



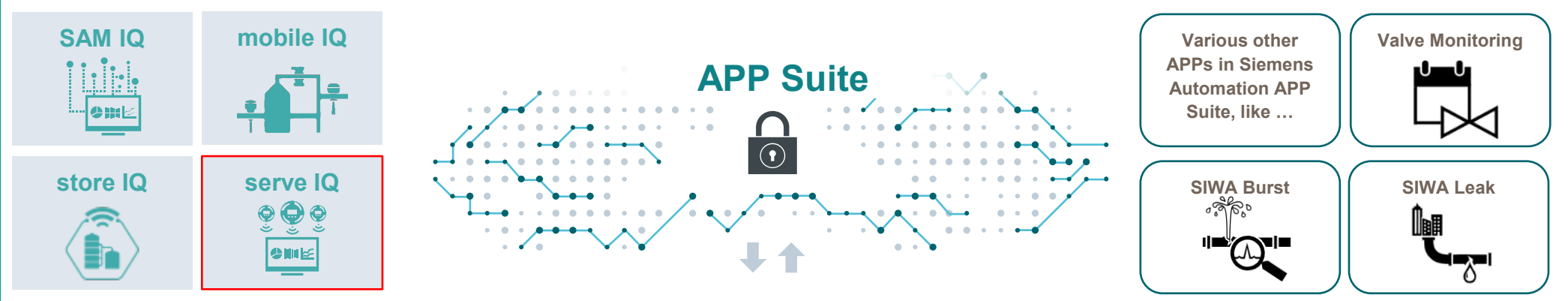
SITRANS SERVE IQ

Remote measurement. Anywhere. Anytime

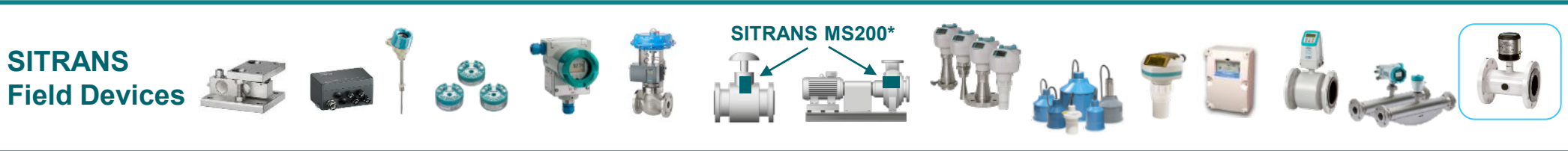
Digitalization Portfolio (excerpt) for Process Industries with Sensors, Connectivity and Apps

SITRANS IQ

Digital Service



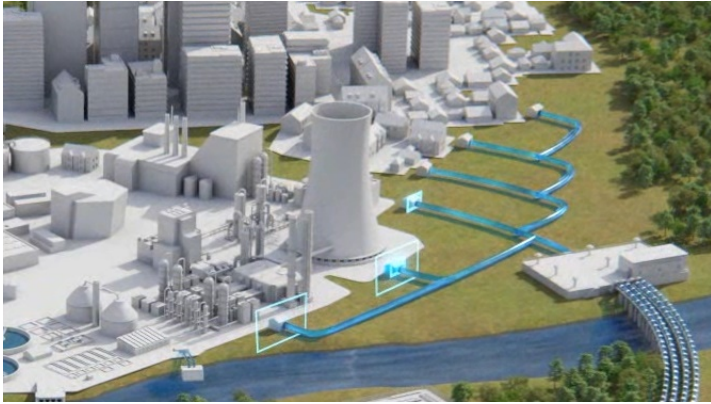
Technical Service



Stand 2020-12-01 *) in development

SITRANS serve IQ

Remote measurement. Anywhere. Anytime.



Situation today

- Remote measurement points
- Far-away field devices, e.g. flow meters

Solution

- Transfer of measurement data from connected devices via mobile network
- Safe storage in local database
- SITRANS serve IQ application to monitor measurements

Benefit

- Remote monitoring via web browser anywhere and at any time
- Overview of alarm events
- Visualization with map view, trend charts, filters etc.
- Saves operator unnecessary travel needs and service costs

What is SITRANS serve IQ



On premises software running on Docker Container in Windows 10 64bit Pro at the customer's infrastructure



Collecting the measurement data in a mailbox sent from MAG8000 with wireless module and other field devices via SIMATIC RTU3030C/RTU3041C



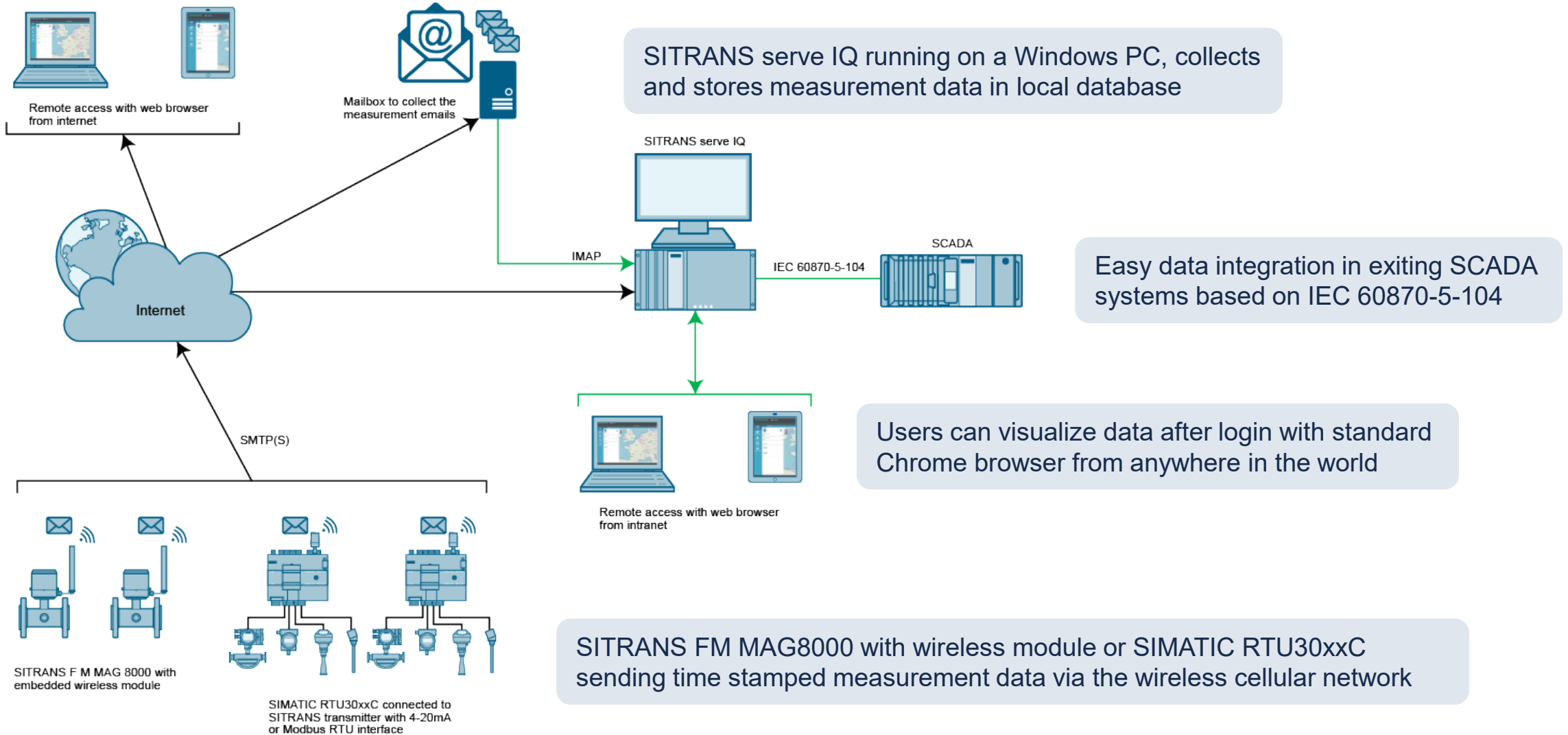
Visualizing the data in trend curve or table, and overviewing alarm events from the device directly or triggered by a customer defined value, and storing the measurement data locally



Easy data integration to SCADA with IEC 60870-5-104 interface

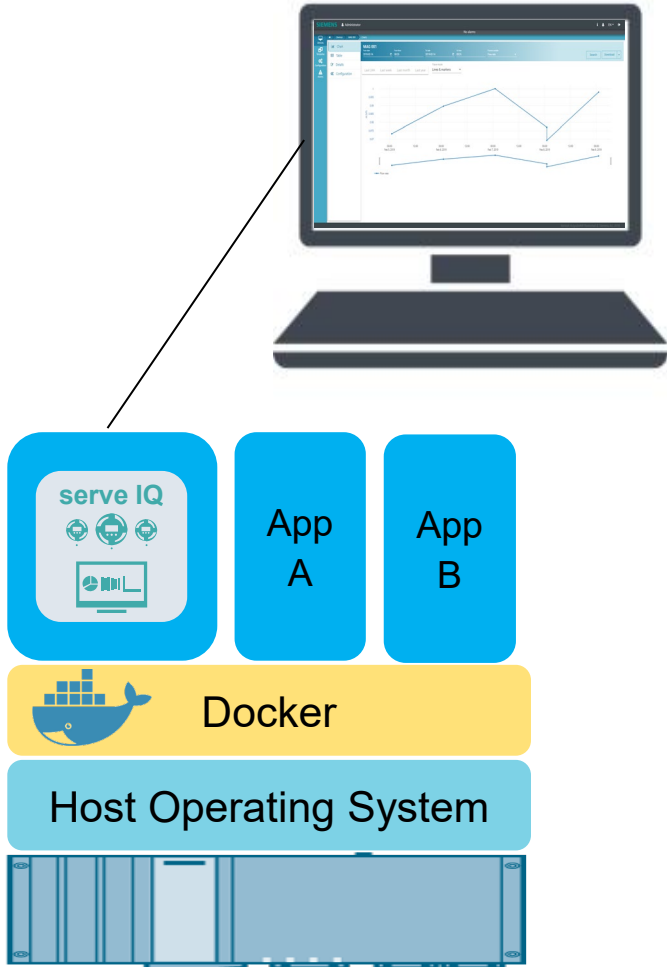
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System architecture



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Prerequisites



HW REQ	SW REQ
<p>A SIMATIC IPC with minimum 8GB RAM and 250GB HDD is recommended.</p> <p>e.g. IPC 427E Microbox PC, 6AG4141-7BC38-0GA8</p>	Windows 10 Pro 64-bit or Enterprise (version 1803, 1809, 1903, 1909);
	Google Chrome web browser (version 67 or later)
	Internet access
	Fixed IP address for the PC where SITRANS serve IQ is deployed
	an email account supporting IMAP protocol

Note:

We recommend installing SITRANS serve IQ on a standalone SIMATIC IPC (e.g. IPC 427E Microbox PC, 6AG4141-7BC38-0GA8) with Microsoft Office only, to minimize the risk of software conflict.

SITRANS serve IQ has been thoroughly tested on SIMATIC IPC in the above configuration. The proper functioning of SITRANS serve IQ is not guaranteed if it is installed on any other PC.

SITRANS serve IQ

Connections from the field

MAG8000 with 3G/UMTS wireless module

Remote flow measurement without mains power



SIMATIC RTU30xxC and sensors

Collection and transmission of level, flow rate, filling height, temperature, pressure without mains power



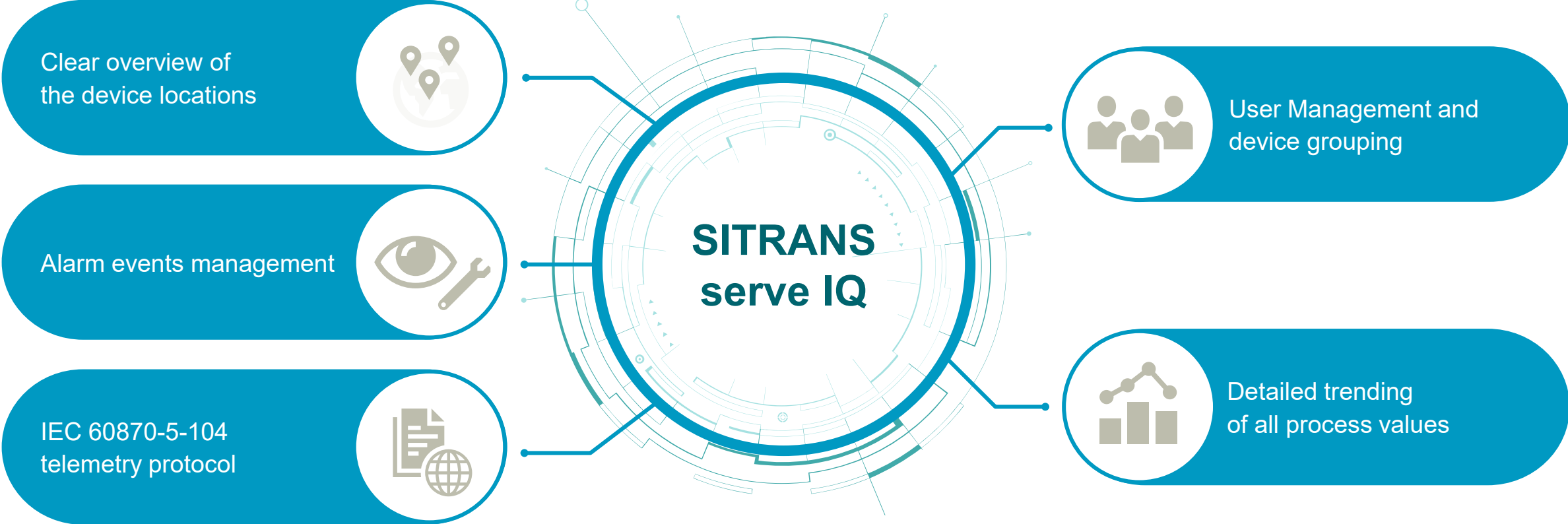
SIMATIC RTU30xxC with MODBUS

Collection and transmission of analog and digital sensor data and more advanced MODBUS devices



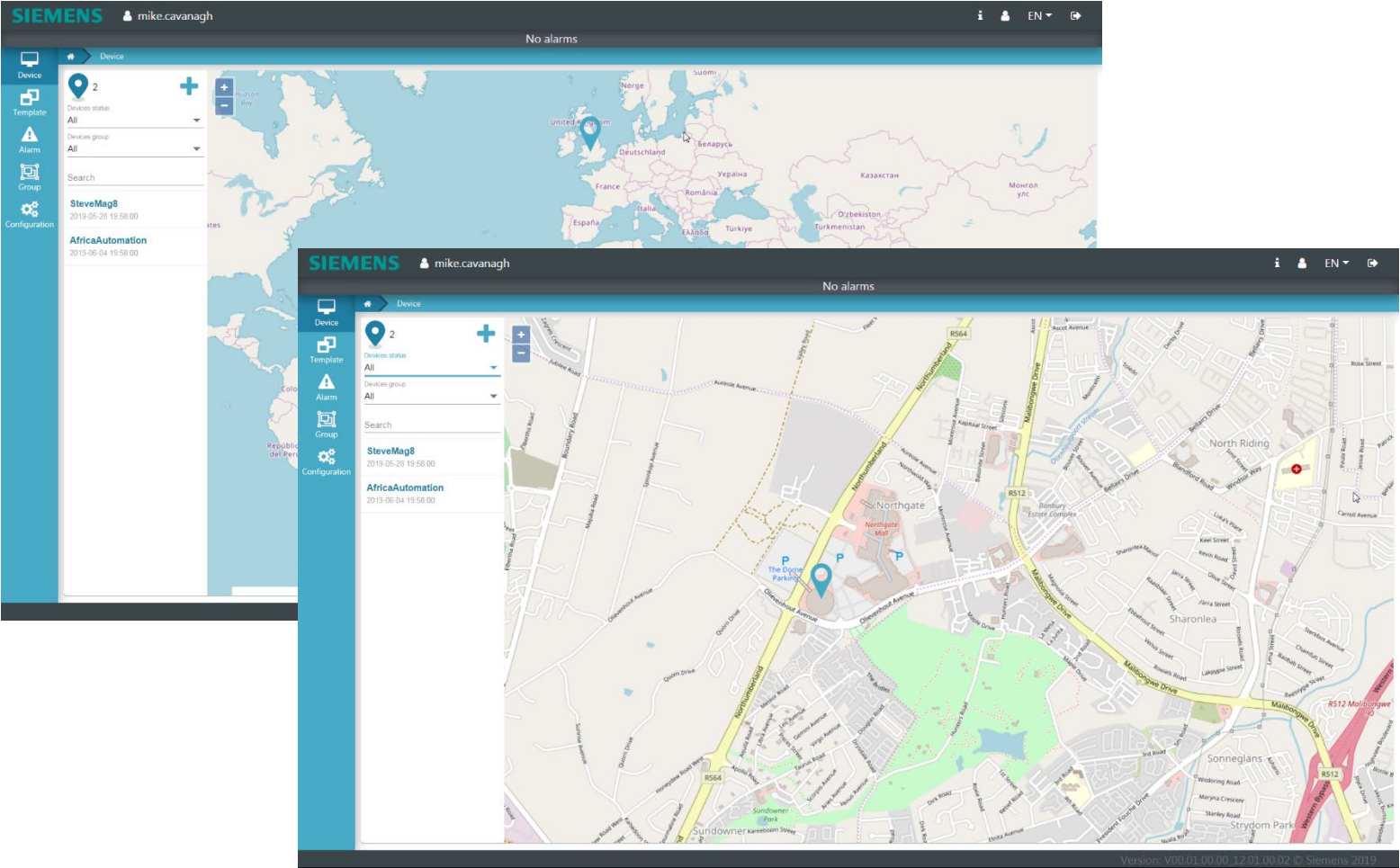
SITRANS serve IQ


Features



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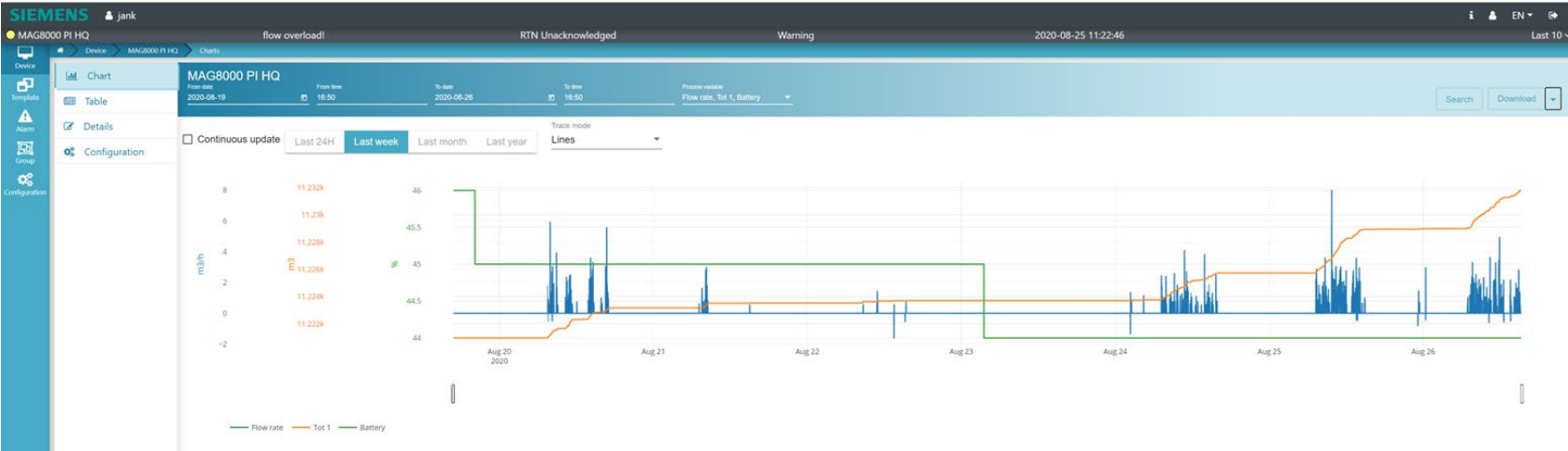
Features – Map View



 Clear overview of the device locations

SITRANS serve IQ

Features – Charts and table view



No alarms

Device: SteveMag8

Process variable: Flow rate, Tot 1, Tot 2

Timestamp ↓	Flow rate	Tot 1	Tot 2
2019-05-28 19:00:00	182.1213389830508	212332.72835593214	2110.6238644067794
2019-05-28 18:00:00	182.12100000000004	212339.005650000004	2133.5277666666667
2019-05-28 17:00:00	182.12356666666667	212348.92843333326	2117.6988833333333
2019-05-28 16:00:00	182.12311666666667	212333.2962166667	2108.2897500000004
2019-05-28 15:00:00	182.12711666666666	212329.5571166667	2123.3265833333333

Items per page 5 | 1 - 5 of 11

Detailed trending of all process values

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Features – Alarm events

The screenshot displays the configuration interface for a MAG8000 PI HQ device. The top navigation bar shows the device name, status (Warning), and timestamp (2020-08-25 11:22:46). The left sidebar contains navigation options: Device, Chart, Table, Details, and Configuration. The main content area is titled 'MAG8000 PI HQ' and includes the following sections:

- Start address:** 0
- Process values:**
 - Process value 1 - Flow rate:**
 - Display name: Flow rate
 - Unit: m3/h
 - Index of column: 1
 - Register: 0
 - Proactive: Not send
 - Type: Float
 - Type ID: 36
- Alarm Definitions:**

Name	Priority type	Type	Condition	Limit value	Time range	
flow overload!	Warning	Threshold	Above	5	00:00:00 - 23:59:59	
reverse flow!	Warning	Threshold	Below	0	00:00:00 - 23:59:59	



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Features – User Management

The screenshot shows the SITRANS serve IQ user management interface. The top navigation bar includes the Siemens logo, the user 'adminiq', and system status indicators: 'MAG8000 PI HQ', 'Internal software error', 'Unacknowledged', 'Warning', and the timestamp '2020-06-19 19:22:45'. The left sidebar contains navigation icons for Device, Template, Alarm, Group, and Configuration. The main content area is titled 'Groups' and features a search bar and a table with the following data:

Name	Assigned users		
main	demouser, user1, user2		
RC-DE	No users in group		
RC-SE	demouser		

At the bottom of the table, there is a pagination control showing 'Items per page 5' and '1 - 3 of 3'.

User Management and device grouping

SITRANS serve IQ

Customer's benefits



Feature/ Function

Securely collect remote measurements

Measurement data stored in an on-premise database

Web server-based data visualization

IEC60870-5-105 interface

Benefit

▶ Measurement data sent from field via email to one inbox for simple firewall and IT setup

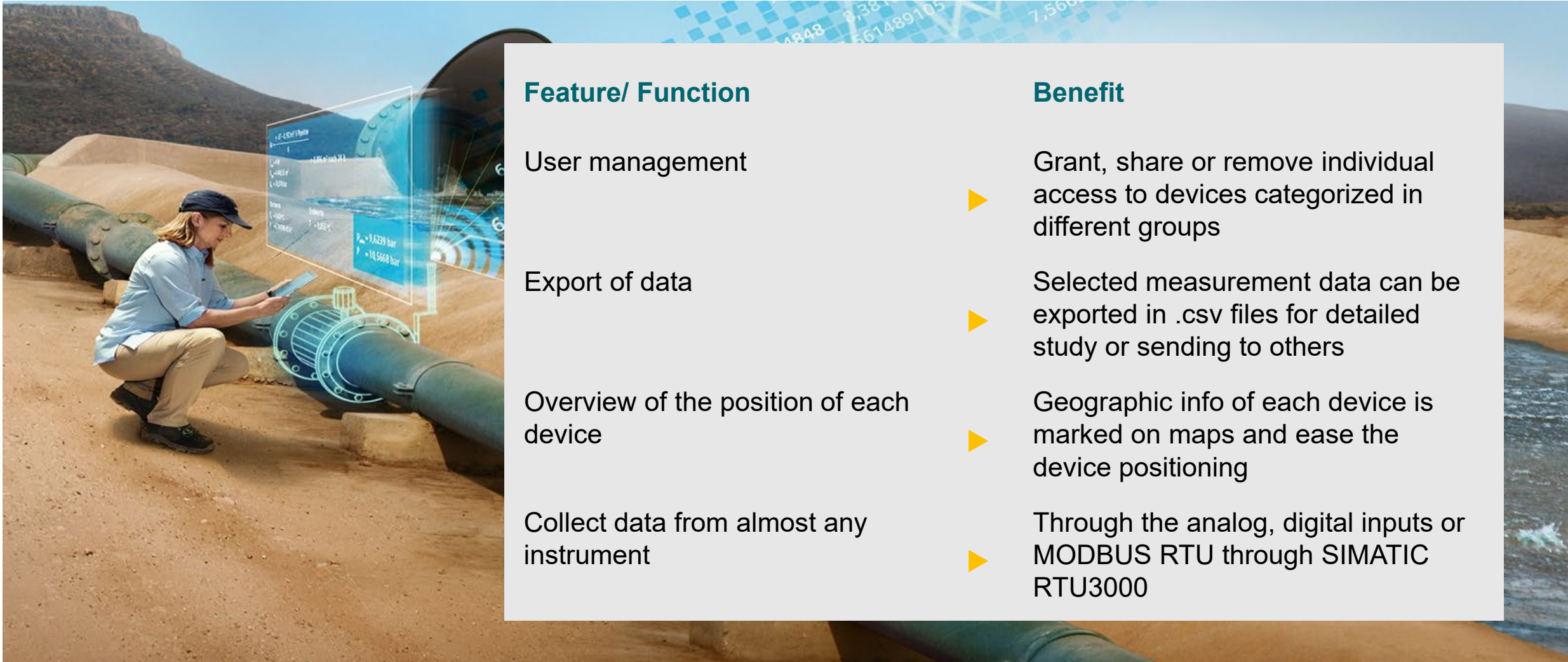
▶ All data are collected and stored in the customer's infrastructure. Every bit is under your control

▶ Easy viewing of measurement data from anywhere worldwide via Chrome browser

▶ Easy data integration to SCADA on industry standard telemetry protocol IEC60870-5-104

SITRANS serve IQ

Customer's benefits



Feature/ Function

Benefit

User management



Grant, share or remove individual access to devices categorized in different groups

Export of data



Selected measurement data can be exported in .csv files for detailed study or sending to others

Overview of the position of each device



Geographic info of each device is marked on maps and ease the device positioning

Collect data from almost any instrument



Through the analog, digital inputs or MODBUS RTU through SIMATIC RTU3000

SITRANS serve IQ shows its strength in many industries and applications for small and mid-sized solutions



Water treatment

- Monitoring water supply networks and irrigation systems
- Bulk water metering to industrial and commercial customers



Vendor managed inventory

- For small solutions
- Allow vendor e.g. of animal food insight in local silos to optimize supply chains



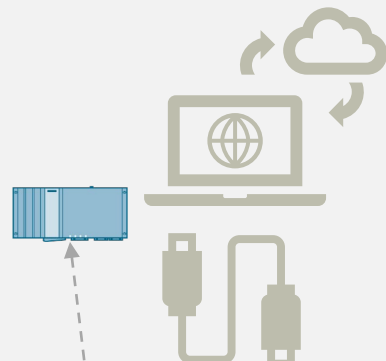
Level measurements

- Flood forecasts
- Monitoring remote silos and tanks

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Solution and service

Customer



Service

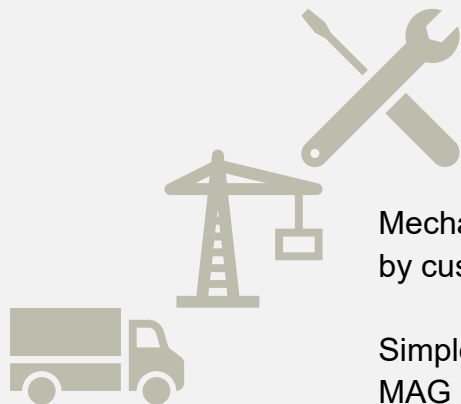
- Managed Support (helpdesk)
- Software Maintenance (upgrades, security)

Simple connecting pre-installed system on customer side

(supported by customer's IT for e.g. firewall settings)

4

Customer



Service


- Annual inspection
- Battery exchange
- Trouble shooting

Mechanical installation by customer / partner

Simple powering up of MAG 8000 / RTU 3030C

3

Siemens



Software SITRANS serve IQ (resp. image)

IPC

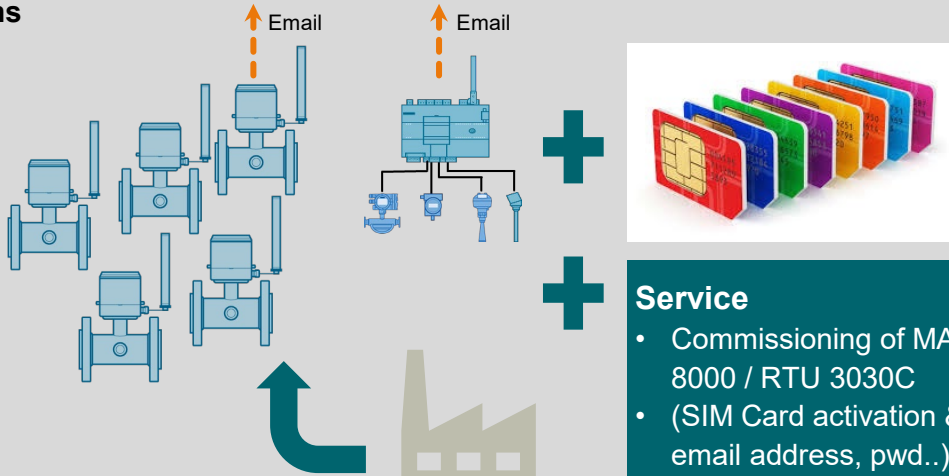
Pre-installed System

SITRANS serve IQ Commissioning based on Customer Information:

- List of measurement points / tags with relationship matrix
- Order serve IQ and IPC
- Installation and commissioning of serve IQ

1

Siemens



Email

Email

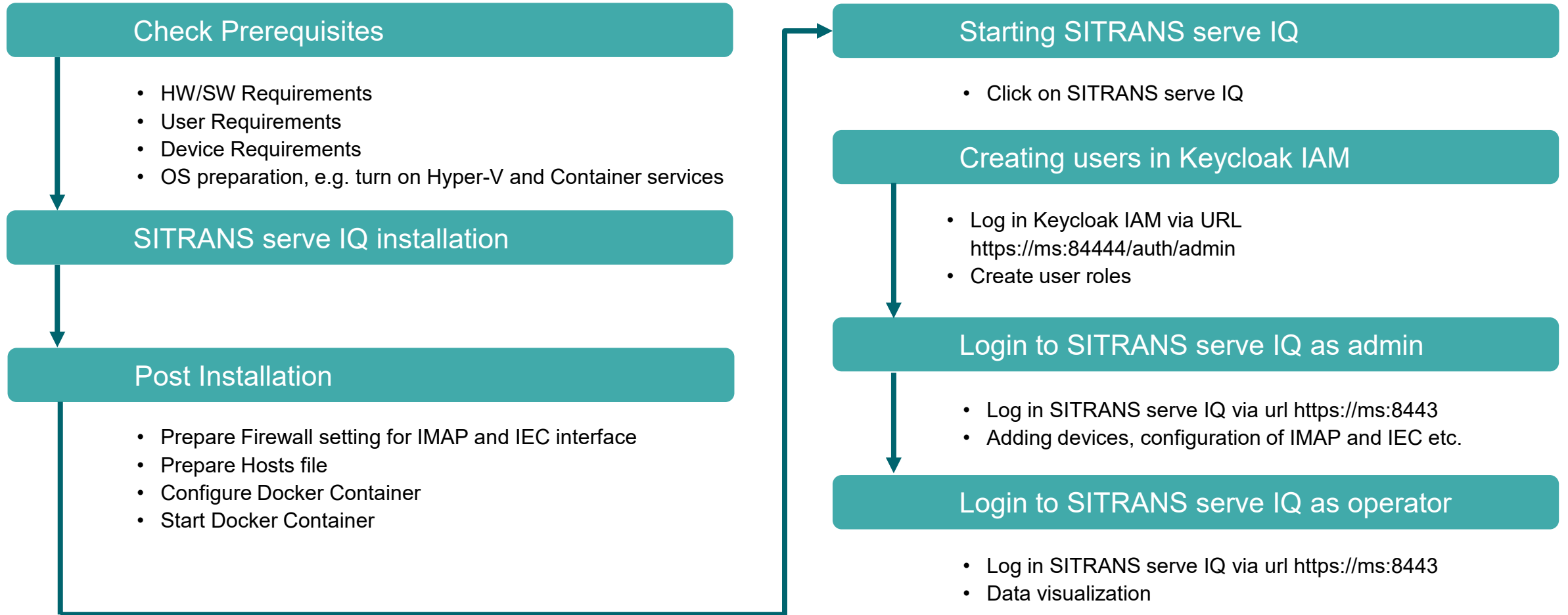
Service

- Commissioning of MAG 8000 / RTU 3030C
- (SIM Card activation & email address, pwd..)

2

SITRANS serve IQ

Commissioning



Administrator, Operator and Devices Management of user and device groups

Roles in SITRANS serve IQ



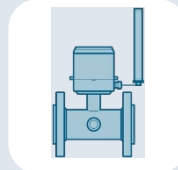
Administrator

- Sets up and configures the application
- Sets up Operators
- Grant or remove access to Operators
- Can see all devices
- Assigns label groups to devices and operators



Operator

- View data from devices
- Can be assigned more than one group
- Cannot see devices that are not assigned to them



Devices

- Devices can be assigned to only one group



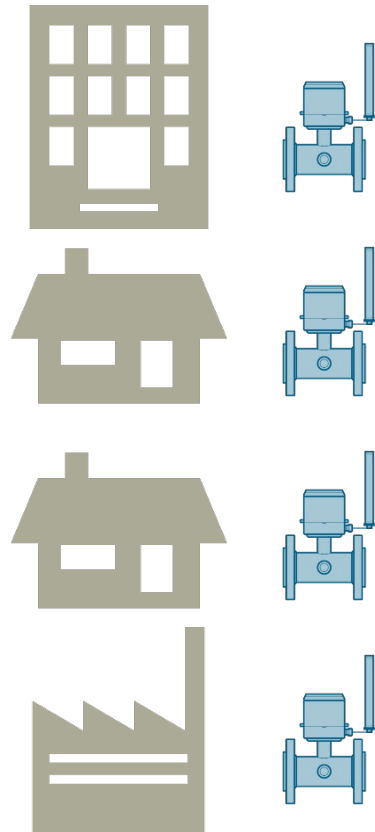
Groups are based on labels in the SITRANS serve IQ software



If an operator is assigned a group label by the administrator, they can see all devices in that group.

SITRANS serve IQ

User Story

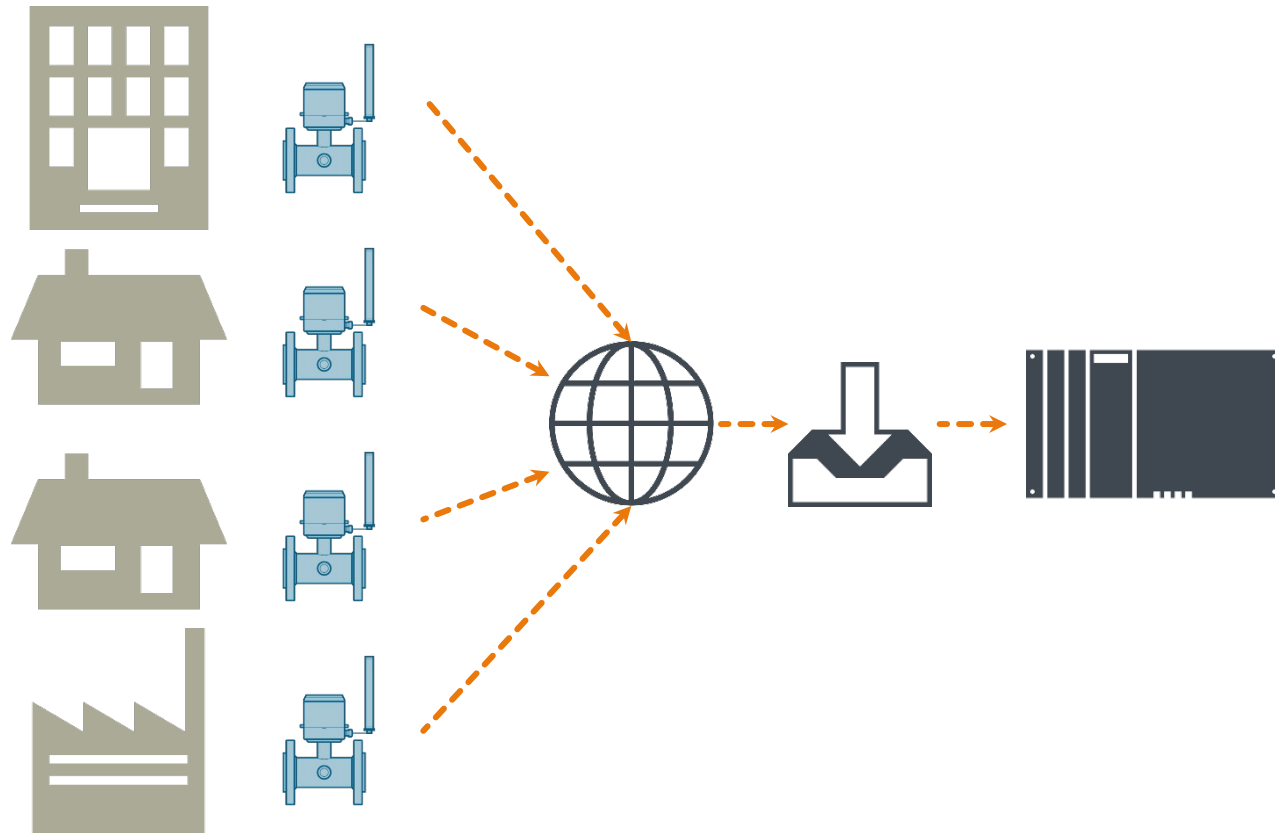


A small town has 4 MAG8000 meters in their water distribution network.

3 of the meters monitor districts, 1 measures water supplied to a large industrial customer

SITRANS serve IQ

User Story



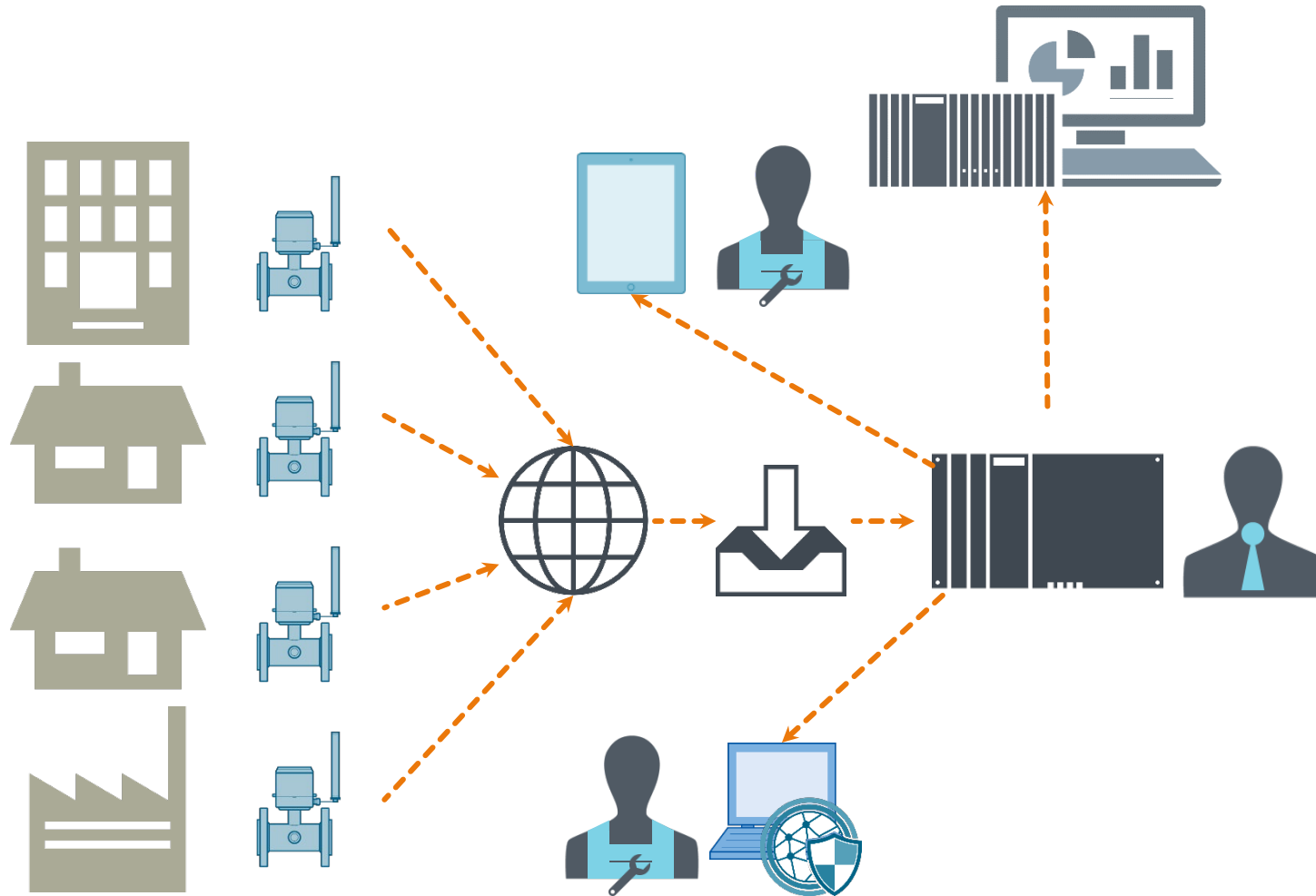
Through the Wireless Module, the measurement data in MAG8000 are accessible remotely via cellular network.

Several times a day, the MAG8000s transmit a .csv file with measurement data.

SITRANS serve IQ captures the .csv files, parses the data and stores it in a local database.

SITRANS serve IQ

User Story



The measurement data can be accessed over the Internet with a web browser on PC or smart device.

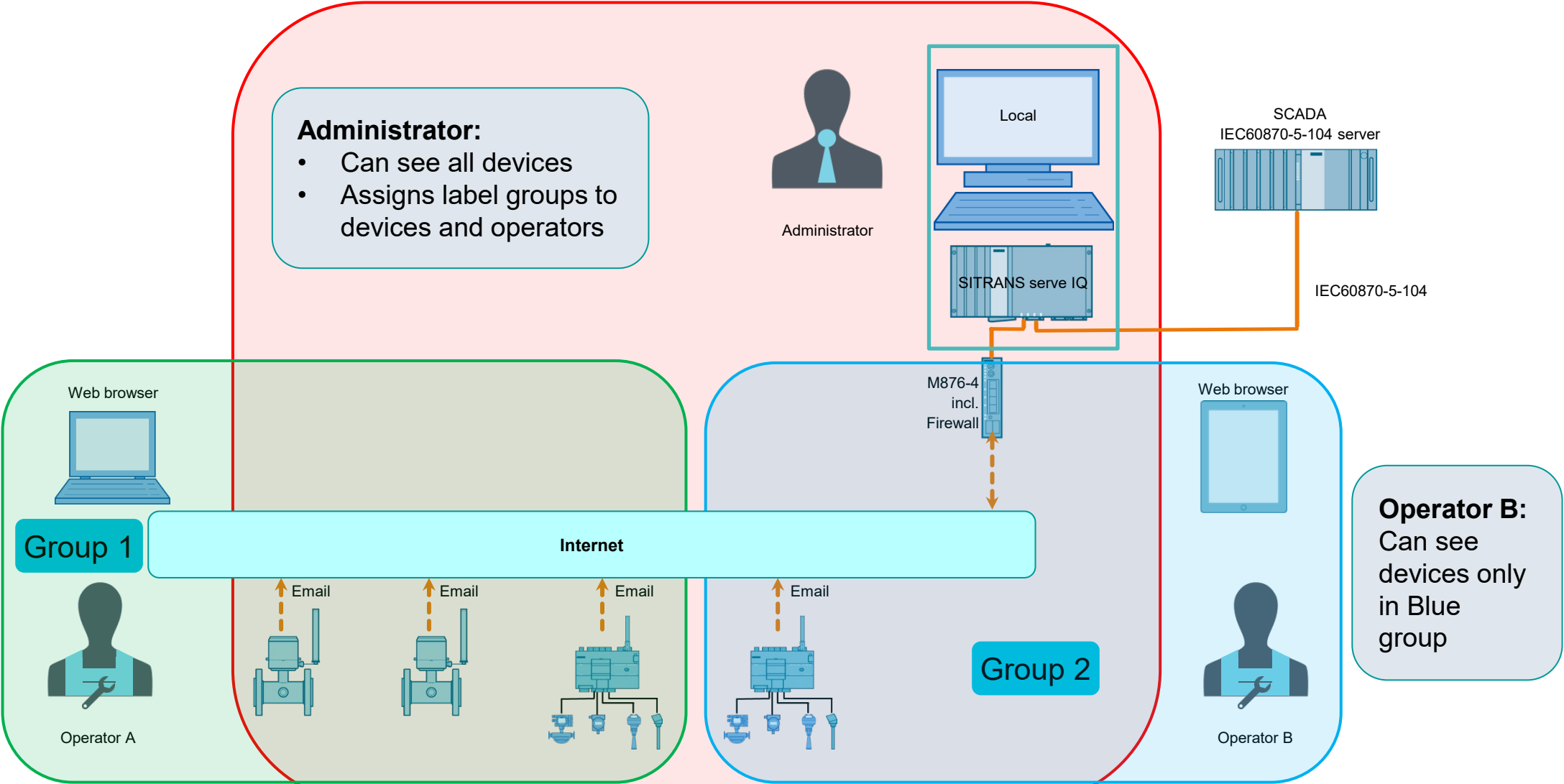
Access to the data is managed by a local administrator and is secured with encrypted connections.

The factory is a private customer, so access to its measurement data is restricted by the administrator.

Measurement data can be pushed to existing SCADA systems.

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User Story



SITRANS serve IQ

Order info (1/2)

MAG8000 with 3G/UMTS wireless module

Remote measurement without mains power

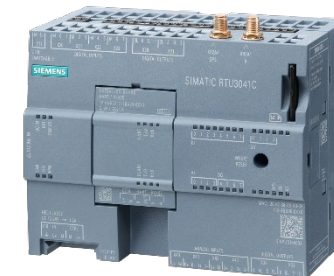
MAG8000 with WCM	7ME68X0-XXXXX-XXSX
MAG8000 with WCM and analog input for pressure input	7ME68X0-XXXXX-XXTX



SIMATIC RTU30xxC and sensors

Collection and transmission of level, flow rate, filling height, temperature, pressure without mains power.

SIMATIC RTU3010C (Ethernet)	6NH3112-0BA00-0XX0
SIMATIC RTU3030C (3G)	6NH3112-3BA00-0XX0
SIMATIC RTU3031C (3G + GPS)	6NH3112-3BB00-0XX0
New: SIMATIC RTU3041C (LTE-M/NB-IoT + GPS)	6NH3112-4BB00-0XX0
HART/RS485 Extension Board	6NH3112-3BA00-6XX1



SITRANS serve IQ

Order info (2/2)

Base License

Serve IQ perpetual 10 dev

Serve IQ perpetual 10 dev with IEC 60870-5-104

Upgrade Options

Serve IQ add 1 device

Serve IQ add 10 devices

Serve IQ add 100 devices

Serve IQ add 500 devices

Serve IQ add IEC 60870-5-104

Entry Packages

Serve IQ 90D trial 2 dev

Notes

- For ordering information, kindly refer to the **PIA – Portal** <https://www.pia-portal.automation.siemens.com/default.htm> using the MLFB root: **6BG0000AA10** *
- SW and licenses will be delivered via OSD or USB stick

The screenshot shows the Siemens PIA Life Cycle Portal search results for the query "6BG0000AA10". The page displays four search results, each with a product number, description, and a "to watch list" button. The results are:

- Serve IQ 90D trial 2 dev OSD** (Product number: 6BG0000-0AA10-0CR): SITRANS serve IQ with 90-day trial for 2 devices. Software online download. On-premise application for Windows to acquire measurement data from remote devices, store, and visualize in trends via web browser. SITRANS serve IQ product sheet & specific terms and software licensing conditions shall apply. For price information please contact your local partner.
- SITRANS serve IQ Perp 10 dev OSD** (Product number: 6BG0000-0AA10-0CS): SITRANS serve IQ with perpetual license for 10 devices, software and license online download. On-premise application for Windows to acquire measurement data from remote devices, store and visualize in trends via web browser. SITRANS serve IQ product sheet & specific terms and software licensing conditions shall apply. For price information please contact your local partner.
- Serve IQ Perp 10 dev with IEC OSD** (Product number: 6BG0000-0AA10-0CS): SITRANS serve IQ with perpetual license for 10 devices and IEC 60870-5-104 protocol. Software and license online download. On-premise application for Windows to acquire measurement data from remote devices, store and visualize in trends via web browser. SITRANS serve IQ product sheet & specific terms and software licensing conditions shall apply. For price information please contact your local partner.
- SITRANS serve IQ add 1 dev OSD, lic** (Product number: 6BG0000-0AA10-1CA): SITRANS serve IQ license upgrade for 1 additional device. Online download. For price information please contact your local partner.

The right sidebar contains search filters for Product family (Process Instrumentation and Process Analytics) and Serial number, along with a "PIA Mobile" section for optimized access on mobile devices.

Thank you for your attention!

For further information and support, please contact:

Mr. Tran Duy Long

Siemens Digital Industries Vietnam

Mobile: +84 (91) 1301 548

Email: tran-duy.long@siemens.com

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