Commercial Real Estate Development WINTER 2023/2024

Development®

IDEAS | ISSUES | TRENDS

The Data Center Real Estate Boom *50*

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

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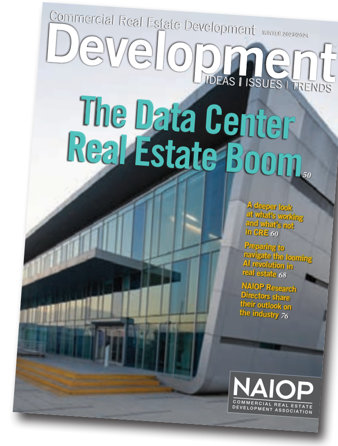

The exterior of an Equinix International Business Exchange™ (IBX®) data center.
Source: Equinix

COLUMNS

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STARBUCKS COFFEE
HOTEL DROVER
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A Note From the Editor

Uncertainty Clouds Outlook for 2024

The economy is demonstrating resiliency, inflation is easing, and interest rates may hold steady in the coming months. However, even if we avoid a recession, growth is expected to be below average next year.

This issue includes many industry experts' insights on what 2024 may hold for commercial real estate — including possible approaches to dealing with the current office vacancy situation, the use of artificial intelligence and the attendant growth in data center development.

Jennifer LeFurgy

Development magazine had an exceptionally successful year — NAIOP members contributed dozens of articles, and we enjoyed a record number of subscribers and page views. I am also pleased to welcome **Jonathan Rollins** as the new managing editor. Thank you for your support, and we wish you the best for the next year.

Stay connected,
Jennifer LeFurgy, Ph.D.
Editor-in-Chief

Future NAIOP Events

- **Chapter Leadership and Legislative Retreat**, February 12-14, 2024, Washington, D.C.
- **I.CON West**, March 11-12, 2024, Long Beach, California
- **National Forums Symposium**, May 8-10, 2024, Minneapolis

For the most current information on upcoming NAIOP events, both virtual and in-person, visit naiop.org/Events-and-Sponsorship/

Most Popular From Fall 2023

1. **"The Logistics Building of the Future"** (naiop.org/23logistics/), page 78
2. **"VanTrust Real Estate: Developing with a Difference"** (naiop.org/23vantrust/), page 70
3. **"'We Cannot Allow the Best to Overwhelm the Good': A Conversation with Joel Kotkin"** (naiop.org/23kotkin/), page 84
4. **"Seattle Draws Cheers for a Daring Stadium Renovation"** (naiop.org/23stadium/), page 90
5. **"Revitalization and Revenue: Office Conversions as a Way to Rebuild Cities"** (naiop.org/23conversations/), page 14

In Brief

Notable facts and figures on the state of the commercial real estate industry, culled from media reports and other sources.

INDUSTRY OUTLOOK

62 The number of mezzanine loans and other high-risk loans foreclosed upon this year through October, according to the Wall Street Journal. This is more than double the number for all of last year, and likely the highest total ever for a single year.

25.1% The percentage of commercial real estate loans captured by smaller U.S. banks in Q2 of 2023, down from a record high of 34.2% in the first quarter of 2023. Never has the share of lending by these smaller banks fallen so sharply in a single quarter, according to MSCI.

0.7% CBRE's forecast for U.S. GDP growth in 2024. The firm expects economic growth to slow in late 2023, with a moderate recession continuing into early 2024.

7.6% The percentage commercial real estate insurance costs have risen annually on average since 2017, according to Moody's Analytics in a September article in The Wall Street Journal. "Increases can result in hundreds of thousands of dollars or more in additional annual costs, depending on location and size of the property. They can be steep enough to wipe away a year's worth of profits."

DATA CENTERS

$48 Billion The transaction volume for data centers in 2022. According to JLL, "The data center sector witnessed record-setting M&A activity and higher EBITDA multiples compared to asset-level deals. While interest rate volatility and regional bank challenges are observed, the data center market continues to attract a variety of lenders including life companies, banks, debt funds, and CMBS/SASB."

OFFICE

2.3 Million The number of square feet of office space occupied by AI firms in San Francisco, according to JLL. The firm is forecasting the city's office market will have around 3 million square feet by the end of 2023.

19.3% The historical peak of the average national office vacancy rate in 1991. The national average office vacancy rose to 19.2% last quarter, according to Moody's Analytics.

90% The percentage of members surveyed by the Seattle Metropolitan Chamber of Commerce who said that the city couldn't recover until homelessness and public safety problems were addressed.

INDUSTRIAL & LOGISTICS

750 Million The number of square feet of leasing activity projected for 2023, according to CBRE. The firm predicts, "While higher-than-expected rent growth in emerging markets could push overall rent growth to just under 15% for the year, vacancy rates will increase more than initially expected as tenant requirements continue to lag new construction completions." ■

Demand Remains High for Construction Workers

Firms with openings for craft workers report challenges in filling those positions.

By Ken Simonson, AGC

Developers aiming for a definite opening date for a new project or renovation must face the reality that the supply chain has not healed completely and that key construction workers may be unavailable. Both shortages can throw schedules off-track and off-budget.

Most materials can be procured without undue delay, unlike the situation during 2020-2022. However, unprecedented lead times still exist for electrical equipment such as transformers and switchgear. Electronic components for elevators, HVAC systems and door-security hardware may also be hard to obtain. Without these items, buildings aren't ready for occupancy.

Tight labor supply is a more widespread problem than is a lack of materials. In a survey the Associated General Contractors of America (AGC) released in early September, 88% of respondents with openings for craft workers said the openings were hard to fill. For each of 21 separate crafts, at least 60% of the firms that had openings for that craft reported difficulty filling the positions.

Among the more than 1,400 respondents, similar levels of difficulty were

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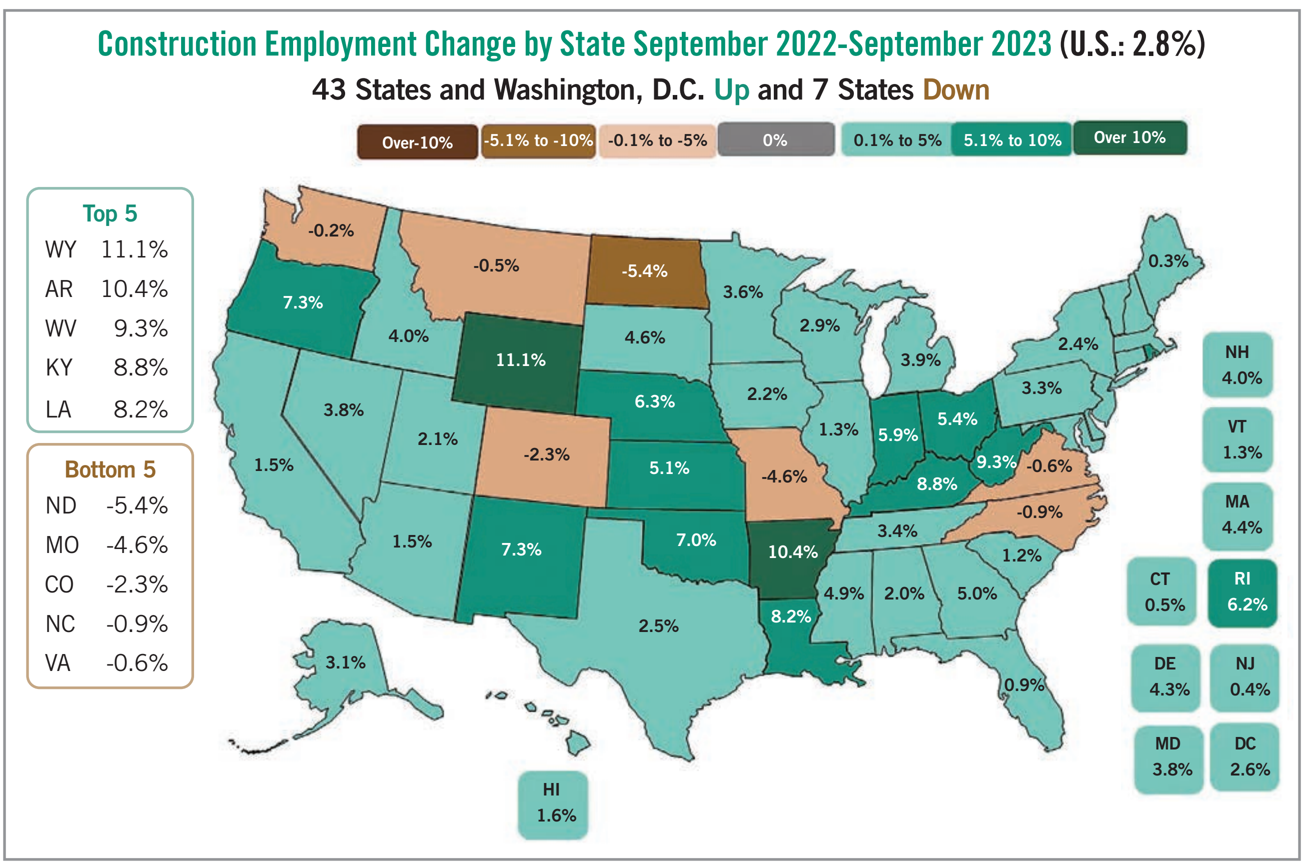
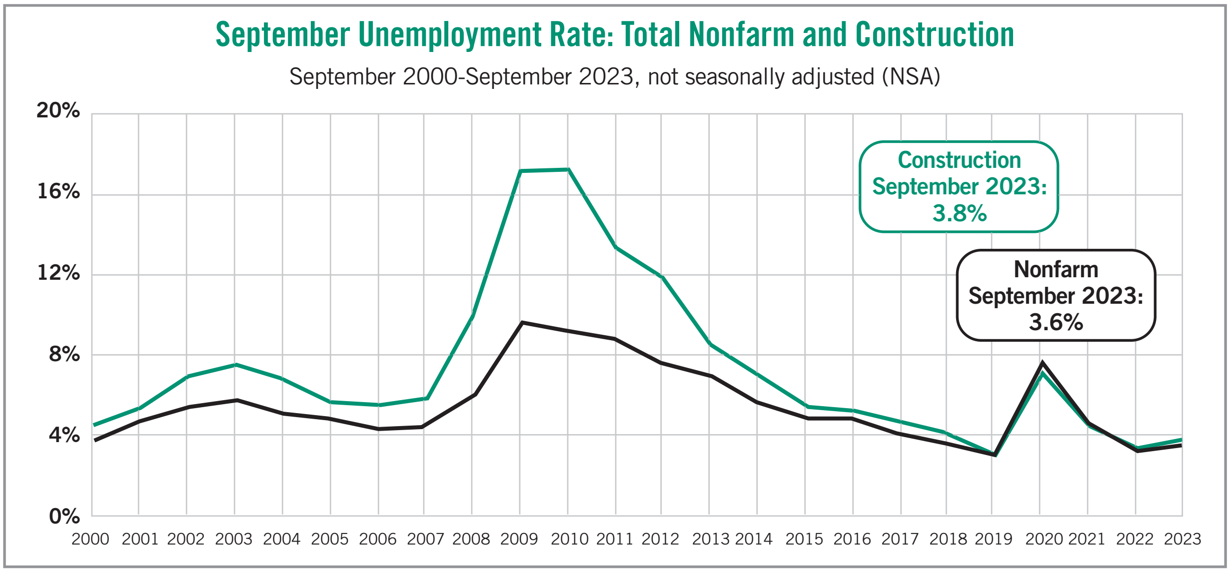


Source: Bureau of Labor Statistics, state and area employment, www.bls.gov/sae

Contractors will probably continue having a hard time filling positions. Most likely, they will have to boost the "wage premium" they pay relative to other industries and pay more overtime to the employees they do have to make up for ones they weren't able to hire.



Source: Bureau of Labor Statistics, Current Population Survey (CPS)

reported by all sizes of firms, all project types and all regions. While open-shop contractors reported somewhat greater difficulty in filling positions than did unionized firms, even the latter had problems with labor supply.

That's not surprising, given the low number of experienced construction workers who are unemployed and looking for work. Until recently, the unemployment rate for construction was typically higher than the overall rate, because after finishing a project, some construction workers would have to wait months for a suitable new project to begin. But the Bureau of Labor Statistics (BLS) reported that the unemployment rate for workers with construction experience in September was only 3.8%, essentially matching the 3.6% total nonfarm unemployment rate. (Unemployment rates by industry are not seasonally adjusted; the seasonally adjusted or "headline" nonfarm rate was 3.8%.)

Two-thirds of respondents to the AGC survey reported that at least some job applicants were not qualified. These applicants may have lacked the required skills or work papers, or they may have had a blemish on their records that barred them from certain jobsites. In addition, one-third of respondents said some applicants couldn't pass a drug test. One out of four respondents said a lack of transportation kept some job candidates from being hired.

Contractors have had some success adding workers. Industry employment rose by 2.8% from September 2022 to September 2023, outpacing the 2.1% increase in overall nonfarm employment. The gains were widespread, occurring in 43 states and Washington, D.C.

However, the employment increases have come at the cost of elevated wages, relative to other sectors. BLS reports each month on average hourly earnings for production and nonsupervisory employees. Such workers in construction include most craft workers as well as office workers. Their earnings climbed 5.7% in the 12 months through September, compared with 4.5% for production and nonsupervisory workers in the overall private sector.

The Bureau of Labor Statistics (BLS) reported that the unemployment rate for workers with construction experience in September was only 3.8%, essentially matching the 3.6% total nonfarm unemployment rate.

Contractors will probably continue having a hard time filling positions. Most likely, they will have to boost the "wage premium" they pay relative to other industries and pay more overtime to the employees they do have to make up for ones they weren't able to hire.

As a result, developers and property owners should expect that contractors will be passing along higher labor costs when they can. In addition, many projects could experience delays due to a shortage of key workers. ■

Ken Simonson is the chief economist with the Associated General Contractors of America. He can be reached at ken.simonson@agc.org.

Ripe for Conversion

Will a radical change in the purpose of underutilized office buildings transform the market?

By Phil Mobley and Jay Lybik, CoStar Group

Housing affordability, especially in major metropolitan areas, has become a major social and political issue in the United States — one that has only been accentuated by the rapid rise in mortgage rates over the past 18 months. Although growth in home prices and residential rents has leveled off since a midpandemic run-up, there is nevertheless a systemic shortage of affordable housing to accommodate the generation of young adults who will be ready to form new households in the coming years. According to the National Multifamily Housing Council, the shortage of apartments alone will exceed 4 million by 2035.

Coinciding with this lack of housing is a structurally challenged commercial office market, the result of a pandemic-driven demand shock that has left some office buildings facing an existential crisis. Since the beginning of 2020, the office vacancy rate in the U.S. has risen from 9.5% to 13.3%, the highest ever observed by CoStar. Currently, nearly 20% of the space in ostensibly Class A rental buildings in the nation's top 30 markets is vacant.

Facing the possibility of the large-scale functional obsolescence of office buildings, building owners, city leaders and a variety of real estate industry professionals have put forth the notion of converting underutilized offices into apartments. On its face, the idea has obvious merit. However, digging deeper into the details of past successful conversions shows that the rigid requirements that make such adaptive reuse financially feasible are likely to restrict the scope of future conversion activity to a few projects.

Alacatr via iStock/Getty Images Plus

Only a select few office buildings are truly viable candidates for conversion to residential use.

Defining the Criteria

Developers with experience in office-to-residential conversions emphasize three factors that stand out in making an office a viable candidate for conversion: location, floorplate size and cost. The last of these items has become more challenging in recent months, with the financing environment stifling much would-be development activity. Beyond this, there are also political considerations that can affect the feasibility of conversions.

As is always the case with real estate, everything starts with location. Industry practitioners report that, in some cases, conversion costs can be more costly than ground-up development. One implication of this is that, in the absence of robust public support, the premium rents that go with a desirable location are crucial for a financially successful conversion.

These prime locations bring competition from other developers, including retail and hospitality investors. This is one reason CoStar has tracked only about 20 major office-to-hotel conversions across major central business districts in the past five years.

Physical Profile

Apartments require a shorter distance from the center to the exterior walls than do offices. This is to accommodate access to windows and emergency egress, as well as to maximize the possibility of using existing elevators, staircases, plumbing, HVAC and other building systems.

This physical feasibility can be approximated by the size and shape of the building's floorplate, or footprint. Historically, office buildings that have worked best for conversions are rectangular, with floorplates ranging from 8,000 to 12,000 square feet.

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Buildings with larger overall floorplates can still be good candidates, however, if their shape allows for a large amount of space near an exterior wall — think, for example, of buildings shaped like a capital "H," "I" or "L."

In practice, older buildings tend to work better for conversions, in part because they typically have smaller footprints. A CoStar examination of 34 completed office-to-multifamily conversions across the nation showed an average age of 93 years. Similarly, among the nearly 30 conversion projects currently underway, the average building age is 65 years.

Counting the Costs

Physical features are only part of the package for a conversion candidate. A building must also meet the financial conditions that will allow it to perform as a multifamily property. On the one hand, there must still be enough latent demand for housing in the area to make a multifamily property an attractive proposition. On the other hand, the building's performance as an office should be poor enough that the prospective acquisition cost basis will allow for the necessary renovations to be performed while still having a cost-competitive multifamily property. This is not an easy balance to strike.

New & Noteworthy

1 million sq. ft.

In a joint venture with **Principal Asset Management**, **Stream Realty Partners** has completed **Portside Logistics Center**, a 1-million-square-foot industrial project in **Baytown, Texas**. The class AA, two-building industrial project offers multiple configurations, with an expandable 760,000-square-foot cross-dock building and a flexible 260,000-square-foot front-load building that will offer a 40-foot clear height and a 36-foot clear height, respectively. The project is seeking LEED certification.

625,000 sq. ft.

Ambrose Property Group announced the completion of **DIA Logistics Park Building I**, a 625,000-square-foot Class A industrial building and the first 40-foot clear-height speculative industrial development in the **Denver** market. The building features 3,858 square feet of office space, 288 auto parking spaces, 176 trailer parking spaces, 92 dock doors, four drive-in doors and an 8-inch-thick unreinforced slab.

560,000 sq. ft.

Pearlmark and **Farpoint Development** recently closed on the acquisition of **134 Long Road**, a 50-acre development parcel where they will construct a 560,000-square-foot cross-docked industrial building. Located in Anderson County, part of the larger **Greenville-Spartanburg MSA in South Carolina**, the property is strategically located near I-85, which is the primary transit corridor between Atlanta and Charlotte, North Carolina, the two largest industrial markets in the Southeast United States.

Office-to-Multifamily Conversion Opportunity Summary		
Assumption	**More Aggressive Scenario**	**More Conservative Scenario**
Submarket Location	CBD/Urban	
Year of Construction	Before 2015	Before 2000
Current Vacancy	At Least 25%	At Least 50%
Typical Floor Plate	30,000 square foot maximum	20,000 square foot maximum
Estimated Impact		
Properties	6,920	2,682
Office Square Feet Subtracted	-534 million, or 6.3% of inventory	-83.3 million, or 1.0% of inventory
Multifamily Units Added	+481,000, or 2.5% of inventory	+75,000, or 0.4% of inventory

Source: CoStar, October 2023

A recent ULI analysis of office-to-multifamily conversion projects shows that the typical hard costs of retrofitting a building range from $250,000 to $300,000 per unit. According to CoStar's data, the current average market price of a multifamily property is just under $240,000 per unit. This implies that, on average, conversions would be difficult to execute financially even if the original asset were acquired for free. Of course, there are many locations where multifamily values are far higher than average, giving developers more breathing room.

Still, meeting the financial feasibility test will not be easy for most office buildings, even given the current softness of the office market. This is where public-sector incentives come into play. The reality is that some form of government subsidy is likely necessary to get potential office conversion projects out of the ground. (See "Governments Turning to Adaptive Reuse Legislation for Additional Housing" on page 82).

Sizing the Opportunity

These on-the-ground physical, financial and political realities mean that the actual number of suitable candidates for office-to-residential conversion is likely much lower than some optimistic projections suggest and that only a narrow set of existing office buildings are truly viable candidates for conversion to residential use.

To quantify the possible scale of office-to-multifamily conversions, CoStar defined two scenarios, each representing a probable ceiling on what can be feasibly converted (see table). For this analysis, physical feasibility is estimated using a building's floorplate size. In the more aggressive scenario, buildings with footprints no larger than 30,000 square feet are considered; in the more conservative scenario, floorplate size is limited to 20,000 square feet or less.

To estimate acquisition cost-basis feasibility, current vacancy is used as a proxy. The more aggressive scenario uses 25% vacancy. This assumes generous public support to offset higher initial valuations and the additional cost of relocating in-place office tenants with term remaining on their leases. The more conservative scenario uses 50% vacancy.

Crucially, the analysis excludes office buildings in suburban areas based on the rationale that it will almost always be more attractive financially to develop new multifamily properties in the suburbs rather than conversions. It also excludes newer office buildings — those built prior to 2015 in the aggressive scenario and those built prior to 2000 in the conservative scenario — since those have performed comparatively better in the office market.

The Narrow Path

The results show that the ceiling on conversions is lower than some reports have suggested. Under the aggressive scenario, about 534 million square feet of office inventory in just under 7,000 buildings would come off the market. This is a meaningful amount but represents only 6.3% of current inventory. Furthermore, only about half of this amount is currently vacant. Assuming the office tenants currently occupying this space were relocated to other buildings, the overall impact on vacancy would be a decrease of about 260 basis points. This would bring the national vacancy rate nearer to its long-term historical average, but it would still be more than 100 basis points above where it was entering 2020.

On the multifamily side, the aggressive scenario would add about 481,000 units to the supply of apartments, or about 2.5% of the current inventory. This is about half the number of units currently under construction. It should also be noted that this estimate recognizes that conversions typically result in fewer units than new developments of comparable size because about 10% of the square footage is left unconverted (serving, for example, as first-floor retail). Of the remainder, the median unit size tends to be about 1,000 square feet.

In the more conservative conversion scenario, the impact on the overall office and residential markets is correspondingly smaller. It would remove about 2,700 buildings comprising 83 million square feet — 63 million of which are vacant — from the office stock. This would bring office vacancy down about 60 basis points and generate approximately 75,000 new apartment units, a mere 0.4% of inventory and less than 8% of the current construction pipeline.

The Impact

The office-to-multifamily conversion narrative holds intuitive appeal, particularly given the current state of the office market. Beyond the inherent logic, there are indications that key stakeholders, including public officials, are more willing than ever to ease the process of remaking underperforming buildings. As these efforts progress, there will doubtless be an increasing number of projects that are truly transformational to the neighborhoods in which they occur. Even so, the physical, economic and political realities of conversions all suggest that they are unlikely to have a significant impact on overall market fundamentals on either the office or the multifamily side. ■

Phil Mobley is the national director of office analytics at CoStar Group, and **Jay Lybik** is the national director of multifamily analytics at CoStar Group.

New & Noteworthy

296 Units

Cityview, a multifamily investment management and development firm, has completed **Jasper**, a 296-unit opportunity zone project located less than 2 miles from downtown **Los Angeles** and adjacent to the University of Southern California. The highly amenitized 283,363-square-foot building offers a variety of studio, one- and two-bedroom floor plans, including 25 units designated very low affordable and three designated moderate-income affordable. Previously the project site housed a defunct bookbinding factory and other unused industrial buildings.

550,000 sq. ft.

In **Vancouver, British Columbia**, **Oxford Properties Group** has completed **The Stack** at 1133 Melville Street, a 36-story, 550,000-square-foot, AAA class office building. It is the first office tower to attain the Canada Green Building Council's Zero Carbon Building Design standard certification and the first high-rise commercial tower in North America built to zero carbon standards.

350,000 sq. ft.

Lendlease and **Ivanhoé Cambridge** have collaborated on **FORUM**, a nine-story, 350,000-square-foot life science development in **Boston**. The $545 million project is located at 60 Guest St. in Boston Landing, a 15-acre mixed-use community in the Allston-Brighton neighborhood. FORUM's flexible, 50,000-square-foot floorplates can accommodate multiple or single-floor tenants, including laboratory and office space. Completion is scheduled for 2024.

The Holy Grail of Warehouse Design: Speed to Market and Energy Efficiency

PEMBs can save time and money for the right projects.

By Doug Brookbank and Sarah Valluzzi, MG2

Modern warehouse construction is a significant challenge for many companies looking to bring their projects to market quickly and efficiently. Speed and certainty in a warehouse design and construction project are critical because they directly affect return on investment. One of the most effective ways to achieve these goals is by using a pre-engineered metal building (PEMB) system. This type of construction system offers a variety of benefits, including efficient design, increased energy performance and shorter construction time. Although the benefits are numerous, there are also variables that, if left unconsidered or unanalyzed, could hurt the bottom line.

MG2_The Home Depot Houston_isky © iSkyProductions

The Home Depot's use of PEMBs in Houston saved time, energy and money.

Benefits of PEMBs

One of the most significant benefits of a PEMB is its ability to offer a shorter construction schedule. As a building system, it can reduce construction time by approximately 30%-40% versus its conventional steel counterparts: concrete tilt and precast systems.

One of the most significant benefits of a PEMB is its ability to offer a shorter construction schedule. As a building system, it can reduce construction time by approximately 30%-40% versus its conventional steel counterparts: concrete tilt and precast systems.

The driving force in making this possible is that PEMBs are prefabricated off-site (from steel and other metal components) and assembled on-site, eliminating many of the delays and challenges associated with conventional building methods. It should be noted that PEMBs are more effective in delivering speed-to-market and cost benefits in buildings larger than 50,000 square feet.

Another advantage of PEMBs is that they can be built in any type of weather, apart from lightning storms, making them ideal for companies that develop in areas with challenging weather conditions. This aspect eliminates delivery and supply chain issues because materials can be secured and scheduled early, reducing the risk of delays and ensuring a smooth construction process. Pricing can be locked in early, and bulk orders can further reduce cost and act as a hedge against supply chain volatility.

PEMBs also allow for tighter control over quality. Building components are manufactured in a controlled environment, which reduces the risk of defects. Thus, the buildings are not only more sustainable but also more durable and long-lasting, reducing the need for maintenance and repairs over time. PEMBs come with warranties, guaranteed for up to 25 years, depending on the program.

Sustainability also comes into play with PEMBs, which offer a leg up on the environmental goals for not only the brand or the developer but also for shareholders, consumers, jurisdictions and greater communities. For many states, PEMBs are often the more sustainable choice in helping all involved to meet statutory requirements (this is particularly true in California, where increasing and tightening energy requirements must be adhered to). In addition, the PEMB system uses recycled content in construction and less material overall compared with its conventional steel counterpart, and parts can be recycled when the building is disassembled.

PEMBs offer a more flexible design, with a variety of options for exterior building skins. Such flexibility enables an owner to choose a functional and aesthetically pleasing design, reflecting the brand's character and personality. Furthermore, when compared with conventional steel concrete tilt buildings with membrane roofing, PEMBs can reduce operating energy by more than 15% depending on climate and embodied carbon by about 8%. This ability not only helps to lessen the environmental impact of the building but also lowers operating costs and enhances energy efficiency, saving businesses money in the long run.

Finally, PEMBs can meet or exceed building codes and local regulations, reducing the risk of delays or issues in obtaining necessary permits or approvals. Therefore, these structures are an appealing option for companies looking to build quickly and efficiently.

New & Noteworthy

266,000 sq. ft.

Hudson Pacific Properties, **Blackstone, New York City** and **New York City Economic Development Corp.** have entered into **Manhattan's** first public-private partnership venture to build a purpose-built studio campus. **Vornado** will be responsible for development, and **Hudson Pacific** will provide design oversight and manage the facility's leasing and operations. Plans for the 266,000-square-foot **Sunset Pier 94 Studios** include six purpose-built soundstages with production control room facilities and 145,000 square feet of production support space and offices.

256,000 sq. ft.

Brinkmann Constructors recently completed the construction of a 256,000-square-foot off-campus student housing community in partnership with **Subtext Living. VERVE Columbus**, located near the south end of the Ohio State University campus, includes nine stories and 153 units and offers floor plans ranging from studio to five bedrooms.

238 Units

The Clear Blue Company, a Nashville-based private equity real estate firm, recently broke ground on **301 Ben Allen Road**, a $65 million affordable housing community in **East Nashville**. The 238 units will be a mix of one-, two- and three-bedroom apartments. The rent will be affordable to individuals earning 60% of the median income in the Nashville area; five units will be set aside for residents earning 30% and below of the median income, and five units will be available to those experiencing situational homelessness.

Case Study: The Home Depot

PEMBs clearly offer an array of benefits. Still, variables such as desired region and location, environmental factors, material costs and sustainability requirements can affect the answer to the question, "How do I know if this is the right investment for my business?" MG2 partnered with the Home Depot to answer this question.

At the onset of the partnership, MG2 conducted a series of data-driven site analyses for the Home Depot comparing PEMBs in five North American climate regions against conventional steel concrete tilt, analyzing both proven advantages and potential volatilities. The studies unearthed significant benefits for the Home Depot that aided in choosing this building system for its new Lower Heights location in Houston that opened in September 2022.

MG2 looked at regional material costs and found that, at the time, metal was more expensive than concrete. However, the PEMB had a construction schedule of 130 days, compared with 190 days for a baseline concrete tilt building, allowing the Lower Heights Home Depot store to open eight weeks sooner than a traditional building. So, the costs of the PEMB system were offset by an accelerated return on the investment due to speed-to-market gains. Although consumer sales were a factor for the Home Depot, other brands or developers may see different benefits, such as an ability to lease space quickly or bring a new food processing or manufacturing plant online in a shorter amount of time.

When compared with conventional steel concrete tilt buildings with membrane roofing, PEMBs can reduce operating energy by more than 15% depending on climate and embodied carbon by about 8%.

The PEMB building system base envelopers also contained more insulation than a concrete structure would have offered for both walls and roof. In this case, MG2 achieved a wall assembly R-value that was six times greater than its concrete alternative and a 25% R-value gain in the roof assembly. Designers also evaluated the energy cost and found that a PEMB could offer up to a 10% savings.

MG2 found that PEMBs have a smaller environmental impact because they require fewer building materials, have reduced construction periods and a lower carbon impact, and experience less maintenance and fewer repairs over time. The standing seam metal roof, for example, offers a 25-year warranty and will need to be replaced less often than traditional thermoplastic polyolefin or ballasted roof systems.

Designers calculated the total carbon impact over a 60-year life cycle, including operational carbon from energy consumption and embodied carbon from building materials, and found that the PEMBs would offer up to a 9% reduction in building life-cycle carbon emissions. Ultimately, when these findings were measured against conventional steel concrete tilt buildings, PEMBs proved to be a cost-effective, energy-efficient and sustainable solution for the Home Depot building.

The PEMB had a construction schedule of 130 days, compared with 190 days for a baseline concrete tilt building, allowing the Lower Heights Home Depot store to open eight weeks sooner than a traditional building.

A metal building system will not always be the least expensive option, however. The fluctuating nature of the cost of steel should be evaluated and weighed against the construction schedule gain. This equation will vary from region to region depending on material prices at that time.

For businesses wishing to leave their mark on the future while saving time, money and resources, modern sustainable warehouse design and construction are essential. By using a proper data-driven comparative analysis that examines advantages such as speed to market, energy efficiency and cost-effectiveness — along with variables like geography, jurisdiction, climate, and building material prices — owners can determine whether a PEMB system might help their companies make a positive contribution to their communities, the planet and their bottom line. ■

Doug Brookbank AIA, NCARB, LEED AP, is a principal in the Washington, D.C., office of global architecture and design firm MG2. **Sarah Valluzzi** RA, LEED AP BD+C, is a project manager in MG2's Seattle office.

Unlocking the Potential of Commercial Real Estate at the University Level

Involvement in educational programs benefits the seasoned and the green.

■ By Michael Riopel, Northwestern Mutual

As a practicing real estate professional and a passionate advocate for education, I eagerly accepted the invitation from Development magazine to share my personal experiences on the transformative power of education and the importance of supporting CRE academic programs.

Education has always been a driving force in my life. When I was growing up, my parents instilled in me the belief that education was the key to unlocking opportunities. My father arrived in the United States at the age of 16 without speaking English, and he relied on the generous support of a neighbor to pay for his education. Through hard work and determination, he not only built a successful real estate career but also became a teacher of business and real estate at the local community college. His story is a testament to the possibilities that education can offer, regardless of one's background.

The Potential of CRE Programs

CRE-focused programs have grown tremendously in the past decade. According to the National Center for Education Statistics, from the 2015-16 academic year to 2019-20, the number of students receiving a bachelor's degree in real estate or real estate

New & Noteworthy

98,850 sq. ft.

Transwestern Development Company announced the groundbreaking of its new 98,850-square-foot industrial facility, **Legacy at Palmdale**, located in the Fairway Business Park on Legacy Lane in **Palmdale, California**. The facility will include cutting-edge building features such as 32-foot clear heights, 15 dock-high doors, grade-level loading, an early suppression-fast response sprinkler system and 5,000 square feet of office space.

10,000 sq. ft.

The University of Texas at Austin and **Karlin Real Estate** are teaming up to launch **UT Impact Labs** at **Parmer Austin**. The 10,000-square-foot wet lab space is the first off-campus site for the university's Discovery to Impact, which will manage the space for lease to life-science startups. The Parmer Austin campus is a 297-acre, $1 billion master-planned technology and office park that includes multiple retail, hospitality and entertainment venues, in addition to public open spaces.

7,900 sq. ft.

Ron Ngiam

Music venue owner and operator **IMP** partnered with **CORE architecture + design** to build **The Atlantis**, a 7,900-square-foot, 450-person-capacity replica of **Washington, D.C.**'s original 9:30 Club. The iconic downtown venue became a rite of passage for touring musical acts during the 1980s and 1990s. The Atlantis features a ghosted scrim of perforated metal panels along with the architectural ornamentation of the original F Street façade. The project is adjacent to the club's current location in the U Street Corridor and incorporates a roof terrace and three bars. ■

Do you have a new and noteworthy project in the planning, design or construction stage that you'd like to share with fellow real estate professionals? Send a brief description and high-resolution rendering to developmentmagazine@naiop.org.

Courtesy of Andrew Hunt

Marquette real estate students regularly participate in real-world commercial real estate problem-solving sessions, including NAIOP case competitions.

development grew at an annualized rate of 13%. Over the same period, the number of students receiving a master's degree in these fields grew at a more modest annual pace of 3.5%, which was still faster than the average for all master's degree programs (1.2%). Bachelor's degree conferrals across all business fields grew at an annualized rate of 1.7%, and master's degree conferrals across all business fields grew at an annualized rate of 1.8%. (See "Expanding the Pipeline: Promoting Diversity in Undergraduate and Graduate Real Estate Programs," Development, Winter 2021/2022.)

Despite the immense value such programs offer, many individuals, including industry professionals, are unaware of the opportunities CRE undergraduate and graduate programs provide. Not only do these programs offer students a solid foundation in real estate principles, but they also foster a pipeline of talented and motivated professionals who will shape the future of the built environment.

An example of an educational program that has harnessed the potential of CRE programs is Marquette University in Milwaukee. Through its Center for Real Estate, Marquette has created a comprehensive undergraduate-level curriculum that combines academic rigor with practical industry experience. Students engage with industry practitioners, participate in internships and gain hands-on experience through real estate projects. This holistic approach prepares students for the challenges and complexities of the CRE industry, equipping them with the skills and knowledge needed to excel in their careers. The recently launched Real Estate Asset Program (REAP) provides students with real-world experience in investment sourcing, underwriting, closing, management and investor reporting. Students offer recommendations to an investment committee made up of alumni and program supporters with oversight of a $2 million pledged equity fund.

Additionally, NAIOP Wisconsin and Marquette launched the MKE CRE Summer High School Immersion Program in 2020. The program invites local high schoolers to spend a week on campus to learn more about the industry through activities, site visits and lectures from local professionals. Many young people think working in real estate is synonymous with being a realtor and are unaware of the diverse

According to the National Center for Education Statistics, from the 2015-16 academic year to 2019-20, the number of students receiving a bachelor's degree in real estate or real estate development grew at an annualized rate of 13%.

The Benefits of a Real Estate Degree

Andy Sinclair, a Marquette real estate graduate, credits the program with helping him land a position at institutional brokerage firm Palmer Capital and later with real estate private equity investment group MLG Capital, where he helped launch one of its first real estate funds. He also mentored students and hired multiple alumni from the program, having quick access to some of the best talent.

When Sinclair launched his own investment firm, his Marquette connections helped him hire even more graduates. He later became president of the real estate alumni association and then joined the university's Center for Real Estate Advisory Board with other industry leaders. As his firm grew, he also supported Marquette's $2 million Real Estate Asset Program (REAP), a fund the university started that allows students to invest in actual real estate deals. In 2022, Marquette's REAP students joined Sinclair's firm in investing in a transit-oriented, Class A apartment property.

Every step of the way, Sinclair has leaned into Marquette's real estate program and gained more than a credential. ■

careers in CRE, from development and investment to property management and brokerage.

The Benefits of Supporting CRE Programs

I urge you to participate in your local or alumni institution's CRE programs. Doing so will yield a multitude of benefits for you, the industry and society. By actively supporting these programs, we can form alliances between academia and industry, ensuring that students are exceptionally prepared for the challenges and opportunities that lie ahead.

Specifically, supporting CRE programs helps cultivate a highly skilled workforce. The industry is constantly evolving, and it requires professionals who possess a deep understanding of market trends, financial analysis and legal complexities. By investing in CRE education, we can ensure that students graduate with the necessary skills to navigate these challenges and contribute to the industry's growth.

Additionally, increased collaboration between universities and CRE professionals fosters innovation and drives advancements in the field. By establishing partnerships, industry leaders can share their expertise, provide mentorship opportunities and contribute to the development of cutting-edge research. This collaboration not only benefits students but also leads to new ideas, technologies and practices.

Many young people think working in real estate is synonymous with being a realtor and are unaware of the diverse careers in CRE, from development and investment to property management and brokerage.

NAIOP Research Foundation Skills Survey

Finding, training and retaining talent can be challenging for commercial real estate development firms. Baby boomers are gradually aging out of the workforce, increasing the demand for younger workers who can take their place. At the same time, technological innovation and an evolving industry constantly shape the skills and duties required of commercial real estate professionals. Last year, the NAIOP Research Foundation convened the Talent Development Task Force, which recommended that NAIOP conduct a survey on what skills are most important to development-related professions. The survey results can be found at https://blog.naiop.org/2023/08/naiop-survey-cre-skills/. ■

Recommendations for Industry Support and Engagement

Professional organizations such as NAIOP and other CRE associations can help bridge the gap between universities and the relevant skills required for careers today. This can be accomplished in the following ways:

Mentorships. Associations have established mentorship programs that connect industry professionals with students. By sharing their experiences and insights, mentors can guide students on their career paths, provide valuable networking opportunities and offer practical advice on navigating the industry.

Internships. Associations and CRE firms often collaborate with universities to develop internship programs. These internships provide students with real-world experience, allowing them to apply their classroom knowledge in practical settings. Additionally, internships serve as a talent pipeline for companies, enabling them to identify and recruit promising individuals who can contribute to their organizations.

Scholarships. Funding helps students alleviate the financial burden, while making education more accessible and inclusive.

Research. Associations can support students who do academic research, allowing them to expand on their ideas, work with practitioners and increase their authorship. The NAIOP Research Foundation encourages student participation in research through its Distinguished Fellows Program.

Increased collaboration between universities and CRE professionals fosters innovation and drives advancements in the field. By establishing partnerships, industry leaders can share their expertise, provide mentorship opportunities and contribute to the development of cutting-edge research.

I believe that success should not be measured solely by personal achievements but also by the impact we have on others. By giving back to CRE programs, we can provide opportunities for students who may not have had access to this education otherwise. We can inspire and empower the next generation of CRE professionals, helping them unlock their full potential and contribute to the industry's growth. ■

Michael Riopel is assistant general counsel for Northwestern Mutual, a NAIOP Research Foundation Governor and vice chair of Marquette University's CRE advisory board.

Skilled Labor: A Comeback Story

Shifting perceptions and education are key strategies.

By Joshua Doty, Swinerton

PeopleImages via iStock/Getty Images Plus

Construction companies, trade associations and educational institutions are taking steps to address the shortage of skilled labor entering the construction industry.

The number of construction workers is shrinking across all sectors. Even with slight increases in entry-level hiring, the U.S. is losing skilled laborers faster than it can replace them with well-trained, journey-level craft professionals. The situation is even more worrisome considering that 41% of the current construction workforce is expected to retire by 2031, according to the National Center for Construction Education and Research (NCCER).

With declining interest in skilled trades and accelerated growth in areas such as technology, what are some possible solutions for the construction industry?

Demand Versus Supply

Construction demand in the U.S. continues to align with the needs of a rising population. And so, it is necessary to address the demand for more skilled labor entering the construction industry. According to a proprietary model developed by Associated Builders and Contractors, "The construction industry will need to attract an estimated 546,000 additional workers on top of the normal pace of hiring in 2023 to meet the demand for labor."

Associated Builders and Contractors has found that every $1 billion

continued on page 22

The demand for qualified craft workers is growing in America, not shrinking. The interest in craft and trade training, on the other hand, has been declining for decades.

continued from page 20

spent on construction creates roughly 3,900 jobs. Government programs that provide funding to modernize bridges, roads and other infrastructure require skilled trade professionals.

The demand for qualified craft workers is growing in America, not shrinking. The interest in craft and trade training, on the other hand, has been declining for decades.

The cultural shift toward favoring four-year college degrees over skilled trades began in the 1960s, resulting in the perception that office or management roles are more attractive. This directly affected interest in high school technical programs, leading to the elimination of many of these programs during the late 20th century. Since then, the construction industry has struggled with a shortage of workers. Although a reemergence of trade programs in educational settings and union training programs is underway, overall interest in construction trade careers has waned because four-year degrees are heavily promoted to young people.

However, the perception of the skilled trades may be shifting.

Earning Potential

According to Statista, the average annual income for a college graduate with a bachelor's degree in 2020 was $52,344. For the same year, the average annual income for a carpenter was $54,200, according to Forbes — and the variety of trade certifications available continues to expand.

Despite the evidence pointing to the earning potential and educational cost savings of the construction trades, they are still stigmatized as being dirty, grungy and labor intensive. Although physical labor is a component of many hands-on construction jobs, a variety of opportunities exist where shirts and shoes remain dirt free. Many construction and trade careers offer comprehensive benefits, career growth and increased earning potential. Some offer promotional opportunities every three to four years as an industry standard.

Education and Apprenticeships

Construction companies of all sizes, trade associations and educational institutions are working to deconstruct the stigma around the trades to help build a skilled labor pipeline.

Community colleges have expanded their curricula and match technical schools in the trade programs being offered, with many being quite affordable. Some institutions are also

> **Community colleges have expanded their curricula and match technical schools in the trade programs being offered, with many being quite affordable. Some institutions are also interested in partnerships with local companies to create programs tailored to their needs. In North Carolina, Duke Energy donated $500,000 to create a utility line worker training program at Central Piedmont Community College, addressing a statewide need.**

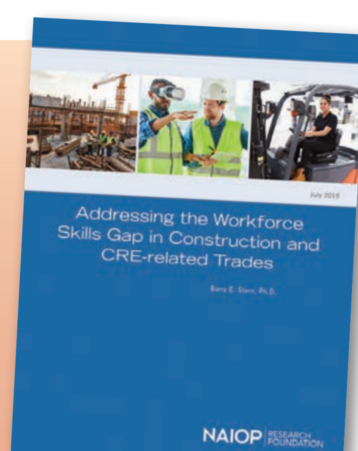
interested in partnerships with local companies to create programs tailored to their needs. In North Carolina, Duke Energy donated $500,000 to create a utility line worker training program at Central Piedmont Community College, addressing a statewide need.

Companies, colleges and organizations such as Associated Builders and Contractors (ABC), the Associated General Contractors of America (AGC) and SkillsUSA are informing K-12 students about the career opportunities in construction. These organizations offer a variety of apprenticeship programs developed by industry leaders. However, the availability of these programs varies by state and region and is often driven by member demand.

For companies seeking to establish in-house programs, curricula from resources such as NCCER are available to teach workers a variety of construction skills, including carpentry and plumbing. National general contractor and construction manager Swinerton

Relevant Research

In 2019, the NAIOP Research Foundation released **"Addressing the Workforce Skills Gap in Construction and CRE-related Trades."** The report explores some of the factors contributing to the workforce shortage and how the construction and logistics industries can improve worker recruitment, training, productivity and retention. Visit naiop.org/Research-and-Publications to view and download the report. ■



uses a mixture of the NCCER curriculum and in-house expertise to train its 2,100 craft professionals, apprentices and superintendents. For employee-owned companies such as Swinerton that employ skilled craft professionals directly, investing in such programs attracts and retains quality talent.

Top construction companies are deploying several initiatives to improve their workforce, acquire skilled workers, increase the skilled labor pool and positively affect the industry overall. These initiatives include the following:

- **Investment in employee education, growth and development.** Developing internal training programs to build skills among the most recent generation of employees, including those with the least amount of exposure to construction, is beneficial in teaching the technical skills for the job. Internal training programs also benefit the company because they build a culture of knowledge-sharing and professional development that can bridge generations.
- **Partnerships with organizations and educational institutions that promote trades.** Construction-focused organizations such as ABC and AGC are creating programs based on the needs of their members to raise awareness of the benefits and opportunities provided by construction careers, as well as offering valuable training.
- **Ambassadors to K-12 programs.** Keeping K-12 students informed of training opportunities in construction can work to effectively diffuse the stigma associated with construction trade career paths. It also can educate future generations about the benefits associated with such opportunities.

No effort to expand the pool of construction workers is too big or too small. Every positive interaction, association or experience with a potential future skilled tradesperson increases awareness and the likelihood that an individual will choose a career in construction — and that outcome benefits the industry and the economy. ■

Joshua Doty is a field talent partner at Swinerton.

Why Mixed-Use Spaces Are the Future of Retail

Underutilized retail centers provide opportunities to reinvigorate communities.

By Kurt Volkman, HED

Several converging trends are presenting an opportunity for developers to shape the future of retail environments. The first is the rise of online retail, which continues to significantly disrupt physical retail spaces, especially those serving middle-market communities. Additionally, there is skyrocketing demand for mixed-use spaces in which people can reside, work, and find recreational and entertainment options nearby. According to analysis from commercial real estate research firm Yardi Matrix, the number of apartments completed annually in "live-work-play" developments quadrupled between 2012 and 2021, rising from 10,000 to 43,700.

Lingering social and economic fallout from the pandemic is also shaping the future of retail. The pandemic accelerated the adoption of online shopping, spurred the rapid rise of remote and hybrid working arrangements, and rekindled people's desire to connect after a period of isolation. Population shifts that predate the pandemic are also in play, creating affordable housing crises in many regions. A March 2023 report from the National Association of Home Builders found that approximately 73% of American families cannot afford a new single-family home at the current median price of $425,786.

According to analysis from commercial real estate research firm Yardi Matrix, the number of apartments completed annually in "live-work-play" developments quadrupled between 2012 and 2021, rising from 10,000 to 43,700.

Mixed-use developments can help address all these challenges and offer a compelling alternative to the malls and shopping centers of the past. Here's a closer look at how these factors have come together to create an opportunity — and how developers and the communities they serve can benefit.

15 Minutes vs. 18 Hours: How Mixed-Use Spaces Are Evolving

Traditional retail centers were built near population centers to maximize visibility and encourage foot traffic. This makes the properties attractive for reuse due to the proximity to jobs and entertainment as well as the inherent walkability built into the original projects. Retail centers already function as destinations, making them ideal for housing that is offered as a component of the live-work-play lifestyle. Residential areas that provide access to public spaces, nature and recreation opportunities are attractive neighborhoods by definition.

A sustained retail building boom left the country "over-retailed" in many regions, with the impact varying according to the socioeconomic status of the community. High-end shopping centers near affluent areas were and still are weathering the "retail apocalypse" by catering to the niche needs of wealthier shoppers, while retail centers in lower-income areas are persevering to creatively meet those communities' basic needs.

The retail space glut hit middle-market retail centers hardest, and that's where the greatest opportunity for the development of mixed-use spaces lies. The business case for developers to rethink retail centers as mixed-use spaces transcends the trendy urban planning concept of "15-minute cities," which posits that everything people need should be within 15 minutes' walking or bicycling distance, including homes, jobs, schools, grocery stores, shops, health care, entertainment and recreational spaces.

Instead, developers can focus on creating "18-hour neighborhoods" that draw people into retail center locations as a destination and keep them there as long as possible to maximize the return on investment. In most cases, the infrastructure to support mixed-use spaces that can function as 18-hour neighborhoods already exists in retail center locations that are prime redevelopment opportunities, such as the 1950s-era Westlake Shopping Center in California, which is slated for redevelopment as a live-work-play community. Infrastructure typically includes ample parking and public transportation that serves retail centers, which were originally sited to maximize utility as a local destination.

How Developers Can Capitalize on the Live-Work-Play Community Trend

An industry insights feature from the International Council of Shopping Cen-

Alacatr via iStock/Getty Images Plus

Some existing retail centers are being reimagined as live-work-play developments.

ters on mixed-use properties from April 2019 noted that nearly 80% of U.S. adults would consider a residence in a live-work-shop-play community that offered entertainment, dining, work and recreation opportunities. Demand may be even higher with the waning of the pandemic era, as people have demonstrated a desire to rejoin their communities and support local businesses. Live-work-play communities can attract a variety of business tenants and a diverse range of residents while also addressing housing needs if the design supports the following key features:

Safety: People need to feel protected in the areas where they live, work and play. Developers of mixed-use projects should give consideration to community crime protection as well as other safety factors such as adequate lighting and traffic control. Focusing on walkability and ease of foot traffic increases safety for residents because highly populated areas benefit from more surveillance and reduced crime.

Wellness: Opportunities to maintain physical and mental wellness are an important component of live-work-play communities. This includes access to green spaces and options for engaging in restorative physical activities, which could include walking trails, bike paths or fitness centers.

Commerce: Development of mixed-use spaces provides opportunities in the form of jobs during initial construc-

The retail space glut hit middle-market retail centers hardest, and that's where the greatest opportunity for the development of mixed-use spaces lies.

For many existing properties, the blueprint is already there because retail centers were designed to be flexible as business uses evolved and to encourage foot traffic — goals shared by planners who adhere to 15-minute-city principles and developers who see 18-hour neighborhoods as a revenue driver.

tion as well as work related to retail, entertainment and dining facilities that are part of the new community.

Connection: Neighborhoods that feature shared spaces where people can come together facilitate the formation of true community.

For example, the AMLI Residential mixed-use development in Pasadena, California, uses street connections, alleyways and strategic security features to fashion spaces for public connection and movement through the ground-floor retail and commercial space while creating secured space for tenants, without sacrificing connection. The multibuilding development uses the historic context of neighboring buildings to place the new development within the local community and become an active part of the streetscape.

Features like these are especially attractive to local planners. For example, in July 2022, the Montgomery County Planning Department in Maryland released findings from a comprehensive multijurisdictional study of mixed-use development trends conducted jointly with consulting firm HR&A Advisors. The study cited several factors associated with successful mixed-use development, and many of the findings are directly relevant to developers who may wish to pursue mixed-use projects at existing retail centers. The Montgomery County study recommends streamlining development approval processes and adjusting policies to provide more flexibility. That's an added incentive for developers considering repurposing retail center properties as mixed-use spaces using the live-work-play model. For many existing properties, the blueprint is already there because retail centers were designed to be flexible as business uses evolved and to encourage foot traffic — goals shared by planners who adhere to 15-minute-city principles and developers who see 18-hour neighborhoods as a revenue driver.

Re-creating existing retail centers as a modern revenue engine will require adapting the properties to accommodate new uses and experiences for residents, business tenants and visitors. Design and construction will vary according to the features of individual properties and regional needs, but there's a through line in the trends that are driving rising demand for live-work-play communities. Developers who see the opportunity and transform retail centers built for another era into mixed-use spaces that meet today's challenges will reshape retail for a more profitable future. ■

Kurt Volkman is associate principal, housing and mixed-use sector leader at HED.

On Leadership: Nicholas L. Pell

The president and chief investment officer of Link Logistics, headquartered in New York, leads a team of 1,200 employees spread across 25 offices and manages properties located in 40 major domestic markets. Link Logistics owns the largest portfolio of U.S.-only industrial real estate with a focus on infill assets.

By Ron Derven

Nicholas L. Pell

"Our main focus is to recruit the most-skilled individuals in our respective markets. In addition, we strive to provide opportunities for growth, learning, and community involvement. Our goal is to establish a strong cultural identity that fosters a sense of belonging among every employee, regardless of their location."

— Nicholas L. Pell, president and chief investment officer, Link Logistics

Development: *What drew you to a career in commercial real estate?*

Nicholas L. Pell: I came from a financial background, but I was eager to connect finance with the ability to source new investment opportunities. Real estate seemed a good fit for me because it is a very entrepreneurial business.

Development: *How was Link Logistics formed?*

Pell: Link Logistics came together in early 2019. Blackstone had been investing in the industrial sector globally for decades but had sold off its U.S. industrial platform in 2016. Subsequently, it completed a few major industrial transactions prior to 2018 when it took a public REIT called Gramercy Property Trust, where I was the CIO, private. I helped construct the REIT portfolio from scratch over five years. Blackstone took Gramercy private with the idea of combining the 75 million square feet that Gramercy brought to the table with Blackstone's 75 million square feet that it had recently aggregated. In 2019, we gathered a team of roughly 125 people and went on to purchase about $60 billion in industrial assets and hired 1,000 new team members across the country. This helped us establish the platform that we have today. Blackstone saw the need for a fully integrated operating platform in the U.S. to align with its macro thesis on industrial investments and complement its global investment expertise.

Development: *Last-mile industrial facilities focusing on major markets in the U.S. is an enviable place to be. How did you come to focus on this market?*

Pell: It starts with Blackstone and its macro investment thesis and its history of successfully investing in industrial real estate. In 2019, we felt that the e-commerce wave was still relatively early but detected a change in consumer behavior where people wanted, needed and expected goods to be delivered quickly. Naturally, this required more space that was proximate to where people lived and worked. At the same time, our team correctly identified a wave of development challenges to delivering new space in those same locations. It is usually a good place to be when you see a rise in demand but challenges in delivering new supply. So, our thesis of focusing on infill assets and finding the best properties we could in all major markets, which are relatively protected from new supply, was the best way to create our portfolio.

Development: *Leading a company with 1,200 employees across 25 offices is challenging. How do you maintain and build your company's culture?*

Pell: Employees are a key pillar of our organization. We try to ensure everyone feels like part of the team, as it is crucial to maintaining company culture. Our main focus is to recruit the most-skilled individuals in our respective markets. In addition, we strive to provide opportunities for growth, learning, and community involvement. Our goal is to establish a strong cultural identity that fosters a sense of belonging among every employee, regardless of their location. At the same time, we aim to give our regional teams a sense of ownership and identity. Regardless of the functional area or hierarchical level, we aim to ensure every team member understands how their work contributes to the company's overall vision and productivity.

Development: *What does leadership mean to you?*

Pell: Leadership has many facets, but one concept that stands out for me is service. My leadership philosophy revolves around serving the people I lead. My goal is to assist them in performing their jobs more efficiently. I always strive to make my team feel that I am working for them rather than the other way around. This approach promotes a sense of responsibility and ownership among the team members. It also creates a feeling of unity, where we all work together and move in the same direction. I believe that anything less than this approach is inauthentic. I have found this method of leadership not only productive but also personally satisfying.

Development: *What is your primary role as president of Link Logistics?*

Pell: My day is spent identifying new investment opportunities alongside Blackstone. I work closely with them, building a pipeline of potential investments, whether they be intriguing buildings or new development opportunities that could enhance our portfolio. I also oversee all of our disposition efforts, which is a key part of our overall real estate portfolio strategy effort. Lastly, I oversee our research team, which is responsible for the analytical work and data-science efforts within Link, where we identify trends and synthesize data into actionable investment and portfolio management decisions. We are highly data driven in running the business, and we pride ourselves on having what I believe to be the top-tier research team in our business.

"Leadership has many facets, but one concept that stands out for me is service. My leadership philosophy revolves around serving the people I lead. My goal is to assist them in performing their jobs more efficiently. I always strive to make my team feel that I am working for them rather than the other way around."

— Nicholas L. Pell, president and chief investment officer, Link Logistics

Development: *What qualities do you look for when hiring senior staff?*

Pell: I look for leadership qualities. It's crucial to have team members who can take ownership of management, make decisions and render sound judgment throughout the day. This kind of autonomy allows me to allocate my time to other tasks. Of course, technical expertise, attention to detail, and substantial experience in our field are also vital components. A demonstrated ability in managing complex relationships, identifying and evaluating new opportunities, time management and critical thinking are traits I value.

Development: *What has been your greatest leadership challenge at Link Logistics?*

Pell: The most significant challenge we have faced is the rapid expansion from around 125 people in 2019 to over 1,200 today. This kind of change is substantial for everyone, regardless of when they joined the company. Today, we've grown into a mature, high-functioning platform, which is what we all envisioned at the beginning. However, it took us time to assemble the right team, familiarize ourselves with the assets, and build up the expertise to make a broad impact on the business and create value. Despite being a large company, we've maintained an entrepreneurial spirit that I think is at the core of much of our success. We are always building, improving and pursuing excellence.

Development: *How do you resolve internal conflicts or mistakes at the company?*

Pell: In my leadership approach, I aim to be as direct and swift as possible in resolving problems. I strive for transparency and candidness, as I believe it's important to call things as they are. Challenges are inevitable, and they present themselves daily. Instead of letting these issues linger, we address them promptly and work through them.

Development: *What will the greatest challenges be in the logistics space in the years ahead?*

Pell: Securing approvals for infill locations is a problem today and will continue into the future. People want and need the benefits that close-in warehouses offer, but most do not want a warehouse located near their residences. But to achieve swift delivery of goods and services, warehouses need to be situated close to the communities they serve. This creates a significant pain point in many urban areas, and as a developer, we witness this firsthand. We strive to collaborate with communities to address these concerns because we recognize that these goods and services are wanted, and there are jobs and opportunities that we help create with our customers. It's crucial to remember that goods must be stored, serviced and assembled near where people work and live. Therefore, we all need to work together to find a balance.

Development: *What is the best advice you have received in the commercial real estate business?*

Pell: When it comes to real estate investment, more good things happen on good real estate, and more bad things happen on lower-quality real estate as cycles turn. Not to say one can't make money buying lower-quality real estate if you get a great basis, time the market and execute a business plan, but our job is to assess probabilities and expected outcomes based on a set of assumptions. In good times, the best real estate tends to compound higher, but when things turn on lower-quality real estate, it can feel like an avalanche of problems on risks you thought were fairly remote during more stable times.

Development: *What advice would you give someone entering the commercial real estate business today?*

"Despite being a large company, we've maintained an entrepreneurial spirit that I think is at the core of much of our success. We are always building, improving and pursuing excellence."

— Nicholas L. Pell, president and chief investment officer, Link Logistics

Pell: It's imperative to show up and be on time to meetings, to flights, to events. Bring good energy, be positive, and add value to every room you are in. Real estate is still a people and relationship business, despite the evolution of data into decision-making and the ongoing institutionalization of the asset class. It's crucial to remember that our counterparties and intermediaries are people; we're dealing with human issues to finalize deals and overcome challenges. If you can show that you possess aptitude, capabilities and tenacity, and you're willing to go that extra mile, you can succeed in this business.

Development: *Has your involvement in NAIOP helped you develop your leadership skills?*

Pell: I've been a member of NAIOP for over a decade now, and almost from the start, I've participated in one of the National Forums. I joined the Forum about a year into my membership, and it's been a wonderful experience. I've remained in the same Forum throughout my membership. Over the years, I've developed strong relationships with the other members. We have grown up together in the industry and shared best practices and insights and advice, both professionally and personally. We often collaborate, buying and selling from each other. The Forum has fostered not just professional connections, but also friendships and a sense of camaraderie in our line of work.

Development: *What crucial lessons have you learned during your time in the commercial real estate business?*

Pell: There's always something. By that I mean there's rising interest rates, there's labor strikes, there's politics and there's pandemics. In this dynamic world of ours, we must be well-prepared and flexible to deal with uncertainty. This means being intentional and measured in our approach to buying and selling assets, deploying capital and predicting potential outcomes. Remember, however, that uncertainty isn't entirely negative. It often leads to dislocation, thereby creating opportunities.

"It's imperative to show up and be on time to meetings, to flights, to events. Bring good energy, be positive, and add value to every room you are in. Real estate is still a people and relationship business, despite the evolution of data into decision-making and the ongoing institutionalization of the asset class."

— Nicholas L. Pell, president and chief investment officer, Link Logistics

Development: *Leading a firm like Link Logistics must be challenging. What are your interests away from work?*

Pell: I have a wonderful wife and two children — a 13-year-old daughter and a 10-year-old son. I spend as much quality time as possible with my family. My personal preference for spending leisure time revolves around being outdoors. From skiing and fishing to cycling, I find great joy in these outdoor activities. I actively contribute to the community as a board member of a nonprofit organization. This organization is responsible for the two music festivals held in Newport, Rhode Island, namely the Newport Jazz and Folk Festivals. Having grown up in Newport, it's a great way to stay connected to my hometown and stay current on music. ■

Ron Derven is a contributing editor to Development magazine.

Eliminating Hidden Liabilities in Real Estate Lease Agreements

Leases need a comprehensive and modern insurance section.

By James "Chip" Stuart, Hub International, and Sarah K. Laird, Polsinelli Law Firm

In the competitive property insurance market, every dollar counts, so owners and managers need to know if the terms of their leases are compatible with their insurance coverage.

It's common for property owners to first get insurance and then proceed with the lease. However, it's best to reverse the process. Begin with the lease and ensure that the necessary insurance provisions are established in it. This includes coverages for both the tenant and the landlord; premiums for shared spaces; subrogation between the tenant, landlord and insurers; and limits and deductibles, as well as required coverages for risks.

William_Potter via iStock/Getty Images Plus

Real estate lawyers and insurance brokers can help mitigate risk by reviewing the language in leases.

Six Must-Haves

Failing to establish a comprehensive insurance section in a lease creates a range of problematic issues. Here is how you can avoid the biggest ones:

1. **Be clear on what you expect to be reimbursed for**, or what you expect the tenant to pay for. If it's not in the lease, you can't assume anything.
2. **Use modern, updated language.** If it sounds old, the entire lease is likely old and may mean the proper coverage is not in place.
3. **Ensure that you're not obligated to become a developer or financier.** Check the section that outlines what happens in case of property damage and make sure it includes language stating that you won't be required to rebuild or replace the property if insurance funds aren't available.
4. **Severely limit the likelihood of a coverage lapse.** Build in a requirement that tenants must show they've paid their premiums on time. Or be sure you have landlord liability coverage.
5. **Make sure your rent abatement clause** doesn't state that you'll abate the rent if something happens to the property.
6. **Have a team in place**, including an attorney and insurance broker, to stay current with leasing requirements.

It's common for property owners to first get insurance and then proceed with the lease. However, it's best to reverse the process. Begin with the lease and ensure that the necessary insurance provisions are established in it.

Insurance Requirements for the Tenant

Requiring tenants to obtain insurance and including that requirement in the lease are essential to protecting your property. But the language matters too. The often-used term "hazard insurance" is outdated; instead, use "property and liability insurance." The term "casualty" should be updated to "covered peril" or "liability insurance." No insurance policy will insure all issues without any exclusions, so beware of the term "all risks" as well. Instead,

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specify the perils, such as earthquake, flood, wildfire and so on.

Tenants must purchase workers' compensation insurance, which is required in most states. Consider obtaining an additional policy in case the tenant doesn't have it, because if there is an accident, you could be sued as the building owner. Another often-forgotten coverage is for tenant improvements, which is necessary if something goes wrong.

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Other Items of Note

Some aspects, seemingly minor at the time, can be easily overlooked, such as the following:

- Draft the lease toward local or service-specific standards.
- Negotiate the right to obtain copies of underlying policies.
- Obtain your own independent landlord liability policy and get the tenants to reimburse you for it.
- Remember that unoccupied and vacant properties are totally different. Maintain the management agreement and the property services you had in place before the tenant exited.
- Understand that lease agreements don't govern the policy terms and conditions. Just because something is in a lease, it won't automatically flow into the insurance agreement.
- Put loss of rent on your own insurance policy.
- Know what's at stake with a mutual waiver of subrogation.

Key Risk-Mitigation Strategies

Risk mitigation is critical to reducing premium costs. Here is what underwriters will want to know before giving you a policy.

Property vacancies: Vacant properties have higher rates and restrictions than unoccupied ones do. Mitigate your risk by ensuring your property is unoccupied versus vacant.

Increased cost of construction: Before renewing with a contractor, review the statement of values, because replacement costs and construction are on the rise by as much as 30% in many areas.

Water damage: Most property damage comes from water leaks, so underwriters want to know the details of damage mitigation. Properties with a sound strategy in place will see better terms.

Security plans: Having a security plan, such as guards and cameras, in place will show that property owners are keeping tenants, customers and assets safe.

The insurance market is complex, but if you have the right team supporting you, such as a real estate lawyer and an insurance broker, you can stay current and mitigate as much risk as possible through the language in your leases. ■

James "Chip" Stuart is the corporate chief sales officer and practice leader for Hub International. **Sarah K. Laird** is a shareholder at Polsinelli Law Firm.

Use a Tenant Checklist

Property owners should always know what coverage their tenants have as soon as they move in. Here is what you need to gain from tenant certificates of insurance (COIs):

- ☐ The entity entered into the lease is insured.
- ☐ The insurance company has a minimum Best's rating of "A-VII," which you can check at ratings.ambest.com.
- ☐ Waiver of subrogation.
- ☐ Excess liability.
- ☐ 30-day notice of cancellation.
- ☐ Commercial general liability, including limits of occurrence and endorsements.
- ☐ Automobile liability, including limits and endorsements.
- ☐ Workers' compensation and employer's liability, including limits and endorsements.
- ☐ Umbrella liability, including limits and endorsements.
- ☐ Property insurance: tenant improvement, business income and period of indemnity, replacement costs. ■

New Office Underwriting Standards: Can the Hospitality Model Save Office Values?

The office space industry needs to have its own moment of creativity and innovation.

By Joshua Harris, Ph.D., Lakemont Group

Office assets stand in a state of flux, especially those in the middle of the "trifurcation" of buildings that are not new enough to capture top-tier tenants nor underutilized enough to feasibly justify conversion, demolition or other drastic measures. This category likely encompasses the largest number of buildings and can be found in all markets, urban and suburban. Given the possibility of rising vacancies, landlords and asset managers need to consider taking immediate action, however unorthodox, to sustain values and plot a course toward recovery. One such step is adopting new underwriting standards and letting go of an old favorite: Weighted Average Lease Term (WALT).

WALT stood as a reasonable measure of risk and quality for an office building when it was to be valued as a collection of credit-worthy leases. Increasingly, users of office buildings are becoming unwilling to sign such long-term leases because they do not fit the reality of rapidly changing business and workplace environments. In all reality, the office sector should not fear this transition to the level it has; coworking operators have demonstrated that users will pay higher per-person occupancy costs in exchange for flexibility, scalability, and access to unique service offerings and amenities. A mistake the office industry made over the past decade was allowing operators such as WeWork to lead in this type of innovation.

Pekic/E+ via Getty Images

Coworking operators have demonstrated the draw of presenting unique service offerings and amenities to their users.

Maximize Cash Flows

Going forward, office asset managers should focus primarily on maximizing cash flows. Maximal revenue should be the major goal irrespective of source, meaning whether derived from long-term leases, short-term leases, or service and ancillary sources. Ultimately, a building that maximizes Revenue Per Available Square Foot ("RevPAF") will likely generate more profits and thus be more valuable, all else being equal. This is a lesson that can be learned from the hospitality industry, which seeks to increase cash flows by maximizing the revenue generated by each guest on a nightly basis. Furthermore, by optimizing around revenues instead of lease term metrics, landlords can break free of the expensive capital expenditure cycle that has been the bane of office investors for years and has contributed to the general underperformance of the asset class.

Flexibility Is a Plus

If space is leased on a short-term basis, tenants will not be able to command significant concessions in the form of costly tenant improvement allowances and free rent periods, which are unlikely to impress the underwriters, analysts at investment firms, and banks going forward. Furthermore, flexible common spaces can be monetized or rolled into an occupancy package, meaning coworking or shared areas, conference

Going forward, office asset managers should focus primarily on maximizing cash flows. Maximal revenue should be the major goal irrespective of source, meaning whether derived from long-term leases, short-term leases, or service and ancillary sources.

rooms and other semiprivate space can be unique sources of revenue from tenants who are less willing to take large blocks of space as they once did. If tenants need more space in the future, they can naturally expand within the same building with relative ease. A building that offers this flexibility upfront in the leasing process is likely to provide more tenant requirements versus landlords who are only willing to offer the traditional model.

Ideal Candidates

Clearly, making the shift to accept shorter-term leases and managing for service/ancillary revenue maximization will cause lenders and equity investors heartburn. However, over time, actual operating results will prove the success or failure of such moves. If these actions lead to higher cash flows and thus profitability, it is hard to imagine buildings and owners will be penalized with the benefit of hindsight. Thus, the ideal candidate for such a conversion is the office building that has fallen to or below 60% occupancy with few prospects for reletting in today's market. These assets have relatively little to lose and likely have floors and spaces built out in ready-to-occupy condition. The largest challenge is empowering the building's management team to offer the embedded services that will probably be needed to optimize such a model. Although this

Over the long term, it is difficult to say whether short-term leases and service/ancillary revenue will be fully embraced or will become little more than an aberration due to the current times, but the retail sector may provide some guidance.

approach is unlikely to be free of up-front costs, they may be substantially less than the equivalent free rent and tenant improvement package required for a new long-term lease. The key is moving ahead of the competition and capturing the demand from those who will prefer such flexible options.

Comparisons to the Retail Sector

Over the long term, it is difficult to say whether short-term leases and service/ancillary revenue will be fully embraced or will become little more than an aberration due to the current times, but the retail sector may offer some guidance. During the rise of Amazon, retail was declared "dead" many times. Yet it found recovery and resurgence in part by embracing new tenant types and service offerings based on what retailers and consumers wanted. This included more "experiential" retail and dining establishments, many of which were mom and pop stores with little to no creditworthiness, as well as users formally considered unwanted in a retail center, such as medical tenants. The result has been record-high occupancies and even rental rates for many assets nationwide.

The office space industry needs to have a similar moment of creativity and innovation, taking inspiration from other asset classes such as hospitality and retail. If owners, investors and lenders act judiciously, the "death" of office could be just one of many overblown stories that the real estate industry has experienced over the decades. ■

Joshua Harris, Ph.D., is managing partner at the Lakemont Group and former vice president of investment strategy at Skanska.

Tapping Renewables at the Right Time in the Decarbonization Process

Approaches start with basic maintenance and extend to tax credits.

By Becky Wacker, Trane Technologies

The world is going through an energy transformation and redefining how energy supply and demand are managed. Renewable energy and decarbonization — the process of preventing or reducing carbon gases from being released into the atmosphere — are mainstays in conversations about sustainability.

Before investing in on-site renewable energy like solar panels, the first step should be to assess the current situation and how best to reduce energy consumption. Simply put, using less energy produces less carbon emissions. There is a considerable benefit to reducing energy use through efficiency improvements, both from a carbon- and cost-reduction standpoint, given that HVAC alone can account for 50% of total energy consumption in commercial spaces. Something as routine as maintaining equipment so it can operate at its best or using connected devices to automate performance management can have a positive impact. Looking at facility and equipment improvements alongside efficiency optimizations to help reduce carbon and energy needs will minimize the overall amount of clean energy needed to support the building into the future.

Before investing in on-site renewable energy, it's wise to assess if energy consumption can be reduced through efficiency improvements. *Wirestock via iStock/Getty Images Plus*

Facilities and Equipment

The second step is to minimize on-site emissions from fossil fuels and refrigerants. To do this, first consider electrifying equipment by switching power sources from on-site fossil fuels to electricity. As the electric power grid transitions to renewable energy sources, electrifying equipment effectively reduces overall emissions. Additionally, if on-site renewable power generation is part of an overall strategy, electrification will help maximize the use of renewable assets. As more facilities look to implement electrified equipment, the growing number of state, local and utility-driven incentive programs can help to make the transition more affordable and accelerate the progress toward decarbonization goals.

Another way to minimize on-site emissions is to mitigate fugitive refrigerant emissions by transitioning to low-GWP (global warming potential) refrigerants in HVAC equipment and adding on-site management to minimize the effects of leaks. Refrigerants can be thousands of times more potent from a global warming perspective than carbon dioxide, making it important to minimize their impact on the environment. As an example, Project Drawdown estimates that if 100% of refrigerant leaks were

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New Mexico's State Buildings Green Energy Project is the largest combined energy efficiency and renewables project ever undertaken by the state. The project leaned into building modernization and efficiency improvements to limit greenhouse gas emissions and tapped into clean, renewable power generation through multiple large-scale rooftop solar photovoltaic (PV) installations on government buildings — the largest solar PV system not owned by a utility in New Mexico. The program helped New Mexico conserve over a megawatt of energy usage while simultaneously setting the state up to produce more than 6 megawatt-hours of clean energy annually. The State Buildings Green Energy Project created green jobs, reduced operational costs by modernizing the facilities, and continues to save the state over $1.1 million in annual energy costs. For more information, see Development magazine, Fall 2023, "Developers Can Cash Out Tax Credits for Renewable Improvements." ■

When considering renewables as part of an on-site generation strategy, think about use scenarios, current utility rates, local legislation and geography — all of which factor into the decision of whether it is the right time to pull the renewables lever.

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prevented over the next 30 years, it would avoid emissions equivalent to 57.15 gigatons of carbon dioxide.

On-Site Generation

Once facility and equipment improvements take place and on-site emissions have been reduced, it is then time to look at on-site generation, potentially using renewables. Evaluating on-site generation and renewables after effectively minimizing energy use and on-site emissions allows a facility to rightsize the required clean energy generation to meet the facility's needs while minimizing costs and balancing resiliency requirements. Developing the right distributed energy resources and incorporating renewables provide the ability to lower energy costs, deliver Scope 2 emissions reduction goals, and drive return on sustainability investments.

When considering renewables as part of an on-site generation strategy, think about use scenarios, current utility rates, local legislation and geography — all of which factor into the decision of whether it is the right time to pull the renewables lever. The specifics of a unique situation and goals such as tax benefits, resilience requirements and energy autonomy will also drive what types of renewables to use, from solar to biomass to geothermal.

The final step in the decarbonization process is addressing difficult-to-abate emissions. If certain emissions-producing operations cannot be decarbonized, consider carbon offsets, or design a virtual purchase power agreement into the overall carbon reduction strategy.

Remember that every decarbonization journey is unique. As you put together your decarbonization program, start by assessing overall goals, develop a holistic plan for decarbonizing, and then implement and measure. Taking time to plan will ensure the right levers are pulled at the right time. ■

Becky Wacker is energy services sales director at Trane Technologies.

Rightsizing Parking in Support of Sustainability and ROI

Shared parking analyses can help save land, costs and time.

By John W. Dorsett, AICP, Walker Consultants

Despite ride-sharing platforms and public transit, parking remains a necessity in urban areas. However, it has been overbuilt in many U.S. areas and has led to several well-documented problems:

- It unnecessarily adds to property costs, which are passed along to occupants, tenants and consumers in the form of higher sales prices, rents, property taxes, and goods and services.
- It creates an opportunity cost when a parking site could have been used in other ways, reduces development density and makes it more challenging to develop walkable communities.
- It occupies land that could serve "higher and better" uses.
- It incentivizes driving vehicles instead of using other transportation modes, contributing to increased vehicle emissions and air pollution.
- It creates excessive stormwater runoff, which increases pollutant levels in waterways.

Steep Costs

Additionally, parking is expensive to build and operate. Parking facility construction costs can range from $3,000 to $8,000 or more per space for a surface parking lot and $25,000 to $100,000 or more per space for a multilevel parking structure. In addition to construction costs, there are land costs, operating expenses and capital expenses (CAPEX) required for repairs and maintenance. Land costs in U.S. urbanized areas can range from less than $1 per square foot in smaller cities to $2,500 or more per square foot in Manhattan. Per space annual operating expenses for a parking facility are likely to range from $150 to $1,000 or more. CAPEX spending varies, but consultants and asset managers often recommend that 0.5% to 1.5% of initial project development costs be budgeted annually. Therefore, if a facility costs $30,000 per space to build, an annual CAPEX set-aside of $300 per space would be prudent.

Table 1 shows that a parking space can cost between $51 per month (for a simple, inexpensive surface parking lot built for $3,000 per space and operated at $150 per space) and $1,074 per month (for a more expensive $100,000 per space multilevel parking structure that costs $1,400 per space to operate).

Parking Minimums

Historically, most city zoning ordinances have required that real estate

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Table 1 **Per Space Monthly Cost to Provide Parking** (US Dollars)

Operating Expenses Per Space, Per Year	Per Space Construction Cost										
	$3,000	$5,000	$8,000	$10,000	$20,000	$25,000	$35,000	$45,000	$60,000	$80,000	$100,000
$150	51	70	99	118	212	260	354	449	591	780	970
$250	60	79	107	126	221	268	363	457	599	789	978
$350	68	87	115	134	229	276	371	466	608	797	986
$450	76	95	124	143	237	285	379	474	616	805	995
$550	85	104	132	151	246	293	388	482	624	814	1,003
$650	93	112	140	159	254	301	396	491	633	822	1,011
$750	101	120	149	168	262	310	404	499	641	830	1,020
$850	110	129	157	176	271	318	413	507	649	839	1,028
$950	118	137	165	184	279	326	421	516	658	847	1,036
$1,200	139	158	186	205	300	347	442	537	679	868	1,057
$1,400	156	175	203	222	317	364	459	553	695	885	1,074

Assumptions:

The table above computes the monthly cost of parking. Costs include those relating to construction, soft, land, operations, and capital maintenance. Amortization is assumed at 6.5% per annum for 30 years and no cash down to cover construction and soft costs, plus land costs. OPEX is added on an annual per space basis. CAPEX is figured at 1% of initial project development costs, excluding land costs.

Soft Costs (as pct. of construction costs) =	20%	Amortization Term (In Years) =	30
Land Costs (per space) =	$1,500	CAPEX (pct. of initial project costs/yr.) =	1%
Annual Interest Rate =	7.50%		

Source: John W. Dorsett, AICP

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developers build a minimum number of spaces. Parking minimums required developers to build on-site parking in accordance with the type and quantities of land uses to be built on the site (such as square footage, number of seats or number of hotel rooms).

However, many cities, plus the states of California and Oregon, have eliminated parking minimums, particularly for developments built close to transit stations. So, depending on the site, developers may no longer be required to meet a city parking minimum, but there are still incentives to rightsize the amount of parking. One way to achieve rightsized parking is through a shared parking analysis.

Depending on the site, developers may no longer need to meet a city parking minimum.

Thomas Bullock via iStock/Getty Images Plus

What Is Shared Parking?

Shared parking allows for the sharing of parking spaces among users in a mixed-use environment instead of having a minimum number of parking spaces for each individual use. It commonly results in a reduction of required parking spaces. This reduction, which is sometimes significant, depends on the quantities and mix of uses and local code requirements.

Shared parking is defined as the ability of drivers to use the same parking area for nearby or adjacent land uses without encroachment. It considers the parking demand for more than 55 different land uses, the availability and use of alternative modes of transportation, captive market effects, and daily, hourly and seasonal variations, all of which can lower parking demand.

A shared parking analysis begins by taking the land use quantities of a project, such as number of residential units and restaurants' square footage, and multiplying by a base parking demand ratio and monthly and hourly adjustment factors. Base ratios and hourly and monthly adjustments are industry standards that are based on thousands of parking occupancy studies and vetted by leading parking consultants and real estate professionals.

Figure 1 provides an illustrative view of the steps involved in a shared parking analysis.

For most land uses, shared parking is based on the 85th percentile of peak-hour observations, a standard espoused by the Institute of Transportation Engineers, the National Parking Association's Parking Consultants Council and experienced parking planners.

Shared parking allows for the sharing of parking spaces among users in a mixed-use environment instead of having a minimum number of parking spaces for each individual use. It commonly results in a reduction of required parking spaces.

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Figure 1: Steps Involved in a Shared Parking Analysis

Land Use Units (Number of rooms, square feet, and so on)	X	**Standard or Base Parking Generation Rate**	X	**Monthly Factor**	X	**Hourly Factor**	X	**Driving Ratio**	X	**Non-Captive Ratio**	=	**TOTAL**

Case Study: Proposed Residential and Hotel Mixed-use Development in a Densely Populated Coastal Area

A developer was planning an infill project in an urbanized metropolitan area that consisted of two towers — a 200-unit residential tower and a 170-key hotel tower — serviced with subterranean parking and related uses including a medium-sized full-service restaurant and a retail sundries shop.

The city's zoning ordinance includes a shared parking provision that allows a developer to lower on-site parking requirements by commissioning a shared parking study performed by a qualified professional.

The developer hired a professional to conduct a shared parking analysis, which resulted in a report used by the developer to secure site plan approval from the city, including approval for building fewer parking spaces.

One key provision of this study was empirical field research that included other hotel properties in the area. The research considered the methodology and effects of shared parking and made a case for the hotel's parking to be 0.67 spaces per key instead of 1.0 spaces per key, as required per the zoning ordinance.

The shared parking analysis demonstrated a need for 25% fewer spaces than required by the ordinance. At $50,000 per parking space, the 141 fewer spaces represented a cost savings of more than $7 million. ■

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Considerations

To rightsize a parking area, an analysis must consider the following factors:

Reserved parking. Many developers include reserved parking spaces for certain user groups. This can include creating a nested or restricted-access parking area in a facility. Another form of reserved parking is spaces reserved exclusively for individual use and tied to a unit number or signed for a specific occupant. Restrictions may vary, and some are restricted 24 hours per day. Others may restrict usage to weekday business hours. This practice of reserved parking negates or reduces opportunities for shared parking spaces.

Local conditions. Local considerations often affect parking needs. For example, multifamily residential developments in one area of a metropolitan center may have different parking requirements than those in a similar development in another part of the metropolitan center. These nuances must be teased out during the field-market research process and a case built that is convincing to local authorities.

Some uses are complementary in terms of offering opportunities for shared parking, while others are not. For example, hotel and office space complement each other. Hotel parking demand peaks in the evenings, while office parking demand peaks on weekdays.

Programming mix and quantities of land uses. Some uses are complementary in terms of offering opportunities for shared parking, while others are not. For example, hotel and office space complement each other. Hotel parking demand peaks in the evenings, while office parking demand peaks on weekdays. In cases where these two land uses are included in a development project within close proximity to each other, parking may be shared. An example of noncomplementary uses is restaurants and entertainment venues such as a performing arts theater, cinema or sports arena. Peak periods of parking demand for these entities are likely during evenings, particularly on weekends. In this example, there is likely less opportunity for shared parking than in the hotel-office scenario.

Call to Action

Savvy developers do their homework and build only the parking that is needed. Sometimes they perform their own parking studies after significant investment in experience, research and independent studies. Alternately, many developers have found that they don't have the resources to perform their own studies or that parking needs are difficult to quantify because needs can often be nuanced and specific to the location. An experienced, qualified parking planning professional can help developers work through these nuances and build rightsized parking by using the appropriate shared parking methodologies. ■

John W. Dorsett, AICP, is senior vice president at Walker Consultants' Indianapolis office.

ADVERTISING FEATURE

7 Sustainable Strategies for Industrial Buildings

With ESG factors becoming critical to development, environmental sustainability is an important consideration in building design.

Our work in the industrial sector plays a key role in transitioning toward a more sustainable future. Here are seven inventive, yet feasible strategies that can be implemented within industrial buildings. The result? Minimization of carbon footprints, a healthier world, and marketable features to appeal to tenants and buyers.

1: Target Sustainability in Structure & Envelope Design

The initial sustainable strategies should focus on the building envelope and structure. Incorporating lower embodied carbon options into design elements for industrial buildings should be a priority.

2: Double Down on EV Charging

In the context of carbon reduction strategies, EV charging plays a significant role. When it comes to EVs, many jurisdictions now mandate certain accommodations and offer incentives.

3: Optimize Onsite Energy

Reducing the carbon from ongoing operations is another important goal. Onsite energy generation can go a long way to supporting the power needs of the building and surrounding community. Industrial buildings have plenty of roof area to use for photovoltaics. Considering the location and feasibility, small rooftop wind turbine systems could also be a viable option.

4: Conserve & Manage Water

Cities are increasingly recognizing the importance of decentralized green infrastructure for effective stormwater management. Embracing the decentralized model not only meets regulatory requirements but also presents an opportunity to transform stormwater management areas into site amenities with attractive landscaping.

5: Incorporate Sustainable Materials in Your Design

Designing and constructing a sustainable industrial building means more than just the structure and envelope. The interior materials need to be considered, too. Making environmentally friendly material choices is possible with limited to no additional cost and should be considered for every project. We recommend using construction materials with transparency data available.

6: Feature Health & Wellness Amenities

To effectively market your building for tenant occupancy or to attract and retain employees, it is crucial to incorporate health and wellness options. When you include the necessary infrastructure, even if it means simply allocating space for a future use like outdoor seating or a walking trail, you can better position your building as a desirable choice.

7: Sustainability Focus Before, During & After Construction

While many of the aforementioned strategies focus on the design phases, it is important to continue the sustainable focus when shifting to the construction phase. For example, deploy a waste diversion plan to prioritize reuse or recycling of materials rather than sending to a landfill. This will not only minimize environmental impact but also save on embodied carbon by reducing the need for new material extraction and production. When the project is complete, commission the building systems and envelope to confirm optimum function and support the facility's energy efficient design features.

Ready, Set, Sustain

Incorporating sustainability practices into building design is essential for creating a greener, healthier world. It is also crucial to have effective systems in place to track and measure progress. Here's how you can get started:

- Bring together a team with the experience and enthusiasm to reach your sustainable design goals.
- Start the project by establishing the specific green project targets with the entire team contributing.
- Use benchmarking and metrics to evaluate progress during design and construction.

Erica Godun, Director, Sustainability
egodun@waremalcomb.com

WARE MALCOMB

Data Center Real Estate: Challenges and Opportunities

At a Glance

- The introduction of artificial intelligence is adding to the demand for data center development.
- Northern Virginia is the largest U.S. data center market, but the Phoenix and Atlanta markets are currently experiencing the fastest growth.
- The largest data centers can use as much power as 80,000 households.

Equinix owns and operates a network of 250 International Business Exchange™ (IBX®) data centers in 71 metro areas around the world.

in the Digital Age

Source: Equinix

Data center inventory growth has accelerated across North American markets.

By Ron Derven

Data center real estate is hot and getting hotter as vacancy rates plummet to historic lows of around 3% in most markets, demand jumps and rents rise. While the adoption of artificial intelligence (AI) by business and the public is partially responsible for this growth, a tsunami of data is also flooding into data centers from numerous sources, including 5G, the internet of things (IoT), e-commerce, streaming services, cloud computing and virtual reality (VR). And coming soon to a neighborhood near you — the autonomous vehicle, which likely will generate literally terabytes of data daily through its high-resolution cameras, radar, lidar (light detection and ranging), GPS and automotive networks.

With or without AI, the level of data creation is almost unfathomable, explained **Carrington Brown**, senior managing director, development, Affinius Capital. “Globally, there are approximately 200 million emails sent every minute and about 350,000 posts to X [previously known as Twitter] every minute. There’s more than 100,000 hours spent on Zoom calls globally every minute. This level of activity necessitates a substantial supportive infrastructure.”

This vast production of data has whetted the appetite of institutional investors who want to boost the bottom line of their real estate investments. “The categorization of data center companies can be broadly divided into several major groups,” noted **Pat Lynch**, managing director for CBRE’s Data Center Solutions. “First, there are large publicly traded data center companies, with Equinix and Digital Realty being the leaders in this area. Next, we have private equity-backed businesses. These are controlled by entities like Carlyle, KKR, Macquarie, BlackRock, Blackstone, among others, who have a substantial interest in the data center space. Lastly, there are the big hyperscale companies, which in some cases own their own data centers. These are often located in secondary markets such

> **"**We are in midst of the **most significant data center development boom** in the industry's history.**"**
>
> *— Curt Holcomb, executive vice president, JLL*

as Cheyenne, Omaha or Des Moines and are at a massive scale."

"We are in the midst of the most significant data center development boom in the industry's history," according to **Curt Holcomb**, executive vice president, JLL. "The industry has seen consistent double-digit compound annual growth rates year after year. This growth is partly due to an imbalance in supply and demand, caused by COVID-induced halts in data center development over a period of months. The introduction of AI has only added to an already robust demand. Hence, we predict that this boom will continue over the next two to three years, despite constraints on the power-delivery side."

About 90% of data center transactions in the first half of 2022 involved private equity firms. For example, Affinius Capital, a company formed from the integration of USAA Real Estate and Square Mile Capital, is developing a major data center, Gainesville Crossing Data Center (GCDC), in Gainesville, Virginia, with its partner Corscale. GCDC is a 130-acre master-planned data center campus. The multi-phase project will encompass 2.3 million square feet over five two-story buildings.

"GCDC marks our first venture into the data center space," said Brown. "We master planned this space for over 300 megawatts of critical IT capacity. Early last year, we started construction on our first building, a 72-megawatt facility. Within four months of breaking ground, we secured a commitment for the building from a hyperscaler (single companies that operate massive, centralized and custom-built computing facilities). We are currently in design and development for future phases. Within the next six months, we will break ground on an additional 72-megawatt building and a 54-megawatt building, which will both be leased to hyperscalers."

Data Center Market Will More Than Double by 2030

McKinsey & Co. expects the data center industry to grow from 17 gigawatts (GW) in 2022 to about 35 GW by 2030. The data center industry doesn't typically measure the size of a facility in square feet, but rather in megawatts (MW). For perspective, a megawatt of electricity can power about 400 to 800 homes for one year, while a gigawatt of electricity can handle 876,000 homes for one year. The U.S. Department of Energy (DOE) notes that data centers are one of the most intensive building types, consuming 10 to 50 times more energy than a typical commercial building. DOE estimates that data centers and servers now use approximately 2% of all U.S. electricity.

Data center inventory growth has accelerated across North American markets in response to the sharp increase in demand. Total data center inventory in the top 12 markets has more than doubled since the beginning of 2020, according to Avison Young's U.S. data center update for Q2 2023.

Northern Virginia continues to extend its lead in overall data center market size, but the Phoenix and Atlanta markets are currently experiencing the fastest growth. While the first half of 2023 witnessed robust growth in the data center market, data center developers in most major and secondary markets are struggling with a supply-and-

The interior of an Equinix IBX® data center.

Source: Equinix

"With or without AI, the level of data creation is almost unfathomable. **Globally, there are approximately 200 million emails sent every minute and about 350,000 posts every minute on X [previously known as Twitter].** There's also more than 100,000 hours spent on Zoom calls globally every minute. This level of activity necessitates a substantial supportive infrastructure."

— Carrington Brown, senior managing director, development, Affinius Capital

demand imbalance, leading to a shortage of co-location space and rising pricing, according to JLL.

Data Center Market Flourishes With High Demand/Low Vacancies

CBRE, in its September 2023 North American data center trends report, noted that despite supply-side issues, primary market absorption was 468.8 MW in the first half of 2023 compared with 484.8 MW in the first half of 2022. Pre-leasing is strong in the primary markets, with 1,673.1 MW (73.1%) of the 2,287.6 MW under construction pre-leased. Hyperscalers are securing space 24 to 36 months in advance of delivery of data center space. Northern Virginia's data center vacancy rate is 0.94%, the lowest in the nation.

The top U.S. data center markets include Northern Virginia (the largest data center market), Dallas-Fort Worth, Silicon Valley, Chicago, Phoenix, Atlanta, Hillsboro (Portland, Oregon), and New York tri-state. Within these primary markets, there is an all-time high of 2,287.6 MW under construction, a 25% increase year over year. Strong demand and developer appetite are driving this market. That's the good news. The bad news is that the lack of readily available power and extended lead times for key pieces of electrical equipment are delaying construction and delivery timelines.

"A great deal of leasing activity is on the AI side of the business and is focused in areas that have either traditional data center development corridors or are near large-scale power sources," explained **Andy Cvengros**, managing director, data center solutions at JLL. "The drive to secure good sites near power is producing some unusual deals. As an example, we recently completed a transaction where 28 low-value homes were purchased and torn down to make way for a new data center. That land was far more valuable as a data center site. Groups are also looking at locations near big electrical substations."

Even when construction delays occur due to issues like power availability, pre-leasing activity remains robust, according to those interviewed. "Let's consider an example of a hyperscaler," said **Gordon Dolven**, director of Americas Data Center Research at CBRE. "In the past, they may have leased from a provider about six to 12 months in advance. Currently, they are more inclined to pre-lease space 18-36 months ahead of time. This shift indicates a significant change in leasing practices."

In a dramatic turn in the leasing market, brokers are sending out letters of intent (LOI) rather than the typical requests for proposal (RFP). "Our clients have an immediate need for multiple megawatts," said Lynch. "A few years ago, we would have issued an RFP to the market; now we approach the few providers with the required capacity directly with an LOI. We are not the only ones adopting this strategy on behalf of our clients. I have never encountered such a phenomenon in any form of real estate."

Data Center Constraints

Across the U.S., with very few exceptions, the industry is looking at markets that are in a supply-and-demand imbalance, according to Holcomb. "There's way more demand than there is supply. And right now, we're looking at a very limited supply of available capacity. We've got a lot of groups that are

The Gainesville Crossing Data Center is a 130-acre master-planned data center campus located in what is known as "Data Center Alley" in Northern Virginia, outside of Washington, D.C.

"Brokers are sending out letters of intent (LOI) rather than the typical requests for proposal (RFP). Our clients have an immediate need for multiple megawatts. **A few years ago, we would have issued an RFP to the market; now we approach the few providers with the required capacity directly with an LOI.** We are not the only ones adopting this strategy on behalf of our clients. I have never encountered such a phenomenon in any form of real estate."

— Pat Lynch, managing director for CBRE's Data Center Solutions

in the beginning stages of development with new facilities, but it is going to take 24 to 48 months for many of these new developments to get built. Developments coming out of the ground are being pre-leased with rising rents. It is changing the way customers go about finding and obtaining space and capacity. They are having to start a lot earlier, and they are having to make commitments to facilities that may not even be constructed yet."

Major data center markets are feeling the growing pains of this robust business, with places such as Northern Virginia encountering an unprecedented multiyear pause on development in some submarkets because of an energy shortage. This is causing the biggest hyperscalers and co-location companies to seek new secondary markets in which to build, according to Cushman & Wakefield.

"We are experiencing a power shortage in the industry," said Lynch. "This has led to a shift in clients' preferences. Previously, clients may have preferred locations like Northern Virginia or Silicon Valley. Now, they are considering alternatives such as Reno [Nevada] or Columbus, Ohio. The strategy is changing. Instead of focusing on bringing power to the site, we're seeing a shift toward bringing the site to the power."

A hyperscaler's data center can use as much power as 80,000 households, according to a report by McKinsey & Co. Although many

Nikada/E+ via Getty Images

According to Department of Energy estimates, data centers and servers use about 2% of all U.S. electricity.

Artificial Intelligence Is Not New

Artificial intelligence (AI) did not appear out of the blue in November 2022 with the introduction of ChatGPT to the general public. AI had its introduction more than 70 years ago, in 1950, when Alan Turing, the brilliant mathematician, published his paper on AI titled "Computer Machinery and Intelligence," which proposed a test of machine intelligence.

Yet ChatGPT and other so-called generative AI apps are having an explosive impact on the public and business and, therefore, on data centers. Just how explosive? Consider this: It took Netflix 3.5 years to reach 1 million users online. Later, it took Instagram 2.5 months to hit the 1 million mark. But it took only five days for ChatGPT to top 1 million users; as of Nov. 3, 2023, it had more than 180 million users.

Since the introduction of ChatGPT, a new text-sharing app has been introduced called Threads, which is owned by Meta, the parent company of Facebook. Threads took only five minutes to hit 1 million users and just 2.5 hours to reach 2 million users. It took two days to reach 100 million. Only one day after the introduction of Threads, users had generated 95 million posts and 190 million "likes" on the app.

> **“A great deal of leasing activity is on the AI side of the business** and is focused in areas that have either traditional data center development corridors or are near large-scale power sources.”
>
> *— Andy Cvengros, managing director, data center solutions, JLL*

The Gainesville Crossing Data Center marks Affinius Capital's “first venture into the data center space.”

hyperscalers are working on ways to lower energy and water use, it is a challenge.

In 2021, for example, Google disclosed that it used 3.3 billion gallons of water at data centers in the U.S. and an additional 1 billion gallons globally. A large data center will use between 1 million and 5 million gallons of water a day. According to a Virginia Tech study, data centers rank in the top 10 of U.S. industries for most water consumption.

“People are often concerned about data centers' high water consumption,” noted **Keith Simpson**, director of engineering for the mid-Atlantic region of Bohler. “If a data center is located near a lake or a river, the water can be taken directly from the body of water and filtered on-site. If not, [the developer] has to tap into the community water supply and draw a lot of the available water. We are hopeful that as data centers transition from air-cooling to liquid-cooling systems, the demand for water will decrease.”

Public Opposition

Five or 10 years ago, data centers did not experience the same level of community opposition as they do today, Simpson said. “While data centers still have minimal impact on local resources such as schools and traffic, communities are increasingly seeing large buildings [data centers] that many view to be unattractive, loud and environmentally unfriendly.”

Simpson said that design and development teams can play an integral role in easing community concerns by addressing aesthetics and mitigating sound pollution. Through the use of faux windows, appealing color schemes and dynamic light displays, data centers can have a more-pleasing visual impact. A strategic site layout can also help mitigate sound by using existing land contours and supplemental landscaping to act as barriers.

Complex Data Centers Evolve

AI's immediate impact on new data centers revolves around the requirement for complex new processors to be installed that need more cooling equipment to function properly. In data centers, Holcomb explained, a traditional server that uses CPUs has been the standard. Now, Nvidia has introduced to the market a chip known as the GPU, or graphics processing unit. Historically, these have been used for heavy graphics, such as those in video games, and other applications such as cryptocurrency mining. However, the processing power and the nature of the chip makes it well suited for the computations required by AI.

While GPUs are more expensive than CPUs, the increased cost is justified by their vastly superior processing capabilities. This enhancement is a key enabler for AI, according to JLL's Cvengros. These new chips consume several times more power per cabinet than the older processors. Unfortunately, this increased power density is leading to the requirement for water cooling at the rack level and the chip level — a need that many facilities are not equipped to accommodate.

"Consequently, the design of new facilities is shifting to support these higher densities," Cvengros said. "We've seen a significant rise in power consumption per cabinet — from 5 kW [kilowatts] to 7 kW a few years ago, to the current 15 kW to 17 kW. The latest processors sometimes require a massive 50 kW or more. Traditional data centers are struggling to manage these power loads, which necessitates design alterations for future developments."

Do these superpowered new data centers using GPUs doom older facilities using CPUs? Not at all, assured CBRE's Dolven. There is such strong demand and low supply

Wirestock via iStock/Getty Images Plus

Data center inventory has more than doubled in the top 12 markets since the beginning of 2020.

5 Types of Data Centers

There is no one-size-fits-all when it comes to data centers, and depending on who is counting, five popular types of data centers are operating today.

Enterprise data centers: The enterprise data center supports a single organization. It is typically built, maintained, operated and managed by companies, such as banks, brokerage firms and insurance companies, for their own use.

Multitenant or co-location data centers: The co-location data center is one where a company will rent space within that data center, which is owned by others and located off premises from the company.

Hyperscale data centers: Hyperscale data centers are those of Amazon Web Services, Microsoft and IBM, and support their large-scale IT infrastructure.

Edge data centers: Edge data centers are owned by third parties in a specific metro area to bring IT infrastructure closer to users. They handle real-time data processing. These centers reduce communication delays.

Container data centers: Container data centers come in shipping containers or modules. These are ready-made data centers. They are plug-and-play, with all the components ready to go.

"In the past, [companies in need of data center space] may have leased from a provider about six to 12 months in advance. Currently, they are more inclined to pre-lease space 18-36 months ahead of time."

— Gordon Dolven, director of Americas Data Center Research, CBRE

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Even as demand for data centers has exploded, they have faced increased public opposition, including by those who view them as environmentally unfriendly.

of data centers today that end users are bifurcating their use, he explained. "For instance, the end user might use a 20-year-old co-location facility or data center for storage or low-density computing needs. The AI-related needs — real-time transaction work and high-density work — are often moved to the new facilities."

Data Center Developers

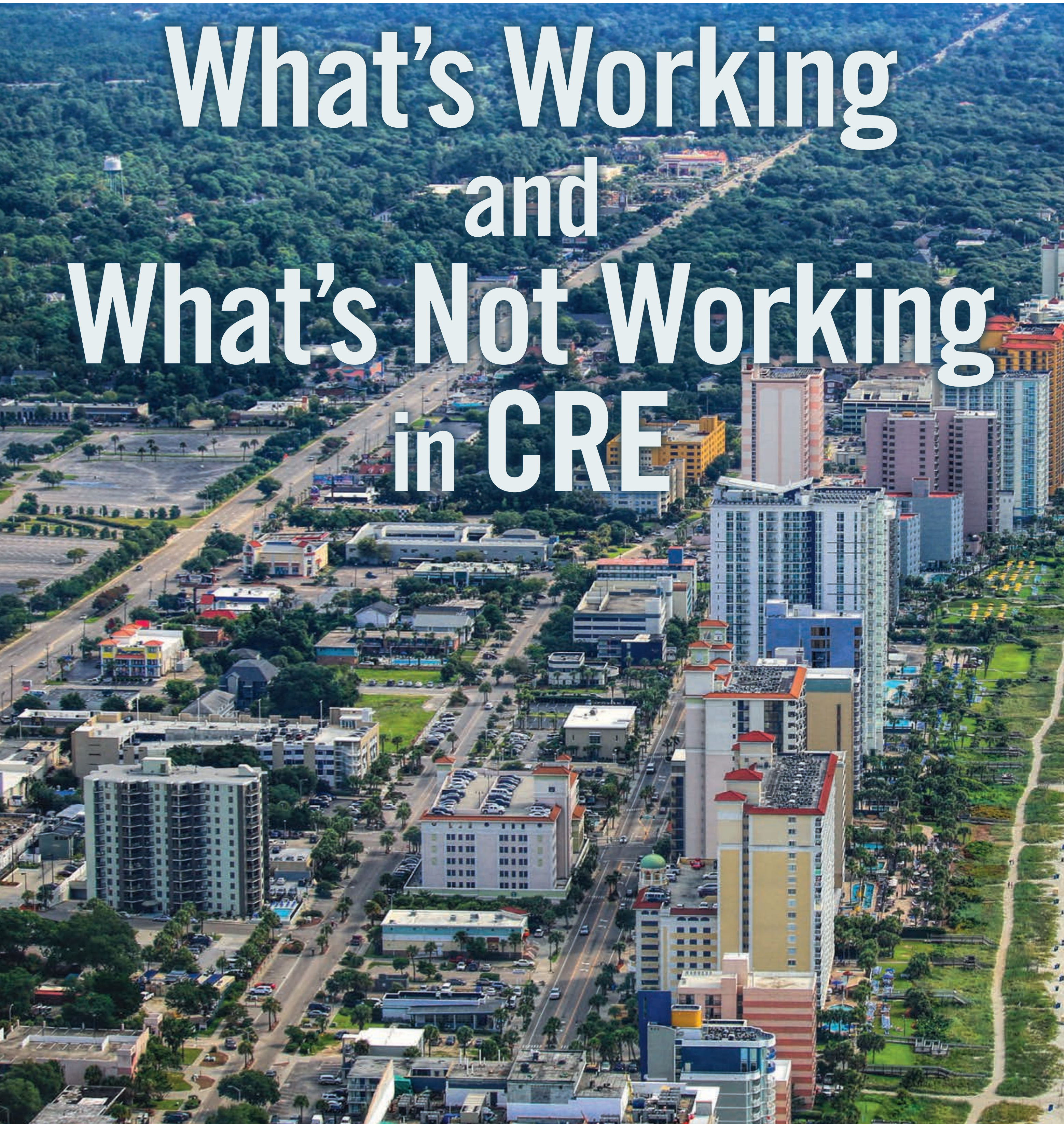
Data center development isn't for everyone. Industrial developers thinking about entering this business might want to consider pursuing a joint venture with an experienced company, according to those interviewed. Typical of the type of developer in this business is Corporate Office Properties Trust (COPT) of Columbia, Maryland. The company got involved in the data center business in 2003 with a U.S. government customer. By 2008, COPT owned and facilitated property management at five data centers totaling 872,000 square feet of space for defense/IT customers. The company said that from 2013 to the present, it has leveraged its development expertise and customer relationships into a growing, build-to-suit platform in data center shells for cloud computing government contractors.

"The data center sector demands substantial capital and specialized execution, particularly when it comes to building the facility," said Brown. "Unlike the construction of a warehouse, office building or multifamily building, few companies have the capability to build a data center."

Similarly, Lynch cautioned that while the data center sector is a great business to be in, it can also be quite costly and challenging, particularly for local developers. "When local clients approach us with a potential location for a data center, we will do a detailed analysis," he said. "If the location proves suitable, we will usually advise the client to partner with a large, experienced company in the business. This is no reflection on the client's capabilities; rather it is a reflection on the complexity of the data center business today." ■

Ron Derven is a contributing editor to Development magazine.

What's Working and What's Not Working in CRE



Myrtle Beach, South Carolina, proved to be one of the most popular places for people to move to in 2022.

Carlosr via iStock/Getty Images Plus

An economist's take on how we got here and what to watch in 2024.

At a Glance

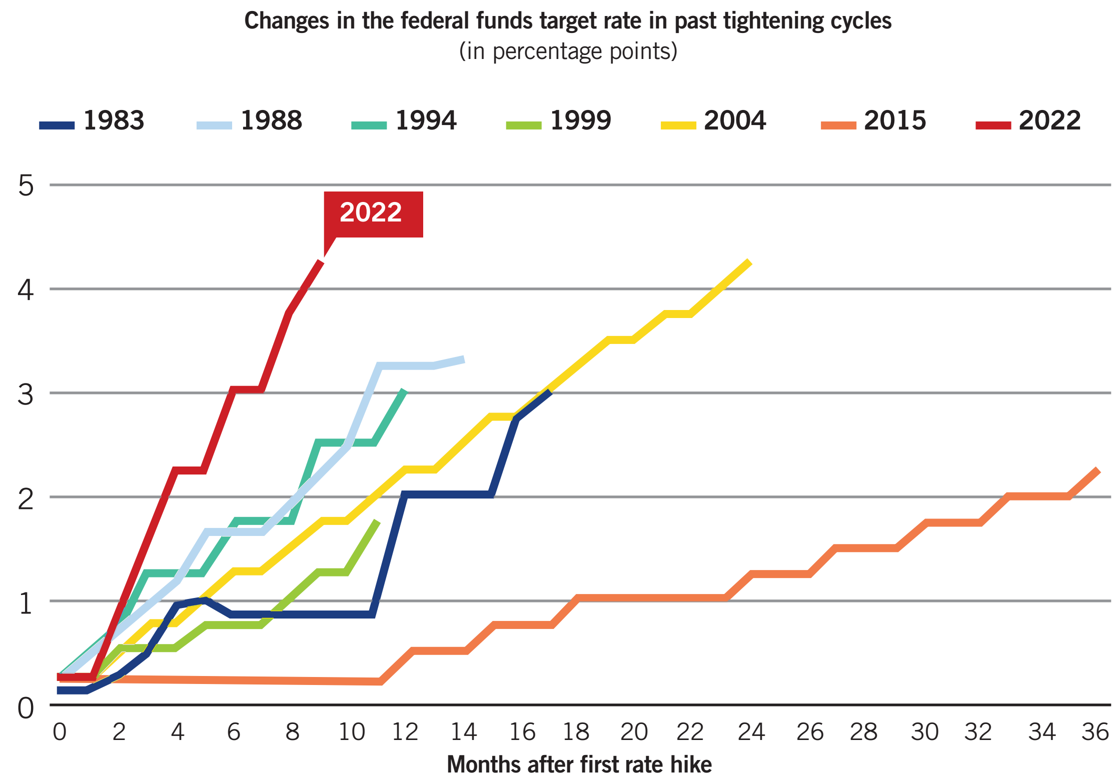
- Unprecedented interest rate hikes by the Federal Reserve and declining CRE values are major obstacles.
- Regardless of property type, borrower credit or metropolitan statistical area, banks are contracting debt capital.
- The Midwest and South are well-performing regions because they offer affordable lifestyles.

By K.C. Conway, MAI, CCIM, CRE

A plethora of media coverage regarding "what's not working" in commercial real estate has taken place since the beginning of 2023, but most of that coverage has been targeted at the outer layers of a deeper and more systemic set of challenges confronting the industry. To better understand what's not working, the use of a visual image is helpful. In this case, imagine peeling back the layers of an onion to see what lies beneath (and what could potentially make CRE investors and lenders cry in 2024).

The obvious problematic outer layers are the Federal Reserve, interest rates and declining CRE values at a time when approximately $1.5 trillion of CRE faces refinancing by early 2025. The Federal Reserve embarked on a historically fast and steep rate-hiking cycle beginning in March 2022 after stating

Figure 1 The Fed Is Moving Historically Fast to Tame Inflation



Source: Federal Reserve; infographic by Statista

that COVID-induced inflation was transitory (followed by an eventual admission that it was not transitory). Interest rate hikes commenced modestly with 25 basis points (bps) in March 2022, followed by 50 bps in May, and then four successive 75-bp hikes. There was no pause until September 2023, following 11 consecutive hikes. Figure 1 illustrates the rate-hiking cycle within a historical context. The red line shows the current 2022-2023 rate-hiking cycle (as of mid-2023). The Federal Open Market Committee (FOMC), led by **Jerome Powell**, has done what has never been done before (not even by former Federal Reserve Chair **Paul Volcker** in the late 1970s and early 1980s), increasing interest rates 11 times within 18 months with no pause for assessment.

Then came the failure of Silicon Valley Bank (SVB) in March 2023. It became apparent that the aggressive rate hikes had created an imbalance between bank assets (loans and fixed-rate instruments like Treasury bonds and real estate loans) and liabilities (deposits) that would ripple through the debt-dependent CRE industry.

Exacerbating the financing problem is that the Federal Reserve has broken the decades-old net–interest margin (NIM) model that sustained banks through every crisis going back to the 1970s. As part of the NIM model, banks have traditionally paid depositors a nominal amount of 1% to 3% for deposits and then lent those funds (liabilities) out at a positive spread of 300 bps to 400 bps, fueling lending growth in areas such as construction loans. Currently, banks have to pay more for deposits (5% to 7%) than their existing loans pay (less than 5%). As a result, many banks (especially CRE-concentrated banks) have a negative NIM that is inhibiting all aspects of CRE lending, from construction loans to permanent commercial mortgage-backed securities (CMBS) and GSE (Fannie Mae and Freddie Mac) multifamily loan originations. Essentially, banks are now facing CRE lending headwinds

It is an extremely strong headwind for CRE because **banks lack the profitability and margin to lend into a nearly $21 trillion CRE market.**

Table 1 Estimates of Commercial Property Value: 2021 Q2

Sector	Base Estimates: Square Footage (Millions)	Price per Square Foot ($)	Value ($ Trillions)
Multifamily	16,383	$235	$3.8
Office	11,780	$270	$3.2
Retail	14,040	$207	$2.9
Health Care	2,705	$864	$2.3
Specialty, Sports and Other	-	-	$3.4
Hospitality	2,625	$617	$1.6
Industrial	21,698	$106	$2.4
Data Centers	-	-	$0.2
Self-Storage	-	-	$0.4
Towers	-	-	$0.4
Total	69,231		20.7

Source: Nareit; CoStar

that go well beyond CRE concentration (100% and 300% of capital limits). It is an extremely strong headwind for CRE because banks lack the profitability and margin to lend into a nearly $21 trillion CRE market (see Table 1).

This "no capital for nobody" layer of the onion has been peeled back by three events. The first was the April 2023 assessment of the SVB bank failure by the Federal Reserve in which it concluded, in part, that it "did not fully appreciate the extent of the vulnerabilities as Silicon Valley Bank grew in size and complexity." In other words, bank supervision had once again failed. Despite this forensic report and supervisory failings, the Federal Reserve went ahead with the second event: its annual stress test of the 23 largest U.S. banks. The Fed concluded on June 28 that all banks had passed, were healthy and were well-capitalized. The ratings agencies, however, were skeptical of this claim and subsequently embarked on the third event: downgrading the same banks and banking system the Federal Reserve has been selling as healthy.

These three events have resulted in the most significant "what's not working" layer for CRE — capital lockup. Regardless of the property type, borrower credit or metropolitan statistical area (MSA), banks are contracting debt capital, and the permanent CMBS loan market has contracted by 80% year over year and is heading toward the same legacy fate it incurred in 2009. CRE requires both "water spigots" (construction lending by banks and a permanent CMBS market for banks to offload stabilized construction loans to replenish capital for new lending activity) to be open and flowing debt capital for the industry to be "working."

Another layer to address is household debt (see Figure 2, p. 65), which is affecting real estate sectors from housing to retail. According to the New York Federal Reserve Bank's Quarterly Report on Household Debt and Credit, household

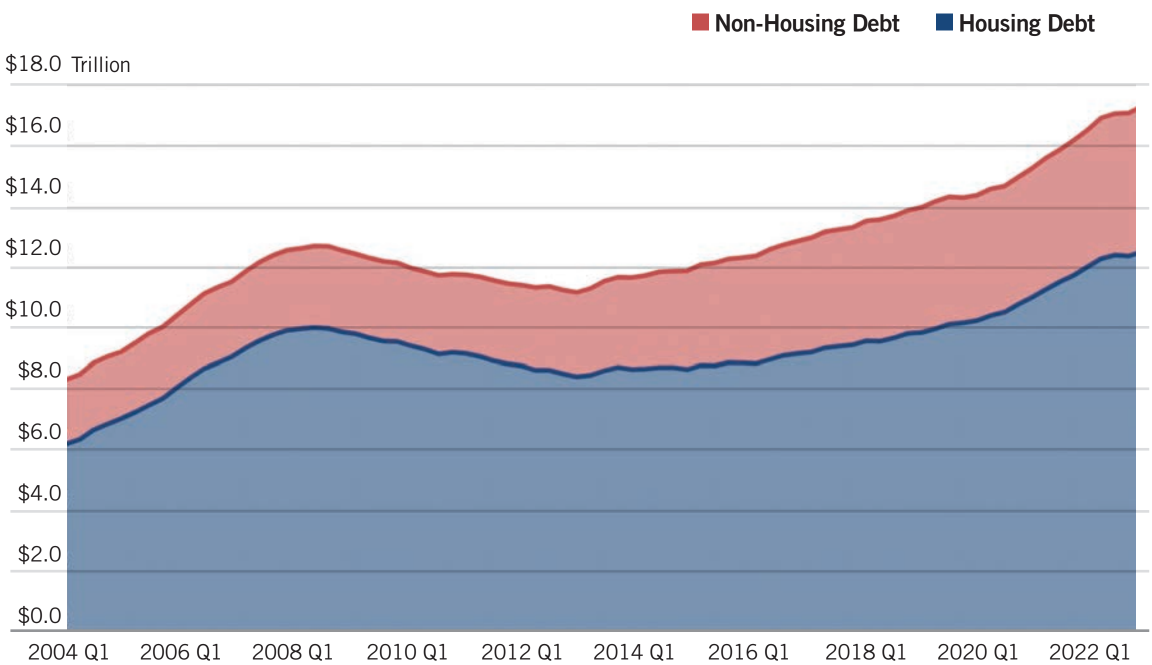
In the third quarter of 2023, total household debt rose to $17.29 trillion (a record), while credit card balances grew to $1.08 trillion. **Households are being challenged by inflation, but more so by the higher interest rates on that increasing debt, which will affect consumer spending (retail and industrial sectors) and the amount available for housing costs (multifamily sector).**

Art Wager via iStock/Getty Images Plus

Connectivity to Gulf ports such as Mobile, Alabama, is a selling point for many tenants of industrial real estate.

Figure 2

Household Debt/Total Debt Balance



Source: FRBNY Consumer Credit Panel/Equifax

debt continues to climb and reach new levels. In the third quarter of 2023, total household debt rose to $17.29 trillion (a record), while credit card balances grew to $1.08 trillion. Households are being challenged by inflation, but more so by the higher interest rates on that increasing debt, which will affect consumer spending (retail and industrial sectors) and the amount available for housing costs (multifamily sector).

What's Working in CRE

So, if a capital lockup is at the core of what's not working, what is working in our CRE industry? First, it is important to recognize that the economic and CRE down cycles were not caused by commercial real estate developers, lenders or investors. After the Great Financial Crisis of 2008-2011, the CRE industry has been quite disciplined. It did not overbuild. It did not overleverage. And it did not engage in exotic finance schemes like subprime mortgages. This point is fundamental to realizing that if capital can get flowing again at reasonable interest rates (the Fed's overnight bank lending rate would need to go below the current 5.3% to a level in the range of 4%), a lot will get working again in the CRE industry.

CRE professionals are advised to anticipate the following moving forward:

- More CRE value contraction as maturing CRE debt gets repriced with interest rates in the 7% to 8% range and cap rates 200 bps to 400 bps higher than when those loans were originated.
- More equity in transactions to offset the debt contraction.
- Development of new capital relationships such as credit unions (yes, they are CRE lenders and can syndicate larger loans among themselves), family and friends funds, private equity not focused on the vulture feeding frenzy for distressed office buildings, and even sale-leaseback structures to retire debt and salvage the operations of assets (resort and luxury hotels executed on this strategy during the early days of COVID when banks panicked).
- Less new supply as construction lending in banks grinds to a standstill.

Recognizing all of the aforementioned, which sectors and locations are examples of "what is working"?

Industrial

Industrial real estate is top of the list, but even this property type is undergoing change. Tenants are conveying to developers that they want to pause on "biggie-size-it" development and instead are opting for 100,000- to 300,000-square-foot warehouses to hedge their long-term risks. However, the tenants/occupiers want this new "small-size-it" warehousing to be: flexible, located in industrial parks that have

Industrial real estate is top of the list, but even this property type is undergoing change. **Tenants are conveying to developers that they want to pause on "biggie-size-it" development and instead are opting for 100,000- to 300,000-square-foot warehouses to hedge their long-term risks.**

Sean Pavone via iStock/Getty Images Plus

Affordability and skilled workforces have raised the appeal of Midwestern locales such as Wichita, Kansas, in the multifamily sector.

New cold-storage development represents less than 2% percent of all new industrial development, so there is little risk of overbuilding. However, it is not for the "faint of capital" because the costs are high and tenant requirements vary substantially.

additional land for expansion and located in proximity to ports and key logistics infrastructure (especially along rail) near emerging inland ports (the newest being in Montgomery, Alabama, and the most overlooked being in Little Rock, Arkansas), and with connectivity to the Gulf and Southeast ports in Georgia (Savannah), South Carolina (Charleston), Florida (Port Everglades), Alabama (Mobile), Louisiana and Texas (Port Freeport). The ports of Mobile and Port Freeport (south of Houston) are two of the most notable ports to watch.

Another area that's working in industrial space is cold storage. The average age of a cold storage warehouse is 37 years, and most of these assets are functionally obsolete. New cold storage development represents less than 2% percent of all new industrial development, so there is little risk of overbuilding. However, it is not for the "faint of capital" because the costs are high and tenant requirements vary substantially.

Multifamily

In the multifamily sector, all but three of the top 15 MSAs in year-over-year rent growth are in the Midwest, according to RealPage's first-half 2023 data. The fuel in this engine is migration toward affordability and MSAs with skilled workforces, from Wichita, Kansas, to Columbus, Ohio.

The PODS Moving Trends report is a relatively new source of data to track current workforce and population migrations. According to the August 2023 report, the Myrtle Beach, South Carolina/Wilmington, North Carolina, area was the No. 1 place people moved to in 2022. Sarasota, Florida; Orlando, Florida; Ocala, Florida; and Houston rounded out the top-five destinations for PODS containers in 2022. The report also noted that 2022 was "the second year in a row that southern states have seen a larger influx of residents compared to any other region, with more than 80% of the destinations on the list being in the south."

Conclusion

Many other areas are still working in the CRE industry, but there is limited space here to highlight them all. New homebuilders are working and able to sell new homes with interest rate buy-down programs that existing homeowners don't have access to. Manufactured housing is working but faces NIMBY headwinds in every state. Amenitized, well-located suburban office buildings are far outperforming urban and central business district buildings in large MSAs because they are close to where the workforce lives and wants to work. The Midwest and South are the two regions performing best from a geographical perspective because they offer affordable lifestyles, educated workforces from nearby universities, and CRE inventory at affordable prices.

Christopher Robb, a stock analyst at Seeking Alpha, recently captured the essence of forecasting this economy and distinguishing what's working from what's not working: "Accepting that many correlations that have traditionally provided insight may no longer be functional is essential to navigating today's markets."

In other words, the data and metrics we have relied on in prior down cycles and CRE recessions (such as unemployment and vacancies) may no longer be insightful and valid. Look to household debt and fresh industry data from the likes of PODS and the National Center for the Middle Market, entities such as Visual Capitalist and Statista, and industry organizations like NAIOP for the windshield view. ■

K.C. Conway, MAI, CCIM, CRE, is a commercial real estate economist and futurist based in Atlanta.

Navigating the **AI** Revolution: A Blueprint for Real Estate Executives

The infrastructures, designs and purposes of buildings and spaces will evolve in response to the rise of AI.

While artificial intelligence reshapes industries globally, commercial real estate is at a crossroads of adapting swiftly or being left behind.

By Graham Wahlberg, Goodman

At a Glance

- AI promises to reshape CRE careers.
- Those who learn about AI now stand to benefit in the long run.
- AI-backed business decisions will become routine if not expected.

Gremlin/E+ via Getty Images

As sectors from health care to finance experience the transformative power of artificial intelligence, commercial real estate treads with caution. Conversations within the industry reflect an understanding of AI's theoretical benefits, but there's a hesitancy toward implementation. Commercial real estate, anchored in tangible assets and direct interactions, now faces the challenge of a digital revolution.

Traditional methods of running a real estate company and the aspects of underwriting, conducting due diligence, running property management and sourcing deals have all been manual and people-focused processes. More volume usually meant more employees. When growing a real estate business, executives chose to hire more analysts, junior property managers, and back-office accounting and finance. CRE's aversion to the adoption of technology and automation has not necessarily been due to distrust but rather to real estate's strong history of being a people-first industry.

However, thanks to the widespread adoption of computers, increased internet connectivity and changes brought on by COVID, the embrace of technology among all companies, including those in real estate, has taken a quantum leap forward. Whereas companies previously required employees to be physically at the office, remote work policies have paved the way for the widespread implementation of new technology. BIM systems have replaced the architectural plan room.

Deal management software such as Dealpath and VTS has helped organize the deal pipeline and the leasing cycle. Customer relationship management systems have replaced the Rolodex. The acceptance of modern computer applications now smooths the path for the next step: AI.

AI History and Terminology

AI started primarily as an academic field focused within the disciplines of computer science. In the 1950s, pioneers including **John McCarthy**, **Marvin Minsky**, **Nathaniel Rochester**, **Claude Shannon** and **Alan Turing** deduced that human intelligence could be simulated, giving rise to the study and development of AI. Over the following decades, research developed many fields within AI, leading to significant breakthroughs in modeling and mimicking human intelligence and thought.

Recent advances in large language models (LLMs), processing power and consumer-facing software have enabled widespread adoption of AI for public use. In November 2022, OpenAI released its chatbot to the public, and it took the world by storm. Suddenly, the public was able to ask its chatbot, ChatGPT, any question, and it would deliver a coherent, helpful response, allowing the world to experience firsthand the power of AI. Other chatbots, including Microsoft's Bing Chat, Google's Bard and Anthropic's Claude, soon entered the field.

Key AI Terms

Algorithm: At its core, an algorithm is a set of instructions that a computer follows to achieve a particular outcome.

Artificial intelligence (AI): A branch of computer science focused on creating machines that can perform tasks requiring humanlike intelligence. These tasks can range from visual perception and speech recognition to decision-making.

Machine learning (ML): A subset of artificial intelligence that allows computers to learn from data without being explicitly programmed for specific tasks.

Neural network: Neural networks are computing systems vaguely inspired by the structure of the human brain. They are made up of interconnected nodes (or "neurons") and are used for pattern recognition.

Deep learning: Deep learning is a subset of machine learning that uses multilayered neural networks to analyze various forms of data. The "deep" refers to the number of layers in the network.

Reinforcement learning: A type of machine learning where an agent learns to behave in an environment by performing certain actions and receiving rewards or penalties in return.

Generative adversarial networks (GANs): GANs consist of two neural networks, the generator and the discriminator, working against each other. The generator creates images, and the discriminator evaluates them.

Natural language processing (NLP): NLP refers to the technology behind enabling computers to understand, interpret and respond to human language in a meaningful manner.

Large language model (LLM): A type of AI model that is trained on vast amounts of text data. LLMs, like OpenAI's GPT series, can understand and generate humanlike text.

Computer vision: Computer vision is a field of AI that teaches machines to interpret and act upon visual information from the world, akin to human vision capabilities.

Chatbot: AI-driven software that can converse with users, answer questions and aid with various tasks. ■

Amplifying Employee Productivity

The primary and most immediate introduction of AI into the commercial real estate industry will involve individuals. The early stages of consumer-facing AI applications have already shown extraordinary opportunities for executives and employees to work more efficiently.

The growth and advancement of LLMs through consumer- and business-facing software have rapidly allowed individuals to scale their personal productivity. The work that previously would have tak-

"Artificial intelligence has unveiled approaches that increased our knowledge of an asset class that was previously uncharted. The newfound insights fuel our pursuit of prospective acquisitions and prepare us to make smarter investment choices."

— Ryan Elazari, senior director, Empire Management

en an employee hours to complete now takes minutes. Similar to how Lotus 1-2-3 and Microsoft Excel revolutionized the private equity and CRE industries, chatbots possess the ability to greatly increase the productivity of employees. A September 2023 Harvard Business School study found that consultants using AI completed 12.2% more tasks on average and produced 40% higher quality work compared with a control group.

Computer programmers, typically with specialized knowledge and years of training, now can use automated tools to write code instead of writing it themselves. Hiring professional photographers is no longer always needed because AI tools can generate realistic photoshoots instantaneously. Marketing materials can be enhanced by well-trained users of chatbots.

Some Current Chatbot and Image Creation Tools

OpenAI ChatGPT

Anthropic Claude

Google Bard

Microsoft Bing

Microsoft Copilot

Midjourney

Adobe Firefly

Stability AI Stable Diffusion

Khanchit Khirisutchalual via iStock/Getty Images Plus

Harnessing Data: AI-Driven Knowledge Management in CRE

CRE companies can use AI to better automate, illuminate and analyze proprietary data that was once embedded in individual workflows. Typically, CRE firms amass vast amounts of data about their properties, tenants and operations, typically in legacy systems or unorganized document storage. By using the power of LLMs, CRE companies will be able to find, organize and analyze vastly more data than previously was possible. For example, new applications using LLMs can scan, read and analyze 1,000-page PDFs such as limited partnership (LP) agreements or commercial leases and then draw conclusions about the relevant data.

Curious about the option language in a lease or need a summary of the fees in your LP agreement? Ask your chatbot.

In addition, vast data sets inside enterprise resource planning systems, comparables databases and leasing software provide unique opportunities for LLMs to query, evaluate and draw conclusions on existing proprietary data. Microsoft's new AI suite, Copilot, can analyze an entire company's data and files to generate relevant knowledge for executives seeking information from disparate sources across the business.

Forward-thinking real estate companies have already included AI in their businesses. "Artificial intelligence has unveiled approaches that increased our knowledge of an asset class that was previously uncharted," said **Ryan Elazari**, senior director with Empire Management. "The newfound insights fuel our pursuit of prospective acquisitions and prepare us to make smarter investment choices."

Beyond Today: Speculating on AI's Future Role in Real Estate

Beyond existing personal and company-wide implementations of LLMs, the modern real estate business will continue to advance past current chatbot implementations. Technological advances and startups will soon harness and effectively deploy AI for uses specific to real estate. AI will be involved in various stages of the investment process such as deal sourcing, asset management, leasing, site design, relationship management, sales and investment decisions. **Guy Zipori**, co-founder of Skyline AI (acquired by JLL), said in a 2019 Forbes article, "As AI infiltrates more aspects of business, commercial real estate investors will come to expect that AI solutions are implemented to yield more precise decision-making. Each deal will still involve its own element of art — but investors stand to win from bringing some data science to the process."

A real estate company is in the business of acquiring, entitling, developing, leasing and managing real estate investments. How will AI

The Modern Real Estate Business Will Soon Use New AI Applications in Several Ways Across the Real Estate Life Cycle

Acquisitions
- Predicting land value based on multiple land uses
- Sourcing sites using geographic information systems
- Automated underwriting, LOI generation, lead generation

Site Selection
- Analyzing supply chain, population, traffic and other data for optimal placement based on forward predictive analytics

Market Research
- Using big data analytics for comprehensive market understanding across various disparate data sources

Design
- Iterative site design using multiple constraints (area, FAR, building depths, property type)

Construction
- Optimizing construction sequencing
- Predicting material usage

Entitlements
- Automating entitlement documentation (EIR, studies, planning)
- Cities processing entitlements using automated systems for real-time feedback

Financial Analysis
- Advanced models for return predictions and risk assessment
- Automated creation of reporting and investment memorandums

Compliance
- Automated checks and analysis against regulatory requirements

Leasing
- Predicting tenant needs
- Automating lease management

Appraisal
- Using data-driven models for automated real-time property valuation

Property Management
- Predictive maintenance using deep learning models
- Energy consumption optimization for sustainability
- Expense analysis using various datasets and financials

Brokerage
- Automated customer relationship management
- Predictive cold calling
- Anticipating tenant space demand needs; predictive analytics

"Think of the amount of time an analyst spends underwriting a deal: the financial model, the comp/data set, comparing debt structures, and so forth. AI will analyze [that] in seconds. **The appraisal business, lease administration, property management … all will be completely changed by AI."**

— Sean Ward, executive vice president, CBRE

affect these individual steps? **Sean Ward,** executive vice president at CBRE, believes the impact cannot be underestimated, especially in brokerage. "Think of the amount of time an analyst spends underwriting a deal: the financial model, the comp/data set, comparing debt structures, and so forth. AI will analyze [that] in seconds. The appraisal business, lease administration, property management … all will be completely changed by AI." Ward doesn't believe this spells doom for employees, but he cautions that as in every other industry, the companies that figure it out first will put themselves far ahead of the pack. "The companies that avoid or lag will be forced to play catch-up or will cease to be relevant," Ward said.

iStock/Getty Images Plus

Navigating the AI Era: Opportunities for CRE Professionals

As students and employees consider their own career growth, many are questioning what skills and values they should focus on to both harness AI's power and protect themselves from becoming redundant. According to **Scott Dunphy**, portfolio manager at MetLife, investing personally in AI leverages success in his career and ensures that he isn't left behind. "I want to be at the forefront of AI change," he said. "Instead of being replaced by AI because I ignored it, I want to be the most involved and driving its adoption." Dunphy, an ex-Silicon Valley engineer turned real estate professional, now actively takes part in senior management's decision-making on AI adoption.

Similarly, **Lindsey Burke**, investor at Greenpoint Ventures, saw the mass adoption of technology in CRE, including AI, as a way to advance her career at Blackstone. Now as a venture capital investor focusing on real estate technology companies, she sees opportunities for eager employees to combine their real estate and technology acumen. "The real estate industry is positioning itself to absorb AI talent that Big Tech is shedding amidst marketwide layoffs," said Burke. Operating companies will be able to improve productivity by implementing basic and free automation modules that were previously available only to trained engineers. Burke expects to see "a significant spike in innovation across real estate, including in infrastructure that supports in-field AI needs specific to real assets."

AI will be a critical skillset for all employees eventually, and those first movers will likely have a significant advantage as AI becomes more widely adopted. "Every real estate professional will need to know, understand and invest in AI in a significant way," Elazari emphasized. "There is an opportunity to reimagine different functions in the real estate business, such as customer service in sales and property management, and gathering market insights and trends data to achieve operational efficiency."

> **"I want to be at the forefront of AI change.** Instead of being replaced by AI because I ignored it, I want to be the most involved and driving its adoption."
>
> *— Scott Dunphy, portfolio manager, MetLife*

Reimagining Real Estate: AI's Impact on the Built Environment

As AI finds its way into various industries and consumer habits, it's not just affecting the internal dynamics of real estate operations but also altering the physical landscapes of our cities and communities. The infrastructures, designs and purposes of buildings and spaces will evolve in response to the rise of AI technologies. In the same way that the adoption of many innovative technologies of the past (cars, e-commerce, skyscraper design, modern manufacturing) brought about new types and designs of real estate, AI stands to make a significant impact on the broader economy and the built environment.

Widespread AI adoption is likely to influence changes in global infrastructure, including power, fiber access and building IT integration, and to fuel real estate impacts such as a further rise in distributed workforces, data centers and alternative retail experiences. Goodman, a global industrial and data center developer, sees the rise of AI kindling substantial data center demand. In a recent financial results call, Group CEO **Greg Goodman** said, "Significant growth in data storage, and AI in particular, is driving data center demand, which is now approximately 30% of our $13 billion development workbook."

Making Use of Chatbots in Real Estate

Real estate professionals should use AI technology to better their careers and increase their productivity. Examples of chatbot use cases ("prompts") one can try today related to real estate:

- Summarize the following email from [X].
- Help me fill out this table with the latest information on our industrial properties (ZIP code, county and headquarters). Output the results in a table format and add any interesting information as new columns.
- How can I create a formula that calculates the net present value of a property?
- Show me how to write a formula that calculates the internal rate of return of a project.
- Create a customizable template for a letter of intent for each property acquisition.
- Generate a list of research topics focused on innovative trends in commercial real estate, especially relevant in the current economic environment (e.g., recession, challenged product types).
- Create a background report/dossier on [X].
- Provide questions to ask [X] during an upcoming interview.
- Conduct research on [company name and scope].
- Analyze the following tenant financials. Find weak and strong points and make a recommendation about the quality of their credit.

AI is likely to affect even more than just data center demand. In an August 2023 blog post, **Jim Costello**, executive director of MSCI Research, argued that while AI may hinder office demand, on balance it will likely spur strong and widespread economic growth, resulting in more high-value real estate.

As AI integrates more deeply into our lives and industries, its imprint on the built environment will be undeniable. While the specifics of its impact remain uncertain, the transformative power of AI on the physical landscapes of our cities and communities is inevitable, and it is bound to reshape real estate in unprecedented ways.

"The real estate industry is positioning itself to absorb AI talent that Big Tech is shedding amidst marketwide layoffs."

— Lindsey Burke, investor, Greenpoint Ventures

2d illustrations and photos via iStock/Getty Images Plus

Closing Guidance

AI's transformative role in the commercial real estate sector underscores its potential to change the real estate business, associated careers and the built environment. Executives should take steps now to learn about AI and how to integrate it into their businesses.

Engage consumer chatbots such as ChatGPT and Microsoft Chat to personally understand and experience what they can do. Although AI comes with tremendous benefits, it also comes with risks. It should be seen as a tool rather than a complete source of information.

Implement AI at an enterprise scale. Businesses should look to utilize their own data, implement systems at scale and proactively put policies in place that future-proof their organizations for AI change.

Focus on what AI is unlikely to duplicate — namely relationships, reputation and execution. While AI can conceivably simulate human interaction, the real estate industry will likely always be a relationship business. Deals, even if aided by AI, will presumably still be struck by individuals, in person. Reputation will continue to be paramount.

Those who act decisively while educating themselves about the AI revolution will lead the future landscape of commercial real estate. Now is the time to invest in understanding and integrating AI solutions, thus ensuring a competitive edge in an ever-evolving market. ■

Graham Wahlberg is vice president of investment management at Goodman and a NAIOP Research Foundation Visionary.

NAIOP Research Directors Discuss an Industry in Transition

At their annual meeting, research directors shared their outlooks for capital markets, office, retail and industrial real estate.

By Shawn Moura, Ph.D.

At a Glance

- Conservative underwriting is affecting loans for many property types.
- Occupiers are leasing less space per worker as they migrate to smaller but higher-quality office space.
- Supply of new industrial space will likely outpace demand until the first quarter of 2025.

The NAIOP Research Foundation held its National Research Directors Meeting in September in Washington, D.C. The conversation was facilitated by **Jennifer LeFurgy**, Ph.D., the Research Foundation's executive director, and **Shawn Moura**, Ph.D., NAIOP's director of research, and brought together research directors from national real estate brokerage, data and investment firms. **Mark Stapp**, executive director of the Master of Real Estate Development program at Arizona State University and a NAIOP Research Foundation Distinguished Fellow, also joined the discussion, which explored how recent capital market and demand trends are shaping the outlook for commercial real estate.

Insight Into the Debt Market

Jamie Woodwell, vice president and head of commercial real estate research at the Mortgage Bankers Association (MBA), gave a presentation on the outlook for CRE finance, which touched on interest rates, debt availability, and delinquency rates for commercial and multifamily mortgages. As interest rates have risen, demand for new commercial mortgages has declined. It appears that data series tracking cap rates

Participants

NAIOP Research Foundation National Research Directors and Distinguished Fellows

Lisa DeNight,
Newmark

Joshua Harris,
Lakemont Group

Scott Homa,
JLL

Phil Mobley,
CoStar

Stacey Mosley,
Brandywine
Realty Trust

Steig Seaward,
Colliers

Mark Stapp,
Arizona State
University

Brandon Svec,
CoStar

Dean Violagis,
CoStar

Susie Wang,
Oxford Properties
Group

Raymond Wong,
Altus Analytics

Jamie Woodwell,
Mortgage Bankers
Association

“Real estate is nothing more than a service to society. When society changes, the service we provide has to change.”

— Mark Stapp, NAIOP Research Foundation Distinguished Fellow

have not yet fully adjusted to the new interest rate environment, with the spread between average cap rates and U.S. 10-year treasury bonds reportedly as narrow as it was in 2006. Relatively low reported cap rates are likely a product of limited transaction volume, which has made it difficult for both buyers and lenders to value buildings in the absence of recent comparable sales.

Lenders have been generally avoiding new office loans but remain open to mortgages for other property types. Woodwell explained, “From an equity investor’s perspective, you’re willing to take a risk if you think that there is a potential big payout. If you’re a lender, there is no upside besides getting paid back. And so, lenders are looking at office and the uncertainty there and saying, ‘Why do I want to make this loan as opposed to something else?’” Woodwell noted that the next step is likely for investors and lenders to begin differentiating between office properties that they feel more — and less — comfortable with and for activity to begin to pick up among the former. More conservative underwriting is also affecting loans for other property types. By the end of 2023, Woodwell expects commercial loan origination volume to be down about 40% year over year.

Higher interest rates also present a challenge to refinancing existing loans and for floating-rate loans that are resetting at higher rates. Buildings with longer-term loans are more likely to be able to refinance at current rates than those with shorter-term loans. The difference in interest rates for a mortgage originated 10 years ago and today’s rates are smaller than for a mortgage originated two years ago, and a building approaching the end of a 10-year mortgage has had more time to appreciate than one with a two-year mortgage.

Overall delinquency rates have yet to significantly increase, but that could change with the large volume of loans maturing in 2023 and 2024. Woodwell observed that lenders have generally been willing to work with borrowers, asking them to post additional equity, but extending loans so long as cash flows are sufficient to cover debt service and maintenance. However, the expectation until recently had been that interest rates would soon decline, leading to a rebound in property values, which now seems less likely. With a growing consensus that interest rates will stay higher for longer, lenders may increasingly prefer to get delinquent loans off their books.

Demographics and Migration

Meeting participants exchanged views on the demographic trends that are affecting demand for commercial real estate. Woodwell observed that millennial household formation has in recent years resulted in migration from urban areas to the suburbs and in interstate migration toward the Sun Belt as young families seek more affordable and spacious housing.

Raymond Wong, vice president of data solutions delivery at Altus Analytics, observed that “with work from home, you see maybe a little bit more opportunity in the secondary and tertiary markets than in the larger markets. In Canada, we look at interprovincial migrations, and they are moving to where it is a little bit more affordable.” Those markets will benefit from the new talent that has moved there, making them more attractive to employers and providing growth opportunities for investors.

However, migration to smaller markets may be ending as more companies adopt hybrid or in-person work requirements for their employees. **Scott Homa**, JLL’s senior director of property sectors research for the Americas, noted that migration to Sun Belt markets has recently slowed as they have grown more crowded. “The cost-of-living advantage has diminished, infrastructure constraints are an issue, and corporate migration has slowed,” Homa said.

Brandon Svec, national director of retail analytics at CoStar, added that millennial migration to the suburbs was not solely a pandemic phenomenon and could be expected to continue. “They’re not going to be the first generation since World War II to raise their children in urban apartments,” Svec said. He conceded that millennials have been marrying and having children later in life than past generations, but “they’re still getting married, they’re still having children, and when they do, that’s going to be in the suburbs. It’s not going to be in the primary gateway markets.”

Future of Office Remains Uncertain

Although the COVID-19 public health emergency officially ended earlier this year, office utilization is not yet high enough to support growth in leasing activity, and nationwide vacancy rates continue to climb. Meeting participants expressed a variety of opinions about the trends affecting the office sector and how quickly it will recover.

Homa voiced optimism for the office sector, with occupancy having recovered recently. "It seems like the tension has shifted very dramatically from 'work from anywhere' to 'let's get back to the office,'" he said. Nonetheless, he acknowledged that buildings with loans that are maturing soon face a challenge given the significant tightening of debt and credit markets.

Phil Mobley, national director of office analytics at CoStar, suggested office fundamentals are likely to deteriorate further. He noted that a long-term shift to hybrid work schedules would not translate to a 40% reduction in demand for office space from pre-pandemic levels, but that some companies may be able to cut 10% fairly comfortably. Occupiers are also continuing a longer trend of leasing less space per worker as they migrate to smaller but higher-quality office space. "Even if we return to pre-pandemic attendance levels, which seems unlikely, we are going to have structurally lower office demand, because we have been shrinking the ratio of occupancy per worker for a decade," Mobley explained.

Wong observed that in the near term, a large volume of sublease space is creating headwinds for building owners. "The good thing about the sublets is that they are starting to burn off," Wong said, "but some of these sublet opportunities are fully furnished office space that landlords can't really compete with."

Homa added that the technology sector was responsible for much of the subleasing activity across the U.S. "It's everywhere, and it's really high-quality space in some cases."

Joshua Harris, managing partner at the Lakemont Group, added that because most office-using businesses still face significant uncertainty around long-term staffing decisions, they are reticent to sign 10- or 15-year lease agreements. Instead, he suggested more landlords might consider following the hospitality industry's example by providing turnkey spaces under a shorter-term lease: "If you want a two-year lease, this is what your space looks like." Avoiding repeated capital expenditures for tenant improvements would help to compensate building owners for the uncertainty associated with shorter leases.

It was generally agreed that occupiers are looking for office buildings in vibrant locations that can attract employees and that the least desirable locations are those with few other uses in the surrounding area. "Regardless of whether you are in a CBD or suburban area, if you are

> "Regardless of whether you are in a CBD or suburban area, **if you are in a commercially diverse neighborhood, then the office component will perform better** than if you are in an office-dominant neighborhood."
>
> — *Phil Mobley, National Director of Office Analytics, CoStar*

The outlook for retail has improved, with strong demand for retail space in suburban areas.

in a commercially diverse neighborhood, then the office component will perform better than if you are in an office-dominant neighborhood," said Mobley. "Workers prefer having nearby retail options if they are going to commute to work."

Stapp shared that the challenges now facing the office sector reminded him of retail real estate after the Great Recession, when it had to adapt to new technologies and changes in consumer preferences. Similarly, the office sector is still in the early stages of figuring out how to adapt to workers' new preferences and behaviors.

Weighing the Prospects for Office Conversions

Office-to-multifamily conversions have been a topic of discussion over the past year, particularly in municipalities facing high vacancy rates and a shortage of affordable housing. Meeting participants generally agreed that more conversions are likely in the years ahead, but that a variety of factors currently limit their feasibility to a small share of existing office buildings.

Steig Seaward, senior director of national research at Colliers, summarized how attractive conversions seem in theory: "Conversions are a wonderful story, a fantastic story, and would check so many boxes, but they are very dependent on feasibility." Office-to-residential conversions, especially for market rate or affordable housing, will need supply-side incentives for the projects to be financially successful.

Stapp observed that crime and homelessness have become a street-level problem for office-centric CBDs in cities where housing affordability is a challenge and office attendance has been low. Cities will need to weigh the social costs of vacant office buildings against the costs of subsidies to convert them. **Stacey Mosley**, director of research at Brandywine Realty Trust, added that "more research needs to be done to determine the long-term impact on the real estate tax income for cities to determine the need for those subsidies sooner than later."

Multifamily may not always be the best use for an old office building. Wong noted that municipalities will often prefer to preserve employment opportunities in their downtowns, and local residents may oppose new multifamily construction. In some cases, life science or even data center conversions may be a more feasible option. Harris added that in the suburbs, low-rise office parks can be more easily redeveloped to a new use than converted.

Whether through conversion or redevelopment, Stapp emphasized that functionally obsolete office buildings will eventually need to make way for new uses. "Real estate is nothing more than a service to society," he said. "When society changes, the service we provide has to change."

Retail Continues to Evolve

The outlook for retail has improved, with strong demand for retail space in suburban areas. Svec observed that recent migration and a lack of new supply are largely responsible for improved market conditions. "In the suburbs, you can't find an available box under 10,000 feet. There just isn't any space available. It's similar to what happened with the single-family housing market. If you structurally underbuild something for a decade, eventually, you will no longer be oversupplied." With little space currently under construction, he expects the market for suburban retail to remain tight for the next two to four years.

The exception to this trend is the Class B and C malls, which continue to struggle. "They're on a doom loop," Svec observed. "First, they lose anchors, then foot traffic declines, and then the in-line stores leave. If one of your largest tenants is a comic book store, you're probably not going to be around in five years." However, these malls' locations may make them attractive targets for conversion to new uses.

In contrast with the generally strong demand for retail space in the suburbs, Svec remarked that the outlook for retail in central business districts varies. Traditional office-centric downtowns are experiencing high retail vacancy rates, but there are lower vacancies in CBDs that have a more balanced mix of uses, including multifamily.

Retailers have also continued to embrace omnichannel distribution strategies that see more stores being used for e-commerce fulfillment. According to Svec, stores

that are used this way typically see around 15% of the store's footprint allocated to back-of-store fulfillment, compared with 5% of space located behind the back wall in a traditional layout.

Manufacturing a Bright Spot in Cooling Industrial Market

Although industrial real estate continues to enjoy rent growth and low vacancy rates in most major markets, demand for distribution space remains cool. **Lisa DeNight**, managing director of national industrial research at Newmark, expects that the supply of new industrial space will likely outpace demand until the first quarter of 2025. A large volume of projects begun in late 2022 have yet to be delivered, and there is now about 545 million square feet of industrial space currently under construction. In earlier years, many of those projects would have already been delivered, but industrial construction timelines continue to be longer than before the pandemic, with ongoing supply chain delays, particularly for components like electrical equipment.

DeNight expects the market for larger distribution buildings will be most affected by the expected increase in supply. "In square footage, the pipeline is concentrated in megabuildings, which have seen the most decline in demand," she said. In some geographic markets, there are signs that developers may have overbuilt in relation to historical demand, at least in the short term. DeNight shared that in the Dallas metropolitan market, more than 20 warehouses over 700,000 square feet in size were just delivered or are currently under construction and are not pre-leased.

Recent trends also suggest that while there is a shrinking appetite for new construction in Southern California currently, given economic conditions, there are increasing longer-term barriers to development in that market, with development shifting to adjacent states or more-distant port markets. Regarding the ports in Los Angeles and Long Beach, DeNight remarked that "the port isn't going anywhere, but it is losing some TEU market share."

Manufacturing construction is picking up some of the slack in the industrial market, with the nearshoring, reshoring and domestic expansion of advanced manufacturing plants leading the way. DeNight shared that manufacturing growth has been concentrated in plants for electronic vehicles, batteries, solar, biomanufacturing and semiconductors. These new plants are large, with an average building size of around 1.5 million square feet. While manufacturing spaces generally command higher rents than warehouses, most of the new construction will be owner-occupied. Reshoring construction activity is occurring nationwide, but many projects are in rural and exurban areas that are adjacent to manufacturing and high-tech labor pools. ■

Shawn Moura, Ph.D., is the research director at NAIOP.

Manufacturing construction is helping to pick up some of the slack in the industrial market, with the nearshoring, reshoring and domestic expansion of advanced manufacturing plants leading the way.

Governments Turning to Adaptive Reuse Legislation for Additional Housing

Tax breaks, streamlined approvals and grants are some of the supply-side incentives.

By Toby Burke

Cities and counties across North America are facing a shortage of affordable rental and for-sale housing. The lack of affordable housing is increasingly becoming a top concern for many Americans, according to the Pew Research Center, with 63% of adults living in urban areas identifying the availability of affordable housing as a major problem. Moody Analytics reports that the national rent-to-income ratio edged over the 30% rent-burden level for the first time in 2022. The two highest rent-to-income ratios are in New York City (66.9%) and Miami (42%).

At the same time, the trend toward remote and hybrid workweeks has resulted in historically high office vacancy rates in most urban areas. Colliers recently reported that the U.S. office vacancy rate stood at 16.4% in the second quarter of 2023, slightly above the Great Recession peak of 16.3%. The high vacancy rate also resulted in decreased valuations of commercial office properties and lower economic activity for many local businesses and restaurants that rely on the foot traffic of office workers. Accordingly, sales tax revenue for local governments has also declined.

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Boston's recent office-to-residential-conversion pilot program incentivizes the conversion of vacant and underutilized office space within the city.

In the U.S., a top NAIOP legislative priority is the enactment of a federal adaptive reuse tax incentive that would spur the conversion of underutilized commercial properties to residential use. While Congress continues discussion on a federal program, mayors and local officials in the U.S. and Canada are already taking action to incentivize the conversion of vacant commercial spaces into residential properties.

A Crisis Spurs Opportunities

In the U.S., a top NAIOP legislative priority is the enactment of a federal adaptive reuse tax incentive that would spur the conversion of underutilized commercial properties to residential use. While Congress continues discussion on a federal program, mayors and local officials in the U.S. and Canada are already taking action to incentivize the conversion of vacant commercial spaces into residential properties. These conversion efforts aim to increase housing supply and promote economic revitalization and job growth in areas negatively impacted by shrinking demand for commercial office properties.

Boston Mayor **Michelle Wu** recently announced a new Downtown Office to

Residential Conversion Pilot Program to incentivize the conversion of vacant and underutilized office space to residential use within the city. The intent of the program is to create new housing and to spur economic activity for businesses and restaurants by residents who want to live, work and play in the downtown corridor.

Under Boston's pilot program, commercial office space owners would receive as much as a 75% reduction in their property taxes at the residential rate for up to 29 years for immediately starting the conversion process. Applications to participate in the pilot program will be accepted only through June 2024, with construction scheduled to start no later than October 2025. Conversion projects within the program will also receive a streamlined approval process for related permits. If construction does not begin before October 2025, the owner will pay any waived taxes. The city will also apply a 2% tax on future sales of the property to compensate for the lost tax revenue.

Under Boston's pilot program, commercial office space owners would receive as much as a 75% reduction in their property taxes at the residential rate for up to 29 years for immediately starting the conversion process.

Some local governments have also strengthened and updated existing conversion programs to provide additional housing and help address the challenges of a post-pandemic economy and workforce. Erie County in upstate New York offers an adaptive reuse tax incentive program to support the "rehabilitation" of existing vacant and underutilized buildings. To receive consideration for the program, buildings and structures must be older than 20 years with "functional challenges" for redevelopment; vacant or underutilized for a minimum of three years; and not producing meaningful rental income. The benefits of participating in the program may include property tax savings, sales tax saving on equipment and materials, mortgage recording tax abatement and other exemptions.

Calgary Leads the Way

In Canada, the Downtown Calgary Development Incentive Program was revised earlier this year with the intent of providing office-building owners financial assistance to convert approximately 6 million square feet (out of 14 million square feet) of vacant office space for residential and non-office uses in the downtown corridor by 2031. The incentive program provides a grant based on square footage of the office space being converted to one or more of the approved uses. The approved uses are:

In Canada, the Downtown Calgary Development Incentive Program was revised earlier this year with the intent of providing office-building owners financial assistance to convert approximately 6 million square feet (out of 14 million square feet) of vacant office space for residential and non-office uses in the downtown corridor by 2031.

- Multiresidential development/dwelling ($75 per square foot with exclusions and restrictions)
- Hotel ($60 per square foot with exclusions and restrictions)
- School ($50 per square foot)
- Performing arts centre ($50 per square foot)

Approved applicants will receive up to a maximum of $15 million per property unless the municipal council approves a greater amount. Ten recently approved projects will create approximately 1,237 units of housing, ranging from studios to three-bedroom apartments, and include affordable units as well as units that will rent at 20% below market rate.

These adaptive reuse programs in the U.S. and Canada demonstrate the important role that local governments could play in incentivizing the conversion of vacant or underutilized buildings for housing and other needed uses. Although conversions can be challenging, especially without incentives, adaptive reuse is more environmentally sustainable than demolition and construction of new buildings. NAIOP supports commonsense efforts at every level of government to develop and strengthen existing adaptive reuse programs and to extend the useful life of existing commercial buildings. ■

Toby Burke is associate vice president of state and local affairs at NAIOP.

Chapter Profile: NAIOP Oregon

Members are supporting each other through challenges and identifying emerging opportunities.

By Jennifer LeFurgy, Ph.D.

Despite the economic challenges facing commercial real estate in Portland, the members of the Oregon chapter remain committed to reenergizing the central business district, advocating for affordable housing and expanding inclusive opportunities.

NAIOP Oregon Chapter President **Lauren Golden Jones**, vice president of development with Capstone Partners, LLC in Portland, spoke with Development magazine about current CRE interests at the state and local levels.

Development: *How are the market conditions for member companies in your area?*

Jones: Portland is facing many of the same challenges and opportunities as other West Coast cities. Industrial leasing velocity remains strong, albeit not as strong as in 2020-2022, and industrial rents continue to grow. The investment sales volume is gradually starting to pick up in the office and multifamily sectors. General contractors continue to have a strong pipeline with public, nonprofit and affordable housing work. The private side is not seeing pricing drift down quite yet. The lack of available construction financing is putting a lot of private projects on hold. There's no doubt among our members that this is a challenging time. However, we are working to support each other.

Development: *What are the challenges you're facing in either the business or regulatory climate in your area?*

Jones: The business and personal tax rates in Multnomah County are causing many businesses to think hard before renewing leases in or relocating to Multnomah County. Multnomah County now has the second-highest total state and local income tax rate in the United States at 14.69%. New York City has the highest at 14.78%. In Multnomah County, the top tax rate starts for single taxpayers with incomes above $125,000 and joint filers at $250,000. In comparison, New York City's top tax rate starts at $25MM.

The good news is that many local elected leaders are recognizing the tax burden and are developing ways to alleviate the burden on businesses. The Portland City Council recently passed a resolution allowing businesses to waive up to $250,000 in business license taxes if the business signs a long-term lease in the Central City. The council also added downtown Portland as an enterprise zone, which allows downtown businesses with new investments to waive property taxes for five years.

The governor is also leading an effort to build more housing throughout the state and reduce barriers to housing. NAIOP Oregon has been at the table for many of the conversations at the Portland municipal level to influence regulatory changes that would facilitate the production of housing. Examples include efforts to reduce permit-review timelines, freeze impact fees and put a temporary freeze on regulations that add significant costs to projects.

> **"NAIOP Oregon has been at the table for many of the conversations at the Portland municipal level to influence regulatory changes that would facilitate the production of housing. Examples include efforts to reduce permit-review timelines, freeze impact fees and put a temporary freeze on regulations that add significant costs to projects."**
>
> *— Lauren Golden Jones, president, NAIOP Oregon*

Development: *What are the opportunities in commercial real estate in your area right now?*

Jones: For real estate investors who are willing to invest right now, there are good opportunities for buying office and multifamily in the core at significant discounts from replacement cost.

Development: *What are some of your chapter's legislative priorities?*

Jones: NAIOP Oregon's current legislative priorities are:

Economic development and job growth: Advocate for policies that promote economic development and job growth within the commercial real estate sector, including tax incentives and regulatory reforms that encourage investment and business expansion.

Land use and zoning: Seek land-use and zoning reforms that streamline development processes, reduce permit-

4nadia via iStock/Getty Images Plus

Portland is the second-most populous city in the Pacific Northwest, trailing only Seattle.

ting delays and encourage responsible land-use planning that aligns with the needs of developers and communities. Support responsible urban growth boundary (UGB) expansion for industrial development and workforce housing needs.

Housing affordability: Collaborate on initiatives that address housing affordability challenges, such as regulatory reforms to reduce development costs [and] increase housing supply, responsible UGB expansions, and reform to increase building within the current UGB.

Central City improvement: Support addressing concerns about law enforcement resources, the need for robust addiction-treatment capacity and potential unintended consequences, such as enabling drug use.

“For real estate investors who are willing to invest right now, there are good opportunities for buying office and multifamily in the core at significant discounts from replacement cost.”

— Lauren Golden Jones,
president, NAIOP Oregon

Development: *Education is an important part of NAIOP's mission. Have there been educational sessions specific to your chapter recently?*

Jones: NAIOP Oregon continues to support an annual case study competition at the Portland State University Center for Real Estate. Our members engage with students in the classroom, share their experiences with the students and serve as resources to students as they grow in their careers.

"The Developing Leaders Board started a mentorship program in 2022, which brings icons in the industry together with members early in their careers to have an open dialogue about how they progressed in their field."

— Lauren Golden Jones, president, NAIOP Oregon

NAIOP Oregon has had a strong Developing Leaders group for many years. The Developing Leaders Board sponsors many events, such as the First Look Events, to foster an understanding of the development and lease-up process for people earlier in their careers. The Developing Leaders Board started a mentorship program in 2022, which brings icons in the industry together with members early in their careers to have an open dialogue about how they progressed in their field.

Development: *Is there a question I didn't ask you here that you'd like to answer?*

Jones: NAIOP Oregon is embarking on a large-scale survey of members and nonmembers. The goal will be twofold. We will learn where our members are finding the most value, such as programs, networking, advocacy or educational opportunities. The survey will also provide us with input on how to foster a more diverse and inclusive community at NAIOP Oregon. We retained a consultant who specializes in diversity, equity and inclusion to develop the survey, help us interpret the results, and conduct focus-area groups based on the feedback. We are excited about what we will learn and how to improve our chapter so that it benefits our members and attracts more members to our chapter in an inclusive and welcoming manner. ■

Jennifer LeFurgy, Ph.D., is editor-in-chief of Development magazine.

From Central Business Districts to Central Activity Districts

With the right incentives, office conversions can help breathe new life into downtowns.

By Emil Malizia, Ph.D., CRE

No consensus on the future of the office market exists, but it is widely acknowledged that the sector faces historic challenges. Although there were signs of oversupply years ago, robust job growth and local market dynamics tended to compensate for those trends. At the end of the fourth quarter of 2019, before the onset of the pandemic, the vacancy rate was 9.5%, net absorption for the quarter was positive 12.5 million square feet, and space available for sublet stood at 120 million square feet, according to CoStar. In the second quarter of 2021, when the pandemic had begun to wane, these statistics were 11.9%, negative 13.8 million square feet, and 203 million square feet, respectively. During the next two years, employment growth was very strong. However, by the second quarter of 2023, vacancies were up to 13.1%, absorption for the quarter was negative 13.4 million square feet, and available sublet space had ballooned to 263 million square feet. The long-standing belief in employment growth as the best indicator of office demand and net absorption had disappeared.

Many analysts have pointed to hybrid work as the proximate cause. The NAIOP Research Foundation published "Hybrid Work and the Future of Office: Adapting to a New Paradigm in Occupier Demand" in August and found that although the expansion of hybrid work schedules has accelerated a decline in the amount of occupied office space per worker, there is greater demand for shared meeting and coworking space to accommodate more employees on busier days. Additionally, occupiers are trading quantity for quality, preferring smaller office footprints in conveniently located modern buildings with amenities that will draw workers to the office and improve productivity. Although many office users have not finalized or fully implemented plans for future space use, many Class B and C office buildings may be unable to regain tenants.

What's Old Is New Again

One recommendation for repurposing empty office buildings is conversion to multifamily uses. Office-to-multifamily conversions are not new and have been taking place with varied success for decades. One recent example of a pre-pandemic conversion is Franklin Tower in Center City Philadelphia. The 1970s-era North American headquarters for GlaxoSmithKline was successfully converted to 549 apartment units in 2019.

Kip Dawkins Photography courtesy of Lowe

Office buildings with notable architecture, working windows and siting with natural light penetration on all sides can be ideal candidates for conversion.

As for the number of recent conversions to multifamily, the results for 2020-22 are modest. About 900,000 units of multifamily housing (including conversions) were built during those three years. Only 35,000 units came from conversions of CRE buildings, or about 4%. According to Yardi Matrix, which has the most in-depth data on conversions to multifamily, about 122,000 units are expected to be converted and added to the market in the next few years, or 3.5 times the 2020-22 amount. Los Angeles (4,566 units), New York City (3,987 units) and Chicago (3,519 units) are expected to have the largest number of conversions.

According to Yardi Matrix, which has the most in-depth data on conversions to multifamily, about 122,000 units are expected to be converted and added to the market in the next few years, or 3.5 times the 2020-22 amount. Los Angeles (4,566 units), New York City (3,987 units) and Chicago (3,519 units) are expected to have the largest number of conversions.

For low-rise buildings in suburban areas, the most important feature is a building width of 60-70 feet. These buildings can provide nicely shaped and sized units along a double-loaded corridor. For high-rise buildings in cities, the key features for efficient conversions are small floor plates (less than 20,000 square feet) and centrally located cores to accommodate elevators, stairwells and trash chutes.

What to Look For

Adaptive reuse projects such as office-to-multifamily conversions have many advantages compared with new construction. Conversion projects are about 15%-30% less expensive (per unit) than demolishing and rebuilding. Less time is needed to achieve stabilized occupancy, including the construction period. For downtown projects, existing zoning often permits conversion by right. Both the shorter development period and entitlement by right lower project risk significantly. Finally, adaptive reuse projects have fewer negative environmental impacts compared with new development (especially when demolition is required).

For low-rise buildings in suburban areas, the most important feature is a building width of 60-70 feet. These buildings can provide nicely shaped and sized units along a double-loaded corridor. For high-rise buildings in cities, the key features for efficient conversions are small floor plates (less than 20,000 square feet) and centrally located cores to accommodate elevators, stairwells and trash chutes. Other attractive high-rise building features include notable architecture, working windows, siting with natural light penetration on all sides, and underground or adjacent structured parking. Location near public transit and in a vibrant center is an additional asset.

Occupied buildings can present complications, but there are different ways to approach project initiation. One option is to wait until the building is completely vacant before starting. If the start date is flexible, this is the simplest way to proceed. When market or financial factors influence timing, construction can begin with tenants in the building. This situation usually requires major after-hours construction work, say from 7 p.m. until 7 a.m. Construction workers receive higher compensation when working such hours, which increases project costs. Alternatively, tenants can be moved to equivalent nearby space. This option is frequently feasible because distressed office properties in urban areas are in the same subareas, and nearby vacant or sublet space is often readily available. Another option is to buy out existing leases to vacate office space, which can be costly and is thereby the least desirable.

Incentives and Zoning Changes

Cities, both large and small, are addressing the underutilization of office space in their jurisdictions as the prospect looms of offices becoming tax-delinquent properties. Municipalities are increasingly offering incentives tied to rezoning, approvals, affordable housing, tax rebates and environmental sustainability. Such supply-side incentives will be necessary because very few buildings will be financially feasible to convert, even if office buildings are offered at steeply discounted prices.

More holistic approaches involve finding ways to transition from urban ame-

Relevant Research

See the NAIOP Research Foundation reports "New Uses for Office Buildings: Life Science, Medical and Multifamily Conversions" by **Emil Malizia**, Ph.D., CRE, and "Hybrid Work and the Future of Office: Adapting to a New Paradigm in Occupier Demand" by Emil Malizia, Ph.D., CRE; **Shawn Moura**, Ph.D.; **Dustin C. Read**, Ph.D./J.D.; **Jessica Morin**; and **Julie Whelan**. Visit naiop.org to view and download the reports. ■

nities that serve daytime office workers and tourists to amenities that primarily serve households of varying types, sizes and incomes. Crises often present opportunities, and the office conundrum could provide much-needed housing and a new approach to urban development. Over the long term, central business districts can become vibrant activity districts that are dense, diverse, connected and walkable centers accommodating workers, visitors and many more residents. ■

Emil Malizia, Ph.D., CRE, is a NAIOP Distinguished Fellow and a research professor at the University of North Carolina at Chapel Hill.

A NAIOP Research Foundation Appreciation: Skip Kalb

For many years, "Thanks, Skip!" has been a common refrain around NAIOP. This is because Skip has always generously offered his time, enthusiasm and wisdom. He is a longtime supporter of the NAIOP Research Foundation and has helped it grow and succeed, especially during the past five years. All of us at the Research Foundation wish to express our gratitude for his support during his tenure as chair of the foundation's Board of Trustees, which ends this year. He joined as the 49th governor in 2015 and since then has led the research committee and the Industry Trends Task Force, mentored Visionaries and joined the Trustees, assuming the role of chair in 2022. His commitment to service, combined with humility, intelligence and wit, has made him a pleasure to work with. As his term comes to a close, we want to say a big "Thanks, Skip!" ■

Actively Seeking Opportunities for Leadership Growth

The 2023 Developing Leaders Award winners employ strategic approaches to their career development.

By Marie Ruff

Leadership development is a process of continual growth and learning, according to the recipients of NAIOP's 2023 Developing Leaders Award. These five commercial real estate professionals ages 35 and under were honored at NAIOP's annual CRE.Converge conference this past October in Seattle for their exceptional professional accomplishments, strong leadership and significant community involvement. They shared how they seek opportunities to learn and develop as industry leaders, and why they also work to build up the next generation of commercial real estate leaders through mentorship and career development.

Andrew Chun, CHMM

Senior Project Manager, Langan Engineering & Environmental Services
NAIOP New Jersey

"One of the most important lessons I've learned is that a leader is nothing without their team. A big mistake I made earlier in my career was placing too great of an emphasis on my own career growth: I had to be the best at everything, handle every aspect of a project, and worked best as a lone wolf. After almost burning out and leaving the industry, I learned that I must shift my mindset from 'me' to 'we.' Since that time, I've learned to identify strengths in each of my co-workers, take the time to improve how I communicate, and provide an environment where each of my co-workers can thrive. Now I know that I couldn't even do a fraction of what we accomplish together as a team."

"I've learned to identify strengths in each of my co-workers, take the time to improve how I communicate, and provide an environment where each of my co-workers can thrive."

Jace Jonsson

Senior Manager, Office Leasing, Oxford Properties Group
NAIOP Calgary

"Intentional opportunity seeking is key for continual development as a leader. I will always be the first to put my hand up to participate in a project that may be out of my current scope of work and never back down due to being uncomfortable in a situation. Usually, what makes you most uncomfortable are the opportunities that will forever set you apart from your peers. Examples of this include public speaking engagements, covering tours or presentations for co-workers, taking on special projects and always giving 110% in everything you do."

"Usually, what makes you most uncomfortable are the opportunities that will forever set you apart from your peers."

Maria Elena Poyer

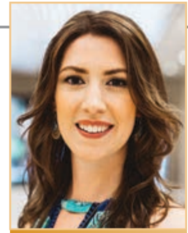
Senior Development Manager – Strategic Property Program, World-Wide Operations Real Estate, Amazon
NAIOP Washington State

"To continuously grow and develop as a leader, I actively seek out opportunities that challenge my current skill set and push me beyond my comfort zone. I believe that leadership is an evolving journey, and I'm committed to continuous growth and self-improvement. I've learned the value of cross-functional collaboration, especially in commercial real estate, where understanding various perspectives is crucial. My involvement with organizations like NAIOP, CREW and 'Women at Amazon' has enriched my leadership skills in different contexts, from event implementation to strategic planning. I'm a firm believer in lifelong learning and make it a point to attend workshops, conferences and seminars to stay abreast of industry trends and best practices. Lastly, I value the guidance I receive from mentors and peers and, in return, take pride in mentoring others, promoting a culture of continuous growth and knowledge-sharing."

"I've learned the value of cross-functional collaboration, especially in commercial real estate, where understanding various perspectives is crucial."


Andrew Chun


Jace Jonsson


Maria Elena Poyer


Michael Testa


Ryan Woods

Michael Testa
Business Development Manager
& Senior Brokerage Associate,
Ogden & Company, Inc.
NAIOP Wisconsin

"**I constantly look for opportunities to say 'yes.'** Since I was in college, I have set a goal to say 'yes' as often as humanly possible; this has led me to some of my biggest challenges and to some of my biggest successes. I love finding new ways to get involved with new groups or organizations to see how I can fit in and help them achieve their goals. I get to build new relationships with like-minded people, learn about industries or trends that I didn't know about before, and make an impact on my community."

"I love finding new ways to get involved with new groups or organizations to see how I can fit in and help them achieve their goals."

Ryan Woods
Associate Principal:
Commercial Practice Leader,
The Beck Group
NAIOP Georgia

"Early in my career, it was about searching for opportunities both in and out of the office to show my value and build my network. Lately, I find myself looking to guide others to do the same, to build up the next generation of young leaders in design and commercial real estate. It is refreshing for me to work with many young professionals who are talented and just as eager and hungry as I was when I started my career. I have made it my responsibility to stay in tune with their needs and ensure they have what they require to develop in their career, while focusing on sharing the opportunity and spotlight with them just as my mentors did for me. That said, as my career has evolved, I have also had to learn that you cannot want something more than [people] want for themselves. It's important to focus and help those who are putting in the effort upfront." ■

"It is refreshing for me to work with many young professionals who are talented and just as eager and hungry as I was when I started my career."

Marie Ruff is director of marketing and communications at NAIOP.

About NAIOP's Developing Leaders Program

Developing Leaders, defined as commercial real estate professionals ages 35 and under, constitute nearly a third of NAIOP's 21,000-member network across 53 chapters. This group forms an active and valuable part of the association.

NAIOP membership connects Developing Leaders with dealmakers; keeps them at the forefront of commercial real estate development with exceptional education and research; provides them with leadership opportunities at the local chapter and North American levels; and protects their businesses with effective advocacy at all levels of government. Many Developing Leaders say that the partnerships they form through NAIOP with peers, mentors and industry professionals are instrumental to their professional success.

Interested in joining? As a Developing Leader, the investment you make today can pay dividends throughout your career. Become a Developing Leader member at naiop.org/join. ■

NAIOP represents commercial real estate developers, owners and investors of office, industrial, retail and mixed-use properties. It provides strong advocacy, education and business opportunities, and connects its members through a powerful North American network. **For more information, visit naiop.org.**

Programs and Services

NAIOP Membership
For membership, information or changes to your membership record, contact membership@naiop.org.

Chapter Network
NAIOP chapters provide local and regional education, networking and legislative affairs.

naiop.org
NAIOP's central resource for industry and association news, programs, advocacy efforts and connections.

National Forums
Special-interest groups that comprise senior-level NAIOP members in a non-competitive environment for exclusive networking and experience exchange.

Center for Education
The principal learning resource for the commercial real estate development professional. Offerings include online, on-demand and live courses, plus two certificate programs.

Development Magazine
Current and past issues are available online and are mobile-responsive for those who want to read Development magazine on-the-go.

NAIOP Research Foundation
Research projects and initiatives to improve the understanding of the built environment and the challenges that lie ahead for individuals and organizations engaged in real estate development, investment and operations.

Career Center
Online resource designed to help employers and job seekers find new commercial real estate job opportunities.

Business Development Industry Partners
Enhance your company's presence as an industry partner by sponsoring, exhibiting or advertising.

Government Affairs
Strong, effective support and guidance to create, protect and enhance development and property values. NAIOP's government affairs team is active on Capitol Hill, in state legislatures and in Canadian provinces.

Market Share Blog
Insights on trends, CRE-related topics and professional development tips. Subscribe to weekly posts, interviews and news at blog.naiop.org.

Mobile Apps
Take NAIOP wherever you go. Access the membership directory, find news, chapters and events, and connect on social media.■

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Jennifer LeFurgy, Editor-in-Chief, September 30, 2023

For information regarding advertising opportunities, contact Christopher Ware at 800-666-6780.

* *This is a listing of NAIOP members who are mentioned in this issue, as well as paid advertisers, which appear in bold.*

2023 Industry Partners

NAIOP wishes to thank our Industry Partners, whose financial support helps us to provide quality programs and communications to you throughout the year. We encourage you as a NAIOP member to include these partners, wherever possible, when you are considering services and products for your business.

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A Year in Review

What an exhilarating and eventful year it has been for our industry and NAIOP! The organization remains strong and relevant as the commercial real estate industry continues to adapt in a period of financial uncertainty and changes in demand.


Kim Snyder

It has been an exceptionally rewarding experience to serve as NAIOP chair and to talk with members from across the United States and Canada at our events and during chapter visits. Sharing what NAIOP has meant to me, and learning how it's shaped others' careers and advanced our industry, has been especially meaningful.

NAIOP has served its members and chapters in several ways this year, thanks to the support and engagement of our board, chapters and staff. Our achievements are many. Here are a few of the highlights:

- We developed a new strategic plan that will guide the association during the next three years. The plan includes expanding our member value proposition; enhancing the public perception of the CRE industry; strengthening our position as the association of choice for CRE professionals; and deepening NAIOP's leadership and involvement in advocacy on all levels. Members and chapters were involved in the plan, and I'm looking forward to seeing how our strategies and tactics shape the association's future.
- Three I.CON conferences sold out entirely this year — an exciting accomplishment for the organization! The fervor of the industrial market and NAIOP's recognition as the leader in industrial real estate helped drive these meetings to success.

It has been an exceptionally rewarding experience to serve as NAIOP chair and to talk with members from across the United States and Canada at our events and during chapter visits. Sharing what NAIOP has meant to me, and learning how it has shaped others' careers and advanced our industry, has been especially meaningful.

- We launched a new NAIOP chapter in Boise, Idaho, bringing our total number of chapters to 53.
- We hosted an executive-level conversation on the seismic shift in office, bringing together top office developers, owners and investors to discuss office demand, the availability of credit and financing, and the future of the space as we navigate current market conditions and prepare for what's ahead. A second gathering of this group took place at CRE.Converge in Seattle.
- Both the National Forums and the Research Foundation programs continue to grow, with new forums added and several new governors pledging to support the important work of the Foundation. These next-level opportunities drive thought leadership and long-term engagement with the association.
- Legislatively, we've worked on federal issues regarding Waters of the United States (WOTUS) and forthcoming legislation on incentives for adaptive reuse. Our government affairs team has collaborated with chapters on such pressing issues as affordable housing, tax increment financing, regulatory and permitting processes, and more.

One of the achievements I've been most proud of this year is how our chapters have invested in operations, services and member benefits that positively impact the CRE industry and deliver member value. Using the resources of the Chapter Support Fund, 20 chapters received grants to launch new programs, deepen advocacy efforts and create important initiatives.

Finally, as any chair who has come before me would agree, the NAIOP staff is an impressive group, and I've appreciated the opportunity to get to know them and collaborate this year. Marc Selvitelli has done an excellent job as our president and CEO during his first year, and I'd like to acknowledge all the successes that have happened under his leadership.

I'd like to thank our valuable members and all they bring to the association. I have been honored to serve as chair this year, and I'm excited to pass the gavel to Brian Walker, our 2024 chair. I know our future is bright under his leadership.

Thank you for the opportunity to lead this organization! ■

Kim Snyder, President,
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Lic. #00892477

Andrew Starnes
+1 909 942 4667
andrew.starnes@cushwake.com
Lic. #01799801

Cruise Adams
+1 909-942 4641
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