

HEALTHCARE ENVIRONMENTAL INTELLIGENCE

Environmental Intelligence for Infection Prevention

Make the air visible. Detect risk earlier. Act with evidence.



THE VISIBILITY GAP

Most environmental investigations begin after a complaint, failed room check, clinical cluster or adverse event.

SensusAir adds a continuous, near-real-time indoor environmental quality and air quality (IEQ/IAQ) intelligence layer across the hospital. Zone-specific sensing reveals biological, chemical and physical changes that periodic checks may miss—giving infection prevention, facilities and environmental safety teams the context to intervene sooner and document what happened.

THE SENSUSAIR PLATFORM: SENSE. UNDERSTAND. ACT + VERIFY.

01 DISTRIBUTED SENSING

Continuous, zone-specific coverage in high-consequence spaces.

- Biological signatures and risk indicators associated with viruses, bacteria and fungi
- VOCs and vapors; PM1, PM2.5 and PM10; CO₂ and other gases
- Temperature, relative humidity, pressure and ventilation clues

02 LIVING INTELLIGENCE™

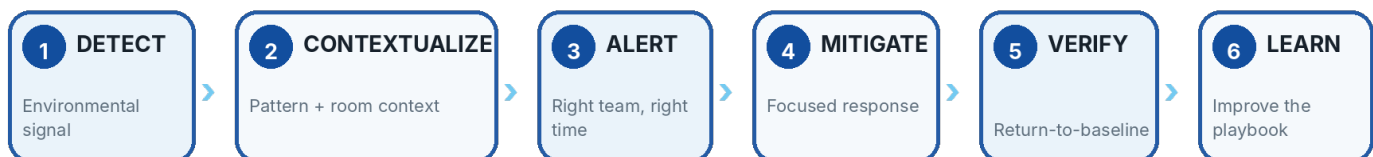
Cloud analytics convert raw signals into interpretable environmental intelligence.

- AI/ML anomaly detection, pattern recognition and personalized baselines
- Room and zone mapping, temporal comparisons and multi-site trends
- Configurable thresholds, dashboards, historical review and API connectivity

03 ACTION + EVIDENCE

Coordinated workflows turn a signal into a documented response.

- Near-real-time alerts through email, SMS or operational escalation channels
- Targeted investigation, source control, ventilation, filtration or cleaning response
- Verification loops and an Air Ledger™: room + event + signal + response + outcome



HIGH-VALUE CLINICAL AND OPERATIONAL ZONES

OR & PROCEDURAL • ICU / NICU • ISOLATION • ED • ONCOLOGY / TRANSPLANT • STERILE PROCESSING • PHARMACY COMPOUNDING
• L&D • CONSTRUCTION BOUNDARIES • STAFF AREAS

SensusAir is an environmental screening and decision-support platform. It does not diagnose disease, replace clinical testing, certify compliance or substitute for professional engineering verification.

One Platform. Hospital-Wide Value.

A shared environmental operating picture aligns departments around the same evidence—what changed, where it happened, how the team responded and whether conditions recovered.

DEPARTMENTS THAT BENEFIT

INFECTION PREVENTION & EPIDEMIOLOGY Add room-level environmental context to surveillance, cluster inquiry, risk prioritization and intervention verification.	FACILITIES / ENGINEERING Identify recurring HVAC performance drift, pressure or ventilation clues, temperature/RH excursions, moisture risk and zone anomalies.
ENVIRONMENTAL SERVICES Relate cleaning activity, chemical/VOC events and particulate movement to room recovery; confirm return-to-baseline after remediation.	QUALITY / PATIENT SAFETY / RISK Strengthen QAPI, incident review, HAC/HAI prevention strategy and defensible documentation with time-stamped environmental evidence.
EMPLOYEE & OCCUPATIONAL HEALTH Investigate environmental contributors to exposure concerns; support staff confidence, safer work conditions and operational continuity.	PERIOPERATIVE / CRITICAL CARE Maintain awareness in areas with vulnerable patients and high consequences from environmental deviation, including OR, ICU, NICU and oncology.
STERILE PROCESSING / PHARMACY Monitor conditions relevant to sterile workflows, storage, decontamination and compounding; investigate short-duration excursions.	EXECUTIVE / SYSTEM LEADERSHIP Standardize response across sites, benchmark performance, prioritize capital and demonstrate accountable environmental governance.

LIKELY OUTCOMES: FROM ENVIRONMENTAL AWARENESS TO OPERATIONAL ADVANTAGE

EARLIER WARNING Recognize drift and episodic events before complaints or routine rounds.	FASTER ROOT CAUSE Direct teams to the room, time window and signal most relevant to investigation.	TARGETED MITIGATION Reduce broad disruption by focusing ventilation, filtration, cleaning or source control.
VERIFIED RECOVERY Demonstrate return-to-baseline after corrective action and preserve the record.	STAFF CONTINUITY Resolve environmental concerns sooner and support safer, more reliable operations.	STRONGER GOVERNANCE Improve survey readiness, incident documentation, multi-site learning and capital priorities.
HACs, HAIs AND THE BUSINESS CASE Hospital-acquired conditions create patient harm, reputational risk and direct financial exposure. CMS applies a 1% Medicare payment reduction to hospitals in the worst-performing quartile under the HAC Reduction Program, which includes multiple healthcare-associated infection measures. No environmental platform alone prevents a HAC; SensusAir strengthens the environmental side of prevention by helping teams recognize, investigate and mitigate contributing conditions sooner.		REGULATORY + ENVIRONMENT OF CARE Standard 170-2025 and Joint Commission utility-system expectations underscore the importance of ventilation, pressure, filtration, temperature and humidity in critical spaces. SensusAir supports oversight, documentation and response—not certification or formal engineering validation.
REACTIVE MODEL Complaint / failed check / clinical signal → broad investigation → delayed correction → retrospective documentation		SENSUSAIR MODEL Continuous signal → targeted alert → coordinated action → verified recovery → institutional learning

Selected scientific and regulatory context: CMS Hospital-Acquired Condition Reduction Program (2026); CDC Guidelines for Environmental Infection Control in Health-Care Facilities; ANSI/ASHRAE/ASHE Standard 170-2025; The Joint Commission EC.02.05.01; OSHA Indoor Air Quality overview.