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Smart Buildings SHOW

18-19 October 2023 • ExCel London

SAUTER

Smart Buildings

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Words that encapsulate smart technologies and their objectives…

"Smart"

"Transparency"

"Sustainability"

"Innovation"

"Enhanced Building FM"

"Predictive"

"Analytics"

"Adaptive"

"Optimisation"

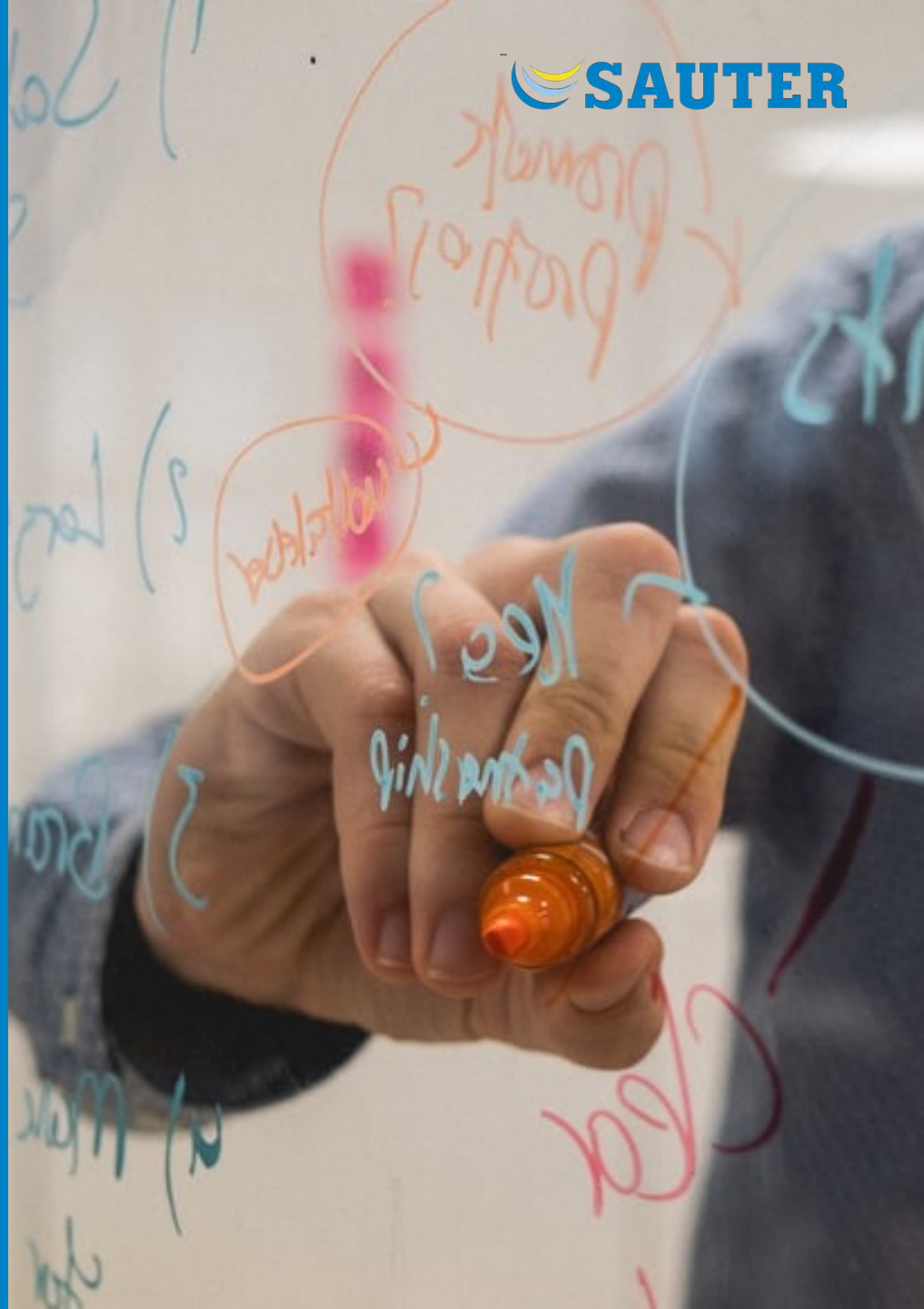
"Energy Efficiency"

"Integration"

"Big Data"

"Autonomous"

"Carbon Emission



“Global market size for AI based energy saving is projected to reach $30.9 billion by 2026, $10.7 billion in 2020.”

Market and Market 2020

“UK Market is estimated to grow 27% to £300 million between 2020-2025.”

Global Market Insights 2020

“The 2021 Energy saving trust survey found that 83% of UK house-holds would employ AI based energy savings technologies if they became available.”

2021 Energy saving trust survey

Today's needs & Challenges…

- Space
- Installation
- Engineering
- Time

Benefits…

- ✓ Deployment
- ✓ Usability
- ✓ Flexibility
- ✓ Transparency
- ✓ Optimised functionality
- ✓ Predictive Trends
- ✓ Tailored Notifications

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A
B
C
D

Today Conventional becomes Smart……

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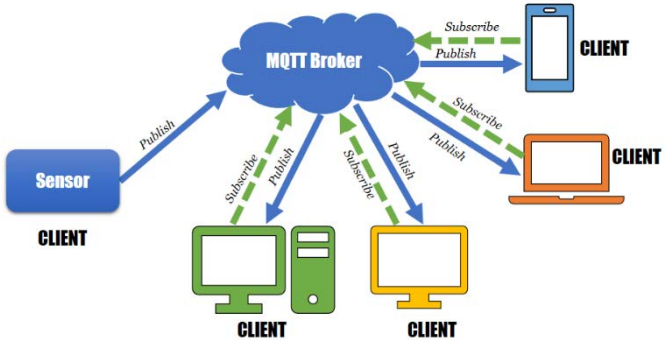
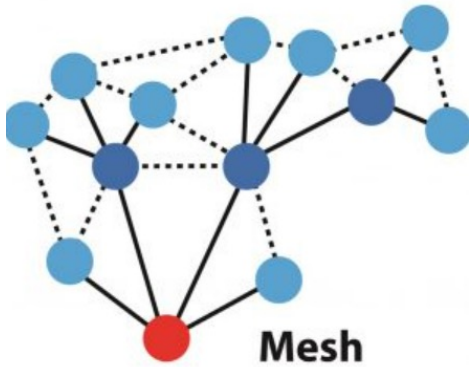




MQTT

Challenges need intelligent solutions…

Take control of your room climate and environment

- **Measure** a wide range of **room environment parameters** (multi-sensor)
- Visual, programmable feedback to users and facility managers that **displays the room and sensor statuses**
- Localisation in the room so that **app loads individual** room configuration from SAUTER Mobile Building Services (MBS) for the **room operation**
- Networking of the measured values via a robust, wireless **mesh network**
- Seamless **integration** into SAUTER **room automation** (ecos504/505)
- Sensor easy to configure (CASE, smartphone, NFC)
- **IoT-capable**, can be connected directly or indirectly to an IP network or **for the cloud**

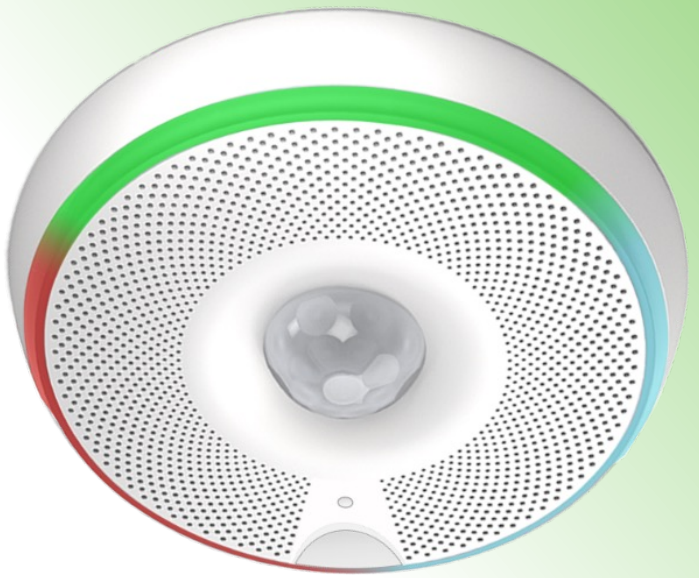
Smart monitoring…

- Temperature (TEMP)
- Humidity (HUM)
- Volatile mixed gases (VOC)
- Presence / Occupancy (PIR)
- Brightness (LUX)
- Noise level (MIC)

Smart Sensors……

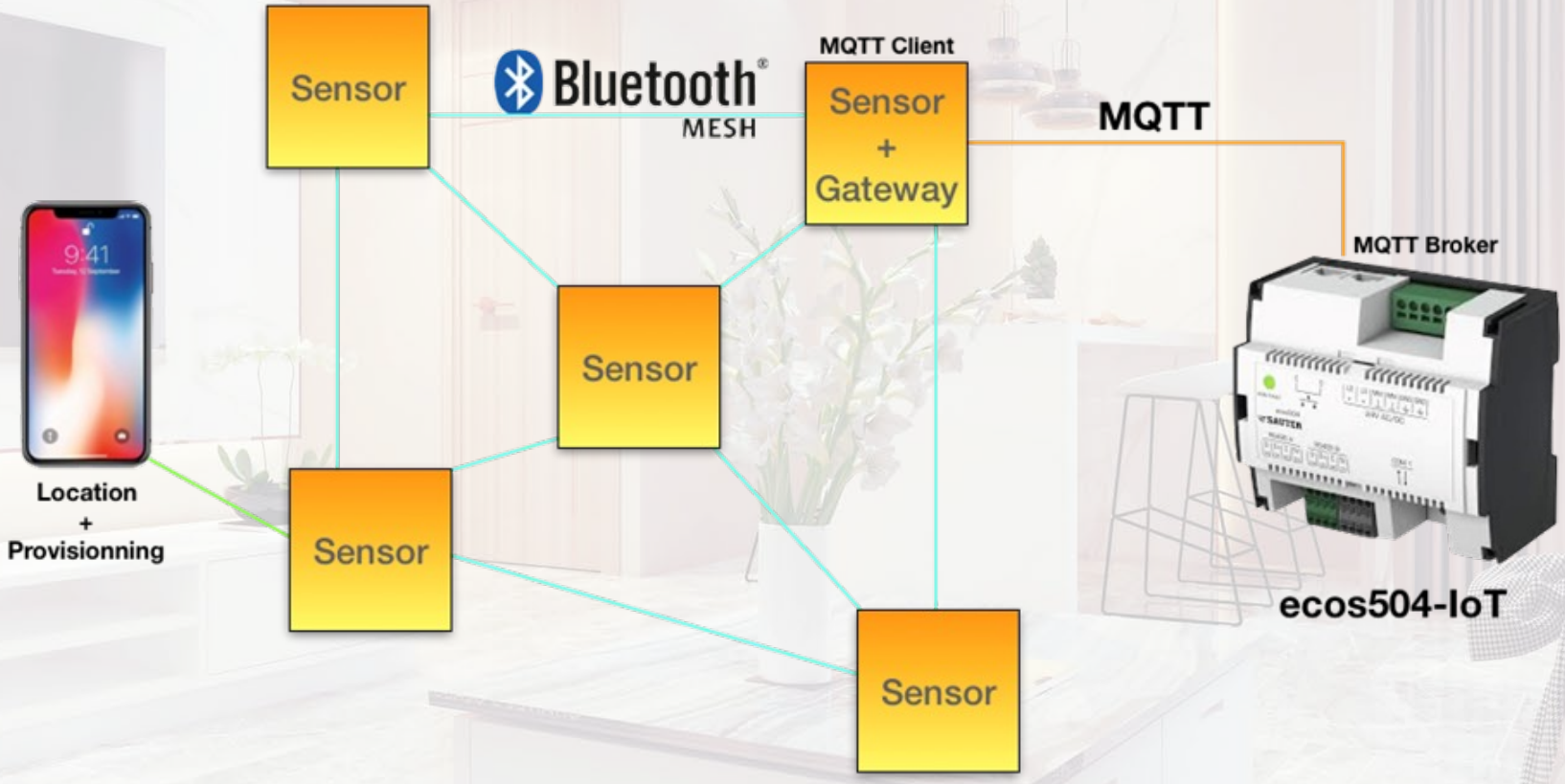
viaSens116 – Fusion Mesh multi-sensor

viaSens196 – Fusion Mesh multi-sensor with Ethernet/IoT-MQTT

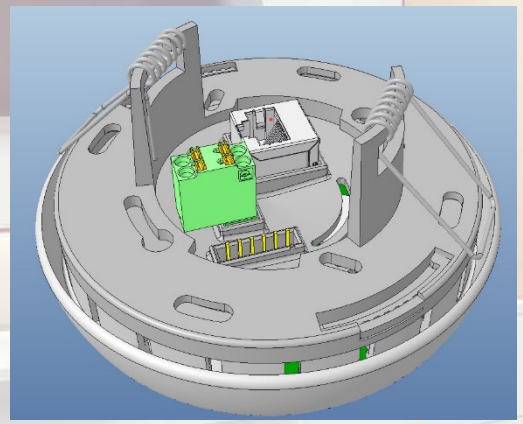


- Wireless networking with Bluetooth Mesh
- Geo-localisation through Bluetooth beacon
- Multi-sensor for room automation
  - Temperature (TEMP)
  - Humidity (HUM)
  - Volatile mixed gases (VOC)
  - Presence / motion (PIR)
  - Brightness (LUX)
  - Noise level (MIC)
- Visual display (RGB LED ring)
- Interaction with smartphone app
- Integrated into automation via IP / Ethernet

Minimum installation, Maximum flexibility……



Simple Installation……



- Ceiling mounting (installation height: 2.5...3.5 m)
- Power supply: 24 V DC pluggable push-in terminal
- Accessories for hollow ceilings or surface mounting
- Wireless communication

Smart - Intelligent - Control…

- Integrated control applications
- Data exchange with the cloud
- Comprehensive network integration
- Local trend storage
- Local calendar

Connections made easy…

- Smart pluggable connectors
- Keyed / Colour coded / Marked
- Significantly reduced fitting times
- Lower error rates
- Increase the quality of the installation.

SAUTER Smart Actuator – uncompromising performance…

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Connection and status signals for early visual detection of faults

Universal I/O + 24V

Error-free fitting with coded and pre-assembled connection cables

Time-saving actuator and valve fitting using bayonet connector

Bluetooth LE and WiFi for commissioning and cloud connection

I/O box with RS485
Universal I/O + 24V

Tried and tested transmission system

BACnet protocol for integration into the building automation

Extend the system where required…

Maximise the range of applications by using an I/O box

- RS485 Sauter Local Communication (SLC) connection to the Smart Actuator
- 24V AC/DC connection with up to 200 mA directly from the Smart Actuator
- 6 universal inputs / outputs
- 3 relay outputs of 10 A each (changeover contact)
- RS485 Sauter Local Communication (SLC) for connecting local operating units

- Max. 2 I/O boxes per Smart Actuator

Autonomous control – Intelligent integration…

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Application library

Device management

Application creation

1 Vorregelung Lufterhitzergruppen/ statische Heizung
2 Raumtemperaturgeführte Vorlauftemperaturregelung
3 Witterungsgeführte Vorlauftemperaturregelung für Wärmetauscher
4 Raumtemperaturregelung mit 6-Wege-Ventilen
5 Druckunabhängiges Regelventil (PICV)
6 Energieventil
7 Zulufttemperaturregelung

Remote

Commissioning and maintenance

Local

WiFi

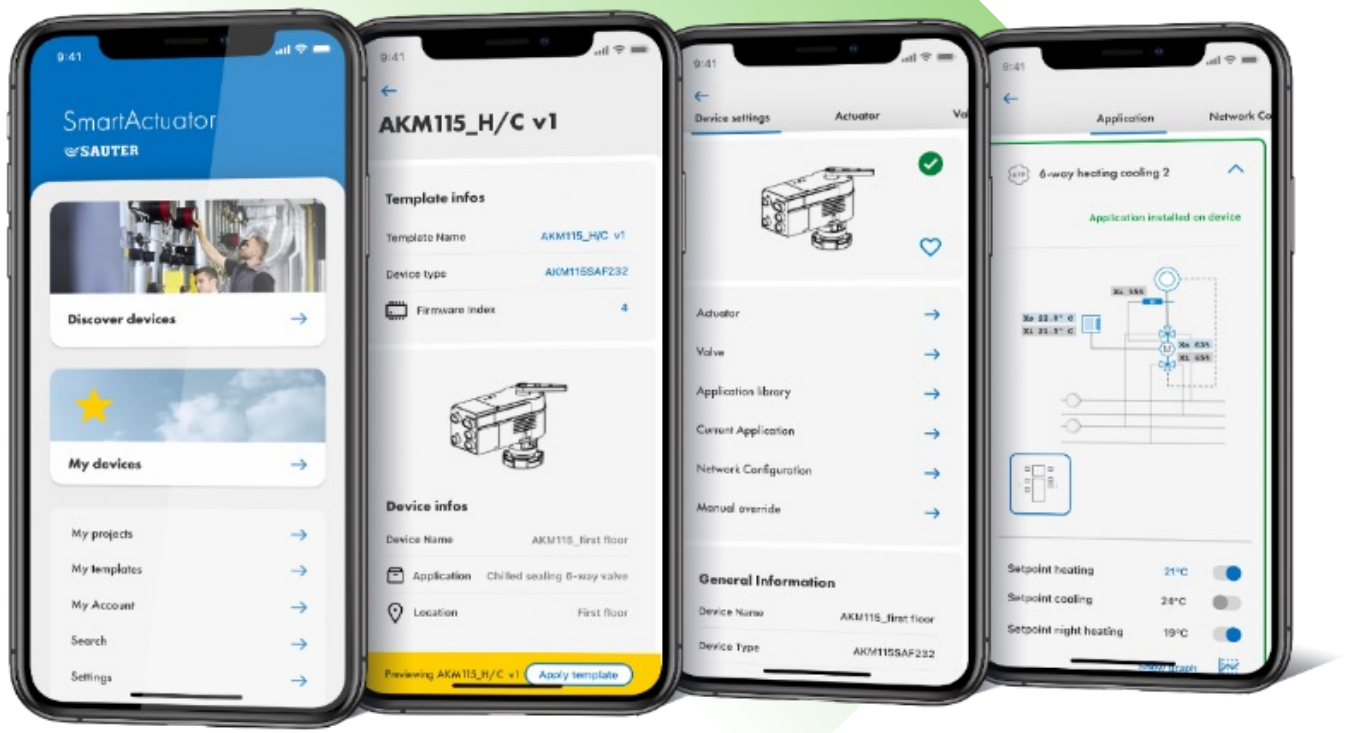
ASHRAE BACnet™

BLE

Building automation

Smart commissioning and project management…

Optimise your available time in the project



- Commissioning via Bluetooth
- Assignment of devices to projects
- Processing of projects in teams
- Visualisation of operating data
- Carry out system optimisations and system checks
- Save and export commissioning data for documentation purposes
- Manage cloud connections
- Remote access to all system data

Why go smart?…

Faster commissioning, maintenance and operation via Mobile APPs.

Reduced installation costs.

Smaller or no cabinets due to relocation of I/Os.

Reduced fire load due to less wiring.

Greater flexibility to meet the client’s needs.

Smart Combined with AI - The Future!

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Smart Vision

Smart Actuator

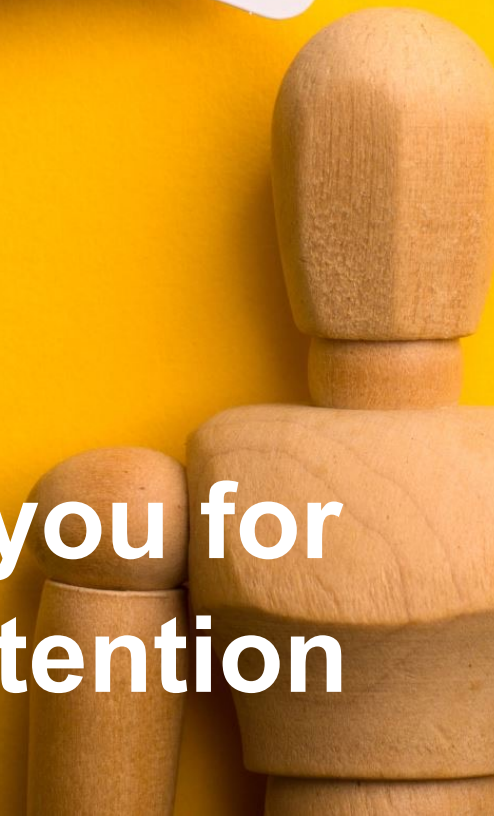
secondsight
automated management systems

Smart Sensor

Smart Room Control
Sauter 504

Smart Outstations
Sauter Modulo 6

Any BACnet enabled BMS system



Thank you for your attention

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9-10 October 2024 • ExCeL London

We look forward to seeing you in 2024