



University of St.Gallen



IoT as an enabler for new business models – from connected products to solutions

Prof. Dr. Felix Wortmann
Bern, August 25th, 2022

*“From insight
to impact”* 

IoT as an enabler for new business models

1. Introduction

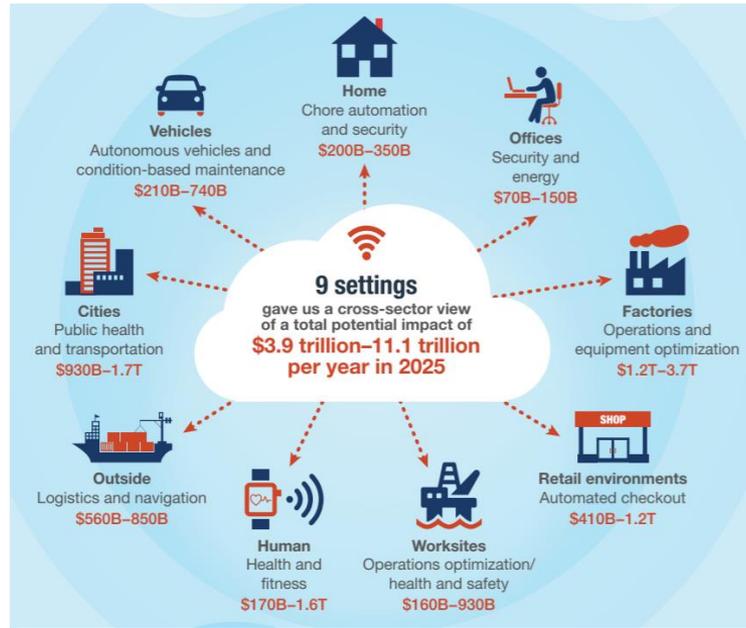
2. Product as a Service (PaaS)

3. Platform business

4. Summary and conclusion

Internet of Things: Where are we today?

The sky is the limit?

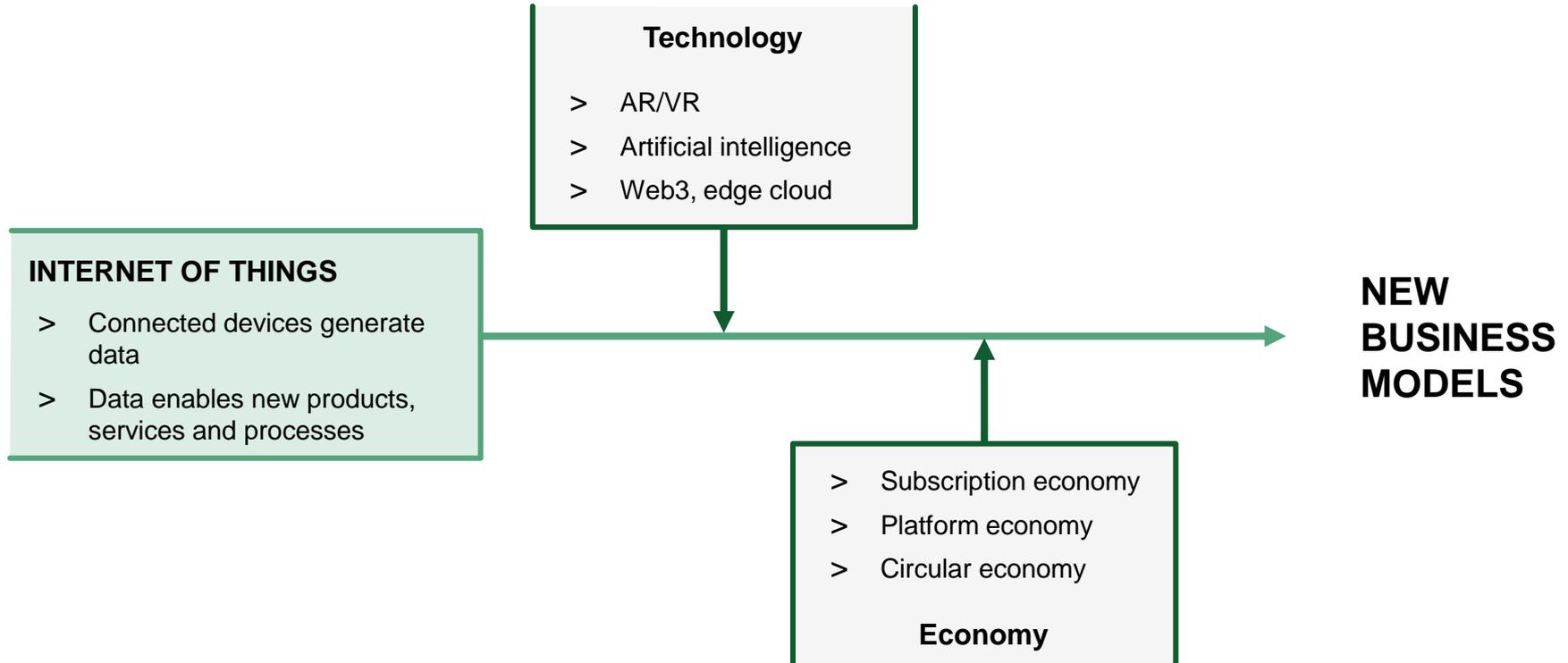


Source: McKinsey, 2014.

The most renowned companies struggle!



Internet of Things: What is ahead of us?



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Subscriptions become an essential part of our daily life and of our industrial activities ...

Consumer

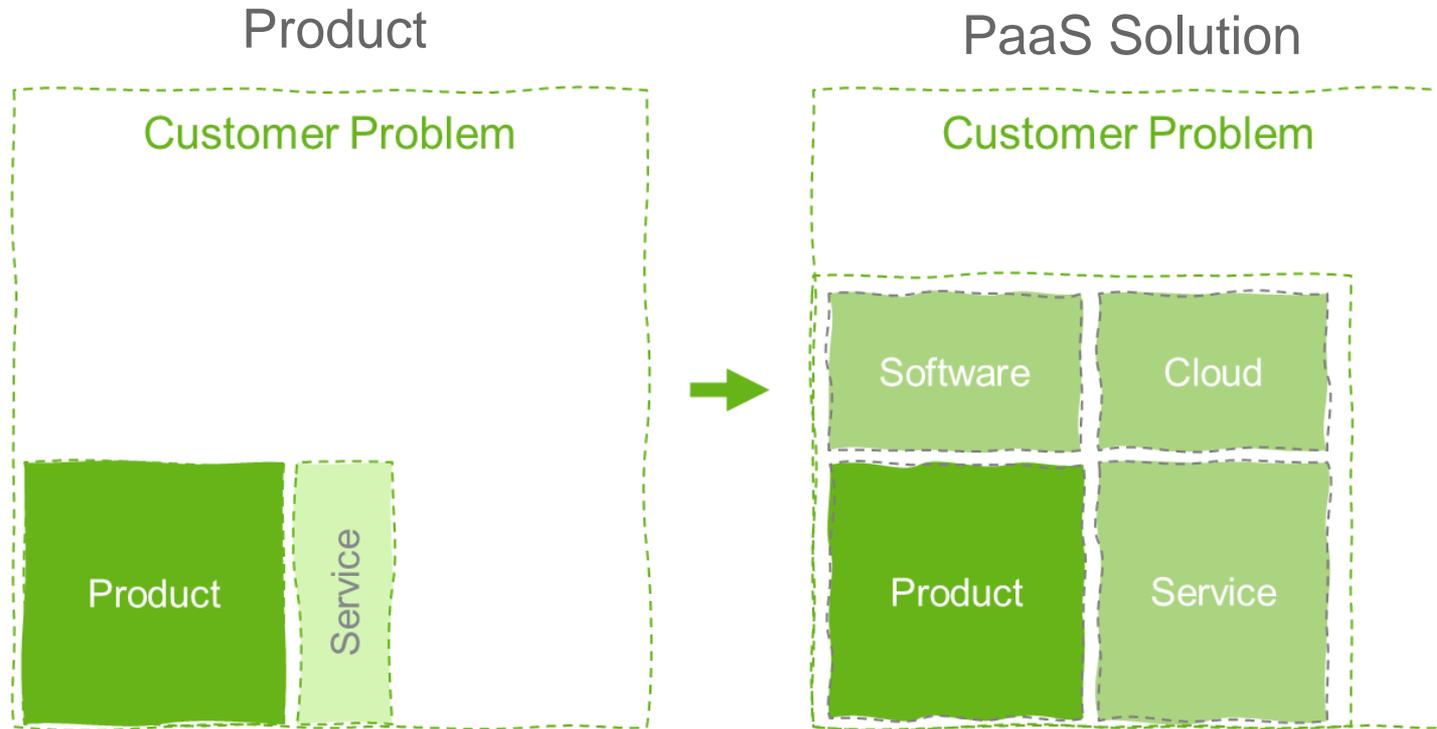
Food, fashion		
Household		 
Health, sport	 	  
Mobility		
Work		 
Entertainment		  

Industry

Robotics		
Energy		 
Machinery		
Airplanes		
Movables		  
Software		 

Source: Gebauer, 2022.

... but there is more than just a new revenue model paradigm



The first step to PaaS is understanding the very diverse nature of PaaS offerings

Asset-as-a-Service

Movable and immovable



KAESER
KOMPRESSOREN

Fleet-as-a-Service

Multiple assets



HILTI

Component-as-a-Service

Hardware or software




Audi

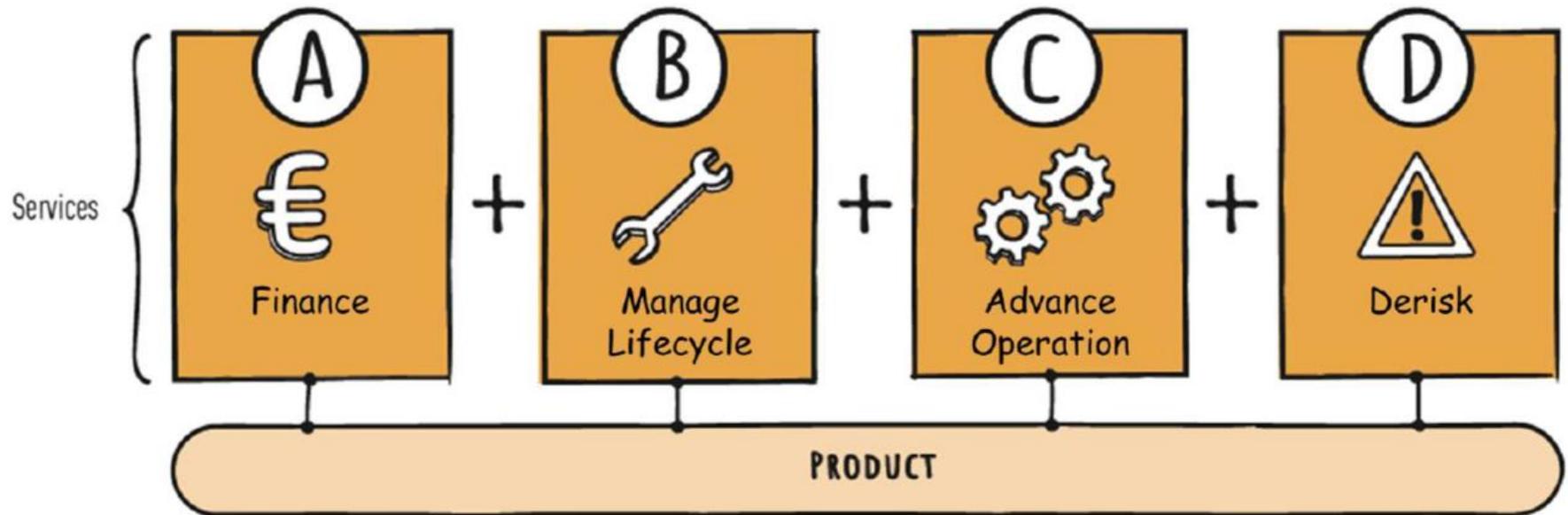
Consumable-as-a-Service

Managed consumables




MICHELIN

PaaS is about attracting customers which pay premium prices for solutions that solve their wicked problems



There are many successful PaaS offerings that do not rely on connectivity, but connectivity becomes crucial for PaaS

FROM SENDING PEOPLE TO
CUSTOMER SITES TO ...

KAESER
KOMPRESSOREN



Automation

SHARENOW



Self service

FROM CUMBERSOME
COLLABORATION TO ...

HILTI



Fleet/asset mgmt

FROM SIMPLE VALUE
CAPTURING TO ...

homie



Pay per use

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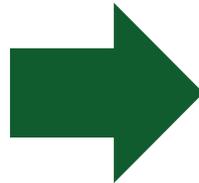
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Platform companies dominate our economy

2011

Rank	Company	Market cap in \$bn
1		337
2		330
3		274
4		225
5		205
6		202
7		194
8		194
9		190
10		186



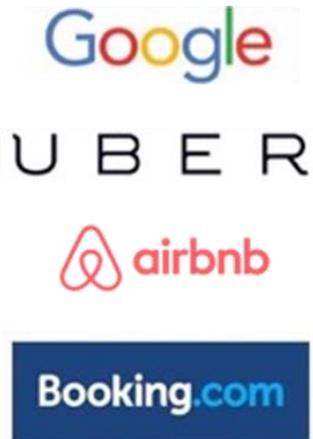
2021

Rank	Company	Market cap in \$bn
1		2,051
2		1,920
3		1,778
4		1,558
5		1,393
6		839
7		753
8		641
9		615
10		588

Sources: Forbes (2011); Newman et al. (2021)

The platform economy goes beyond digital players, however industrial incumbents face particular challenges

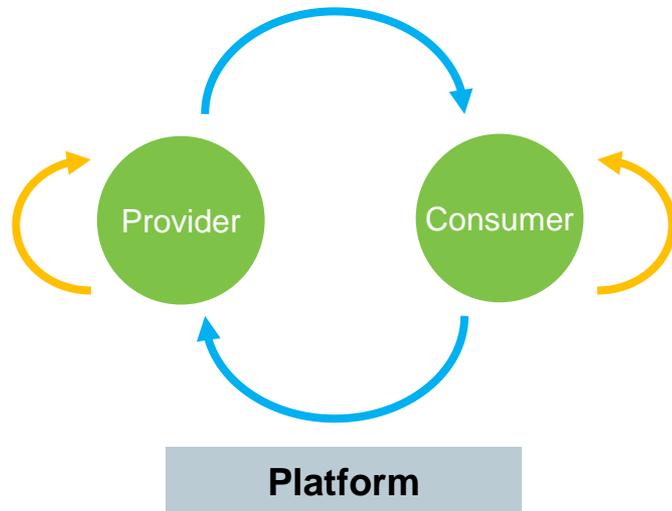
Digital players



Industry incumbents



Unlike linear pipeline businesses, platforms are intermediaries that rely on network effects



Same side (direct) network effects relate to one side of the market.

Cross side (indirect) network effects relate to the interactions between the different sides of the market.

Source: Parker et al., 2016

Two types of platforms: Transaction platforms

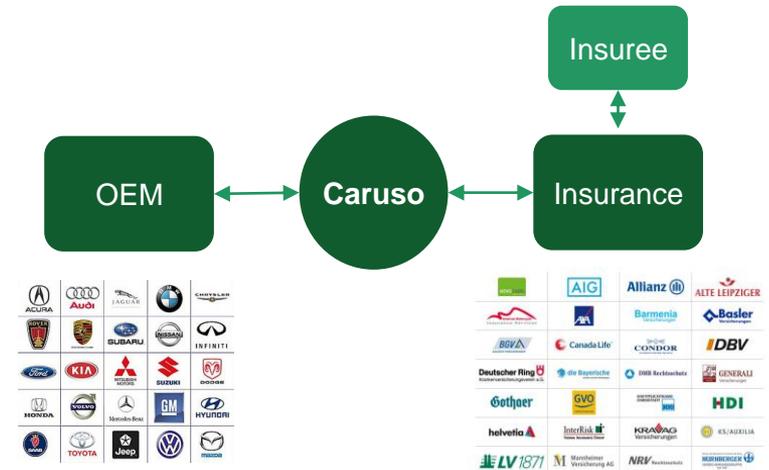
CARUSO marketplace

HOME SUCCESS STORIES PRICING DEVELOPER ZONE ABOUT & CONTACT MARKETPLACE LOG IN

From Connected Cars to Connected Business

We empower you to easily build life-improving solutions. Our platform helps to connect the smart with the real world by offering standardized data from multiple vehicle manufacturers.

Use case: Driving-based insurance?



Two types of platforms: Innovation platforms



OS for security cameras
Innovation platform



App store
Transaction platform



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Conclusion

1 **Monetizing the IoT** is still a fundamental **challenge** in many industries. However, **success materializes**, and a **next innovation wave** is ahead.



2 The **IoT is a core enabler of PaaS**. PaaS is about offering **product-software-service solutions** and overcoming “sell & forget”.



3 More and more industry incumbents leverage the **IoT to implement platform business models** that facilitate multi-sided markets.



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