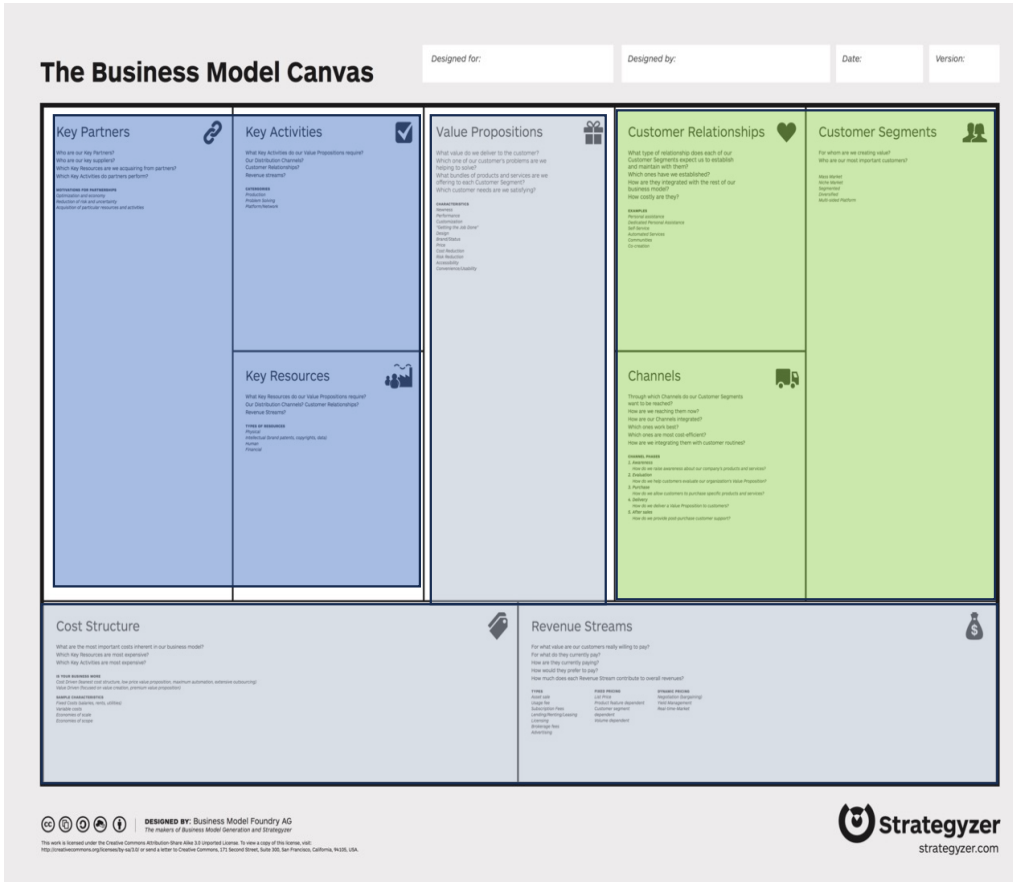
Different types of BM modularity (e.g. Gärtner & Schön 2016)

- Product & Service modularity
- **Pricing modularity**
- **Core asset modularity**
- **Partner network modularity**
- Channel modularity
- Core activities modularity



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Machine-as-a-Service (MaaS)/Pay-per-Use/Outcome-based BMs,…

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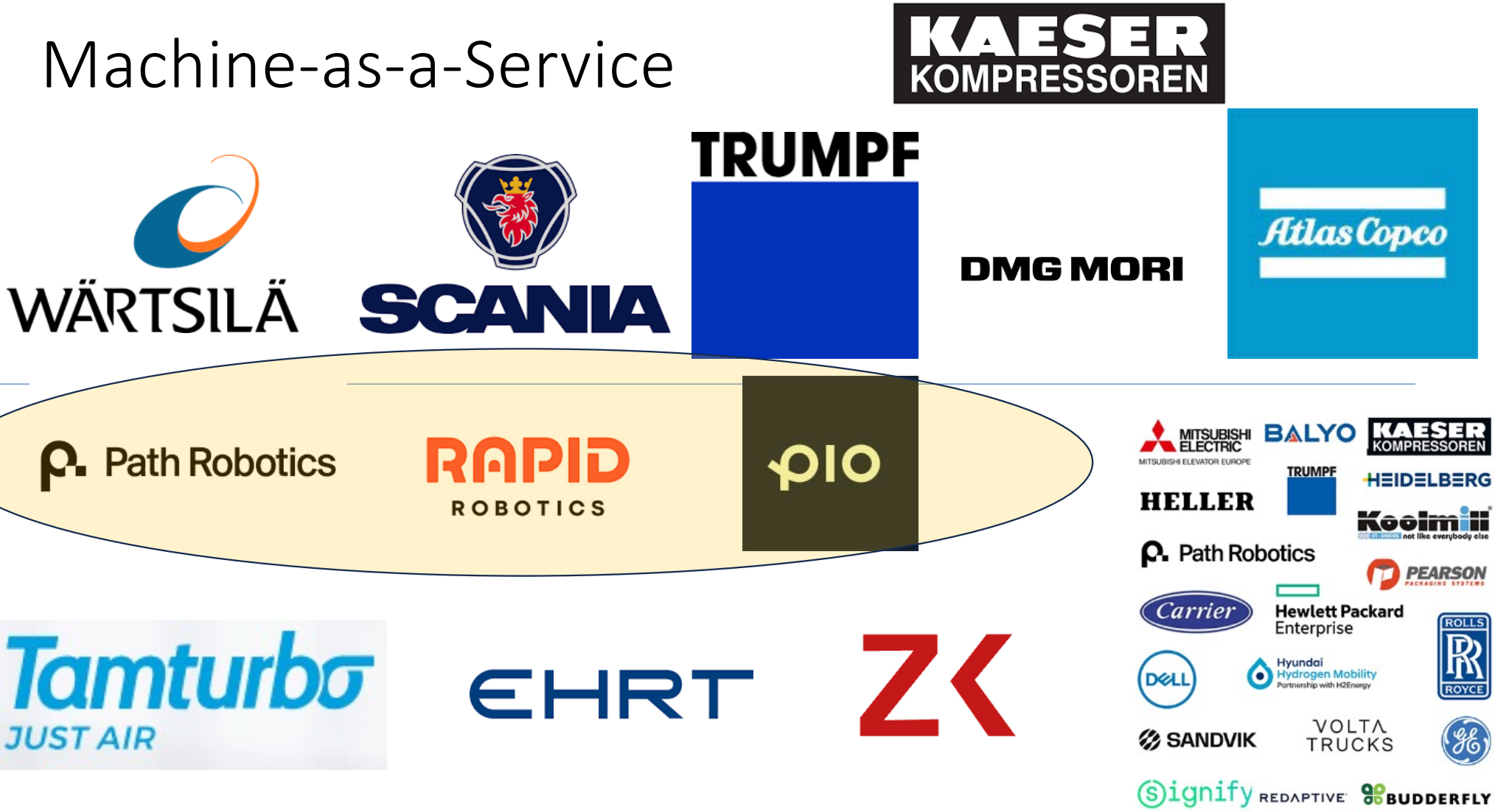
Machine-as-a-Service



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- Interested in collaboration e.g. in terms of joint projects related to Data-Driven Business Model resilience/modularity, Business Model design, and BM innovation in manufacturing field?
- Contact

hannu.karkkainen@tuni.fi
+358 (0)40 8490228
Tampere University