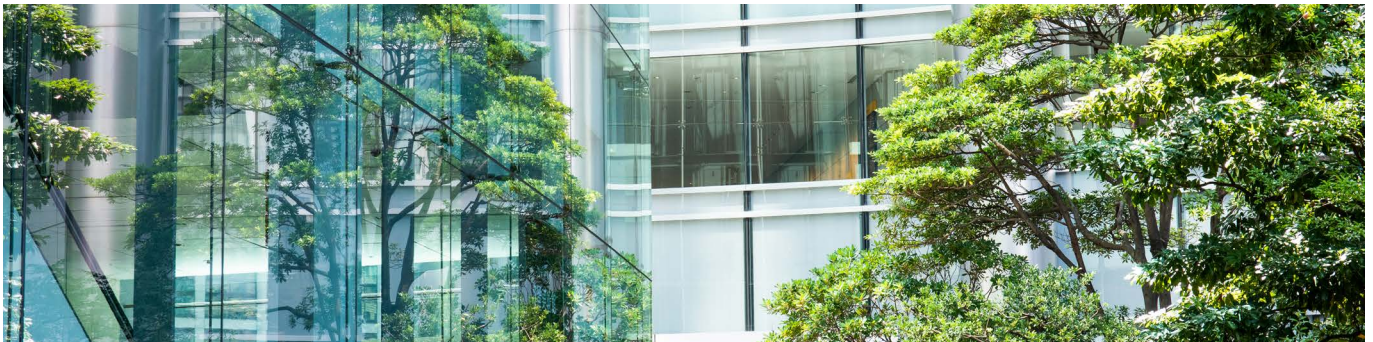


It's Crunch-Time for Commercial Real Estate Owners - Why Smart, Healthy, Sustainable Buildings Matter



The commercial real estate (CRE) market is facing a [perfect storm of financial, regulatory and social headwinds](#).

Rising interest rates, curtailed credit and a drop-off in occupancy rates are all buffeting the sector. Governments, investors and tenants all are hungry for action and results on ESG, particularly in the realms of energy efficiency and decarbonization. Meanwhile, owners cannot ignore the ongoing need for operational savings, portfolio compression and enhanced occupant experiences.

Around \$900 billion in U.S. commercial property debt is due this year and next, which means that many building owners will make refinancing their short-term priority. But tweaking the terms of their loans is only a recipe for their short-term survival. To thrive when calmer waters prevail, they'll also need a robust strategy for sustainability, a shrewd blueprint for tailoring their floor space to fit the hybrid work era, and a clear plan to enhance the health and wellness of their building users.

Owners can't tackle these various challenges without harnessing smart building technologies that integrate seamlessly to boost outcomes across their portfolio. The insights generated by Artificial Intelligence-enhanced building automation systems (BAS), Internet of Things (IoT) sensor solutions, and cloud-based, open API

platforms [can be a game-changer](#) for energy efficiency, space optimization and healthy buildings.

But many major building owners are still playing catch-up on smart, sustainable buildings. Slowing them down are capital constraints, a lack of leadership over the issue, and the difficulty of obtaining meaningful insights and improved outcomes from the data churned out by their digital technology. This is concerning, not least for the sake of the planet. The world's buildings are responsible for [nearly 40% of all carbon emissions](#) and 34% of energy demand, and the gap between the climate performance of the sector and the 2050 decarbonization pathway [is widening](#). The recent extreme heat in several parts of the northern hemisphere is a timely reminder of the environmental and socioeconomic risks of inaction on decarbonization.

It's not hyperbole to say that some owners will face existential risks if they take a passive approach to reducing their energy consumption and carbon footprint. Two years ago, Blackrock Chief Executive Larry Fink wrote that [climate risk was investment risk](#), and warned that major companies who failed to prepare and participate in the race to net zero would "go the way of the dodo." The financial turbulence will surely hasten their extinction.

Phoenixes

Conversely, there are significant rewards up for grabs for "phoenixes," the name Fink coined for companies who proactively embrace technologies that accelerate the energy transition. (Phoenixes are mythical birds that cyclically regenerate themselves.) The CRE sector's phoenixes will be the owners who refinance promptly and prudently, and set about converting their portfolios into smart, sustainable spaces that reduce energy consumption and support the world's decarbonization goals. Along the way, they will tailor their real estate footprint to fit the hybrid work era, and transform their buildings into safe, healthy and comfortable spaces for the people using them.

Phoenixes will see an upward trend in their most important numbers, which are the sales and rental values of their real estate portfolios. There's [overwhelming evidence](#) that smart, sustainable buildings command a healthy premium per square foot in the sales market. Tenants are increasingly prepared to pay more for office blocks that support the physical and mental health of employees. Building owners can maximize their premium by taking decisive action now.

Viewpoint 1

'Striking a balance between investment and returns'

"We are seeing a premium available for buildings with sustainability features, whether it's onsite solar panels, or technology that smartly monitors and adjusts the energy usage of HVAC and lighting systems. But real estate players will need to tread carefully, because that premium isn't free: They'll need to invest to obtain it, which will eat into their returns.

It's tough to justify putting up extra capital in an environment where office demand is muted, and it'll be even more costly for owners and landlords who operate ageing buildings with obsolete systems that might not even support new technology. The smart building technology market is also confusing, with lots of players selling individual solutions.

Owners and landlords often have very little insight into the system or configuration of systems that will offer them maximum value. Commercial real estate players will need all the resourcing, expertise, and know-how to help them navigate these challenges."

Julie Whelan

Global Head of Occupier Thought Leadership, CBRE

struggling owners. Asset values have slumped in the wake of dwindling occupancy rates, which will result in several owners accepting a major haircut if they go to market. Owners who somehow weather the storm, but continue to neglect their net zero goals, shouldn't be under any illusions: They are living on borrowed time.

The companies that manage to cling onto their assets and are planning to invest in smart buildings are in a race against time on sustainability. Building owners are facing onerous compliance and transparency requirements at the federal, state, and local levels. The United States Securities and Exchange Commission (SEC) has [recently implemented new rules](#) for environmental, social and governance (ESG) reporting and climate disclosures. The new rules would require listed companies to not only disclose risks that might have a material impact on their business, operations, or financial condition, but their Scope 1, 2 and 3 emissions.

A growing number of states and cities have published [Building Performance Standards \(BPS\)](#), which are policies and laws for tackling greenhouse gas emissions from large built environments. Several countries have passed, or are considering, stricter laws on energy efficiency. Consumers and shareholders are also growing more adamant that companies decarbonize.

One key date for many building owners is 2030. Some firms have already made worldwide science-based commitments to achieve net zero greenhouse gas (GHG) by the end of the decade. BPS also follow a [seven-year cycle](#). Commercial building owners have two years to benchmark and disclose the energy use of a building, after which a city, county or state body defines the carbon and energy performance improvement targets for the structure. Owners then have five years to make the necessary retrofits for compliance. They'll face financial penalties if they don't meet their deadlines.

Leaving it late

Despite the urgency, many building owners are leaving it late. According to the [Net Zero Tracker](#), around half of the 2,000 largest publicly-traded companies in the world by revenue have committed to a net zero strategy for at least one of the [Scope 1, 2 and 3](#) categories. Of CBRE Global Workplace Solutions' 150 enterprise clients, [fewer than half](#) have published strategies in place to meet their carbon reduction goals. To align with the Paris Agreement, which aims to limit global warming to between 1.5°C and 2.0°C, 37% of global buildings will need to be decarbonized by 2030.

CBRE notes that a fully-fledged decarbonization strategy, including management, finance, operations, and decision-making, can feel

Financial reckoning

There's no denying that the financial outlook looks bleak for building owners. Market watchers have spoken of a "reckoning" that is underway in North America's CRE industry, with developers handing back obsolete [office buildings](#) to lenders, foreclosures on indebted condominiums, and defaults on hotels and shopping malls. Some banks are even offloading performing property loans at a loss as they hunker down in anticipation of the gathering storm.

Many owners will attempt to refinance their debt with their lenders, who are mainly private regional institutions, but it won't be smooth sailing, since the era of cheap money is now just a distant memory. Many won't be able to refinance on agreeable terms, and will elect to sell, rather than limp on. But selling up is no panacea for



“overwhelming”, especially at a time of financial stress. Building owners also have more on their plates besides energy efficiency and sustainability. The advent of the hybrid work era is forcing them to reconcile their total real estate footprint with actual space usage. Meanwhile, the users of their buildings want to understand how the facilities in which they live, work, and learn are contributing to a healthier planet and community. Owners are increasingly aware of how consumers prioritize environmentally conscious brands, and jobseekers seek out sustainably aware employers.

Some owners have only taken ‘analogue’ steps to address these issues. For example, some have adopted all-electric heating and cooling systems for their new pipeline of developments and retrofitted older properties, adapted to more renewable sources of energy, and completed embodied carbon assessments for their projects, which offers them an overview of the emissions from the extraction, manufacture and assembly of everything that goes into its buildings.

Other major building owners and companies with large real estate portfolios who are chasing higher returns on their equity are downsizing and carving out more flexible space as they adapt to the hybrid work era. On the health and wellness front, companies have started to measure the atmospheric concentrations of carbon dioxide and particulate matter 2.5 (PM2.5 µg/m3), the invisible particles produced by the combustion of fuels for vehicles, heating, and power generation, as they respond to heightened public awareness over indoor air quality.

The ‘smart’ conundrum

When it comes to smart building technologies and platforms that can help them overcome these various challenges, building owners are spoilt for choice. We are now living through a fourth Industrial Revolution, also known as Industry 4.0. This refers to the integration of physical assets with advanced digital technologies, such as IoT, AI, robots, cloud computing, nanotechnology and more. These digital technologies specialize in communicating, analyzing, and acting on data, allowing organizations, consumers and society better, deeper insights. Those insights can be used to make more intelligent, transparent, and efficient decisions.

Viewpoint 2 ‘Smart data is imperative’

“We are helping our clients invest in smart building technologies and pilot various smart-technology tools because they know there is significant opportunity for the technology to help reach their goals for sustainability, employee health and wellbeing, and hybrid work – and do so while balancing costs. However, if the investments are not driven by a strategic plan and integrated approach, the quality of the data that owners and occupiers garner from their buildings is often poor and not actionable.

Owners will have data flooding in from utility meters, sensors, building management systems, access control systems and work order management systems – and its often not integrated into one platform in a single building, let alone a network or portfolio of buildings. That’s an issue.

Integrating smart data properly, to get meaningful insights is key to achieving goals and deliver on objectives.”

Kelly Spinola

Senior Director, Global Product Owner, Facilities Management at JLL

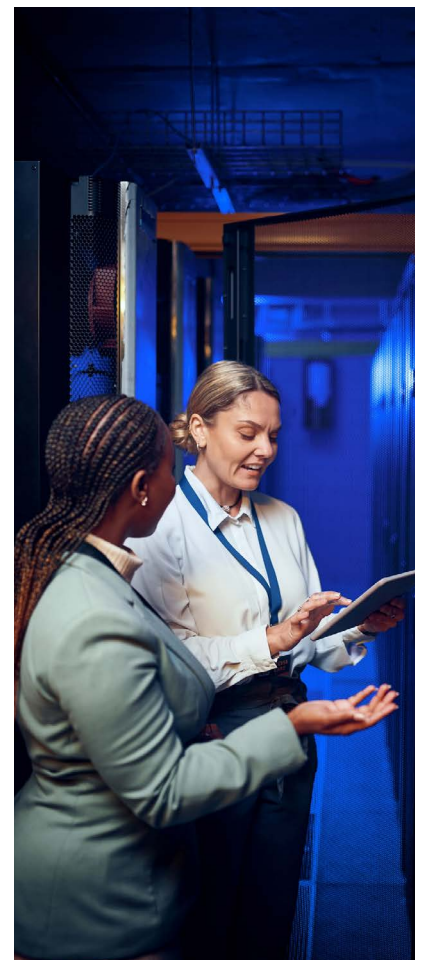
Many building owners operate several of these individual digital technologies, but **fully-fledged smart buildings**, which WiredScore defines as “structures that deliver outstanding outcomes for all users through digital technology,” remain elusive. WiredScore warns that many owners and landlords adopt technology for its own sake, rather than leveraging it with improved outcomes in mind, such as reduced carbon footprints, cost efficiencies, and personalized services.

This puts the onus on owners to better define their desired outcomes from smart building technology. To help them, they should seek out smart building technology solution providers who offer considerable building expertise and cutting-edge technology as standard, and who can tackle the **smart buildings conundrum**. These partners will understand that the individual missions to boost

sustainability, optimize space or enhance wellness are not just inseparable from digitalization, but closely related to each other.

They’ll wield the crucial ability to gather and aggregate the mountains of data churned out by a medley of building equipment, systems, and sensors, then analyze that data to generate meaningful, actionable insights that can improve outcomes across the board. Often, partners will package these abilities as software platforms that provide building owners with ‘efficiency as a service.’ These cloud-based platforms often leverage sophisticated APIs and are agnostic to any infrastructure, building automation system or service provider. Owners should favor vendors who offer attractive financing options, guarantee cost savings, and offer rapid ROIs.

But the clock is ticking. Owners will need to seek out suitable partners as a matter of urgency, since the demand for digital solutions to support sustainable initiatives is likely to surge in coming years, which is a recipe for increased costs.



Viewpoint 3

'Building dynamic flexibility'

"Owners and occupiers are in a position of caution, as they try to strike a balance between managing capital for the future and meeting the health and wellbeing commitments they've made to the people in their space. But many owners are trying to build dynamic flexibility into their spaces across the board, whether it's the ability to ebb and flow space according to occupancy, automated HVAC that learns about day-to-day operations, or tailoring cleaning services to space usage.

They're investing in technologies that give us data and insights about the way that spaces are used in real-time. That technology is allowing them to meet their energy efficiency and sustainability goals too. Based on insights about space usage, they can boost sustainable outcomes, all the way from closing off entire floors, which reduces the power consumption and costs of HVAC and lighting systems, to avoiding the use of chemicals used for cleaning.

The technology goes all the way down to equipment level, allowing them to know if a boiler or chiller is working outside of its usual parameters, allowing us to get it fixed faster and save energy."

(Read about the experiences of [Derwent London](#), [Microsoft Beijing](#), and [Fiserv Forum](#)).

Kelly Spinola

Senior Director, Global Product Owner, Facilities Management at JLL

Many building owners will balk at making large investments in technology in the capital-constrained environment. Some owners with large real estate footprints will need to invest millions of dollars just to ensure their building portfolios comply with current code standards and efficiency ratings. It goes without saying that few companies have large reserves of spare cash. Others may be wary of allocating capital for major digital transformation projects, since it will reduce their ability to make acquisitions and make dividend payments.



Viewpoint 4

'Creative financing solutions'

"We see building owners falling into three groups. There are those who haven't even started on sustainability, and those who have fully embraced it, and know exactly what they need to do. But there's a big swathe in the middle who acknowledge sustainability pressures but have no real roadmap for getting where they need to be. They're often capital constrained, and thus wary of making large investments to digitally transform their businesses. Thus, they need creative solutions for financing, but aren't aware of the options available to them, especially from the vendors who are selling 'efficiency as a service.' They should investigate their options.

These models rely on a monthly fee, which can be covered by the guaranteed savings from more efficient equipment and reduced energy consumption. These models aren't just ticking financial, sustainability and compliance boxes, but supporting an organization's talent attraction and retention goals. Over the longer-term, companies that demonstrate progress in decarbonization will benefit from a 'sustainability premium', receiving favorable lending rates and attracting investments."

Jonathan Heckmann

Global Managing Director
Johnson Controls

Flight to quality

Building owners that seize the day on digital transformation are well-positioned. In addition to the energy savings that owners will make from digitally transforming their portfolios and the reduced prospect of financial penalties for non-compliance, there's strong evidence of a flight to quality in the CRE market. Occupiers and investors are willing to pay more for high-quality buildings with advanced sustainability features and amenities, such as solar panels, or EV chargers.

Reducing energy consumption and carbon emissions are the top ESG considerations most likely to impact property value, according to three-quarters of all respondents to a [CBRE survey](#). Investors and occupiers are most often willing to pay a premium for buildings with on-site renewable energy generation and smart technology to monitor and adjust energy usage.

The situation is similar to the higher price commanded by a recently renovated house: Investors would prefer not to invest significant capital to make these improvements themselves but are prepared to pay a premium for properties that already boast high-quality amenities.

Viewpoint 5 'Flight to quality'

"The real estate market is currently facing challenges due to rising interest rates, which affect the cost of carrying buildings. But there's good reason to believe that tenant demand will bounce back for two main reasons: Employers have continued to hire throughout the pandemic, resulting in a higher need for office space, and companies want their employees to return to the office more frequently. As the sector rebounds, we'll see a flight to quality, with companies seeking high-quality buildings that offer energy efficiency and sustainability features, and sophisticated systems that manage data smoothly and transparently. Green buildings especially are fetching a premium and are increasingly important to tenants in their building selection process. Some tenants have even taken it upon themselves to invest in smart building technology, such as sensors to manage their spaces more efficiently."

Brandon Forde
President, Advisory & Transaction
Accounts, CBRE

For example, there is a [growing link](#) between healthy buildings, and the premium they command from investors and tenants. Nearly half (49%) of occupants and investors surveyed by [CBRE](#) would pay more for buildings with features and amenities that support the physical and mental wellbeing of its users. Around the same proportion (47%) are prepared to pay a premium for buildings with health and wellbeing certificates, such as WELL. The effort to boost the health, safety and wellbeing of building users feeds through to the bottom line, too. Blackrock's Fink noted in his [2022 shareholder letter](#) that companies who forged strong bonds with their employees saw lower levels of turnover and higher returns during the COVID-19 pandemic. Green building certification is also a factor that could positively impact a real estate transaction. [A CBRE analysis](#) of 20,000 U.S. office buildings found that average rent of those with LEED certification, which denotes a high degree of energy efficiency and environmental responsiveness, is 31% higher than that of non-LEED-certified buildings.

The CRE sector's phoenixes will enjoy the smoothest refinancing experiences, receiving favorable interest rates and repayment terms from lenders and technology partners. They will also avoid the financial penalties of non-compliance. Before long, their energy efficiency and space optimization drives will yield significant cost savings, allowing them to receive rapid return on investment (ROI). They'll also find themselves becoming beacons for attracting and retaining talent as they burnish their reputation in the jobs market. A company's brand is also a major driver of a decision to pursue net zero emissions, with [plenty of evidence](#) that consumers are willing to spend more if a company or product aligns with their values.

This reinforces the positive case for the CRE sector making prompt investments in smart, sustainable buildings. The upfront cost for smart building platforms might seem daunting for capital-constrained owners, but the longer-term economic, regulatory and reputational benefits appear to outweigh short-term financial concerns. But owners will need to allocate capital sooner, rather than later.



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