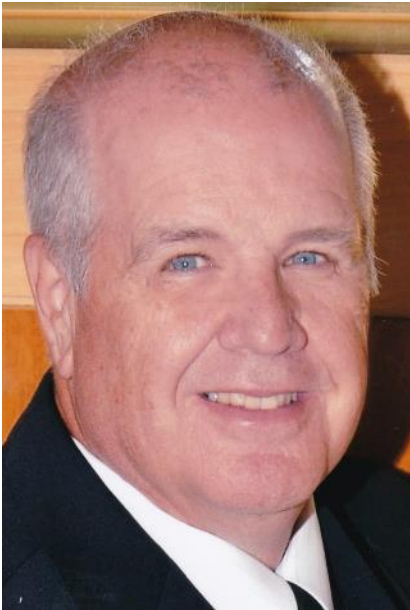


Remote monitoring on the cloud

Process Industry Update Webinar



Your presenter



john.roushey@siemens.com

SIEMENS



Jack Roushey is a Marketing Manager for Siemens Process Instrumentation, with current responsibility for SITRANS FM magnetic flow meters. He has worked in the process instrument industry for 45 years and his experience is equally divided between marketing and sales management for multiple flow technologies as well as level, pressure, temperature and liquid analysis products. Jack has served as chapter president of ISA in the Philadelphia area and has been published in numerous technical journals and magazines. He has also been featured in video interviews and has produced a variety of YouTube videos on various process instrumentation and digitalization topics. Jack has a Bachelor of Arts in Marketing from Eastern University.



Siemens Process Automation Overview



Engineering Management Level

COMOS Plant Engineering

PlantSight DT Cloud Services

SIMIT Simulation

XHQ Operations Intelligence

MES Solutions Pharmaceuticals

Operation and Control Level

SIMATIC PCS 7

SIMATIC PCS neo

SIMATIC PCS Hardware

Power Supplies

SIMATIC HW Modules

SIMATIC S7-400

Field Level

Analytical Products and Solutions

Process Instrumentation

Industrial Identification and Locating

Industrial Communication

Chemical

Water & Wastewater

Food & Beverage

Mining & Cement

Energy

Automotive

Pharmaceutical

Oil & Gas

Fiber

Marine

Utilities

Other



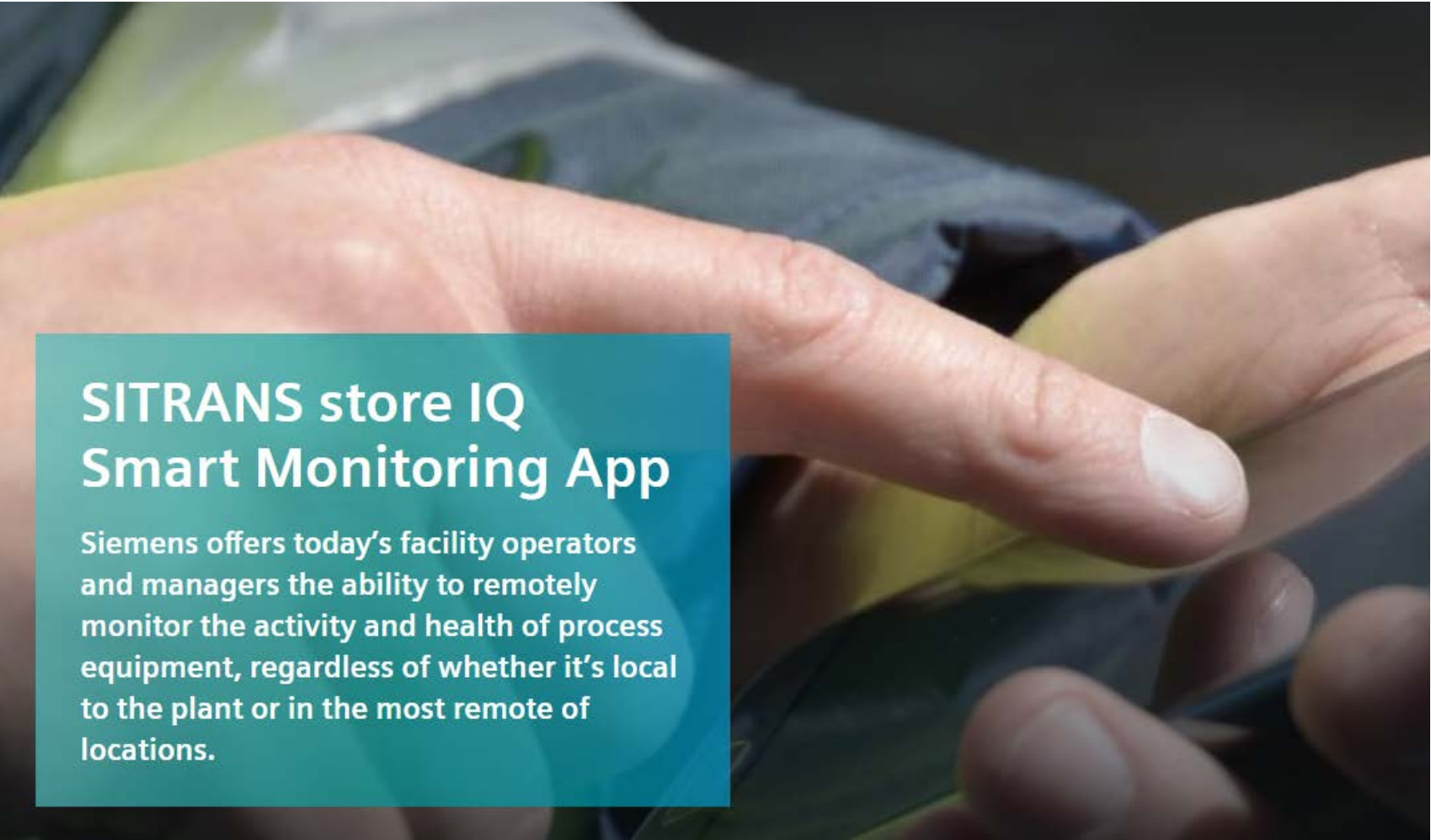
Today's Key Points



- What is Digitalization and how does it tie to Remote Monitoring?
- What is the “cloud”, how do I get my information into the cloud and how do I protect my information once it's there?
- What can the Remote Monitoring Apps offer me and how can I configure them to my requirements?



What is Remote Monitoring?

A close-up photograph of a person's hands holding a smartphone. The phone's screen is visible, showing a blurred interface. The hands are positioned to hold the phone from the sides and bottom.

SITRANS store IQ Smart Monitoring App

Siemens offers today's facility operators and managers the ability to remotely monitor the activity and health of process equipment, regardless of whether it's local to the plant or in the most remote of locations.



Monitoring process instrumentation

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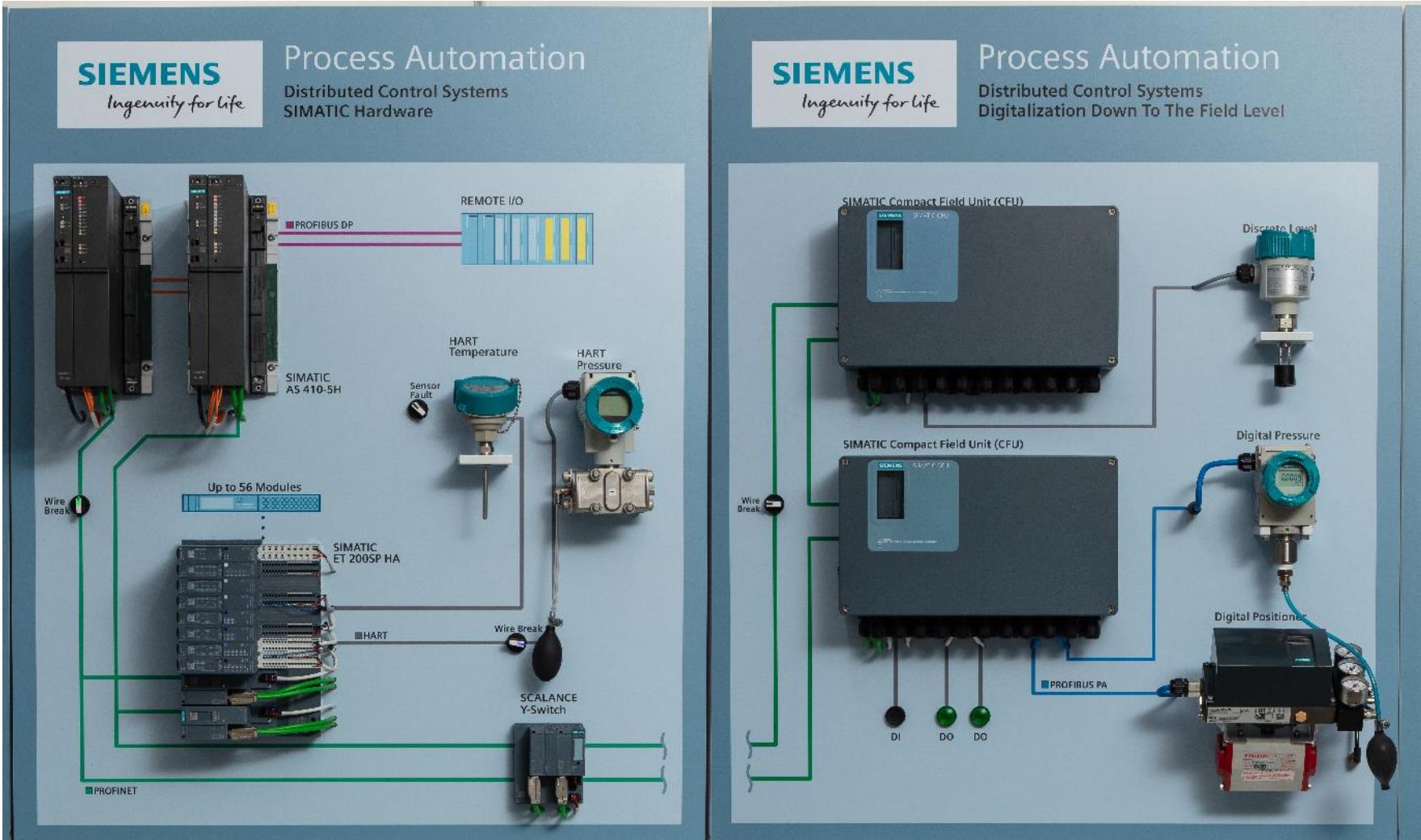


Monitoring process instrumentation

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Facility requirements

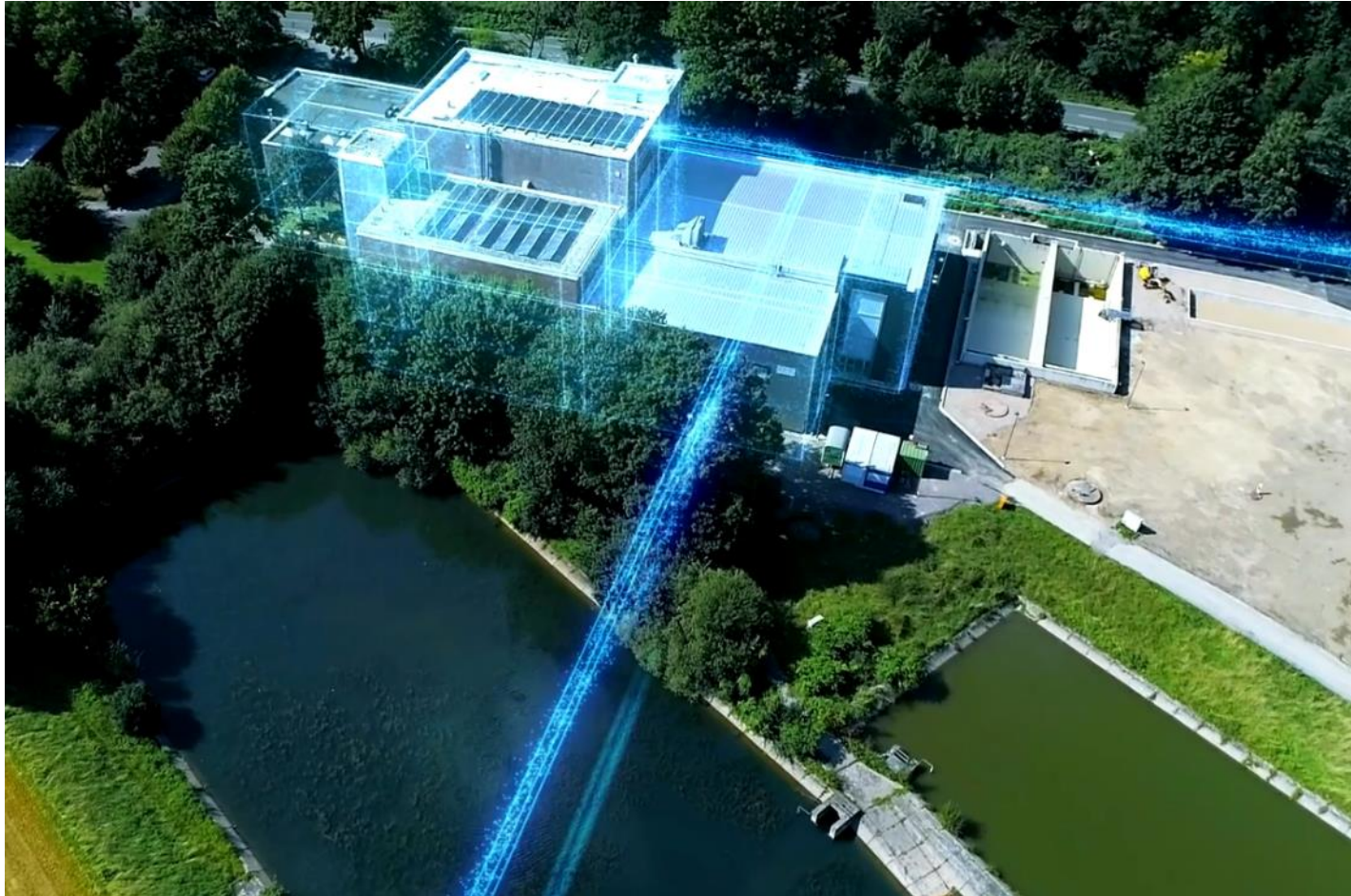


Facility requirements



Connection to a digital world

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Connection to a digital world

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Getting information into the hands of those who need it

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Getting information into the hands of those who need it

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Digitalization



What information is available?

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What information is available?

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What information is available?





Digital twins

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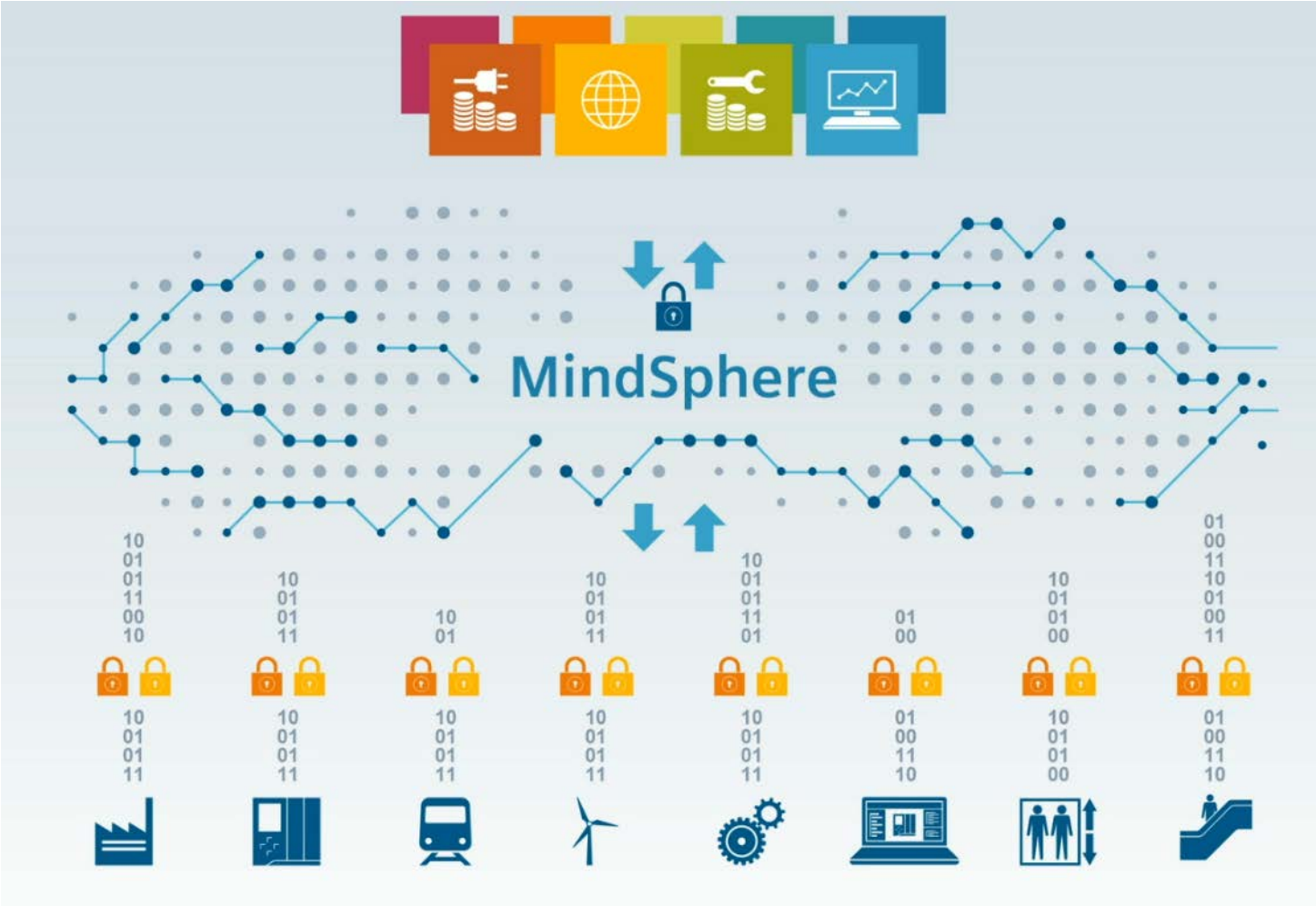
Improve Efficiencies



Simulate What-If Scenarios



Connectivity and the cloud



Connectivity and the cloud

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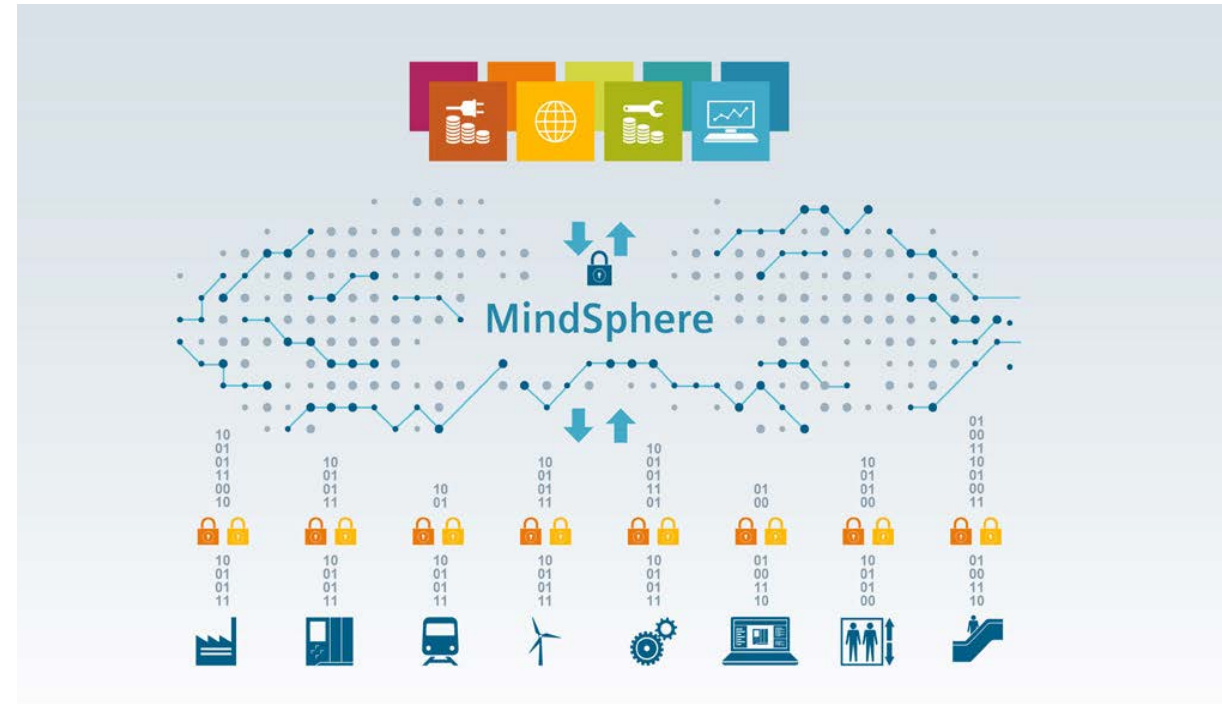


What is the cloud?

The cloud provides a combination of computing, storage, networking, cybersecurity and application utilities:

- On a pay-as-you-go basis
- With virtually unlimited, on-demand scalability

For plants and associated remote locations, cloud-based SCADA systems can be impervious to extreme weather events, floods, earthquakes, and other natural disasters.



What is MindSphere?



[MindSphere White Paper](#)





SIMATIC HMI touch panel for
local display of process data



SIMATIC S7 PLC

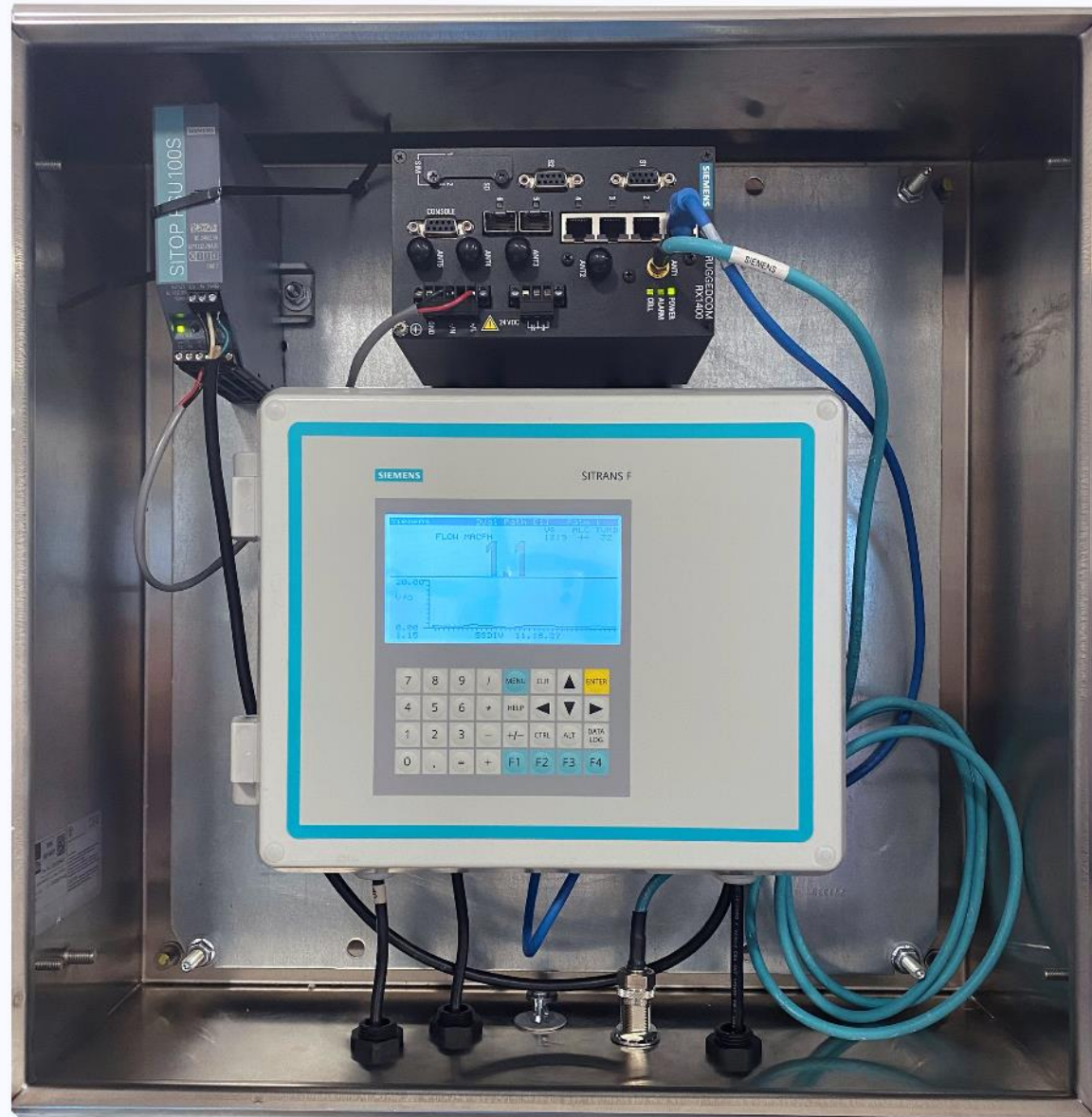


SCALANCE M
mobile wireless
industrial router for
IP-based networks



MindConnect IoT2040
dedicated IoT gateway to
MindSphere











Analog (4-20mA) or frequency (totalization) output only





Analog (4-20mA) or frequency (totalization) output only

Temperature

Pressure/Flow

Level

Level

Flow
Density
Temperature

Flow

Flow

Valve Positioning





HART MODBUS Profibus Profinet Ethernet IP MODBUS TCP/IP Foundation Fieldbus

Primary process: Flow, level, pressure, temperature, valve positioning

Additional process (any or all of the following, based on technology):

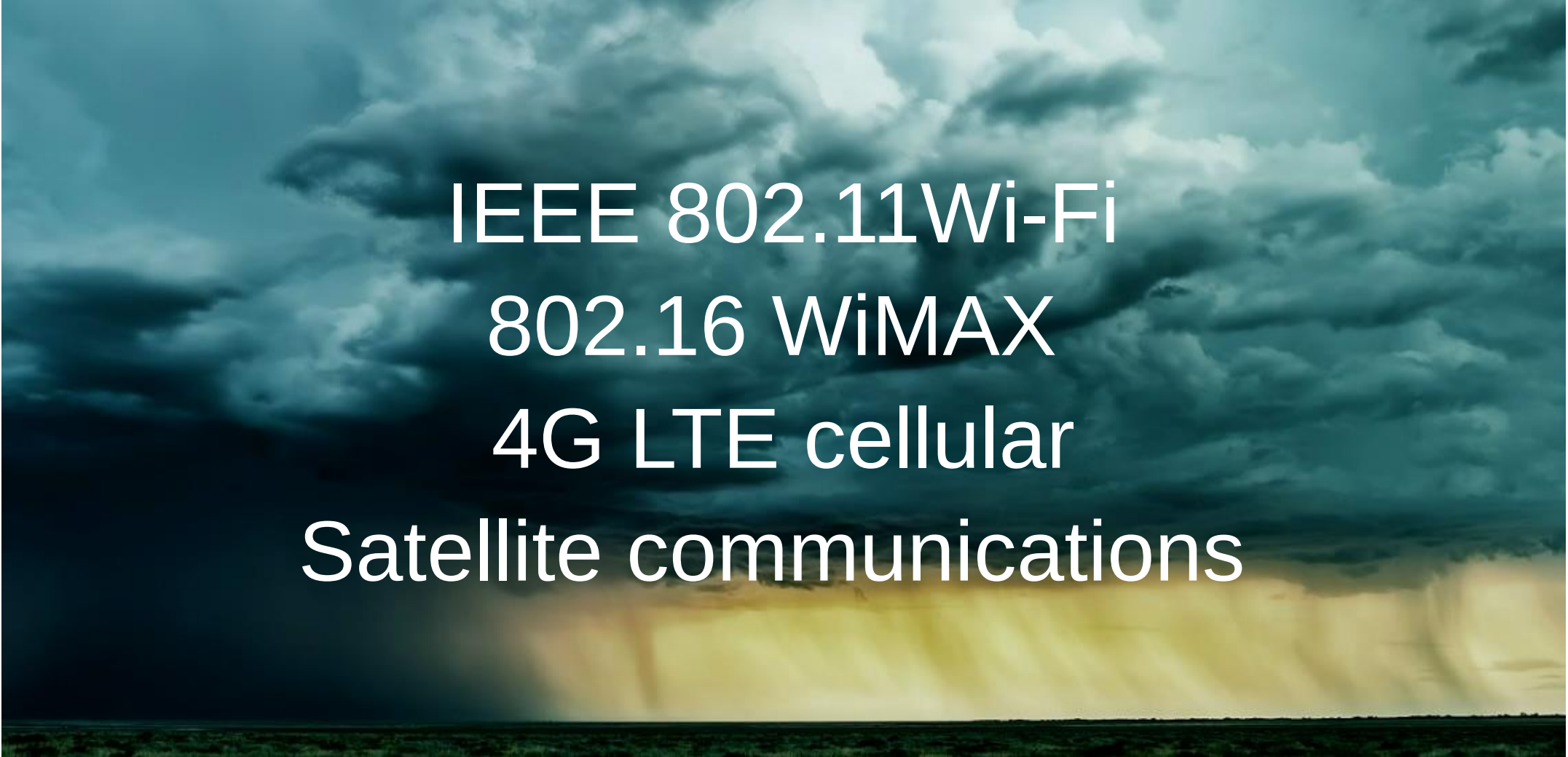
Flow, level, temperature, velocity, volume, conductivity,
pressure

Diagnostics: Instrument health, process alarms

Any other information resident on data highway



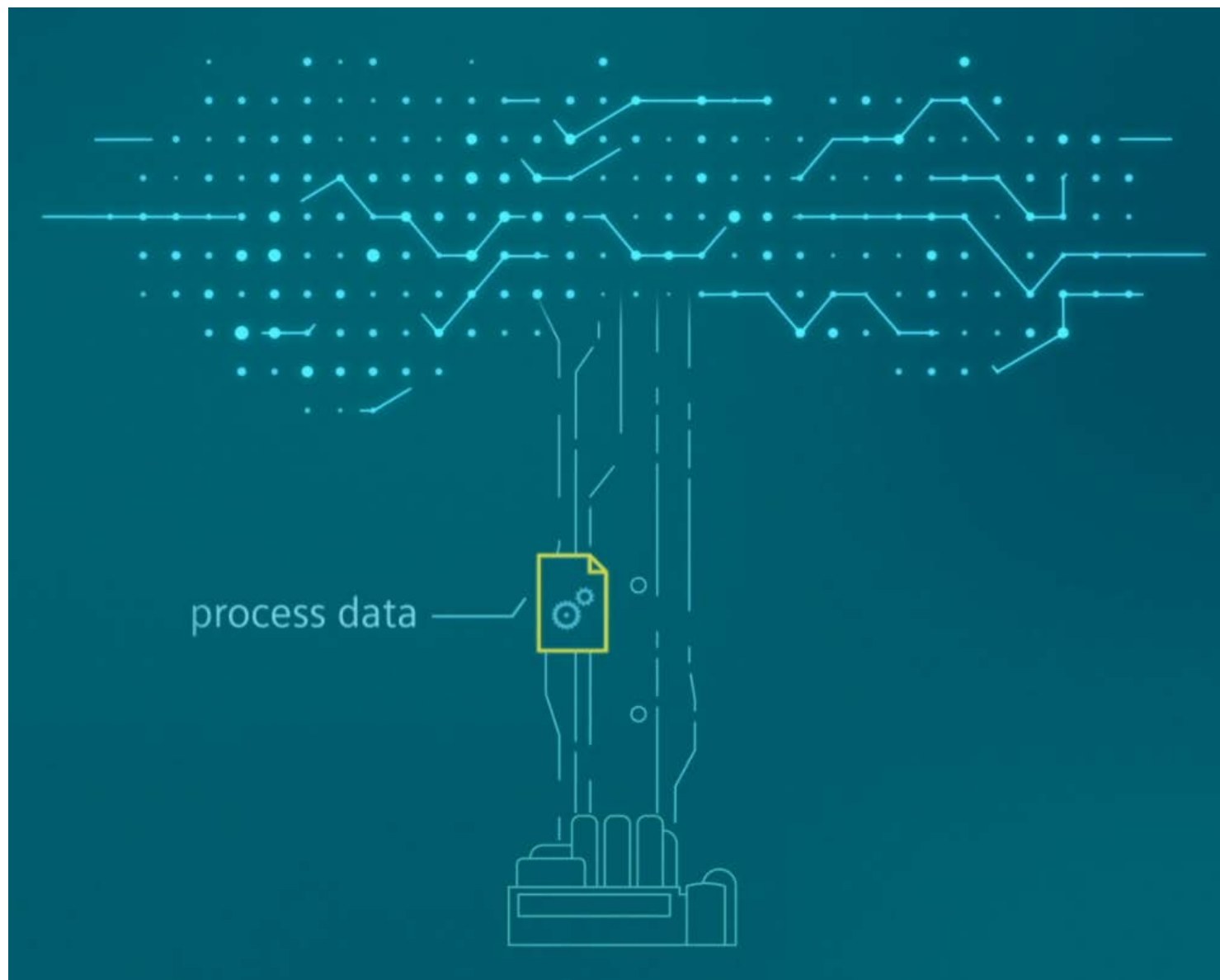




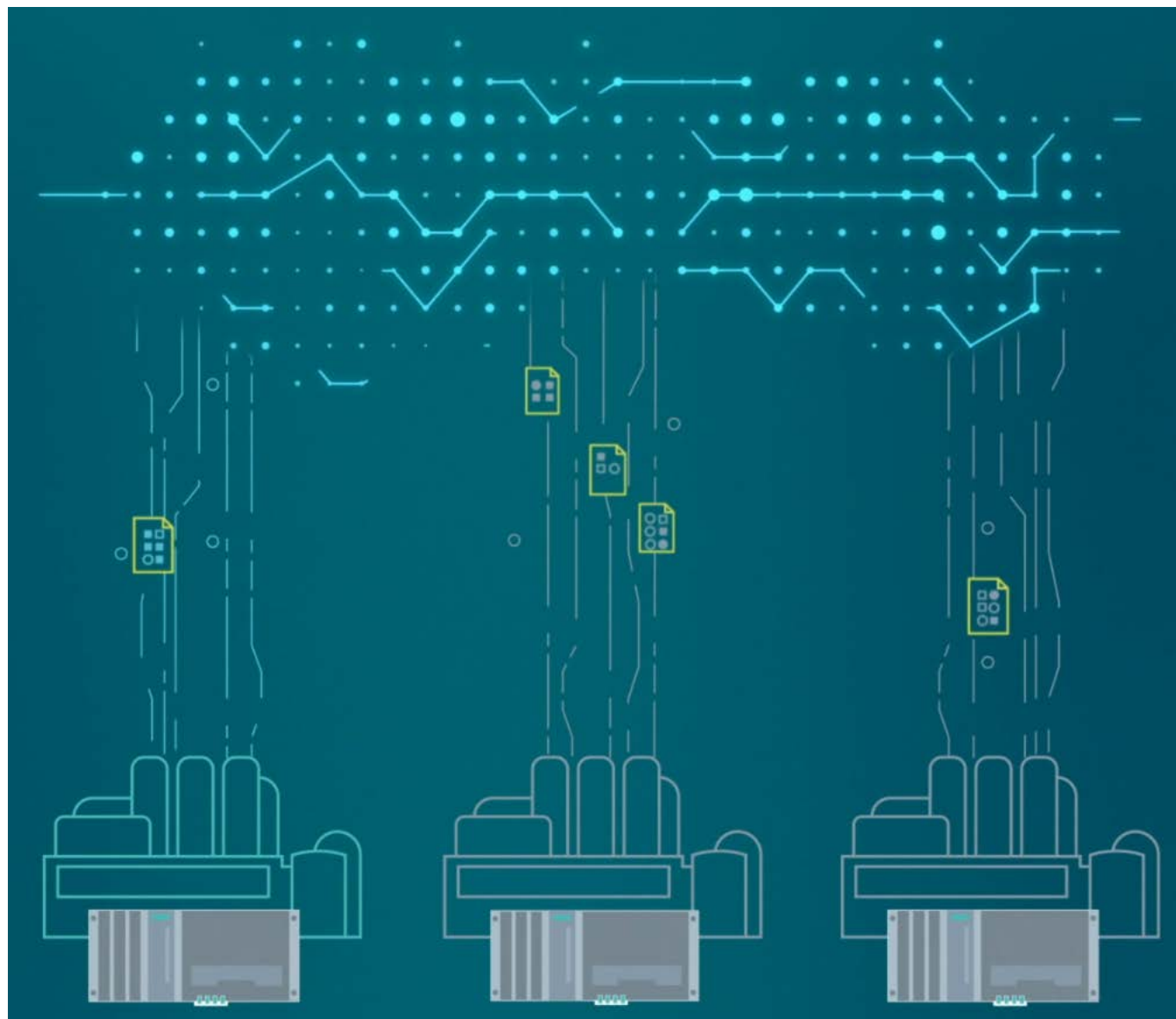
IEEE 802.11Wi-Fi
802.16 WiMAX
4G LTE cellular
Satellite communications



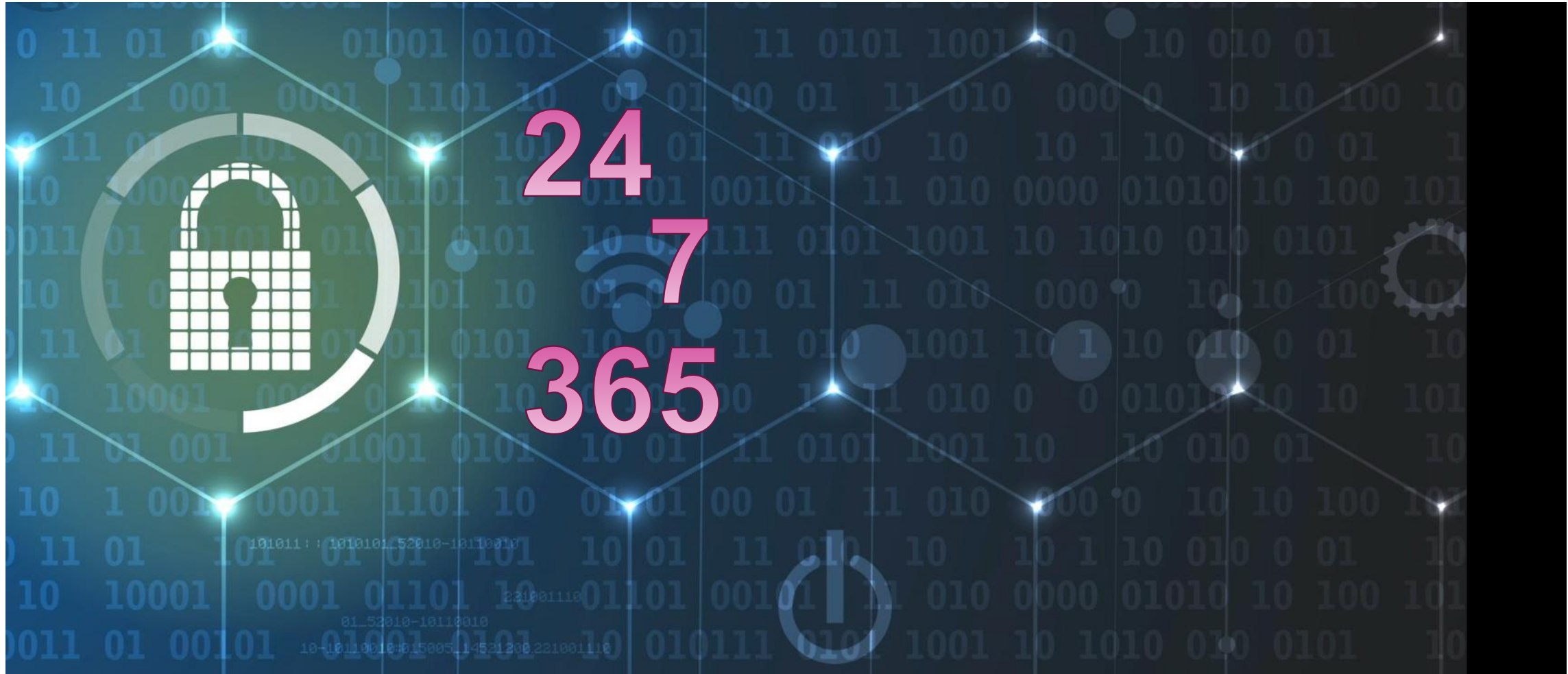
Cloud platforms



Cloud platforms









24
7
365

Plant Management
Field Level
Access Control
Communication Security

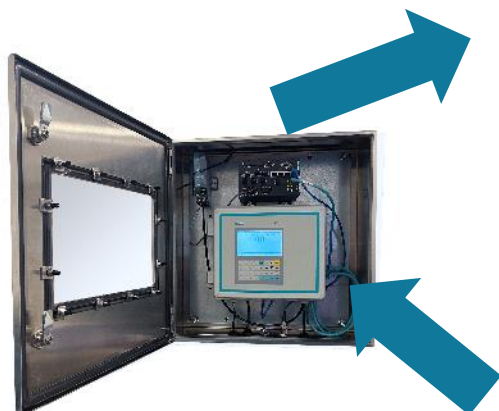
IEC 62443







The information is in the cloud. Now what?



Primary process: Flow, level, pressure, temperature, valve positioning

Additional process (any or all of the following, based on technology):

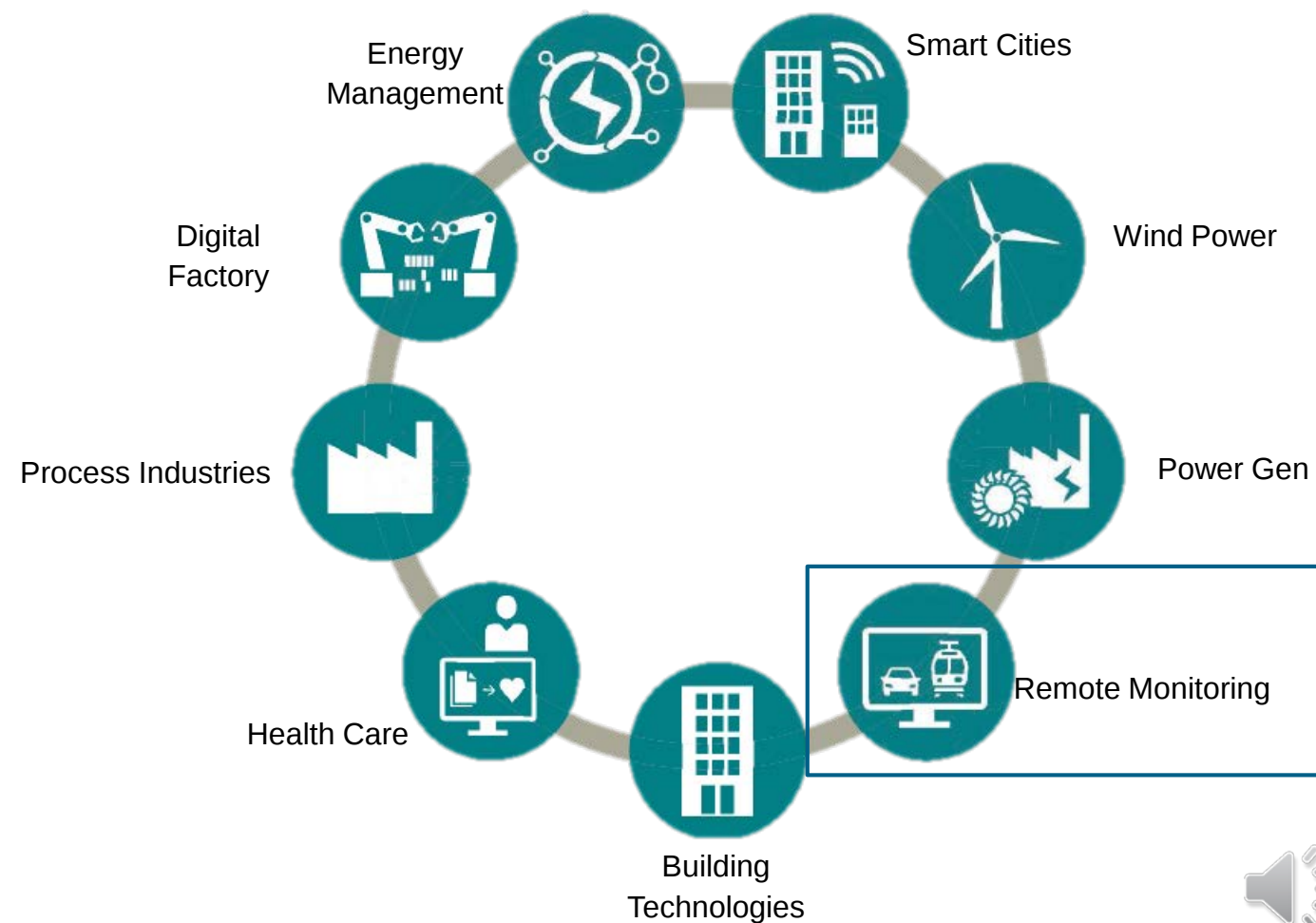
Flow, level, temperature, velocity, volume, conductivity,
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Diagnostics: Instrument health, process alarms

Any other information resident on data highway



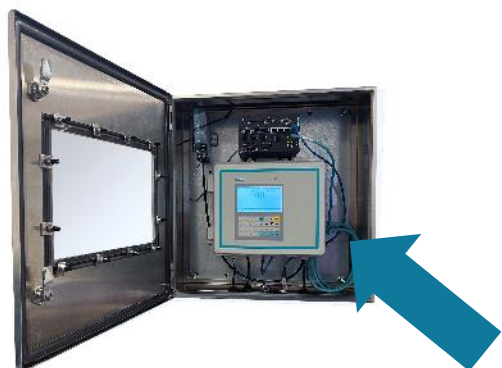






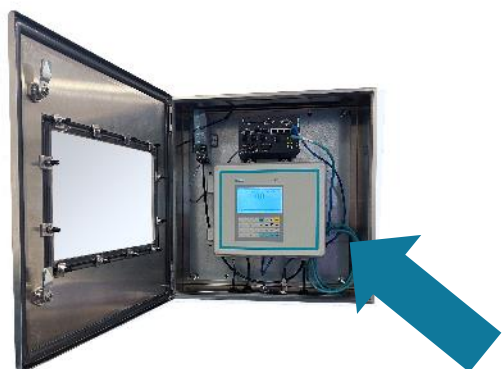


MENS
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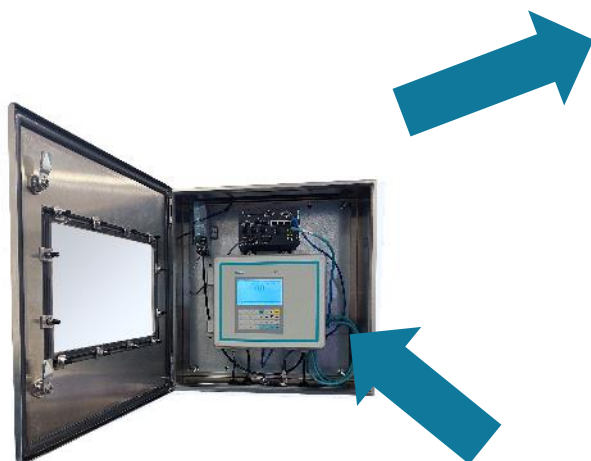


Siemens
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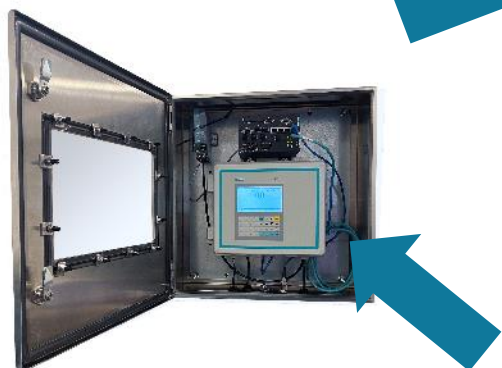


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Remote Monitoring App





Keeping the system well-maintained



Keeping the system well-maintained

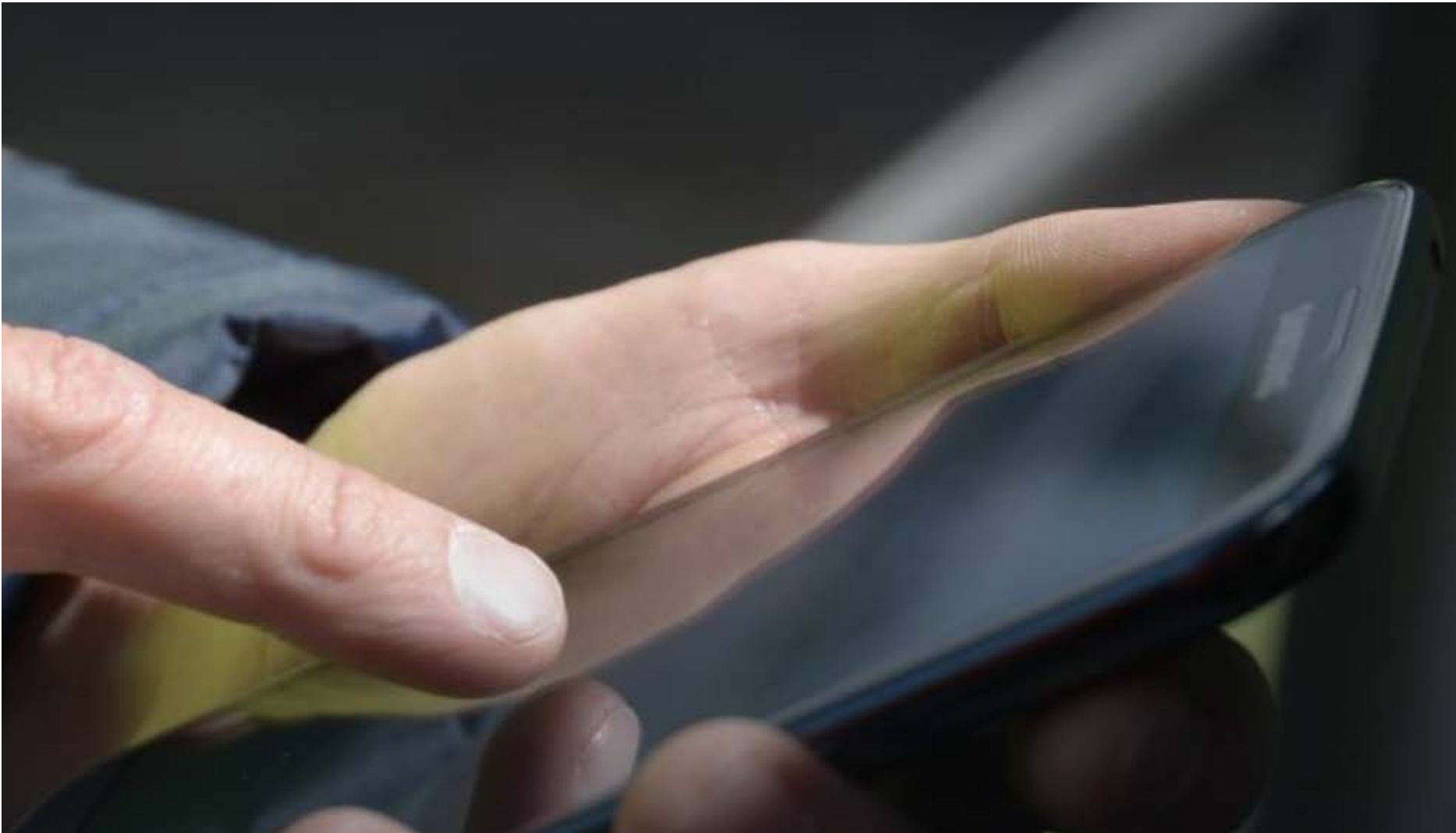
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Analytics



What's next?

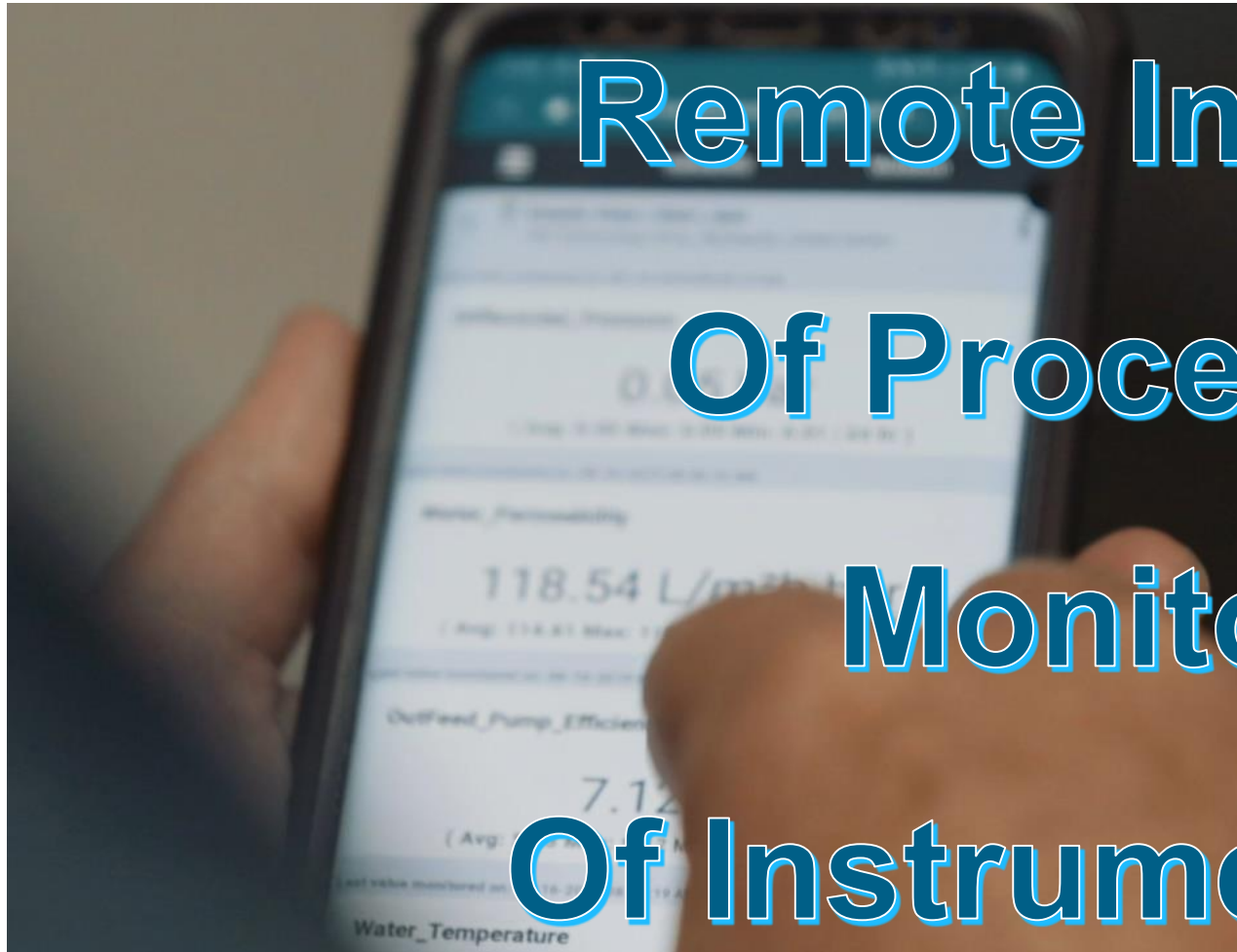
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Remote Monitoring Apps

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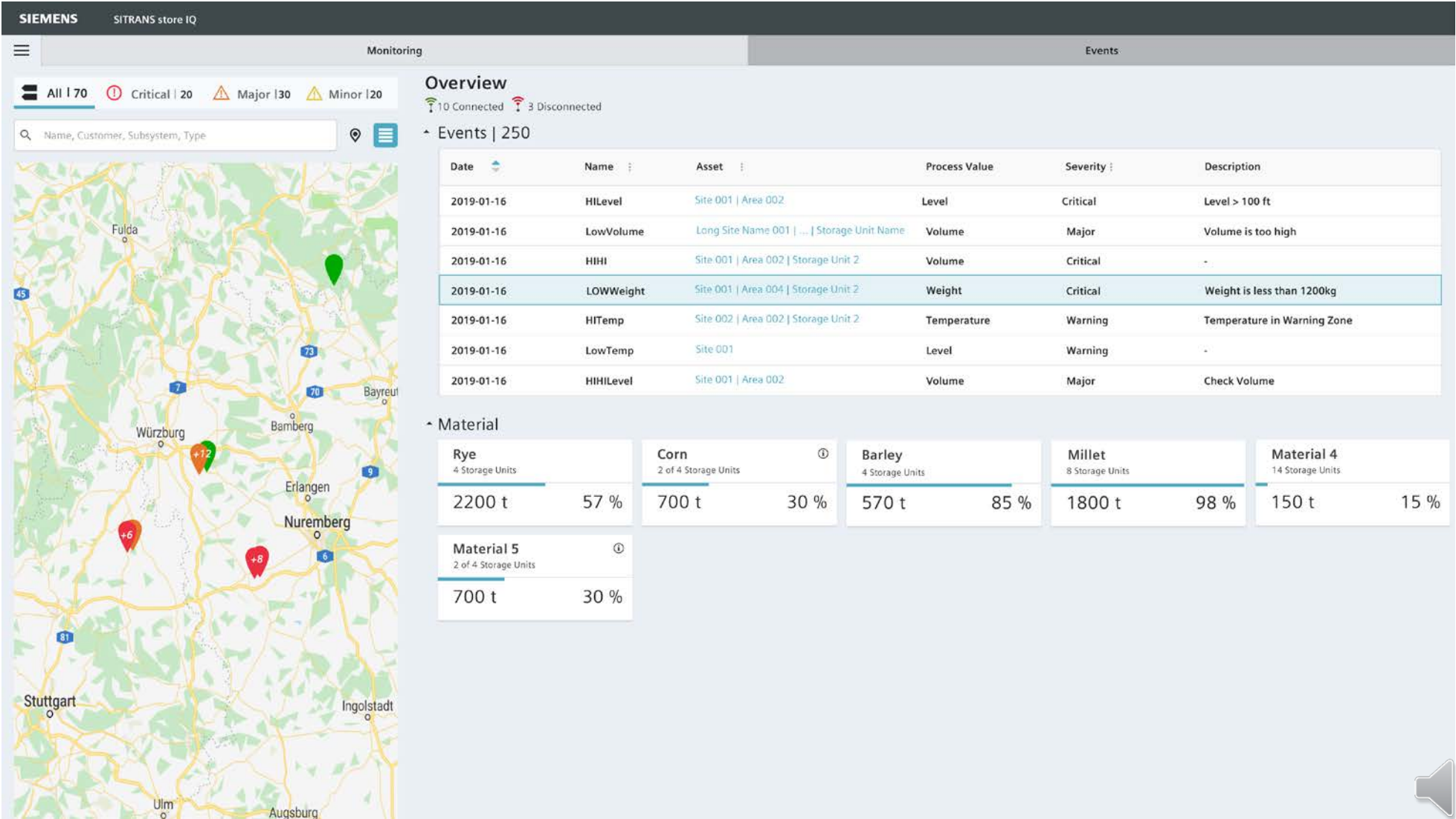


Remote Indication Of Process and Monitoring Of Instrument Health





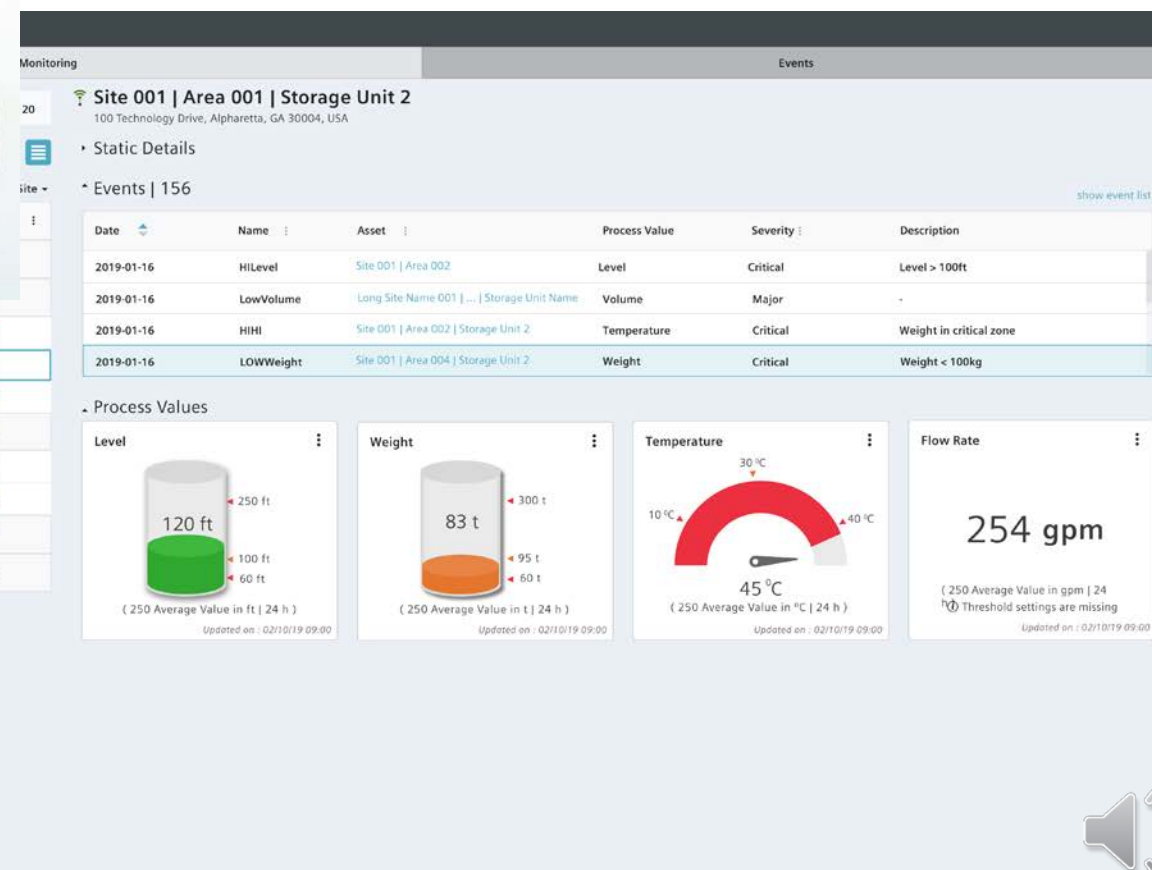
Catch issues before they become problems



What kind of partner should you look for?

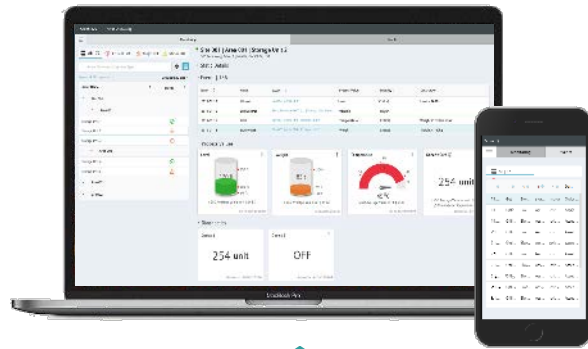


Storage Unit 1	✓
Storage Unit 2	⚠
Storage Unit 3	⚠
Area 002	⚠
Storage Unit 4	✓
Storage Unit 5	⚠
Site 002	✓
Site 002	✓



SITRANS store IQ – MindSphere based solution for inventory monitoring and management

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SITRANS store IQ delivers dashboarding, alarming and notifications functionality in a browser based format for desktop, tablet and/or smartphone usage.



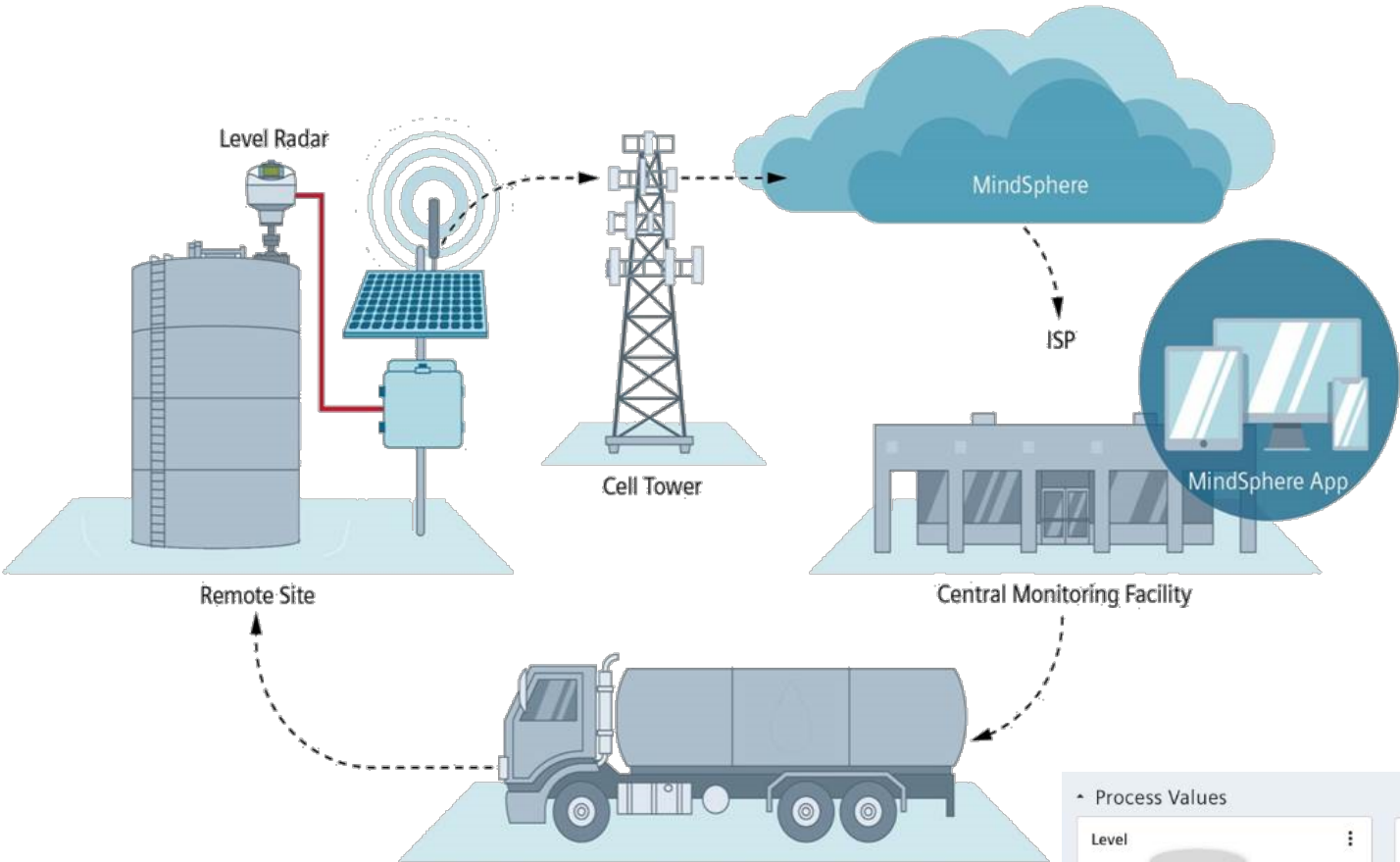
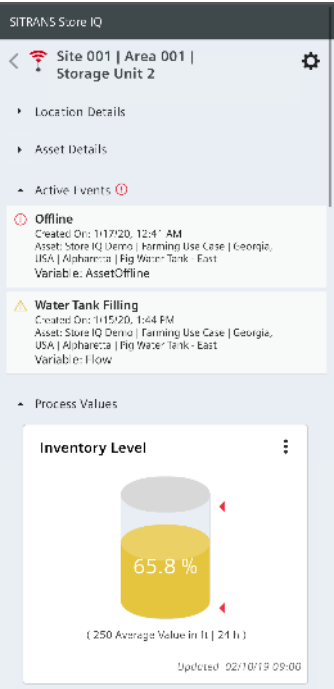
Connect and onboard your devices to MindSphere via MindConnect hardware like MindConnect IOT2040 or MindConnect Nano. Or have Siemens EIS team design the hardware package to meet your specific requirements.



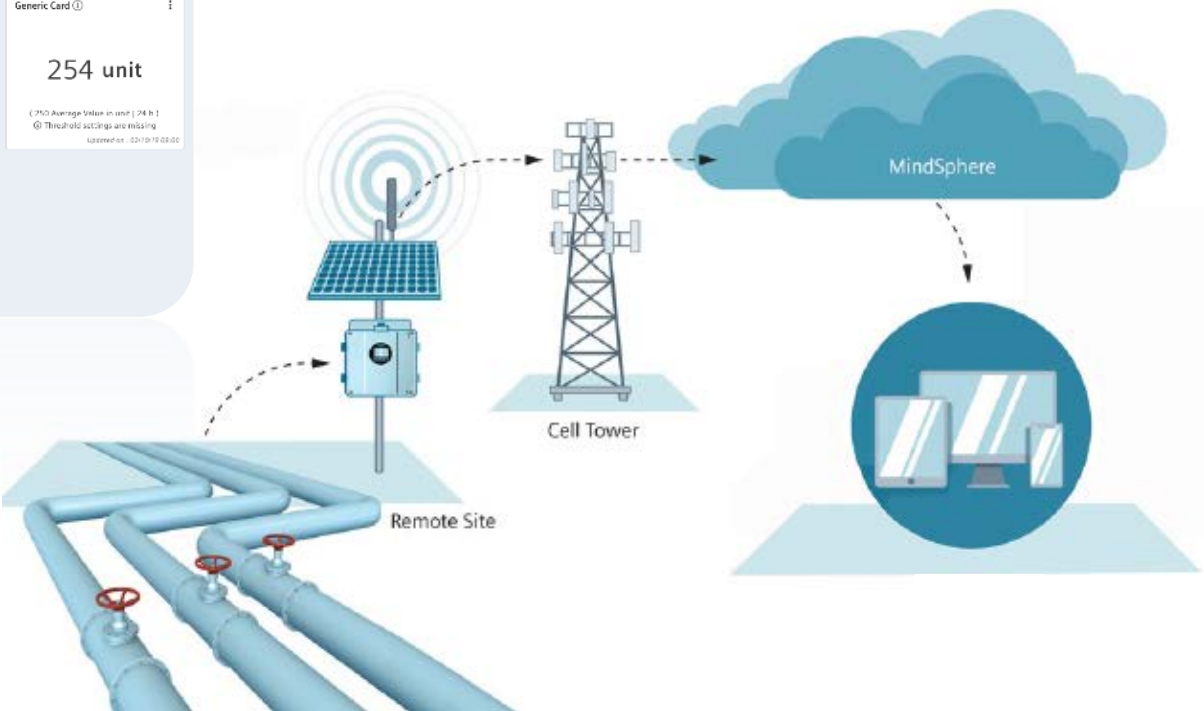
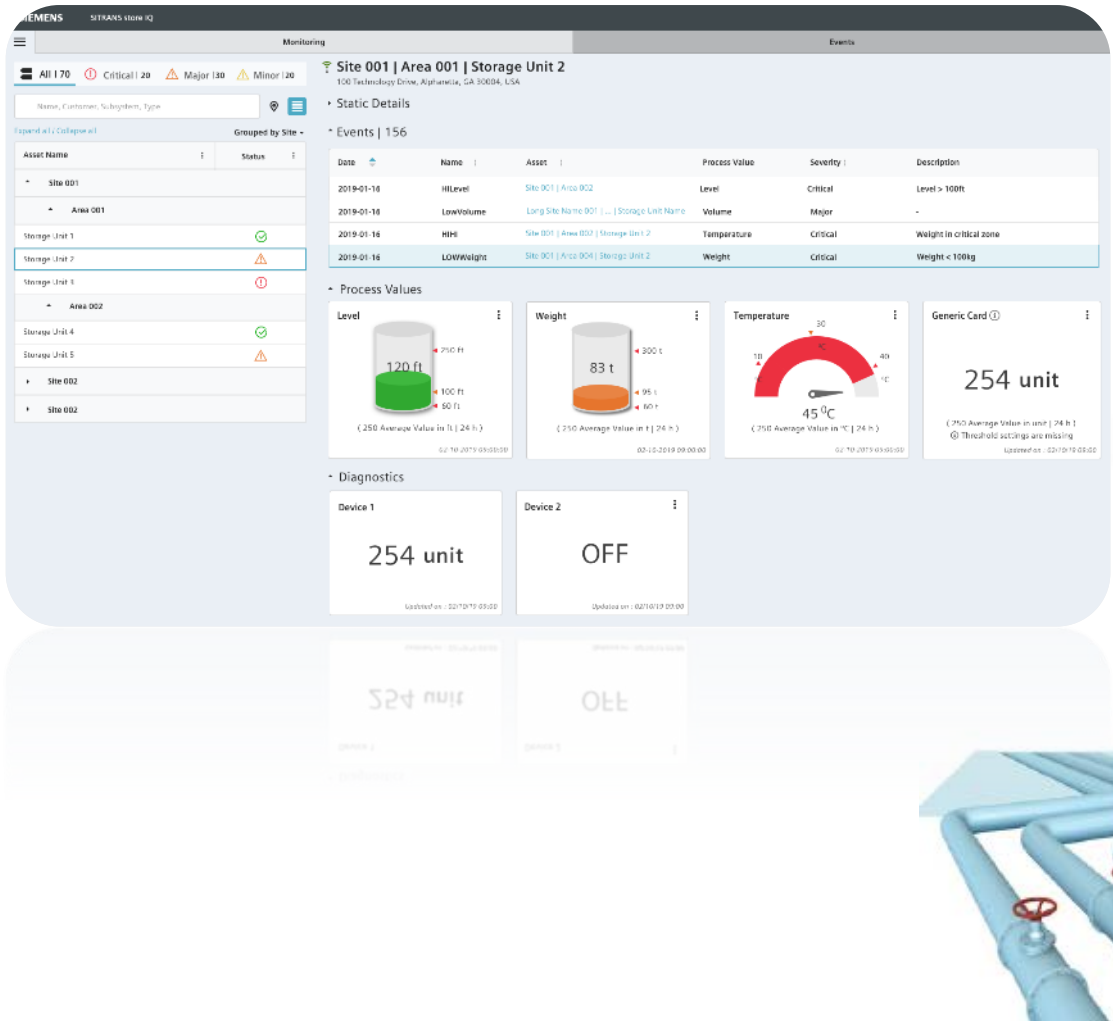
Use Siemens process measurement instrumentation or anyone's process measurement equipment. Digital or Analog outputs. Basic measurement or key diagnostics.



Using Remote Monitoring Apps



Using Remote Monitoring Apps



Design your Remote Monitoring App to your requirements

Alerts



Alerts

One User or 100 (or more)



Alerts

One User or 100 (or more)

Once a Day or Multiple Times Per Minute



Alerts

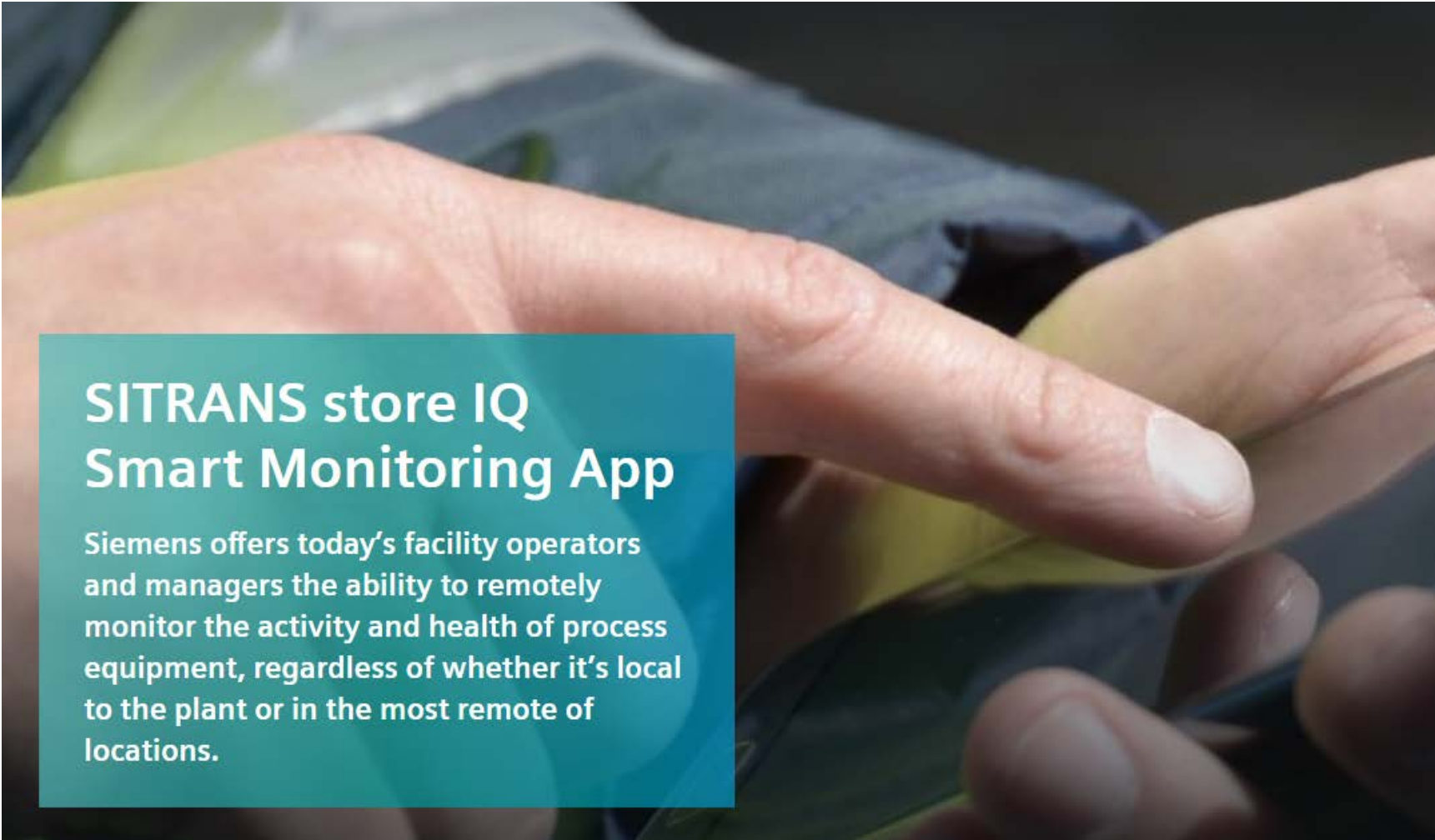
One User or 100 (or more)

Once a Day or Multiple Times Per Minute

Get an App Tailored to Your Requirements



Remote Monitoring – It's here today

A close-up photograph of a person's hand holding a smartphone. The phone's screen is partially visible, showing a dark interface. A semi-transparent teal rectangular box is overlaid on the left side of the phone, containing white text. The background is blurred, showing what appears to be a blue and yellow object.

SITRANS store IQ Smart Monitoring App

Siemens offers today's facility operators and managers the ability to remotely monitor the activity and health of process equipment, regardless of whether it's local to the plant or in the most remote of locations.

<http://www.usa.siemens.com/monitoring-apps>



Remote Monitoring Apps

Siemens Smart Monitoring

SITRANS store IQ Smart Monitoring Application

Through the use of Siemens Mindsphere and for a low monthly cost, information can be uploaded to the cloud and then used to provide you with real-time monitoring of multiple assets, retrieving real-time data from multiple remote sites for your user group, anywhere and any time. In addition, you can receive alarms, alerts and notifications without delay. And all this can be sent directly to your pc, tablet or phone.



Reduce site visits by up to 90%

Avoid traveling to remote areas under extreme weather conditions by using remote monitoring.



Save up to 50% of costs due to maintenance delays

Ensure equipment is functioning properly to avoid costly repairs later.



Save up to 70% on future cost of expansion

Expanding is easily done - just add more devices to the cloud.



Reduce downtime by up to 50% by early fault detection

Real time monitoring catches small issues before they become big problems.



Typical applications (configurable to your specific requirements)



Tank Level



Truck Loading/Unloading



Remote pumping stations



Pipeline Safety and Security



Elevated Tank/Booster Pump Station



Remote Lift Station

Keep an eye on virtually any part of your operation that previously required your presence on site or in the control room.



Where can I find information?



Contact USA

Products & Services Market-specific Solutions Company

Search for ...

Products & Services > Automation > Process Instrumentation > Digitalization > SITRANS store IQ Smart Monitoring App

SITRANS store IQ Smart Monitoring App

Siemens offers today's facility operators and managers the ability to remotely monitor the activity and health of process equipment, regardless of whether it's local to the plant or in the most remote of locations.

Digitalize your process plant with SITRANS store IQ Smart Monitoring App

Download Brochure



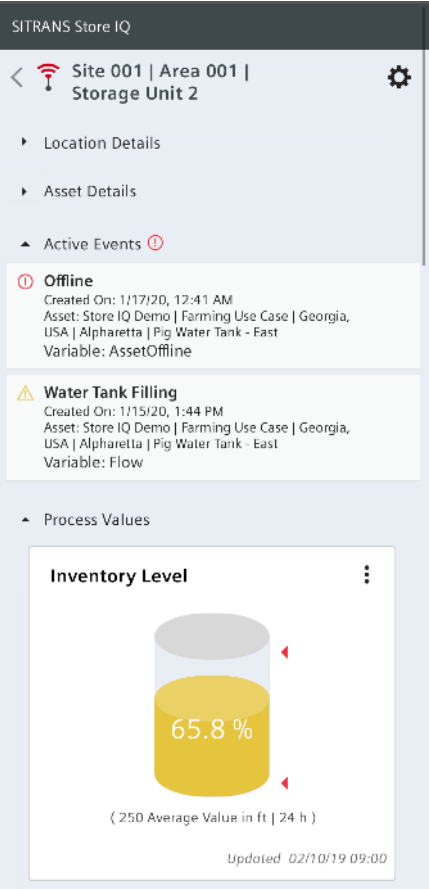
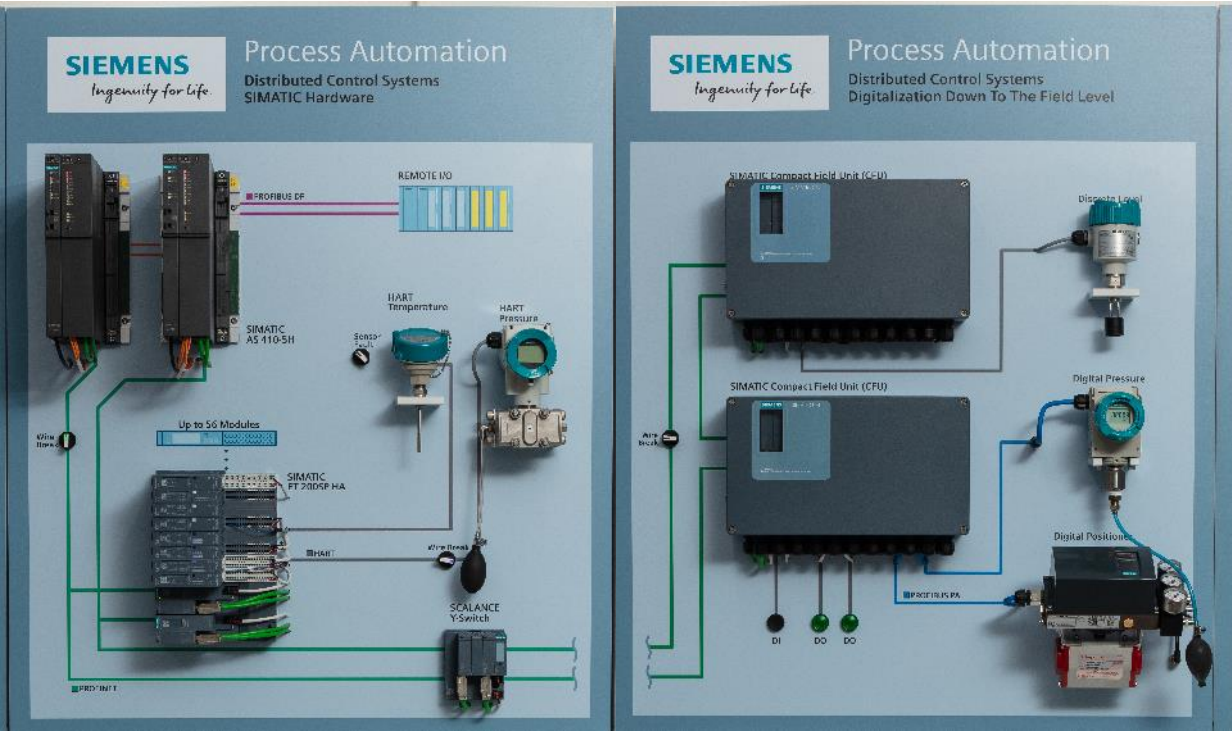
Key takeaways



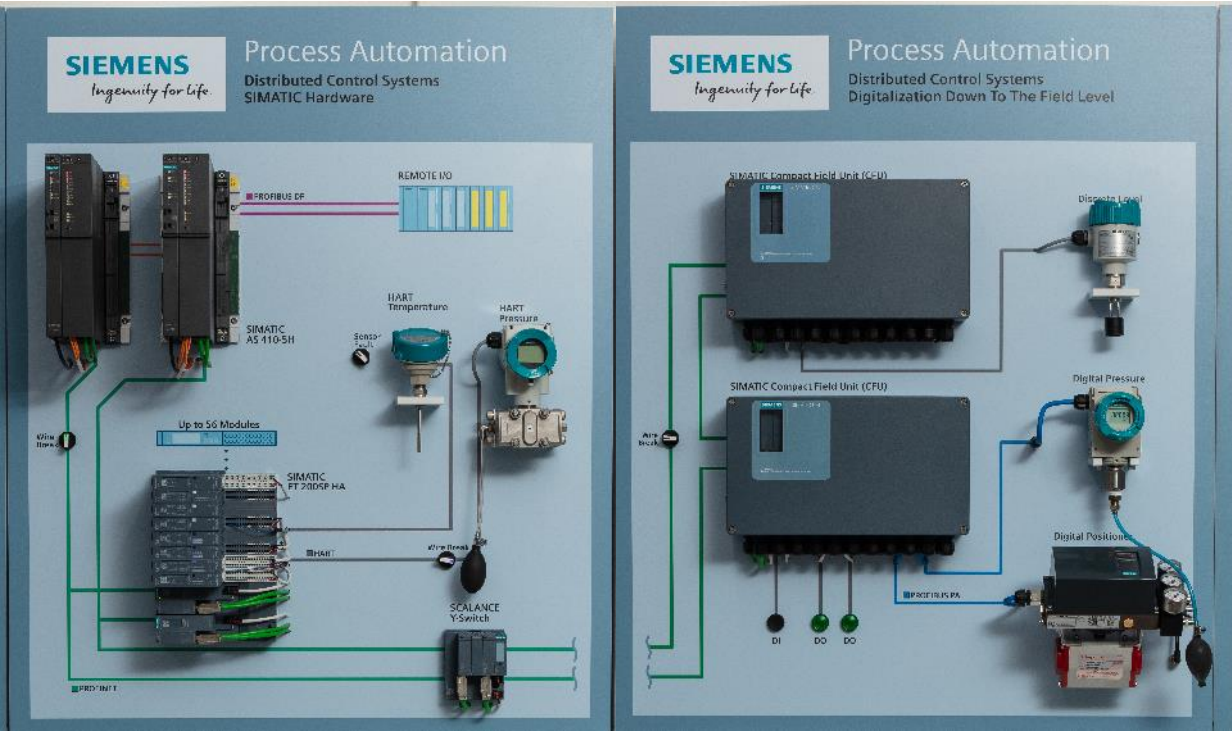
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Key takeaways



Key takeaways



SITRANS Store IQ

< Site 001 | Area 001 | Storage Unit 2

Location Details

Asset Details

Active Events 1

Offline

Created On: 1/17/20, 12:41 AM

Asset: Store IQ Demo | Farming Use Case | Georgia, USA | Alpharetta | Pig Water Tank - East

Variable: AssetOffline

Water Tank Filling

Created On: 1/15/20, 1:44 PM

Asset: Store IQ Demo | Farming Use Case | Georgia, USA | Alpharetta | Pig Water Tank - East

Variable: Flow

Process Values

Inventory Level

65.8 %

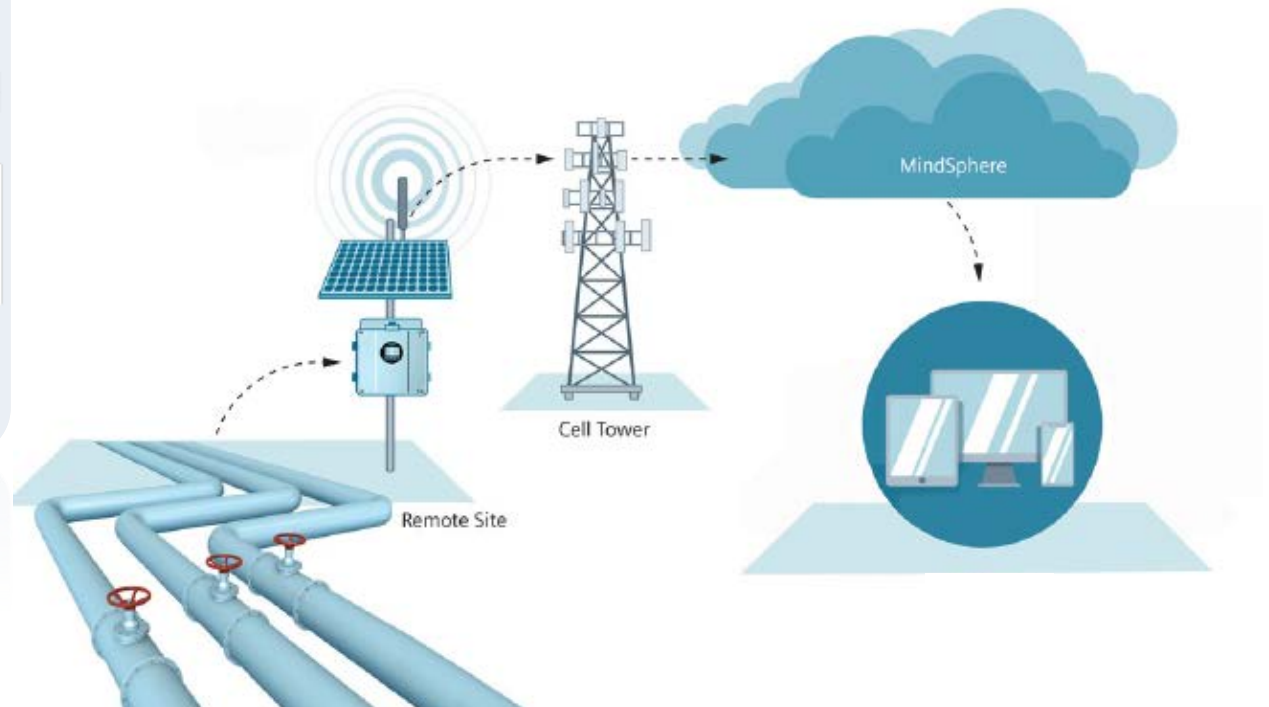
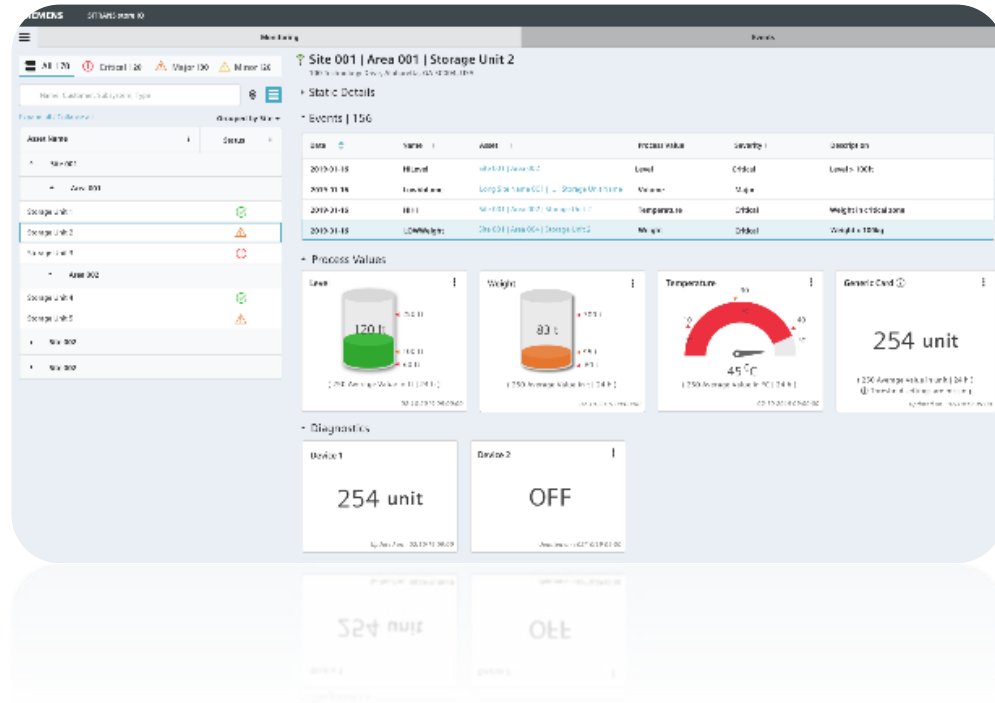
(250 Average Value in ft | 24 h)

Updated 02/10/19 09:00



Key takeaways

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<http://www.usa.siemens.com/monitoring-apps>



Thank you for your attention!

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Published by Siemens Industry Inc.

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