

A nighttime photograph of a cityscape with tall buildings and a bridge, all illuminated with blue light. The lights are reflected in the water in the foreground. On the left side, there are several vertical yellow bars of varying heights.

Das Internet der Dinge als technologische Herausforderung und Treiber für die Digitalisierung in Unternehmen

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SAP is ...

The worldwide market leader in enterprise software and the leading cloud company

- ✓ 300,000 SAP customers, represent 98% of the top 100 most valued brands in the world
- ✓ 77,000 employees, 120 nationalities worldwide, in 130 countries, 43% Millennials, 32% Women

VISION

Help the world run better and improve people's lives

MISSION

Help our customers run at their best

STRATEGY

Become THE cloud company powered by SAP HANA



Fully automated Port in China

Market realities are forcing the need for business transformation

Evolving expectations



US\$6.2T

Global worth of Internet of Things technology by 2025¹

Hyper-connectivity



>2.8B

Internet users worldwide²

Business complexity



90%

Of the world's data generated in the last two years³

Accelerating Pace of Business



<15 years

Average lifespan on the Fortune Global 500⁴



US\$41T

World trade of goods and services by 2020, nearly two and half times more than 2010⁵



US\$14.4T

Value created by the "Internet of Everything" from 2013 to 2022⁶

Sources:

¹ "15 Mind-Blowing Stats About The Internet Of Things" Giselle Abramovich, CMO.com, April 2015.

² Kleiner Perkins Caufield Byers, Internet Trends 2015, May 2015.

³ "Big Data, For Better or Worse: 90% of the World's Data Generated in the Last Two Years," ScienceDaily, May 2013.

⁴ "Peggy Noonan on Steve Jobs and Why Big Companies Die," Steve Denning, Forbes, November 2011.

⁵ "Trading Places: The emergence of new patterns of international trade," Ernst & Young, 2011".

⁶ "Embracing the Internet of Everything," Cisco, February 2013.

Reimagining business models

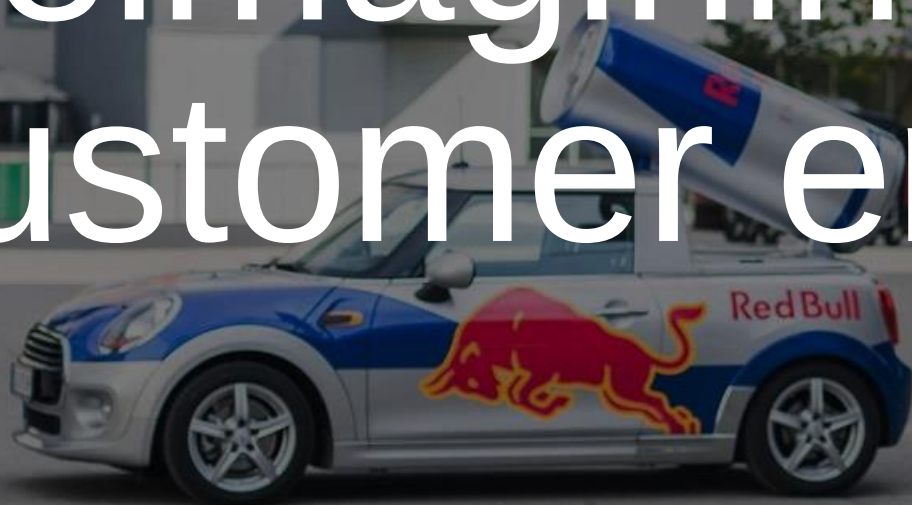




Reimagining products



Reimagining customer engagement





CATERPILLAR

Reimagining manufacturing



HILTI

Reimagining the customer experience

Efficiency Led Models

Optimizing Machine Efficiency

Reducing
Down-Time



Faster Delivery

Reduce Maintenance
Effort and Costs

New Business Models

Transform Products
to Services

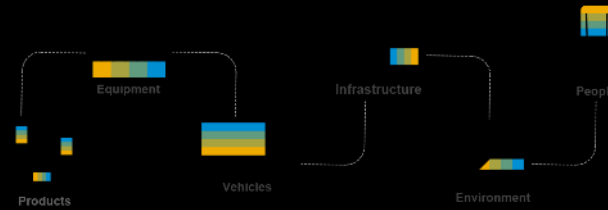
New Digital
Services



New
Customer Experience

Personalized
Products & Services
(Lot-size 1)

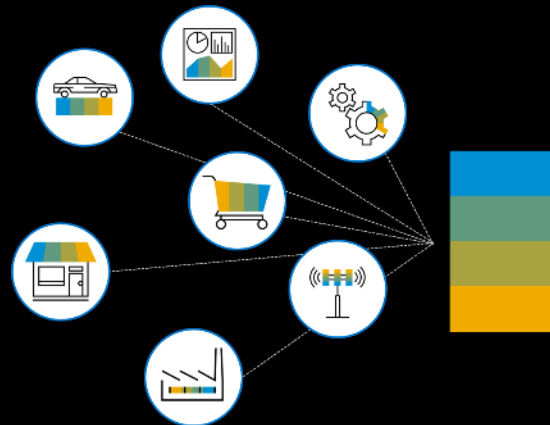
- Customers and users are more informed and empowered
- Data is available 24/7



- Machine Learning
- Artificial Intelligence
- 3D Printing
- Predictive Processes
- Products are Smarter

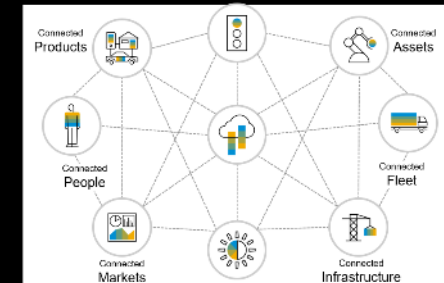


- Online Ordering
- 2-Hour Delivery
- Real-Time Decisions
- Predictive Analytics



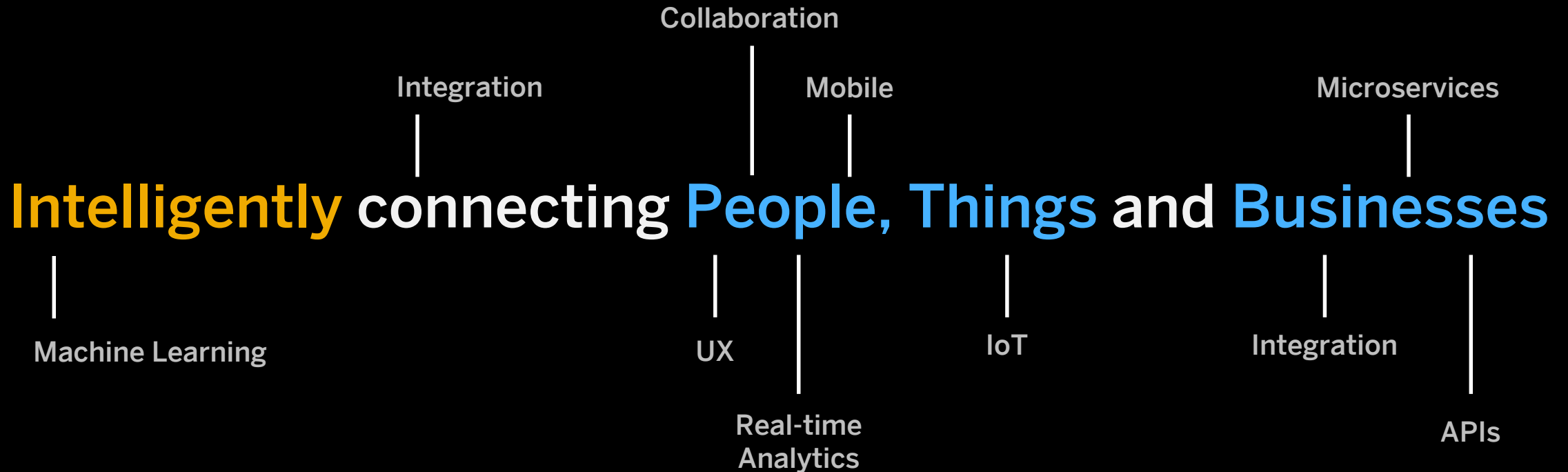
Visibility across the business network of both structured and unstructured data:

- Business Systems
- IoT Enabled Devices
- Sentiment Analysis
- Weather Patterns
- Traffic Reports
- Etc.



Digitalization as holistic trend is driving Industry priorities

Every Company to become a Software-driven Company by ...



Drivers & Challenges of IoT



Sensors built in / intelligent things

Price of sensor and local computing power has drastically come down



Ubiquitous connectivity

Proliferation of mobile networks and evolution of low energy wireless; 5G to natively support IoT



Unlimited data storage at low cost

Amazon AWS offerings provide storage from 30\$ per TB and month; open source standard stores



Cloud scalability, elasticity, availability

Cloud offerings are designed for scalability, high availability, and elasticity



IoT for everyone

Millions of developers can easily “play” with IoT – at home, at startups



Heterogeneous device standards

Large variety of proprietary interfaces, protocols, and data formats



Scenario-specific algorithms

Customer landscape for IoT applications have little commonality, requiring data scientists



Many market players

Customers face offerings from different parts of the stack; most vendors only address parts



Security, safety, privacy concerns

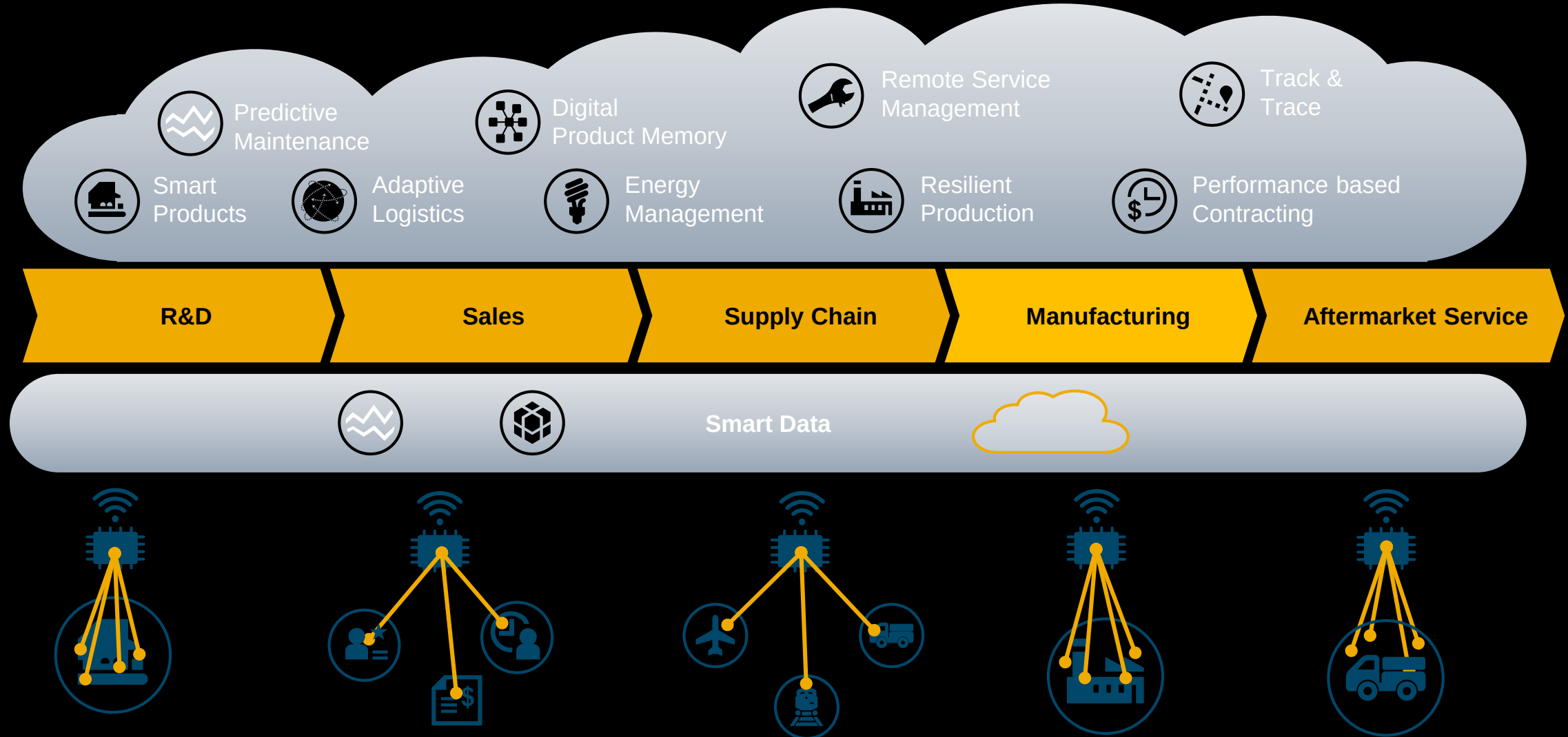
Heterogeneity of attack points with lack of end-to-end standards; safety relevant areas; aspects of liability



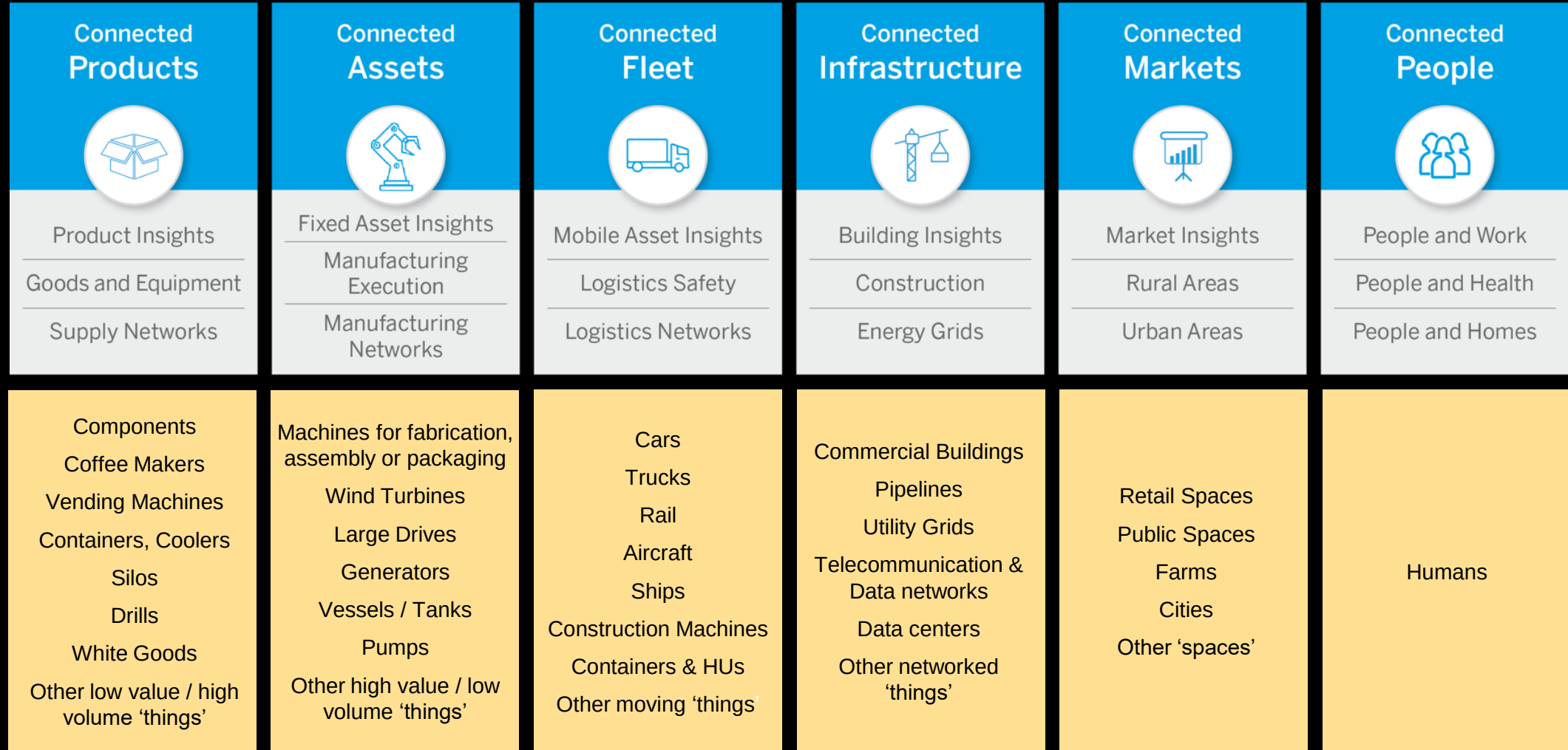
Lack of skills

Expensive specialists for data intake, data scientists, security experts

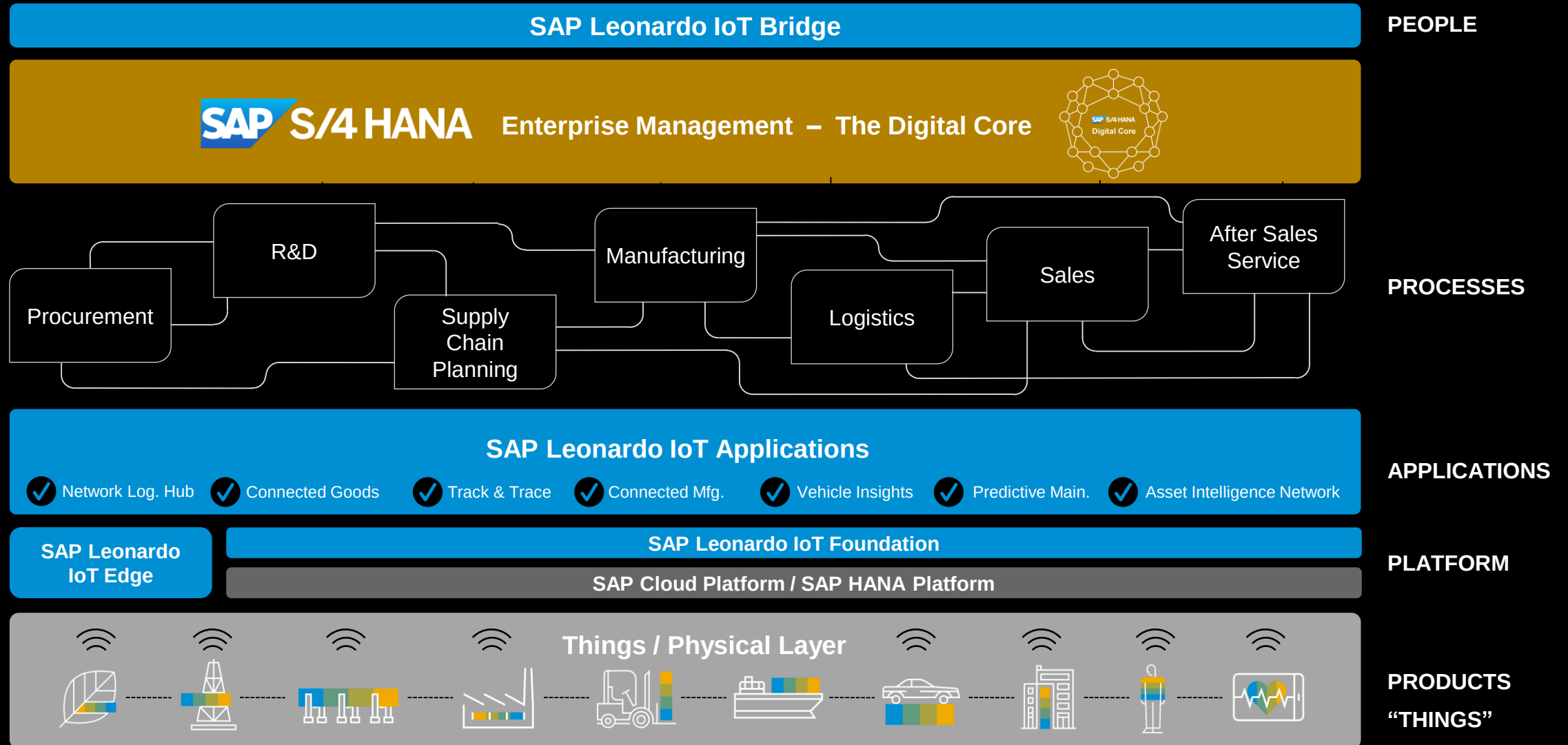
IoT triggers multiple discussions along the enterprise's value chain



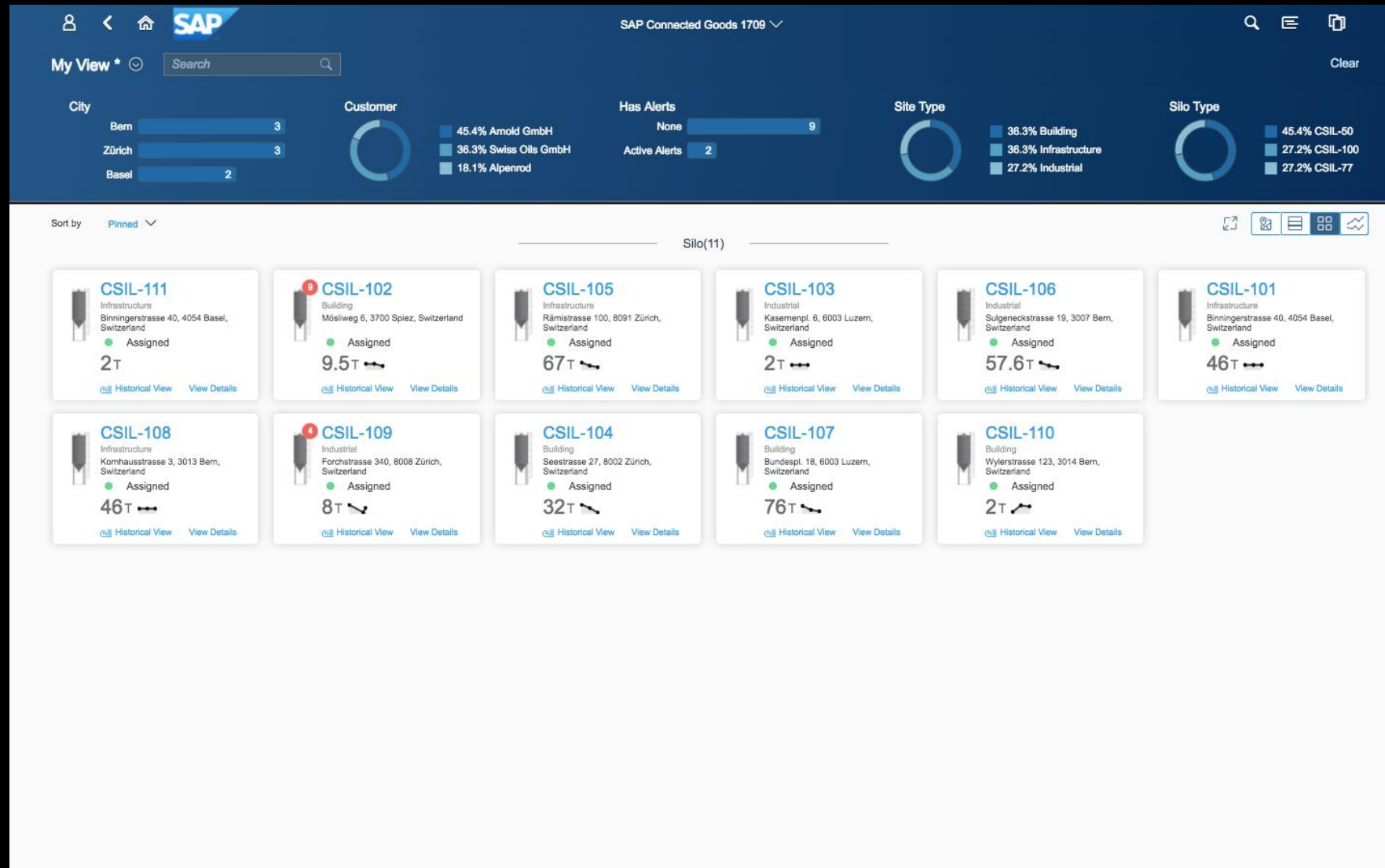
Connected Things – What should you be thinking about



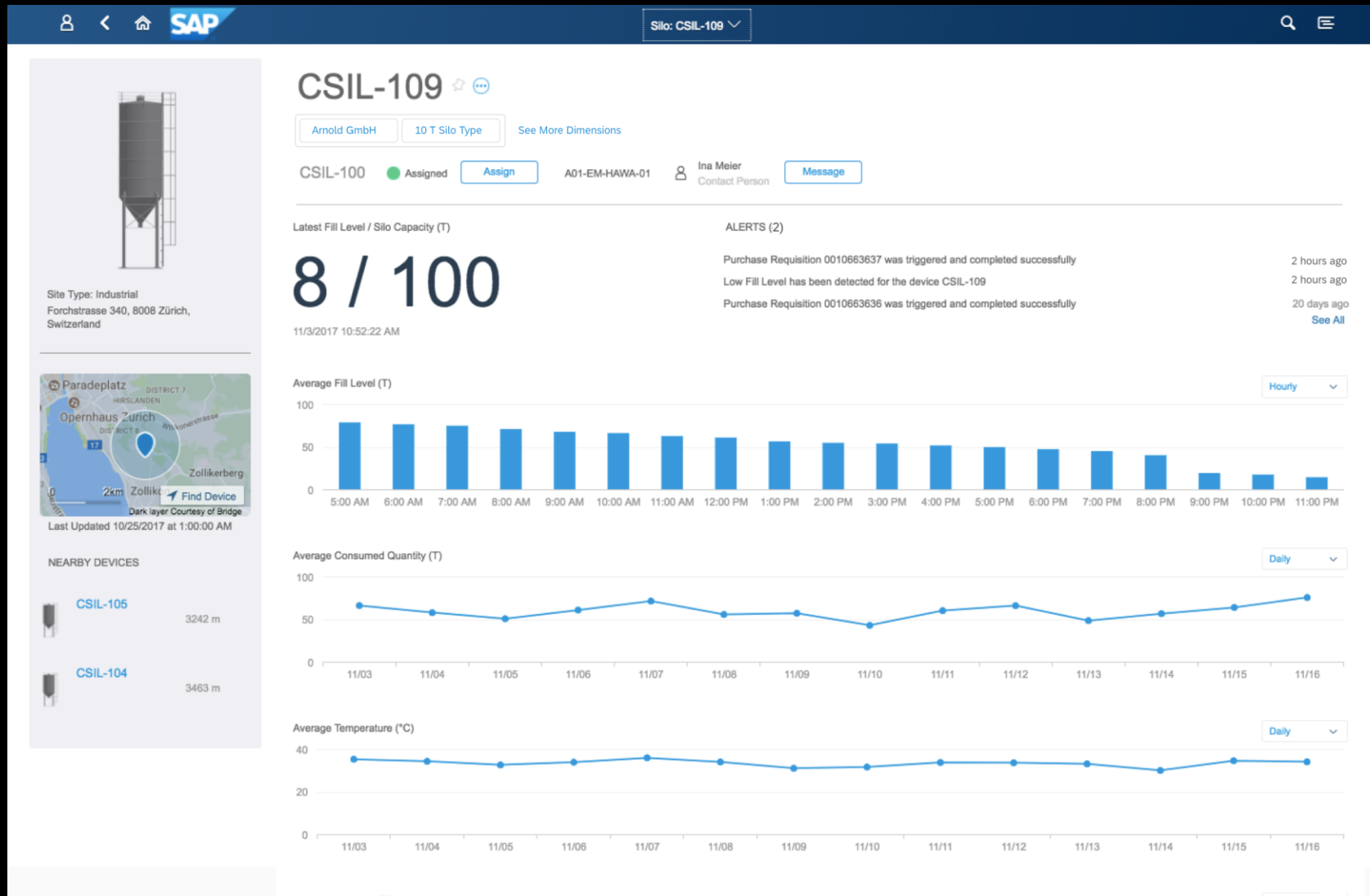
SAP Leonardo IoT - The Big Picture



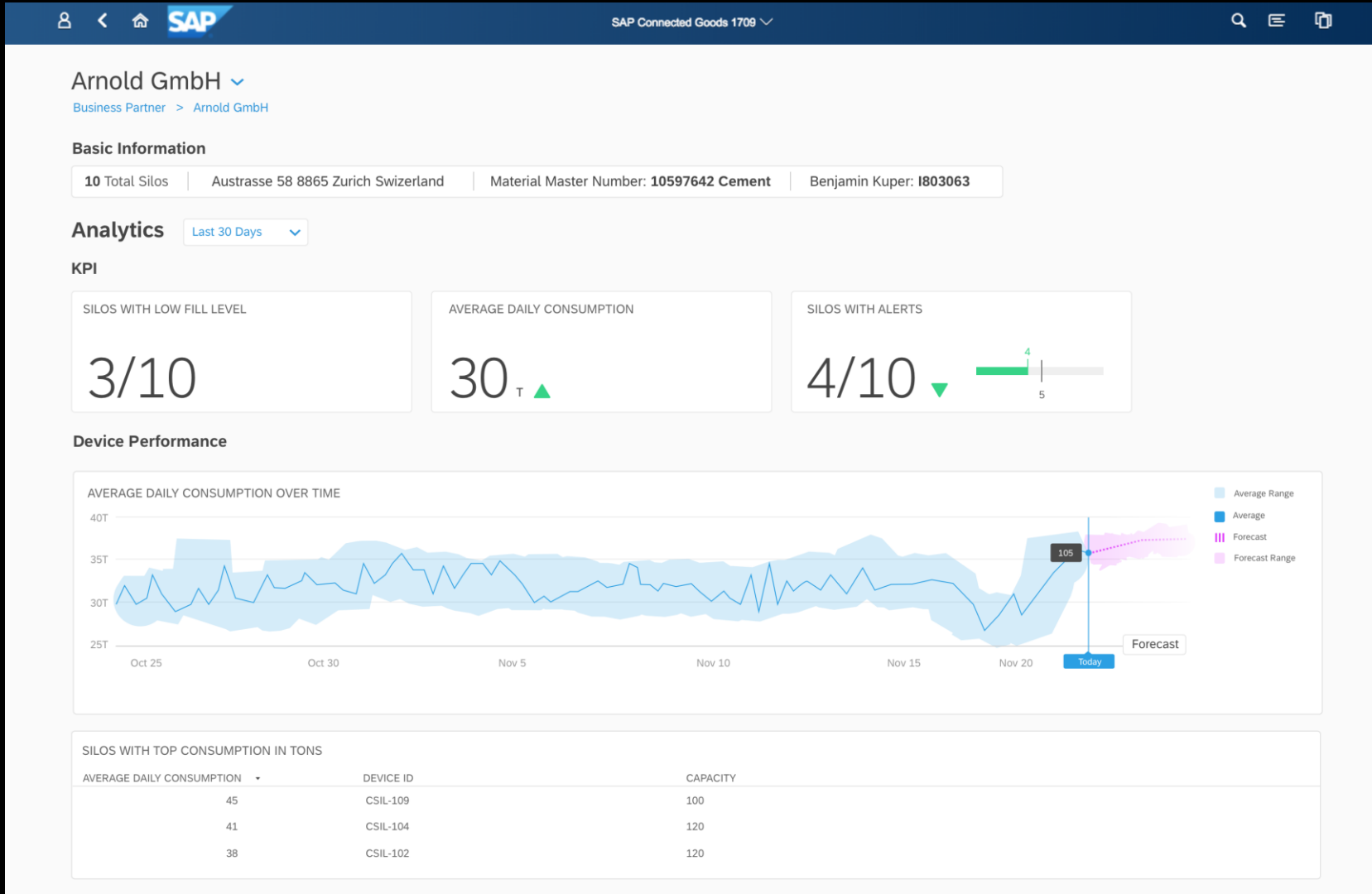
SAP Connected Goods - Demo



SAP Connected Goods - Demo



SAP Connected Goods - Demo





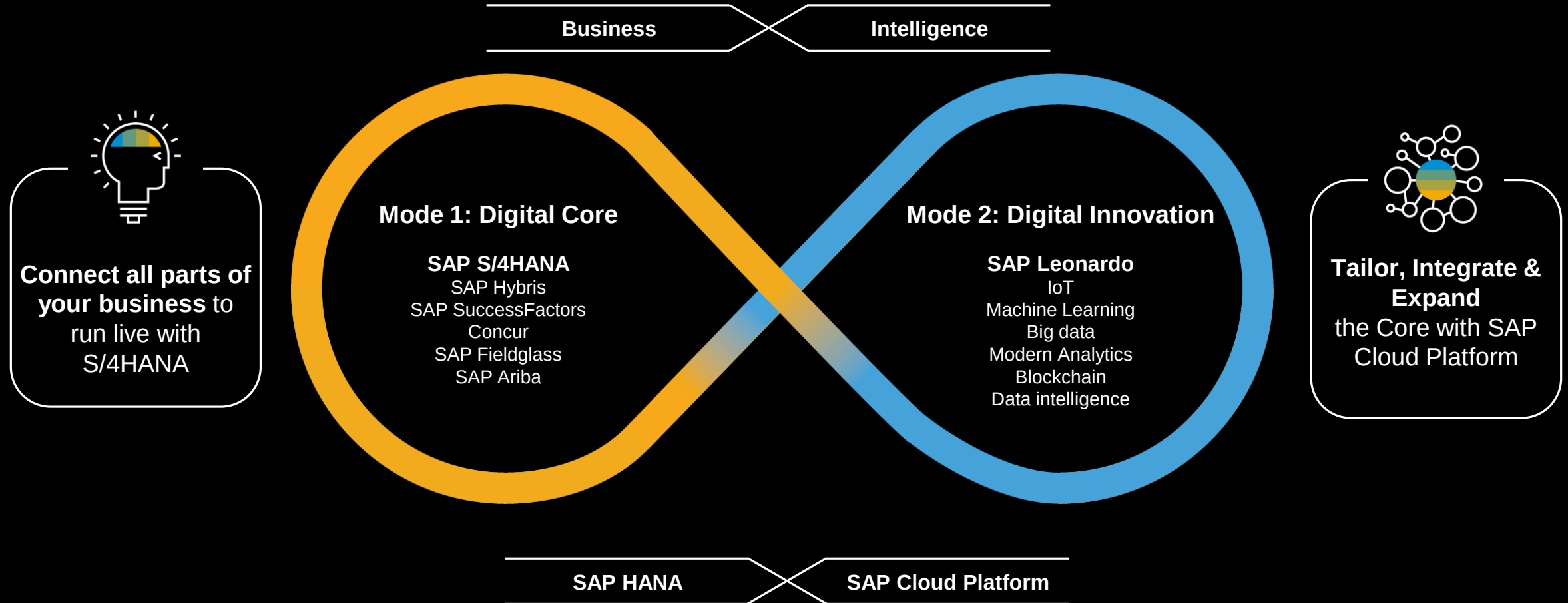
Rock



Sponge

The Bi-Modal Architecture of the Modern Enterprise

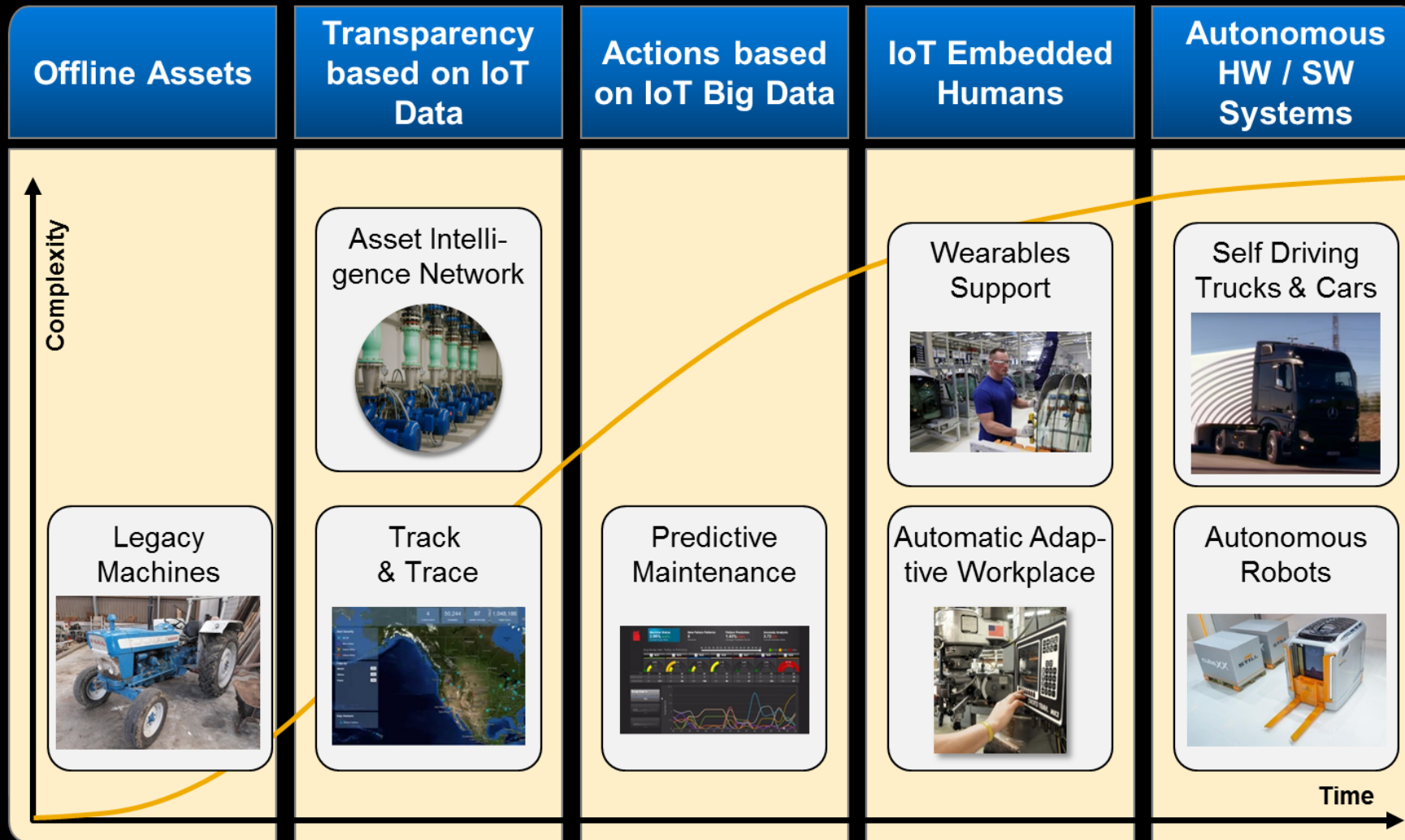
A Digital Core *and* a Digital Innovation System





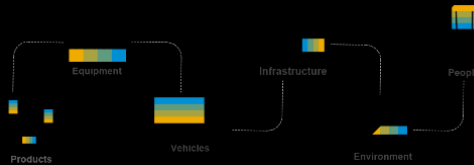
Yes, and where do we go from
here?

Exemplary IoT roadmap towards fully autonomous systems



Why SAP Leonardo IoT & Digital Supply Chain

Connecting Things with People and Processes



Business Network
Capabilities



World-class customer base



READY-TO-DEPLOY
integrated E2E solutions



Powerful Ecosystem to extend
and complement



Deriving **common standards**
and **security** in the market



Business Process and industry
expertise

***„When wireless is perfectly applied
the whole earth will be converted
into a huge brain, which in fact it is
all things being particles of a real
and rhythmic whole ...“***

Nicola Tesla (1926)

Thank You



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