

Smart Building Solutions

Capability Document





The anywAiR i0 story

As the demand for smart building technologies continues to grow, Fujitsu General recognises the need to integrate advanced systems that enhance building automation and energy efficiency.

What is anywAiR i0?

anywAiR i0 is Fujitsu General's Wi-Fi and Internet of Things (IoT) brand, offering advanced control solutions to the market. The combination of Fujitsu General's industry-leading air conditioning expertise and Nube i0's innovative smart building solutions allows us to deliver comprehensive solutions that seamlessly integrate with existing building infrastructure.

By leveraging the power of data and automation, we empower building owners and operators to make informed decisions, optimise operational efficiency, and help create sustainable environments for occupants.



An innovative partner in Nube i0

Fujitsu General leverages Nube i0's expertise in smart building solutions, which encompass a range of technologies such as data analytics, machine learning, and IoT connectivity. These transformative solutions enable us to create intelligent, connected systems that improve occupant comfort, reduce energy consumption, and enhance overall building management.

System Capabilities

EXISTING BUILDING MANAGEMENT SYSTEMS

FRAGMENTED SOLUTIONS

Existing BMS solutions provide fragmented layers making integration difficult with a requirement to use multiple products to achieve a satisfactory outcome

HIGH INSTALLATION COSTS

Most BMS require specialised knowledge and significant resources to implement

SIGNIFICANT DOWNTIME

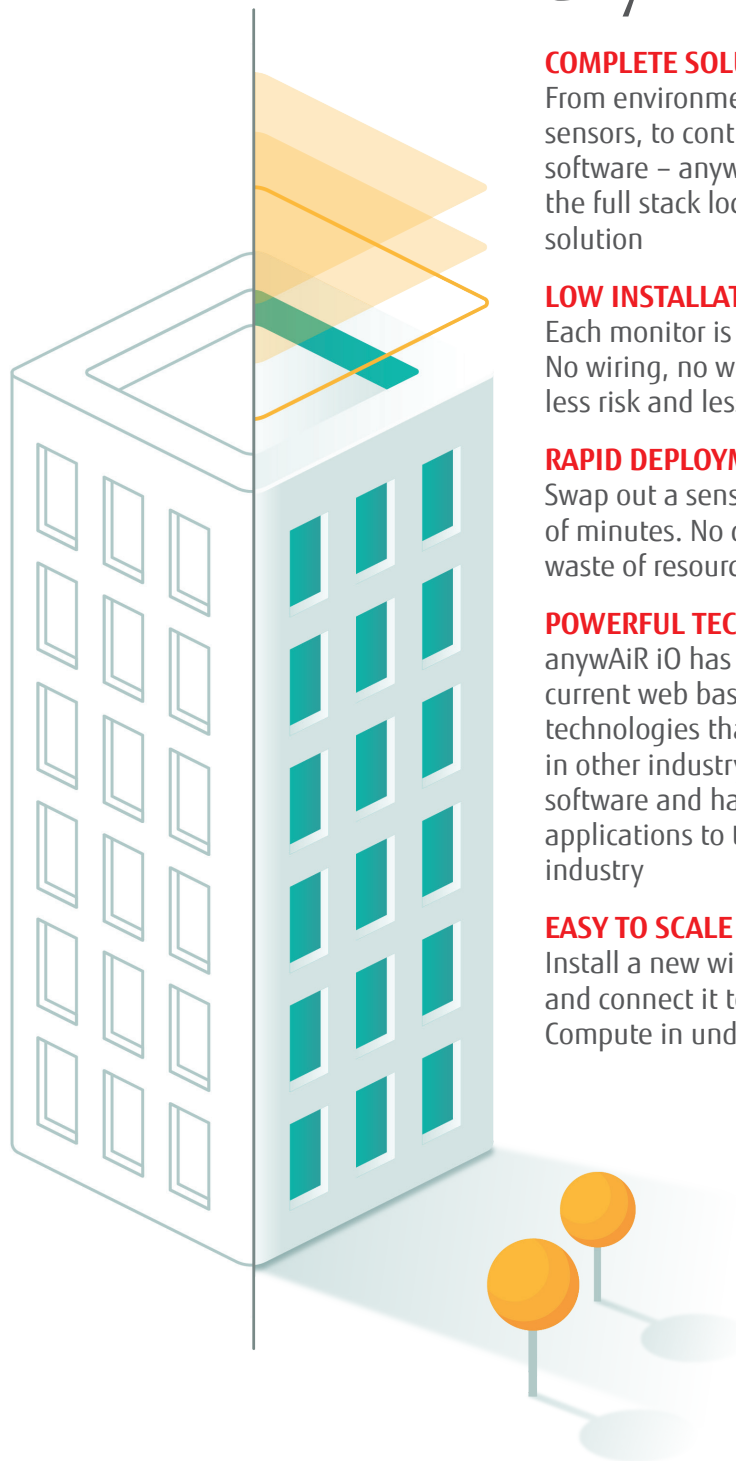
Due to the complexity of most solutions on the market, replacing items lead to significant downtime

OUTDATED TECHNOLOGIES

Completely wired and cumbersome, these solutions utilise technologies that are restrictive, outdated, proprietary and unsecure

DIFFICULT TO SCALE

Adding a new sensor or removing one from the system can be a complicated process



anywAiR® iO

COMPLETE SOLUTION

From environmental and asset sensors, to controllers, to BMS software – anywAiR iO offers the full stack local or cloud solution

LOW INSTALLATION COSTS

Each monitor is LoRa-enabled. No wiring, no wiring means less risk and less disruption

RAPID DEPLOYMENT

Swap out a sensor in a matter of minutes. No downtime, no waste of resources

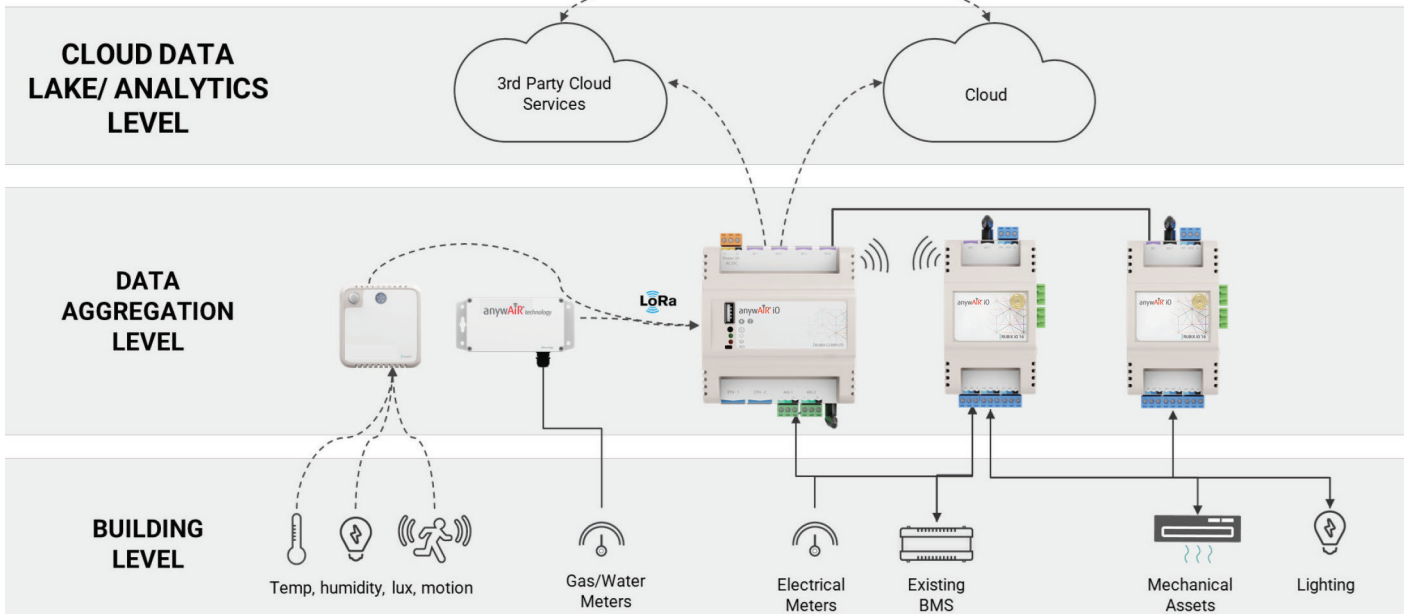
POWERFUL TECHNOLOGY

anywAiR iO has bought current web based technologies that are used in other industry leading software and hardware applications to the BMS industry

EASY TO SCALE

Install a new wireless sensor and connect it to the Rubix Compute in under a minute

System Architecture



Rubix Compute

- IoT Multi Language Gateway
- Collects and aggregates data
- Connects to wireless and wired sensors
- Gateway point to the cloud



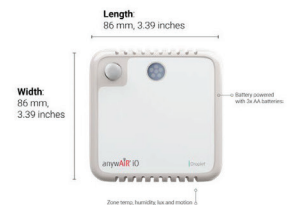
Rubix iO

- A series of low-cost iO modules
- Communicates wirelessly via LoRa®
- Analogue inputs/outputs
- Digital inputs/outputs



Micro Edge

- A LoRa® technology based IoT sensor
- Seamlessly captures data from your equipment and other assets
- Enables you to make smart, data-driven decisions

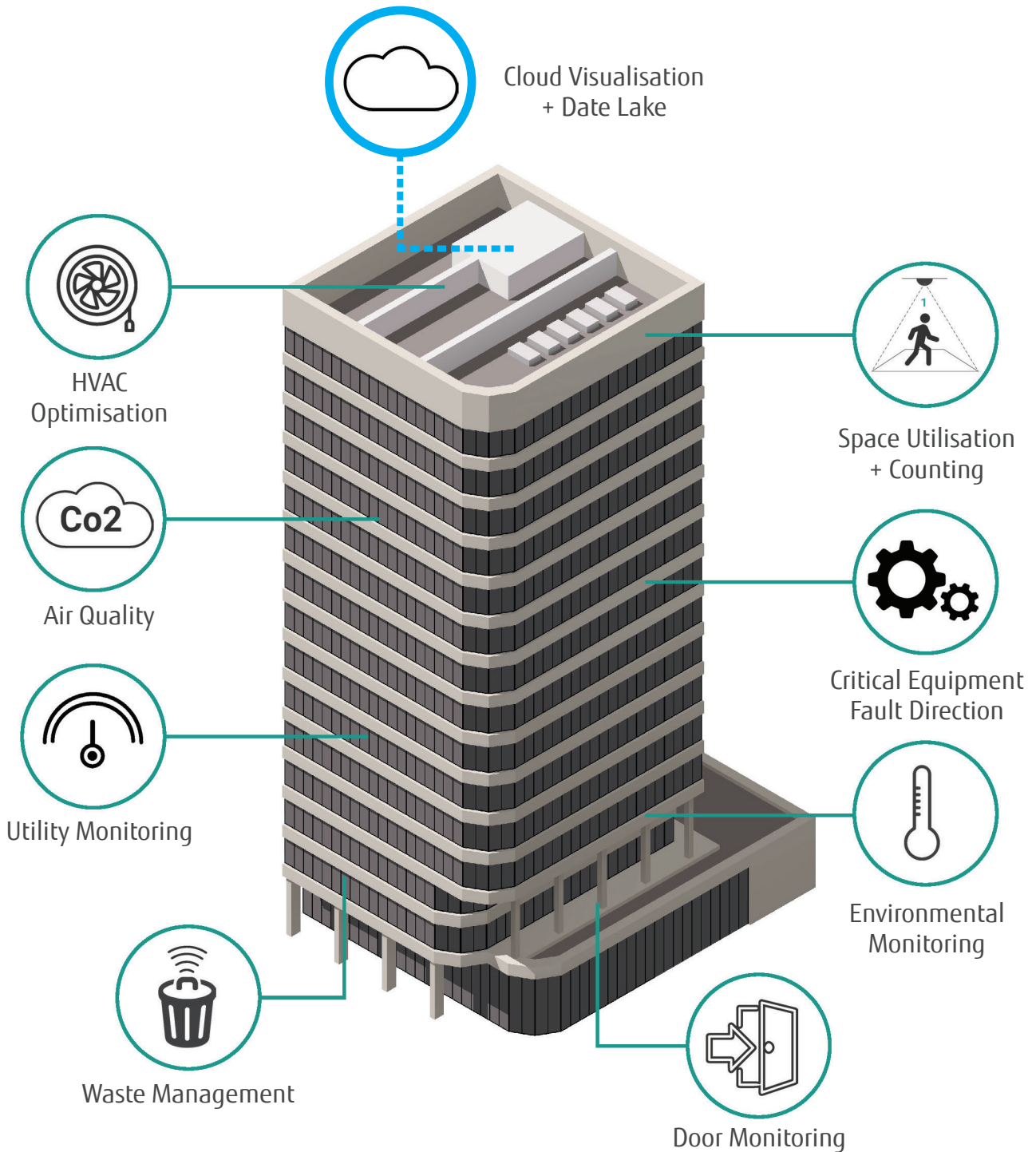


Droplet Sensors

- Captures multiple data points
- Temperature, humidity, lux, motion
- Wireless Droplet Sensors
- Quick installation

Key Capabilities

The anywAiR iO utilise a unique combination of sensors, gateway edge computing, cloud-based AI and applications providing real-time data and control of physical assets.



HVAC Control

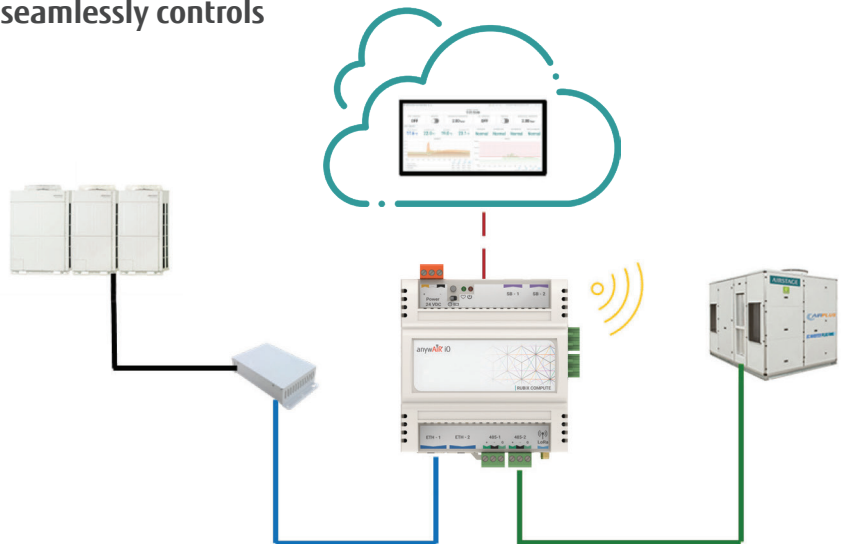
The anywAiR iO control system seamlessly controls and monitors HVAC equipment

Air Conditioning Equipment

- VRF Systems
- Roof Top Package Units
- Chillers and AHUs
- Split Systems

Ventilation Equipment

- Exhaust Fans
- Dampers
- Valves
- Car Park Exhaust



HVAC Optimisation

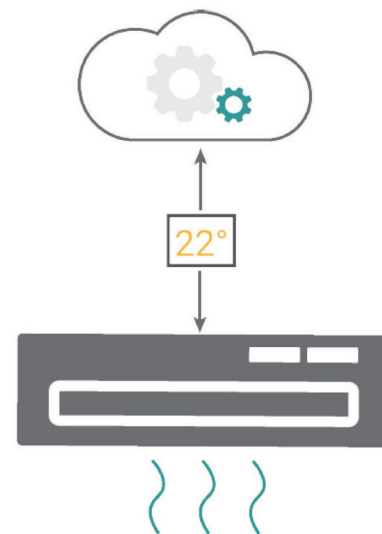
Using sensors to reduce energy consumption and detect faults.

Wireless Monitoring – PAC Units

- Current for equipment status
- Vibration to determine run times and status
- Zone Temperatures
- Supply air duct temperatures

Fault Detection

- Critical A/C cooling diagnostics
- Receive early stage notifications if ambient store temperature is rising
- Receive early stage notifications for current or vibration anomalies



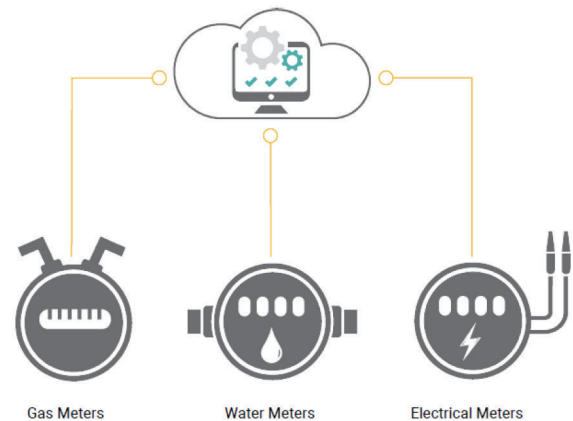
Utility Monitoring

Monitor utilities consumption

- Low-cost remote monitoring solution providing consistent and accurate data about utilities consumption
- All meter data aggregated for
- Whole tenancies and sub-tenancies

ROI

- Reduced bills for energy, water and gas
- Sub-tenancy apportioning
- Maintain Green Star and Nabers
- Low-cost data conduit
- Avoid leaks or excess use through alerts



Indoor Air Quality



The anywAiR i0 control system can connect to a range of wireless and wired indoor air quality sensors which can be used for monitoring or interlocking with associated equipment

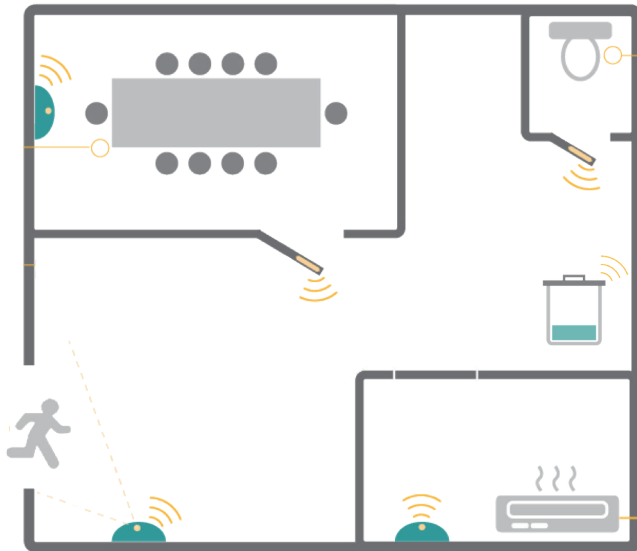
Sensor Types

- CO₂ – Carbon Dioxide
- CO – Carbon Monoxide
- VOC – Volatile Organic Compound
- PM_{2.5}
- Humidity

Benefits

- Green Star or Nabers Requirements
- Ensure Optimal Working Environments
- Interlock Sensors with Fresh Air Strategies

IoT - Space Utilisation



Non-intrusive Monitoring

- Motion detection detects occupancy to predict occupancy trends and assist with equipment run times
- Reed switches to monitor the state of the door and track the usage over a period of time
- Level monitoring sensors to detect current levels for example bin and water

ROI

- Predictive maintenance or on-demand
- Optimised rostering of staff
- Reduce energy costs
- Facility insights Peak and no-peak operating times

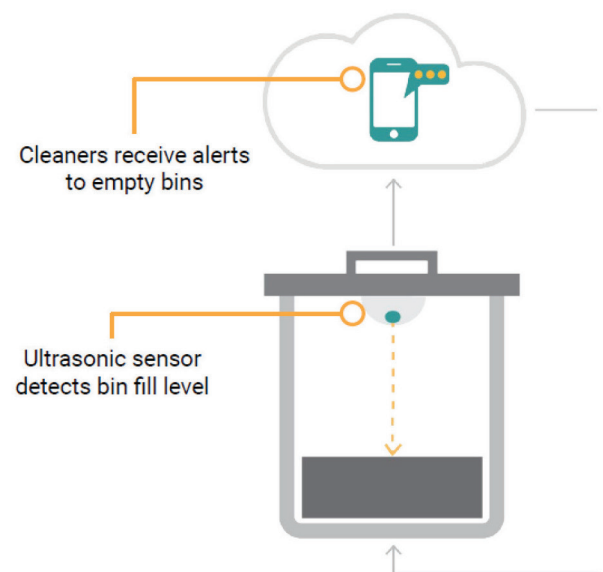
IoT - Asset Monitoring

Wireless ultrasonic sensors to detect bin fill level

- Turnkey IoT solution for waste management
- Reduce frequency of bin changes and optimize cleaning processes
- LoRaWAN sensors provide up to 10km transmission range
- Battery powered using AA batteries
- Detects up to 2000mm bin depth
- 5-7 year battery life

ROI

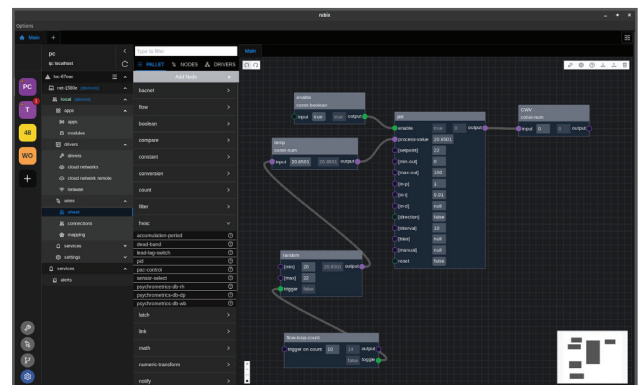
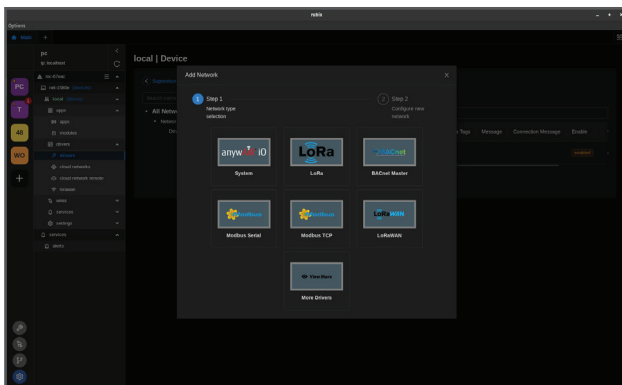
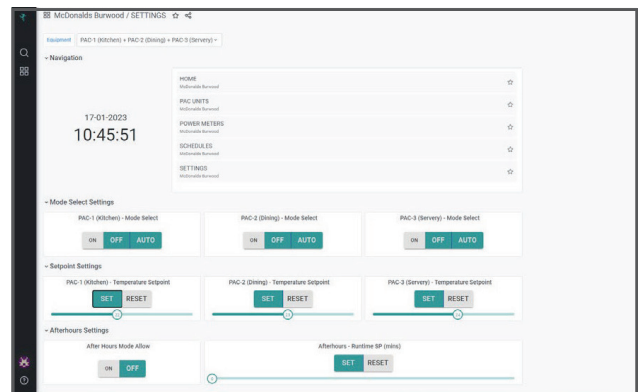
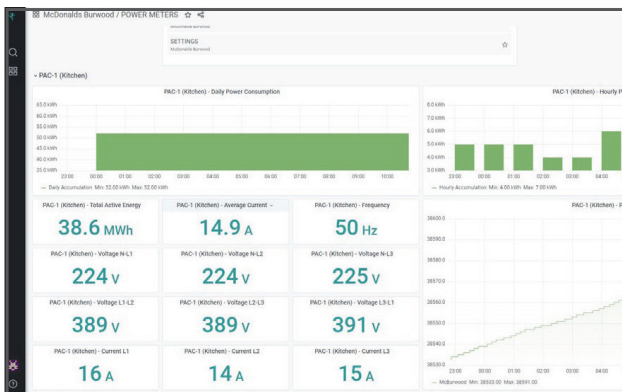
- Reduced maintenance customer experience
- Can these bins be emptied less frequently?
- Can we better avoid bin overflows?
- Predictive cleaning based on data



anywAiR iO Dashboard

Portfolio Management

- anywAiR iO hardware can be connected to the anywAiR iO dashboard –a user-friendly, fully customisable web-based interface
- There is no software to install, configure, or update.
- Access it from anywhere, using any browser and device
- The dashboard comes with configurable alerts, mechanical statuses, location-based map overview, and support for any number of buildings or devices

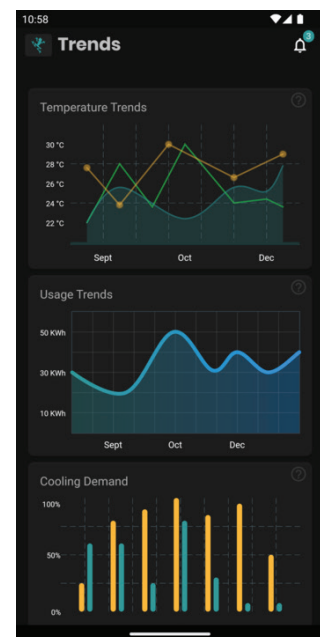
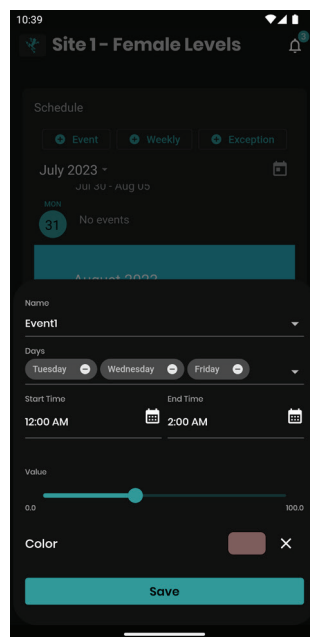
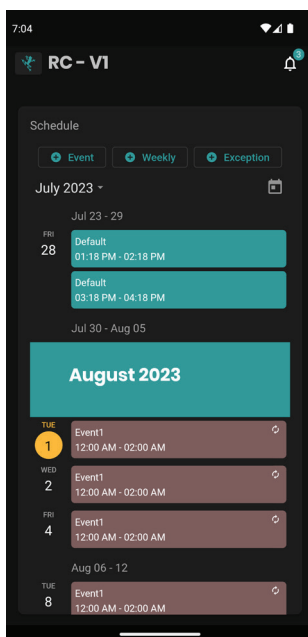


App Monitoring *(coming soon)*



Remotely Monitor Your Entire Asset Portfolio

- Log into multiple buildings across a large geographical area from one remote login
- Access your data on your phone, laptop or tablet with no software to install
- Fully customisable with multiple skin designs
- Analyse data using a highly visual dashboard
- Stay on top of the BMS performance with daily updates and alerts
- Scheduling and trending
- Manage setpoints and thresholds



Solution Examples

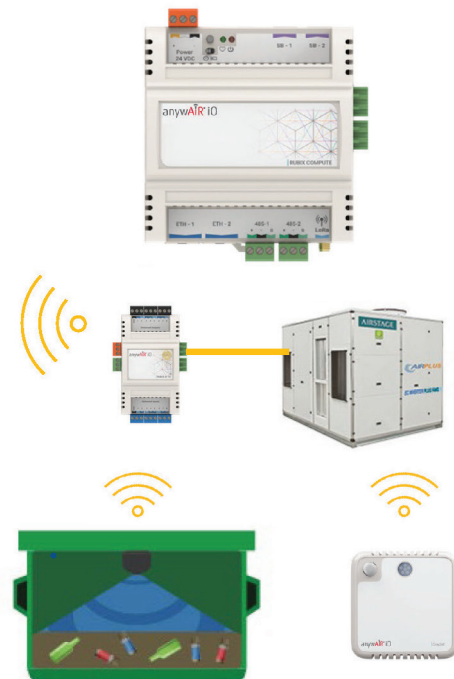
Light Commercial

Project Requirements

- RTPU & VRF - Control and monitoring
- Ventilation - Control and monitoring
- IAQ - Reporting and alerting
- Occupancy - Space optimisation

Hardware and Equipment

- RC5-8-LR1-RS2
- RC-LW-CON
- RIO-16-LR-RS1
- DROP-LR-THLM
- NRS-REEDSWITCH-LORAWAN
- NRS-CO2-LORAWAN



Utilities Monitoring

Project Requirements

- Nabers reporting
- Energy consumption and comparisons
- Usage - Alerting and alarming

Hardware and Equipment

- RC5-8-LR1-RS2
- ME-LR-5-0



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Please ensure you have confirmed installation
requirements and pipe sizes prior to install.

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