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# Hype or necessity?
## What motivates industrial manufacturers to develop their own IIoT platforms

Jürgen Käser |  2019-04-03

# Agenda

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1. Company presentation

2. From 3.0 to 4.0 offerings

3. Driving forces

4. Make or buy?

5. Platform as a business model

6. Summary

# Four Group Divisions
## A well positioned company

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### Voith Group

**Paper**

Partner and
pioneer in the
paper industry

**Hydro**

Full-line supplier
for hydro power
plant equipment

**Turbo**

Intelligent
drive systems
and solutions

**Digital Ventures**

Solutions for the
internet of things:
networking and
digitalization

# Voith in figures

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In more than **60** countries

**19 535** employees

**5** markets

R&D ratio
**5.4 %**

Family-owned since
**1867**

Sales
**€ 4.2 Billion**

As of: 2017/18

# Voith stands for massive products made of steel
## Example of a papermachine

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- Total weight = 100 t

# Voith stands for massive products made of steel
## Example of a papermachine

**VOITH**



- Total weight = 100 t
- Free width = 12 m

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## Example of a papermachine

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- Total weight = 100 t
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## Example of a papermachine

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- Total weight = 100 t
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- Max speed = 2000 m/min

# Voith stands for massive products made of steel
## Example of a papermachine



- Total weight = 100 t
- Free width  = 12 m
- Diameter = 1.5 m
- Max speed = 2000 m/min
- **Max tolerance = 20 μm**

Headbox: Running Simulation

1.25%
Fibers

98.7%
Water

0.05%
Chemicals

Voith Cloud

! Replace
Part 115
Section B

Expected Error in
5 Days

6 pm
Technician Informed

Paper Quality

17.9 Nm/g
SCT

2.25 kPa m²/g
Burst

# Why should we care about bits and bytes?
## Because data is the world's most valuable resource

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**We are your reliable partner to leverage today's industrial opportunities for a smarter digital tomorrow.**

**Industrial competence >150 years**

**ROI for customers**

**Open software standards**

**Customer is owner of the data**

# Why Industrial Internet of Things (IIoT)?
# From 3.0 to 4.0 offerings

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**Visualize data, optimize processes & maximize profit**

- Provide actionable information
- Automate operations
- Offer services

**Turn data into insight**

- Process and store data
- Perform data analytics
- Manage networks

**Machines**

- Intelligence at the edge
- Filter data
- Perform edge analytics
- Data informs and directs devices

**Cloud Management & Data Center**

**Gateways**

- Hardware verification
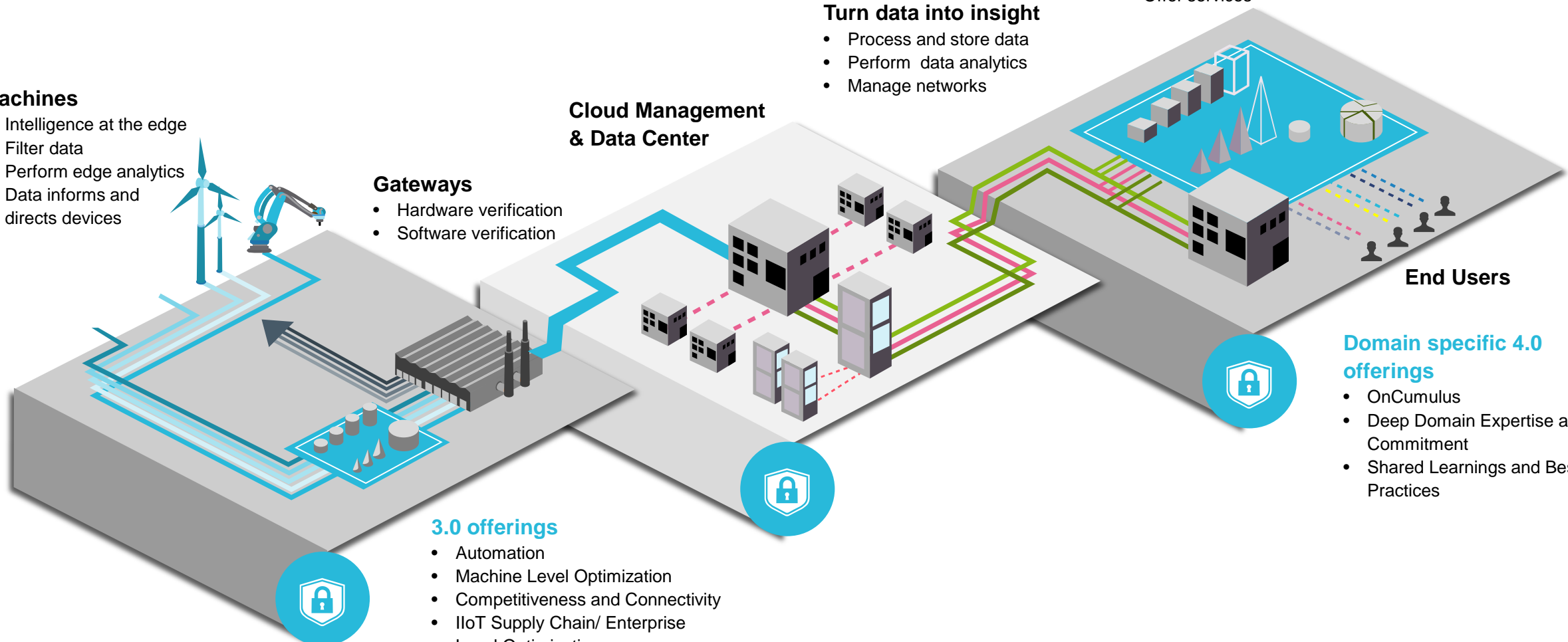- Software verification

**End Users**

**Domain specific 4.0 offerings**

- OnCumulus
- Deep Domain Expertise and Commitment
- Shared Learnings and Best Practices
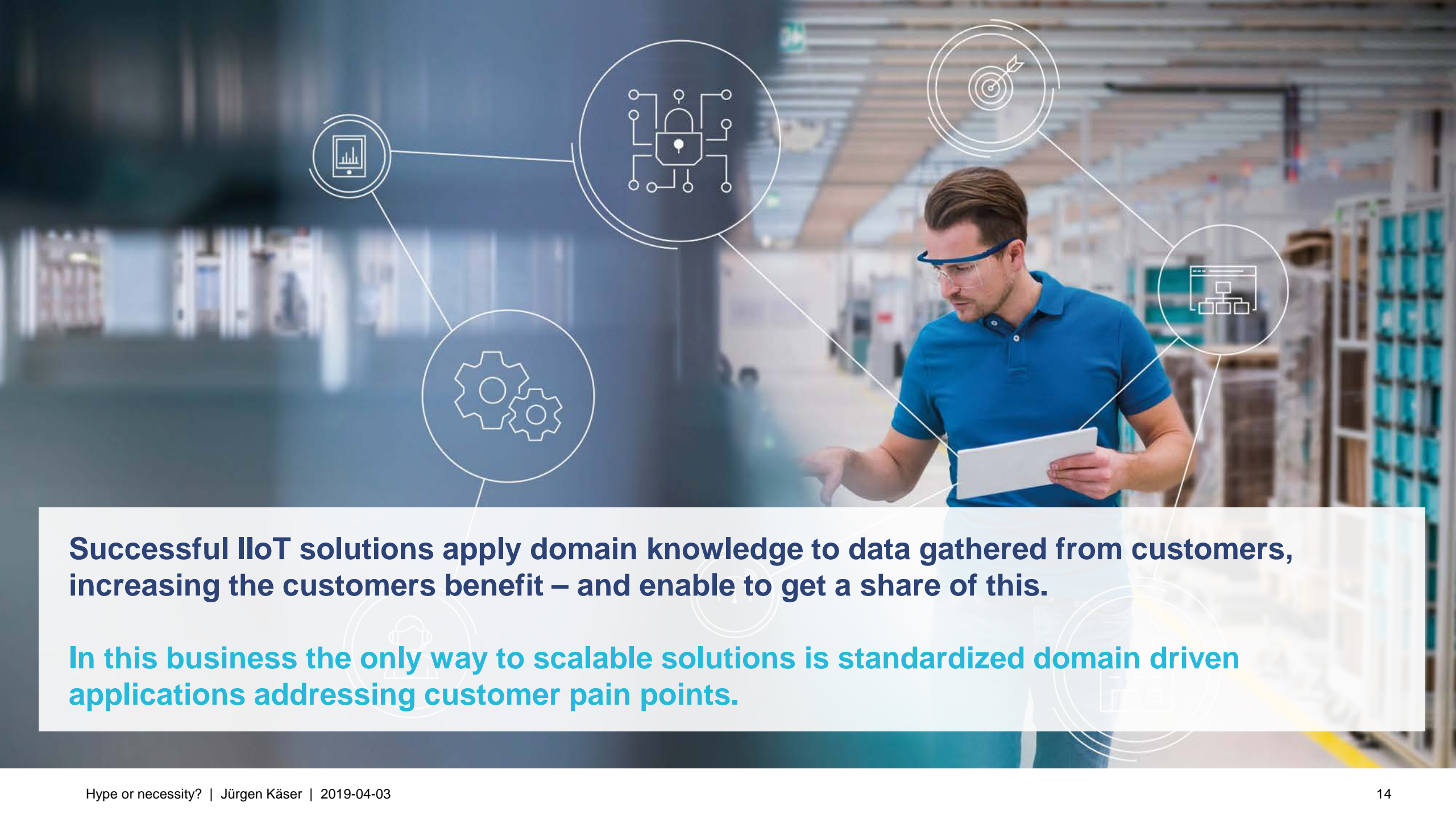
**3.0 offerings**

- Automation
- Machine Level Optimization
- Competitiveness and Connectivity
- IIoT Supply Chain/ Enterprise Level Optimization

# Addressing customer needs
## Basis for solving pain points

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**Raw material**

Predict raw material impact on product quality. Optimize raw material utilization.

**Problem solving**

Increase the speed of decision making through experience management and data analytics.

**Intelligent alarming**

React on alarms with defined measures and given priority.

**Cost transparency**

Know the cost impact of measures, ideally in advance.

**Data reliability**

Increase the performance of all features (e.g. cost tracking, controls) by verified, reliable data.

**Safe operation**

Immediate notification on all deviations from normal.
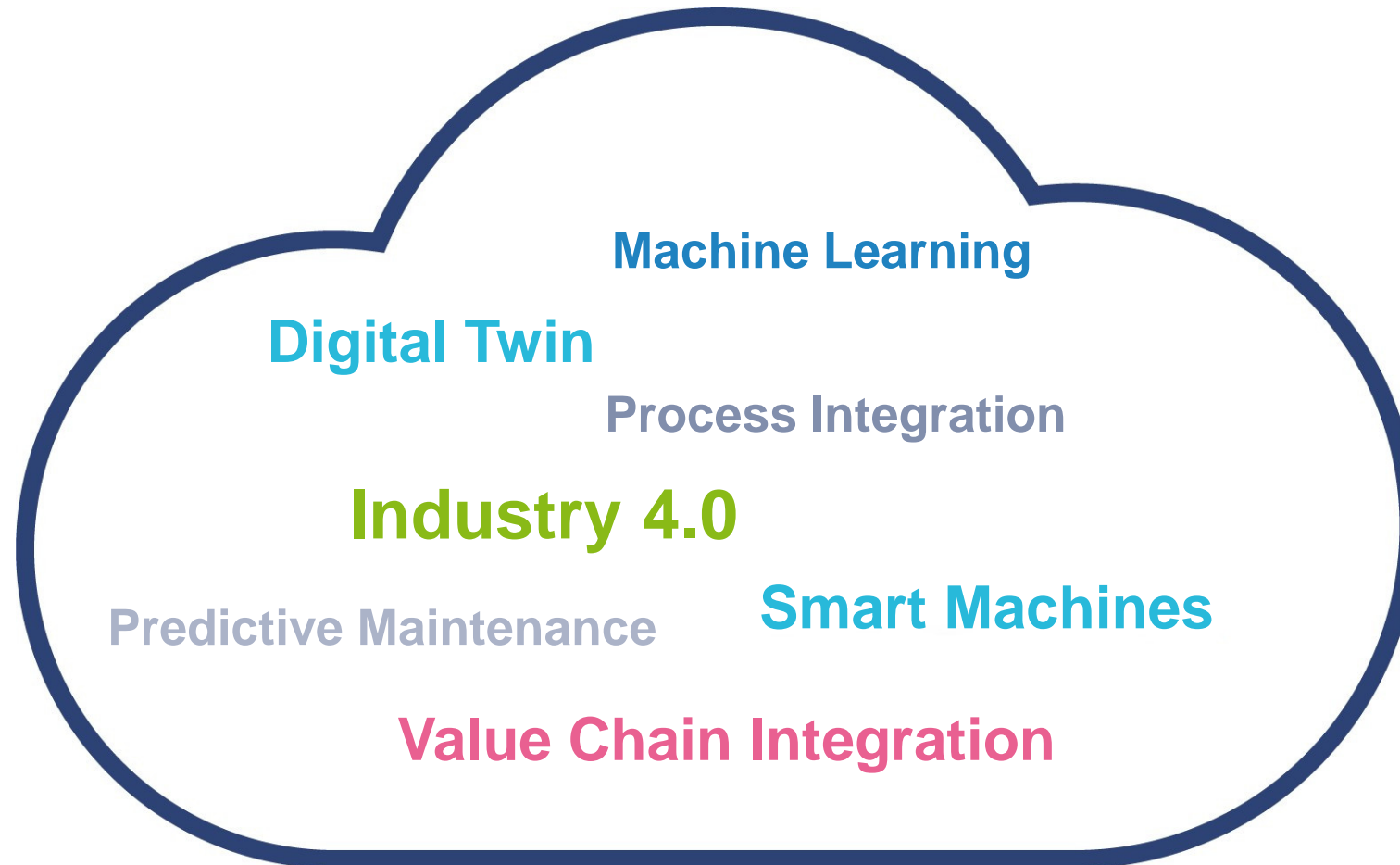
**Customer Needs**

**Successful IIoT solutions apply domain knowledge to data gathered from customers, increasing the customers benefit – and enable to get a share of this.**

**In this business the only way to scalable solutions is standardized domain driven applications addressing customer pain points.**

# Driving force – Customer pull
## Customers expect answers to "Digitalization"

Machine Learning

Digital Twin

Process Integration

Industry 4.0

Smart Machines

Predictive Maintenance

Value Chain Integration

# Driving force – New revenue streams
## Business opportunities in the existing eco system
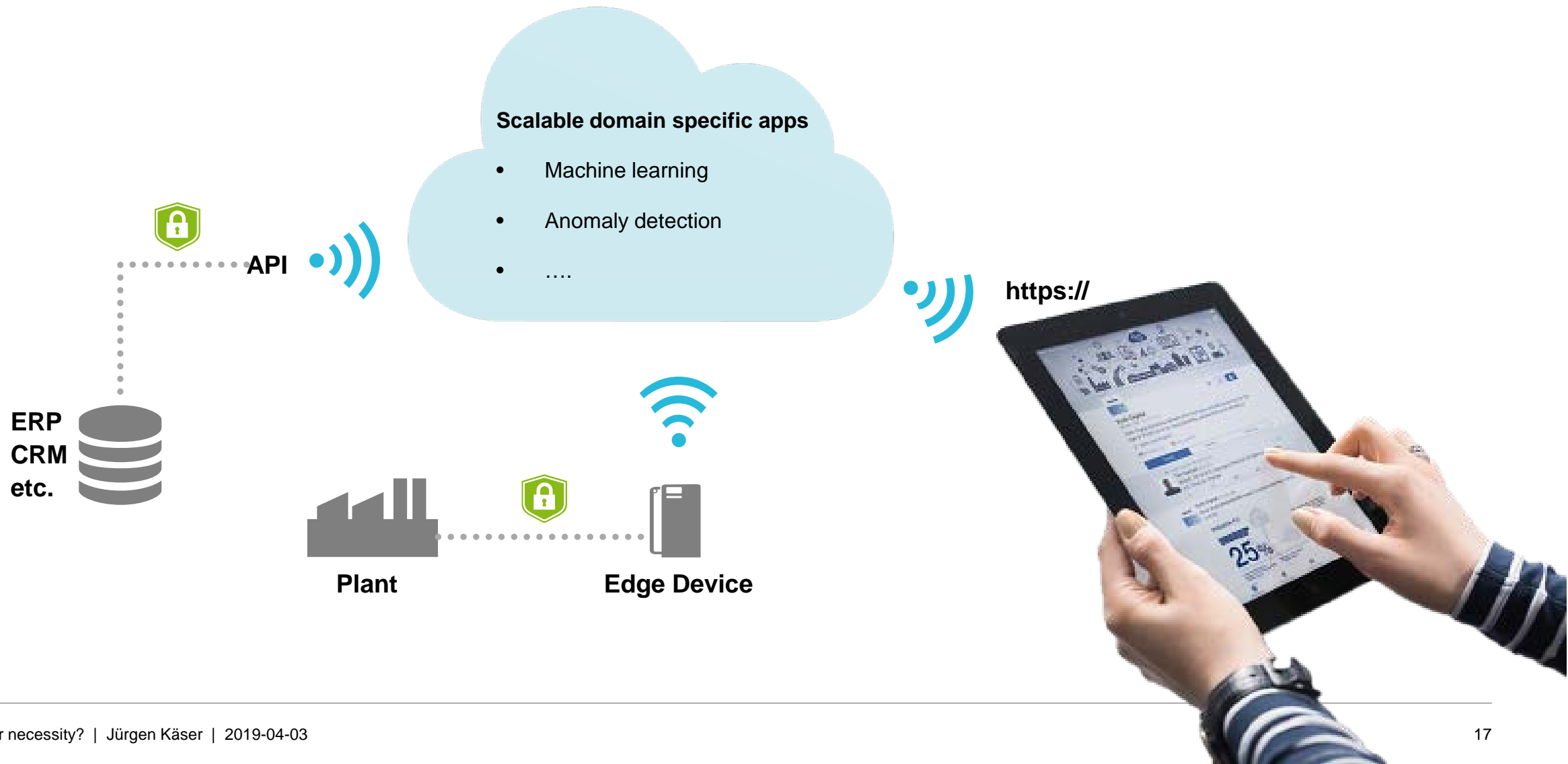
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**Continuous revenue out of the sold steel**

- ✓ New business models
- ✓ Closer customer relation
- ✓ Performance contracts
- ✓ Service contracts
- ✓ Boost spare part sales
- ✓ Share benefits

# No data – no Big Data
## Local data storage

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**Scalable domain specific apps**

- Machine learning

- Anomaly detection

- ….

API

https://

ERP
CRM
etc.

Plant

Edge Device

# Make or buy?
## Build own IIoT platform

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Build up in-house knowledge

Slow implementation

Reuse "automation edge" and connect to platform

High initial cost

Establish internal processes for software development

IaaS reduces independence

Grows with the incoming tasks

# Make or buy?
## Use public IIoT platform

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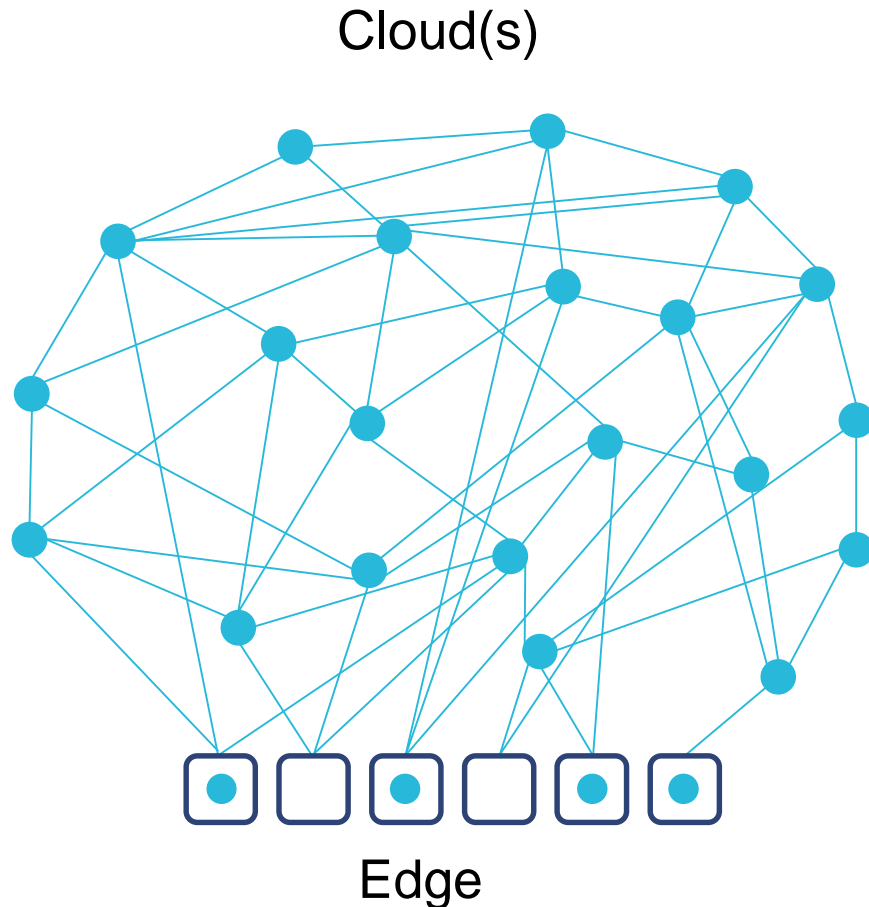| | |
|---|---|
| Fast implementation | Low customer acceptance |
| IaaS is part of the offering | IP protection? |
| Managed services speed up platform / app development | Strong binding to one supplier |
| | Not suitable for all industry applications |

# The Platform as a business model?
## There will not be "the" IIoT Platform

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Cloud(s)



Edge

- Customers will not accept proprietary, isolated IIoT solutions of single suppliers

- Data will be interfaced from host to apps if requested by the customer

- Apps will run "somewhere"

- **IIoT platforms will be a commodity and not add value to the supplying company**

- Still they are the vehicle to get started **NOW**

**Over all industries
IIoT applications will be a part
of most future business models**

# Summary

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1.  IIoT applications will be an essential part of future business models

2.  The value is within the applications – the platform is a commodity

3.  Key to be ready is to build up internal processes & knowledge

**The questions are not**

"Are we building and IIoT platform" or "make or buy"?

**The main question is**

**"Are we fast enough to remain the technology lead in our industry?"**

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# Thank you!

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for Generations