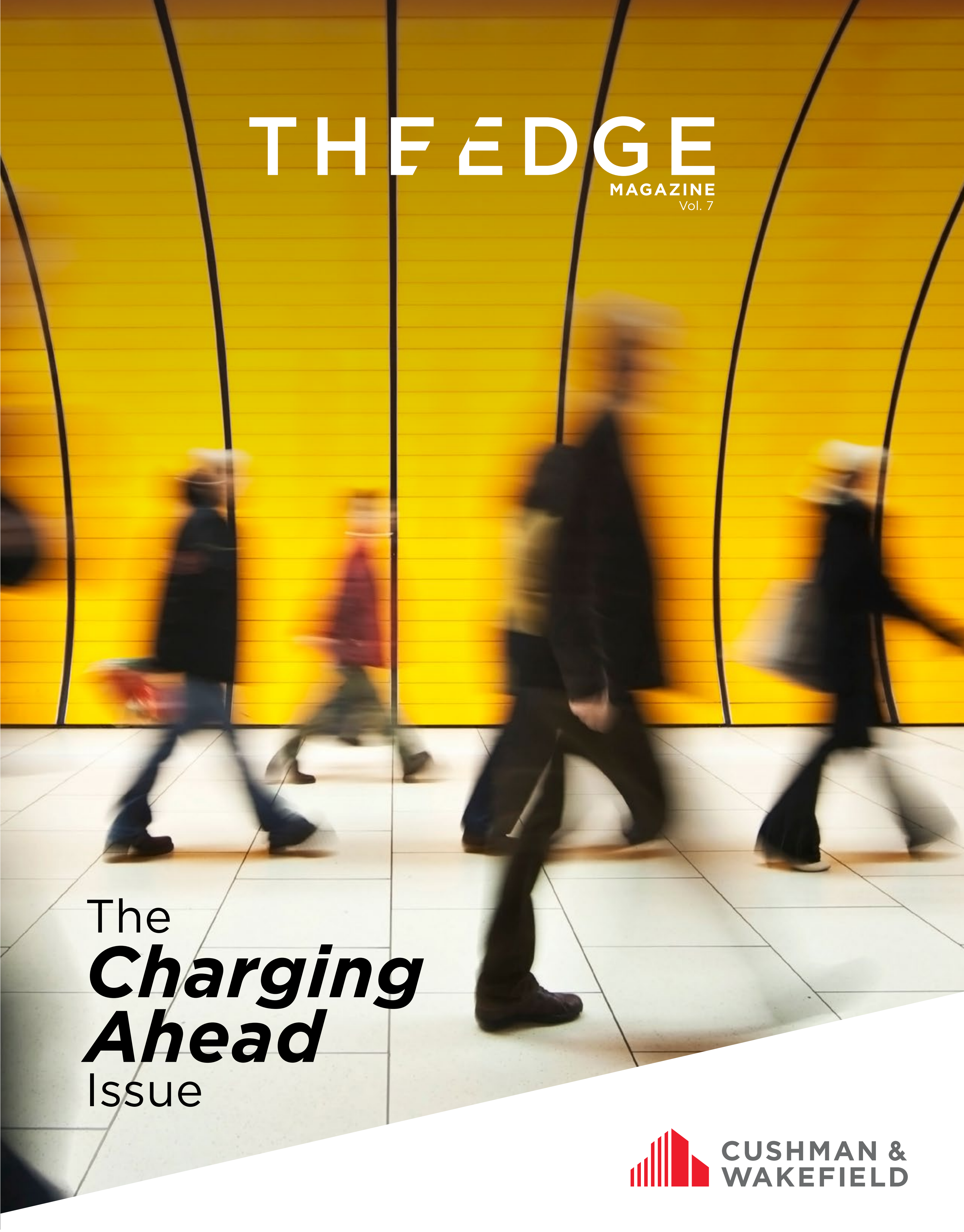

THE EDGE

MAGAZINE
Vol. 7

The *Charging Ahead* Issue

CUSHMAN & WAKEFIELD

Charging on with resilience, relevance and readiness.

This goes without saying, but no one has been immune to the challenges of the global pandemic, its subsequent economic fallout, ongoing geopolitical conflicts—or any number of other uncertainties that seem to come at us daily. Across the globe, we've all had to adapt in both our professional and personal lives. But through it all, Cushman & Wakefield remains committed to our people, our clients, our partners and our industry friends, ensuring they have access to the tools, data, thinking and insights to feel confident in a turbulent time.

While significant challenges remain, we feel increasingly confident about the role our industry will play in the continued evolution of the built environment and its impact on society. This conviction is not in spite of great change but because our industry and its participants continue to demonstrate tremendous resiliency, innovation and readiness in the face of great change.

In this volume of The Edge Magazine, we feature stories that underscore our optimism and the kinds of innovation and adaptation shaping the future. We look at how real estate investors can capitalize on ESG to create long-term value, and why it's important for the multifamily sector to keep Generation Z's preferences in mind. We also touch on the transition digitally native retailers are expanding to brick-and-mortar locations, why commercial drones are more prevalent than you may think and more.

More change and challenges will come our way, but no doubt our industry will meet them head on. And as we move deeper into 2022, we look forward to sharing additional stories in Volume 7 that feature great imagination, resilience and thinking. We encourage you to subscribe to receive the latest.

Charging ahead,

Brad Kreiger
Chief Marketing & Communications Officer

Content Director: Peter Walpole

Editors: Gina Dardi, Jamie Tetro & Casey Miller

Creative Director: Senem Goctu

Designers: Anna Kancs, Rachel Summers, Romeo Van Buiten & Sarah Knowles

Digital Marketing Leads: Taylor Tomlinson & Jamie Schmitz

Learn more: cushwk.co/theedge

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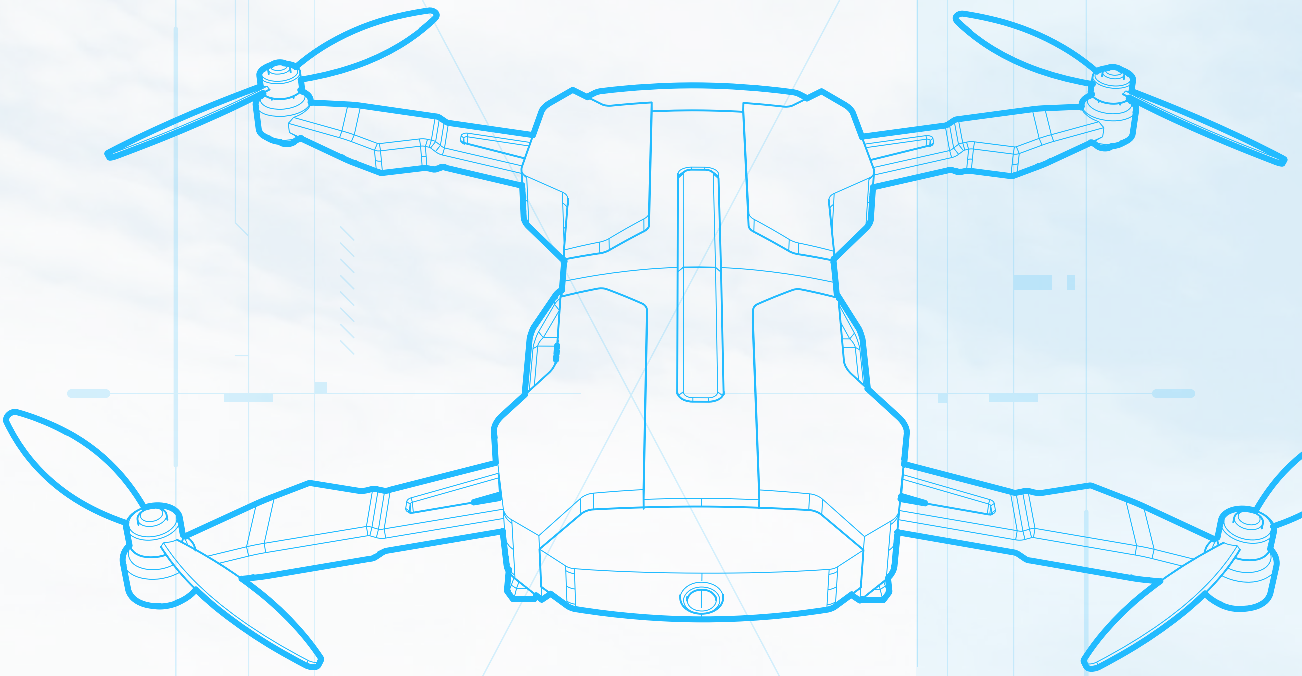
WHERE ARE ALL THE DRONES?



SANDY ROMERO
Research Manager, Global Research
Cushman & Wakefield
sandy.romero@cushwake.com

After years of hype about drones capable of delivering packages, groceries, lunch—nearly any item that one could think of—where are they now? And why aren't they more prevalent today?

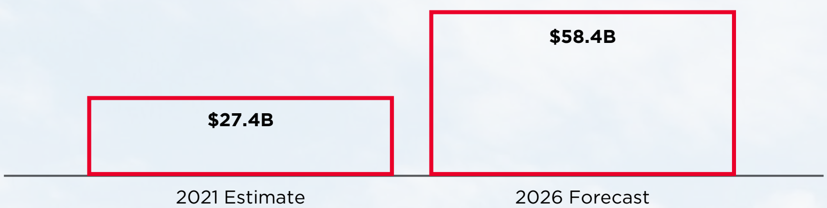
The reality is that they are prevalent, all around us—but we don't see them because commercial drones have been working mostly behind the scenes in many sectors. From inspecting buildings to monitoring construction sites to capturing virtual tour videos, commercial drones have been making a significant impact for years, and the industry is poised for even more growth, especially in the delivery and logistics industries.

POISED FOR CONTINUED GROWTH

Just as the global pandemic impacted the performance of many industries, the commercial drone industry saw a drop in demand, especially in the early days of the pandemic as cities and countries locked down and businesses closed. This ebb in demand, however, proved to be temporary. As demand returned, the drone industry grew rapidly as evidenced by the $2.3 billion companies poured into drones in 2020, 81% higher than the $1.3 billion they invested in 2019.[2]

Since then, the global drone market has further expanded and is primed for more robust growth over the next five years. In fact, the $27.4 billion drone market today is expected to more than double to approximately $60 billion by 2026 with a compound annual growth rate (CAGR) of 16.3%.

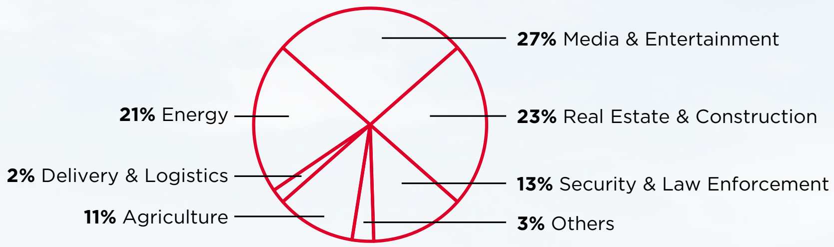
Global Commercial Drone Market Size



Source: Statista

Industries that have been out front to date in their use of commercial drones include media and entertainment, energy, and real estate and construction. In fact, site surveys, commercial property aerial photography and aerial mapping were some of the first commercial uses for drones. One industry that has lagged others, yet is forecasted to grow the fastest in the near term: the delivery and logistics segment. It's expected to experience a CAGR of 60% from 2021 to 2028.[3] And as online shopping continues to surge, drones will become increasingly important for distribution and fulfillment.

Share of Global Commerical Drone Market By End Use, 2020



Source: Grand View ResearchDrones, increasing online demand and warehouse facility design

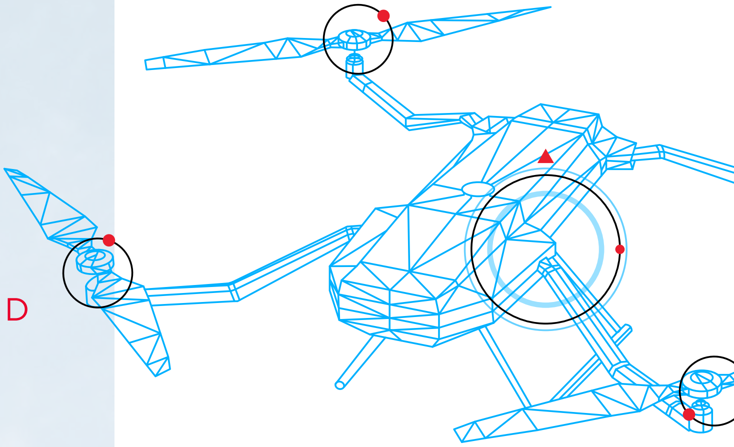
2 Alvarado, Ed, (2021) Global Companies Invest in Drones Despite Recession, Drone Industry Insights, (https://droneii.com/global-companies-invest-in-drones-despite-recession), accessed February 2022

3 Commercial Drone Market Size, Grandview Research, (https://www.grandviewresearch.com/industry-analysis/global-commercial-drones-market), Accessed February 2022

WHAT ARE DRONES?

Formally known as Unmanned Aircraft Systems (UAS) or Unmanned Aerial Vehicles (UAV), a drone is a small, unmanned aircraft weighing less than 55 pounds that typically operates via radio frequency, according to the Federal Aviation Administration (FAA) in the United States.[1] They have innate intelligence and can fly, hover, navigate and avoid obstacles without pilot input, which is part of their appeal.

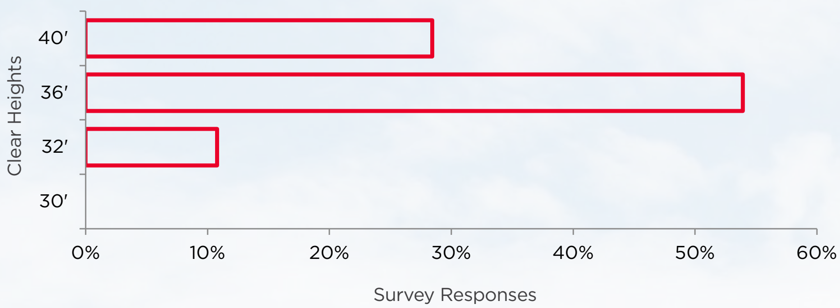
1 Small Unmanned Aircraft Systems (UAS) Regulations (Part 107), (2020), Federal Aviation Administration, (https://www.faa.gov/newsroom/small-unmanned-aircraft-systems-uas-regulations-part-107), Accessed March 2022



DRONES: INCREASING ONLINE DEMAND AND WAREHOUSE FACILITY DESIGN

E-commerce trends that were already growing pre-pandemic accelerated after the virus forced lockdowns, spurred by online demand for goods and services, which in many cases became more of a necessity than a luxury. Two-day delivery times turned into next-day delivery. Same-day delivery has now increasingly become the expectation, and no commercial real estate sector has felt the impact of this demand quite like the warehouse and logistics sector.

While fulfillment centers have struggled to keep up with demand, online retailers have taken steps to improve delivery times. Automation has helped. In the first months of the pandemic, when occupancy limits were put in place for warehouse workers, autonomous robotics became "essential workers," roaming the warehouse floors, stacking, sorting and, in limited cases, packing goods for delivery.



Big Box Most Desired Clear Height

Source: Cushman & Wakefield Research

Warehouse and logistics facilities were already a high performing real estate type for more than a decade, but the demand for warehouse space has grown significantly during the pandemic. To keep up with demand, operators and investors are navigating an already tight market, supply chain challenges and land constraints in many prime locations to try to build new properties and convert older properties into newer fulfillment centers. Warehouse design trends, too, have accelerated with a new generation of facilities. Column spacing has grown to accommodate autonomous robotics, and clear ceiling heights have increased to allow for higher stacking. In a recent Cushman & Wakefield survey of tenant preferences, it's clear that big-box tenants—500,000+ square feet—prefer larger clear heights (36' or higher).

ENTER THE DRONES

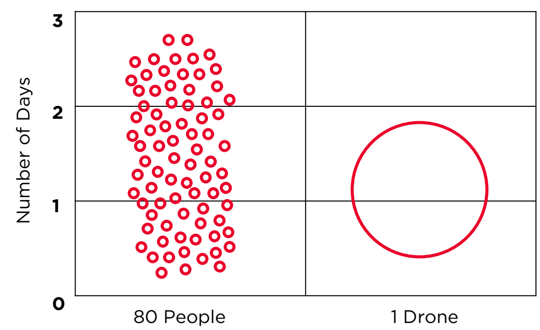
These changes in warehouse and fulfillment center specifications have opened the world of drones to facility operators. Wider column space and larger clear heights lend themselves well to drones, allowing for autonomous navigation systems to function optimally. Additionally, inside warehouses and fulfillment centers, drones are not restrained by line-of-sight FAA regulations.

But just what exactly are these drones doing in these large facilities? One answer is helping to keep track of all of the items that get shipped out to businesses and residences.

DRONES AND INVENTORY MANAGEMENT

One of the main functions that drones can perform inside the warehouse—and perform well—is inventory management. Staying on top of inventory is a priority for businesses, making sure high velocity goods are properly identified, monitored, tracked, picked, packed and shipped. Frequent inventory controls are among the tasks where drones can play a vital role, including stock and cycle counting.

Stock Counting: People vs. Drones



Stock counting:

Stock counting of large and uniform warehouses that contain numerous handling units above head-height is where the labor and time-saving benefits of drones will be most evident. Material Handling Exchange estimates that it would take approximately 80 people with handheld scanners and forklifts three days to complete a typical stock count for an average size uniform warehouse.[4] One drone can complete the same job in two days, on its own and without forklifts. Given the current labor crunch, utilizing drones to perform these basic, repetitive functions can free up existing staff to focus on other tasks.

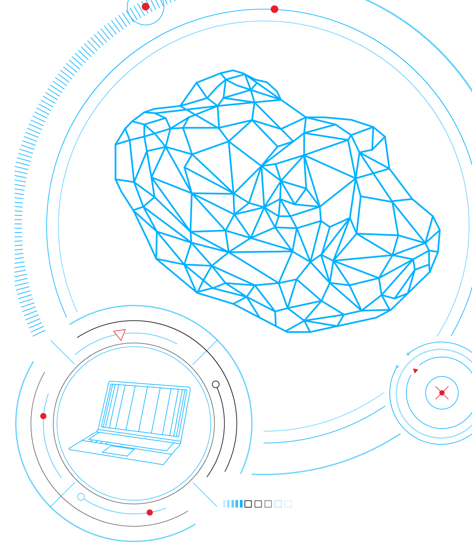
Cycle Counting:

Cycle counting is an inventory management process where a daily or weekly inventory count of a smaller set of items in the warehouse is completed and used to represent the entire warehouse inventory. Cycle counting can be a huge time saver. However, operators have traditionally needed staff to do the smaller counts at a higher frequency. But drones equipped with Radio Frequency Identification (RFID) readers can easily scan the inventory barcodes at any level in the warehouse, at whatever frequency is optimal for operations.

DRONES AND BRICK-AND-MORTAR

Because buy online, pick up in-store (BOPIS) shopping demand grew during the pandemic, brick-and-mortar retailers responded quickly by redesigning their store layouts to [accommodate contactless shopping](). Retailers even designated several parking sections just for BOPIS customers. Post-pandemic, these trends are expected to continue and expand. But retail's rapid response to changes in e-commerce trends indicates that if and when drones begin delivering goods more widely to consumers, brick-and-mortar stores may need to quickly adjust their layouts to take advantage of drones to achieve same-day delivery. Retailers are already making some of those changes, including designating larger portions of their storage for e-commerce inventory. Another potential change includes creating drone-focused launch areas and pads that ultimately can be reconfigured from a BOPIS-designated space.

4 Are Drones the Future of Warehouse Operations?, Material Handling Exchange, (https://www.m-h-e.com/are-drones-the-future-of-warehouse-operations/), Accessed February 2022



DRONE DELIVERIES: THE FINAL FRONTIER

While NASA's drone, Ingenuity, continues to zip around Mars,[5] performing amazing feats unhindered by power lines or recreational UAVs, drones on Earth are tethered to a set of regulations. These same regulations, however, may begin to soften in the near future, given recent tests of drone deliveries in several global locations, including the following examples.

- In Christiansburg, Virginia, Wing, the world's first on-demand drone delivery service direct to homes and businesses, has been running a drone delivery test market in a residential neighborhood since 2019.[6]
- In the U.S., the Federal Aviation Administration (FAA) has given approval to drone company Flytrex to deliver within a one nautical mile radius as part of its partnership with Causey Aviation Unmanned.[7] Flytrex currently operates drones in three cities across North Carolina and is launching services in the Dallas-Ft. Worth area to deliver food to consumer homes.
- Singapore's goal to become a "Smart Nation" includes developing regulation that allows drones to operate autonomously throughout the country, including food and mail delivery.[8]
- Across several European cities, the European Union-led AiRMOUR project is paving the way for the use of emergency medical service drones.[9] The two-year program will determine what steps the EU will need to take to implement drone technology at scale.
- In Coventry, in central England, construction has begun on an Urban-Air Port.[10] The port is being designed as a hub for autonomous aircraft, including logistics drones.

High-density, urban locations have been at the forefront of infill development and last mile delivery trends in recent years. Providing products and services to people faster through the congestion of high-density areas is a challenge—and the goalpost keeps moving. Drones appear to be at least one potential part of the solution. Integrated into smart cities of tomorrow, drones will be able to deliver both services and products faster than current methods. And as the appetite grows for drones to perform an increasingly broad range of tasks, city planners, property developers, architects and engineers will need to determine how drone services will impact building design. Urban planners are already including high-rise drone landing platforms in their plans for the city of the future, as recently featured at a recent Urban Land Institute (ULI) conference in Singapore.[11]

How quickly this transformation will become an everyday reality is anyone's guess. Until it does, commercial drones will continue to perform important but largely unseen roles across a variety of sectors. For their part, the drone and delivery industries seem confident the day will come when the ring of the doorbell or the alert on the smart phone will signal not the arrival of a Door Dash or Amazon driver but a drone at the doorstep. And if these deliveries come faster, more efficiently, and reduce carbon emissions relative to traditional delivery vehicles, they'll largely be welcomed. If nothing else, perhaps we'll have solved an age-old conundrum of how much to tip.

5 https://mars.nasa.gov/technology/helicopter/

6 Wing Drone Flown in Christiansburg Added to Smithsonian's Collection (2020), (https://www.newrivervalleyva.org/news/wing-drone-flown-in-christiansburg-added-to-smithsonians-collection/), Accessed March 2022

7 https://www.faa.gov/uas/commercial_operators/part_107_waivers/waivers_issued/media/107W-2021-02857_Jeffrey_Causey_CoW.pdf

8 Sagar, Mohit, (2017), Drones are a part of Singapore's Smart Nation strategy, Open Gov, (https://opengovasia.com/drones-are-a-part-of-singapores-smart-nation-strategy/), Accessed March 2022

9 https://airmour.eu/

10 'World's first' Urban-Air Port starts construction in Coventry (2022), Coventry City Council, (https://www.coventry.gov.uk/news/article/4121/-world-s-first-urban-air-port-starts-construction-in-coventry), Accessed March 2022

11 Shu-Chianghttps, Yong, (2022), Planning for a Bolder Future in Singapore, Urban Land institute (https://urbanland.uli.org/planning-design/planning-for-a-bold-future-in-singapore/?utm_source=realmagnet&utm_medium=email&utm_campaign=HQ%20Urban%20Land%2003%2E07%2E22), Accessed March 2022

WHY ESG MATTERS TO THE FUTURE OF INVESTING


MEGAN KREST
Project Manager, Energy & Sustainability Services
megan.krest@cushwake.com


RACHEL SCHIFTAN
Associate Director, Energy & Sustainability Services
rachel.schiftan@cushwake.com

Not long ago, Environmental, Social and Governance (ESG) was dismissed as superfluous and unnecessary when it came to commercial real estate. More recently, it became a "nice to have." Today, ESG has become a "must have" and is viewed as a huge opportunity as issues such as climate change pose a real risk to the value of assets of almost every company across the globe.

Since ESG takes into consideration a business' impact on its operating environment in the investment decision making process alongside other financial motivators,[1] businesses must "future-proof" their organizations by analyzing, strategizing, and disclosing their ESG impacts, starting today. Otherwise, they will soon find themselves left behind by others that have embraced the need to develop and execute a clear ESG strategy.

1 msci.com/esg-investing

WHAT'S DRIVING DEMAND?

ESG investing includes a variety of considerations to satisfy the demands of an extensive list of stakeholders, including commercial real estate (CRE) investors. One in five investors say they decided to not invest with a manager because their ESG policies were inadequate, and as of 2021, 39% of investors are currently invested in ESG products, an increase from 33% in 2020.[1] Sustainable investment funds have doubled to $54.6 billion as of the second quarter of 2020.[2]

There are five key factors driving demand for ESG investment:

1 REGULATORY DEMANDS

Currently, 39% of global energy related carbon emissions come from the built environment and approximately 2/3 of the global building area that exists today will still exist in 2040.[3] The impact is already being felt at the state and local levels as many regional standards require buildings to reduce their carbon emissions substantially within the next 20-30 years, eventually reaching net zero.

Outside of local regulatory changes, global and national guidelines will come into effect within the next decade—many of which are already here. As of January 2022, the California Senate passed the Climate Corporate Accountability Act (CCAA), the first law in the United States to require large companies to disclose all of their greenhouse gas emissions. This new legislation would require all companies generating more than $1 billion in gross annual revenue to disclose their emissions from all scopes (1, 2, and 3). And the UK will be the first nation in the G20 to force companies to deliver on TCFD (Task Force on Climate-Related Financial Disclosures) reporting requirements.[4]

As a result of COP26, the IFRS Foundation announced that a new International Sustainability Standards Board (ISSB) has been created to develop a "comprehensive global baseline of high-quality sustainability disclosure standards to meet investors' information needs."[5]

By having a strong ESG strategy, businesses can reduce transitional risk and the potential impacts of regulatory initiatives such as decarbonization efforts and emissions standards. CRE investors can and will be part of the solution by leveraging building intervention points and integrating ESG strategies into their operations.

> "One in five investors say they decided to not invest with a manager because their ESG policies were inadequate."

2 THE IMPACT OF MILLENNIALS AND WOMEN

As a new generation begins to represent a larger majority of the investor base, it is essential for organizations to understand what their motivators are—and ESG is near the top of the list. Over the next two to three decades, Millennials are expected to inherit more than $30 trillion[6] of generational wealth from the Baby Boomer generation, and by 2025, Millennials will represent three quarters of the global workforce.[7] Known as the values-driven generation, a Morgan

The individual elements of ESG

Environmental (E) includes the impact an organization has on environmental areas such as energy, greenhouse gas emissions, waste, climate change and resource scarcity.

Social (S) focuses on how the organization impacts the people it employs as well as the communities which it operates in, including labor rights, land acquisition, workplace/workforce health and wellness, safety, diversity and community impact.

Governance (G) examines how the organization governs itself including board structure and composition, executive compensation, business ethics and shareholder rights.

Together, these definitions expand beyond traditional measures of 'sustainability,' and the 'triple bottom line,' with an increased focus on how these factors contribute to socially responsible investing.

1 ey.com/en_us/wealth-asset-management/can-the-difference-of-one-year-move-you-years-ahead?WT.mc_id=10814266&AA.tsrc=paidsearch&gclid=Cj0KCQiAip-PBhDVARIsAPP2xc0pyvcdisMKwm8AlvOfboqVUGRu9XqvzKYOGnvLrgA9STulNB-SwmYaAuTnEALw_wcB

2 spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/esg-funds-outperform-s-p-500-amid-covid-19-helped-by-tech-stock-boom-59850808 - :~:text=Many%20large%20investment%20funds%20with,seen%20their%20own%20strong%20performance

3 architecture2030.org/why-the-building-sector/#:~:text=Buildings%20generate%20nearly%2040%25%20of,for%20an%20additional%2011%25%20annually

4 edie.net/news/7/UK-to-enforce-mandatory-TCFD-reporting-in-April-2022/

5 fm-magazine.com/news/2021/dec/esg-strategy-reporting-after-cop26.html

6 "The Greater Wealth Transfer", Accenture, 2012.

7 Big demands and high expectations, The Deloitte Millennial Survey, 2014.

25 cities that have pledged to become carbon neutral by 2050[1]

1. Austin
2. Accra
3. Barcelona
4. Boston
5. Buenos Aires
6. Cape Town
7. Caracas
8. Copenhagen
9. Durban
10. London
11. Los Angeles
12. Melbourne
13. Mexico City
14. Milan
15. New York City
16. Oslo
17. Paris
18. Philadelphia
19. Portland
20. Quito
21. Rio de Janeiro
22. Salvador
23. Santiago
24. Stockholm
25. Vancouver

If the majority of the world hopes to meet its ambition of limiting global temperature increases to 1.5C[2] by reaching net zero carbon emissions by the middle of the century, other cities will almost certainly have to do the same.

1 c40.org/news/25-cities-emissions-neutral-by-2050/
2 https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

Stanley study found that Millennials are twice as likely as the general population to invest in companies with social or environmental goals.[8]

Firms typically lose 70-80% of assets when transferred from one generation to the next.[9] In order to retain and attract this growing investor base, organizations need to prioritize how they are addressing ESG within their operations. The Millennial generation—and Millennial women specifically—will be directing their newly inherited capital towards opportunities that not only earn excellent returns, but also contribute to social good and are in alignment with their personal values.

3 RISK MITIGATION

For CRE, ESG issues have a quantifiable impact on portfolio risks and opportunities. A recent PwC survey indicates that more than 79% of investors believe that ESG-related risks are an important factor in investment decision-making. Climate change and global sustainability challenges are some of the greatest accelerants facing CRE portfolios. Natural disasters, flood risk, sea-level rise, natural resources scarcity, pollution and health concerns, climate refugees and tropical disease migration present new risk factors for investors. There are two primary risk categories that investors should take into consideration: physical risks and transition risks.

8 Sustainable Signals. New Data from the Individual Investor, Morgan Stanley Institute for Sustainable Investing, 2019.
9 investmentsandwealth.org/getattachment/bbdef004-2fe8-4e71-a445-918a270b5ff7/IWM19MarApr-TheMillennialInvestor.pdf

Physical risks include disruptions to operations and supply chains as a result of unplanned changes due to weather and climate. These risks, such as extreme weather events and rising average global temperatures, vary in frequency and severity and are difficult to predict. Global natural disasters resulted in losses of around $5.2 trillion between 1980 and 2018,[10] with numbers trending upwards.

Transition risks include business-related risks that follow societal and economic shifts towards a low-carbon and more climate-friendly future.[11] Examples include policy and regulatory changes, advancement of technologies, market changes due to supply and demand and the public perception of a company's operations.

Management of these risk types can reduce cost, frequency of incident management and have a measurable impact on a company's market value as well as its reputation. Understanding the impact of these issues will allow investors to better reduce the ESG risks associated with operations and create a more resilient business infrastructure.

4 POSITIVE BUSINESS OUTCOMES

Sustainability and ESG factors have historically been understood as having little-to-no impact on revenue. Now, investors want to see business strategies tied to long-term value creation, and ESG factors can be used to create best-in-class investment approaches that generate returns in line with or in excess of market.[12] Companies with well-managed ESG can see cost reductions, reduce regulatory interventions, and increase employee retention, attraction and productivity. A research study by McKinsey found that ESG can help combat rising operating expenses and impact operating costs by as much as 60%. Much of the built environment can be optimized for enhanced social and environmental benefits, and it is up to the CRE market to act.

At the asset level, value-creation can be found by managing a building's carbon footprint and integrating ESG risk mitigation processes. This can affect overall net operating income and drive increases in asset value upon disposition. If an owner ultimately wants to sell a property, they will be more likely to attract investors where ESG is a critical qualifier. As research continues to verify the positive correlation between ESG performance, corporate financial performance, and investment returns, organizations should position themselves to exhibit strong performance on ESG-related factors investors believe are linked to value creation.

5 SOCIAL STRENGTH

Social impacts of real estate have been historically difficult to measure. Investors are looking to understand how the CRE industry can be leveraged to improve "social good" and have broad impacts beyond the scope of operations. Specifically, at the asset level, it is important to understand how assets engage with and enhance the communities which they operate in—beyond a workplace. Having strong

10 https://www.bis.org/bcbs/publ/d517.pdf
11 https://gresb.com/nl-en/products/transition-risk-tool/
12 https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/from-why-to-why-not-sustainable-investing-as-the-new-normal

> "Market influencers, large multi-national asset managers and investment managers will best position themselves in the future by focusing on ESG investment strategies."

ESG WILL PLAY
a critical role in Real Estate Valuations as well.

BY BRIAN KRITER
Executive Managing Director, Valuation & Advisory

With the ongoing concern surrounding transmission of the COVID-19 virus, more sustainable office buildings with strong covenants are attracting tenants who are looking for the best air quality possible for their people. This demand enables these buildings to recover faster from both an occupancy and rent growth perspective and the strong covenants also help ensure bond-like cash flows for the building owner.

Conversely, Class B (or lower) buildings are becoming less competitive due to the costs associated with implementing advanced HVAC/filtration systems. And in certain situations, there's even a risk of material obsolescence—for instance, in the event regulatory requirements for enhanced energy efficiency standards, air quality, or carbon emission requirements aren't met.

Going forward, once credible benchmarking data on property performance becomes available and a standard set of ESG KPIs are established, sustainability features will play a more significant role in value considerations. Climate change data will also become more of a factor for a range of asset classes and valuers will need to reflect up-to-date information on environmental and physical risks. For example, areas that are more prone to flooding will present greater risks for supply chain disruptions for industrial, as will unplanned outages for data centers, etc.

RESILIENCE IS KEY

Sustainability features will have a much larger impact on global property values in the medium and long term. Currently, our valuation teams around the globe are working with our data teams to see how we can develop a "resilience" index which would score buildings on a number of ESG criteria to help rank the performance of the asset relative to its peer group. We also expect that there will be more third-party data available in the medium term for our teams to factor into our valuations.

social capital is critical to driving high yield returns, therefore ESG investment strategy must include evaluating how an organization is addressing social impacts. In August 2020, the SEC deemed human capital management as a significant material risk.[13]

Globally, we are seeing regulations coming up in an attempt to provide a clear measurement of the social factors in ESG. Germany has adopted a supply chain act (GSCA) that sets a new standard for human rights and environmental due diligence. This law will require companies to ensure human rights standards are in place at all tiers of their supply chains.[14] The UK now requires employers with a headcount greater than 250 to calculate, report, and publish specific figures related to their gender pay gap.[15] Another example includes Australia's Modern Slavery Act (NWS Act) which establishes mandatory reporting obligations related to the risk of modern slavery in the operations and supply chain of organizations.[16]

STAYING FOCUSED ON ESG INVESTMENT STRATEGIES IS CRITICAL

As these regulations and measurement methodologies continue to expand, we will see investors continue to take note of which organizations are demonstrating holistic ESG strategies. ESG risks will apply to all businesses and industries, though the relevance of the risks present will vary. Given their exposure and unique position as market influencers, large multi-national asset managers and investment managers will best position themselves in the future by focusing on ESG investment strategies. The global real estate market is experiencing the convergence of ESG, regulatory demands, occupant needs and increased market demands, creating the perfect opportunity to create long-term portfolio value and lasting positive environmental and social impact. If the listed demands are not addressed, we will start to see "stranded assets"—buildings that do not meet those ESG requirements of investors or occupiers.

The good news is that all industries are beginning to realize that ESG concerns are more urgent than ever. Integrating ESG investment strategies into business will prove to establish resiliency, create long-term value, and create a positive and lasting impact on the environment and our society as a whole.

13 https://aquicore.com/esg-guide-cre/
14 https://blog.assentcompliance.com/index.php/german-supply-chain-act-due-diligence/
15 https://www.cipd.co.uk/Images/gender-pay-gap-guide-march21_tcm18-91629.pdf
16 https://www.nortonrosefulbright.com/en/knowledge/publications/06a565ee/modern-slavery-act-what-businesses-in-australia-need-to-know

WHEN DIGITAL GOES PHYSICAL

Why Digitally Native Brands are Coming to You IRL (In Real Life)

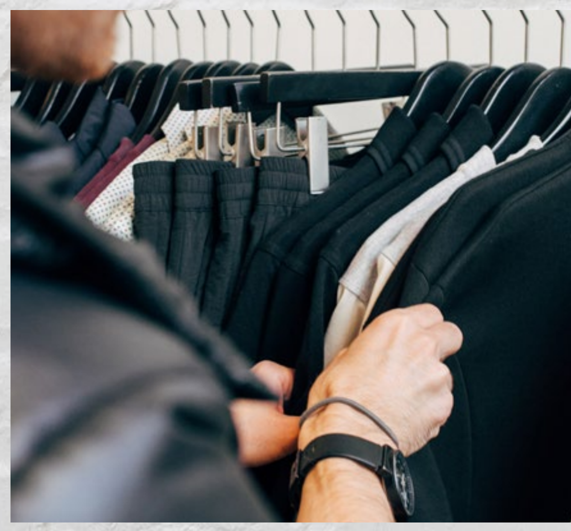
Warby Parker. Cotopaxi. Brilliant Earth. UNTUCKit.

You are likely familiar with some of these retailers. And odds are you know them thanks to Instagram, Facebook, Google ads or other digital media channels. That's because these companies were born online and built both a retail presence and strong customer following without physical stores.

Over the last decade, faced with fewer barriers to entry than traditional retailers—and thanks in large part to venture capital funding—these digitally native brands (DNBs) have grown dramatically, both the number of new entries to the market and as a share of e-commerce sales. In 2020, for example, digitally native brands sales in the U.S. were $27 billion, according to Statista. Forecasts exceed $38 billion for this year and more than $44.6 billion by 2023.[1] Part of the growth story is the spike in online shopping the pandemic created when consumers were faced with lockdowns and limited shopping alternatives. In the pandemic's first year, overall e-commerce sales increased 30% in the U.S., and in some countries, grew as much as 70% to 100%.[2] Like most online sellers, digitally native brands benefited from the trend.

1 https://www.statista.com/statistics/1251979/digitally-native-brand-d2c-ecommerce-sales/

2 https://unctad.org/news/global-e-commerce-jumps-267-trillion-covid-19-boosts-online-sales



Although you may have seen these retailers first via social media or online ads, recently you may have noticed a physical store. Vision and eyewear company Warby Parker was among the earliest digitally native brands to expand into physical locations in the U.S., opening its first shop in 2013, just three years after the company's launch. Today, most of Warby Parker's revenue comes from its more than 160 stores. The company added 35 locations in 2021, is targeting 40 more in 2022, and with a potential long-term footprint of 900 stores.[3] While other DNBs may not be rolling out stores on the same scale as Warby Parker, many have followed a similar path to physical locations. In fact, finding a mature online, direct-to-consumer retailer that *doesn't* have a store presence—or isn't planning on one—is becoming increasingly rare.

WHY MORE DIGITALLY NATIVE BRANDS ARE COMING TO A CORNER OR LIFESTYLE CENTER NEAR YOU

One reason is cost. While digitally native brands initially find niche customers online, many have struggled to acquire a broader set of customers. As more competitors have entered the market, digitally native brands have been vying for customers through the same digital marketing channels, which has compounded the challenge. Not only are these retailers trying to differentiate themselves in an often too-crowded field, the crowd itself has driven up digital marketing costs. That's made customer acquisition, a key financial health metric for retailers, too expensive in many cases. So, in a slight twist of irony, brands have turned to physical locations to grow their customer base, despite the costs of securing, building out and operating stores.

A second reason digitally native brands have expanded to brick-and-mortar locations is for the one-of-a-kind experience stores create for customers. Websites and social media can do many innovative things, but they can't offer a full sensory brand experience, a place where shoppers can truly interact with products and services. A visit to a store or showroom can be memorable and personalized in a way a visit to a website can never be. Take one simple example. Casper, which until 2019 only sold its mattresses online, created Dreamery by Casper, a nap room in one of its New York City locations. The concept provides an opportunity for store visitors to rest for 45 minutes on a Casper mattress in a private, comfortable and curated space. To enhance the experience, the retailer offers touches such as luxurious sleepwear, skincare products and meditation music. Unique experiences like this continue to represent a retail brand's best opportunity to differentiate itself. Long before the pandemic, consumers showed their affinity for experiential retail. Those interests haven't waned and that's why DNBs that have ventured into physical retail are primed to take advantage of a wave of pent-up demand for those experiences.

3 Warby Parker Q4 and full-year 2021 earnings report: https://investors.warbyparker.com/events-presentations/default.aspx

What is a digitally native brand (DNB)?

Digitally native brands are retailers that are conceived, built and developed online and offer customers an innovative product or service. DNBs manage most, if not all, of their business operations with digital technologies and can garner a wealth of intimate customer knowledge and data.

KAZUKO MORGAN
Executive Vice Chairman, Retail Brokerage
Cushman & Wakefield
kazuko.morgan@cushwake.com

MICHAEL O'NEILL
Vice Chairman, Retail Brokerage
Cushman & Wakefield
michael.oneill@cushwake.com

ALANNA LOEFFLER
Managing Director, Business Strategy, Americas Retail Services
Cushman & Wakefield
alanna.loeffler@cushwake.com

FREDDIE STEEL
Senior Analyst, London
Cushman & Wakefield
freddie.steel@cushwake.com

ANTOINE VANDAMME
Consultant, Retail Services, France
Cushman & Wakefield
antoine.vandamme@eur.cushwake.com

JOHN CROMBIE
Head of Retail, Canada
Cushman & Wakefield
john.crombie@cushwake.com

The good news for DNBs is that despite retail vacancies, landlords are still focused on finding the right tenant mix and providing unique and memorable shopping experiences that will drive foot traffic and consumer engagement.

What's more, digitally native brands typically have an advantage over traditional retailers in understanding their customers. Given their online roots, DNBs have rich customer data—everything from site user habits, to click patterns, to search queries. Armed with the insights from this data, they are well equipped to customize every aspect of the store experience, designing innovative layouts and creating unique moments that meet their customers' needs and expectations.

Other benefits underscore why expanding to physical locations makes good business sense for digitally native brands. On a per visit basis, for example, consumers are likely to spend more in-store than online. Further, according to a First Insight survey of shopping habits and purchase behavior, consumers also tend to make more impulse buys in-store than they do online.[4] For men, 78% said they are likely to add impulse items in-store while only 67% are likely add them when shopping online. For women, the story is largely the same—nearly 90% report they're likely to add an item shopping in a store versus 77% who said that they are likely to add items online.

4 https://www.firstinsight.com/white-papers-posts/the-state-of-consumer-spending-report

MAKING THE TRANSITION OFFLINE

Despite the advantages of physical locations, opening retail stores is not easy. Location, for example, is still critically important. The pandemic created significant retail vacancies, and all retailers, including digitally native brands, have one of the best opportunities in years to secure superior locations. But while there may be more options to assess, the best locations in the best neighborhoods, high streets, lifestyle centers and malls still come with a price tag. According to Cushman & Wakefield research, while retail rents overall are still recovering, in some of the most desired retail locations and properties, asking prices are approaching pre-pandemic levels—even exceeding those levels for select available spaces.

The good news for digitally native brands is that despite retail vacancies, landlords are still focused on finding the right tenant mix and providing unique and memorable shopping experiences that will drive foot traffic and consumer engagement. As such, many real estate owners are open to making creative deal structures or providing turnkey retail options to bring exciting new tenants into their properties. Many digitally native brands fit that profile.

EXPLORING CREATIVE ALTERNATIVES

Leasing traditional retail space isn't the only way to establish a store presence, and some digitally native brands are exploring these alternatives. Pop-up stores, for example, enable DNBs to experiment with physical formats with minimal risk. Another approach is a partnership model with established retailers like Costco, Nordstrom, Walmart and Target. Through this kind of arrangement, the online brand can take advantage of a tried-and-true store network and put products on the shelf without the capital investment associated with opening a store. The relationship is intended to benefit the host retailer too, as adding these digitally native brands can attract a new set of customers—often younger—who may not necessarily shop the store otherwise, ideally boosting foot traffic and generating more revenue.

Other digitally native brands are exploring retail-as-a-service (RaaS) platforms, which provide the physical space to brands in desirable locations and properties. RaaS providers enable the retailer to avoid long-term lease investments and other operating costs, like inventory management and hiring staff, so the brand can focus on immersive experiences for customers. Through a showrooming model, the retailer can feature best-selling products with fewer SKUs on the floor—a format that appeals to shoppers who prefer to interact with products first and then make purchases online.

CARPE DIEM

While the pandemic hit retail stores hard, in many places across the globe, there is a growing sense of retail rebirth. More consumers are back in force in physical shopping environments, seeking unique experiences. At the same time, online retail will continue to grow. Finding the right omnichannel strategy to both acquire customers and satisfy their changing preferences will continue to be a focus of all retailers, including digitally native brands. The retail industry will no doubt continue to innovate, but perhaps now more than any point in the last decade, digitally native brands have an opportunity to seize the moment and find new customers to delight in the offline world.

FROM ONLINE TO ON MAIN STREET

Founded in 2011, UNTUCKit is an apparel company known for men's shirts designed to be worn untucked. Beginning online and selling directly to consumers, the brand began contemplating its first brick-and-mortar store in 2015. Since then, UNTUCKit has targeted markets for expansion, utilizing existing e-commerce data as well as store performance metrics to identify top locations. Today, the retailer operates more than 80 stores in the U.S., Canada and the U.K. across malls, lifestyle centers and high streets.

Brilliant Earth is a jeweler is focused on ethically-sourced, sustainable and high-quality jewelry. The brand was founded online in 2005 and opened its first showroom in 2011. Now publicly traded, Brilliant Earth operates 18 showrooms across the U.S. and has served more 370,000 customers around the world through its e-commerce platform. Like its DNB peers, the retailer uses its customer-data from online and store sales to inform brick-and-mortar expansions.

THE RESILIENT OFFICE IN ASIA PACIFIC

DR. DOMINIC BROWN
Global Head of Demographic Insights
dominic.brown@cushwake.com

There has never been a time when workplace strategy has been so extensively discussed while so closely scrutinized.

Early in the pandemic, many questioned the role of the office and whether the unforeseen global experiment in remote working would render the office irrelevant. Now, as we find ourselves in the third year of a global pandemic, we are gaining a greater sense of the long-term impact.

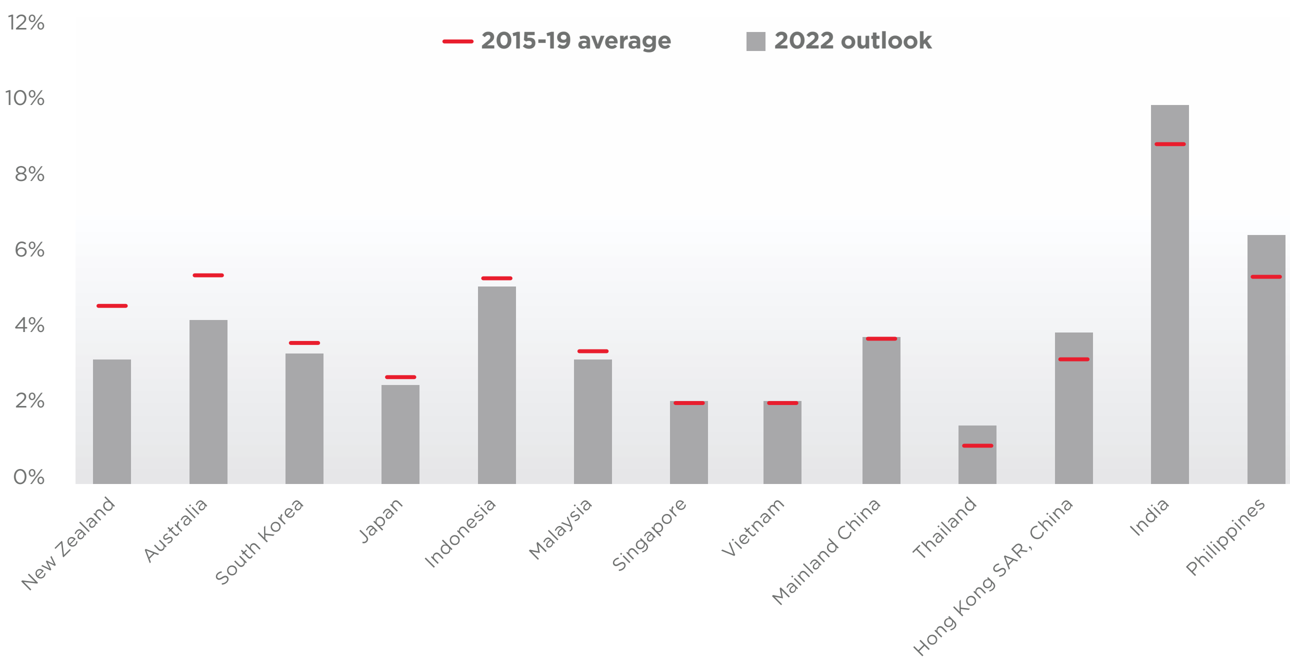
With hybrid working seemingly entrenched in work-life across most of the globe, Asia Pacific isn't seeing the same response, with much of its workforce instead heading back into the office. In fact, the Asia Pacific office market has shown continued resilience throughout this pandemic, being the only region to record consecutive quarters of positive net absorption since the virus' onset, and the forecast for office demand continues to look positive largely due to the three following factors: growth in office-based employment, weaker adoption of flexible working practices and the vital role the office continues to fulfill.

1 GROWTH IN OFFICE-BASED EMPLOYMENT

Unemployment forecasts show that labor markets are expected to tighten across the region, with most registering unemployment rates at or below their respective five-year averages (Figure 1). However, aggregate figures of unemployment hide finer details highlighted in the 'K-shaped' recovery that has already revealed weakness in retail, tourism and service-oriented sectors compared to tight labor conditions in professional services, IT, finance and manufacturing. There is an increasing mismatch between required business skills and the available labor force which has intensified the war for talent. Beyond this, evidence from a global study shows that 41% of the workforce is considering changing jobs within the next 12 months—during the so-called 'Great Resignation.' While this originated in the U.S., there is mounting evidence that it will also sweep through parts of Asia Pacific. Fundamentally, the key message here is that corporate occupiers should prioritize talent retention and attraction in the immediate term as well as enhancing productivity through investment in technology and real estate. Unemployment forecasts out to 2025 suggest that unemployment will stabilize around the same levels forecasted towards the end of 2022.

Furthermore, office employment across Asia Pacific is forecast to grow at more than twice the rate of total employment at 2.1% per annum and 0.8% per annum respectively. The mismatch is especially stark in mainland China as employment moves up the value chain and greater proportions of workers enter office-based employment. In absolute terms, office-based employment is forecast to increase by more than 12 million workers by the end of 2025, with the majority accounted for by growth in mainland China and India.

FIGURE 1: UNEMPLOYMENT RATE OUTLOOK, END-2022 COMPARED TO A 5-YEAR AVERAGE



Source: Moody's; Deloitte Access Economics; Cushman & Wakefield

2 WEAKER ADOPTION OF FLEXIBLE WORKING PRACTICES IN ASIA PACIFIC

There has never been a time when workplace strategy has been so extensively discussed while so closely scrutinized. The global experiment of working from home during lockdowns has accelerated the adoption of greater flexible working practices for many corporations. However, uncertainty reigns regarding the optimal blend of in-office and remote working.

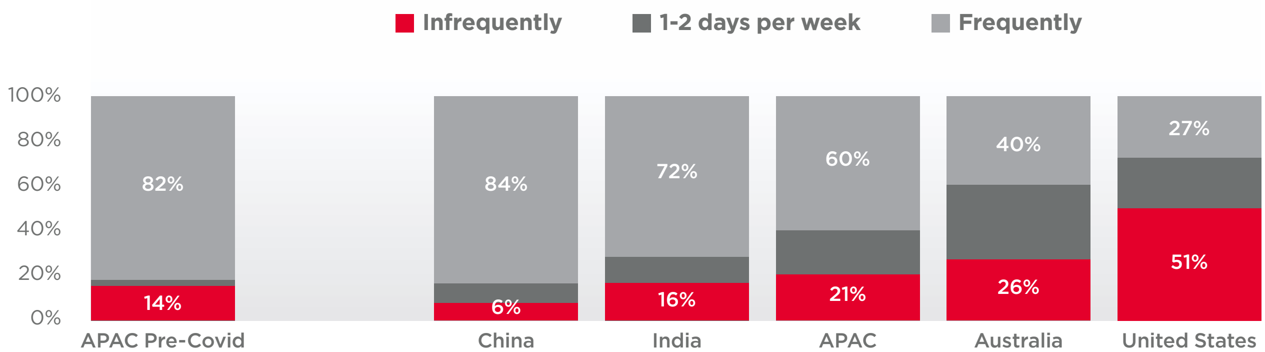
Analysis of data from Cushman & Wakefield's bespoke workplace strategy tool, Experience per Square Foot™ (XSF), has shown a practically universal desire to work more flexibly post-pandemic, but significant variations exist across the region (Figure 2). At one end of the spectrum, employees in mainland China and India still prefer to spend most of their work time in the office, while in Australia there is a greater desire to adopt a hybrid model that incorporates more remote working. The data highlights that the most important element is to allow employees the freedom to choose where they wish to work. If employers can then inspire their staff back into the office, not only does this provide a boost to employee experience but also drives significantly higher engagement outcomes.

Globally, because employees expect greater choice of where to work, office spaces will be increasingly designed with a greater focus on collaborative space. But the shift in Asia Pacific is likely to be more limited. Fundamentally, this is due to a greater proportion of employees spending more time in the office and therefore requiring space for focused work. As a result, occupiers will likely turn to landlords to provide collaborative space and wellness activities elsewhere within the building for group use.

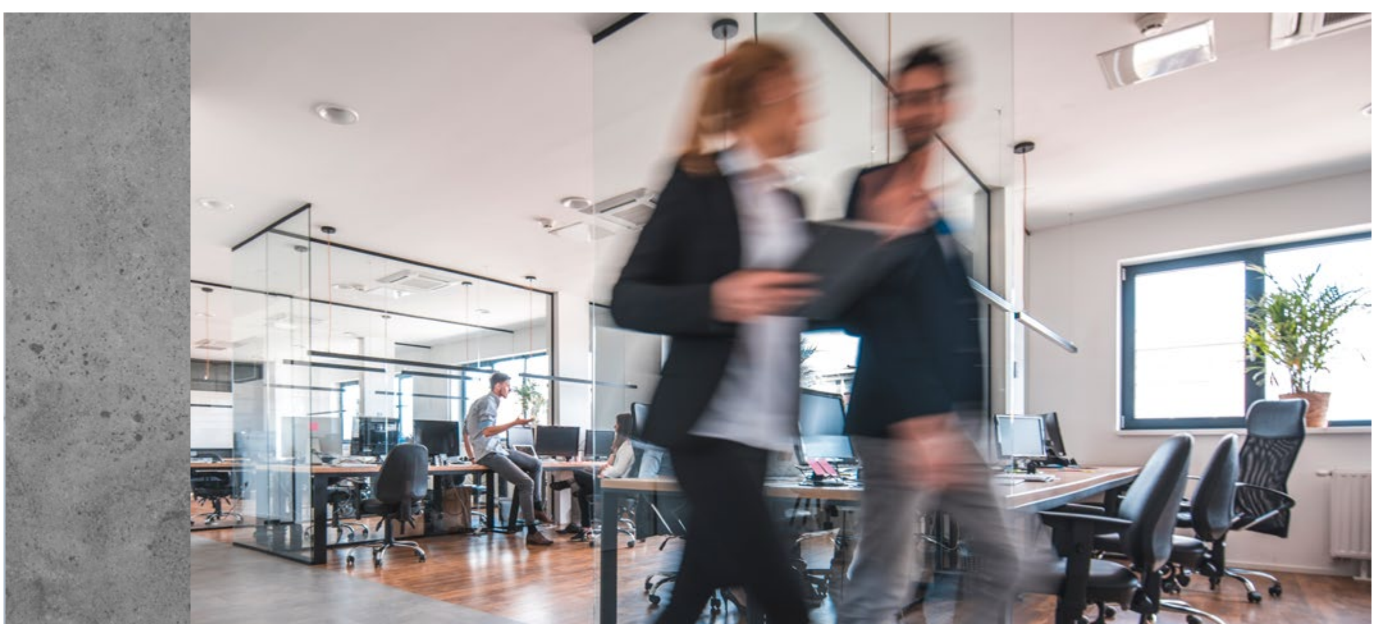
Office Space Allocation Forecast (Approximate)

Region	Focused work	Collaborative work	Support activities
APAC	50%	30% - 40%	10% - 20%
U.S. & EMEA	30%	50%	20%

FIGURE 2: DESIRED OFFICE ATTENDANCE POST-COVID FOR SELECTED COUNTRIES



Source: Experience per Square Foot™; Cushman & Wakefield



3 THE OFFICE CONTINUES TO FULFILL A VITAL ROLE

The office continues to play a vital role in the workplace, so the key is understanding what is needed from the office and by whom. Throughout the pandemic, workers have shown that they can continue to be productive when working from home. However, this has come at the expense of other aspects of workplace experience. For example, employees who joined their company within the previous year are doing well, outscoring longer-tenured colleagues on over 70% of XSF measures, but remote work has been a drag on personal interaction—especially when it comes to building professional networks and bonding with colleagues.[1] In contrast, mid-tenured employees (3-5 years tenure) appear to be struggling the most with working from home and see the greatest improvements with more frequent office attendance.[2]

The challenge for landlords and occupiers is how to inspire employees to choose the office. In simple terms, it will mean creating great spaces and places—placemaking—as employees will expect and require more than an A-grade building with great views. The office is an essential tool in retaining and recruiting talent and communicates a company's brand and culture. Amenities are now key differentiators, evolving into spaces for tenants to work, socialize and connect with colleagues. Creating communities is now fundamental to the tenant experience and at the heart of a thriving precinct, building or workplace. Consequently, we see communities being created through wellness spaces, tenant apps, partnerships and events.

1 cushmanwakefield.com/en/united-states/insights/us-articles/new-employees-doing-surprising-well-in-hybrid-workplace
2 cushmanwakefield.com/en/united-states/insights/us-articles/the-largest-part-of-your-workforce-may-be-struggling-the-most

REMARKABLE RESILIENCE

The Asia Pacific office market has shown continued resilience, being the only region to record consecutive quarters of positive net absorption since the onset of the pandemic. Although the near-term economic outlook has become a little more uncertain since the start of the year, office demand is expected to remain robust. Office demand for the full year in 2021 across Asia Pacific's top 25 markets rebounded to 64 million square feet (msf), which is 60% above 2020 levels. This is due to record demand in Tier 1 markets in mainland China. Demand is expected to increase further to 72 msf—reflective of a stronger recovery and office employment growth across the entire region—before returning to pre-pandemic levels of around 83 msf in 2023. Projected employment growth and the transition to a higher proportion of office-based employment are forecast to more than offset the underlying headwinds from remote working.

With corporates placing a greater emphasis on building quality and amenities, the nature of demand will shift. Inevitably, this will favor newer, higher-grade assets with lower-grade assets, especially those for which refurbishment is financially unviable, potentially becoming obsolete. To an extent, this is to Asia Pacific's advantage with its comparatively young average prime building age. However, risk aversion and supply chain disruptions have meant that building supply pipelines have been pared back with new supply in 2022-23 being below the 2015-19 average in 60% of markets tracked across the region. Against this backdrop, the office in Asia Pacific is far from dead and corporate occupiers will need to be increasingly proactive in deciding their space requirements in light of increasing demand for quality space at a time of more limited supply.

DAVID BITNER
Global Head of Capital Markets Insights
Cushman & Wakefield
david.bitner@cushwake.com

JACOB ALBERS
Research Manager, Global Think Tank
Cushman & Wakefield
jacob.albers@cushwake.com

PAMELA VAN OS
Senior Vice President, Agency Loan Production
Greystone
pamela.vanos@greyco.com

C. LAMAR SEATS
Senior Vice President, FHA Loan Production
Greystone
clamar.seats@greyco.com

HOW GENERATION Z IS FUELING THE DEMAND FOR MULTIFAMILY

Since the start of the pandemic in early 2020, multifamily sales have comprised

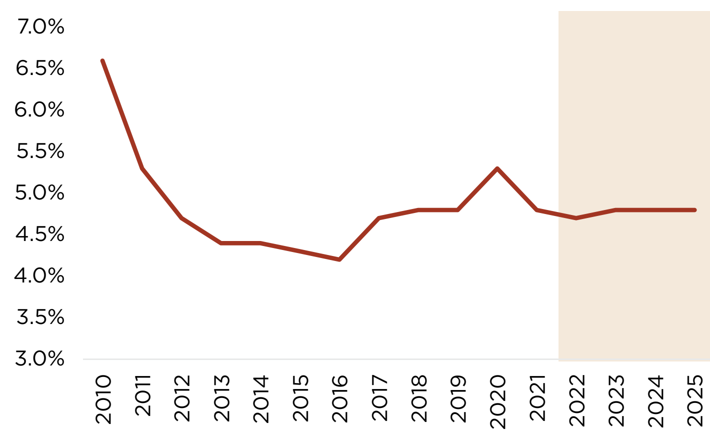
42% CRE TRANSITION ACTIVITY IN THE INVESTMENT SALES MARKET.

MULTIFAMILY BOOM UNDERWAY

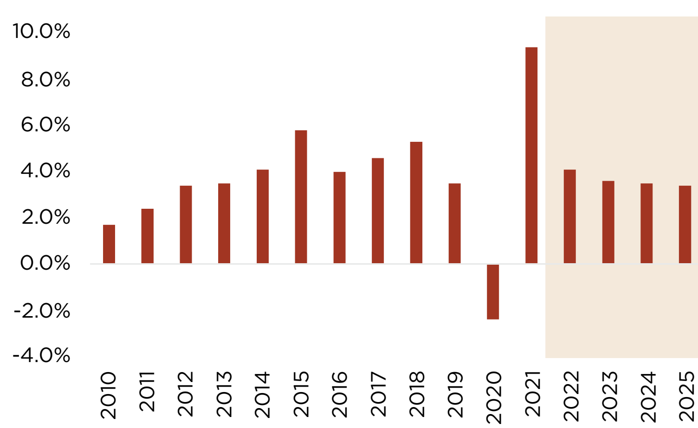
Multifamily has recently been dubbed "the darling" of real estate investors. Take one look at the investment sales data in the U.S. and it's no wonder this asset class has received this moniker. Since the start of the pandemic in early 2020, multifamily sales have comprised 42% of all CRE transition activity in the investment sales market—up from 35% in 2019. And the dollar increase has been even more impressive with multifamily sales up 75% from 2019, totaling $320 billion. As a result, these investors have been rewarded with strong returns, second only to the industrial sector.

Having a strong foundation in supply-demand fundamentals has been key to multifamily investment. U.S. household formation rebounded strongly in 2021 to 1.3 million and is projected to increase further to a peak level of 1.5 million in 2023. The rental sector could absorb a higher than usual share of this new demand because of home affordability challenges and low for-sale housing inventory. Accordingly, multifamily market forecasts point to continued low vacancies and solid rent growth in the coming years, especially in fast-growing Sunbelt markets.

U.S. MULTIFAMILY VACANCY



EFFECTIVE U.S. MULTIFAMILY RENT GROWTH, YOY%

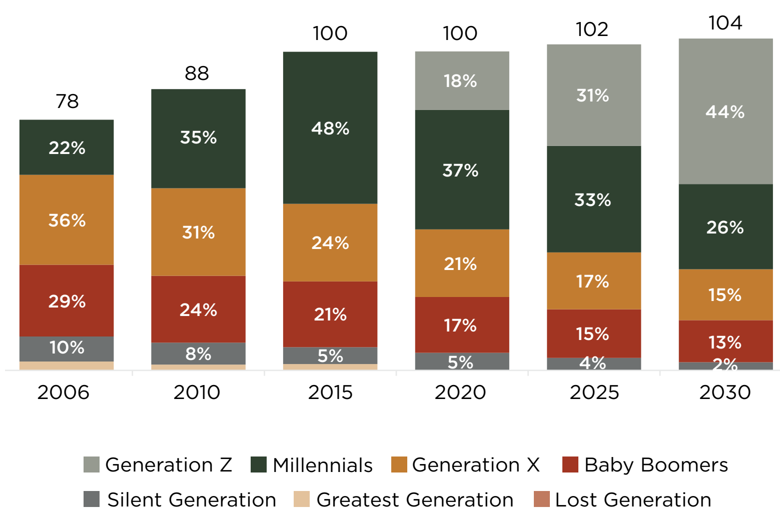


Source: REIS

GENERATION Z WILL INCREASINGLY DRIVE THE MULTIFAMILY MARKET

As the multifamily market undergoes a demographic transition, Generation Z (those born between 1997 and 2012) will quickly supplant Millennials as the largest renter cohort. We estimate that there were 100 million renters in 2015, of which 48% were Millennials. By 2020, the Millennial share had already fallen to 37% as Millennials have increasingly transitioned to homeownership while Generation Z rapidly grew to 18% of renters. This is just the beginning. By 2025, Millennials and Generation Z will represent the same percentage of renters and by 2030, Generation Z will be kings of the "renterverse." For landlords, the rental market is set to become more competitive by the mid-2020s as demographics suggest that the renter population will grow at a slower pace in the next 10 years compared to the 2006-15 period—at least absent significant further increases in renter propensity across age groups or major accelerations in immigration. It follows that multifamily owners and operators need to be increasingly focused on attracting and competing for this new generation of renters.

ESTIMATED RENTER POPULATION BY GENERATION IN THE U.S.



WHAT GENERATION Z WANTS

A number of factors are shaping Generation Z's preferences on home renting versus homeowning. According to a survey of Generation Z by Freddie Mac, despite 82% of respondents desiring to eventually own a home, Generation Z overwhelmingly believes that home prices (92%) and down payment costs (82%) pose significant hurdles to becoming a homeowner. At the same time, respondents also note the benefits of renting: 68% believe that renting is more flexible than ownership and 63% believe that renting is less stressful than ownership.[1]

1 http://www.freddiemac.com/research/consumer-research/20191120_gen_z_ambitious_yet_realistic.page

Another reason Generation Z is opting to rent over buying is they are choosing to live alone more often than Millennials. The Organization for Economic Cooperation and Development (OECD) projects that the number of single-person households will increase by 35% from 2000 to 2025.[2] Renting allows this demographic more flexibility, while homeownership is more cost prohibitive for a single income household.

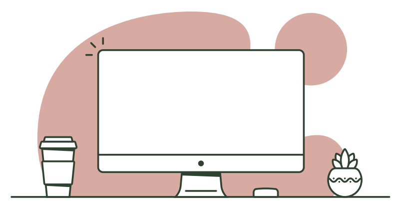
While the market is only beginning to understand Generation Z's preferences as renters, evidence suggests that their preferences are very similar to Millennials' preferences. For example, a 2020 RentCafe Survey found that Generation Z and Millennial renters reported similar responses—albeit with some nuanced differences—across a range of dimensions, including the importance of technology, amenity preferences and apartment search process.[3]

Generation Z is the first digitally native generation, so it's not surprising that they value high-speed internet not only more than any other amenity, but more than any other cohort. They also use Google more intensively in their search process and are savvier in discerning quality through online reviews, social media presence and targeted advertisements. Because Generation Z is a digital generation, best-in-class practices in media and marketing will quickly become the new normal, including A/B testing marketing campaigns and partnerships with local businesses that align with the lifestyle and brand of the asset.[4] The more successful multifamily owners will likely focus on search engine optimization, buy paid advertising across social media channels, including TikTok and Instagram, as well as actively monitor their online reputations.

Millennials have garnered a reputation as a particularly urban generation—or at least one that has had a large effect on urban spaces. While many members of Generation Z will live in urban cores in coming years, there are some indications that Generation Z is more attracted to amenitized suburban living than their Millennial predecessors. According to a survey by the National Apartment Association, 23% of Generation Z renters intended to live in cities after graduation while 44% preferred "vibrant suburbs" and 29% preferred "quiet suburbs."[5] This could potentially add further impetus to the ongoing trend of suburban multifamily outperformance.

SUSTAINABILITY IS KEY FOR GENERATION Z

Sustainability is a major focus of the CRE industry. But while much of the discussion to date is on the office sector, where tenants and investors are increasingly requiring sustainable practices, multifamily is slightly behind the curve (see **"Green is Good"**). For example, LEED-certified properties make up just 1.4% of institutional-grade units and still less of the overall market.



Generation Z is the first digitally native generation, so it's not surprising that they value high-speed internet not only more than any other amenity, but more than any other cohort.

2 https://www.oecd.org/futures/49093502.pdf

3 https://www.rentcafe.com/blog/rental-market/market-snapshots/generation-z-most-techy-research-focused-instagram-loving-generation-renters/

4 A/B testing is when two or more marketing approaches are used on different segments of the customer base at the same time and data is collected on which performed better. Digital advertising has made rapid A/B testing much easier to deploy and test compared to traditional print media.

5 https://www.naahq.org/news-publications/complexities-digital-generation-insights-naa-satisfacts-apartmentratings-survey

Sustainability is likely to become more salient, however, as Generation Z becomes a larger segment of renters. Various surveys show that Generation Z is more concerned with environmental issues compared to earlier generations, though this was already a trend with younger Millennials. In fact, in a recent Pew survey, 37% of Generation Z said that addressing climate change was their top concern.[6] While location, price and building quality will still largely determine Generation Z's rental decisions, sustainability at the building and unit-level will offer ways of differentiating rental offerings. As Generation Z grows older and wealthier, they will have more budget to allocate towards their environmental values, so sustainability will remain key.

EMBRACING GENERATION Z

Generation Z pursues unique and personalized experiences—they know what they want and expect. Brands and companies that market to this generation have to understand their needs—and that includes multifamily owners. As the multifamily sector and "renterverse" continue to grow, it's more important than ever for owners to keep these preferences in mind as Generation Z's influence will only continue to grow.

6 https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/

About Cushman & Wakefield

Cushman & Wakefield (NYSE: CWK) is a leading global real estate services firm that delivers exceptional value for real estate occupiers and owners. Cushman & Wakefield is among the largest real estate services firms with approximately 50,000 employees in over 400 offices and approximately 60 countries. In 2021, the firm had revenue of $9.4 billion across core services of property, facilities and project management, leasing, capital markets, and valuation and other services. To learn more, visit www.cushmanwakefield.com or follow @CushWake on Twitter.