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DEEP DIVE

Health, Wellness and Sustainability Beyond COVID-19

We won't be speaking through plexiglass forever. What's next?

By John Salustri

THE OVERVIEW

While the COVID-19 pandemic caught many by surprise, commercial real estate professionals are on track to emerge more informed and better prepared for the inevitable next time. Of course, we have traveled that path from unknowing before, awakened, as it were, from blissful ignorance.

In the weeks and months following the terrorist attacks of 9/11, for instance, the business community and the United States populace in general remained on high alert. Security screening appeared in lobbies and National Guard professionals began protecting transit hubs. Today, such measures, once so strikingly out of the norm, are now much like white noise. We have all grown used to taking our shoes off as we board airplanes or flashing our photo IDs in building lobbies.

Now, with the end of the COVID-19 pandemic in sight, the same dynamic is likely to take place with the protections we have put in place to prevent the spread of the coronavirus. But how exactly will this *next* New Normal take shape? Will we be social distancing in our offices this time next year? Elbow-bumping rather than shaking hands? And, even if conference rooms are sanitized between each use, how many of us will be comfortable using them? We know now that there is a direct, if hidden, interplay between place, culture and well-being, a relationship thoroughly probed in *Deep Dive No. 2: Tenant Culture and the Psychology of the Return*. But how will that interplay hold up in the long term, when the "Great Return" to offices has been completed and office workers once again have grown used to regularly entering—and spending a full day in—office buildings?

In addition, more than ever, it is clear that the topic of wellness cannot be fully addressed without also discussing sustainability. The intersection between the two had been considered long before we upgraded our minimum efficiency reporting value (MERV) filtration to COVID-resistant levels. Now, the concepts are undeniably forged together. Likewise, responsible investing was already an attractive strategy for commercial building owners and—therefore—corporate tenants trying to prove their mission statements prior to the pandemic. And as Deep Dive No. 2 outlined, corporate responsibility translates into hiring and retention—so you can bet that idea is a late-stage pandemic favorite, too.

Just as you can't adequately address tenant culture today without considering employee well-being, broader discussions about building wellness in the New Normal are incomplete if they don't factor in sustainability.

Needless to say, at this early stage of recovery in the United States—before most of the world has been fully vaccinated, with countries still fighting to contain new outbreaks and while we ponder the potential impacts of variant strains of the virus—some speculation (albeit *educated* speculation) is due to enter the conversation. That said, Deep Dive No. 3 will tackle the ever-expanding, hard-to-define and presumably here-to-stay wellness issue from the following points of view:

- Table Stakes: Tenant Demand in the Long Term
- The Rise and Fall of Protocols
- Nuts, Bolts and Swiss Cheese
- Of Pseudoscience and Greenwashing
- Sustainability, Our Buildings and the Bigger Picture

"There has been a lot of knee-jerk, hasty acceptance of innovations over the past year, but that will slow down as more do-no-harm strategies lead the way."

— Sean McCrady, UL

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TABLE STAKES: TENANT DEMAND IN THE LONG TERM

It is interesting to note upfront the number of participants in this Deep Dive who linked a projected "COVID-19 hangover" to the history of other global disasters, specifically, the various impacts of 9/11 and the fear of congregation left in the trail of the 1950s polio epidemic.

The comparisons are apt. In both cases, it took the general population years to normalize. While the degree of COVID-19 awareness might differ from individual to individual, "You're going to have institutional memory probably for the next three to five years," says one wellness expert, who adds, "It may even be longer than that."

Of course, employees now have often-revamped corporate policies embracing work-from-home and hybrid workplace options, so they can ease their way back to the office while property management teams continue to carve out plans to rebuild trust in their indoor spaces. But how safe is safe? As Michael Gao, M.D., of Haven Diagnostics and Assistant Professor at Weill Cornell stated in a recent Gensler Research Institute interview, "What few people realize is that the office setting, even in modern sealed buildings, typically has higher rates of outside air ventilation and better air filtration than the home setting."

Offices, agrees one contributor, represent some of "the best ventilated indoor spaces that you can find." He refers to studies proving that viral particles released into the office air are blown around and diluted quickly enough to minimize risk. Nevertheless, "There is an incorrect perception that indoor spaces are not trustworthy. What that really means is that they have no control over those spaces."

What might be lacking is appropriate communication. People want to know that their buildings are safe, and it is simply not enough to say that you are doing it all. More than one property manager we spoke with advocates for third-party verification of building performance. The tenants need not know or understand every minute detail of the certification or designation. But, it is enough "to demonstrate that this building and this management team are operating at a high level."

As one source explains, COVID-19 actually represents two health crises: one physical and one mental. It is the latter issue that will define the overhang—and the table stakes for getting people back into the office. "Mental health equals trust," she says.

Tenants know what they want. Or at least they believe they do. Traditionally, commercial office as an industry has been a sleeping giant in the gross national product, at least when it came to people's awareness of it. We may occupy office buildings, but we tend not to have the awareness of office as an industry in the same way we think of airlines and insurance. That has changed somewhat in the past year as celebrities began promoting clean environments on television and the consumer press began writing about the benefits of MERV-13 filters.

"Individuals have been introduced to the idea of MERV ratings and HEPA filters," says one source. "There has been a collective expansion of our understanding of air in this building as opposed to another building. Ventilation and filtration will continue to be points of distinction and something about which tenants are now keenly aware."

Maintenance and cleaning will also remain a high priority. One expert points to things as simplistic as a dead plant or trash left unattended. These also impact that level of trust. And therein lies another irony in the perception of tenants: "People are making assumptions, and the feeling of safety is often pulled from sources that may have nothing to do with it."

The implication here is for work above and beyond what might be necessary for building teams to truly keep tenants, staff and service providers safe. That is where those informational stickers on the front door come into play—no matter which organization is providing them. They are, after all, another clear means of communicating the building team's efforts. It is also where education enters the conversation.

"Health requires a team. We need to partner with tenants to marry facility design and operational strategies with tenant behavioral and educational strategies."

— Whitney Austin Gray, International WELL Building Institute


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THE RISE AND FALL OF PROTOCOLS

It behooves building personnel—*all* building personnel—to bring rationality into the picture and meet tenant worries at the front door—literally. "Building managers should be empowered to talk about health," says one source. That communication will (or should) ultimately lead to comfort and that all-important trust.

"For leading organizations, the manager's role is elevated through education and responsibility," she says, referring to the education of both the manager and the tenant.

One advisor prods the management community with a challenge. He wonders aloud if managers are having regular meetings or communications with their tenant contacts, and if they share data with them "rather than expecting everyone to just know. The managers who engage in this sort of education will be essential to what happens in 2022 and beyond."

But educating tenants might still be tricky in the face of changing regulations and protocols from the likes of the U.S. Centers for Disease Control and Prevention (CDC), a dynamic that is likely to continue now that vaccines are rolling out with great regularity. Add to that dynamic vaccine hesitancy and the threats of new strains and "boosters and more vaccines," says one contributor, all of which could call for more oversight. In short, we are not out of the regulatory woods yet.

"Well-informed building management and facilities staff are all now the messengers for safe buildings and the protocols that are in place."

– Joanna Frank, Center for Active Design

It should be noted that, while the CDC has had to modify guidance several times throughout the pandemic—in some cases increasing the national angst level and affecting building managers' ability to speak with consistency and authority—the immediate rush for solutions was often negated by the workings of the scientific process, which, as one source explains, "is not as linear as we would all love it to be. This pandemic was unanticipated for many of us, so we were watching the scientific method unfold." It can be messy, she adds, and sometimes "theories are wrong."

So, where does science fall now, and how might it relate to how the office will look in the long term? The consensus is that plexiglass, for one, has been proven minimally effective, and then only when people are in face-to-face communication.

Due to the pandemic, sales of plexiglass have skyrocketed by as much as two to three times more than pre-pandemic levels, according to the International Association of Plastics Distribution. However, while plexiglass barriers may block large droplets generated by coughing or sneezing, the aerosolized nature of COVID-19 spread means the efficacy of these barriers is limited.

"The science is very clear that plexiglass barriers are not very effective," says one expert, "and, in some cases, it can be detrimental to ventilation" and airflow within a space.

Masks, on the other hand, as tedious as they can be, will probably be around for a little longer. JV Chamary, Ph.D., a science communicator writing in *Forbes*, agrees. →

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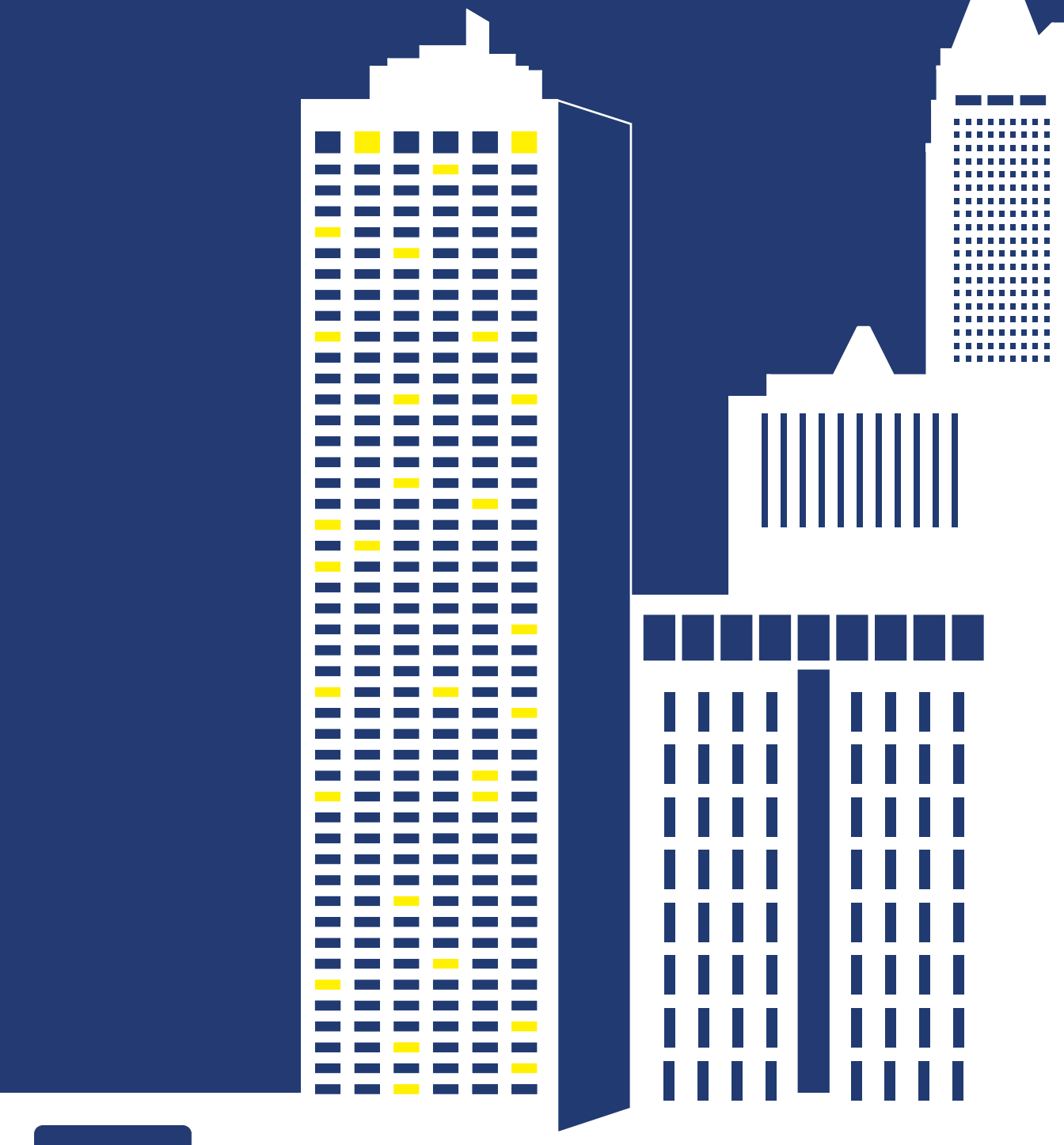

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"Shields and barriers are not a safe alternative to covering your nose and mouth," he writes. On the other hand, as Chamary notes, wearing masks inside buildings can be an effective tool in our public health arsenal and provides protection based on the aerosolized way the coronavirus is spread. Hence the need to continue their use indoors. Unless, of course, the individual is fully vaccinated, according to the latest guidance issued by the CDC in mid-May. For those who are not vaccinated (or for vaccinated individuals who are in one of a few specific settings, including healthcare facilities and transportation hubs), the point still stands. And, of course, many vaccinated individuals may still opt to wear masks for a while longer out of an abundance of caution and to feel a greater sense of control.

Alongside signage, masks and sanitizing stations, regular cleaning might be the most visible (read: comforting) proof that the building team is on the COVID-fighting case. It might also be among the least effective. Science now points to fomites as having minimal COVID-19 transmission capability.

As the CDC states: "Because of the many factors affecting the efficiency of environmental transmission, the relative risk of fomite transmission of SARS-CoV-2 is considered low compared with direct contact, droplet transmission or airborne transmission. However, it is not clear what proportion of SARS-CoV-2 infections are acquired through surface transmission. There have been few reports of COVID-19 cases potentially attributed to fomite transmission."

"If you had told me two years ago that I would be using the word fomite in a sentence, I'd say you were crazy," says one property manager. "But as science more fully develops, it seems that it's less about contact points and more about ventilation and filtration."

And that brings us to the preventive activity that tenants may not see but might be doing them the most good.

Property professionals should feel empowered to talk about health, safety and well-being, and those conversations ultimately will lead to tenant comfort and, most importantly, trust.

NUTS, BOLTS AND SWISS CHEESE

Heating, ventilating and air-conditioning (HVAC) systems once might have appeared on page 23 of an RFP, says one contributor. "Today, it's on page two." Tenants, prospective and otherwise, may not understand the nuts and bolts of system operations, but they now know of its importance to their employees. "The cat is out of the bag."

If, as stated before, office buildings are indeed often safer than our homes, it comes down mostly to how well we handle air. "One of the ways to mitigate infectious respiratory disease is through fresh air," says one expert, "and it is also really good for mental health." Fresh air leads to both physical and psychological well-being, which in turn leads to greater productivity and fewer sick days. "All the evidence points to it."

Despite the recent consumer focus on MERV-13 filtration, the subject has to be approached with more nuance than many tenants might have at their disposal, because, frankly, it is not a one-size-fits-all or plug-and-play solution—and there are trade-offs in terms of energy usage and costs, too. Besides, in some markets, MERV-13 is no longer the standard.

"As you increase the level of filtration, you increase the pressure drop, so the fan has to work harder," explains one contributor. "New buildings with state-of-the-art HVAC systems are designed for that pressure drop," but they'll consume more energy. MERV-13 is a requirement for certain building certifications, but "in some cases, you might have to upsize motors and belts to achieve that." It comes down to a function of motor horsepower, age and, of course, "budget. It always comes down to budget."

"First and foremost, it's about superior HVAC, enhanced filtration and ventilation and confidence that our management teams have our mechanical systems up to snuff."

– Alex Grella, Brandywine Realty Trust

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For one advisor, the cost is worth it. "The building manager needs to tell his or her owner to be willing to spend money and make investments, especially on ventilation upgrades, which can have a dramatic effect on performance," he says. "And they should be able to use that as a selling point." He does acknowledge that those costs can be hefty, possibly involving a change to the building's infrastructure. "You may have to change out air handlers and spend extra money on new fans and power equipment."

The higher the rating, the higher the overall cost. One contributor notes that Class A assets in San Francisco now hold a minimum MERV-14 rating as standard, and that can go to 15. This is a function of the added need for filtration due to the smoke risks of Northern California, especially during fire season. Some tenants also invest in portable HEPA filters, a less-than-$300 fix available at any home improvement store. "These are fantastic for COVID," she says. "They filter out small particles." And while COVID particles are smaller, "they can attach to a piece of dust or a droplet of water," making them easier for the filter to grab.

"Being able to promote the health impact of a space can bring a huge financial benefit to landlords and developers."

– Mara Baum, HOK

Another ventilation option, albeit a costly one and mostly out of budgetary reach for older existing assets, is thermal displacement, says one contributor. "It can have big paybacks in energy savings as well as productivity and building health," he says, adding that it has been around "for decades," but the system requires a different mechanical infrastructure. Hence the higher cost.

With thermal displacement, air comes in low, explains another expert, moves up, is distributed and vented out. Ironically, she says, you can achieve much the same benefit by simply mixing and diluting the air in the space. "It's far simpler to install ceiling fans to help with mixing."

It must be noted that safe and healthy office buildings are not a matter of filtration and ventilation alone. A common analogy is slices of Swiss cheese, as one building manager explains. Each protocol, overlaid with another, narrows the holes in the overall strategy. "Filtration is good, but it alone won't prevent the spread of COVID-19, and it's not entirely true that UV systems alone will prevent the virus either. But when you look at a number of protocols in concert, they're very effective," especially when they are coupled with increased rates of vaccinations.

OF PSEUDOSCIENCE AND GREENWASHING

There is, however, a strong case still to be made for the protocols that might now be disproven or carry minimal impact, as counterintuitive as that seems. So-called "hygiene theater" has little practical application in the fight against the COVID-19 virus, but such policies as sanitizing doorknobs and handrails might still be present in the post-COVID workplace. On one hand, "The expectations about hand sanitation and handwashing are clearly evidence-based," says one advisor, "but much of the surface cleaning and the hygiene theater we're seeing aren't."

On the other hand, remember that, as stated above, COVID-19 represents two health crises, one physical and one emotional. As we discussed in Deep Dive No. 2, the post-pandemic office also has to offer amenities that cannot be replicated at home. Fold in the fact that virtually all of us "equate shiny with clean," as one expert states, and it becomes clear that hygiene theater is theater only for the first crisis. It has practical implications for the second.

"Maintenance and cleanliness have a direct correlation to my level of trust," she states. Plus, clean spaces contribute to better behaviors. "If, as a building occupant, I see a clean bathroom, I'm more likely to wash my hands." Because there is so much about COVID-19 and its prevention that cannot be seen, "we rely on design and physical cues to gauge our trust of the building and its management."

"There's evidence that continuous deep cleaning isn't necessary from a hygiene standpoint. What is necessary is training for owners, managers and tenants on this issue."

– John K. Scott, Colliers

And this too is where shared knowledge comes in handy, in the hope that education leads to understanding and ultimately to comfort—even if tenants do not see cleaning crews 24/7. "First you provide, and then you educate and then you scale back," says one contributor, "and then you scale back some more."

At that point, if a tenant still feels vulnerable, give them the tools to control the situation themselves. "Tell them that we won't control it for you anymore, but if you want to clean your own desk, here's how you do it." Touchless technologies and automation also can come into play here, minimizing contact while also harnessing the power of sensors and data to provide an optimized tenant experience.

Yes, hygiene "theater" might mean extra work for the building team in the short term, but it is for the good of tenancy, which makes it good for ownership, too.

We might call the related concept of "greenwashing" a riff on hygiene theater, although the motives might be more suspect. As UL explains, in a world where there are seemingly more green products on the market than ever before, "Greenwashing is the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service." Companies making outrageous claims about their so-called green products without the benefit of evidence only confuses the issue and leads to bad investments of capital and time.

Of course, avoidance of snake oil is simple enough. "When you pursue green products, you want to be careful about what you're using and verify the details," says a property manager, much like property professionals have been called to do throughout the pandemic with products claiming to mitigate COVID-19. "We're all sensitive to greenwashing, but it's easy enough to verify the products that should be used."

Greenwashing, as the name implies, refers to a range of sustainability issues, wellness included (See *"Seven Deadly Greenwashing Sins"* below.) But there is a "throwing the baby out with the bathwater" effect taking place here. The nefarious practice of greenwashing should not deter property managers from the importance of being truly green.

Seven Deadly Greenwashing Sins

In the field of sustainability, environmental firm TerraChoice (which was subsequently purchased by UL) studied the environmental claims of various popular cleaning products. The following Seven Sins of Greenwashing were developed from those survey results. "Today, the Sins of Greenwashing remain a popular learning tool to help consumers evaluate sustainability claims," says UL, and they have taken on a renewed prominence in the wake of the pandemic.

- **Deadly Sin #1: The hidden trade-off.** This sin paints a narrow picture of attributes while ignoring others. "Paper, for example, is not necessarily environmentally preferable because it comes from a sustainably harvested forest. Other important environmental issues in the paper-making process, such as greenhouse gas emissions or chlorine use in bleaching, may be equally important."
- **Deadly Sin #2: No proof.** These simply are claims without verification or certification. "Common examples are facial tissues or toilet tissue products that claim various percentages of post-consumer recycled content without providing evidence."
- **Deadly Sin #3: Vagueness.** Says UL: "It is a claim that is so poorly defined or broad that its real meaning is likely to be misunderstood by the consumer." One example includes the use of the phrase "all-natural." After all, arsenic, uranium, mercury and formaldehyde are all-natural "and poisonous. All-natural isn't necessarily green."
- **Deadly Sin #4: Worshiping false labels.** This refers to fake labels, designed to give "the impression of third-party endorsement where no such endorsement exists."
- **Deadly Sin #5: Irrelevance.** Claims may be true, but they are not necessarily relevant. "CFC-free is a common example," says UL. It might sound like the manufacturer is serving the public while making a point of differentiation. In reality, they have no choice. CFCs are banned in certain regions.
- **Deadly Sin #6: Lesser of two evils.** Claims can be specifically true, such as those touting the benefits of organic cigarettes. Still, "they distract the consumer from the greater environmental impacts of the category as a whole." It is a sin of omission.
- **Deadly Sin #7: Fibbing.** Flat-out lies. "The most common examples are products falsely claiming to be ENERGY STAR® certified or registered."

SUSTAINABILITY, OUR BUILDINGS AND THE BIGGER PICTURE

Of course, we cannot speak of wellness in the context of building performance without addressing sustainability. In fact, as one expert commented, to separate the conversations is to do a disservice to the industry.

"Your building is more than a place to shelter someone," says one contributor. "As building professionals, we play a key role in shaping the impact of our assets," not only on the people within them but indeed on those outside them, too. "There is a connection between our buildings and our health. That connection has been made and people cannot unsee it." And yet, the magnitude of the broader conversation is "overwhelming," even to the sustainability professional who used the word in our interview.

In a very narrow, building-specific sense, there has been a gradual evolution of what constitutes a "healthy" asset. Public health considerations have been with us for well over a century, but it might be said that the 1976 outbreak of Legionnaires' disease in a Philadelphia hotel, which was traced to bacteria in the cooling tower of the hotel's air conditioning system, gave the issue a renewed national prominence.

"There is no single right answer for a lot of sustainability issues. There are often trade-off conversations we all have to have."

– Catherine Sheehy, UL

Over the years, as one sustainability expert explains, the public discourse has evolved and expanded, and a general understanding of considerations around our indoor environments have flourished to embrace such wide-ranging issues as energy efficiency; the use of certain furnishing materials; and policies that promote exercise and mental health. All such considerations fall under the overarching category of sustainability, not only of our natural resources but, indeed, ourselves. And this conversation is also driving the recent proliferation of ESG (Environmental, Social and Governance) principles.

The topic of sustainability continues to evolve, and practitioners see a direct connection between healthy buildings and healthy communities. And in this larger context, technology plays an even greater role. Can you have a truly smart city that is not also a walkable or transit-friendly city? And can you have easy, stress-free access that does not also reflect social equity? Indeed, our infrastructure and choices for commuting—including new power storage options and cars that can park themselves—all figure into the health and wellness of the individual, as well as the sustainabilty of the world around us.

In all, it is a simplistic outline, but one that, at its core, "is spot on," says one contributor. And there are many ways buildings can be part of a new paradigm. Clearly, these are solutions that can extend far beyond the property line.

Ultimately, as one advisor states, "We're going to find that buildings are community makers and wellness generators when they are done right." More on this in BOMA International's next Deep Dive. ■

There are many ways buildings can be part of a new paradigm. Clearly, these are solutions that can extend far beyond the property line.

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Research work contributing to this paper includes:

- From BOMA International: "Tenant Culture and the Psychology of the Return."
- From the U.S. Centers for Disease Control and Prevention: "Science Brief: SARS-CoV-2 and Surface (Fomite) Transmission for Indoor Community Environments."

  "*Legionella* (Legionnaires' Disease and Pontiac Fever)."
- From *The Conversation*: "The Deadly Polio Epidemic and Why It Matters for Coronavirus."
- From *Forbes*: "Why Face Shields and Plexiglass Barriers Don't Block Coronavirus."
- From Gensler Research Institute: "Surprising Truths About the New Hybrid Workplace."
- From UL: "Sins of Greenwashing."