

A photograph of a modern office interior. The space features a large, multi-paned glass skylight that allows natural light to fill the room. The ceiling is white with recessed lighting. The walls are also white, and there are large windows on the left side. In the foreground, there are several green armchairs arranged in a circular pattern around a small white table. The floor is a light-colored, textured material. In the background, there are more office desks, chairs, and a staircase with a glass railing.

How Healthy Buildings Raise Client Satisfaction and Profit:

An A/E/C Industry Guide

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WHY HEALTHY BUILDINGS?

Everyone's health is affected by the spaces we most frequently occupy. According to the EPA, the average person spends 90% of their life indoors. Indoor environments, therefore, must promote the health and wellness of their occupants.

This presents a unique challenge and opportunity to members of the A/E/C industry. As the great resignation has shown, employees are more concerned than ever about workspace quality.

Chris Herd from Firebase HQ, a remote work solution, recently spoke to a CEO trying to grow his business. He hired over 15 engineers in 60 days by reaching out to competitors attempting to have their employees return to work.

Simply stated the environment in which one works matters. This transcends the social and now includes the physical. The Director of the Healthy Buildings Programs at Harvard often says, "The people who manage your building have a greater impact on your health than your doctor.

In 2022, employees will not work in substandard building conditions.

This book serves construction professionals' guide to healthy buildings. A/E/C executives can use healthy buildings to provide a unique value proposition for their customers. Healthy buildings are becoming standard buildings, but there is still time to be at the forefront of this movement.

Why are we so confident that the healthy building movement will continue to grow?

Healthy buildings increase the bottom line of companies who build them, work in them, and manage them. They increase productivity, attendance, and comfort, which allow for more billable hours at a higher rate.

So, what is a healthy building? The World Health Organization defines it as a space that supports people's physical, psychological, and social health and well-being.

At illumiPure, we define it as a building designed and maintained to enhance occupant health and performance.

Welcome to the world of healthy buildings.

Tactic #1: Reduce Construction Schedules

Construction executives know that every day on the job matters. Whether meeting a schedule or cutting down labor costs, reducing construction time can create a more appealing bid package. Reducing the construction schedule will also allow leaning out a job a little more to get ahead of your competition.

Fortunately, healthy buildings help with that too. Healthy building solutions, like antimicrobial paint or air purification systems, can decrease your time to occupancy. For example, The Portable by Air Guardian can eliminate VOCs and particulate matter from construction sites to turn rooms over faster, especially in healthcare projects with specific requirements. In addition, when a permanent solution is installed, these exact solutions will help keep particulate counts down low when these products are off-gassing (more on this in the bonus tactic).

Healthy buildings help with core and shell projects and are an investment for future renovations. For example, every coat of paint or change in flooring allows off-gassing products to delay your construction schedule. Healthy buildings, particularly solutions for air quality, will help mitigate these risks for future renovations in the same structure.



illumiPure has shown some Air Guardian® products can reduce particle count by 30% in as little as 10 minutes, potentially saving weeks on larger construction projects.

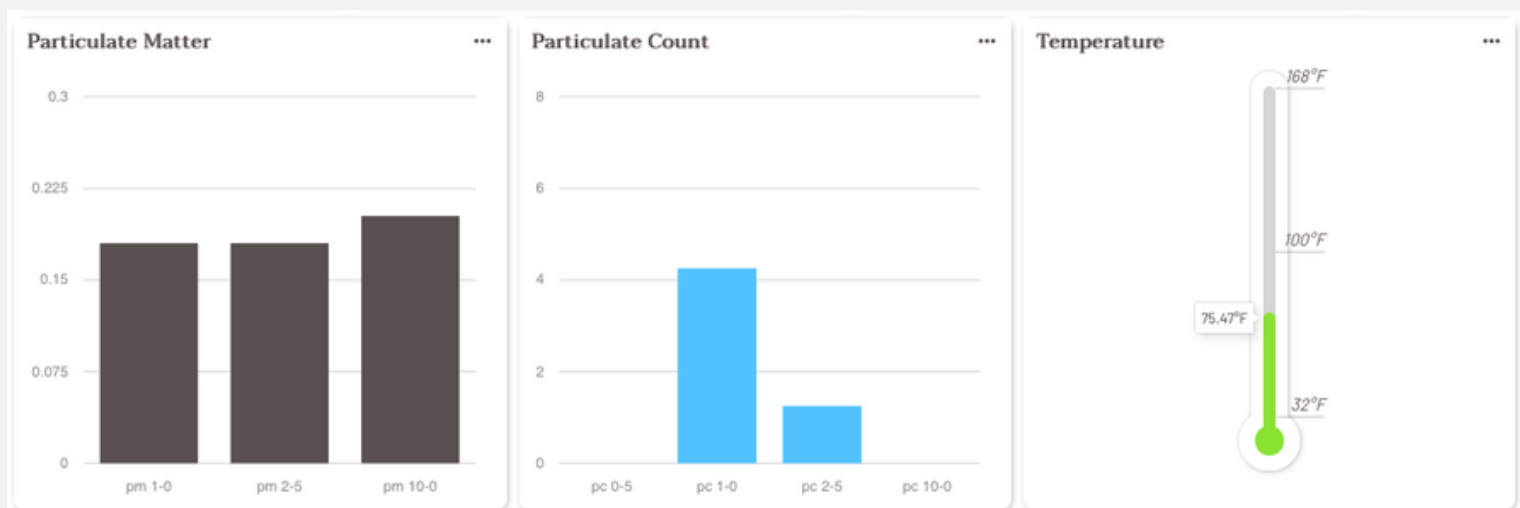


Tactic #2: Keep Employees Safe with Real-Time Monitoring

Healthy buildings aren't static. They continuously monitor themselves to make ensure occupants are in the safest spaces. We're all familiar with the thermometer, but today's healthy buildings measure everything from lumens to particle count.

Did You Know:

illumiPure's air quality monitoring device, Vertices®, measures air quality every minute!



Real-time monitoring helps keep construction employees safe and facilitates decreased construction schedules. When construction employees are working with hazardous materials, especially in rooms with poor ventilation, air quality monitoring, one of the backbones of any healthy buildings program, will help keep them safe and alert supervisors and foremen that there is a danger in the working space.

These solutions, such as illumiPure's Vertices, allow for cloud-based reporting so headquarters can see continuous working environment data, even if it's across the world.

In addition to keeping future occupants safe, A/E/C professionals can take advantage of these technologies. Both air purification and air quality monitoring can contribute to safety to decrease EMR and reduce the cost of insurance.

It can also be used progressively, allowing a construction executive to show real-time and previous examples of how a business has kept job sites safe and how they monitor to make sure their employer's staff, such as an owner's representative, are sure to be in a secure environment.



Tactic #3: Increase Your customer's bottom line

MIT's Real Estate Innovation Lab recently found that healthy buildings increase rents by 4-7%.



INCREASE ATTENDANCE

Employees in healthy buildings show up for work more frequently than those in regular workspaces. In 2002, Milton et al. showed that healthy buildings increased attendance by 1.6 days per year.

Some quick math: If a tenant is a lawyer that bills \$150/hour, a healthy building provides 12.8 more billable hours a year. That's almost \$2,000/year per employee!

RAISE PRODUCTIVITY

Not only do employees who work in healthy buildings show up more, but there is clear evidence that they are more productive while at work. In 2007, Coley and colleagues showed that rooms with power air quality decreased power of attention by 5%.

That may not seem like much, but that is the equivalent of skipping a meal, and not many business owners would expect high productivity out of employees who were frequently hungry.



ATTRACT THE BEST TALENT

In 2017, former CEO of Google Eric Schmidt wrote a *How Google Works*, where he said:

"The only way to succeed in business in the 21st century is to continually create great products, and the only way to do that is to attract smart creatives and put them in an environment where they can succeed at scale."

Healthy buildings help occupants succeed at scale by creating the best building environments.

Bonus Tactic

Teach Your Clients About Off-Gassing

Off-Gassing affects your project schedule and the building's occupants every day.

Off-gassing has been mentioned several times in this report as a reason for construction delays and the reason monitoring is needed to keep employees safe.

Off-gassing (sometimes called out-gassing) is the release of VOCs or other chemicals into the air. This frequently occurs with new products or when chemicals are sprayed. In many cases, a person can smell when off-gassing occurs, such as the smell of fresh paint or odors in a tire shop.

If a person can detect these odors, they are ingesting VOCs. Although many VOCs have government-regulated acceptable tolerances, it is ideal for keeping VOC levels as low as possible, even if the odor does not bother employees or building occupants.



Frequent Off-Gassing Times

Paint: 3-5 years

Carpet: Up to 5 years

Particle Board: 12 to 24 years

Mattresses: Lifetime of the product

Most of the products listed above have a shorter period where they undergo heavy off-gassing. However, the products above may contribute to low indoor air quality in your next project over several years.

Healthy building solutions will help both A/E/C employees and building occupants work in safe spaces regardless of long-term off-gassing.



About Us

illumiPure is the world leader in healthy building devices and solutions. Focusing on complete solutions for buildings, we hold patents for air purification, light-based surface disinfection, air quality monitoring, and LED lighting. illumiPure is your single source solution for creating optimal indoor working environments.

illumiPure products are handcrafted in Houston, Texas, just minutes away from our corporate headquarters. This allows for unparalleled quality assurance and control and the ability to research, engineer, and test our own devices.

All illumiPure products are 3rd party tested and validated. Please get in touch with us for more information about our products and product testing.

Healthy Building Product Lines

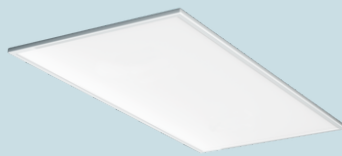
Air Guardian®



Air Disinfection: Continuously neutralizes pathogens, providing disinfection, filtration, and destruction of chemical contaminants while providing ventilation with frequent room air changes and protective airflow.

A portable model is available to remove VOCs and particulate matter on construction sites.

CleanWhite®



Surface Disinfection: Ultra Safe White Light Disinfection. Safe for humans, illumiPure's patented antimicrobial white light LEDs continuously disinfect and destroy surface pathogens while people are in the room.

CleanWhite's surface disinfection and Air Guardian's air purification are available in a single unit, the Air Guardian Plus.

Vertices®



Air Quality Monitoring: A complete air quality monitoring solution. Measure both indoor and outdoor air quality in a single application. Complete with a mobile application and up to five years of cloud-based data storage.

Integrate Vertices with Air Guardian for complete wireless control and management of Indoor Air Quality.

www.illumiPure.com