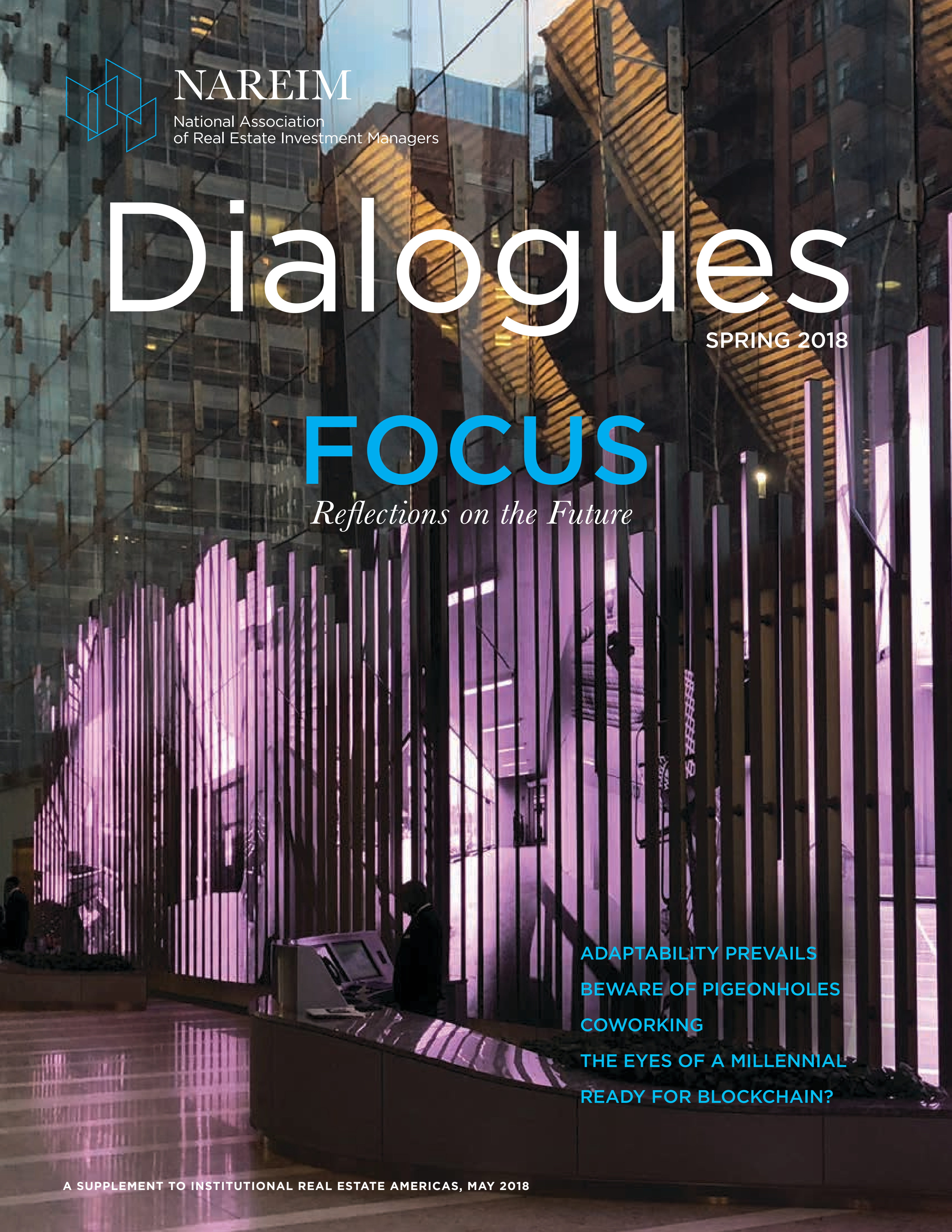

NAREIM

National Association of Real Estate Investment Managers

Dialogues

SPRING 2018

FOCUS

Reflections on the Future

ADAPTABILITY PREVAILS

BEWARE OF PIGEONHOLES

COWORKING

THE EYES OF A MILLENNIAL

READY FOR BLOCKCHAIN?

A SUPPLEMENT TO INSTITUTIONAL REAL ESTATE AMERICAS, MAY 2018

IN MEMORIAM

Jeffrey A. Barclay

I first met Jeff almost seven years ago when he interviewed me for a job. One thing struck me right away: he asked a lot of questions. They were good questions: provocative, in-depth, and searching. Despite his obvious brilliance, the questions he asked were not used to confirm what he knew, but to learn what he didn't know. Which of course meant that he listened – very closely and critically – to whatever I managed to say. In the gentlest way, even in that first meeting, he asked for more; more insight, more understanding, and more truth.

Jeff's questions impacted everyone around him and allowed many of us to improve. As Chair of the Board of NAREIM from 2012 to 2014, he never accepted "good enough". He was a true leader in that he always looked for "better". Our organization blossomed as a result.

Jeff was a life-long student and mentor, who always gave of himself. He welcomed discussion and was unafraid of disagreement. He cared.

Throughout his career as a Managing Director at Goldman Sachs Asset Management, Executive Officer at Clarion Partners, in various roles at other real estate firms, as an active participant in ULI, PREA, and NAREIM, and as an Adjunct Professor at Columbia Business School, he had a significant and important impact on the institutional real estate business – and on many of us that worked with him.

The news of Jeff's death in March of this year was a shock to everyone who knew him – and not only because he was too young and vital to leave us so early. His contributions, as a colleague, as a leader, as a teacher, and as a human being were supposed to continue for many more years. In a world where image seems to eclipse substance, where success is seen as a zero-sum enterprise, and listening is undervalued, his deep questioning is needed now more than ever.

Jeff believed deeply in supporting and mentoring the next generation. One of his early ideas as chair was to establish a NAREIM Fellowship Program that each year invites 12 students nominated by university real estate programs all over the country to participate in our Executive Officer Meetings. The program continues to this day, and many of the fellows have gone on to exciting careers in our industry. That is why NAREIM is establishing ***The Jeff Barclay Memorial Scholarship*** to give students the opportunity to ask more questions. If you are interested in contributing to that scholarship fund, please reach out to us.

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2018 MEETING SCHEDULE

APRIL 23
CHICAGO
INDUSTRY ICON DINNER WITH LYNN THURBER

APRIL 24
CHICAGO
REALCOMM REAL ESTATE INVESTMENT MANAGEMENT TECH FORUM

APRIL 24
CHICAGO
D3: DATA DEEP DIVE MEETING

MAY 10
CHICAGO
20/20 INVESTOR SUMMIT

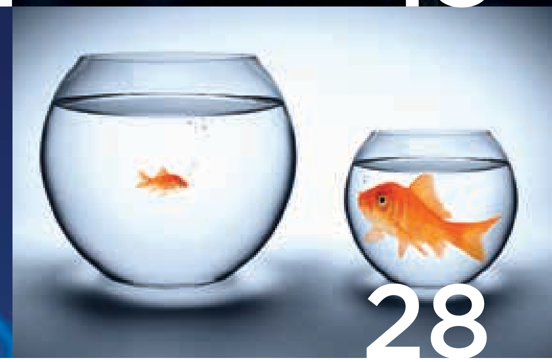
SEPTEMBER 26
NASHVILLE
A&E: ARCHITECTURE & ENGINEERING

OCTOBER 23
CHICAGO
EO: EXECUTIVE OFFICER FALL MEETING

NOVEMBER 13
CHICAGO
L&C: LEGAL & COMPLIANCE

DECEMBER 4
CHICAGO
C&I: CAPITAL RAISING & INVESTOR RELATIONS

> To register for these meetings, go to www.nareim.org



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SPRING 2018

When Reality Overtakes Theory

Climate Risk and Fiduciary Responsibility

Jack Davis, *Director of RE Tech Advisors*

On February 13, Director of National Intelligence Dan Coates gave written testimony to Congress outlining his assessment of risks facing the United States in 2018[1]. Ranging across familiar topics such as weapons of mass destruction and terrorism, Secretary Coates also highlighted less obvious issues including cybersecurity, disruptive technology, and climate change. >

Noting that the past 115 years have been the warmest period in the history of modern civilization, and that the recent few years have been the warmest on record, the testimony concludes that "the impacts of the long-term trends toward a warming climate...are likely to fuel economic and social discontent...through 2018."

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Similarly, Defense Secretary James Mattis testified to Congress on February 6th about the challenges to the military when evaluating climate change. When asked about environmental risks and dealing with extreme weather, Mattis stated that climate change is an integral part of military planning, reflecting "This is a normal part of what the military does, and under any strategy, it is part and parcel."[2]

Dan Coates or James Mattis may not be the first people that come to mind when thinking about real estate investing. But their role in the U.S. government parallels a key aspect of investment management – that of a fiduciary. Like a fiduciary, the intelligence community and military are assessing risks, understanding exposures, modeling scenarios, and developing contingency plans. Coates and Mattis don't have the luxury or time to debate the ramifications or causes of climate change. Politics aside, they are de facto fiduciaries acting in the public's stead. Like any institution that acts on behalf of stakeholders, faces on the ground realities, and is tasked with delivering real world results, they know they will be held accountable.

And take note of the time horizon of Dan Coates statement above. He is not forecasting risks 10 years out, or even 5 years. Secretary Coates' assessment anticipates real world risks this year.

A RECORD YEAR FOR ECONOMIC LOSSES

According to the National Oceanic and Atmospheric Administration (NOAA), 2017 marked a record year, having the most climate and weather-related events causing greater than $1 billion in damages.[3] Hurricanes Harvey and Irma generated most of the attention, but real economic impacts and property damages were felt across the United States, from California and Western wildfires, drought in the upper mid-west, and large-scale storms, tornados, and hail events.

While we can't draw cause and effect conclusions between climate change and any single event, the science does encourage a probabilistic view and signals a rapidly increasing risk profile. Simply put, we can expect weather-related events to be more frequent and more intense.

Extending one's outlook past direct property damages to secondary effects such as regional economic disruption, social discontent, and loss of productivity[4] – the challenge for investment managers and fiduciaries becomes daunting.

NEW MARKET SIGNALS, BENCHMARKS, AND EXPECTATIONS

Stakeholders across the investment landscape have begun to ask pointed questions about the risks associated with climate change – and the obligations of fiduciaries to asses and disclose exposures. In 2015 the United Nations Principles of Responsible Investing (UN PRI) initiative released its report Fiduciary Duty in the 21st Century. The report strongly asserted that fiduciary duty does not prohibit the consideration of climate risk and other factors in investment decision making, further stating that "Failing to consider long-term investment value drivers, which include environmental, social and governance issues, in investment practice is a failure of fiduciary duty." In June of 2017, the work of the influential Task Force on Climate-related Financial Disclosures – chaired by Michael Bloomberg with support from Mark Carney, Governor of the Bank of England – was summarized in its final report. Among many recommendations, the Task Force strongly advocates that companies and managers actively inform shareholders and investors with information about the risks, opportunities, and impacts posed by climate change.[5]

In November, Moody's Investors Service announced its intention to place greater weight on climate risk issues when evaluating the credit worthiness of state and local governments.[6] Also in 2017, CDP launched Climetrics, a ranking methodology for equity investments that "grades" investment funds on their exposure to climate impacts. Specific to real estate, GRESB is launching its resilience module as part of the 2018 survey, and both this new module and the full survey have multiple questions and metrics associated with climate risk evaluation, mitigation, and recovery.

Given these and other initiatives, investment managers can expect increasing pressure to engage with stakeholders on climate risk issues, have a meaningful strategy in place, and be evaluated accordingly.

[1] https://www.dni.gov/files/documents/Newsroom/Testimonies/2018-ATA---Unclassified-SSCI.pdf

[2] https://www.vox.com/energy-and-environment/2018/2/15/17016952/climate-change-security-threat-cia

[3] https://www.climate.gov/news-features/blogs/beyond-data/2017-us-billion-dollar-weather-and-climate-disasters-historic-year

[4] https://www.nytimes.com/2017/11/03/climate/climate-change-impacts.html

[5] https://www.natlawreview.com/article/2018-rising-trends-corporate-climate-disclosures

[6] https://www.nytimes.com/2017/12/13/opinion/climate-change-credit.html

FIDUCIARY FIRST STEPS…

The real estate implications of climate change are multi-faceted and challenge many organizational, cultural, and economic assumptions – specifically raising questions on due diligence and acquisitions, portfolio allocation, market exposures, property operations, and business continuity. Recognizing the accelerating number of climate events, growing investor concern, and the practicalities of their fiduciary duty, many investment managers are beginning to examine their decision making and risk mitigation processes.

At Bentall Kennedy, the sustainability team began examining climate issues in 2013, commissioning academic research that laid the groundwork for factoring climate implications into its corporate strategies. Bentall Kennedy went on to establish a list of key hazards related to climate risk aimed at assessing vulnerabilities of its property portfolio. Giselle Gagnon, Senior Vice President at Bentall Kennedy describes the resulting "ForeverReady" framework, centered on the concepts of readiness and adaptation: "In the short term, each property needs to understand and be aware of their unique, locational circumstances and develop appropriate preparedness plans." Looking towards the long-term and adaptation, the team at Bentall Kennedy has generated new discussions on topics ranging from building structural changes to chiller replacements to accommodate different operating conditions 20-30 years from now based on available science. Giselle concedes that a challenge lies in bringing the various stakeholders together for meaningful conversations. As an example: "One of the opportunities is understanding the readiness of cities. How prepared are they today and how will their capabilities relate to our real estate investments in the future? We would like to understand that piece of the puzzle better."

A similar initiative has taken root at Principal Real Estate Investors, relates Jennifer McConkey, Senior Director of Operations and Sustainability: "In 2017 we facilitated a strategic planning workshop with our Responsible Property Investing (RPI) team to map out strategies for the next several years. Climate risk issues arose multiple times – particularly concerning due diligence." The Principal RPI team recognized the need to enhance how they evaluate climate risk and resilience factors in the acquisitions process, from the property conditions assessment to the investment committee. Principal began drafting and piloting some new due diligence protocols in late 2017, and Jennifer expects more progress to occur in 2018: "We want to make sure we get this right, develop a process to uncover what is material when it comes to climate risk, and ultimately hold more meaningful discussions with our investors on the implications."

National Real Estate Advisors has focused on market and portfolio allocation questions, as described in its June 2017 publication "Climate change and commercial real estate – How resilient is your portfolio?" The paper outlines National's efforts to benchmark its portfolio risk exposure to markets highly susceptible to climate influenced events such as hurricanes, inland flooding, and tornados. Darob Malek-Madani, Head of Research and Analysis at National, summarized the project's origins, stating "It started with some internal discussions about Miami and its changing risk profile. We had a lot of anecdotes, but we wanted to put numbers to it." To do so, the National team developed a risk analysis tool built from NCREIF and CoStar data, created a "model" portfolio to compare market exposures, and assessed if National was over-weighted in some geographies from a climate risk perspective.

The results have proven influential, shaping decisions and policies within National Real Estate Advisors. Maryellen Dolan, Director of Portfolio and Asset Management, shared her perspective "The tool is really supportive of the decision-making process, informing our views on markets, new investments, and existing assets." Stakeholders have reacted positively, and early discussions with investors and consultants lead Maryellen to believe engagement on these questions will accelerate, perhaps becoming a point of competitive distinction: "There seems to be more focus on how to separate investment managers from each other, and risk mitigation tools and quantifiable metrics help us in that regard."

STRANDED ASSETS, COMPETITIVE REALITIES, AND MUSICAL CHAIRS?

Each of these organizations – Bentall Kennedy, Principal Real Estate Investors, National Real Estate Advisors, and many others – has started to internalize climate risk into their thinking and decision-making. Like Director Coates or General Mattis, each approaches the issue from a different perspective, given the unique needs of their stakeholders. Further, the investment community has a growing appetite for dialogue and transparency on climate risks, at a time of significant consolidation in the investment management community.

The concept of stranded assets – where an investment becomes obsolete or non-performing due to changing market conditions – increasingly applies to issues of climate risk. But what about the "stranded asset manager"? Will advisors and fiduciaries who are unwilling or unable to guide investors through climate risks find themselves at a competitive disadvantage?

Investment performance will ultimately drive that discussion. But the fiduciary reality emerging is that climate risk factors can influence financial results today, within typical real estate hold periods.

At some point, the music will stop, and investors will start asking questions. When this occurs, who will be left standing, or stranded without a strategy in place?

ADAPTABILITY PREVAILS. IN DESIGN. IN INVESTMENTS. IN LIFE.

Gary Cohn, *Executive Vice President, Marx|Okubo*

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change."
–Charles Darwin

A fallacy of many of today's intelligent sustainable buildings is the inability of so-called intelligent buildings' capacities to adapt to changing societal trends and technologies. A school of thinking is emerging which posits that the best building designs for the long term are ones which allow for adaptation over time.

Adaptability is the feature which allows a thing to change to fit a new use or requirement. An expectation of change and the need for an adaptation to that change should be the foundation of any design concept for a building which is planned to have a long lifespan—and be a profitable and wise investment. Buildings tend to be thought of as anchored in place and time. While buildings generally do not move, it is clear that if they are to exist well into the future, they must be thoughtful about the times, trends and the changing demands of the occupants.

Though buildings of the past had perhaps a somewhat easy task in responding to the technological changes over time, the pace of change in the last few decades has really challenged our notion of adaption. It would be overconfident to think we can predict changes. But it holds true that buildings with "good bones" can continue to change and adapt, while those without will become the UN-sustainable content of landfills.

ADAPTIVE DESIGN IS SUSTAINABLE DESIGN

Sustainability is a topic that arises in real estate conversations frequently these days. No matter where you stand on the politics of climate change, the idea of using MORE energy and resources when better options are available is clearly outdated thinking. No matter how sustainable a project is, the construction of a structure takes a tremendous amount of resources, both physical and financial.

The most sustainable new building is the one that does not have to be built. Buildings that are poorly designed with respect to adaptability and basic design principles are more likely to be replaced before they have reached the end of their expected useful life than structures that allow for change and evolution. Great examples are some of the buildings and homes in the 1970s-80s when tech really started to propel changes—it played out in limited-thinking at a time perhaps when things felt so new and grandiose, people really couldn't imagine what could come next. Nor did they even think about how to build for that. It was all about what we can show off today as the latest and greatest feature. That collective arrogance has become a hindrance to reinventing these assets.

CRYSTAL BALL, ANYONE?

Looking back over the last 20-30 years seems like a view into a whole new era when it comes to technology and the pace of change. The buildings designed in the 1940s or 1950s were, for the most part, considered acceptable to users in the 1990s. The styles may have evolved, but the technology driving buildings had largely been intact for decades. And no one then could anticipate the impending rapid aging of investments that was just around the corner. The internet and its widespread access to a range of technology platforms has truly changed everything.

It is obviously easier for a building to change interior paint colors and finishes as they become aesthetically dated than it is for a building to change core technology. But predicting what that new technology will be is not as easy as it was in the past. Think about space dedicated in buildings of the past to telephone booths or drinking fountains, both of which are disappearing from modern designs—not to mention the very-specific built-ins for TVs and audio systems that quickly become irrelevant. What elements of today's designs will be unnecessary or sabotage the future use of a structure?

We don't know what the technologies of the future will bring to us. Will senior housing change as we are better able to monitor and assist our aging family members through cameras and sensors that alert us to changes in vital signs? Site planning on all kinds of projects will be changed by technology. How will we move around our cities? Will we use autonomous vehicles? Will those vehicles be electric powered? How will the ever-increasing list of devices we all carry change the plug loads and associated electrical systems in our buildings? Conversely, will there maybe even be a backlash from technology overload and the focus becomes all about spaces where people connect—to other people?

BUILDING COMMUNITY LEGACIES

Recently, here at Marx|Okubo, we encountered a project experience that highlights the importance of thinking ahead in a way that really stretches the imagination. A client that is a religious organization (which many might consider as low-tech in nature) challenged us to help them build a structure which would not only be standing—but viable and sustainable—when it is 300 years old. Quickly the discussion moved from the things that won't be different in 2318, such as the orientation of the sun and awareness of expected seismic activity to the things that were almost imponderable, like what technologies will be available to monitor and manage the structure's day-to-day operations and what will energy cost. In the end, the most incontrovertible fact is that adaptability and the ease of integration for new systems was key to any model of success. Our advice has been to consider the long term with respect to the durability of material selections, open system architecture and flexibility of energy delivery methods.

LOS ANGELES HOTEL: NEW ERA, NEW ELECTRICAL

Another example we encountered was a recent project where adaptability planning would have been desirable is with a hotel project under construction that we are currently monitoring in the Los Angeles area. This hip, urban hotel was able to increase room count successfully after the start of construction through an amended agreement with the city. Although this improved the future facilities revenues, the project developers ran into trouble with the portion of the amended agreement that called for a higher electric vehicle parking stall count. The added electrical panels and other features to accommodate the higher loads became problematic because of a lack of space in electrical rooms and difficulty and associated cost of running conduit to the future stall locations. Cutting things too close in initial design can leave little room for future space planning adjustments that can improve a property. While not always possible, our teams are tireless advocates for leaving a bit of room for future expansion in mechanical and electrical support spaces.

AUTOMOTIVE WORLD: CLASSIC, BUT INSIGHTFUL

Interestingly and perhaps counterintuitively, one sector of the world economy which has accepted and counted on change as a basic element is the automotive industry. In fact, while your instincts may be to think of manufacturing as clunky and easily outdated, the automotive industry relies on change to drive (pun intended) sales of its products. In many areas around the world automotive plants have existed for decades with constant change and new technology adoption taking place. The ability to change out the technology for an auto assembly line within the unchanging box of the building is the key to success. Manufacturers realized long ago that making a significant capital investment in a new building every time the design or technology of vehicle assembly changed was not realistic. Auto assembly plants became structures that house an ever-changing array of technologies while maintaining a solid, resilient base building function.

SHORTSIGHTEDNESS WILL CRUSH AN ASSET

As owners, investors, developers and designers of buildings, we can't predict but need to proactively encourage our projects to evolve with changes that are coming, as opposed to settling for something that works today and maybe only a couple of years into the future. With mechanical, electrical, plumbing and fire/life safety systems sometimes making up 40 to 50 percent of a building's value, it is simply too expensive to make poor choices or to lock an owner/investor into a vendor or method that may not match well with future needs. For example, smart designs are planning for future wired and wireless connectivity through the deployment of distributed antennae systems, non-proprietary building management systems and open architecture designs for fire/life safety systems and other key building components. Another decidedly low-tech building feature allowing adaptability is the refinement of finishes and the addition of ample blocking or strapping in stud walls to allow for the adjustment of grab bars, rails, shelfs and other interior components, which assist in mobility for the disabled. Whether the feature is high – or low-tech, building elements that allow for change in the user population, as well as in technology, are ultimately stronger solutions in the long run.

GOOD DESIGN IS AGELESS

While we must accept that some elements of buildings need to change over time, other things are universally desirable regardless the location of the facility. No matter what the structure type or use, basic universal design elements such as maximizing natural light, capturing views, creating robust and resilient structural systems, and integrating logical circulation patterns have always been, and will be, design elements that appeal to building owners, investors and users. Basing a design on these universally-favored features and working with the surroundings/environment, while at the same time allowing the technological features to change and be adapted, allows the building to be viable well into the future.

"In the end, the most incontrovertible fact is that adaptability and the ease of integration for new systems was key to any model of success."

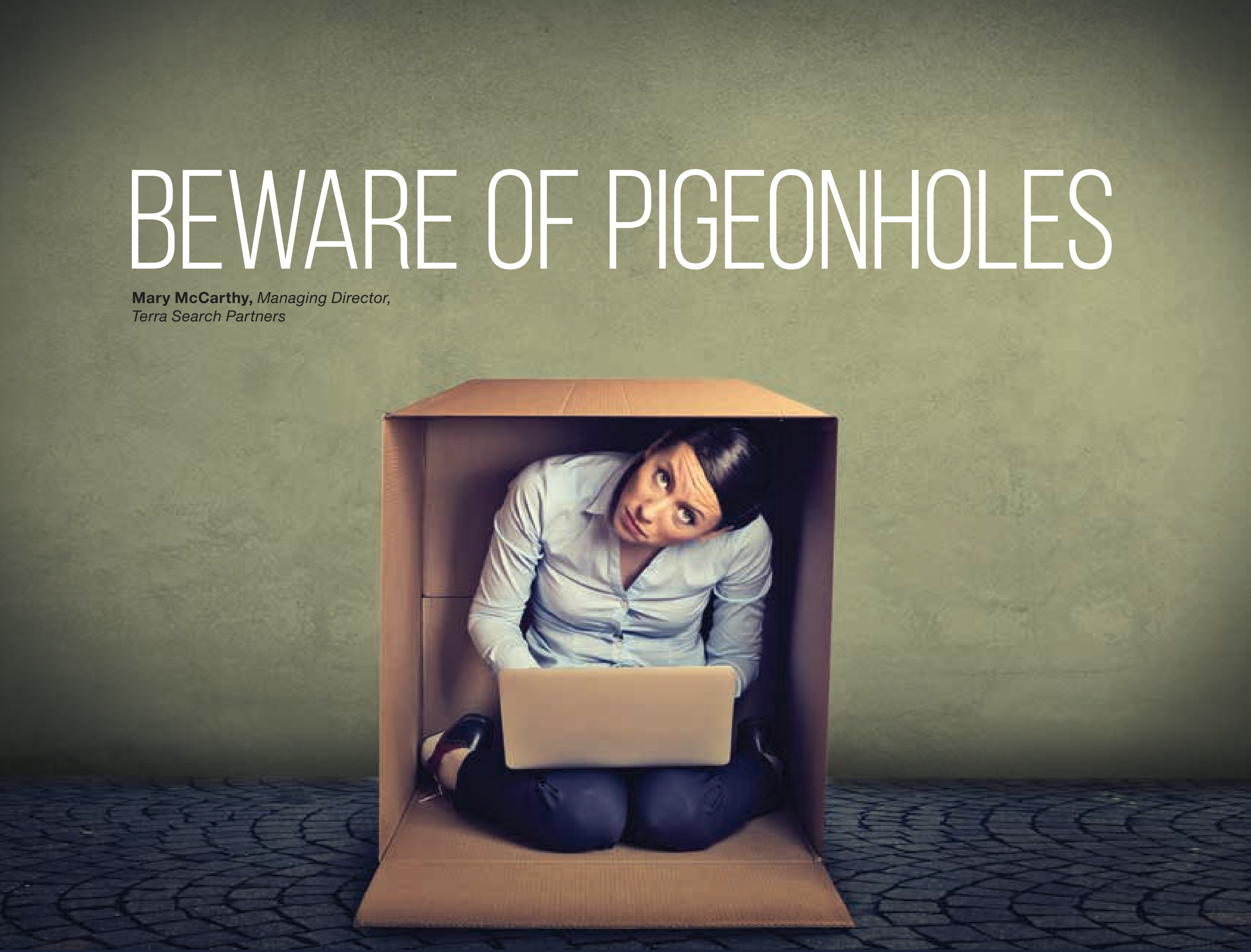
Think about the buildings that are being reused today across the country as creative office space structures. The vast majority include durable interior elements, an abundance of light, high ceiling heights and flexible use of space for bigger gatherings or individual needs. The elements that make these buildings attractive are very universal design qualities and meet the intrinsic needs we have for light, connectedness and focus.

While the idea of our octogenarian relatives being challenged by computer technology is common today that may not be the case in 20 or 30 years, as younger people who have grown up with computers age and move into housing designed specifically for the elderly. How would we feel if we walked into a residential development design for the elderly and saw multiple large format monitors on each unit's wall and found wireless connectivity throughout the structure? Would we be surprised by wireless cameras and door bells at each entry and would we find it out of place to have a sophisticated environmental control panel controlling the lighting, temperature and white noise on the wall in each unit? That scenario may seem farfetched but is completely realistic given today's population and technology trends. How well would the senior housing of today fare tomorrow with all those additional technological demands?

A RECIPE FOR LONG-TERM SUCCESS

As societies and user groups change, so should the buildings that are designed for them. As any aging baby boomer will tell you, the wise tenets of life parallel those of good structures: Flexibility coupled with good bones will make for an easier life and easier transitions as the years roll by. Buildings and their embodied technology are changing at a mind-boggling pace. The only thing that seems certain is that technological change is always coming quickly, if it is not ringing your wireless internet-connected doorbell right now. Combining the ability to change and adapt building systems with solid and timeless design precepts will help ensure that a building or complex is still being used and not part of a landfill down the road. And with ever-increasing costs and ever-tightening budgets, all parties involved with the building creation and ownership process owe it to themselves and to each other not to waste any of our precious resources on short-lived ideas and products.

"Adaptability is the feature which allows a thing to change to fit a new use or requirement. An expectation of change and the need for an adaptation to that change should be the foundation of any design concept for a building which is planned to have a long lifespan—and be a profitable and wise investment."



BEWARE OF PIGEONHOLES

Mary McCarthy, *Managing Director, Terra Search Partners*

When I began my executive search career, I was really surprised to hear, "I don't want to be pigeonholed," from candidates still relatively early in their careers. Similarly, I was surprised to hear my search colleagues refer to some candidates as "Role Players."

To be pigeonholed is a bad thing. It's to be put in a box, typecast, or profiled. To be perceived as pigeonholed is to be considered "small," as in the dictionary definition of a pigeonhole. Similarly, Role Player implies limits, as the role is highly defined. A Role Player is distinct from someone whose perspective and skill set are bigger and broader. In other words, a Role Player is distinct from a Leader. Role Player and Pigeonhole can be synonymous.

Some narrowly-focused, highly specialized, Pigeonhole roles are great, even necessary. Brain surgery, for example. As well, in our early careers we are necessarily given roles that could become pigeonholes – skill acquisition is critical, entry roles tend to be tightly focused, and it is important to excel in early positions. Over time, though, ideally one grows from Role Player to Leader.

Now, with recruiting assignments behind me ranging from Acquisitions Officer to President, as well as some reflection on my own career, I better understand the Role Player shorthand used by my recruiting peers, as well as the Pigeonhole fears of those early in their careers.

For both employers and employees, Pigeonholes represent risk. This article takes a look at Pigeonholes from both perspectives.

THE EMPLOYER'S PERSPECTIVE

The risk related to Pigeonholes for employers seems pretty straightforward. Your talented Role Playing employee seeks a Leadership Role, but you have a vested interest in keeping him/her in the existing pigeonhole. Perceiving this lack of opportunity, the employee leaves for a greater leadership role elsewhere or to learn a new set of skills (new Pigeonhole), adding to his/her portfolio of leadership-related experience.

The first step in minimizing Pigeonhole risk is probably astute recruiting. Success in retaining valuable employees is about aligning your expectations and those of the recruit. For example, a client recently considered a talented, accomplished person for an investment role. In this case, though, the Venn diagram of our candidate's ambitions and the role's leadership opportunity in the near term had just a sliver of overlap. Our client moved on to consider candidates whose ambitions better fit the role they offered, and the candidate remains open to new opportunities, though happy in his current, somewhat specialized role.

We all imagine that Pigeonhole risk is easier to manage in a large multinational, or a growing company like Google. The large, growing firm has the luxury of grooming future leaders by rotating its talented people from one assignment to the next. But, for the smaller firm, transitioning someone from one functional role, e.g., asset management, to another, e.g., acquisitions, can be difficult. The roles require different skills, as well as relationships in different networks to do a job effectively. That said, we see examples of employers creatively transitioning people from one specialty to another. One of our investment management clients lost an acquisition officer to a start-up. Though a retained search for a direct replacement was an option, our client chose an elegant alternative solution: moving a portfolio manager into the acquisitions role. Though this required some investment and ramp up time for all concerned, it enabled the employer to offer a talented individual an opportunity that would keep him engaged and possibly position him for future firm leadership.

The kind of "replace-a-person" search that might have happened in the example above is often a search for a Role Player. The employer might be thinking narrowly – "solve the problem" – with bigger picture organizational design not in the calculus. Regardless of size, however, hiring firms need to think strategically, particularly in replacement situations.

- Probably the easiest way to get started thinking strategically is to ask, "Are we doing the right search?" And, consider whether the problem you are trying to solve, or goal you seek, is fully articulated internally and to your search consultant. Do you have a strategic goal that is not explicit? Perhaps you do not fully understand the top priorities amongst your goals. Sometimes, a recruiter finds that an important goal only becomes clear well along in the process. This is okay – recruiting is a discovery process and one that typically is not linear. For example, a client recently interviewed four people for a Vice President role. The position description was specific and included many investment-related tasks. The post-interview discussion, though, revealed a key priority that had not been fully articulated. While the position description mentioned a desire for leadership skills, only after the interviews did we realize the importance of the firm's goal of "upping their game." This would require that the successful candidate have Role Player experience, as well as the Leadership skills to tackle real organizational change.
- Especially in replacement searches, where the risk of thinking narrowly is greatest, organizational design – including growing future leaders – should be part of the calculus. Like our most astute candidates, the employer needs to be thinking long-term. Someone's departure can create an opportunity for those who remain to grow and develop, as well as, of course, for the leadership team to re-think who does what.

THE EMPLOYEE'S PERSPECTIVE

If you just love doing one thing – e.g., doing deals – and have no aspirations to manage teams or a firm, by all means stay as focused as a brain surgeon. But, if you aspire to lead a firm, continually broaden your skill set, or try new things, be careful that you don't become pigeonholed accidentally.

In my own career, I made this mistake. After investment banking, where I found that crafting a financial solution and then making the case (the pitch) to the client was the most fun, I focused on client relations and capital raising (making the pitch). Little did I realize that a couple of jobs into this, I would be perceived narrowly as a capital raiser. As one of my recruiter friends put it, I could be considered a "plug-and-play" capital raiser, i.e., a narrowly focused expert, interchangeable with any other narrowly focused expert.

For those aspiring to broader roles, here are some of the lessons in that experience to consider:

1. Think longitudinally. Consider your ultimate career goals (e.g., leadership, earning potential, balance, etc.). Consider not just job content or the near term.
2. Look at your business and understand how the CEO got to the top spot. Assuming you want a top spot, see if you can position yourself to pursue a similar track. In corporate America, the CEO typically comes from operations rather than from a functional role such as general counsel. In other words, the CEO comes from the realm of P&L responsibility and not a supporting function. The corollary in real estate investment management is that the CEO typically comes up through the investment ranks, mostly likely via acquisitions.

3. Beware of headhunters. They will call you because you are doing exactly what their client needs. Same job, new context. You need to think more strategically than that. Our most astute candidates – and those our narrowly-focused clients would like to attract but can't – are thinking about their careers strategically. They want to understand job content, context and, most importantly, how the proposed role will position them for leadership in the new firm. In other words, these professionals see themselves as potential Leaders rather than Role Players.

Without changing firms, how can you position yourself for a new role or leadership? One way is to focus on developing your soft skills – learn to manage upward and horizontally. Horizontally, look for opportunities to "reach beyond your silo." Engage with peers across functional lines, perhaps on a project where you can lead, collaborate importantly, or inspire. Gain the support of people who don't report to you. Is it possible to acquire some of the expertise of peers in different silos? Perhaps this peer-to-peer exchange occurs outside the firm, e.g., in an industry association.

If changing firms, how can you position yourself for leadership in a new role?

- Choose the smaller firm. Typically, it's easier to gain a seat at the table if the crowd chasing the chairs is smaller.
- Choose the younger firm. In the younger firm, the positions will not be as highly defined as in a mature, long-established company.
- Seek the new position rather than the replacement role. A firm with a new position likely won't be in the market for a plug-and-play, but rather someone who can bring something special or different as the new position is filled and then defined. For example, an investment manager hiring its first VP Asset Management recruited someone who brought deep technology, systems, and project management expertise to this growing company, as well the requisite asset management experience. The firm was looking for someone who could help scale the asset management function without needing additional headcount in the future.

Smaller, younger, and new all present risks, of course.

"Think about your career relative to the big picture – your life, ambitions, and the opportunities the real estate industry offers."

RETURNING TO THE LESSONS RELATED TO PIGEONHOLES

Smaller firms – AKA "the rest of us" – especially must think creatively about keeping talent challenged. If we don't, the talent – and the investment in that talent – will be lost. Employees who perceive themselves as Pigeonholed will leave to broaden their experience or pursue investment roles that better position them as future Leaders. But if they do leave, it's just as important to think broadly rather than narrowly about the replacement search and ask, "Are we doing the right search?"

Similarly, for employees, the key lesson is: Think strategically. This is toughest when you are starting out, since the tendency is to keep your head down and get the work done. That's not enough. Pop your periscope up and out of your Pigeonhole. Think about your career relative to the big picture – your life, ambitions, and the opportunities the real estate industry offers.

For everyone, beware of Pigeonholes!

HOW MUCH SHOULD WE WORRY ABOUT COWORKING

Paul Fiorilla, *Associate Director of Research, Yardi Systems*

Commercial real estate has always evolved in ways that reflect technological and social changes.

The most obvious current examples revolve around how e-commerce has altered the landscape for retail and industrial properties, but no property type is immune. The trends impacting the office market are arguably subtler, but the sector is transforming to meet the shift in demand for lower costs, more flexibility for corporations, a more entrepreneurial workforce, and tenants that care more about community and the environment.

Coworking represents a small yet growing segment of the office market. A study by Yardi Matrix of coworking leases in 20 major markets found 1,166 co-working sites with 26.9 million square feet of space. That represents 1.2 percent of office space in those markets. Coworking has proliferated more in cities: leases encompass 1.4 percent of urban office and 0.9 percent of suburban office space.

At 7.7 million square feet, Manhattan has by far the most coworking space, followed by Los Angeles with 3.7 million square feet. Miami has the most coworking space as a percentage of stock, at 2.7 percent, with Manhattan coming in second at 1.7 percent. Although there are numerous companies offering cowork space for lease, the field is dominated by Regus (9.4 million square feet) and WeWork (6.5 million square feet). The two industry giants account for nearly 60 percent of all cowork space leased in our 20 markets.

Despite its growth as a subsection within the office market, data on the amount of coworking space within commercial real estate has been hard to come by. Yardi Matrix's study is one of the first to quantify the amount of square footage of coworking space in relation to total office space within markets.

INDUSTRY TRENDS

Coworking is not a new concept. Regus pioneered the "workspace as a service" concept in the 1990s, first in Europe and later in the Americas. The idea was to provide space for self-employed workers and for the small number of corporate employees that are traveling or working remotely. Regus initially aimed its efforts at traditional office employers such as law and accounting firms that wanted to have remote offices, in what was called "executive suites" space.

Coworking is an evolved form of executive suites space that also encompasses increased amenities and more flexible leasing arrangements. Typically, executive suites require 1-year commitments while coworking members can purchase space by lesser blocks of time down to the hour. It didn't really take off, however, until after the Great Recession due to the culmination of trends that increased demand dramatically. These trends include:

- **GROWTH IN THE GIG ECONOMY.** The number of workers who are self-employed has risen dramatically in recent years. One such worker type includes experienced knowledge workers who lost jobs during the Great Recession and now work as consultants.
- **ENTREPRENEURIAL WORKERS.** This category includes founders and employees of start-up companies.
- **REMOTE EMPLOYEES.** An increasing number of people work remotely, which is possible because of technology that enables people to be connected. This also helps companies keep overall space needs down and is a way of attracting talent that is not located near corporate offices.
- **LESS COMMUTING.** Another trend boosting demand for cowork space is that workers are trying to avoid long commutes for quality of life reasons and to reduce the impact on the environment.
- **RELAXED ENVIRONMENT.** Coworking provides a more social work environment that is attractive, particularly to Millennials. Community-oriented features provided by coworking spaces include food and drink, presentations from local restaurants or farms, exercise facilities, and social activities such as ping-pong tournaments and mixers.
- **CUTTING COSTS.** As office rents continue to rise, especially in city centers, companies try to reduce their footprint. Office space per employee has dropped steadily over the course of the current business cycle, even as employment has grown. Core Net Global, a corporate real estate trade association, says that office space per employee has dropped to 150 square feet, down by one-third since 2010. Companies are using fewer offices with open work plans, cubicles are getting smaller and the need for paper storage has diminished as files are stored in the cloud.
- **LARGE CORPORATIONS.** This is a growing segment of coworking demand. WeWork, which is focusing on larger tenants and larger blocks of space, leased more than 2 million square feet of space in 2016. While coworking will never replace all or most of the space leased by large companies, employers do enjoy the flexibility that comes with having cowork space. Companies whose employees work off site – accounting firms, for example – can avoid having space that is often empty, while at the same time have outposts near the locations where the workers are deployed.
- **TAX LAWS.** Federal Accounting Standards Board rules also may play a role. Starting in 2019, corporations must treat lease obligations as debt on their balance sheets, which gives incentives to avoid long-term leases.

The upshot is that despite limits, coworking provides to some degree a solution for the growing number of entrepreneurial and remote employees, can help to attract talent and improve work satisfaction, and enables companies to continue to reduce the long-term fixed costs associated with leasing commercial real estate.

METRO ANALYSIS

Yardi Matrix did a study to quantify coworking locations in 20 large U.S. markets. The study encompasses office buildings of 50,000 square feet, so it does not capture coworking arrangements in smaller office buildings. We found companies offering memberships at 1,166 coworking locations totaling 26.9 million square feet of space. We did not count the number of members in each location.

Not surprisingly, the metros with the most amount of coworking space are large markets Manhattan and Los Angeles, yet 11 of the 20 markets had more than 1 million square feet of coworking space for lease. Manhattan has 245 coworking locations for lease with 7.7 million square feet, and Los Angeles has 158 locations with 3.7 million square feet. Other metros with a significant amount of coworking space include: Dallas/Fort Worth (1.6 million sf), Atlanta (1.5 million sf) and the Bay Area (1.5 million sf). Inland Empire (123,000 sf), San Antonio (194,000 sf) and Ft. Lauderdale (305,000 sf) have the least amount of space.

Market		CoWorking Tenants	Sq Ft
Manhattan	Total	245	7,650,722
Los Angeles	Total	158	3,702,972
Dallas – Fort Worth	Total	88	1,565,144
Atlanta	Total	76	1,519,969
Bay Area	Total	48	1,485,882
San Francisco	Total	50	1,416,292
Miami	Total	59	1,379,098
Houston	Total	71	1,295,804
Denver	Total	67	1,164,063
Orange County	Total	55	1,032,568
Seattle	Total	40	1,004,705
Phoenix	Total	42	789,644
San Diego	Total	41	749,735
Austin	Total	20	395,500
West Palm	Total	25	376,975
Sacramento	Total	12	375,587
Portland	Total	19	340,000
Fort Lauderdale	Total	22	305,927
San Antonio	Total	18	194,375
Inland Empire	Total	10	123,458

Manhattan (7.7 million sf), Los Angeles (2.5 million sf) and San Francisco (1.3 million sf) led in the amount of coworking in urban locations, while four markets had more than 1 million sf in suburban locations: Los Angeles (1.2 million sf), Dallas/FW, the Bay Area and Orange County (all 1 million sf).

As a percentage of total stock, Miami has the most coworking space, at 2.7 percent of the metro's 50.5 million square feet of space. Miami has many self-employed workers and a large number of start-up businesses in the telecommunications and medical sectors. The metro also has many small import-export businesses related to trade with Latin America that produce demand for small, flexible office spaces. Manhattan (1.7 percent), Los Angeles and West Palm Beach (1.6 percent each) also have above-average share of coworking space. At the other end of the spectrum are San Antonio (0.6 percent of total space), Houston and Dallas (0.7 percent each).

Coworking is a young industry, so the numbers are likely to evolve on a metro level as the concept matures. However, demand seems to be based on a couple of main factors. One is the type of industries that proliferate in a metro. Demand is high in markets with concentrations of knowledge workers – especially information technology (IT) but also new media or industries such as biotechnology and telecommunications – that are friendly to startups.

Another factor is the makeup of space within a metro. Demand is higher in metros where space is at a premium. Metros where coworking is low as a percentage of stock such as Dallas and Houston have low barriers to construction and high vacancy rates, making it easier for small companies to find cheap space in convenient locations. Fewer blocks of space exist in large coastal markets such as Manhattan, San Francisco and Los Angeles, which have higher concentrations of coworking space.

Again, the industry is young and growing, so the numbers are bound to change, but when we plotted the percentage of coworking space against the vacancy rate in a market, there was a clear trend in which markets with lower vacancy rates generally had a higher proportion of coworking space.

Coworking is more ubiquitous in urban settings, where it represents 1.4 percent of office space as opposed to only 0.9 percent of suburban office space. There are several reasons that coworking has germinated in urban areas. One is the critical mass of workers: few people commute long distances to cowork sites, and there are more workers in urban areas. Startups proliferate more in cities, and the social elements of coworking are more in tune with the urban environment.

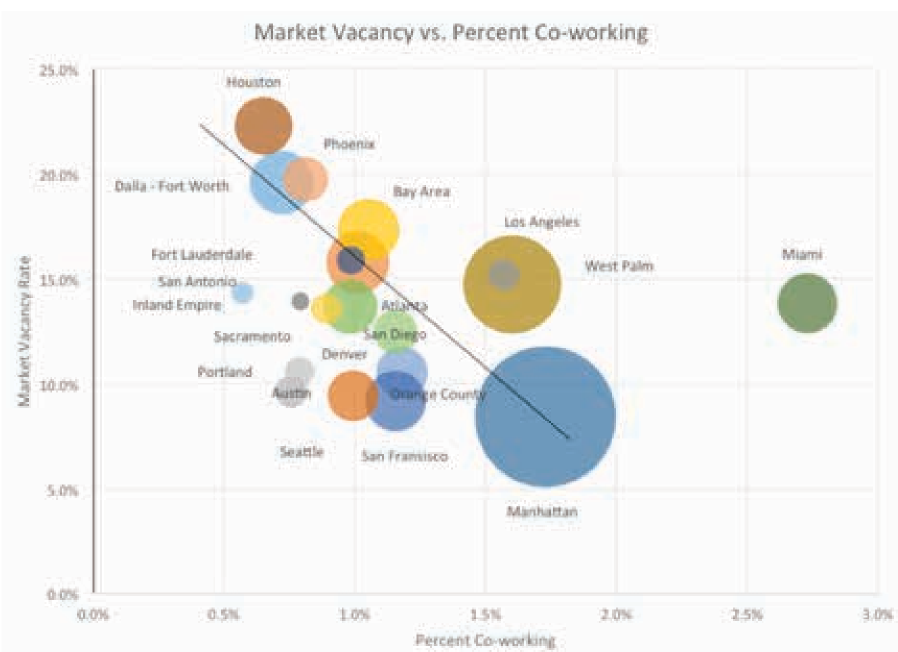
What's more, in suburbs there are a lot more blocks of small space available at low rent levels that are natural competition for institutional coworking firms. Think of converted single-family houses that are used by tenants such as lawyers, doctors, insurance agents, etc. that only need a room or two. That said, coworking is gaining traction in suburban areas and the model that attracts users with extra amenities, a connection to other small tenants and a fun environment could prove to be attractive for suburban office tenants.

Manhattan (7.7 million square feet), Los Angeles (2.5 million sf) and San Francisco (1.3 million sf) had the most cowork space within urban areas. But as a percentage of stock within urban areas, Miami (3.5 percent), Austin (1.9 percent) and San Diego (1.8 percent) topped the survey.

Just counting suburban areas, Miami (2.2 percent), West Palm Beach (1.6 percent) and Los Angeles (1.6 percent) led in coworking space as a percentage of total stock. Los Angeles (1.2 million square feet) led in total square footage in suburban locations, while Dallas, the Bay Area and Orange County all had slightly more than 1 million square feet.

Coworking Urban	% Co Working	Sq Ft
Miami	3.5%	698,470
Austin	1.9%	236,500
San Diego	1.8%	206,023
Manhattan	1.7%	7,650,722
Bay Area	1.7%	447,291
Los Angeles	1.6%	2,505,282
San Francisco	1.6%	1,251,104
Orange County	1.5%	21,000
Inland Empire	1.3%	60,458
Atlanta	1.2%	665,797
Seattle	1.2%	788,494
Denver	1.1%	461,024
Fort Lauderdale	1.1%	128,377
West Palm	1.0%	29,135
Sacramento	0.9%	105,898
Portland	0.8%	199,000
Dallas – Fort Worth	0.8%	519,729
Phoenix	0.7%	265,392
Houston	0.7%	689,586
San Antonio	0.6%	64,375

Company	Company average sq. ft.
WeWork	76,569
Knotel	24,543
Industrious	22,348
Regus	19,820
Barrister Executive Suites	18,478
Premier Business Centers	18,345
Jay Suites	18,234
Servcorp	13,821
Pacific Workplaces	13,290
Intelligent Office	9,411



The study found 239 companies are involved leasing coworking space, although the vast amount of them are small. Regus (9.4 million square feet) and WeWork (6.5 million square feet) were by far the biggest providers of cowork space, and Premier Business Centers (1.1 million square feet) was the only other firm leasing more than 1 million square feet of space.

WeWork clearly stands out when we look at the average size of locations. WeWork's average lease size of 76,000 square feet was four times the 19,000-square foot average of all other companies. WeWork has made partnering with large corporate users a big part of its strategy, and now corporate partners represent more than a quarter of its total revenue.

RISKS

Clearly, coworking represents the cutting edge of the office industry, as it caters to social and demographic changes. However, that doesn't mean the market is without risks, the biggest of which is how to maintain revenue during a downturn. Here the flexibility of short-term leases cuts against the industry. Tenants value flexibility but long-term leases protect the landlord. Small businesses and startups are the first to fail during recessions, and entrepreneurial workers that lease cowork space could instead work from home when budgets are squeezed. Even large corporations could find it easier to not renew short-term cowork leases when belts need to be tightened. The industry has grown during the long economic recovery and certainly will be tested the next time the economy hits a bump.

Another challenge for cowork providers is the low barriers to entry to compete, as most cowork space involves small locations. It may be hard to duplicate the model established by a large owner such as WeWork, but competition among the plurality of small players is likely to grow as the industry becomes established, much like a successful new retail model quickly gains imitators. That could result in a wave of companies combining, or failing during a downturn.

CONCLUSION

Coworking as a model is likely in its beginning stages. The industry provides a service that is in line with the direction businesses are moving. It gives tenants flexibility and provides attractive space for young workers and the growing number of self-employed and remote employees. The number of locations and total space dedicated to coworking is impressive, given the industry's youth. Over time, the industry is likely to develop its model to be able to survive recessions and changes in business operational trends.

SURVIVAL DEPENDS ON A STRONG COMPANY INFRASTRUCTURE

Peter DiCorpo, *Chief Operating Officer, Waypoint Residential*

High-rises built by 3-D printers. Artificial intelligence that manages leases, loans and investment transactions. Robots that lay bricks. Welcome to real estate's high-tech future.

(Source: The Real Deal, "Real Estate's Tech Disruptors," 2/1/18).

While these innovations are impressive, the most critical and highest return opportunity for most real estate investment firms is more fundamental and closer to home: Company infrastructure.

The commercial real estate industry has typically viewed infrastructure and internal systems as cost centers that would never generate revenue. Investing the minimum amount required to run the company was considered smart business.

Today, a robust infrastructure is anything but optional. Enhanced processes, operations and information systems can create competitive advantages that positively impact the bottom line. Infrastructure can help a company secure capital, expand into new markets and attract talented employees.

The stakes are high. In a competitive market with few easy deals on the horizon, commercial real estate firms that continue to treat infrastructure as an afterthought are not likely to prosper in the near-term or survive in the future.

LATE TO THE GAME

Cost is not the only reason commercial real estate is lagging far behind other industries in implementing process and technology improvements.

Many real estate companies were founded by an enterprising individual with a vision, ability to shoot from the hip and an endless supply of determination and hard work. These companies thrive on entrepreneurial energy that rewards accomplishing as much as possible with as few resources as possible. If five people using spreadsheets can get the job done, why invest in additional staff or systems?

Commercial real estate prides itself on being unique and entrepreneurial, which has led to the adoption of a figure-it-out-as-you-go mindset. While this approach can be useful for some aspects of the business, the actual process of buying, managing and selling assets should be streamlined and efficient. These are the industry's "manufacturing processes," and manufacturers cannot afford to "wing it" or reinvent the wheel each time they make a widget.

To be fair, real estate companies' lack of infrastructure investment also reflects a shortage of systems and information services designed for the industry. The common response has been to use spreadsheets and word processing programs to track sizeable investment portfolios at both the individual property and overall portfolio level as well as to prepare complex reports.

That is no longer necessary. There has been significant growth in systems and services designed specifically for tracking and managing investments, properties, assets, investor relations and more. According to Douglas Bibby, President of the National Multifamily Housing Council, "Three years ago there was $459 million in private equity and venture capital funding dedicated to real estate technology, at year-end 2016 there was $2.7 billion." (Source: GlobeSt, "3 Big Multifamily Predictions for 2018," 1/22/18). Expectations for 2017 tech funding are even higher.

ATTRACT LOYAL CAPITAL

Securing a dependable capital base is one of the most significant reasons to invest in a company's infrastructure.

Institutional investors are looking far beyond track record performance and spending more time underwriting the entire organization. They will look for and place capital with firms that can respond quickly to information requests and have clearly defined procedures, succession plans and state-of-the-art cyber security systems.

Although other capital sources may not investigate as deeply, reporting and transparency remain as important as investment returns. If this seems overstated, consider the following: A leading institutional real estate fund generated returns well above its initial target, yet most of the investors opted out when the company tried to launch a follow-on fund.

Why? Inadequate reporting. The company could not provide detailed back-up information about the fund's performance in a timely manner. Impressive returns were not enough.

Investor requests for proposals and quarterly reporting requirements offer valuable insight into their priorities. In addition to fund-level data, investors want comprehensive, granular performance data, including attribution analyses that illustrate each property's role in a portfolio's performance. This is nearly impossible using the antiquated systems and spreadsheets that are standard for most companies.

Investing in internal processes and systems is key to meeting investors' information demands and ensuring a dependable capital base. Firms can now invest in products that manage and report real-time, asset-level data in ways that even the most sophisticated spreadsheet falls short.

CREATING OPPORTUNITIES IN A COMPETITIVE MARKET

The most lucrative opportunities in today's late-cycle market are complicated and time-consuming. Winning and successfully executing these deals requires an infrastructure that manages most of the process, so investment professionals can address the more complex issues that require a higher level of expertise.

A robust infrastructure can also build revenue and profit by helping a company expand into new markets. In rental housing, for example, several resources offer detailed information about occupancy, demographics, and supply and demand in every market, sub-market and micro-market.

With this information in hand, a company can identify new markets that are a solid fit and test the waters before opening an office and putting boots on the ground.

Investing in access to detailed data and internal systems offers another invaluable benefit. It allows a company to proactively seek deals that fit its criteria, rather than simply reacting to opportunities that the market presents. This is a potential game-changer for every commercial real estate firm.

THE BEST AND THE BRIGHTEST

Competing for top talent? The role a company's infrastructure plays in attracting and retaining the most qualified talent cannot be underestimated or overlooked.

Today's up and coming commercial real estate professionals grew up with high-tech innovation. These technology natives will be drawn to companies whose systems and processes facilitate connectivity, efficiency and progress. Companies that operate manually to create and deliver client account statements, reports, and other investment related communications and that track portfolios on spreadsheets are unlikely to attract and retain top talent.

A robust company infrastructure can also help companies hire more strategically. With systems in place to collect, analyze and report data, recruiting can focus on professionals whose highly specialized skills can contribute to the bottom line.

REALITY CHECK

The operational and strategic benefits of creating a strong company infrastructure cannot be overstated, especially for the vast number of commercial real estate companies that have given the topic little attention.

Yet it is important to be realistic about what is involved. Creating a robust infrastructure is not easy, inexpensive or a one-time project.

Buying technology solutions may look like a shortcut, but there is not a benefit in automating inefficient processes. The first step must be to clearly identify and document how a company operates at every level. It is critical to understand what is being accomplished by the systems currently in place, the steps each person takes to complete their job, and what works well along with what does not.

Only then will it make sense to evaluate technology solutions that can manage data and reporting, streamline operations and increase efficiency. Choosing solutions is an early step in a much broader initiative. As a rule of thumb, the greater a system's potential to drive a company's success, the longer and more complicated its implementation.

Further, managing a company's transition to an efficient, technology-enabled infrastructure is not a part-time job. It requires an experienced, forward-thinking real estate IT professional who can identify and tailor solutions to meet the company's needs and build a best-in-class team to transform the platform.

Finally, building an infrastructure that truly supports a company's growth is not a "one-and-done" exercise. Like perpetually sourcing new deals and capital, real estate firms need to continuously manage and evaluate their infrastructure for the greatest impact and opportunities.

"INVEST NOW OR BECOME EXTINCT!"

"Invest in infrastructure or become extinct" may sound inconceivable in a thriving commercial real estate market. However, some real estate companies with a vision for the future are already investing in their internal operations, processes and systems. Other firms will follow.

Over time the companies with robust infrastructures will obtain the majority of institutional and other capital, execute a majority of the lucrative deals and win the war for talent. When the cycle changes, these companies will likely be among the most resilient.

For those firms who choose to stay the course and avoid developing an effective infrastructure, the Kodak story should serve as a cautionary tale.

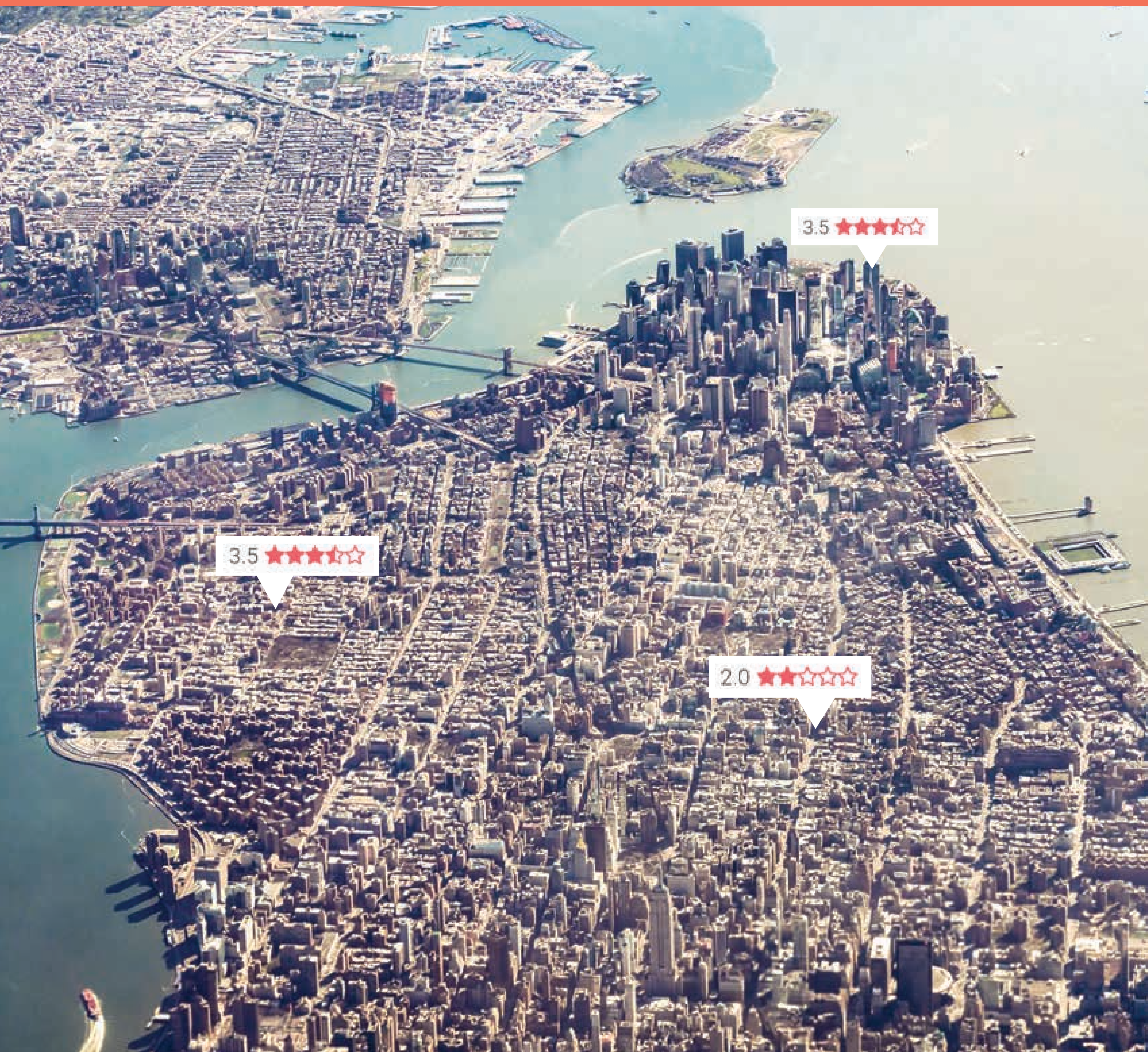
Few may recall that Kodak invented digital photography. However, film was the company's top producing product at the time, and the company saw no reason to change its business model. Instead, it continued to stay firmly focused on its traditional business, despite rapidly declining demand. Today, Kodak is mostly irrelevant within the photography industry.

The choice is critical. Evolve by investing in infrastructure or die on the vine.

A STAR-STUDDED WAY

TO VIEW KEY PERFORMANCE INDICATORS

Alan James, *Senior Vice President, RealPage, Inc.*



"The industry has long been challenged to assess property performance quickly and conveniently."

When assessing the health and direction of an investment portfolio, the real estate industry can learn from Wall Street.

For years, financial advisors and investors have relied upon services that rate the performance of stocks and mutual funds with a simple star system, condensing mountains of data into an easy-to-digest format. High-level performance ratings help build and manage successful portfolios, prompting investors to have critical conversations and make decisions about the portfolio's direction.

What if real estate investors and asset managers had similar tools to help with strategic moves?

Technology is enabling the brain trusts of real estate asset management to get a high-level view of a portfolio with star ratings based on key performance indicators (KPIs). Metrics like loan-to-value, NOI variance, occupancy, income yield, and other KPIs can be used to "score" an asset, according to a firm's own benchmarking metrics and standards.

Three stars. Four stars. Five stars.

The key is to allow an asset manager to formulate how the star ratings are determined, based on whatever metrics are appropriate for the properties they manage. Once rated, it's possible to understand how a property and or portfolio is performing, at a glance.

The methodology is changing the higher conversation.

STAR RATING IS THE NEXT GENERATION OF METRICS MANAGEMENT

Basing decisions on a rating has become the norm in today's review-centric world. Star ratings create conversations about what's behind the glitter. A good star rating twinkles success, while a bad one suggests a possible black hole.

In the consumer world, ratings give the user a fast assessment of a business, event, product, or feature.

Of course, consumer ratings are often subjective, reflecting the experience of the person who is doing the rating. Bad ratings can lead to countless hours of adjustments at corporate levels to improve ratings, whether fixing a problem or improving service, without fully knowing what will drive the rating up or down.

In real estate, asset managers have a similar task of assessing the health of a property or portfolio. However, real estate has an important difference: KPIs provide hard, quantitative measures. Over the years, software has helped investment managers to partner with third-party property managers, joint venture partners, and others on reporting and collecting this data.

While this represents a big improvement on the manual, paper-based reporting of previous years, the asset manager must still interpret the results before making the next strategic move. In many cases, the manager is dependent on others to gather the data and crunch the numbers before being able to see the information, thus slowing the process.

FILLING A VOID FOR ASSET MANAGERS – INTERNAL STANDARDS AND METRIC BENCHMARKING

The industry has long been challenged to assess property performance quickly and conveniently. Originally, it was a challenge to simply get the raw results. Data aggregation solutions helped gather and serve up the data in meaningful ways, but a holistic view of a property's performance required some connecting-the-dots.

Now, imagine an asset management system that can assign a simple star rating to a property by calculating the mounds of data, giving asset managers early insight into where potential problems exist, and helping ensure the investment's strategy stays on target.

Stakeholders can quickly identify underperforming properties, then drill into the details that allow troubleshooting and determination of where the issues lie.

Once a score is determined, investors and asset managers can have meaningful conversations about how to adjust the management strategy. The substance of the conversation is not about how the metrics are performing individually, but what they mean toward the view from 15,000 feet.

	Result	Score	Weight
YTD NOI Variance	-15.6%	2.0	16.0%
Debt Coverage Ratio	2.3658	5.0	9.3%
TTM NOI Yield (%)	172.4%	5.0	24.0%
TTM NOI Margin (%)	63.2%	4.0	18.7%
Occupied SqFt (%)	78.2%	1.0	16.0%
Weighted Avg. Lease Term, Months	47.89	4.5	16.0%
Overall Score		3.5	

At the same time, a star rating that suggests the property is healthy means the asset manager can move on to more pressing issues rather than spend time interpreting metrics. You're freed up to add value elsewhere.

GAINING COMPLETE CONTROL OF ASSESSING HEALTH OF A PORTFOLIO OR ASSET

What makes the methodology stand out is that the asset managers control the scoring parameters rather than relying on pre-established KPIs. Asset managers know their portfolios and investment strategies, so they know how to score them.

The key to successful scoring is selecting relevant KPIs, and establishing the sensitivity of the ratings to each. You might have a different set of criteria for a core portfolio versus an opportunistic portfolio, where different strategies focus on different KPIs.

Also, establishing the desired KPIs to be scored each month allows investments to be ranked, adding a new dimension to the conversation and promoting deeper discussion of what's working or not working from an asset management perspective.

For years, real estate asset managers have known what metrics drive performance and how to calculate them. But technology is helping to push to a higher level the ability to see the bigger picture.

The technology ultimately complements the investment manager's well-educated approach to portfolio and asset management. A star scoring approach doesn't take the expertise out of the manager's hands but provides added insight for making the best decision about strategic direction. It's all about decision support: recognizing problems as early as possible, starting the conversation, and taking action..

And that's a star-studded benefit to any asset manager and investment management professional.

Scores

300 Madison Avenue
4.0

Landmark Square
3.5

One World Financial Center
3.5

Sunrise Technology Park
3.5

One Allen Center
3.0

53 State Street
2.0

City Center
1.5

Driving a Successful DATA STRATEGY

"A strong data, reporting and analytic infrastructure can enable reporting efficiencies, improved analytic capabilities and help frame internal investment and portfolio discussions."

John Mahoney, *Managing Director, Laurel Property Advisors*

If your company is like many real estate organizations, at the end of every time sensitive analytic or reporting exercise you breathe a big sigh of relief. Through your team's heroics, you were able to extract most of the key information needed out of the excel spreadsheets, pitches, file cabinets and people's heads in time to meet the deadline. Yes, there were some gaps and numbers that didn't tie but you "smooshed" the data and in the end the results looked reasonable and supportable. You know there has to be a better way yet the cycle repeats itself.

Unfortunately, there is no "easy button" and the road to a data driven organization is littered with tales of delays, budget overruns or outright abandonment. Fear not! Success is possible by starting simply, building confidence with early accomplishments, iterating quickly and staying in touch with the business as you build your capabilities.

WHAT HAPPENED TO THE GPS?

While there are many reasons that a data initiative can fall short of expectations, experience has taught me that the number one reason is the lack of a clear business purpose and ownership. Without clear focus, ownership and prioritization these projects can quickly become "boil the ocean" exercises, taking on too much all at once. This results in projects that take too long, often don't meet expectations, and are prone to cost overruns. Watch out for scope creep, expectations of "build it and they will come" and projects that go for extended periods without showing results to the business. All these are signs that you could be getting off track.

STAYING OUT OF A DITCH

Based on experience it is best to start simple with a well-defined output that you would like to reproduce – the complexity will come soon enough. If you can't accurately deliver the basics, you risk losing credibility and won't make it to more challenging, and valuable, analytics.

In a recent project, after several false starts building a data warehouse, a debt and equity investor restarted the project by focusing on duplicating a very simple report describing its portfolio. This report contained 32 core points of information about its investments – things like type of investment (debt/equity), position in the capital stack, exposure, type of property, location, etc. Even with this narrow, seemingly simple, scope, key strategic decisions that lay the foundation going forward needed to be made.

Consider address information for a debt portfolio – much focus is placed on the "Obligor" but when Hurricane Katrina was bearing down on New Orleans was it more important to know that the Obligor was safely in New York or Chicago or rather that the collateral was located on Canal Street? If you frequently make investments in portfolios of properties are you ok with the locations or property types being identified as mixed, various? What if you have multiple investments in a property – how do you allocate exposure and avoid duplicating value? As I said, complexity starts to come quickly.

Once you have identified that initial data set, the next step is to agree with all interested parties on the definition and "source of truth" for each data element. Ideally, there is only one but if your organization has independent business units or distributed information there could be many.

At this point you start laying the roadbed by building a repeatable process for bringing the data together from the source(s) of truth into a single repository, whether excel or a data warehouse. This is followed by a test drive including reviewing the data for completeness, consistency, acceptable ranges of values, conducting spot audits and/or comparisons to existing reporting to ensure that the attributes tie to verified sources. Correct the data at the source and keep re-pulling it until the alignment is right. Don't be surprised if multiple iterations of this step are required. Only once you have signoff from both the data providers and consumers are you ready to bring on the broader organization as passengers. This process is then repeated for each additional phase or enhancement.

DRIVERS WANTED

Beginning with the Business Champion, extending to the primary team and beyond, having clear roles and responsibilities, ensuring accountability and appropriate rewards and recognition is essential. This applies equally to a smaller portfolio where the roles may be only part of a job description or a large enterprise with a dedicated team supporting the initiative.

The Champion is responsible for maintaining the expectations of the business along with a roadmap of deliverables that provide focus and the opportunity to continuously show value to the organization. Don't jump to the false assumption that because data is involved that IT should be the Champion. Yes, IT will be a critical partner, particularly with regard to data movement and systems implications. However, it is the business that knows what the desired outcome should look like; if the data is reasonable and within accepted norms; and determines the requirements for frequency of update, quality, etc.

Accountability includes the acknowledgement that data providers within the organization are now assuming responsibility for maintaining the data to an agreed upon level of quality, completeness and timeliness. Clear ownership of the data at the source is critical and it isn't IT. The challenge is that some of your most highly compensated employees will likely become involved in the process, including asset managers and originators.

You shouldn't be surprised by organizational push back as people complain that being a "data entry clerk" interferes with doing their day job. This is where senior leader support for the initiative is a critical element. The organization will need to be reassured of the importance of the initiative, that leadership understands the additional data responsibilities, and that they are committed to optimizing the collection process. Optimizing could include using junior associates, outsourced or off shore resources but regardless, the responsibility for data quality can't be delegated away.

Documentation is a critical role that needs to be staffed as a part of the team. Good documentation supports continuity through employee turnover and organizational evolution. Additionally, it provides an audit trail and the basis for future expansion, as well as integration with new systems or portfolios.

REVVING THE ENGINE

The real fun begins when the basic infrastructure is in place and the initiative has built credibility by successfully delivering. As the organization starts to see the benefits of its new capabilities, they will come to increasingly rely on the new infrastructure and additional requirements are to be expected.

By getting data out of drawers, distributed spreadsheets and ad hoc reports into a central environment, the entire organization has a common view of critical business information, eliminating the need for overlapping data collection and maintenance. Beyond this increased efficiency, as multiple periods of data are accumulated, the opportunity to do trend analysis on a portfolio wide basis also becomes possible.

Needs change as portfolios grow and what works for a smaller organization/portfolio won't necessarily work for a larger one. As your portfolio grows, the ability to conduct asset-by-asset reviews may no longer be possible. With a reliable data infrastructure in place the ability to do less frequent or exception-based reviews presents itself. This allows your portfolio to continue to grow without a commensurate increase in reporting resources and without losing sight of emerging issues.

With the addition of triggers for tolerances of movement (e.g. decrease in cash yield qtr over qtr of more than X%) or absolute values (e.g. loans with LTV > 80% and maturity date < 1 yr), outliers in the portfolio can be identified and the organization can focus on proactively addressing the issues before that unexpected impairment or loan modification is necessary.

The combination of robust internal data and the exciting information available from developments in PropTech enable an organization to continuously compare its investments and portfolio to the overall market. With little additional effort, it will be possible to confirm that the investment thesis continues to remain valid and to move analytics from being largely focused on what has happened in the past to enabling dynamic scenario planning for future events.

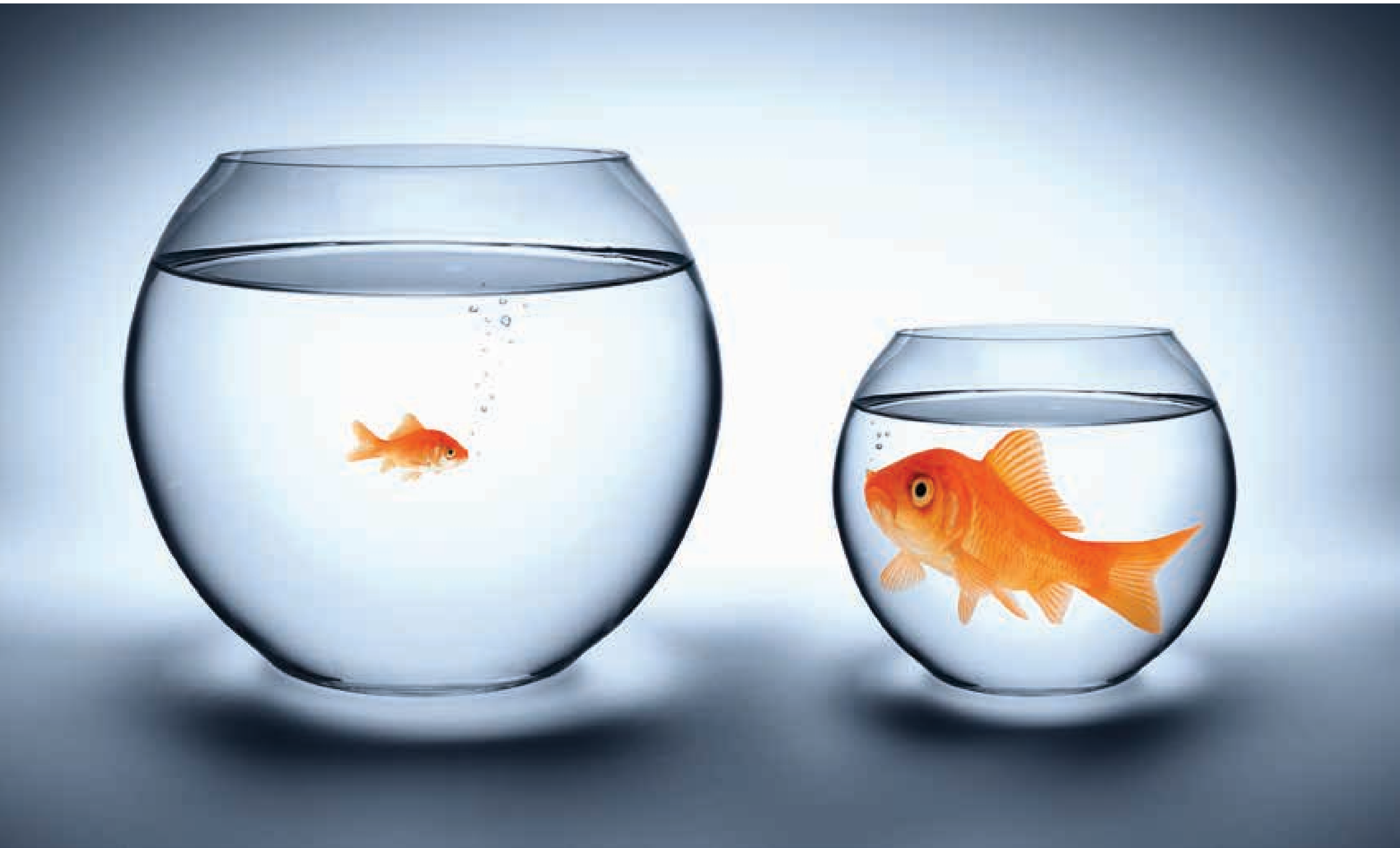
A strong data, reporting and analytic infrastructure can enable reporting efficiencies, improved analytic capabilities and help frame internal investment and portfolio discussions. However, given that commercial real estate remains an investment class with high property idiosyncratic performance, there is no substitute for the sound business judgement of an experienced real estate professional.

2018 PROPERTY SECTOR OUTLOOK AND CORE INVESTMENT STRATEGIES:

One Size Does Not Fit All

Christopher Macke, *Managing Director, Research & Strategy, American Realty Advisors*
Stanley L. Iezman, *Chairman & CEO, American Realty Advisors*

As we enter 2018, significant tailwinds and moderate headwinds confront the four major property sectors in commercial real estate. We expect these cross-currents to lead to a divergence of performance amongst property sectors as well as disparities within each individual sector.

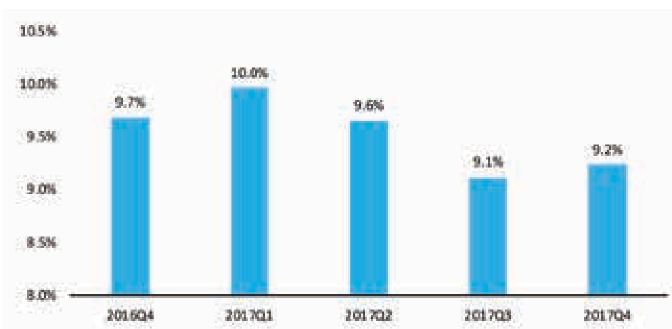


Rather than favoring one property category over another on a broad spectrum, current economic conditions require more detail and diligence in identifying those segments of each major asset type where opportunity for success exists. We have outlined key aspects of each type below and are focusing our core portfolio to take advantage of these specific trends to capture out-sized risk-adjusted returns.

Multifamily: Submarkets Matter More Than Ever

Higher quality assets in major markets collectively saw a 50 bps decline in vacancy rates for the year ended 2017. Reduced construction lending, increasing construction costs and tapering rent growth foretells an eventual decrease in supply and this supports increasingly favorable fundamentals going forward.

> Vacancy Rate



Source: CoStar

Multifamily housing, particularly in the coastal blue states, should benefit the most from the recently passed tax bill as the reduced mortgage interest deduction caps, and caps on state and local tax deductions will tilt the "rent vs. own" economics toward renting most in these high cost housing and tax markets. This benefits higher-end multifamily housing demand in markets with low affordability, as the already prohibitive cost of owning only increases. Alternatively, the advantage already enjoyed by lower cost states will increase as the cap on state and local tax deductions impacts higher cost states.

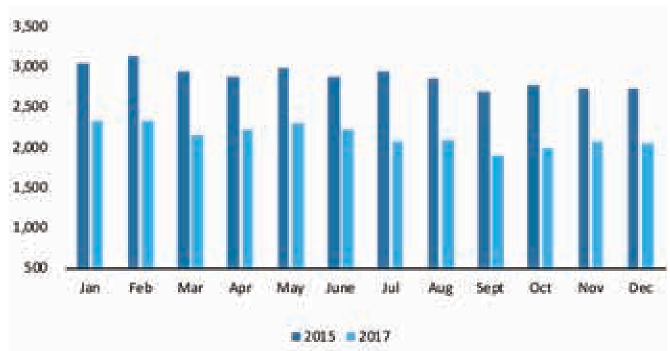
While a significant slowdown in supply has yet to materialize nationally, activity in select submarkets is creating targeted opportunities this year. With strong supply in many submarkets and less new competition in others, discipline in submarket selection will be the key to multifamily investment success in 2018.

Key Core Investment Strategy Success Factor:
Discipline in submarket selection will be the key to investment strategy success in 2018.

Office: Most in Need of Boost from Tax Reform

Moderating employment growth and increased tenant willingness to pay outsized premiums for top quality assets characterized the office sector in 2017 with the negative effects of moderating employment growth impacting the sector more than any other.

> Employment



Source: Bureau of Labor Statistics

Add to this increasing supply, 2017 saw a softening in office property rent growth. As future employment growth continues to be constrained by an increasingly small supply of qualified workers, the office sector is the most likely to benefit from the recently passed tax bill delivering the promised acceleration in wage growth. If the rate of wage growth were to materially increase, that could encourage workers currently on the sidelines to reenter the labor force, creating greater employment growth. While today's stagnant rate of wage growth – despite the low unemployment rate – is a cautionary tale in forecasting outsized future wage growth, a moderate increase in the rate of wage growth is plausible based on an ever-tightening labor supply. Even a moderate uptick in wages would be beneficial to the office sector's prospects in 2018. As companies face increasing challenges in recruiting and retaining top talent, the highest quality assets will continue to reap outsized rent premiums relative to next tier assets as companies use high quality work environments as a competitive tool in attracting and retaining talent.

Key Core Investment Strategy Success Factor:
Focus on best-in-class assets occupied by larger higher credit quality tenants with longer-term leases and contractual rent escalations.

Industrial: Changing Consumer Preferences Continue to Propel Industrial

With online holiday-period retail sales increasing nearly 19% over the prior year, the significant tailwind provided by e-commerce continues to drive industrial demand and rents higher to levels not previously seen.

> Year-Over-Year Rent Growth by Quarter

Source: CoStar

We expect that demand will remain robust for the foreseeable future although the industrial sector is not without risks. Supply is increasing at meaningful levels in select submarkets. While this supply is currently being absorbed, a disruption in industrial demand would leave these submarkets most vulnerable, specifically as a result of meaningful disruption in imported goods. While this is not our base case scenario, the current rhetoric surrounding global trade agreements makes this a concern worth noting.

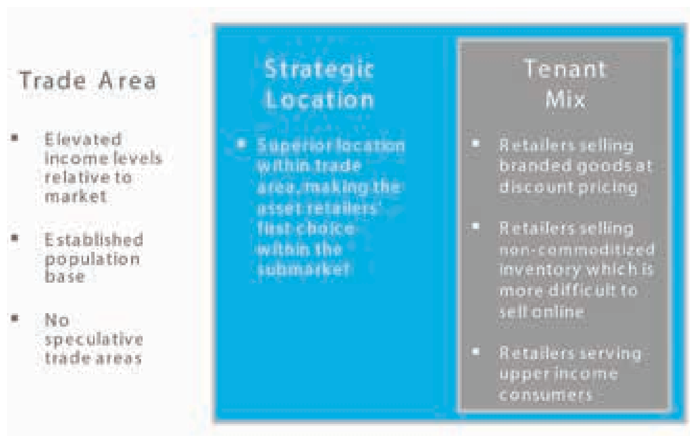
Key Core Investment Strategy Success Factor:
Overweight the highest quality logistics assets able to meet both the locational and asset specific demands of the widest array of companies and logistics supply chains.

Retail: Winner-Take-All

With continuing headwinds from e-commerce and ever-changing consumer preferences, retail is increasingly a winner-take-all property sector with national headlines and statistics masking wide variations in asset level performance.

The highest quality assets in strongest trade areas continue to experience significantly lower vacancy rates and greater tenant demand than lower quality assets in weaker trade areas.

These assets are best positioned to capitalize on macroeconomic forces that will promote spending. Continuing employment gains, the wealth effect from rising equity markets, home values that increase consumer confidence, and the resultant willingness to both save less and take on more debt are all positives for retail activity. Given the run up in consumer debt and the decline in the consumer savings rate, future retail sales growth will be increasingly dependent on both employment growth and wage growth acceleration. Since we do not foresee a substantial increase in employment growth, extending the favorable current macroeconomic environment for retail spending will become increasingly dependent on wage growth acceleration.



Source: American Realty Advisors

The strongest retail assets are characterized by the following three key indicators: a center's strategic position within a trade area, a center's tenant composition, including financially strong, market- leading grocery anchors and/or non-grocery anchors selling branded goods possibly at discounted prices, and centers located in higher income, established trade areas with the necessary population base already in place.

Key Core Investment Strategy Success Factor:
The ability to identify the dominant assets in the strongest trade areas and to focus solely on those assets.

The four major property sectors have opportunities and challenges unique to each of them. This requires an understanding of those opportunities and challenges to identify the most important core investment strategies for each. Understanding the importance of each sector's underlying drivers will increase the chances for investment outperformance in 2018.

INVESTORS & MANAGERS:

Upgrading, Re-tooling Operating Guidelines Provides an Edge in Competitive Markets

John Mackel, *Director, Moss Adams*

HOW OPERATING GUIDELINES CAN IMPROVE PROCESS AND SMOOTH BUMPY RIDES

In this long, strong market cycle, taking the time to find areas of improvement may provide a lot of value in the long term. One common area available to investors, investment managers, and operators—whether at a firm that's humming along, growing quickly, or facing challenges—is operating guidelines, also called policies, practices, and procedures.

Operating Guidelines, From 1.0 to 3.0

Operating guidelines include processes that can or should be used in any type of market—whether now or the next downturn—in a wide variety of scenarios, such as:

- When a new investment strategy or new fund is launched
- When a change in valuation frequency or financial reporting will occur
- When a new process and/or system is implemented

Operating guidelines become even more crucial when confronting challenges, such as:

- Valuing quarter-end or year-end off-market deals
- Valuing nonperforming loans at the end of the financial reporting process

Times of change often shine a light on the investment managers that have strong policies in place, which have been implemented in a way that helps prepare for change. For many firms, operating guidelines serve as a living tool and are regularly reviewed and improved.

Institutional investors also generally want institutional-grade operating and reporting systems from their partners. While some investors will overlook weaknesses in this area if an investment manager has a long track record of superior performance, evaluating systems and instituting best practices can improve an already good relationship—helping investment managers avoid future problems.

Accordingly, the majority of successful real estate firms—from private equity shops to real estate operators and advisory firms—employ a consistent behind-the-scenes tool: operating guidelines. These are a set of working documents comprising a firm's operational and investment strategies in a way that allows potential partners and investors to quickly and comprehensively understand a firm.

For companies already using operating guidelines, it may be time to revise and update these documents due to fair value reporting changes as well as other institutional investment, finance, and accounting changes.

WHAT TO INCLUDE

Once a company chooses which reporting standards and approaches it wants to use, it's important to codify them in its operating guidelines. These can include the following:

- A statement of objectives or an overview of process points and timing that specifies how each process is handled—providing checks and balances as well as a system that can be referred to in the event of staff changes or other disruptions
- Business plans for the company and key business lines
- Quarterly or mid-year forecasting
- Asset-management reporting practices
- Valuation processes for properties and investments—especially if a company is operating under net-asset value reporting
- Development of a valuation committee with assigned roles and responsibilities
- Disposition or acquisition processes, including steps for solicited and unsolicited transactions

Many entities have a full version of their operating guidelines for internal use as well as a high-level or summary version for investors, partners, or even the SEC if they're a registered investment advisor.

TIMING

Timing is essential no matter if valuations are prepared internally or by external parties. Company resources and financial reporting deadlines need to match the timing and execution of three key items:

- Valuations
- Reviews
- Approvals

Why Update & Retool Operating Guidelines?

Investors, investment managers, and operators often find the process of developing or updating guidelines does more than expected, shining a light on existing inefficiencies or uncovering small problems before they become big ones. Examples are shared below.

CFO FOR A FAMILY OFFICE WITH $2 BILLION IN ASSETS UNDER MANAGEMENT

"The policies formed the bedrock for our operations around valuations and financial reporting and allowed us to have tangible guidelines that we could build and expand on, and that we can share with stakeholders", said the CFO.

Although the company sees itself as nimble and has an entrepreneurial culture, it also has a deep focus on compliance and risk management. Well-researched and updated operating guidelines are part of management's approach.

One component of the revised operating guidelines was the incorporation of a comprehensive, yet concise, dashboard presenting the main inputs and assumptions in the quarterly valuations.

COO OF A $1 BILLION PRIVATE-EQUITY FUND

"The policies gave us the framework we needed at a critical time in our growth cycle, and the development of a related fair value liquidation model allowed us to focus on our core skills, such as acquisitions and asset management," according to the COO. "The operating guidelines also increased transparency for our investors and played a role in our capital raises."

For this company, documenting the process of projecting asset-management fees based on potential deal flow to determine the resulting net-asset values gave management and potential investors significant additional clarity.

Accounting/Reporting: Illuminating Issues, Before They're an Issue

Transparency, consistency, and accuracy are essential when creating, revisiting, or updating a company's operating guidelines. As companies strive to create stronger operating and reporting guidelines, certain trends emerge, for example:

INVESTMENT-COMPANY GUIDANCE

Many firms use tax-basis accounting or historical-cost accounting under generally accepted accounting principles (GAAP). However, audited financials for companies reporting under investment-company guidance are becoming more standard as investment partners and their investors are pressed to report values that reflect more timely valuations.

FAIR VALUE REPORTING

When valuation policies exist, they tend to focus on acquisitions and asset management because of the shoot-first-ask-questions-later nature of certain real-estate funds. It's important to establish these policies for all scenarios, however, given the nature of increasing investor requirements, which continue to gravitate toward fair value reporting.

DEVELOPMENT-PROPERTY VALUATIONS

At minimum, operating guidelines should demonstrate how development properties are valued depending on two measures:

- The development stage
- How the development stage aligns with the fair value measurement date

Both a bottom-up approach—essentially the fair value of the land, development costs, and profit—as well as a top-down approach—the completed, stabilized property with deductions, profit, cost to complete, and leasing—are credible.

Both approaches can and should be employed, depending on the complexity of the property or rehab as well as the investment management team's level of sophistication and available resources. In many cases, a third-party appraiser may be a preferable alternative to perform this work.

QUARTERLY VALUATIONS

Many companies continue to increase internal/external valuation frequency to a quarterly versus annual basis. Most larger companies are also alternating the external appraisal firm they use for annual valuations every three years.

Firms aiming for the highest standards in the industry often ascribe to the NCREIF PREA Reporting Standards, which are increasingly used for joint ventures or funds with institutional investors.

Example Scenarios of Best-Practice Operating Guidelines

The following examples illustrate firms that have used operating guidelines to provide a strong framework for their business processes and financial reporting.

RESIDENTIAL REAL ESTATE DEVELOPMENT FIRM WITH PRIVATE-EQUITY PARTNERS

A real estate firm specializes in master-planned community and land development, including for-rent and for-sale housing as well as multifamily projects and condo conversions.

Although the firm had successfully launched two funds already, it wanted to create a more diversified fund with the potential to attract pension-fund partners for the first time. The effort to create operating guidelines focused on supporting institutional fundraising and establishing timelines driven by financial reporting deadlines for the following reasons:

- Engaging third-party appraisers
- Reviewing appraisals
- Finalizing reports

In moving to fair-value reporting, the guidelines—specifically the timeline for engaging appraisers to assist with the more complex assets—proved critical in giving management sufficient time to review the valuations.

COMMERCIAL REAL ESTATE FIRM USING PRIVATE EQUITY
An owner of industrial, flex, and office properties had successfully created two private funds. Prior to launching a third fund, the owner realized she needed to boost processes because of inefficiencies around financial reporting—including internal valuation processes and internal appraisal reviews.

New operating guidelines served to incorporate commonly accepted best practices for a fair value reporting framework as well as document internal valuations. Creating these guidelines prior to a pending system implementation ultimately enabled a smoother integration.

MEDICAL OFFICE PRIVATE-EQUITY FUND
A company was launching its first fund— in acquisitions and redevelopment—and realized it needed to update and expand its internal systems. The effort to develop operating guidelines focused on several objectives, including the need to identify staff for certain functions and provide them with the tools to assist with valuation and reporting. The company also implemented new employee training and hiring in acquisition and asset management functions, which incorporated fair value exercises, such as appraisal reviews.

> "Times of change often shine a light on the investment managers that have strong policies in place, which have been implemented in a way that helps prepare for change."

These policies empowered management to identify and document support for key inputs and assumptions, which hadn't always been readily available from third-party sources.

Next Steps

When developing or updating a set of operating guidelines, management can benefit from first looking at current best practices or obtaining a template or redacted set of guidelines from another advisory firm.

Whatever stage a firm is in with its operating guidelines, the process and end results can yield valuable insights into improving current operations, establishing a strategy for growth, and attracting new capital.

DATA UNLOCKS

the value of your portfolio's 'Efficiency Reserves'

Brenden Millstein, *Carbon Lighthouse*

BUILDINGS ARE COMPLEX ecosystems with many interdependent parts. While the widening availability of real-time, comprehensive data is allowing real estate investors to improve investing decisions, efficiency, accuracy, and operating choices, the quantity of data within a building is much more complex than many realize.

In recent years, we've seen how data can build bold new business models and even industries, some which may previously have seemed far-fetched. Lyft and Uber, for example, have taken an idea that would have sounded silly, if not ill-advised, less than a decade ago — getting into the personal car of a total stranger — into something many of us now take for granted. All of this while creating a new value stream for vehicle owners and continually increasing the value of these companies. Data makes it possible.

But it's a different ballgame for the real estate industry. Coordinating cars seems like tee ball when compared to the overwhelming quantities of data buildings can generate. This confusion compounds when building data is viewed across extensive portfolios with multiple asset classes in many local economies. And the quality of the data is just as if not more important as its quantity.

When collected properly, the right data allows real estate investors to tap hidden value in their assets that generates significant profit portfolio-wide. Even with activities as seemingly mundane as energy efficiency.

Advances in data collection and analysis enable us to quantify the financial worth of wasted energy in buildings just as Exxon might size the prize of oil in the ground. However, this isn't a 'one-and-done' deal — even initially accurate efficiency data measures often lead to disappointing results. Many, including engineers, have too-high expectations of what efficiency can do for them. A 2017 UC Berkeley study found that only 24 percent of predicted savings came through. This largely is due to the inevitable 'performance drift' with which building owners have become well-acquainted.

As dynamic ecosystems, conditions impacting building energy performance are in a constant state of flux. Tenants, technologies and even weather patterns change. That's why active management and ongoing tweaking is needed. You would never drill an oil well and not pay attention to production; likewise one should never tap Efficiency Reserves without taking ongoing action to ensure the value is delivered as expected. To do this effectively, we need better data.

Tapping your building's 'Efficiency Reserves'

Admittedly, viewing real estate assets like oil and gas assets might sound unconventional and perhaps controversial coming from a clean energy company. But oil and gas extraction has a lot in common with commercial real estate.
It can generate significant value for real estate investors.

Just as in Big Oil, the most successful real estate investors are those who have learned how to extract the most value out of a given piece of property. Like oil industry 'energy reserves,' tapping 'Efficiency Reserves' in buildings provides a competitive edge in a volatile market and creates real financial value. If you look at building energy efficiency opportunities, there are billions of dollars in value from wasted energy that can be harvested.

Granted, tapping those reserves isn't easy. Efficiency is scattered across multiple building systems and processes — single point solutions like swapping out old lighting fixtures, replacing a chiller, updating a roof system, or changing management practices can require major capital expenditures, disruptive construction projects and, depending on lease structures, take time to produce a positive return — if a return materializes at all.

Creating significant value from efficiency requires vast amounts of original, building-specific data so that you can uncover and continuously correct hidden inefficiencies in existing, interconnected building systems. With such nuanced data, small tweaks across many different building systems can yield 10-30 percent energy savings, and more importantly for many landlords, boost net operating income. Again, this is similar to the oil industry, where expert businesses have emerged specifically to identify, value and then extract reserves for their clients.

Real estate needs the same kind of approach – and, like oil, investors can now look at efficiency as potential value creation and not as marginal cost savings. Real estate investors care the most about the overall value of the buildings, expending the brunt of their worry on maximizing NOI to improve the equation coupled with a cap rate.

While energy might seem like a small variable, generating even $0.50 energy savings per square foot tapping into Efficiency Reserves can, if done correctly so that it can be capped at disposition even in NNN buildings, increase the overall value of a building by $5 – $10 per square foot— while making important progress against climate change. In a 100,000 square foot building, this would result in $1 million dollars in financial value and 3,000 tons of carbon dioxide eliminated. Multiply this by a portfolio of 1,000 buildings, and you've just generated $1 billion in financial value, and eliminated 3 million tons of carbon dioxide — about the same as cutting the emissions from electricity use from half a million homes in one year. That's a lot of green.

Data-enabled 'Efficiency Production'

Traditionally, the concept of energy efficiency has been a relatively passive affair. You screw in a few LEDs, purchase ENERGY STAR-friendly products, add a green roof or bike racks, check the boxes to make your building LEED-certified, and call it a day. But these measures only scratch the surface of the opportunity.

By collecting and analyzing more data than ever before, sustainability and efficiency can be viewed as prospecting for value. In a tight market priced near to perfection, these Efficiency Reserves can be the difference that creates alpha. While commercial real estate has been able to weather the Information Age thus far without too much trouble, technology now is disrupting the status quo.

Businesses and consumers spend $450 billion powering these buildings each year, with up to 30 percent of that energy and money wasted on delivery and management of energy. What if we could convert this wasted energy into revenue?

Again, thanks to data, we can.

The Efficiency Production process works by deploying hundreds of physical sensors throughout a commercial building in a way which doesn't disrupt operations but allows for the collection of huge amounts of quality thermodynamic data pertaining to the building's heaviest energy users: heating, cooling, ventilation and lighting systems. All of this information, along with supplementary data from the Building Management System (BMS), utility, and weather satellites, is fed into CLUES®, Carbon Lighthouse's proprietary software platform, to create a kind of MRI of your building. This lets us identify how to best optimize the equipment you already have in a way that improves overall system efficiency, without costly equipment replacement or upfront cost. With this MRI "baseline", we can model which corrective actions will produce the highest returns.

After we've implemented the changes, we use data to monitor the energy performance over time, which is how we Efficiency Producers to take corrective action as soon as there is a problem, guaranteeing continued financial value even in the face of inevitable building drift. Energy efficiency is not a 'one-and-done' deal; it requires continuous action.

While Carbon Lighthouse coined the term 'Efficiency Production', it is increasingly being deployed across portfolios nationwide by owners and real estate investors who see the massive market opportunity of Efficiency Reserves — $100 billion in the U.S. market alone in the form of wasted energy.

Capitalism will save the planet

The beauty of efficiency in all of its forms is that it's about making better use of the resources we have to create better outcomes. Real estate investors have plenty to worry about on the climate front — in 2017 alone, extreme weather events such as Hurricanes Harvey, Irma, and Maria inflicted billions of dollars in damages on the built environment, before even accounting for lost rents. And, as the planet continues to warm, the costs associated with these unpredictable weather risks will only increase.

There is a common belief that the environment and the economy are mutually exclusive pursuits. Technological improvements over the past decade have rendered that belief outdated and incorrect, and the data proves it.

When wasted energy is turned into revenue, we remove a chunk of the 20 percent of global emissions coming from commercial buildings. So far, Efficiency Production has eliminated the equivalent of six power plants (with nine more on the way) while tapping the value of millions of dollars worth of Efficiency Reserves for real estate investors.

Those who predict the future will inherit it

Success in the real estate industry comes down to the ability to make accurate predictions. It's the real estate investor's job to predict the future of the market, and in this endeavor data is a powerful ally. Making useful predictions depends on the quality and quantity of the available data.

We live in the Information Age, and data reigns. Those investors who learn how to collect, analyze and act on data will reap the financial rewards. In an industry struggling to solve the value creation problem, data offers an opportunity to find and tap new revenue streams that haven't ever been possible before.

The successful will profit while making a tangible impact on climate change. How we now collect, analyze and act on data has changed the game. There's untapped value waiting in your building. Will you reach for it?

BLOCK

IS YOUR ORGANIZATION READY FOR

CHAIN

Sondra Ashmore, *Assistant Director of IT*
Steve Johnson, *Managing Director of Commercial Mortgage Servicing, Principal Real Estate Investors*
Tama Huang, *Principal, Global Real Estate Advisory Services Leader at NOI Strategies, a Division of CohnReznick*

You may have heard the term "Blockchain" thrown around at a recent conference or referenced in a Fintech article, but many of us are still trying to understand what it is and how the technology could impact the Real Estate industry. There are a host of questions that many industry stakeholders have regarding the technology. For instance: does Blockchain have the potential to change real estate transaction settlements to the same degree that online shopping has changed the retail experience? If so, how far away is this disruption? What aspects of real estate investing are the most vulnerable to this change? To answer these questions, we must start with providing a bit of history on why Blockchain technology was created in the first place.

WHAT IS BLOCKCHAIN?

Blockchain was created in 2008 to support a distributed and immutable public ledger for the Bitcoin currency. Allowing the transactions to be timestamped in a public ledger, Blockchain solved the digital currency issue of double-spending, or replicating a digital token twice so it can be spent more than once. Behind the scenes, there is a distributed server that timestamps transactions and saves them to a database without manual intervention over peer-to-peer networks. Most fundamentally, Blockchain technologies provide a trusted architecture that verifies and validates untrusted parties by creating an immutable historical record of transactions.

The next generation of Blockchain was introduced in 2014 and has allowed for expanded uses beyond Bitcoin. Separating the underlying technology that operated Bitcoin from the currency, opened up the ability to represent more complex financial instruments like loans or bonds, rather than only cash-like tokens. This lends itself to the potential application of the Blockchain in a distributed ledger to title and parcel history as well as lease transactions in the real estate market. By 2020, IBM predicts that 66% of banks are expected to have Blockchain in commercial production for loan applications. Today, research has shown that 15% of banks are using Blockchain.[1] The predictions for real estate adoption of Blockchain have been less clear, but the fact that a nonprofit organization, International Blockchain Real Estate Association, formed to advocate for Bitcoin and Blockchain education and implementation, signals that real estate has the potential to be a fast follower.

HOW CAN BLOCKCHAIN IMPACT REAL ESTATE?

The most important thing to know about Blockchain's impact on the real estate industry is that change is happening now. Early focus has been on title transfer and eliminating the need for title insurance. In October of 2016, Chicago's Cook County Recorder of Deeds Office announced a partnership with real estate Blockchain start up, Velox.re (https://www.velox.re/), to test property title transfers on Blockchain.[2] Other uses are also being explored. For example, California-based company, Propy, partners real estate buyers with real estate brokers using Blockchain technology and promote a smarter contract experience.[3] ABN Amro bank is working with IBM to develop a Blockchain that allows buyers, sellers, brokers, and regulators to both record and share real estate transactions.[4]

OUR EXPERIMENT AT PRINCIPAL REAL ESTATE INVESTORS

At Principal Real Estate Investors, we sought to learn more about Blockchain by getting our hands on the technology and partnering with a company outside of Principal to do a mock exchange. We found an enthusiastic real estate partner, Berkadia (https://www.berkadia.com), and used a hackathon (we call them "code jams") approach to pay an invoice using Blockchain.

We teamed remotely with Berkadia and allocated two and a half focused days to make it work. On the first day we decided to try Openchain (https://www.openchain.org) because it seemed relatively simple and appeared to be a fit for our use case. By the end of day one we were able to make some progress, but ultimately were not able to troubleshoot key issues due to the lack of documentation and support. We came to the conclusion that we needed to move on to a new technology on day two in order to meet our goal.

On our second day, we started exploring Hyperledger (https://www.hyperledger.org/). We went this direction because Hyperledger is getting a lot of attention in the Blockchain industry and it also has extensive documentation and community support. Hyperledger offers a variety of options for Blockchain and we ultimately decided on the Hyperledger Fabric platform due to the modular design and vast support it provided.

By the end of the code jam, our real estate partner could send us an invoice for $500 and we could pay it based on fictitious credits we created. Time did not allow us to connect the Hyperledger platform to our internal accounts. The next step would be to perform a test using live accounts to see how the technology performs this transaction.

While we achieved our goal of a transfer across companies, Principal Real Estate Investors plans to continue exploring the uses and benefits of Blockchain. More importantly, we learned a great deal about how the technology works but still have a long way to go to put it into operation. Testing, implementing process controls, and understanding the impact of future regulations will be key things to consider before Blockchain can be fully adopted.

INTEGRATING BLOCKCHAIN INTO REAL ESTATE OPERATING PROCESSES

Blockchain investment has soared in recent quarters, $107 million of Blockchain venture capital and an additional $36 million was raised through Initial Coin Offerings (ICOs) in Q1[5]. With CohnReznick prioritizing innovation from its Chief Executive Officer down, the firm has Blockchain squarely in its sights, using The CohnReznick Innovation Lab at the firm's global headquarters in New York to explore Blockchain solutions. Bitcoin transactions are passing 275,000 each day, and with several potentially larger deals on the horizon, CohnReznick is analyzing how Blockchain can support business process improvement efforts, and potentially disrupt supply chains in existing market sectors. For example, the collaborative capabilities in the innovation lab allowed CohnReznick to create a virtual global "code jam" to ideate solutions leveraging Blockchain and Internet of Things (IoT) devices for an Asia-Pacific-based client to potentially mitigate food safety issues in the $250 billion global perishable goods distribution market.

In the real estate space, the immediate low hanging fruit for Blockchain centers on disintermediation and process improvement to lower costs across the transaction lifecycle by reducing process complexity. Other goals are to streamline due diligence to accelerate leasing transactions, enhancing cash flow, and providing improved data quality for management decision-making across the asset lifecycle. The firm's real estate advisory team is evaluating real estate-specific platforms such as REX; Ethereum, a decentralized platform of apps built on Blockchain, and the InterPlanetary File System (IPFS); and assessing interoperability gaps between the peer-to-peer platform and the traditional real estate technology stack. CohnReznick's Governance Risk, Compliance and Cybersecurity practices are monitoring the global regulatory environment, privacy and security standards, and other potential threats as the industry embraces the technology at greater scale.

ARE YOU READY TO IMPLEMENT BLOCKCHAIN TECHNOLOGY?

How do you prepare your organization to implement Blockchain technology in the real estate space? The good news is that there are many educational opportunities and groups that can help real estate stakeholders. Here are some good tips and resources to help you get started:

- Get involved by joining the International Blockchain Real Estate Association. You can find more information at www.ibtcrea.org or by joining their LinkedIn group.
- Follow #blockchain on Twitter for the latest news on Blockchain
- Attend a Blockchain hackathon
- Seek out conferences that have sessions on Blockchain. Many real estate and Fintech conferences are recognizing the importance of this technology
- Find another company that is willing to experiment with you on a proof of concept
- Work with a Blockchain consultant or vendor such as IBM (https://www.ibm.com/blockchain) or Symbiont (https://symbiont.io/)

[1] http://fortune.com/2016/09/28/blockchain-banks-2017/

[2] https://bitcoinmagazine.com/articles/chicago-s-cook-county-to-test-bitcoin-blockchain-based-public-records-1475768860/

[3] https://cointelegraph.com/news/california-startup-uses-blockchain-for-real-estate-deals-from-la-to-dubai-and-moscow

[4] http://www.coindesk.com/abn-amro-blockchain-real-estate/

[5] State of Blockchain Q1 Report, Coindesk

The $500 Billion DISRUPTION

Ed Lubieniecki, *Enterprise Managing Consultant, RealFoundations*
Barry Faulkner, *Senior Managing Consultant, RealFoundations*

If you're not already talking with the investors you serve about the potential effects of the Financial Accounting Standards Board's (FASB) new lease accounting standard, you're running late! There is urgency in having this conversation — which really should be an ongoing dialogue — as the update will most certainly change tenant behavior and key marketplace dynamics in ways that could significantly impact investors.

FASB's ASC 842 and a similar update by the International Accounting Standards Board (IASB), IFRS 16, require tenants to include the future value of their lease obligations as liabilities on their balance sheets. Historically, tenants have noted this information in the less scrutinized footnotes of financial statements.

The new requirement is intended to give users of financial statements, such as investors and creditors, a more transparent view of a company's true financial health. This change will affect selected commonly-used performance measures, e.g., return of assets, interest coverage, return on capital and quick ratio as well as loan covenants, credit ratings and the cost of borrowing.

Aptly, business pundits, including hands-on real estate experts, are describing the new standard with terms like "bombshell" and "disruptive," even characterizing it as "the biggest change to hit business owners in decades" (Forbes, May 5, 2017).

The Compliance Challenge for Tenants

To begin gauging the update's scope of impact, RealFoundations, one of the leading professional services firms focused exclusively on commercial real estate, commissioned the first known study to estimate how many commercial real estate leases exist in the world and the possible macro consequences of that finding.

"The Inaugural Global Lease Count Study"[1], a rigorous investigation led by RealFoundations founder David Stanford and Senior Research Consultant Ward S. Caswell, accounts for nearly 4 million office, industrial and retail third-party leases spanning 91 countries. RealFoundations believes that the annual value of those leases is about $500 billion (USD). Researchers derived this number using accepted practices for calculating the total value of investment real estate at the country level and scaling to remove those segments without commercial leases.

Although the study reflects lease counts for only about half of the world's countries, due to limited data availability, the findings are still meaningful because the top 25 nations account for more than 80 percent of all global leases.

The analysis of an individual company's leasing obligations is an enormously challenging undertaking, especially for those with hundreds or thousands of leases throughout the country and the world. Many tenants need in-house and/or outsourced, cross-functional teams of specialists to: gather and digitize relevant documents; identify, extract and verify a plethora of key data; and consolidate the information into consistent systems for financial reporting. In most cases, tenant companies have to purchase and implement new software solutions while some have gone as far as re-designing IT systems and processes.

Tenants must also contemplate the difference between data and information. What do the data mean? Once the data are collected and consolidated, how should the company analyze and use the data? What metrics should the company develop that help enhance corporate value and mitigate risk?

[1] To view The Inaugural Global Lease Count Study and for additional information, visit http://www.realfoundations.net/news/cre-lease-count-study.

Savvier Tenants and New Marketplace Dynamics for Investors

Not surprisingly, the topic of leased space has taken on new importance in the C-suites and boardrooms of the world's largest companies.

"With easier access to better lease data, tenants are now better equipped to provide more sophisticated risk analysis and more effective strategic planning," says Randall Zisler, Ph.D., Chairman, Zisler Capital Associates, a commercial real estate investment banking company serving investors/owners, developers and investment managers with capital placement services, strategic consulting and research. "Transparency and enhanced analysis, in turn, can affect the value of buildings themselves."

CRE veterans predict savvier tenants who will change some of the rules of engagement. They also anticipate new marketplace dynamics. These include:

- **Shorter leases.** Tenants may want less debt showing on their balance sheets as more debt could negatively influence perceptions of their creditworthiness and affect their cost of capital. "We expect tenants to seek short-term leases wherever practical," says Jules "Jay" H. Marling IV, CEO & Managing Principal, Capright, which provides real estate valuation, consulting and due diligence services in the United States and Latin America. Tenants also may want to renegotiate existing leases for briefer durations and fewer option periods. Additionally, notes Zisler, "Better lease data help analysts determine the interest sensitivity of different lease structures, which is important when evaluating leases in the context of the company's liabilities."

- **A surge in co-working.** Co-working already is an attractive, fast growing alternative to traditional office space because it offers shorter rental periods, easier scalability as a company's needs change, more amenities and fewer restrictions. According to Marling, "The fact that leases under one year can still remain off the balance sheet should be a boon for the co-working industry." This is not lost on the leading company in this space, WeWork, a recognized disruptor in the office market in its own right, even before the lease accounting change.

- **Volatility in asset valuations.** "Shorter lease terms, if they develop, could increase the volatility in asset valuations as shorter leases would necessitate an increase in assumptions related to future cash flows," notes John Caruso, Managing Director, Head of Finance, Americas, at TH Real Estate, one of the largest real estate investment management firms in the world.

- **Smaller budgets for tenant improvements.** According to Caruso, "The availability of tenant improvement dollars could be significantly reduced as landlords would have a shorter period to recoup those investments."

- **Higher costs for mortgage financing.** "Costs for mortgage financing could also be impacted as lenders would seek to be compensated for the increased risk from shorter lease terms," Caruso adds.

Investment Managers Should Communicate Proactively

The convergence of these developments could materially influence property valuations and returns. Investment managers should discuss the ramifications of these changes with their clients, manage their expectations and help them avoid surprises. Here are the top four things you can be doing to best serve your investors during this period of change.

1. Educate yourself on the implications of the update. Read everything you can — a lot of information and commentary is available online — and ask strategic business partners for their perspectives.

2. Develop a "house view" on the topic. Socialize it within your organization so all managers are conveying that same perspective to and sharing consistent advice with investors.

3. Evaluate the potential long-term valuation and return impact on assets (and liability for those companies that are lessees) in each investor's portfolios in the post-update world.

4. Actively engage in candid dialogue with your investors about what the update could mean for them so they are not caught off guard when otherwise foreseeable impacts become reality. Have an initial conversation and then follow-up discussions, as industry developments warrant, to prevent blindsiding.

Industry organizations, too, can play a valuable role in helping investors understand and prepare for possible consequences of the new lease accounting standard. This is an important topic for presentations and roundtables at conferences and even online forums where institutional investors and their advisors can easily share knowledge and insight in real time.

No one, including RealFoundations, has all the answers but we know that change is coming. Knowledgeable and proactive advice on this topic will ease the transition for your investors who, after all, capitalize the commercial real estate business.

> "The new requirement is intended to give users of financial statements, such as investors and creditors, a more transparent view of a company's true financial health."

Real Estate Markets Enter 2018 on a High Note

Synchronized growth provides strong platform for 2018

Blake Lacher, *Managing Director, JLL*

Global real estate markets ended 2017 in impressive fashion, with 2018 projected to be another solid year barring major financial, economic or political shocks. Office leasing volumes in the final quarter of 2017 were at their highest level in a decade, while the global vacancy rate defied expectations and continued to fall, despite being near the peak of the development cycle.

This helped to propel office rental growth to over 4 percent for the full year, above earlier forecasts and the strongest increase since 2011. At the same time, absorption levels in the logistics sector were at record levels, while vacancy fell to historic lows. Investors remain confident in the real estate sector, with transaction volumes in the final quarter of 2017 surpassing the previous quarterly peak in 2014.

The synchronized global economic upswing provides a strong platform for 2018, although it will be difficult to match the robust levels of last year and investment volumes are likely to soften slightly due to a lack of product and continued investor discipline.

Fourth quarter bounce lifts global investment volumes

Global real estate transaction volumes for the fourth quarter of 2017 came in at US$228 billion, 10 percent higher relative to the same period last year. This brings full-year volumes for 2017 to US$698 billion, 6 percent above last year's total. While political uncertainty still looms, investors remained confident in the performance of the real estate sector, reflected in Q4 2017 global investment volumes surpassing the previous quarterly peak set in 2014.

Despite being in an extended cycle, the weight of capital seeking to enter the sector is still significant. Although global markets continue to be liquid, the relative lack of product combined with continued discipline are likely to limit investment growth in 2018 and we expect global investment volumes to soften by 5-10 percent to around US$650 billion. Nevertheless, investors are still keen to access the sector and are now looking to new strategies such as debt financing, M&A and alternative sectors as the search for yield continues.

Global office leasing volumes at highest levels for a decade

The global office leasing markets finished the year on a high note, with 11 million square meters leased in the final quarter of 2017 across 96 markets, the strongest quarterly volume since 2007.

For the full-year 2017, gross leasing volumes were a healthy 4 percent higher than 2016 and at the top end of our forecast range. Europe was the outstanding leasing market performer with activity up an impressive 10 percent, while volumes in the U.S. were up by 3 percent on 2016 levels with new supply providing greater choice for tenants.

2018 is set to be another good year and we have revised our global volume projections upwards to close to 430.5M square feet. Yet due to the exceptional 2017 result, this translates into a modest 3 percent decline year-on-year, with volumes unlikely to hit last year's impressive tally.

Global office vacancy rate falls, defying expectations

Office leasing markets ended the year a lot tighter than predicted, with the global office vacancy rate defying expectations by falling marginally to 11.9 percent in Q4 2017, testimony to the capacity of the market to absorb additional space.

Most of the vacancy rate decline was due to the continued falls in Europe, where vacancy dropped further to 7.4 percent in Q4. Vacancy rates remained broadly flat in the Americas (at 14.9 percent) and Asia Pacific (at 11.1 percent). Nonetheless, with the delivery of new offices expected at a relatively elevated level during 2018, vacancy is projected to edge up in 2018 to around 12.2 percent.

Office rental growth strongest since 2011

Rents for prime offices across 26 major markets grew by 4.1 percent for the full-year 2017, double our forecasts at the beginning of 2017 and the largest increase since 2011. More of the same is expected for 2018, with growth projected to average 3 percent and top performances going to Singapore and Sydney. Only Shanghai, Mexico City and Beijing are slated for rental corrections over the coming year.

Retail markets focus on asset enhancement and tenant mix

Retailers are adapting and re-evaluating their existing physical space in response to the structural change impacting the sector, with a notable acceleration in new business models and owners investing to create mixed-use destinations for the evolving shopper.

The U.S. retail market expansion continues to slow as low vacancy and a focus on renovation of existing space rather than construction keeps rents inching up, though at a reduced pace. Strong confidence and job creation continue to drive consumer spending in Europe, although prime high street rents are broadly stable in most markets. In Asia Pacific, many retail landlords are adjusting tenant mixes while retailers focus on consumer engagement and experience, with generally flat rents across the region.

A banner year for global logistics markets

Global logistics markets ended 2017 on a high, with robust demand and vacancy at historic lows propelling further rental growth. The U.S. industrial market registered its best fourth quarter of net absorption on record in Q4 2017, driving vacancy to an all-time low and spurring additional rental growth. In Europe the regional vacancy rate has also fallen to a new low with 2017 take-up well above the long-term average. Rents continued to edge up in most markets across Asia Pacific, supported by the uplift in global trade. With buoyant demand and a lack of modern vacant space, we expect continued rental growth momentum in 2018.

Continuing economic growth extends hotel cycle

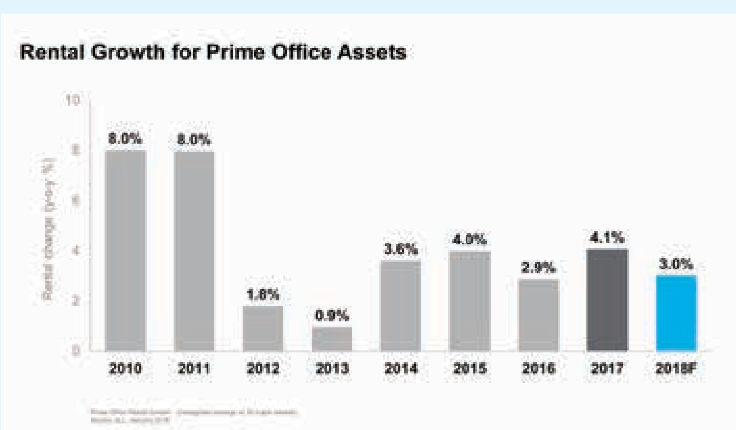
The global travel market remains robust, leading to positive hotel operating performance in all three global regions. Continuing economic growth is supporting a healthy hotel investment environment, with global hotel transaction volumes totaling US$62.5 billion in 2017, on par with the levels seen in 2016. Investment funds and private equity firms stayed the most active buyer group in 2017, while institutional investors continued to increase their allocation to real estate, more than doubling their share of acquisitions since 2014, from 4 percent to 10 percent in 2017.

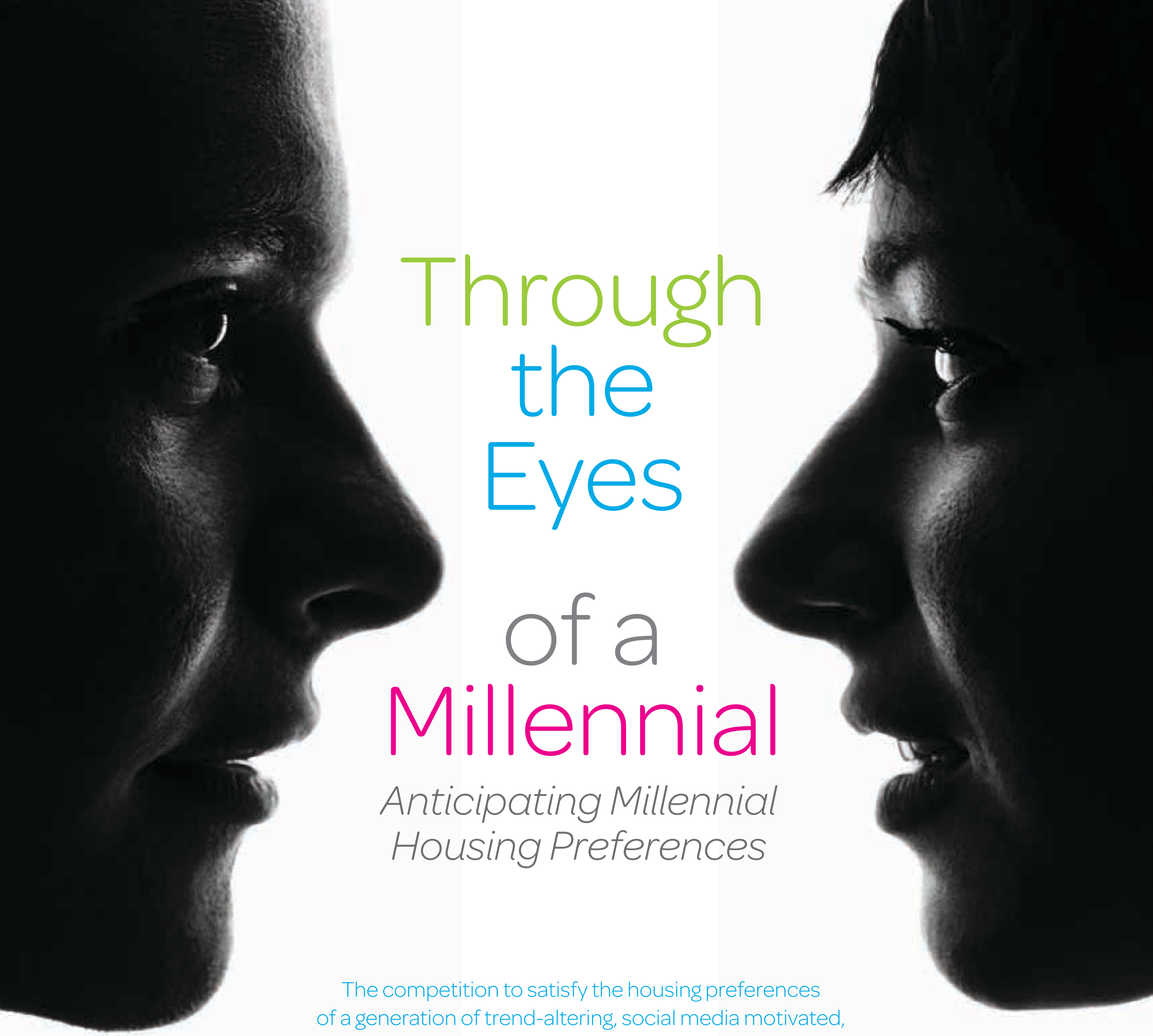
New supply outpaces still solid demand in U.S. multifamily market

The U.S. multifamily rental market continues to adjust to an influx of new supply being delivered across the country. 2017 marked the expected peak of the development cycle, with annual rental growth decelerating and a slight rise in the national vacancy rate to 5.2 percent. With new groundbreakings in the multifamily sector now slowing, fundamentals are well positioned to stabilize over the next 18 to 36 months.

Institutional investor demand remains buoyant in continental Europe, with investment volumes climbing higher in Germany while the Netherlands registered a record year for transactional activity. The UK institutional market remained on its growth trajectory, with investment volumes 20 percent higher in 2017 and expectations of continued strong growth this year.

In Asia Pacific, a tight housing policy stance and limited issuance of pre-sales certificates have impacted sales activity in Shanghai. Elsewhere, market sentiment has led to sustained sales momentum in Singapore as well as Hong Kong, where buyers have snapped up flats in new launches.





Through the Eyes of a Millennial

Anticipating Millennial Housing Preferences

The competition to satisfy the housing preferences of a generation of trend-altering, social media motivated, over-spending, student debt smothered 20-and 30-somethings appears to be coming to an end. Though countless projects are still reaching further upwards toward the sky – searching for those prospective tenants that are rumored to be flooding our inner cities in search of a walkable, amenity filled lifestyle – there are whispers that leases are not being signed as fast as investors expected. Apartments are filling up, but these millennials are not consuming units as fast as many experts anticipated.

Grant Hromas, *NAREIM Fellow, DePaul University Graduate Student*

Recent data have demonstrated a revitalization of suburban development taking place, particularly in the Chicagoland market. Investors are targeting sites near the village-scaled downtowns that feature some semblance of the urban neighborhoods that many of these millennials are leaving behind for greener, and less expensive, pastures. Ample opportunities for investors exist in the countless bedroom communities that serve our Nation's economic powerhouses. Take Chicago, for example.

Chicago is the center of a network of smaller cities, towns, and villages. In fact, there are 250+ suburbs within the tri-state area of Illinois, Wisconsin, and Indiana. Naturally, there are more real estate investment opportunities in the larger network than in and around Chicago's Loop, but as multifamily housing unit construction is accelerating across the vast expanse of suburbs, more specific opportunities should present themselves for a less tapped product beyond simply multifamily, such as smaller detached homes, townhomes, or duplexes to name a few. Are urban and suburban multifamily housing where investors should be pouring their money; or is a transition about to take place that opens up a substantial market for some of the most under delivered, medium-density housing types?

So What Exactly Are Millennials Looking For?

It is undeniable that a substantial amount of money has been made by investing in high-density, urban rental housing in Chicago. As neighborhoods such as South Loop, West Loop, and River North continue to see construction cranes populate vacant parcels, an occupancy slow-down is inevitable. Concessions and empty units are common. Costs have soared higher and higher as contractor capacity is low and an unpredictable economic and political climate exists. This highly competitive market is seeing thin margins to achieve successful returns.

Though not the only targets for this highly-amenitized housing, Millennial preferences may be shifting, which is causing a strain on new apartment deliveries. There is certainly a convenience factor for living so near work and having multiple options for public transportation. Living near restaurants, bars, shareable amenities, nightlife entertainment, and other young singles makes these inner-neighborhoods incredibly attractive for the urban-inclined; however, as this generation is aging, so too are its preferences.

As the Millennial generation begins to form long-term relationships, a need for larger housing units and a place for our children – typically animal children – to roam. Concerns about quality schools that are affordable, or preferably public, start to populate the backs of minds. Home ownership, in spite of that pesky student debt, begins to become a priority. It may be, however, a slightly terrifying thought for the city-dweller to have to move out to our parents' suburbs in order to find housing options that satisfy these new criteria. A choice to stick it out in the City or move away for those greener pastures may seem like a bipolar decision, but maybe there is an in between. Is it possible that what people are looking for is a higher level of density, amenity, affordability, and convenience?

The Untapped Potential of the Suburb

Investors are making it a less intimidating transition to the suburbs by providing housing choices that closely reflect that of the urban core: mid-rise, highly-amenitized apartments that bring like-minded individuals together in contained communities near village downtowns. There is likely more bang for your buck, so the move feels lateral, as opposed to a step down from, say, Chicago's Wrigleyville to Forest Park. Though the commute may be a bit longer, the suburban location is transit-served along Chicago's Metra commuter rail service and located near shops and restaurants. These suburban targets are an excellent investment that take advantage of what both the city and surrounding communities have to offer. Here is the catch: it is only filling a temporary need for a generation of late blooming home-buyers.

The untapped potential of suburbs, and outer urban neighborhoods for that matter, may be better revealed with for-sale housing types that are located within walkable, amenity rich downtowns. The 250-unit apartment building serves as an excellent stopover for a year or two, while a prospective buyer can try out an unfamiliar community and search for that perfect starter home; however, in most communities within the Chicagoland area, the housing stock is tired. Limited new housing of quality exists in most of Chicago's suburban communities.

Quality housing from a Millennial's perspective might look like this: near the heart of the community, within a good school district, walking distance to transit, sized with efficiency in mind – think around 1,600 to 2,200 square feet, minimal yard to maintain, alley served, access to parks to make up for that smaller yard, intermixed with a variety of housing types to emulate a foregone urban life, and hitting a price point that is achievable for the comparatively late bloomer. This may include townhomes, duplexes, or historically creative solutions such as bungalow courts, where a cluster of smaller single-family homes share a common outdoor space. An appropriate mix would help supplement the rapidly expanding capacity of suburban rental apartments, while maintaining enough density to support the types of urban amenities that some will leave behind. Additionally, these higher levels of density could support and maintain the culture of sharing that is so common in Millennials' lives. Waiting only two minutes for an Uber to pick you up at your door in Park Ridge or hopping on a Divvy bicycle to cruise around a park in La Grange? It might as well be the Bridgeport neighborhood in Chicago!

These examples are just a few potential solutions to help satisfy what may be projected as an underserved market. It does not have to be "I can only have this in the city" or "I can only have this in the suburbs". Middle-density housing, however, is more difficult to execute and is not the forte of Midwest housing developers. Additionally, this type of housing could be considered land greedy when compared to mid-rise housing, thus making it easy to dismiss without much further thought. Though the identification of this underserved housing market is made with confidence, investments in this arena may rely on the ideal scenario where market meets a municipality with capacity and vision.

Identifying the Millennial Friendly Community

Whether near Chicago or another major job center, there exists an exorbitant number of suburbs. Not all of them have the capacity or desire to meet the needs of a generation seeking a new home without giving up the conveniences of an urban lifestyle. Some municipalities do not have the necessary direction or have an existing population that is resistant to change. Introducing a lower price point of seemingly "urban" housing types may bring undesirable residents in their eyes. Many of these communities are established in their ways. What investors must search for are communities that create the "right" barriers to entry.

Attributes of worthwhile communities include inherent aspects of tangible criteria already established, such as quality schools, access to transit, a TIF in place, and at least the potential of a quality downtown; however, the intangibles may include visionary leadership, competent staff, a community supported master plan, and a hunger to establish public-private partnerships to get the job done. These intangibles are too often overlooked and underappreciated by investors that are simply identifying market capacity, favorable demographics, and minimal barriers to entry.

Finding the right community to partner with may build a lasting relationship between village leadership and investor, which could make repeat investments lower-risk and less competitive in a market that may be starved for a refresh in both its population and housing stock. Sure, they might expect high-quality, but finding that community with a vision and commitment to improve their downtown and willing to take a risk on allowing a Millennial-welcoming environment should reveal investment opportunities both now and into the near future. With foresight and a willingness to listen to a public partner, investors have a chance to unlock some of the untapped potential of the suburbs.

Millennials are Making Their Move

As housing deliveries have increased in the suburbs from 2016 to 2018, while decreasing in the urban core, investors are fully aware of this trend of the pendulum swinging towards the periphery. The question becomes: are we building the correct housing in the right locations? In some cases, yes, but honing in on those communities that support the criteria of a generation preparing to buy something that may not yet exist is key.

Millennials will demand a variety of housing types, sizes, and locations. Not one product will satisfy an entire generation. Though it is easy to articulate generational stereotypes, Millennials – like the generations before and after – will live in cities, suburbs, and everywhere in between. Millennials will generally have children later. They could have debt. They may even budget their money well – for all those older generations out there, we just spend it differently. An intelligent investor will continue to seek the right place at the right time, but consider this: ask the nearest Millennial where they see themselves in five years.