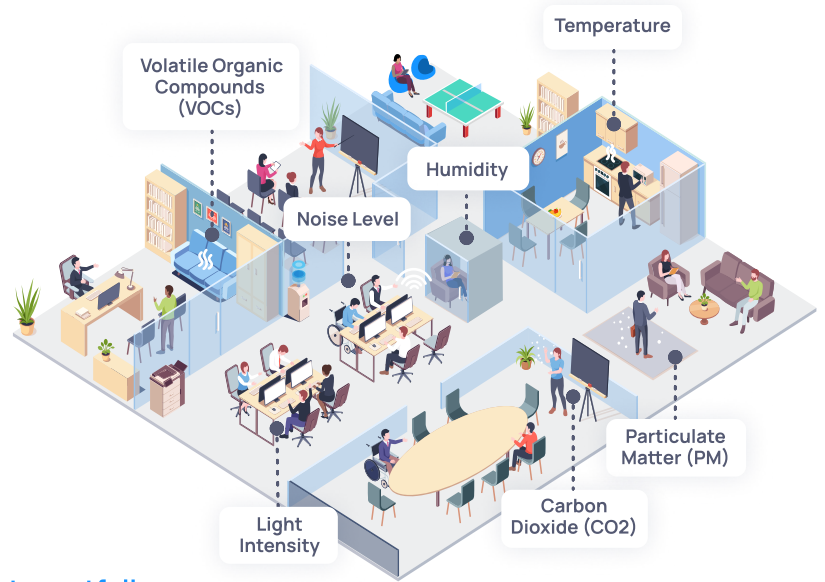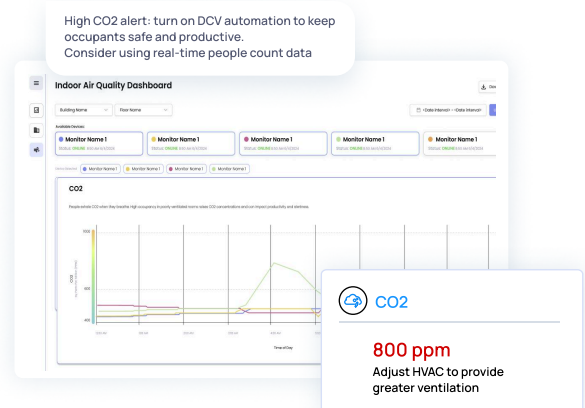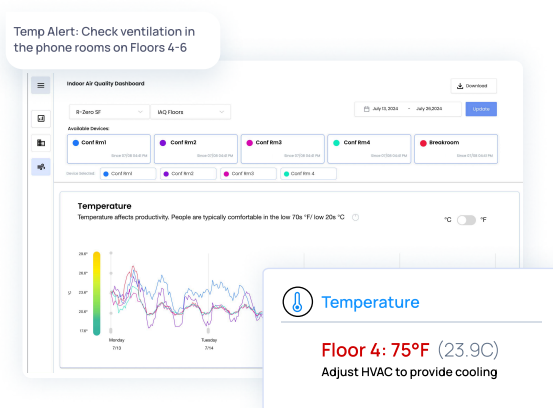# Optimize buildings with air quality and environmental data

Comprehensive air and environmental quality data, with countless applications for comfort, efficiency, and performance

Isometric building illustration with labels: Volatile Organic Compounds (VOCs), Temperature, Humidity, Noise Level, Particulate Matter (PM), Light Intensity, Carbon Dioxide (CO2)

Achieve a return on investment across your real estate portfolio

▶ **Maximize productivity.** Create high-performance environments by maintaining optimal CO2 levels in offices, schools, and healthcare facilities.

▶ **Detect mechanical issues early.** Use real-time IAQ data to detect faults and and fix ventilation problems before they become widespread and costly.

▶ **Prevent complaints.** Improve occupant satisfaction by staying ahead of air quality issues. Use smart building controls to take corrective action as needed.

▶ **Improve choice with comfort data.** Understand thermal comfort, noise, and light intensity, and integrate preferences with room reservation systems.

▶ **Reduce risk.** Prevent exposure to off-gassing from furniture, carpets, and other materials with formaldehyde measurements.

▶ **Adapt in real-time.** Gain real-time insights for accurate fault detection and air pollutants to ensure tenant comfort and react immediately.

Temp Alert: Check ventilation in the phone rooms on Floors 4-6

Indoor Air Quality Dashboard

Temperature
Temperature affects productivity. People are typically comfortable in the low 70s °F/ low 20s °C

🌡 **Temperature**
Floor 4: 75°F (23.9C)
Adjust HVAC to provide cooling

High CO2 alert: turn on DCV automation to keep occupants safe and productive.
Consider using real-time people count data

Indoor Air Quality Dashboard

CO2

☁ **CO2**
800 ppm
Adjust HVAC to provide greater ventilation

Support your healthy building certifications

RESET   INTERNATIONAL WELL BUILDING INSTITUTE™   U.S. GREEN BUILDING COUNCIL USGBC   fitwel

Air and environmental quality monitor

Measures all typical markers of air quality with the addition of basic comfort metrics like temperature, humidity, luminosity, and noise. Set thresholds and receive threshold alerts.

Measurements:

- CO2
- Particulate matter — 1, 2.5, 4, 10
- TVOC
- Formaldehyde
- Temperature
- Humidity
- Pressure
- Light intensity
- Noise

Occupancy with temperature & humidity

Low-energy battery powered occupancy sensors that use passive infrared to detect if spaces are occupied or unoccupied, while also reporting temperature and humidity for ventilation fault detection.

- Matchbox sized 1.85 x 1.85 x 0.25 inches PIR sensor
- Anonymous data + temperature, humidity, optional UV sensor
- Low power 2.4GHz wireless data communication
- Ceiling or furniture mount with VHB tape or magnet
- Typical occupancy detection area is 300 square feet
- 10+ year battery life

Hub connectivity

Hubs receive sensor data as BLE packets through an encrypted mesh network and send it to the cloud via a secure (HTTPS) WiFi , LAN or cellular internet connection in real time.

- 4 x 3 x 1.25 inches
- Cellular, WiFi or LAN
- OTA updates
- 5V/2.5A DC via micro USB connector, 5V DC via GPIO header or POE
- Mount on ceiling, wall, or in cabinet

Learn more at rzero.com