

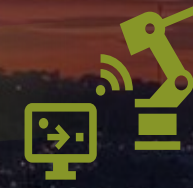
Combining the physical and digital worlds – platform strategies at work

Dr. Roland Busch, Deputy CEO, CTO, CHRO
and Member of the Managing Board of Siemens AG

MIT Platform Summit, July 2020

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**Digitalization –
Cyberphysical
systems**



**Electronics and IT –
Automation of
manufacturing**



**Electricity –
Introduction of
assembly line**

Founding of Siemens



**Steam power –
Shift from manual to
mechanical
production**

Industrie 4.0

Industrie 3.0

Industrie 2.0

Industrie 1.0

The industrial Internet of Things will unleash the next era of growth and innovation

by combining
the physical and
the digital worlds

Potential economic impact of up to \$11 trillion per year in 2025. B2B applications account for 70%.

Source: McKinsey, Unlocking the potential of the Internet of Things

Industry



60% of manufacturing tasks could be automated improving productivity, quality and safety

Source: McKinsey, BCG, BuildingRadar

Infrastructure



80% of the lifecycle costs are in the operations phase. The possibility to influence the costs is the highest in the planning phase

Mobility



20% potential increase of transport capacity w/o building new physical infrastructure

The industrial Internet of Things will trigger the next era of growth and innovation

by combining the physical and digital worlds

Systematic expansion of software and automation portfolio

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€10 billion investment in acquisitions of software companies



Selection of acquisitions

1 Cooperation 2 Acquisition of Edge technology






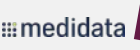





















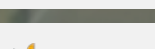
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Multiple actors from three different groups all are competing for the attractive market

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Traditional players

Building strategic networks to expand offering & enable end-to-end solutions

 DASSAULT SYSTEMES	+	
 DASSAULT SYSTEMES	+	 IQMS M&A
 DASSAULT SYSTEMES	+	 medidata M&A
 ANSYS	+	
 ANSYS	+	
 Rockwell Automation	+	
 Rockwell Automation	+	
 ptc	+	 Onshape M&A
 ptc	+	 ANSYS Microsoft  tvnlds  vuforia M&A
 ptc	+	 Rockwell Automation M&A¹⁾
 Schneider Electric	+	 AVEVA M&A
 Schneider Electric	+	 RIB M&A
 Schneider Electric	+	 AutoGrid M&A

Tech companies

Positioning themselves as IoT/digitalization partner for major vertical industries

 amazon web services	
	
AWS IoT Greengrass Core	IoT Hub
	
AWS IoT SiteWise	Azure Machine Learning Service




Consulting firms / System integrators

Expanding into attractive and fragmented IoT domain

 accenture	+	 REVOLUTIONARY SECURITY M&A	
 accenture	+	 Symantec M&A	
 accenture	+	 Pragis Bidoop M&A	
 BCG GAMMA	 Atos	 QUANTUMBLACK A MOORE COMPANY	 TATA CONSULTANCY SERVICES

Siemens - a digital Champion for Industry and Infrastructure



	 Industry	 Infrastructure	 Mobility
Solutions & Services		Marketplace IoT Consulting & Implementation Digital-Enabled Solutions & Services	
Software		Vertical Software Development Environment Cloud infrastructure Edge – “Seamless Edge to Cloud”	
Automation		Smart Edge Devices Control Systems	
Hardware		(Smart) Devices	

Business Ecosystem

Industrial Ecosystems



Cloud Partners



Alliances



Unleash new customer value by combining the physical and digital worlds in all served markets

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Digital world



Automotive



Machine Building



Food & Beverage



Pharma



Chemicals



Additive Manufacturing



Cranes



Logistic



Combining the physical and digital worlds



Physical world



Buildings



Campus



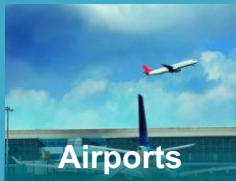
Hospitals



Energy Distribution



Rail



Airports



Process Plants



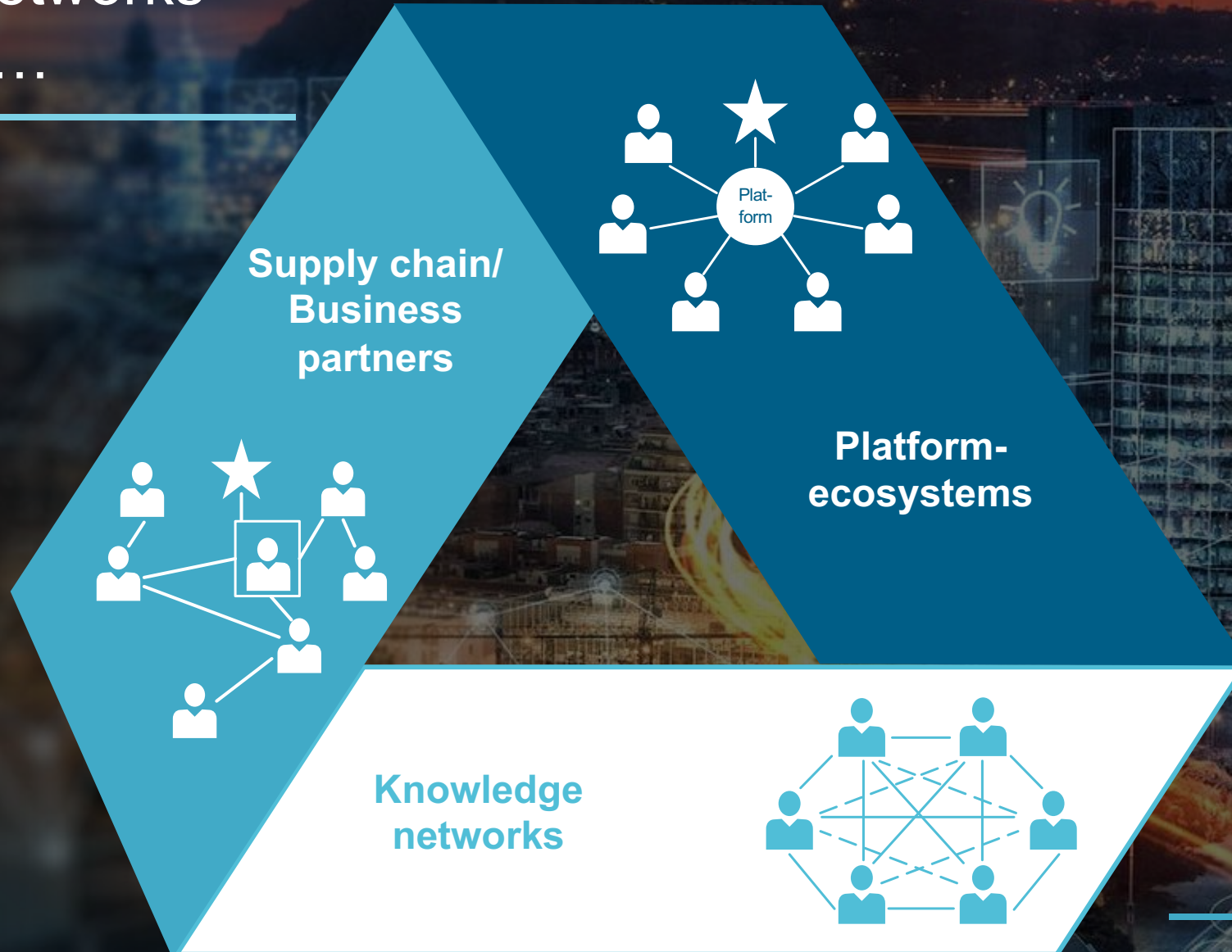
Oil & Gas

How can we **scale B2B platforms** learning from B2C platforms?

Deep **domain knowhow**,
a strong **technology stack**
and powerful **ecosystems**
are the key...

to combine the physical
and digital words

Traditional networks
are our core...



platform
ecosystems are
our future

Evolution of our market from core to incremental SW capabilities and connected systems

Core Markets



Automation systems



Vertical Software



Integrated automation portal



PLM software



IoT Market



selected examples

IoT platform for workplaces and smart buildings



Low-Code Software platform



Ecosystem for Mobility



Industrial Edge



Industrie 3.0

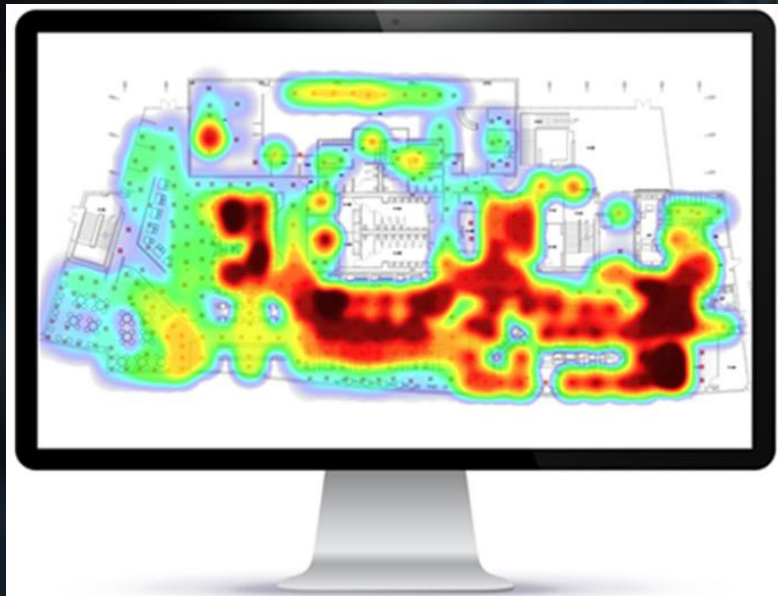
Industrie 4.0

Safe return to office

Using IoT native **Enlightened** and cloud native **Comfy** platforms in times of COVID-19 and beyond

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Heatmaps

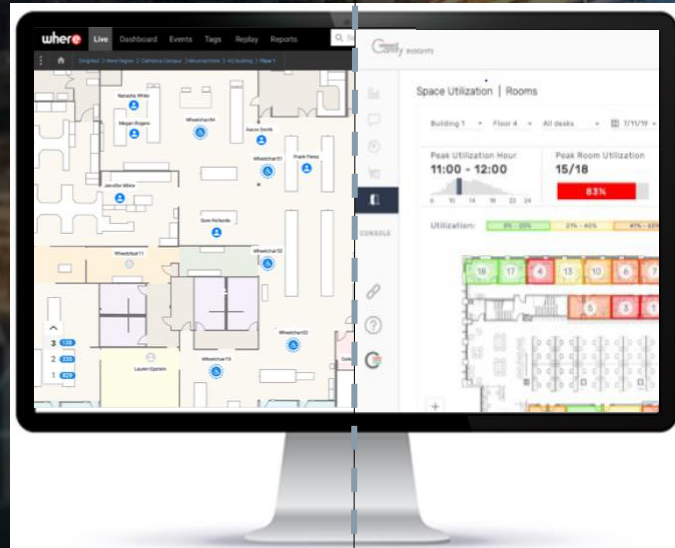


Keep occupancy limits

enlightened™
A Siemens Company

Comfy

Contact tracing Transparency



Identify interactions with those confirmed COVID-19 infections

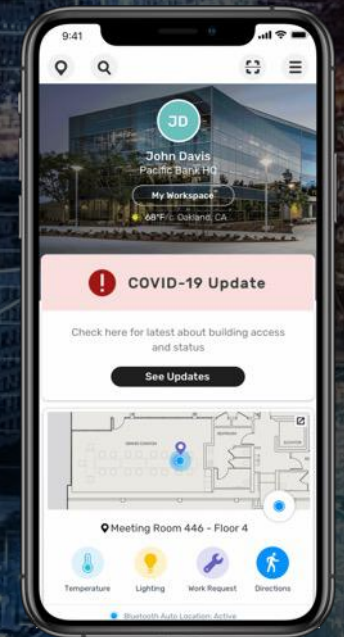
Monitor density & safe distancing

Booking



Ensure compliant work during social distancing

Information



Provide COVID-19 updates for all employees

Safe return to office

Siemens and Salesforce combine their value add of key technologies, helping our customers to reopen safely

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Railigent – An open platform ecosystem integrating best-in-class rail applications



Efficient maintenance

100% availability

Reliable operations

Railigent platform

Business models

Outcome as a service

Insights as a service

Software as a service

Managed service



Data

Rolling stock

Signaling

Infrastructure

Low-code App platform Mendix

Build applications 10x faster with 70% less resources

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Let's restart together and shape a
more sustainable and resilient economy



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Thank you!