

IoT and Big Data are being used to identify and eliminate energy waste, and provide accountability to current energy savings projects and projections.





By making indoor air quality, safety, and cost metrics visible, analysts and managers can identify waste and energy reduction opportunities that drive cumulative energy savings.

Smart Energy Management – Industry 4.0 (Integrating IoT, cloud computing, big data, and analytics)

VISIBILITY DELIVERS PERFORMANCE ACCOUNTABILITY

"We have an energy savings performance contract with a big company. All it does is go up at about the same rate as the national average. We don't have a clue whether or not it's working."





Accountability: Measure and manage actual impact vs. the variation in a utility bill

ESG - manage, document, and validate carbon reductions

Evaluate/Validate new DERs (Distributed Energy Resources - solar, wind, etc.)

Stay in front of system & equipment PM - alerts before failure

Optimally prepared for future pandemic or contagious event

Better overall health and wellbeing for all students and staff

ID moisture problems, mold before structural damage occurs

Reduce respiratory infections, asthma events, allergy symptoms

Reduce CapEx - less powerful HVAC systems can be designed with optimized filtration technologies











AN EXPENSIVE SPORT

And recently announced regulations could mean higher prices for energy. The second largest operating expense for schools after payroll is maintaining the indoor air ecosystems. An intricate balance of optimal air quality across multiple KPIs (Key performance indicators).

By combining IAQ with a detailed understanding of energy consumption down to the individual equipment level, building management teams are able see their air in real-time..

The good news is that we now know optimal air quality and lower energy costs are not mutually exclusive. When these systems are responding to actual environmental metrics vs. presets they are significantly more efficient. In older buildings with less automation, having visibility into "where the gaps are" can identify even greater opportunities for cost take out.

Bottom Line: Making your air visible, and actively managing both quality and cost, have been proven to drive financial impact. How much you ask?

HILLSBOROUGH COUNTY FL:

ENERGY SPEND: \$37 MIL WASTE REDUCTION: \$8 MIL

MORE THAN MONEY

Bonus! Dozens of studies have now documented the cause and effect relationship between improved IAQ and human performance. Better cognitive development, attention, and memory. Better Grades. 6-13% fewer asthma events. Lower absenteeism.

VISIBLE IMPACT

"Now, I can honestly show on a minute-byminute basis how much money we're saving this community. We use it every single day. It is helping the lives of the kids here in Tampa.

> Chris Farkas Deputy Superintendent Hillsborough County Public Schools



"You can't improve what you can't measure"

Peter Drucker Management Consultant, Educator, and Author



DASHBOARD

Real-time performance monitoring for your indoor air ecosystems.



PORTABLE

View your air from anywhere! Identify problems, equipment failures, "system leaks", IAQ issues,



EASY INTEGRATIONS

Add new sensors - integrate with your BMS. See why managing your air from a dashboard vs. a rear view mirror can save millions!



The nationwide average electricity price increased nearly 11% from 2021 to 2022, and 2023 might be another big year, with electricity bills in states with a lot of natural gas generation jumping 40% or more as utilities raise rates

Source: https://www.solarreviews.com/blog/average-electricity-cost-increase-per-year



IAQ EMS

ENVIRONMENTAL MANAGEMENT SERVICES: IAQ

Another benefit of being able to see your ecosystem's air is that we can see it, too. So, we can query historical data from 16,000 sites around the world to find and apply other improvement opportunities on your sites.

Our 24/7 EMS includes Monitoring and IAQ CPI (Continuous Process Improvement) support. That means you have an engaged and capable partner in the mission to drive more benefits and dollars back into classrooms.

A team that watches out for "energy leaks" and asks questions like, "How much can a sensor change in a walk-in cooler mean in real dollars? Can control limits and system alerts on CO₂ or PM 2.5 levels improve human performance? Did the solar installation actually deliver the financial impact advertised?

You will be surprised how much money cleaner, more efficient air will save!









"The person who manages your building has a bigger impact on your health than your doctor."

Dr. Joseph Allen

Deputy Director of the Harvard Education and Research Center for Occupational Safety & Health



GAP ANALYSIS

CAN YOU SEE WHERE YOUR ENERGY IS LEAKING?

With hundreds of Gap Analysis exercises under our belt the confidence interval is now at 98%. If we tell you that we can find 15-25% waste reduction opportunities in your energy costs, 98 times out of 100 we will do that.

And we will prove that we did it.

No cost. No obligation.

Questions? Ready to see if we can find some gaps?

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"Converging trends will likely accelerate industrial companies' adoption of energy management solutions and potentially boost their interaction with electric utilities and the grid."

Deloitte Insights - Smart energy management for industrials



Energy costs are on the rise, and the pandemic has made air quality top of mind. Two powerful trends would seem to move in opposite directions. But the data tells a different story.

We invite you to see what "actionable air" can do for both human performance and utility costs.

Linking actions and impact in real-time provides unparalleled ability to identify and verify the impact of energy and green improvement projects and make sure that gains are sustained. Validate waste reduction. Validate actual financial impact.

