

# EQUIP Webinar

## EQUIP Product Portfolio Update

Jo Chan | Product Solutions Group | 05/21/2026



# EQUIP Portfolio



Sensing Devices	Acting Devices	Power	Network	HMI	Product Solutions
-----------------	----------------	-------	---------	-----	-------------------

Gas Detection  
Pressure Sensors  
Occupancy Sensors  
Temperature & Humidity Sensors



Actuators  
Dampers  
Drives  
Valves



Current Sensors  
DIN rail UPS  
Energy Meters  
Power Supplies



Ethernet Switches  
Gateways  
Routers  
Interfaces and Concentrators



Room Monitors  
Thermostats  
Touch Screens  
Scene panels



VFDs  
enteliPREM  
enteliVIEW



## Access

Cards and Card Readers  
Door Locks  
Door / Window Sensors  
Network Cameras  
Network Video Recorders  
Software



## Lighting

Light Color Sensors  
Light Level Sensors  
Lighting Controls  
Retrofit Kits  
Switches  
Twilight Sensors



## Air Quality

IAQ monitors  
Ionizers  
UVC Lamps  
PM Sensors  
CO2 thermostats  
Outdoor IAQ stations



## Hardware

Electrical Enclosures  
Meters and Gauges  
Relays and Switches  
Transformers and Fuses  
Wire and Cable  
Wireless Products



## Equipment

Ionization Units  
Dampers





Delta IBT  
Equip Webinar 2026  
With Milesight and Setra

# Speaker Profile



## Rainfie Chen, IoT Partner Executive, Milesight

Rainfie is the IoT Partner Executive at Milesight, bringing extensive experience and a profound understanding of the IoT ecosystem. Specializing in LoRa technology, she excels in both product development and market strategy. With a keen eye for innovative technologies and their practical applications, Rainfie is adept at identifying emerging trends and opportunities within the IoT landscape.

# About Milesight

Intelligent Sensing. Global Scale

**2000+**

Distributors and System Integrator Partners

**1M+**

Products Deployed

**67.7%+**

CAGR from 2013 to 2024

**120+**

Countries & Regions

Our mission is to "**Make Sensing Matter**" — transforming sensing technology into real-world impact.



# Milesight Product Matrix

## Sensing Nodes

This section displays various Milesight sensing nodes categorized into six groups:

- HVAC Control:** Includes smart thermostats and sensors for climate control.
- Indoor Air Quality:** Features sensors for monitoring air quality and CO2 levels.
- Temp.&Humi. Detection:** Shows sensors for temperature and humidity monitoring.
- Co-WorkSeries Electricity Control:** Displays smart light switches and electrical control modules.
- CT & CTH Energy Monitoring Series:** Includes current transformer (CT) and current transformer hub (CTH) sensors for energy monitoring.
- Occupancy & People Counting:** Shows a variety of sensors and cameras used for detecting occupancy and counting people.

## Connection

This section displays Milesight connection hardware:

- LoRaWAN® Gateway:** Shows a large outdoor gateway device for long-range communication.
- Building IoT Gateway:** Displays a compact gateway device for building automation.
- Industrial Cellular Routers:** Shows rugged routers with multiple antennas for industrial environments.

## Vertical Industries

This section displays Milesight solutions for various vertical industries:

- Smart Building:** Represented by a building icon.
- Smart Retail:** Represented by a storefront icon.
- Cold Chain & Logistic:** Represented by a truck with a refrigeration unit icon.
- Smart City:** Represented by a city skyline icon.
- Smart Industry:** Represented by a robotic arm icon.
- Smart Agriculture:** Represented by a field with crops icon.
- Beaver IoT:** Represented by a laptop displaying a dashboard.
- DeviceHub:** Represented by a laptop displaying a device management interface.
- Milesight VPN:** Represented by a computer monitor showing a network diagram.
- Milesight Development Platform:** Represented by a 3D cloud icon with a person and a gear.

# Smart Integrated HVAC & Facility Management Solution



## Milesight HVAC & Facility Management

- AC, heat pumps, boilers, and PTAC Management
- Meter Retrofitting Solutions



## Benefits

- Monitor the status remotely
- Control systems automatically
- Customizable settings & scheduling

# HVAC Control System Upgrading in a Hotel



## Location

Cordoba, Argentina

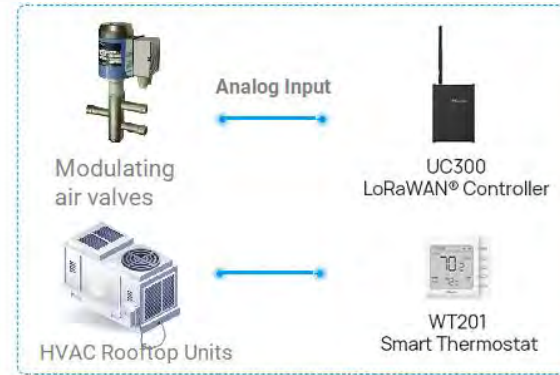


## Background & Challenges

- No In-Room Temperature Control
- Scalability Constraints
- Manual & Inefficient Operations
- No Real-Time Room Data

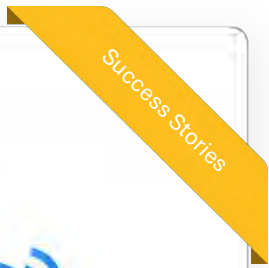


## Solutions & Products & Benefits



## How it Works?

17 pcs of WT201 Smart Thermostat - Installed in rooms supporting real-time room monitoring and adjustment. 16 pcs of UC300, the IoT controllers drive existing air valves for airflow management and 1 pcs of UG65 LoRaWAN gateway to cover the full area's LoRaWAN network.



# HVAC Control System Upgrading in a Hospital



## Location

France



## Background & Challenges

BACS, Building Automation and Control Systems, is used to control technical installations in buildings, and can help to achieve rapid energy savings at reasonable cost. These BACS make it possible to reduce energy consumption while ensuring the comfort and health of the building's occupants.



## Solutions & Products & Benefits



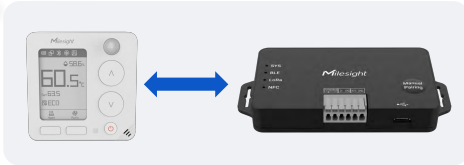
## How it Works?

**The integrated IoT solution complies with BACS standards, helps hospitals reach CEE Level A energy efficiency, and boosts monitoring, reporting and overall operational efficiency.**

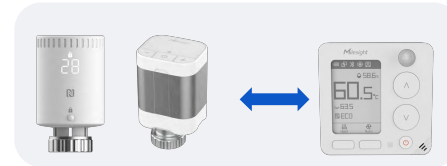
- Milesight WT101 Smart Radiator Thermostat enables room-wise independent temperature control. It auto-adjusts radiator hot water flow via ambient temperature monitoring and limits valve opening to regulate maximum heat dissipation.
- Combined with WS202 PIR&Light Sensor or WS301 Magnetic Contact Switch, it collects real-time room occupancy data to optimize heating control with WT101.



# More Choices Mean More Capabilities: Milesight HVAC Series



- HVAC Type: PTACs/Heat Pumps/ Boilers
- Model: WT401 + UC711 Controller



- Heating Type: Hot Water Radiators
- Model: WT101/WT102 or paired with WT401



- HVAC Type: 24VAC FCU/ Heat Pumps/ RTUs (No economizers)
- Model: WT202 Programmable (Lua / C languages)



- HVAC Type: Heat Pumps/ RTUs/PTACs/ Boilers
- Model: WT201



- HVAC Type: Fan Coil Units
- Model: WT303/304



- HVAC Type: Split AC (Infrared Control)
- Model: WT401 + UC701 Controller

# Energy Management | Meter Management



**Location**  
San Jose, CA, USA

**Milesight Partner**  
myDevices & Install IoT

## Background & Challenges

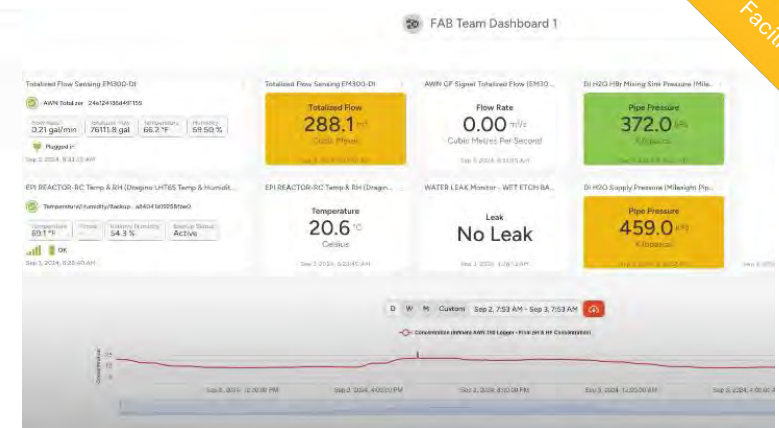
A semiconductor factory needed to monitor critical data points in real time to enhance operational efficiency and risk management.

## Solutions & Products & Benefits

- LoRaWAN Solution brings integration in resource management and remote management
- Get real-time alerts to prevent unplanned downtime and reduce waste, all managed seamlessly through the myDevices platform.

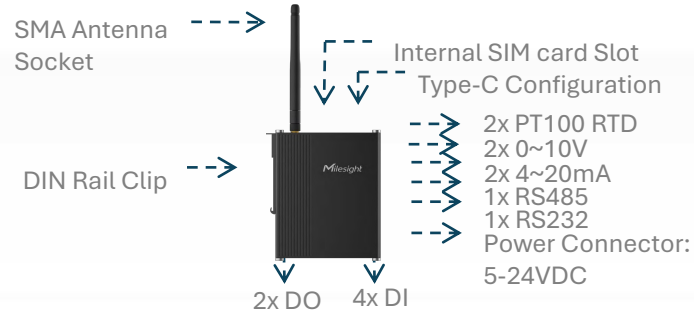
## How it Works?

- myDevices & Install IoT have deployed advanced IoT solutions in San Jose, CA, optimizing resource usage and minimizing risks. With 25 devices, including UC300 IoT Controller, EM300-DI Pulse Counter, and EM500-PP Pipe Pressure Sensor, connected through LoRaWAN, we're enhancing operational efficiency and safeguarding machinery.



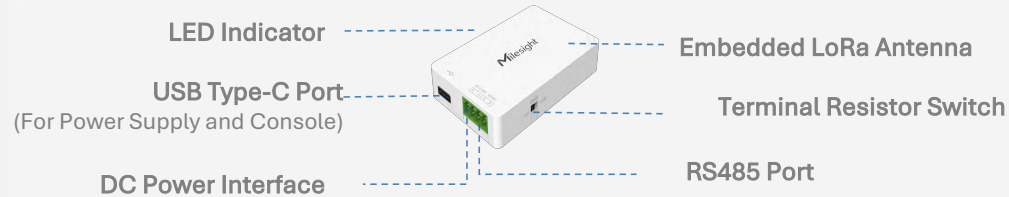
Facility Management

# Meter Retrofits & Wired System Upgrades



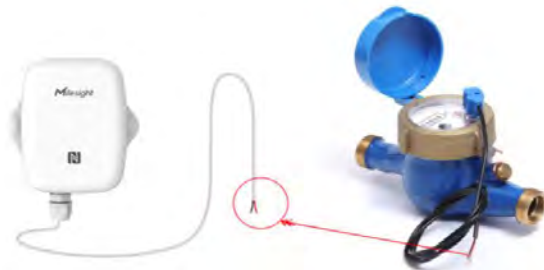
## ▶ UC300 Smart IoT Controller

- RS232/RS485/Analog Input Interfaces
- Opto-isolated DI and AI (4-20mA) Interfaces
- Intelligent Trigger System (Up to 16 commands)
- Autonomous Operation (Executing commands even when network is unavailable)



## ▶ UC100 IoT Controller

- Compact Sized For More Flexible Deployment
- Modbus RS485 to LoRaWAN® Converter
- Customizable Trigger Commands up to 16
- Milesight D2D Controller & Agent



## ▶ EM300-DI Pulse Counter

- High Accuracy: Filter out Interference Signals Automatically
- Refresh, Clear and Accumulated Counting
- Data Storage, Retransmission and Retrievability
- Built-in Temp. & Humidity Sensor

# Energy Saving and Space Efficiency Solution



## Mileight Energy & Space Management

- Energy Management
- People Counting & Space Management




## Benefits

- Monitor the status remotely
- Valuable People Data
- Energy Parameters

# Revolutionizing the Management of a Concert Hall



 **Location**  
Spain

 **Background & Challenges**

In the entertainment industry, venue management faces increasing demands for energy efficiency, environmental quality, and customer experience. A renowned concert hall in Spain turned to IoT solutions to address these challenges.

## Solutions & Products & Benefits

This project helped the concert hall in Spain enhance operational efficiency and improve the overall audience experience.

- VS133 AI ToF People Counting Sensor - Real-time foot traffic monitoring for efficient crowd management
- CT101 Smart Current Transformer - Non-intrusive, real-time power consumption monitoring for efficient energy control
- AM103 IAQ Sensor - Real-time air quality monitoring for enhanced comfort
- WS302 Sound Level Sensor - Noise monitoring for optimal sound level

## How it Works?



Success Stories

# Revitalizing Energy Efficiency at the Historic Theater



**Location**  
Rome, Italy

**Background & Challenges**

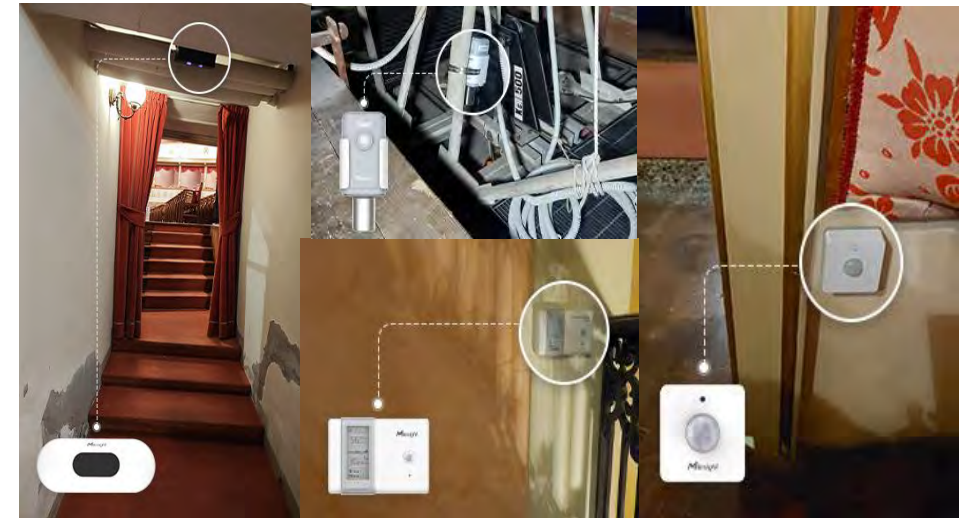
A historic theater in Rome faced difficulties optimizing energy use and managing guest flow due to its aged infrastructure, thick walls, and preservation constraints. Challenges included poor air quality, limited occupancy data, and cabling difficulties.

## Solutions & Products & Benefits

This project helped enhance the theater's sustainability, improve the guest experience, and increase operational efficiency.

- 175 \* WS202 PIR & Light Sensors - Occupancy monitoring & light control in balconies and bathrooms
- 50\* AM307/ EM500-CO2/ EM300-TH Sensors - Real-time air quality monitoring for optimal audience comfort
- 17 \* VS133 People Counting Sensors - GDPR-compliant people counting at bar and entrance for people flow data
- 11 \* UC100/ UC300 IoT Controllers - Integrate sensors for centralized environment and energy control
- 4 \* UG65 LoRaWAN® Gateways - Wireless data transmission for reliable connectivity



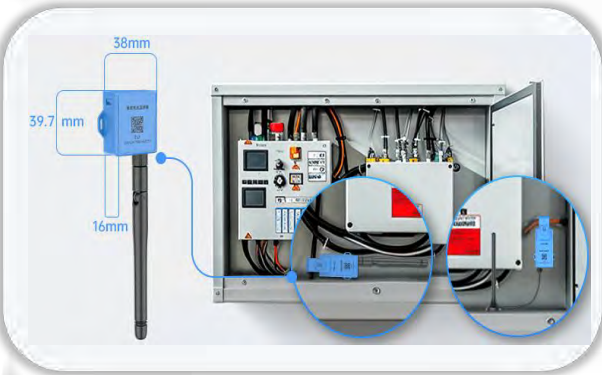

## How it Works?



Success Stories

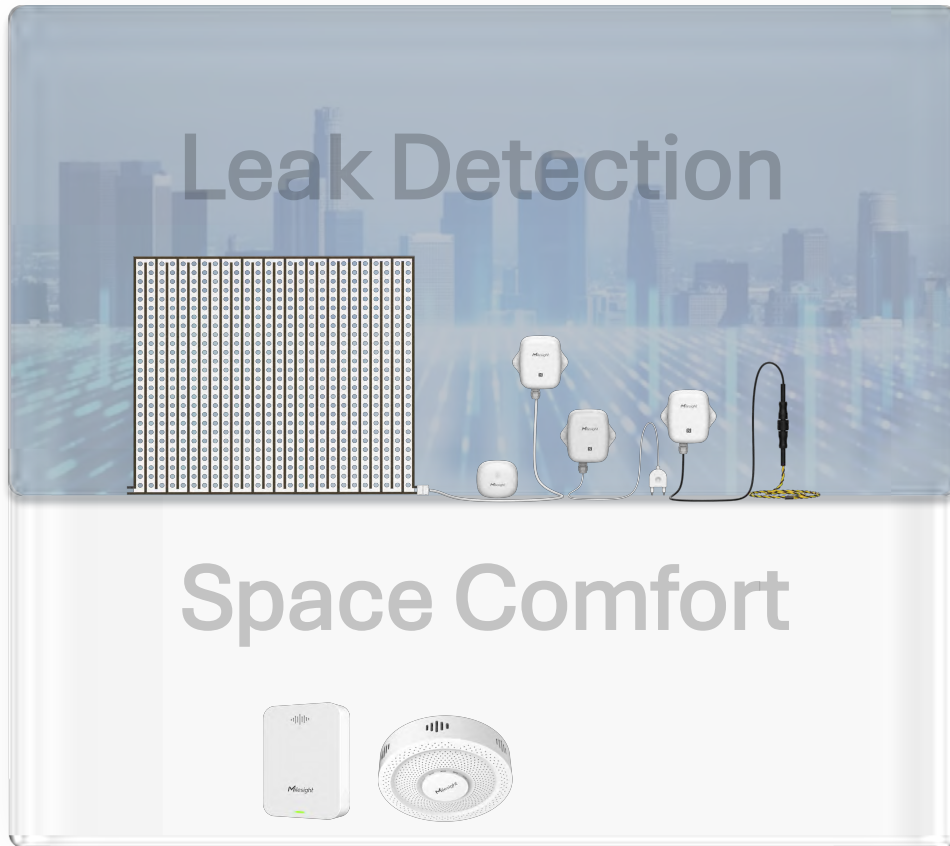
# Space Efficiency Product Matrix



 <p><b>▶ WS302 Sound Level Sensor</b></p> <ul style="list-style-type: none"> <li>• Accurate sound level measurement</li> <li>• Threshold alarms</li> <li>• More than 4 years battery life</li> <li>• Compact size, flexible installation, and NFC configuration</li> </ul>	 <p><b>▶ WS202 Motion &amp; Light Sensor</b></p> <ul style="list-style-type: none"> <li>• PIR-based lighting management</li> <li>• Accurate brightness measurement</li> <li>• LoRaWAN wireless connectivity &amp; NFC effortless configuration</li> <li>• Up to 4 years battery life</li> </ul>
<p><b>▶ CT Smart Current Transformer</b></p>  <p><b>Analyzing Energy Consumption Trends</b></p> <ul style="list-style-type: none"> <li>• Measure Current Invasively &amp; Report Estimate <b>Energy Consumption</b> (Manual Power Factor &amp; Voltage Configuration), Temperature</li> </ul>	<p><b>▶ CTH01 Smart Power Monitor Hub</b></p>  <p><b>Energy Data Precise Calculation</b></p> <ul style="list-style-type: none"> <li>• <b>Measurement:</b> Voltage, Low-current, Power Factor, Active Power, Apparent Power, Reactive Power Energy Consumption, Temperature, THDi &amp; THDv, TPVUD</li> </ul>



# Building Comfort & Security Solution



## Milesight Water Management

- Spot & Space Water Leak Detection
- Water Meter Management Through IoT Transformation
- Gas Detection: Odor or Vape Detection



## Benefits

- Monitor the status remotely and send alarm timely
- Built an Integrated IoT-Based Water Management system
- Open to Programmable & Customized Adjustments

# Facility Management | Water & Leak Management



## Location

1111 Atwater St., Montreal, Quebec, Canada



## Milesight Partner

Thingsfactory



## Background & Challenges

1111 Atwater St. is a marquee 38-floor condominium and rental building with 238 units, located in the heart of Montreal. In early 2021, our partner, Thingsfactory, was asked to provide a comprehensive solution for water leak detection and protection.



## Solutions & Products & Benefits

Early detection of leaks can save time and money in the long run, as administrators can take steps to prevent further damage. Building owner can get informed in real-time and make it predictive.



Facility Management



## How it Works?

- Over 1,200 Milesight EM300-SLD Spot Leakage Detection Sensors were installed in bathrooms, laundry rooms, kitchens, and mechanical rooms.
- UC1114(UC50x ) IoT Controller control 1.5 inches ball valves and 2 1/2 inches butterfly valves on risers. UC300 IoT Controller also control dual hot and cold 3/4 inches ball valves in condominiums.
- UG67 serves as a master (fleet mode) controlling the data received by UG56 & UG65 for building a LoRaWAN network.

# Energy Management Product Matrix



## ▶ EM300-SLD Spot Leak Detection Sensor

- Spot leak detection (2 Metal Probes)
- Built-in Temp. & Humidity Sensor
- Trigger once liquid level reaches 0.5mm



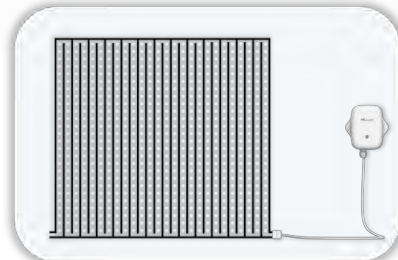
## ▶ EM300-ZLD Zone Leak Detection Sensor

- Zone Leak Detection ( 3m Detection Rope & Support Customization )
- Built-in Temp. & Humidity Sensor
- Non-locating leak detection cable



## ▶ EM300-MLD Membrane Leakage Detection Sensor

- Broader Zone leak detection (40x40cm default)
- Customizable, reusable adhesive membrane
- Easy buckle connection



## ▶ WS303 Mini Leak Detection Sensor

- Spot leak detection (2 Metal Probes)
- A built-in buzzer for local Alarm
- Up to 5 Years Battery Life
- Trigger once liquid level reaches 0.5mm
- Capacitor for low-power alarm



# Data-Driven Airport Management for Better Passenger Experience



## Location

Jacksonville International Airport, Florida, US

## Milesight Partner

Senzary LLC / Actility (TPE)

## Background & Challenges

Passengers frequently complain about the lack of clean, well-stocked restrooms near their gates, exacerbated by custodians' arbitrary cleaning schedules that don't align with real-time usage or peak passenger times.



## Solutions & Products & Benefits

Restroom cleaning schedules will be optimized based on historical utilization data and projected passenger traffic, which will soon integrate with FlightAware systems for even more precise forecasting, ensuring the least amount of disruption for passenger traffic.



## How it Works?

- GS301, installed in airport restrooms, detects ammonia and H<sub>2</sub>S to trigger targeted cleaning
- AM308L in passageways monitors CO<sub>2</sub>, PM2.5 and other parameters for dynamic HVAC adjustment.
- VS350 at restroom entrances uses dual PIR sensors to accurately count bidirectional foot traffic.
- Actility's ThingPark Platform in the server room ensures stable network performance even during outages.



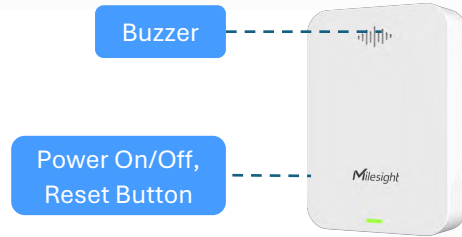
Facility Management



# Space Management in Building & Retail

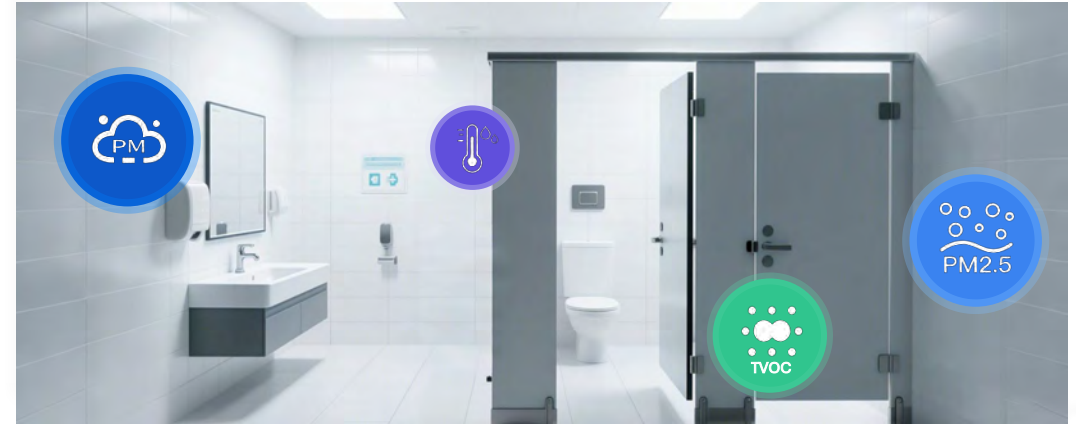
## Keep Hospital Restrooms Fresh and Hygienic

- Humidity & temperature & NH<sub>3</sub> & H<sub>2</sub>S
- NH<sub>3</sub>: 0~10ppm | ±5% Accuracy
- H<sub>2</sub>S: 0~5ppm | ±5% Accuracy
- LED lights indicator & built-in buzzer
- Support Milesight D2D
- High sensitivity (Up to 2.5m height)



## Detect Vaping & Smoking in Privacy-Sensitive Areas

- Versatile detection parameters (Vaping/smoking/TH/TVOC/PM1.0/PM2.5/PM10)
- Rich threshold alarms (LED & buzzer)
- Anti-theft alarming by vibration detection
- Zero privacy intrusion – no camera, no microphone, no audio recording



# Space Management in Building & Retail



## Milesight People Sensing

- People Flow Statistics & Attribution Detection
- Occupancy & Space Resource



## Benefits

- Manage the space smartly
- Business-related statistics from data value
- Privacy-concerned Solution

# Space Optimization in an Old Theater



## Location

Mercat de la Boqueria, Spain



## Milesight Partner

Mercat de la Boqueria



## Background & Challenges

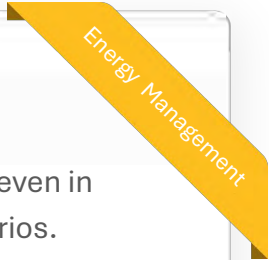
Large public venues, just like the famous tourist market in Spain, are striving to enhance visitor experience by optimizing crowd flow. However, traditional monitoring systems often struggle to deliver accurate data in complex lighting and high-density environments.

## Solutions & Products & Benefits

- **Exceptional Accuracy:** 99.8% industry-leading precision ensures reliable visitor trend tracking, even in 0 Lux low-light conditions, delivering consistent performance under versatile application scenarios.
- **Flexible and Scalable Deployment:** rich connectivity options for seamless integration with the local setup and current system
- **Optimized Operations:** Accurate data supports smarter resource allocation and on-site management

## How it Works?

- VS125 AI Stereo Vision People Counter - leverages AI and Binocular Stereo Vision technology to achieve an impressive accuracy and rich attributes recognition while complying with GDPR, despite the low-light conditions.



# IoT-Driven Enhancements in Hospital Comfort and Efficiency



**Location**  
Spain

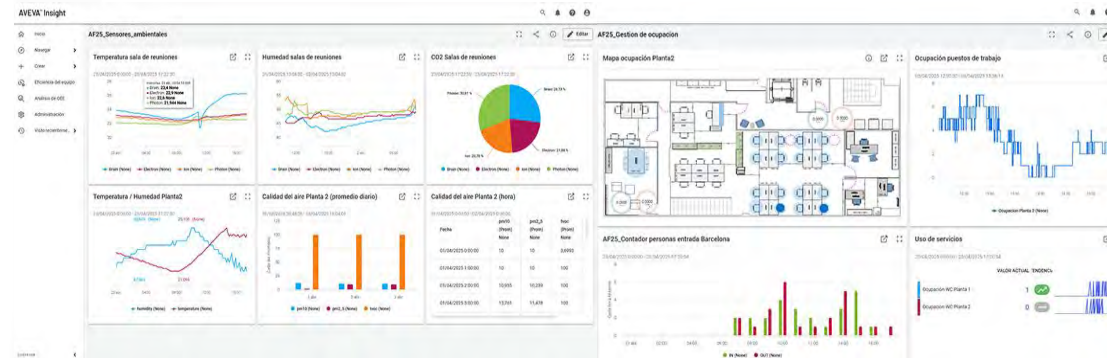
**Background & Challenges**

Monolithic aimed to modernize its office in Barcelona by creating a smarter, more efficient workspace. The main challenge was to obtain real-time visibility into space usage and environmental conditions for better facility management and comfort.

## Solutions & Products & Benefits

- VS351/ VS133 AI People Counting Sensors - Track people flow and room usage for smart scheduling
- VS121 Workplace Occupancy Sensors - Monitor desk occupancy for dynamic workspace planning
- AM103/307/319 IAQ Sensors - Monitor indoor air quality to enable real-time HVAC adjustments for healthier and more efficient environments
- WS202 LoRaWAN® PIR & Light Sensors - Detect presence and lighting conditions in restrooms
- WS301/WS303 Sensors - Trigger alerts for door activity and water leaks in critical zones


## How it Works?



# IoT-Driven Enhancements in Hospital Comfort and Efficiency



 **Location**  
Spain

 **Background & Challenges**

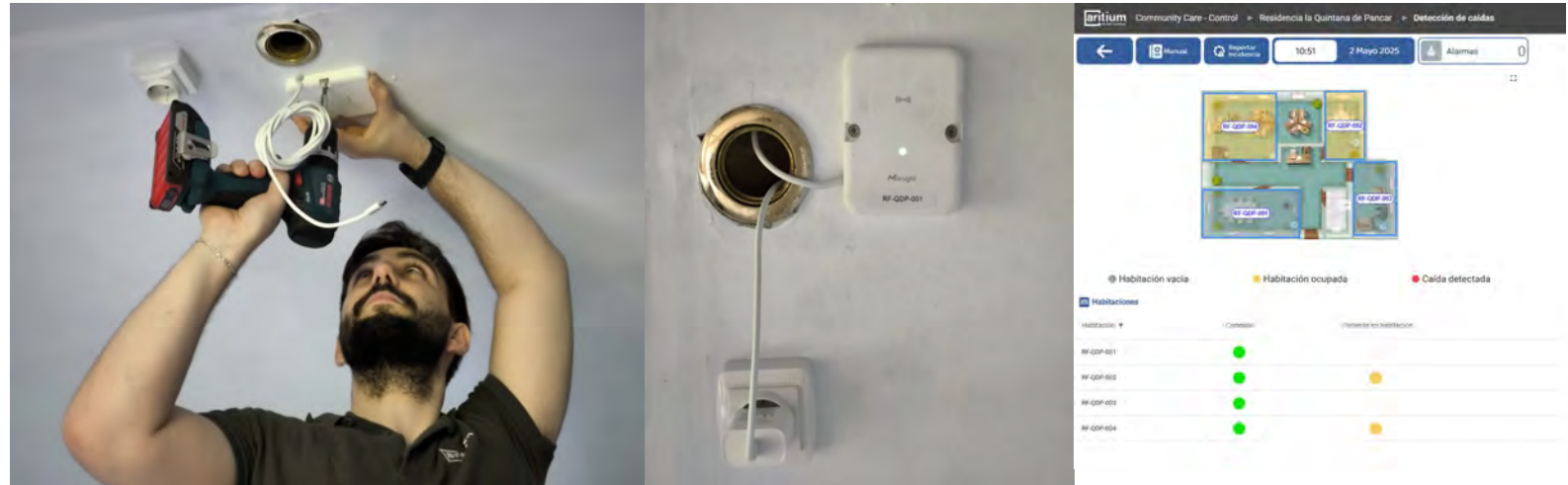
Traditional fall detection systems are intrusive or unreliable. These systems frequently fail to detect real falls in time or generating too many false alarms. The elderly care center needed a non-wearable, automated solution to monitor residents 24/7 and ensure faster response to incidents.

## Solutions & Products & Benefits

This solution was deployed across multiple nursing home wards, playing a key role in enabling **real-time fall detection and response, all crucial for enhancing safety, visibility, and caregiver efficiency.**

- VS373 - the fall detection sensor, installed in bedrooms and connected to Aritium Platform, enabling real-time fall alerts, room and bed occupancy status, and daily tracking of time spent in bed and room.

## How it Works?



Success Stories

# Space Management Product Matrix

## ▶ VS121 AI Workplace Occupancy Sensor

- AI & RGB-Based Solution (GDPR)
- Up to 95% Industry-Leading Accuracy
- Powered by USB Type-C
- LoRaWAN® & PoE Versions



## ▶ VS373 Radar Fall Detection Sensor

- High Fall Detection Accuracy of Up to 99%
- 24/7 Monitoring Even in Dark and Humid Environments
- 100% Privacy Protection



## ▶ Milesight VS People Sensing Family




- People Sensing = **People Counting + People Presense + People Caring**
- Space Data is Valuable in Energy Control & Decision Making
- Innovative Technologies: **ToF, RGB, Radar, PIR, Thermopile**
- Popular in **Buildings & Retail** Industries
- Multiple Communication: PoE/LoRaWAN/4G/WiFi-HaLow

# THANK YOU



 [www.milesight.com](http://www.milesight.com)

 [iot.product@milesight.com](mailto:iot.product@milesight.com)

 Building C09, Software Park Phase III,  
Xiamen 361024, Fujian, China



# **Environmental Monitoring in Healthcare: An Overview of regulatory requirements and best practices**

Presenter: Mai Nguyen – Product Manager, Monitoring Solutions

- ▶ Who is Setra?
- ▶ Environmental Monitoring In Healthcare
  - ▶ Critical Environments in Healthcare - What, Why, How
  - ▶ Common Standards, Compliance and Accreditation
  - ▶ Requirements and Best practices
  - ▶ Common Applications
    - ▶ Selecting the right monitor and sensor suite
    - ▶ Setra's Monitoring Solutions
    - ▶ Setra Product Lines Overview
    - ▶ Q&A
- ▶ Product Concepts Round Table
- ▶ Hands-On with Setra Products

Note: The views and opinions expressed or implied do not represent the views or opinions of ASHRAE, ISO, or USP.



# Who is Setra?

## Background

- Company founded in 1967 by Dr. S. Y. Lee and Dr. Y. T. Li, former professors of Engineering at Massachusetts Institute of Technology (M.I.T.)
- Acquired by Danaher/Fortive in November 2001
- 27 U.S. and international patents

## Resources & Facilities

- Corporate headquarters in Boxborough, MA
- 230+ Employees: Production, Sales, Engineering, Marketing
- 1,400 sq. ft. clean room in U.S.



**We design and deliver premium sensing solutions**



# What are critical environments? Critical Spaces



**High consequence**  
**High risk**

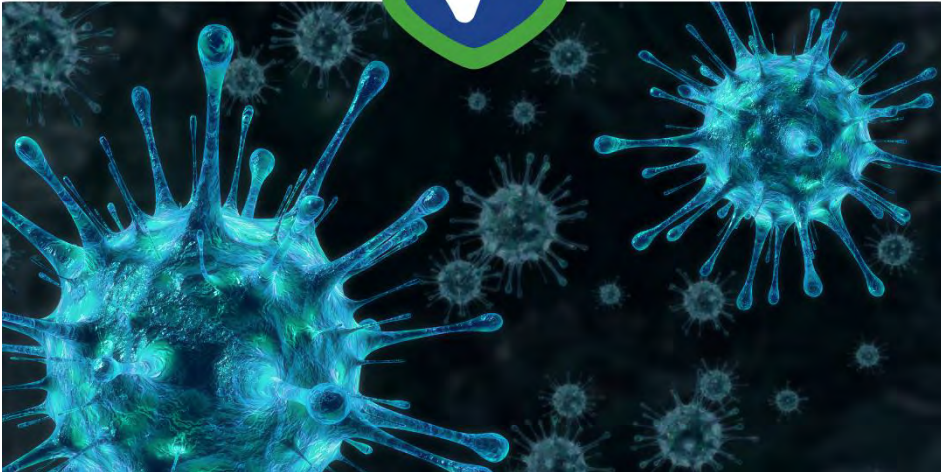


# What are critical environments? Non-Critical Spaces

**Less risk**

**Known impact on facility**





## ▸ Why?

- Infection Prevention
- Safety of patients, caregivers, and hospital staff
- Accreditation = Medicare Reimbursement

## ▸ How?

- Restrict contaminant movement, eliminate bacterial growth and other contaminants
- Monitoring and management of:
  - Pressure relationships
  - Temperature
  - Humidity
  - Air Changes
  - Air Filtration



**Common Standards**

**Compliance and Accreditation**



## **Common Standards**

- ASHRAE-170: Ventilation of Healthcare Facilities (2021)
- Facilities Guidelines Institute (2022)
- Pharmaceutical Compounding
  - USP 795
  - USP 797 (2022)
  - USP 800 (2022)

## **Accreditation / Licensing**

- The Joint Commission
- DNV
- Board of Pharmacy
- FDA Approval (Some Pharmacies)
- Local/State level organizations (i.e. AAAHC)



# **Requirements and Best Practices**



# Environmental Requirements Critical Spaces

Space	Pressurization to Adjacent Space	Pressure Differential (INWC)	Constant Pressure Monitoring	Temperature (F)	Humidity	ACH
Operating Rooms	Positive	.01	Best Practice	68 - 75	20-60	20
Airborne Infection Isolation (All)	Negative	.01	Required**	70 - 75	Max 60	12
All Anteroom	Negative to Corridor Positive to All	.01	Required**	Not Specified	Not Specified	Not Specified
Protective Environments (PE)	Positive	.01	Required**	70 - 75	Max 60	12
Protective Anteroom	Positive to corridor Negative to PE	.01	Required**	Not Specified	Not Specified	Not Specified
Compounding Pharmacy - Hazardous*	Negative	.01 - .03* .02	Required	Max 68	Max 60	30/20/12*
Compounding Pharmacy Non Hazardous*	Positive	.02	Required	Max 68	Max 60	30/20*
Central Sterile Processing / Clean Storage	Positive	Not Specified	Best Practice	68 - 73	Max 60	4
Central Sterile Dirty /Decon	Negative	Not Specified	Best Practice	60 - 73	Not Specified	6

\*Individual spaces within a compounding pharmacy have different requirements based on design and required ISO cleanroom classification

\*\*Require local visual alarming on pressure differential

Table reflects the minimum requirements as defined by ASHRAE-170 and USP-797/800 as well as common design practice



# Environmental Requirements Non-Critical Spaces

Space	Pressurization to Adjacent Space*	Pressure Differential (INWC)	Constant Pressure Monitoring	Temperature (F)	Humidity	ACH
Bronchoscopy	Negative	.01	Best Practice	68 - 73	Not Specified	12
Dirty Linen Storage	Negative	Not Specified	Best Practice	Not Specified	Not Specified	10
Clean Linen Storage	Positive	Not Specified	Best Practice	72 - 78	Not Specified	2
Emergency Departments (Non-Trauma)	Negative	Not Specified	Best Practice	70 - 75	Max 65	12
Emergency Departments (Trauma Spaces)	Positive	Not Specified	Best Practice	70 - 75	20-60	15
Morgue/Autopsy	Negative	.01	Best Practice	68 - 75	Not Specified	12
Laboratory (Pathology)	Negative	Not Specified	Best Practice	70-75	Not Specified	6

- Table reflects the minimum requirements as defined by ASHRAE-170 as well as common design practice as noted
- This is NOT an exhaustive list of spaces



# **Common Applications**



**FLEX/PEM -**  
Advanced  
Multiparameter  
Environmental  
Monitor



**Setra Lite**  
Simple DP only  
monitor



**SRVH**  
Velocity probe  
/ airflow station



**SRH**  
Basic  
Accuracy T/RH



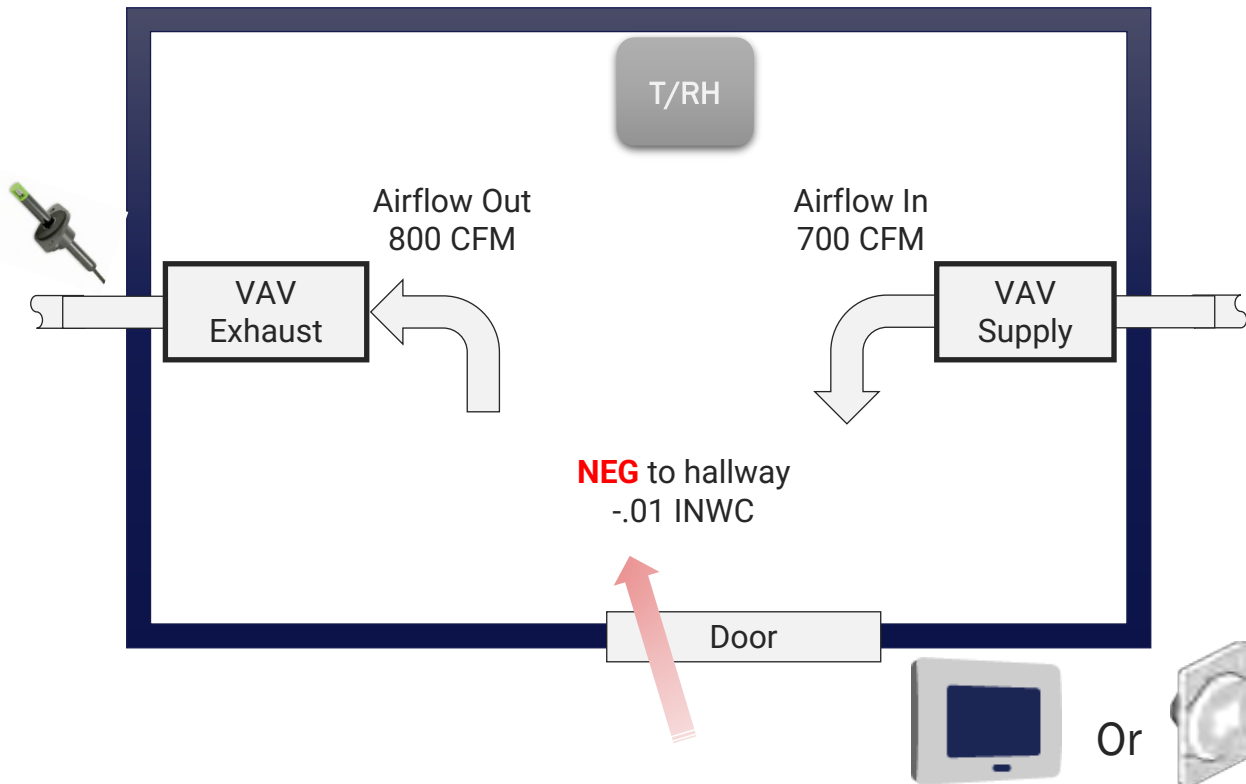
**SRH200**  
High Accuracy  
T/RH



**SPC5000**  
Non-Viable  
Particle  
Counter

## Goal:

Protect staff and public from highly contagious diseases. i.e. TB & COVID19



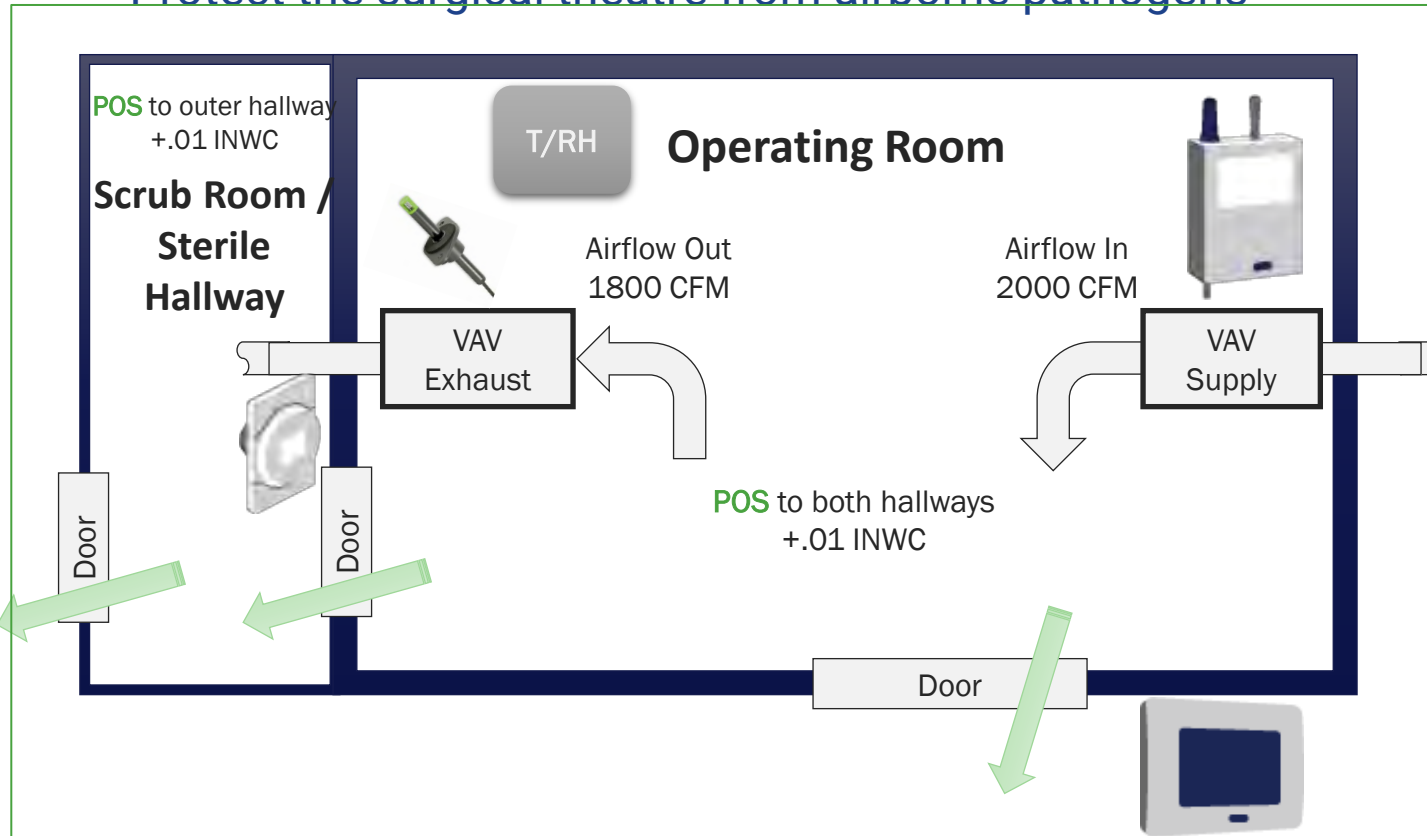
Required: Local visual alarming  
Best Practice: + Audible alarming

Pressurization to Adjacent Space	Negative
Pressure Differential (INWC)	0.01
Constant DP Monitoring	Required
Temperature (F)	70 - 75
Humidity	Max 60
ACH	12



## Goal:

Protect the surgical theatre from airborne pathogens



Best Practice: Local visual and audible alarming

Pressurization to Adjacent Space	Positive
Pressure Differential (INWC)	0.01
Constant DP Monitoring	Best Practice
Temperature (F)	68 - 75
Humidity	20-60
ACH	20



Monitor / Pressure

Temp/Humidity

ACH

Other

## AII / PE

FLEX PEM



SRH



Velocity or Air Flow Sensor



## Operating Theatre

FLEX PEM



SRH200



Velocity or Air Flow Sensor



Particle Counter



## Compounding

FLEX PEM



SRH200



SRVH



Particle Counter



Continuous Compliance monitoring Software

## Anterooms

Setra Lite



## Non-Critical Spaces

Setra Lite



Basic Accuracy T/RH





# Selecting the right monitor and sensor suite

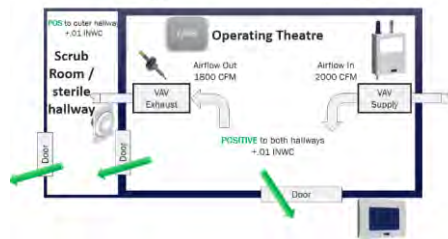
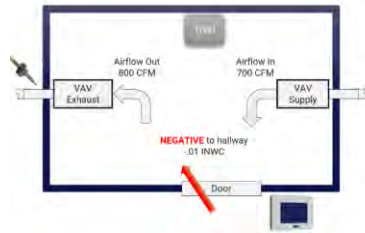


# Selecting the right Room Monitor What to consider?

## Critical or Non-Critical



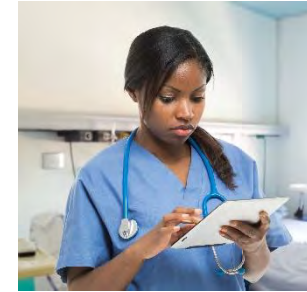
## Single vs Multiroom



## Regulatory Compliance



## End User Needs



## Cost vs Best Practice





# **Setra's Solutions for Healthcare**

## Sensors



Low  
Differential Pressure



Humidity & Temp



Particle Counting



ACH (Velocity)

## Monitors



setraFLEX



setralite



CEMS - Remote Monitoring & Compliance System

2008

SRPM



2012

SRCM



2018

setraFLEX



2020

setralite



- First Pressure Monitor
- Pressure only, 1 room
- BACnet or analog
- Visual & Audible alarm

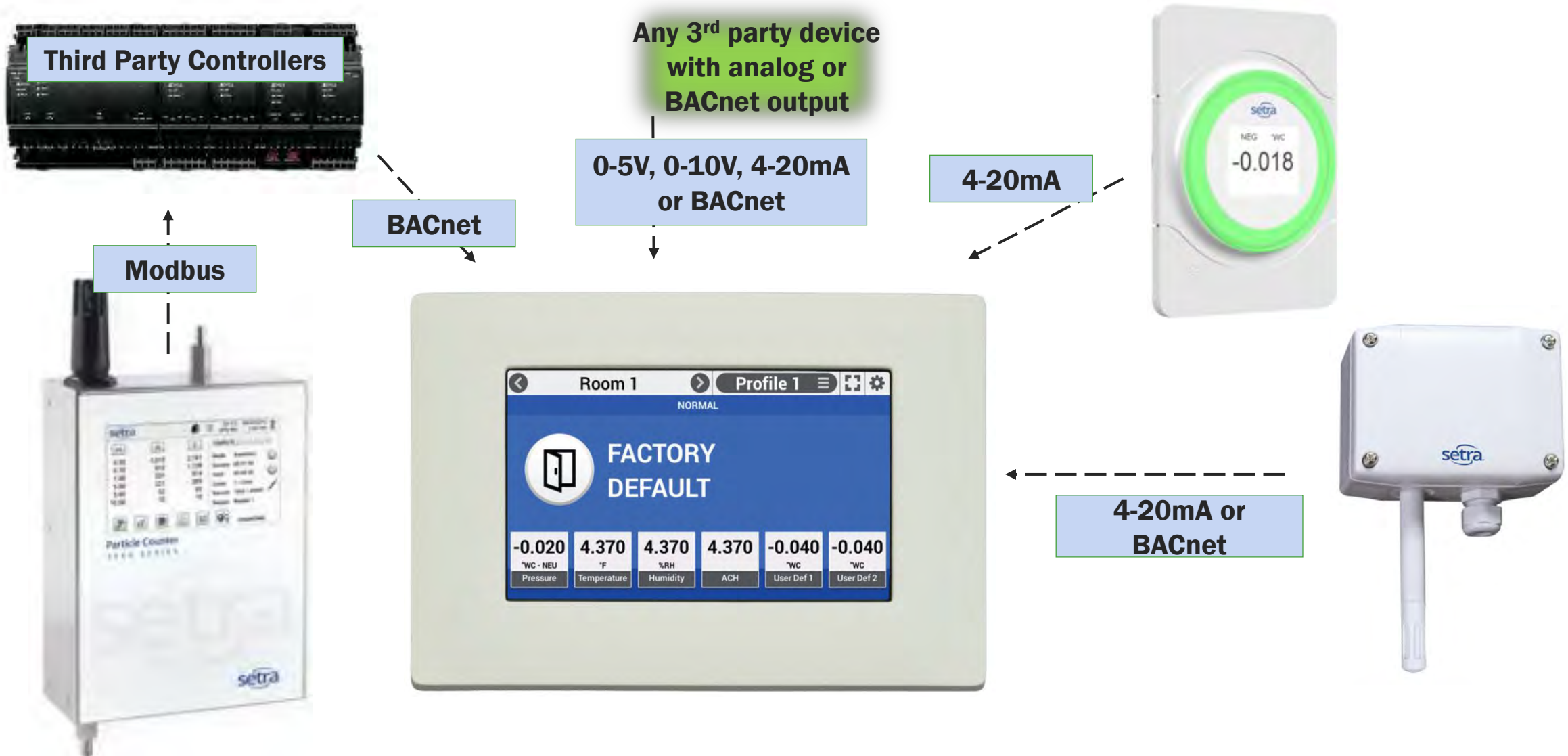
- 2<sup>nd</sup> Gen Room Pressure Monitor
- Pressure + 3 more, 2 rooms
- BACnet or analog
- Visual & Audible alarm
- Supports Setra and 3<sup>rd</sup> party products

- 18 parameters, 3 or 4 rooms
- Display any environmental condition
- BACnet MS/TP or BACnet/IP
- Visual & Audible alarm
- Supports Setra and 3<sup>rd</sup> party products

- Pressure only, 1 Room
- Analog Output
- Visual & Audible Alarm



# Complete Monitoring & Sensing Solution



### FLEX is the HUB for all sensor inputs for localized display

**Constant monitoring of multiple room conditions with local display for critical healthcare spaces (ASHRAE 170)**

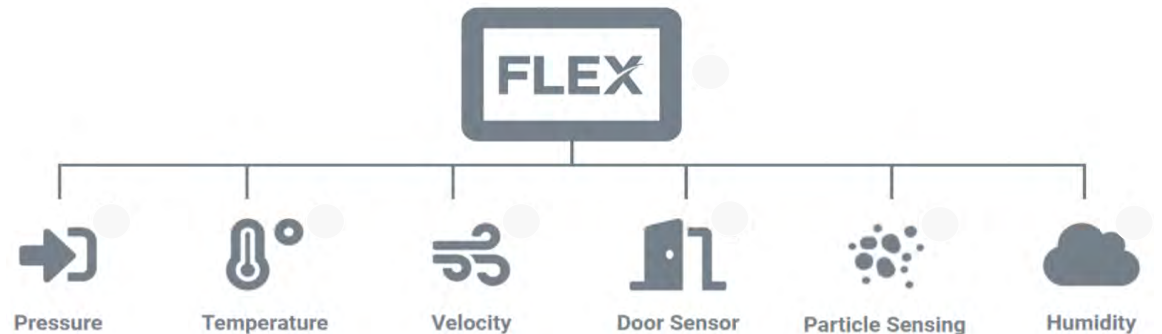
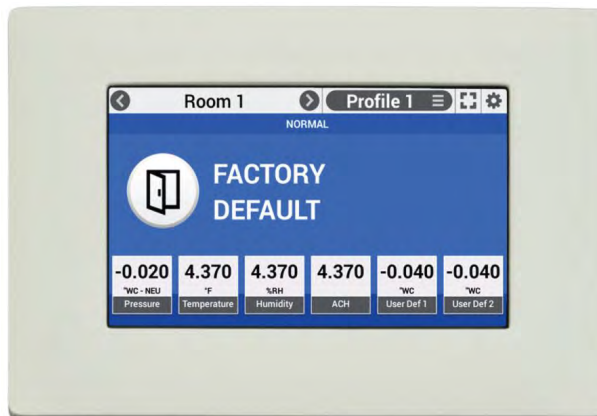
- Operating Rooms
- Compounding Pharmacies

**Single point monitoring of multiple conditions in multiple related spaces**

- Clean Rooms and ante rooms
- Vivarium

#### Key Features

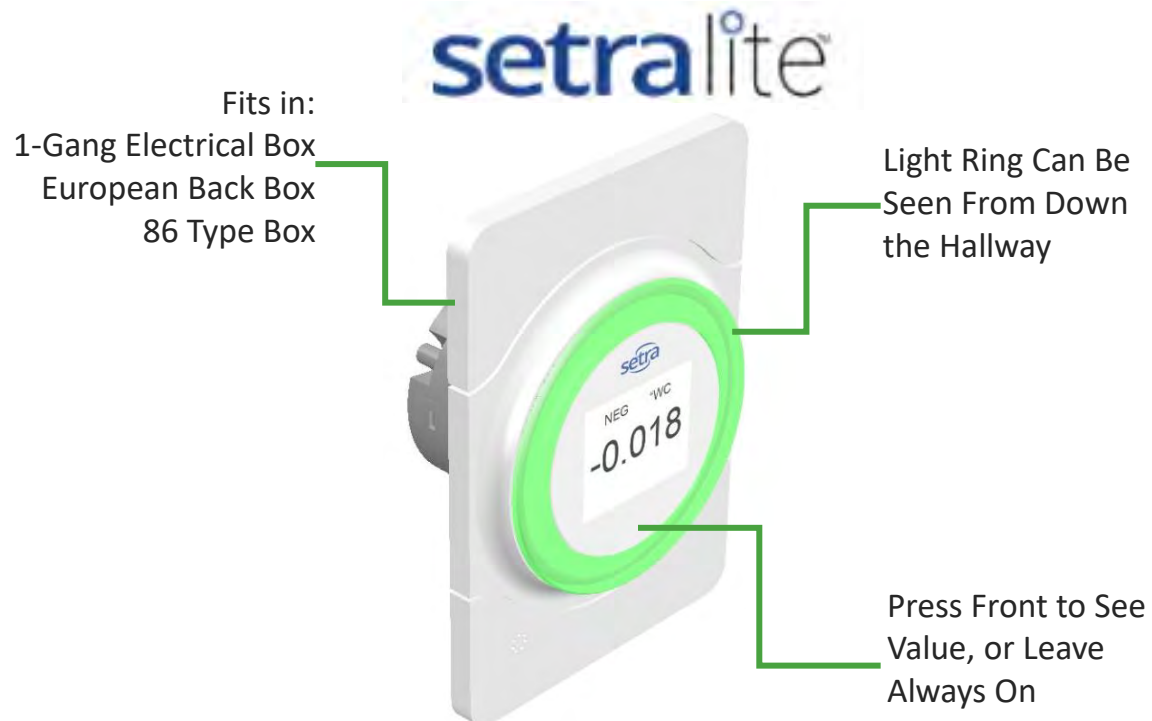
- Monitor and control pressure, temperature, humidity, ACH
- 7" touch display, usable with medical gloves
- Supports 3 rooms, up to 6 parameters per room
  - Preset and user defined parameters
- 4 Inputs & 2 Outputs on-board
- Audible & visual alarm on any parameter
- On-board or external pressure transducer (or none)
- High accuracy 0.25% sensor standard
- Selectable BACnet/IP or BACnet MS/TP at the job site
- Multiple installation options to manage wall thicknesses and locations - Hot wire retrofit also available



### Continuous monitoring accessible for **ALL** pressurized spaces

#### Key Features

- On board pressure indicator – Same proven technology as our most common differential sensors
- Simple green/red light ring status
  - Audible Alarm optional
- Analog output (0-5V, 0-10V or 4-20mA)



#### Monitoring of non-critical ASHRAE 170 Spaces

- Affordable solution to reduce the constant “walk around” pressure checks
- Let clinical staff see the status of rooms, report problems
- Be more prepared for Joint Commission inspections

#### Localized display/monitoring of pressure for critical spaces

- Isolation Rooms
- Protected Environments

#### Localized clean room pressure status



Pressure indication



Simple green status



Red indicates alarm



# Temperature and Humidity Sensors

## Performance T/RH for Critical Applications

- Pharmaceutical Clean Rooms
- Compounding Pharmacies
- Research Labs
- Operating Rooms
- Extreme temperature environments – Freezers, Cryogenic tanks, incubators



SRH200



SRF 612 / 614 /615

## Key Features

- High accuracy readings:
  - +/- 1.5 to +/- 2.5 % RH
  - +/- 0.36°F
- Large temperature range capability
- Analog Output (4-20mA, 0-10 V)
- Modbus or BACnet compatible
- Field calibratable
- Ability to take door sensor input
- Wireless options



# Particle Counters

## Spaces requiring continuous particle count monitoring per regulation (FDA, ISO)

- Pharmaceutical Manufacturing
- Compounding Pharmacies
- Clean Rooms

## “Clean” spaces in healthcare that benefit from particle count data

- ORs are dirty cleanrooms – Hospitals getting more pressure to keep them clean
- Construction sites in hospitals – Keep the rest of the hospital from contamination

## Key features

- Store 45,000 records at a time
- Save and transfer data while the machine is collecting sample
- Each record can be annotated either during or after sampling
- Easy-to-use touchscreen interface
- Outputs: Modbus, wireless, USB, BACnet
- Software interface
- Software can easily be updated in the field using thumb drive
- Remote diagnostics over internet connection
- Compliance with ISO 21501



SPC5000



SPC7000



AQM5000



AQM7000



SPC8000



## Contact Info:

Mai Nguyen  
Product Manager, Monitoring Solutions  
[mai.nguyen@setra.com](mailto:mai.nguyen@setra.com)

### **Setra Systems, Inc.**

159 Swanson Road | Boxborough, MA 01719 | USA

Phone: +1.978.430.6211



**Thank You!**