

Edge i industrien



Ny teknologi er på vej til vores maskiner.
Tag et smugkig på Siemens Industrial Edge.

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Dagens værter



Marianne Hjortlund, Technology Specialist
Morten Kromann, Technology Specialist

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Agenda

Hvad er Edge?

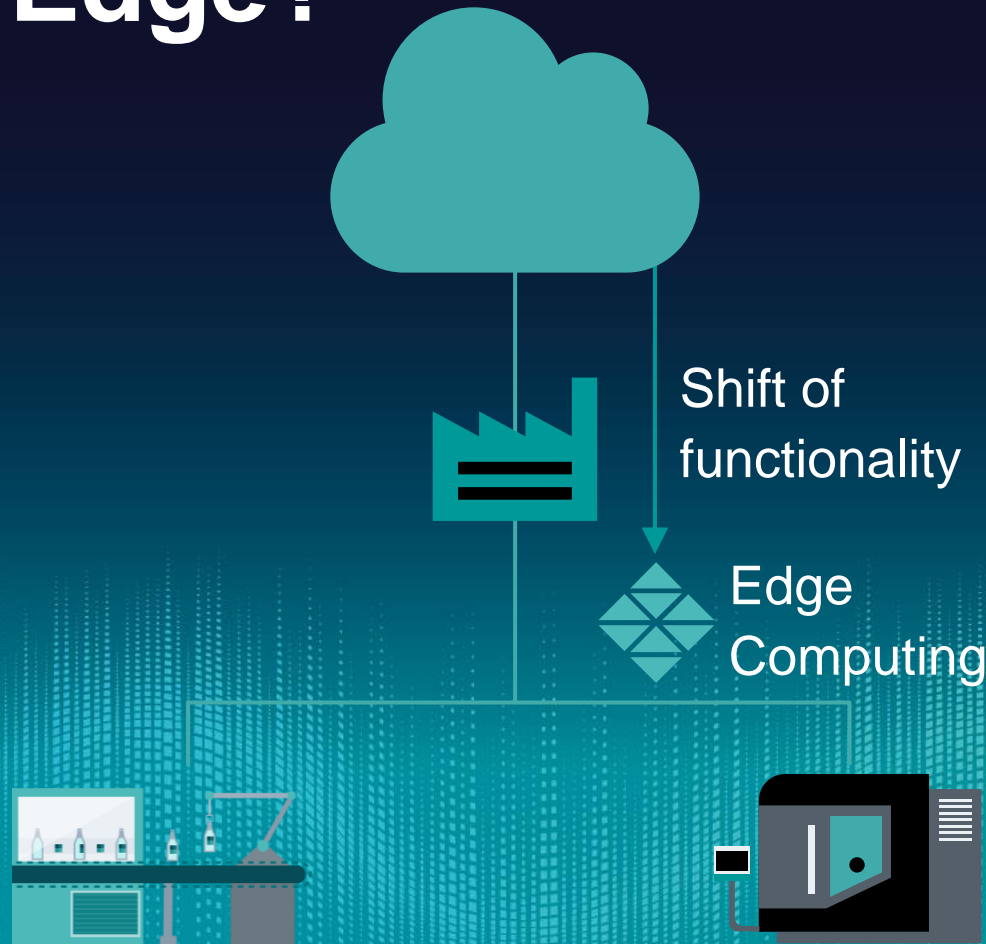
Konceptet bag Industrial Edge

Applikationer (Apps)

Demo af Industrial Edge Hub og Industrial Edge Management

Priser og Get started

What is Edge?



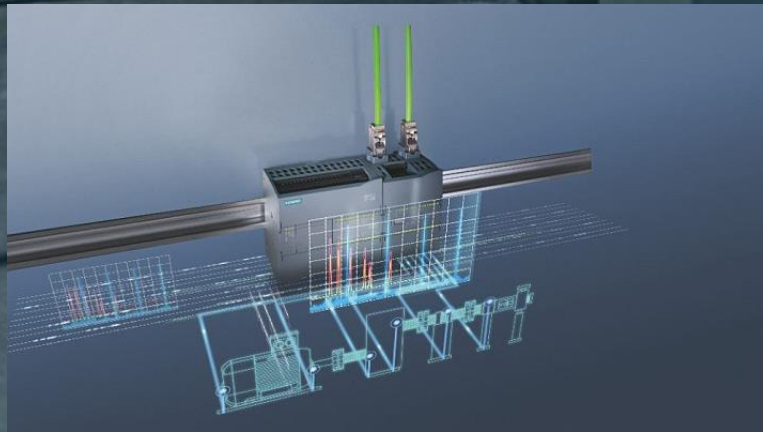
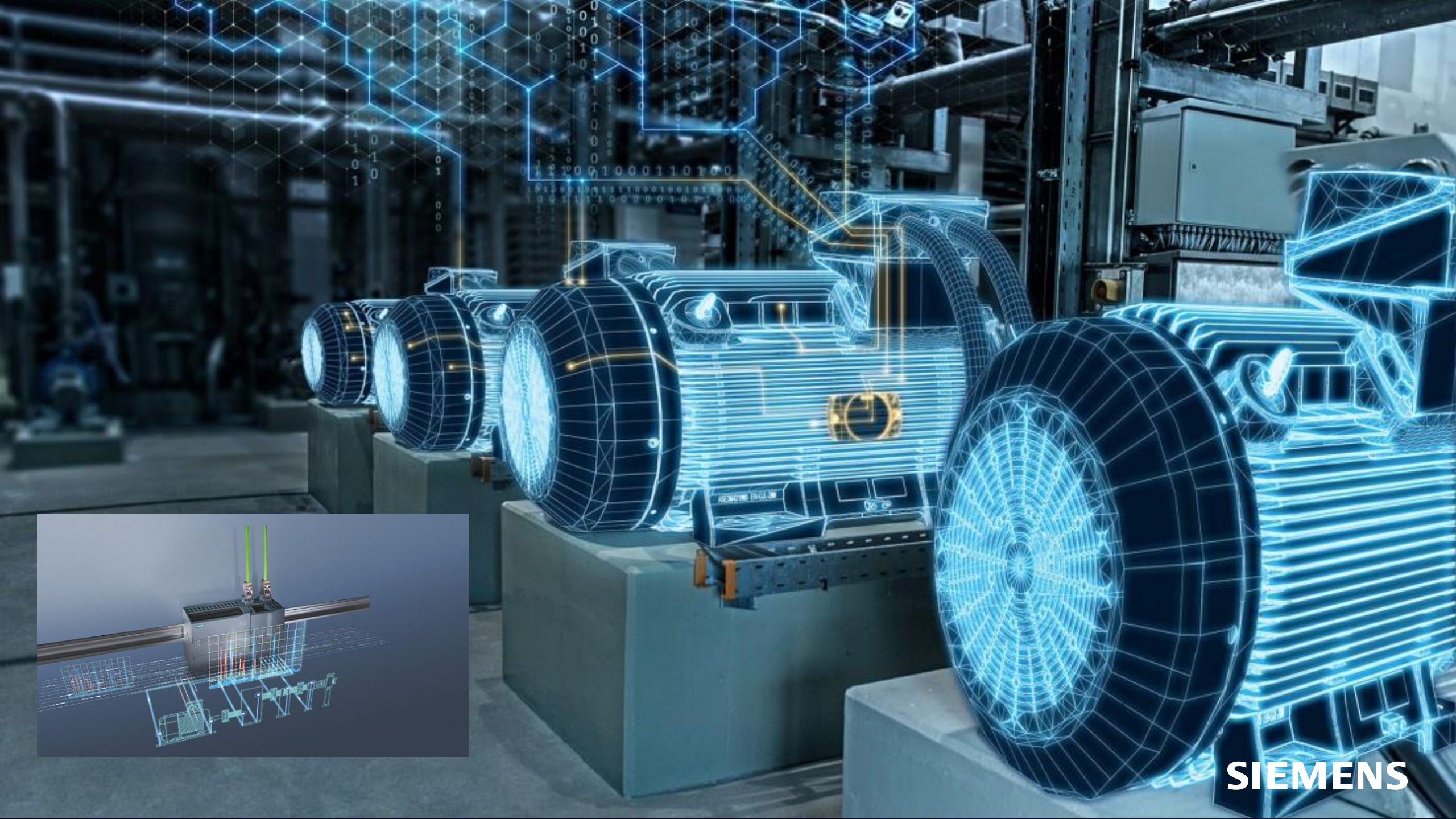
Edge vs. cloud

- Preprocessing of data
- Low latency/fast response
- Offline capabilities

Edge vs. controller

- Centrally managed
- Easy integration of IT applications





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Introducing

Industrial Edge

An open eco-system to integrate IT into the shop floor in a way software- & data handling becomes scalable, reliable, and easy to use.



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Support for 3rd parties

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aws
Microsoft
Azure
Cloud 6

Hostable on multiple infrastructures

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aws
Microsoft
Azure

3 Edge Management System

Support for 3rd parties

Rackwell
Automation
BECKHOFF
SIEMENS

Automation 1

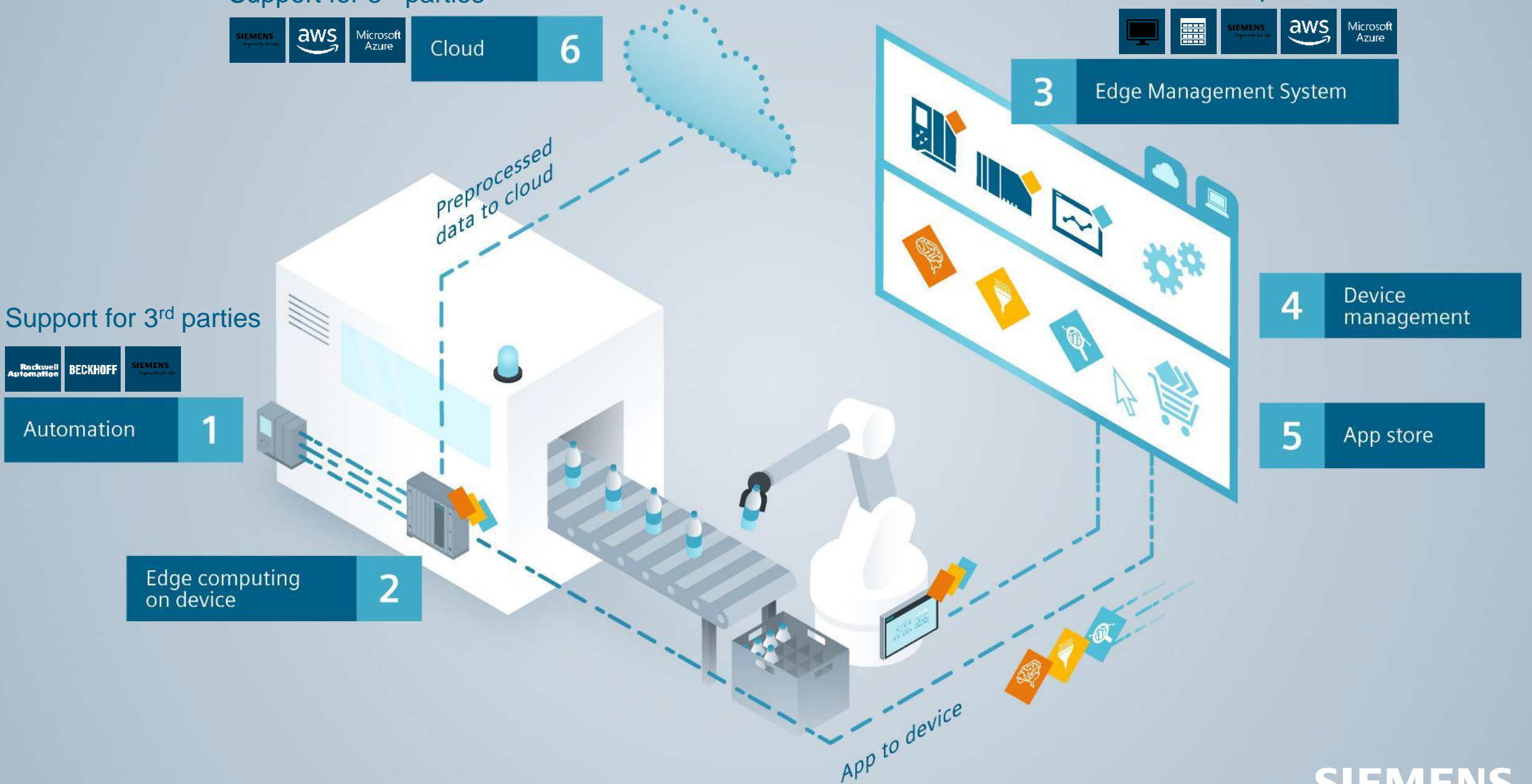
Edge computing
on device 2

4 Device
management

5 App store

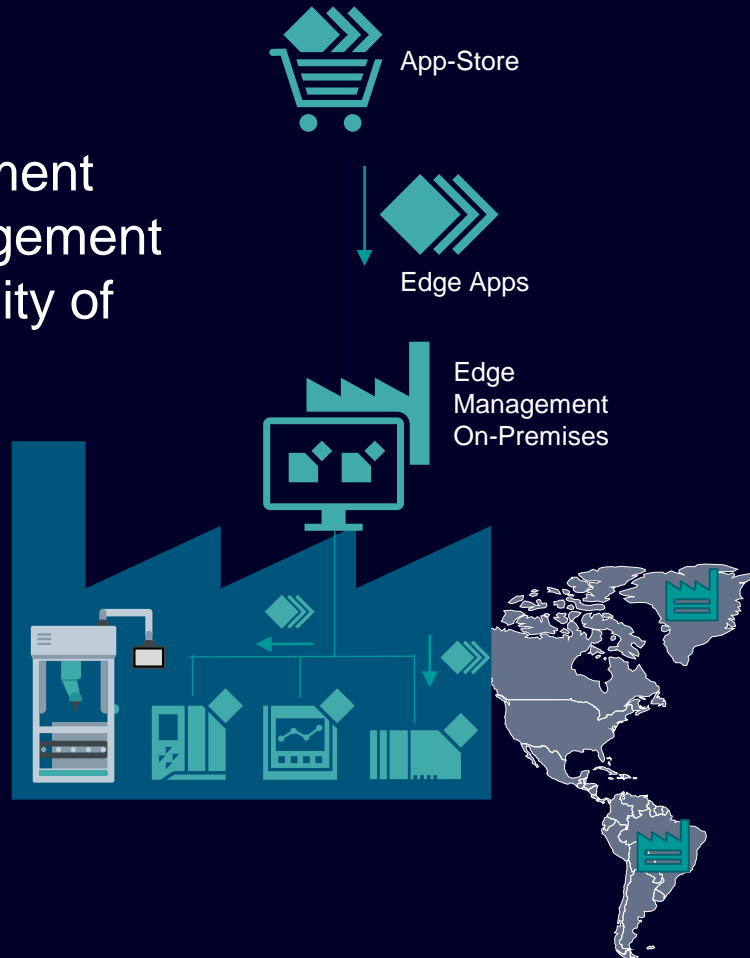
App to device

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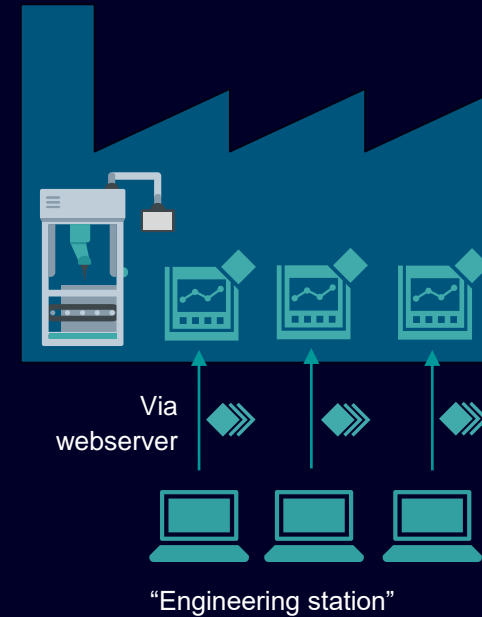
Central-Managed Edge

- App Management
- Device Management
- Full functionality of app store



Device-Managed Edge

- Subset of full “manageability”
- Local app orchestration
- Basic Device Management



Edge Devices can be managed in a scalable way

Scalability



Device-managed Edge:
Manage few devices locally
on the device (Unified Comfort Panel)



Centrally-managed Edge: Manage many devices from a central point

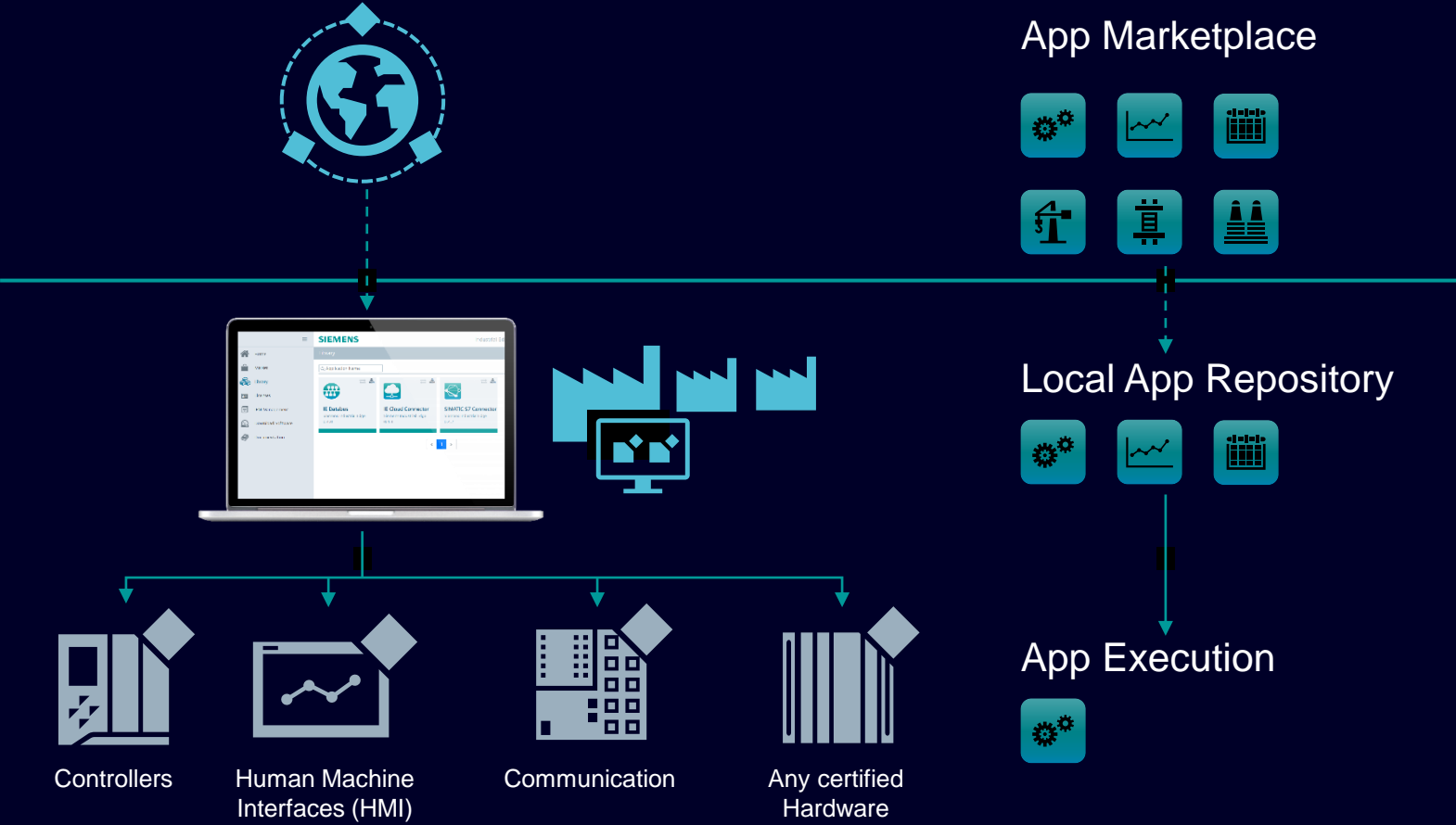


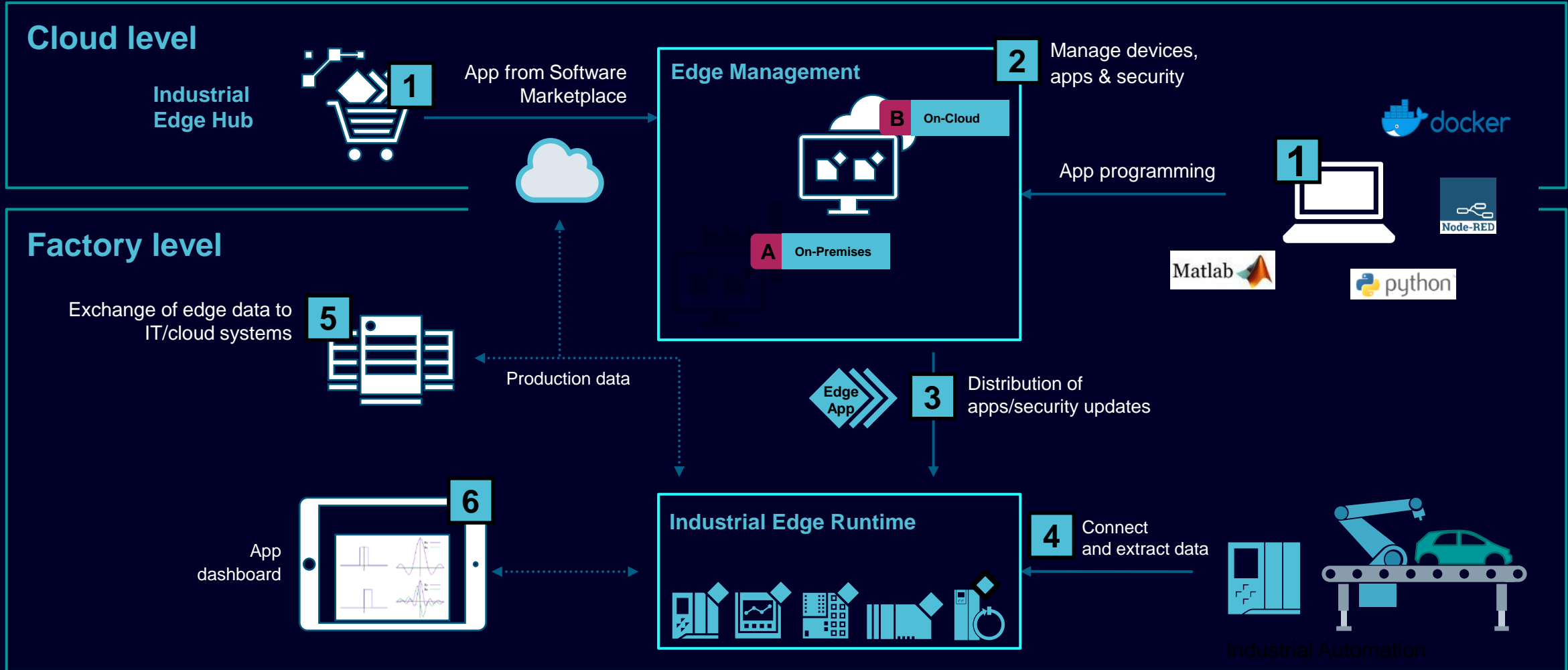
Industrial Edge components

Industrial Edge Hub
(Cloud; Siemens operated)

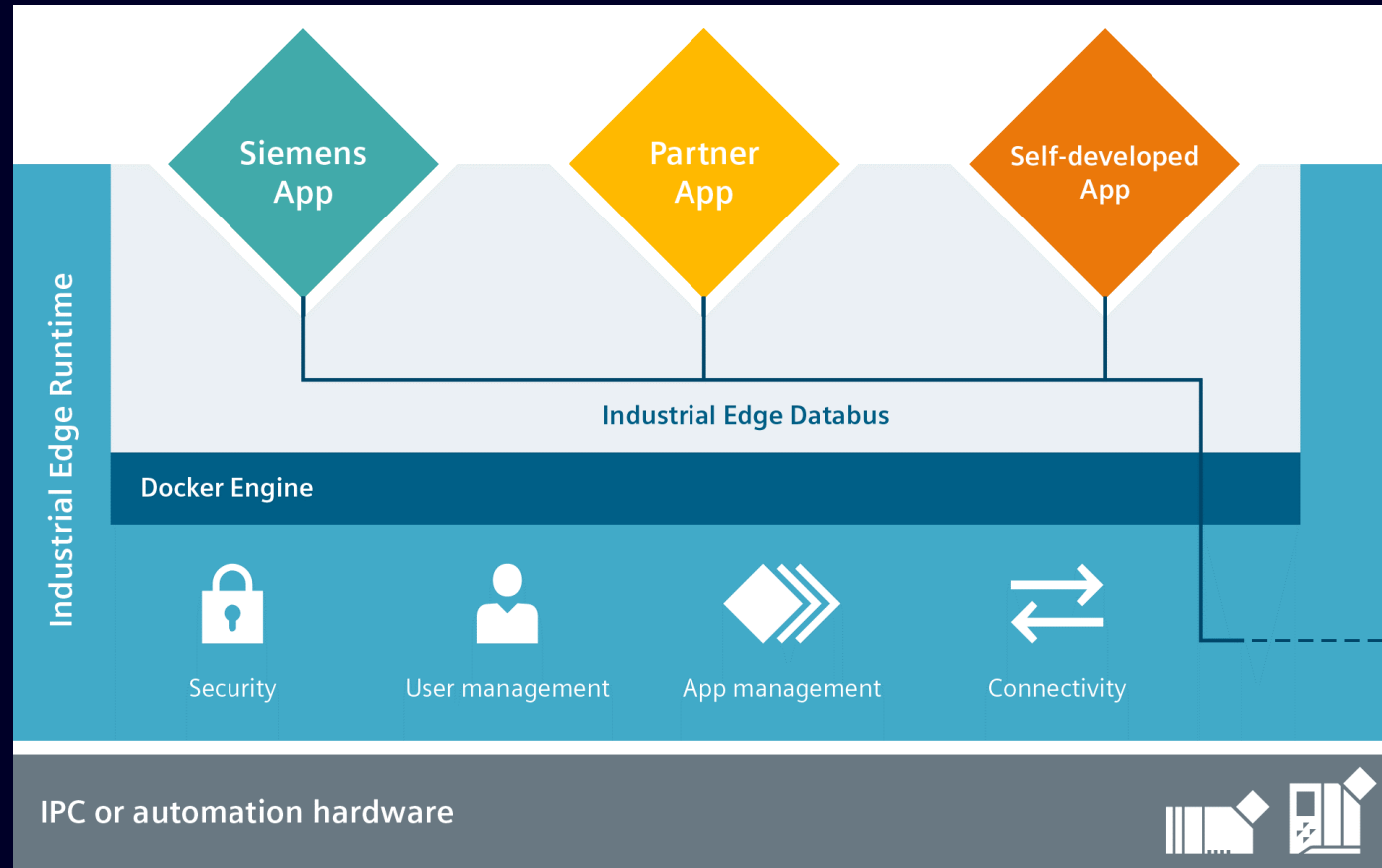
Industrial Edge Management
(On-Premises or Cloud)

Industrial Edge Runtime on with Industrial Devices
(On-Premises)





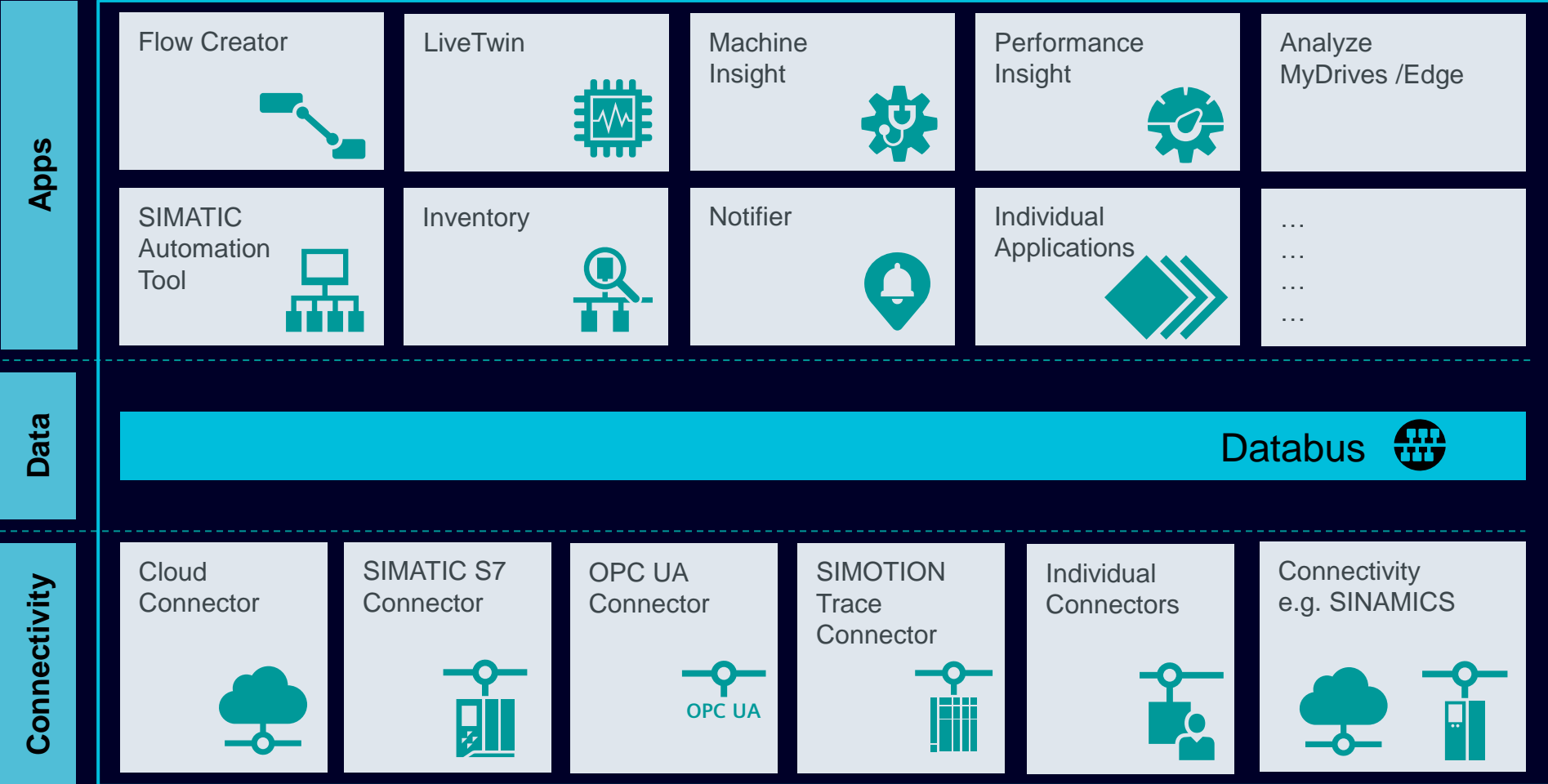
Edge device system concept



Benefits

- Easy app integration on various hardware
- Security included by default by Siemens
- Openness to program & integrate any app
- Docker container format enables hardware independence & scalability

Edge device system layout



Applications (Apps)



Machine
Insight



Notifier



Performance
Insight



SAM



LiveTwin



Automation Tool



Energy Manager



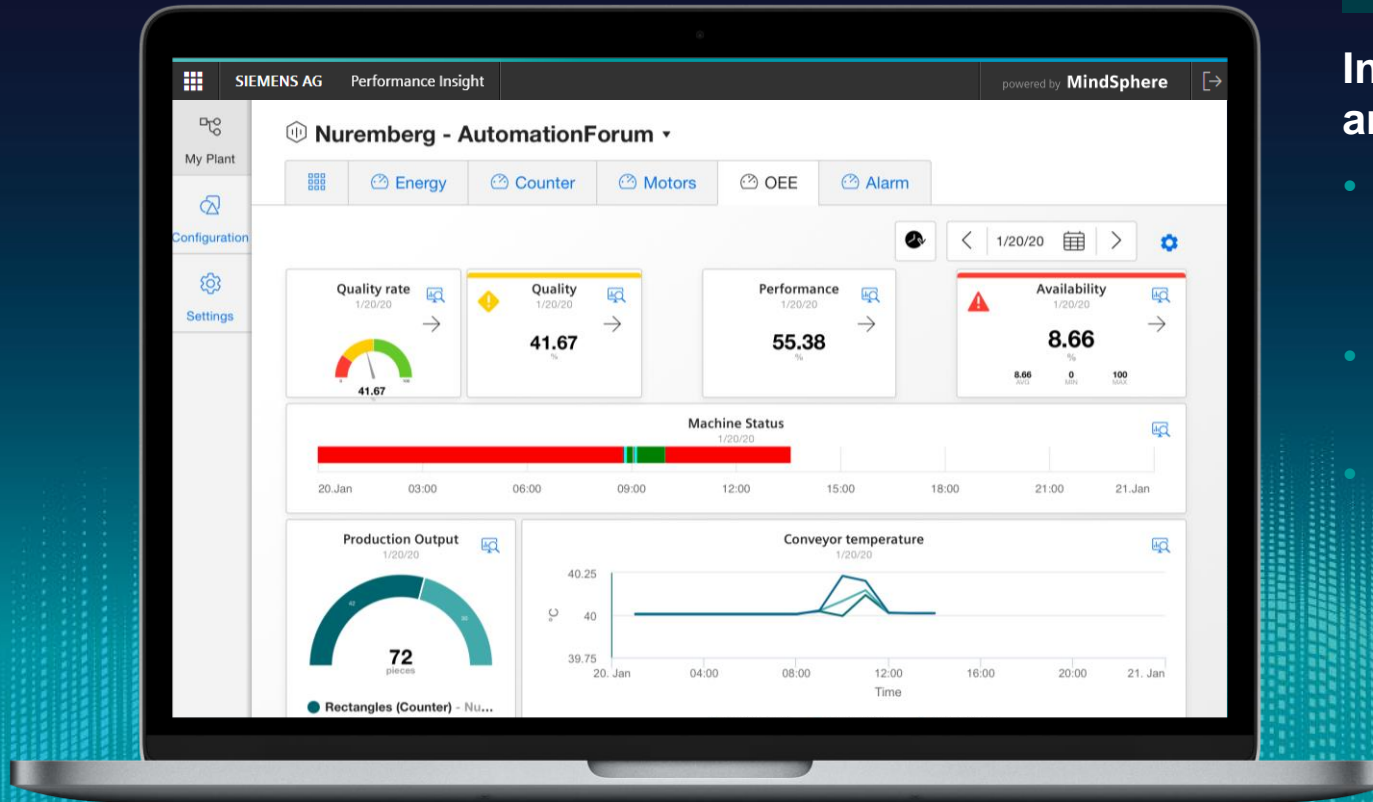
Inventory



Flow Creator



Performance Insight



MindSphere
app

Industrial
Edge app

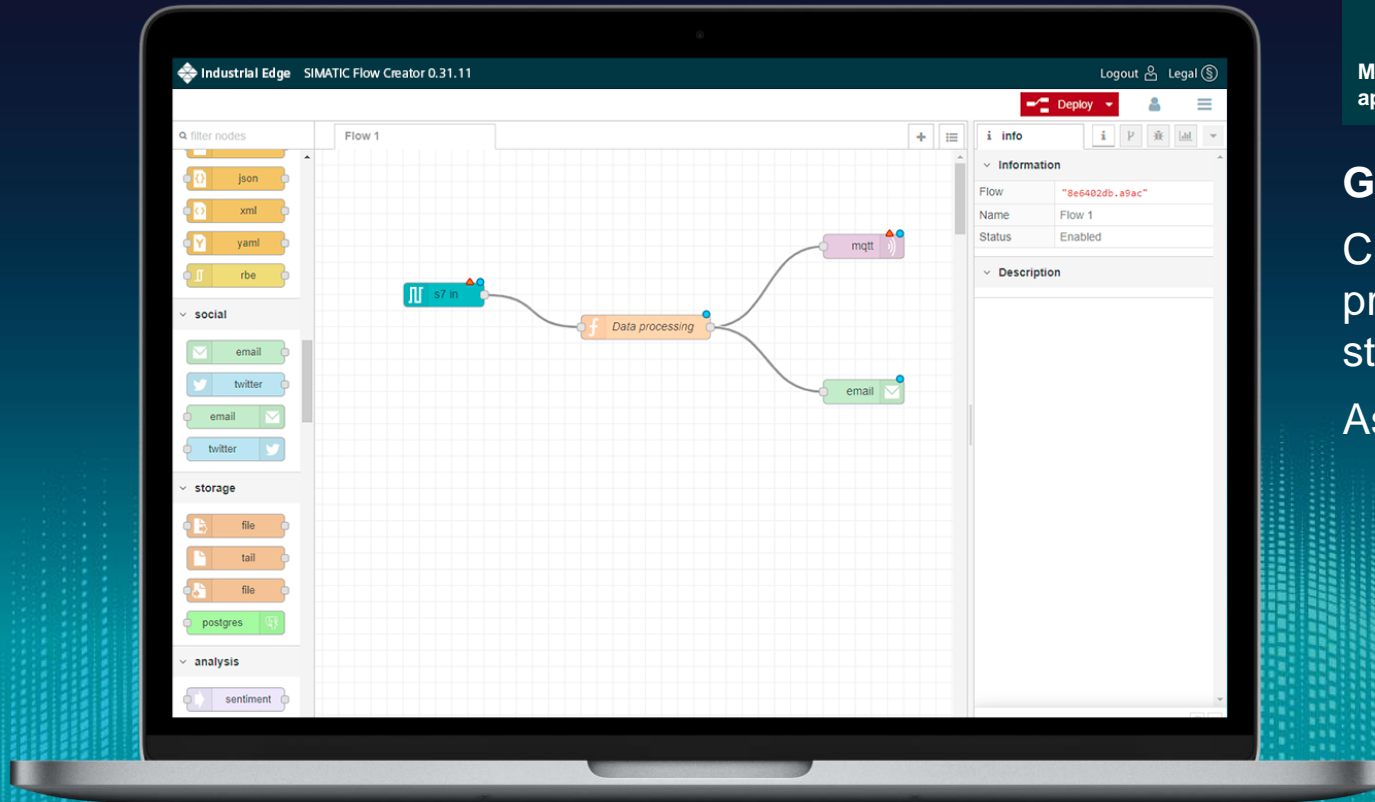
Increase productivity for any machine, line or plant

- Flexible tool for calculating and visualizing the machine condition to get additional machine transparency
- Optimize assets by gaining transparency about OEE, quality and further KPIs
- Generic visualization enables an integration of all kind of machines

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SIMATIC Flow Creator



MindSphere
app

Industrial
Edge app

Get started easily

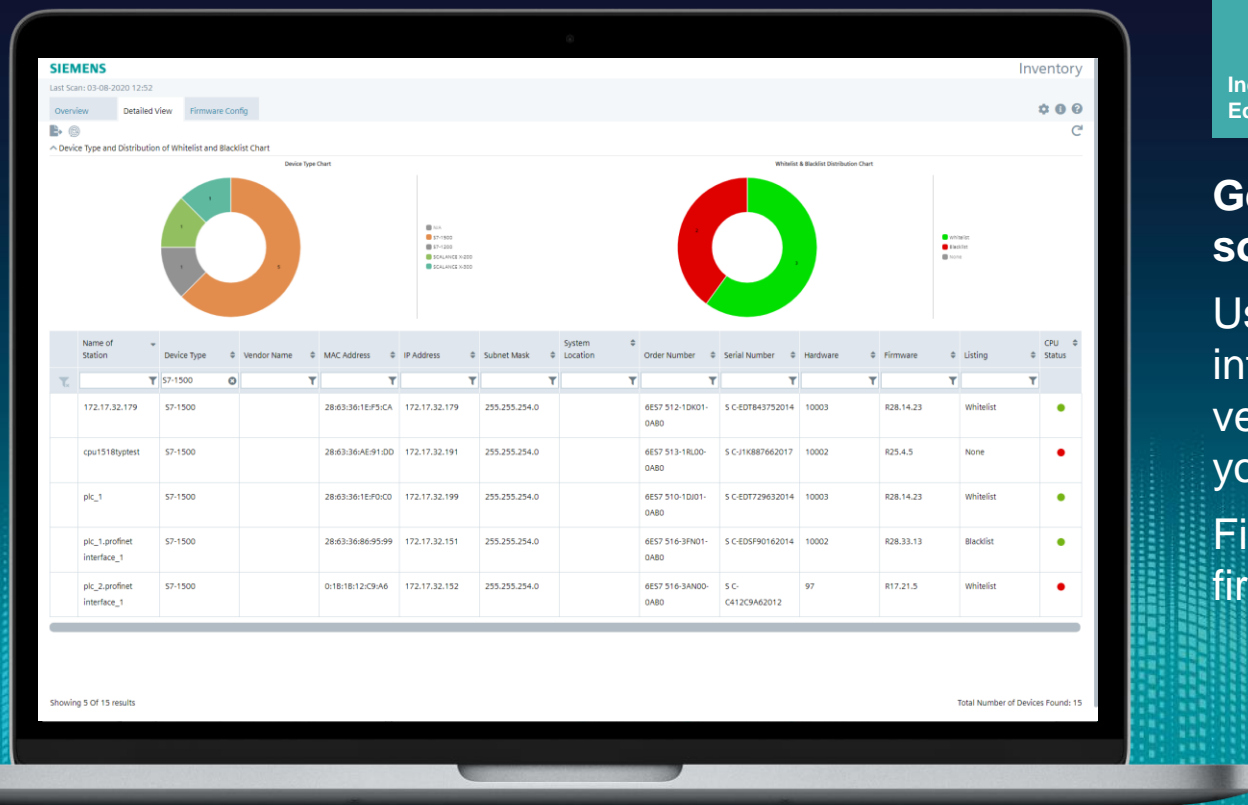
Create data flows without deep programming knowledge and start processing data.

As known from NodeRed.

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Inventory



Industrial Edge app

Get an overview of all devices and software

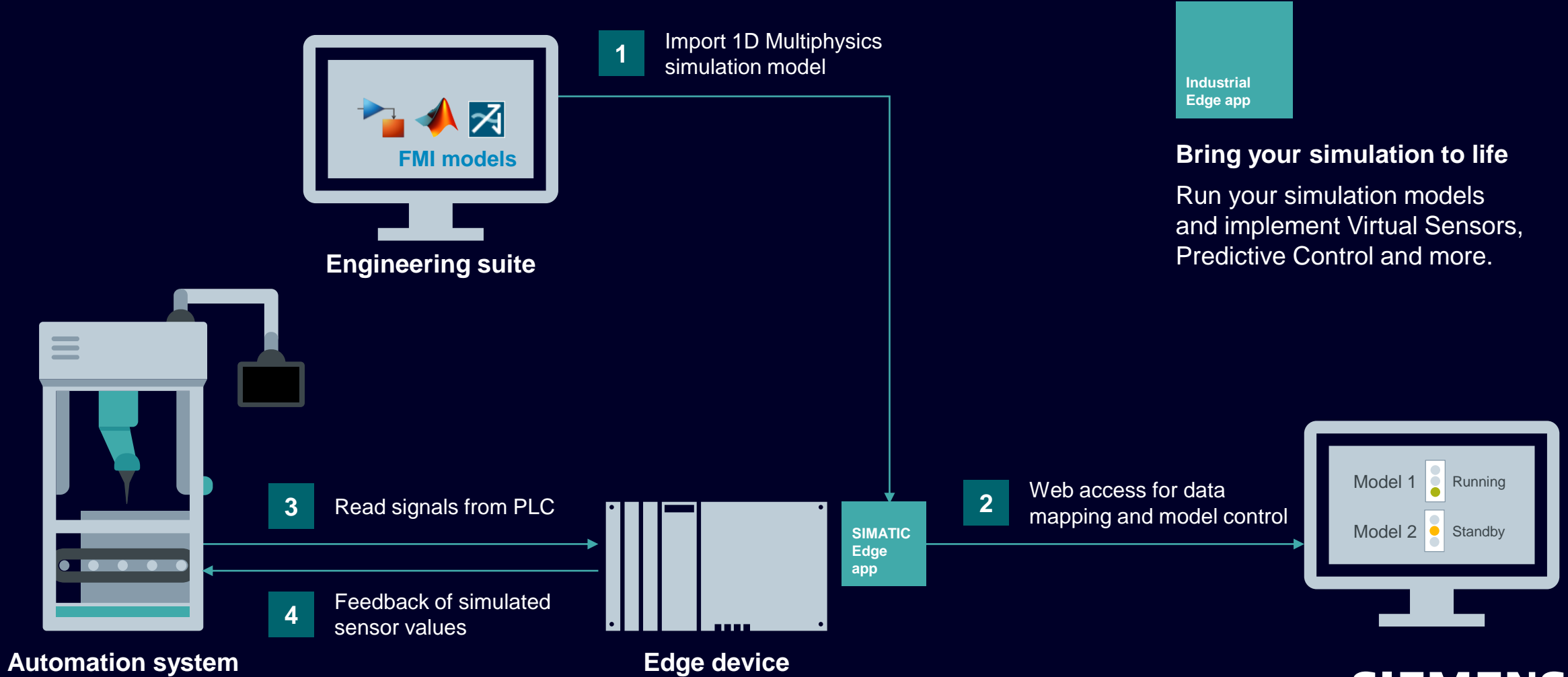
Use scanning functionality to get device information like location, software version or serial number to optimize your spare part stock.

Firmware check detects outdated firmware versions.

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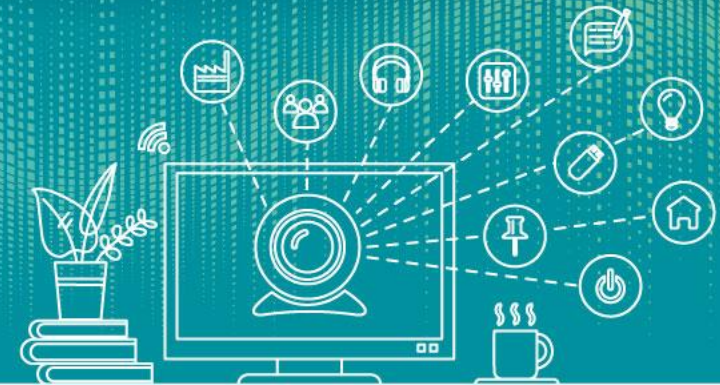


LiveTwin



Demo IE Hub & IE Management

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Industrial Edge Hub

This screenshot shows the 'Download Software' section of the Siemens Industrial Edge Hub. The left sidebar contains navigation options: Home, Market, Library, Licenses, IEM Management, Download Software, and Documentation. The main content area is titled 'Download Software' and has sub-tabs for 'Initial Setup Tools', 'Update Packages', and 'Developer Tools'. A card for 'Industrial Edge Management Initial Setup VM - ISO' is visible, showing 'Version - 0.4.2' and a 'Download' button.

This screenshot shows the 'Library' section of the Siemens Industrial Edge Hub. The left sidebar is identical to the previous screenshot. The main content area features a search bar labeled 'Q Application Name' and a grid of three software application cards: 'IE Databus' (Siemens Industrial Edge 0.4.0), 'IE Cloud Connector' (Siemens Industrial Edge 0.4.4), and 'SIMATIC S7 Connector' (Siemens Industrial Edge 0.4.2). Each card includes an icon, a version number, and download/upload arrows. A pagination control at the bottom shows '1' of 1 items.



DEMO

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Industrial Edge Management

The screenshot shows the 'Catalog' page in the Siemens Industrial Edge Management interface. It features a search bar and a grid of application tiles. The tiles include: Device Scanner Service, IE Cloud Connector, IE Databus, Machine Insight, Node-RED, Notifier, Performance Insight, and SIMATIC S7 Connector.



The screenshot shows the 'Dashboard' page in the Siemens Industrial Edge Management interface. It displays several key metrics:

- Relay Servers:** 1 total. Assigned Ports: 35, Available Ports: 165.
- Email Servers:** 0 total.
- Edge Cores:** 42 total. Docker: 42.
- Submitted Apps:** 68 total. Unpublished: 44, Published: 4, Deleted: 20.
- Registered Users:** 78 total. Approved: 78, Pending: 0, Suspended: 0.

DEMO

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Security is our primary requirement for an IIoT system

Software level



Container based isolation

Digital signatures for Software artifacts

Certificate based authentication

Secure onboarding

Operating System level



Security enhanced Linux

No root user login

Secure and metered boot

Secure remote system update

Hardware level



Full disk encryption

Trusted Platform Module

Trusted deployment

Manufacturing device certificates

Certification for Industrial Edge according to IEC 62443 is planned.

SIMATIC AI

on Industrial Edge

Ready to use apps to accelerate the deployment of AI models to the shop-floor, from data collection to model deployment. An open ecosystem which brings AI to the Industry environment in a scalable manner, reliable, and easy to use.



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| Pricing and Get started

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The simple and predictable pricing scales with you

1

Industrial Edge Access

Get Initial Access to Edge Software (IE Hub)

1 €



2

Industrial Edge Devices

Configuration specific



3

Industrial Edge Device Licences

Per centrally-managed device per month

10 € per device per month



4

Industrial Edge Apps

Self-developed apps are for free

Monthly fee



Note: Version 11/2020. Prices are subject to changes.

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How to get started with Industrial Edge



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Kontakt



Marianne Hjortlund
marianne.hjortlund@siemens.com

Morten Kromann
morten.kromann@siemens.com

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NYHEDSBREVE TIL INDUSTRIEN
UDKOMMER 8-10 GANGE OM ÅRET

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