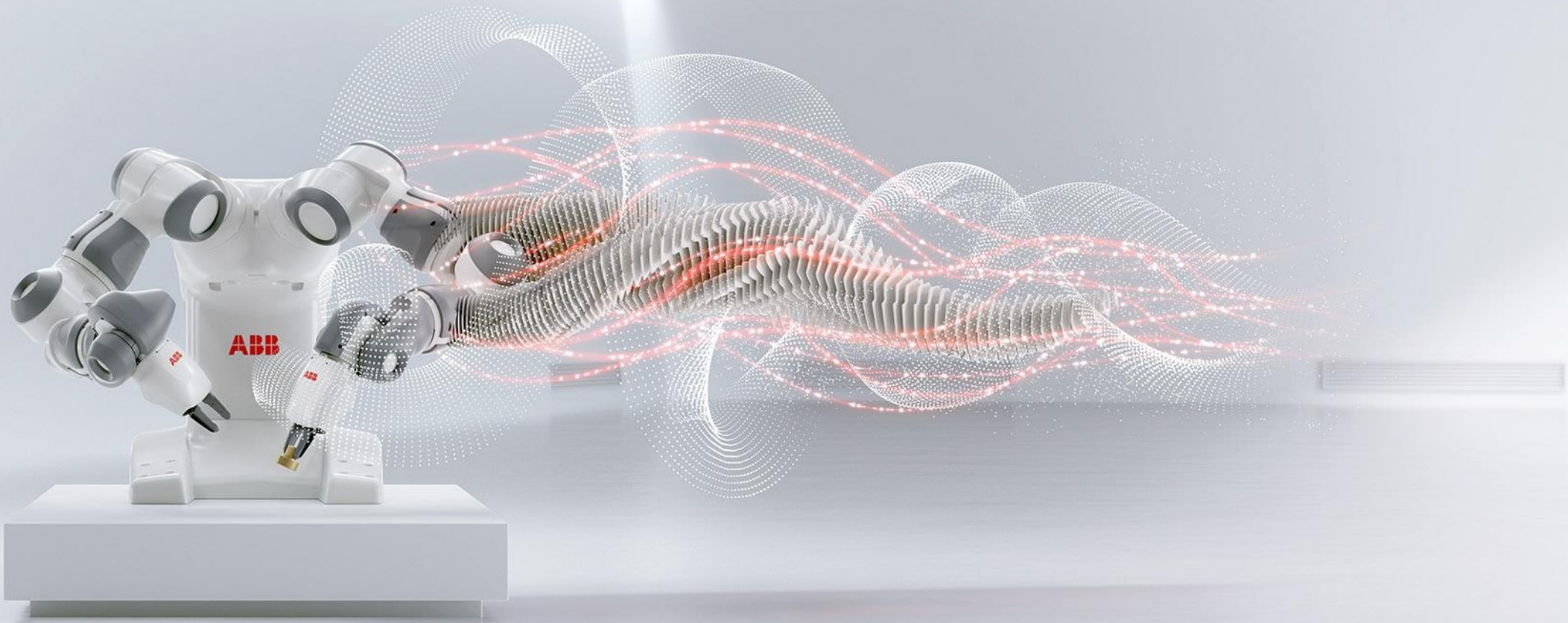


JANNE NIEMINEN 2019-11-06

# ABB Oy Drives Industrial cases for 5G

5G Momentum

# World’s first industrial application utilizing 5G and AI adopted at ABB drives factory in Helsinki

**Real time quality assurance, low latency 5G connection, machine vision analytics running in datacenter**

https://new.abb.com/news/detail/25464/worlds-first-industrial-application-utilizing-5g-and-ai-adopted-at-abb-drives-factory-in-helsinki?utm_campaign=589d5c88d4dbac372704cbdf&utm_content=5d073043fc34620001dda8c5&utm_medium=smarpshare&utm_source=linkedin

https://www.youtube.com/watch?v=AKK0TfbyJ1E

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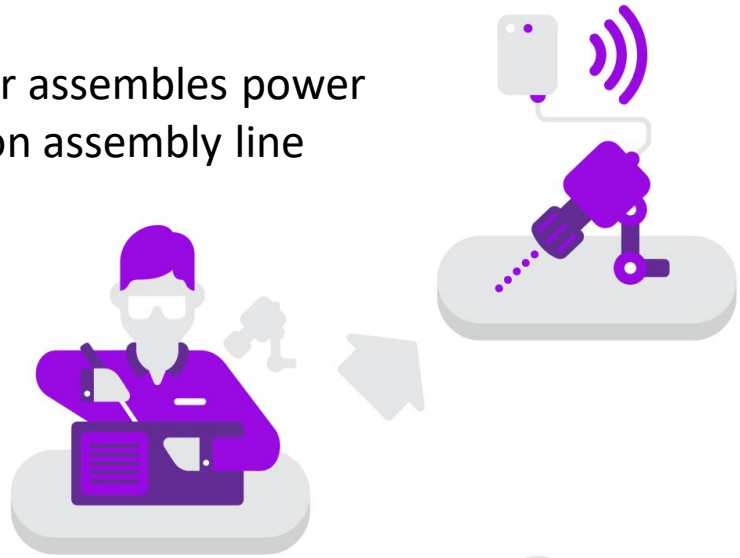
# THIS IS HOW 5G AND ARTIFICICIAL INTELLIGENCE HELPS THE LINE OPERATOR WORK

1. Operator assembles power modules on assembly line



2. Machine vision application follows the assembly work

3. SOLUTIONS connects to cloud service running in TELIA DATACENTER using low latency 5G connection

4. Operator is receiving guidance or feedback in case of possible assembly mistakes via augmented reality application

ATOSTEK

Telia

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# ABB 5G smart video analytics Industry4.0 USE CASE PILOT

## BENEFITS

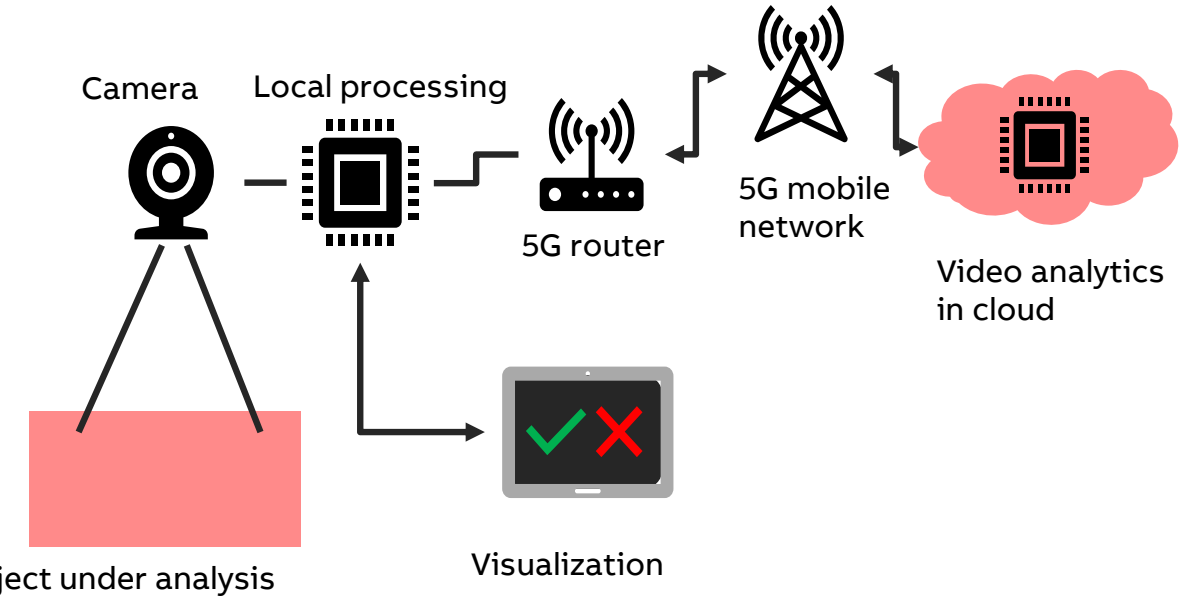
- Industrial quality assurance, reduce operator mistakes in assembly work to reduce warranty claims
- Detect and correct errors when created to reduce operation costs
- Reduce the stresses related to human error
- Improves wellbeing at work

## WHAT?

- At workstation: High quality cameras, visualization GUI
- 5G connection for high bandwidth and low latency
- Light local processing for camera driver and visualization engine
- High quality video image processing in cloud and error detection.

## WHY 5G & cloud?

- 5G for scalability to multiple stations
- 5G wireless connection enables production layout design flexibility – smart and flexible production!
- On demand basis usage of processing power via cloud – reduced amount IT HW at workstations
- Scalability, simple & fast rollout of updates via cloud to multiple stations
- Cloud enables easy interface to EMS systems

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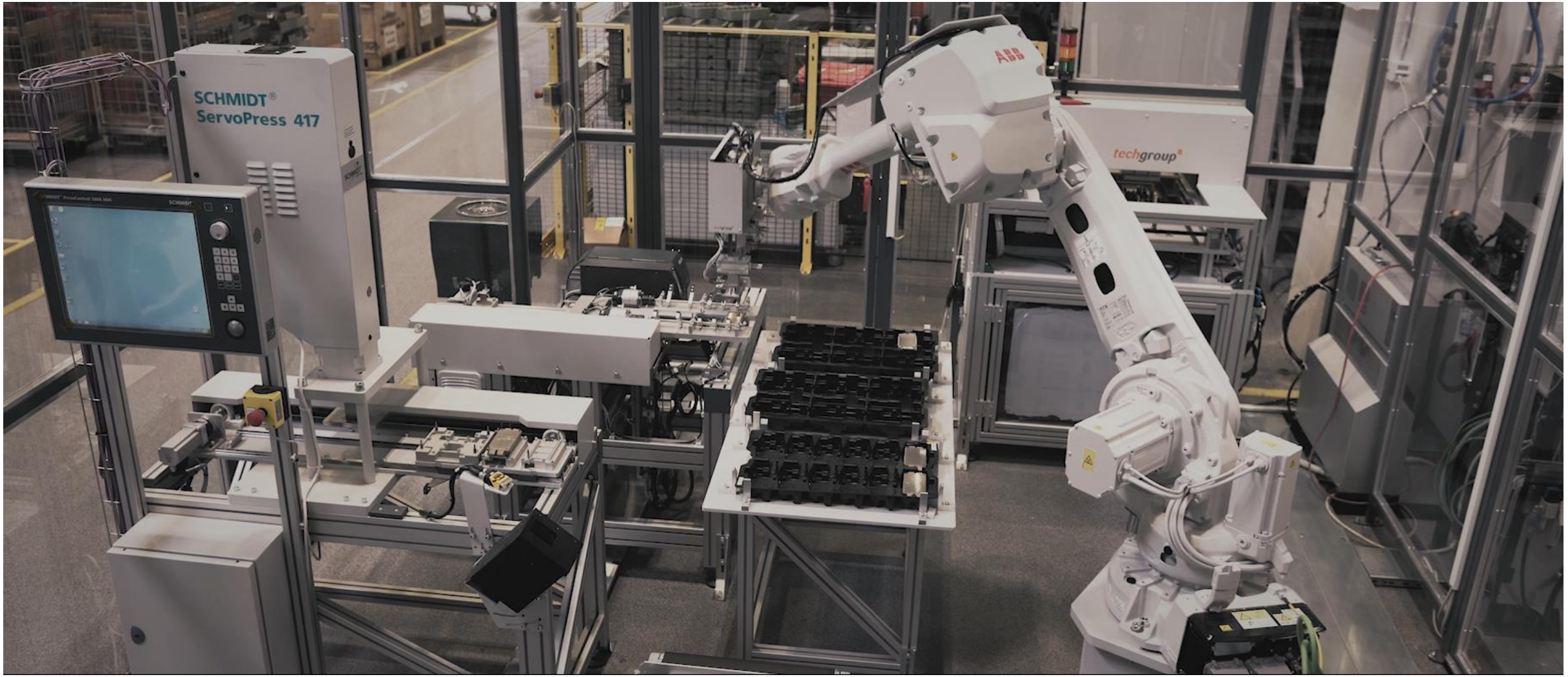
# 5G Connected ABB robot with ABB Ability Connected Services

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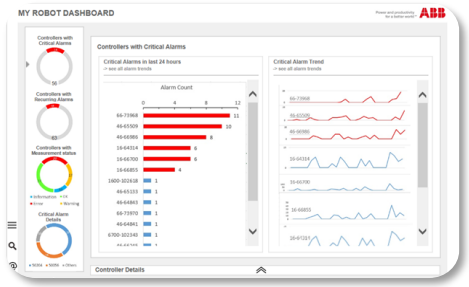
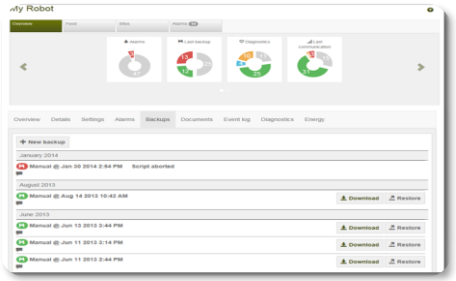
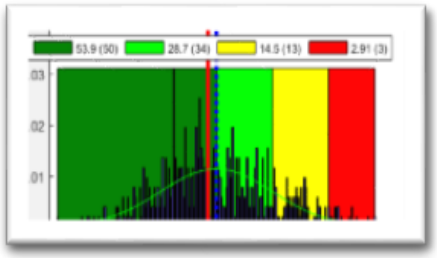
# Connected Services



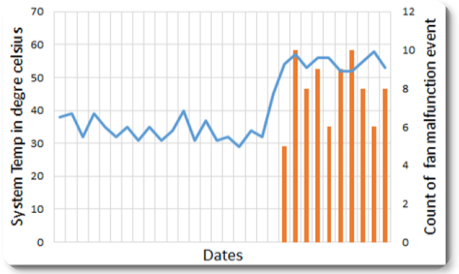

Condition Monitoring & Diagnostics



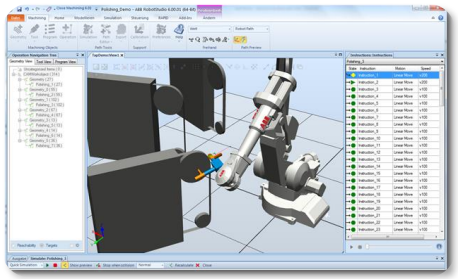

Backup Management



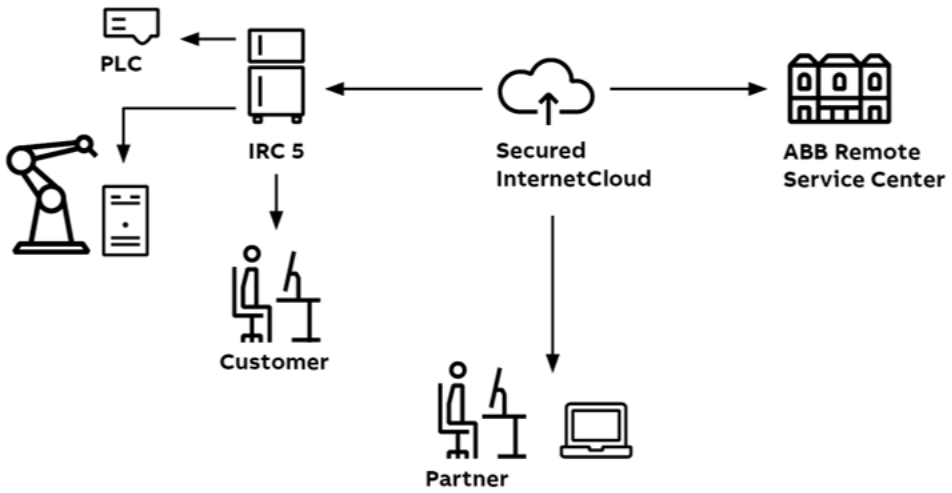

Fleet Assessment




Asset Optimization



Remote Access

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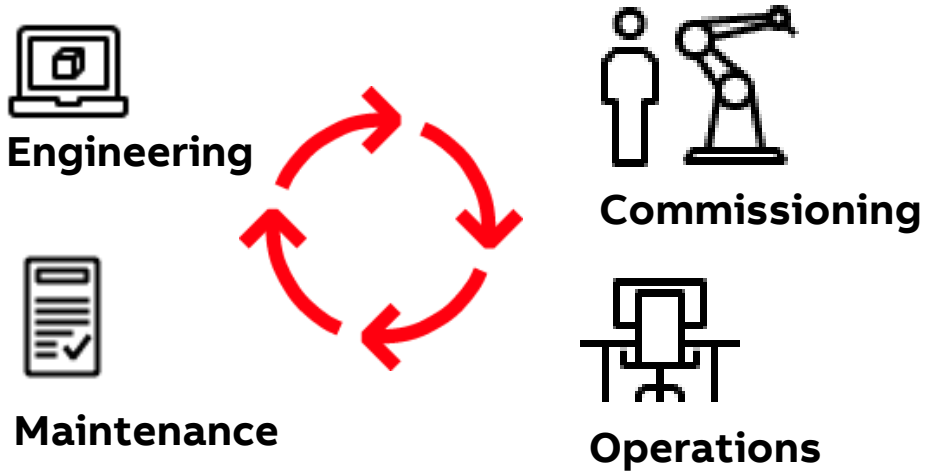
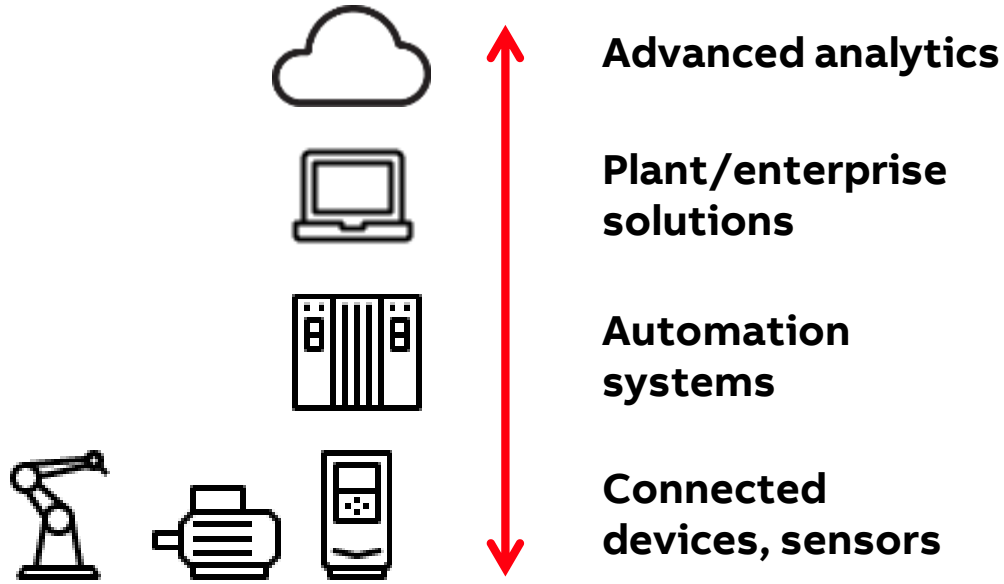
# What Next?

To win in the digital world it takes ability. ABB Ability™

## Creating value at each stage of the automation lifecycle




## Collaboration from the factory floor to the cloud

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