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Commercial real estate redefined  
How the nexus of technology  
advancements and consumer  
behavior will disrupt the industry

Deloitte Center  
*for* Financial Services

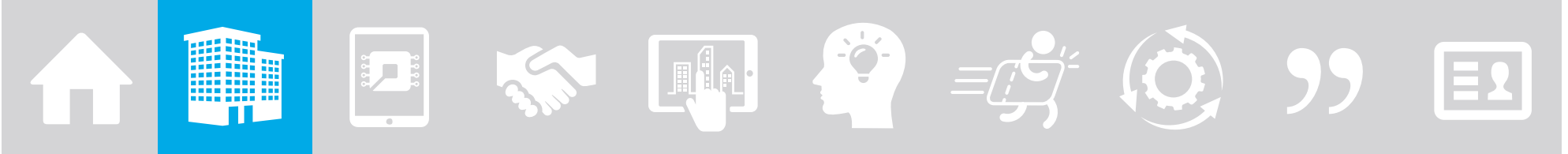


# Contents

 Foreword	1
 A nexus of technology advancements and consumer behavior changes	2
 Collaborative economy	3
 Disintermediation of brokerage and leasing	6
 War for talent	9
 The last mile	12
 Disrupt or get disrupted?	15
 Endnotes	16
 Contacts	17

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Dear colleagues,

In previous editions of our outlooks, we examined the marketplace to offer guidance on what might be of greatest importance to industry leaders in the coming year. But many of these day-to-day challenges and opportunities don't change that much from one year to the next. With that said, we are seeing our clients become increasingly concerned by the potential disruptions they may be facing not just next year, but over the next several years. Industry leaders are increasingly thinking about longer-term strategic issues and how they can stay ahead of the impacts, and so we felt it was necessary to similarly take a longer-term view in our outlooks.

We are delighted to share with you our views on commercial real estate (CRE) industry trends and priorities over the next few years, based on the perspectives and first-hand experience of many of Deloitte's leading practitioners, supplemented by original research from the Deloitte Center for Financial Services.

Making predictions is an inexact science at best, but we are seeing the emergence of a number of dynamics that have great potential to fundamentally change the CRE business over the next decade. Technology developments—mobility, cloud computing, analytics and the Internet of Things, as examples—will have great influence on how properties are constructed, managed, sold, and leased. Several consumer trends, like urbanization and the sharing economy, are already coming together to shape how people live, work, and play. These trends also have changed the way that office space is used, for example, which will continue to evolve over time. And the convergence of additive manufacturing, electronic commerce, and innovative delivery methods will greatly change the “last mile” problem of getting goods to market, with consequent impacts on both retail and warehouse properties.

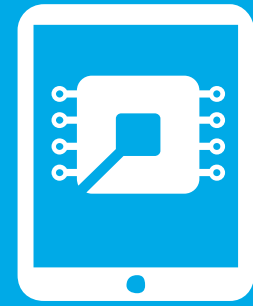
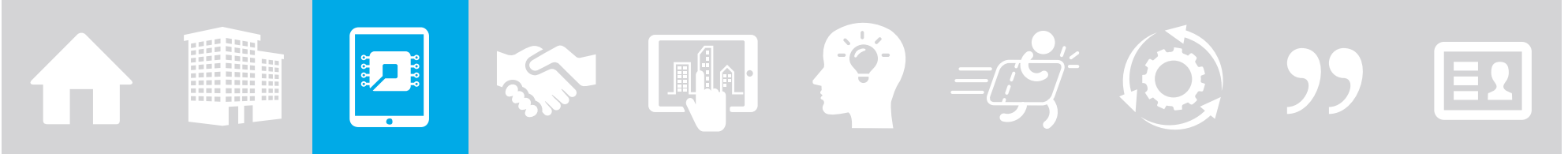
This outlook is organized to provide the reader with an overview of a few disruptive trends that we find are generating the most energy in client discussions at the moment. We have traced the development of each trend, with some pertinent examples that show how the industry is already, or will be impacted over the next decade. A series of bold predictions, in the form of a “CRE forecast,” are offered that are based on our experience and analysis, and each section wraps up with actionable takeaways and strategies executives can consider to seize opportunities through these potentially disruptive clouds. We hope you find this report insightful and informative as you consider your company's strategic priorities for the coming years. Please share your feedback or questions with us. We would value the opportunity to discuss the report directly with you and your team.

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# Foreword





## A nexus of technology advancements and consumer behavior changes

Disruption is not a new phenomenon, yet it is a hot topic of discussion in every boardroom today. Many of these discussions center around the potential impact of technology on their business, and while this trend is also not new, nearly every traditional business is feeling the heat more than ever.

The convergence of one or more technologies, such as advanced cloud computing, mobile, social media, and analytics, is leading to fast-paced, big-bang disruptions in many industries. For example, this convergence is enabling high-quality Internet enabled services such as advanced payment systems, Internet of Things, and geolocation services globally. Furthermore, small and large technology companies are leading the charge by constantly experimenting with product innovation.<sup>1</sup> These companies use hackathons and other approaches to innovate products and services that unintentionally obliterate existing businesses.<sup>2</sup> As a result, traditional value chains are being transformed with transfer of power to the consumer. The technology advancements are increasing global interconnectedness, data ubiquity and transparency, and speed of information access and exchange. As a result, disruption in one part of the ecosystem is rapidly spreading to the broader world.

Other evolving trends are rising urbanization and changing global consumption patterns. Urban population is expected to grow to 66 percent of the global population by 2050, as compared to 54 percent and 30 percent in 2014 and 1950, respectively.<sup>3</sup> This rising urbanization is redefining how and where people live, work, and play. Consumption patterns are tilting toward more customized goods and services. Some consumers are increasingly environmentally conscious, preferring to reuse and share goods rather than own and acquire new ones.

We believe the nexus of technology advancements and consumer behavior changes has the potential to redefine urban planning and fundamentally change the CRE demand-supply dynamics and business model, including real estate usage, site location, development, design, valuations, leasing, and financing. That said, as the disruptive trends evolve, regulators will likely have to develop policies and regulations to strike a balance between protecting public interest and enabling innovation.<sup>4</sup> We believe CRE organizations will have to be increasingly cautious about cybersecurity and the appropriate use of data.

In our inaugural longer-term outlook, we have identified four themes that we believe will result in significant disruption for the CRE industry over the next decade:

- Collaborative economy
- Disintermediation of brokerage and leasing
- War for talent
- The last mile

While there is no certainty about the extent of disruption in each of these trends, we firmly believe that CRE companies will have to be agile and flexible in embracing technological innovations to keep pace with their new competitors and maintain their edge. Mark Fields, president and CEO, Ford Motor Company, said “For me, it was exciting to have the opportunity to join a company that simultaneously built one of the world’s most complex industrial products and the most interesting consumer products. Fast-forward 26 years, we now make one of the world’s ultimate technology products as well.”<sup>5</sup> This is one example demonstrating how traditional automotive companies are tackling both current technology-driven innovations, like electric vehicles, as well as emerging disruptions—like driverless cars. Could the CRE industry see similar innovation and disruption in their business?



## Collaborative economy

### Reshaping CRE demand and use

The collaborative, or sharing economy is a digitized format of the age-old bartering system. Essentially, consumers serve each other directly rather than being served by companies, and pay for the use or access of goods and services rather than own them. Based on the premise of “on demand,” technology advancements, consumption and lifestyle patterns, along with societal factors are driving the rapid growth of the collaborative economy. Companies such as Uber and Lyft are leveraging technology to offer on-demand taxi services, while Zipcar provides on-demand car rentals. Combined, these services have reduced the need for car ownership. This trend can be equally applied to CRE, as collaborative space usage is gaining prominence in places where one lives, works, and shops.

Airbnb is an online marketplace for renting accommodations. With over 1.5 million global listings across more than 190 countries and in over 34,000 cities, the company is catering to more than 40 million guests and has revolutionized the concept of renting a wide variety of accommodations for business and leisure travelers.<sup>6</sup> Many consumers believe that it’s more convenient to use such a service rather than reserve hotel rooms, and at the same time enjoy the unique customized lodging experience they are able to create for themselves.

In the office sub-sector, WeWork leases large office spaces and sub-leases them on demand. In another variant, companies like LiquidSpace,<sup>7</sup> Regus,<sup>8</sup> and Desks Near Me<sup>9</sup> are online marketplaces for a wide variety of short-term rentals of office space, ranging from day offices, hourly use of office space or meeting rooms, to virtual offices and other uses. In the retail space, online marketplaces such as Storefront offer a platform to brands, designers, and artists to find physical retail space for short duration.<sup>10</sup>

Going forward, we expect driverless cars to take car sharing to the next level. Likewise, real estate space sharing will expand to other property types: For example, WeWork is expanding the sharing concept to residences with WeLive. One of their properties in Crystal City in Arlington, Virginia, will include two floors of cosharing office, apartment, retail, and other shareable spaces.<sup>11</sup>

The success of a collaborative economy could be stymied by regulatory intervention, as many new services are perceived either to affect public interest or to potentially violate existing regulations.<sup>12</sup> Although state and federal governments have yet to develop policies to respond to the growth in the collaborative economy, companies such as Uber, Airbnb, and

others are coming under significant regulatory scrutiny in various jurisdictions. For example, in the October 2014 report, “Airbnb in the City,” the New York State Attorney General estimated that as many as 72 percent of the units rented through Airbnb were in violation of state zoning regulations or other laws.<sup>13</sup>

### How will the collaborative economy impact CRE?

The growth in the collaborative economy will likely create opportunities for incumbents to optimize rates on short-term space, creating more value while allowing tenants to obtain space that more closely meets their demand-based needs.

However, it can also impact the demand for existing real estate. For example, studies suggest that revenues of lower-end hotels are impacted by nearly 8-10 percent in areas with high Airbnb listings.<sup>14</sup> Separately, certain property types such as parking lots may not be required at their existing locations, as driverless cars become operational. (For more details, read our blog, [“Commercial real estate sector: Get set to be disrupted by driverless cars.”](#))

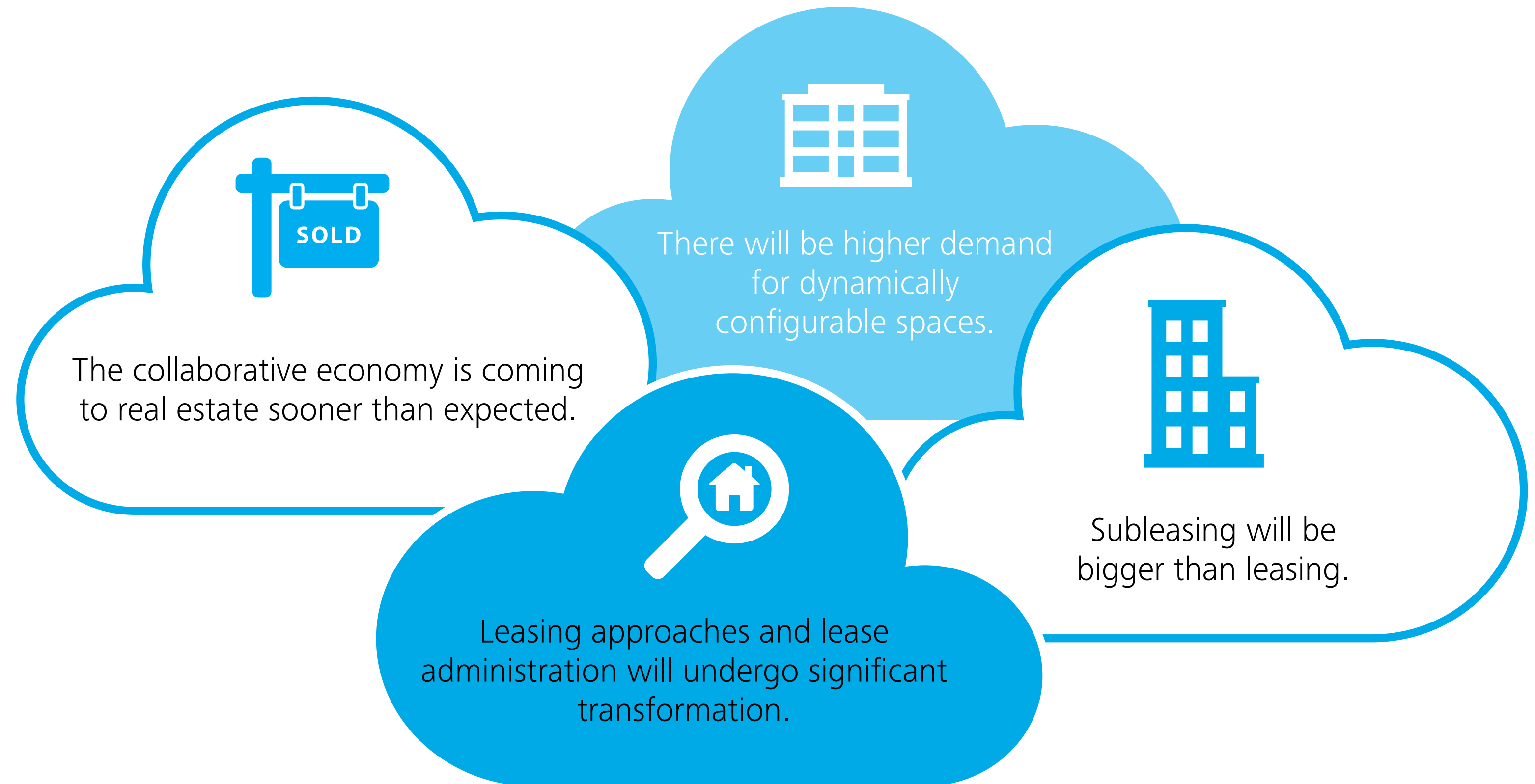
Incumbents will find it challenging to manage the use of existing real estate under current leasing and tenant approaches, because they may not have the flexibility to accommodate tenants' varying demand for, and use of space. Companies like LiquidSpace offer large open office spaces that can be adapted to each tenant's unique need by allowing the latter to scale their space requirements up or down based on short- or intermediate-term demand, rather than locking themselves into longer-term leases for more space than they need most of the time (or too little space during periods of rapid growth or project-related demand).

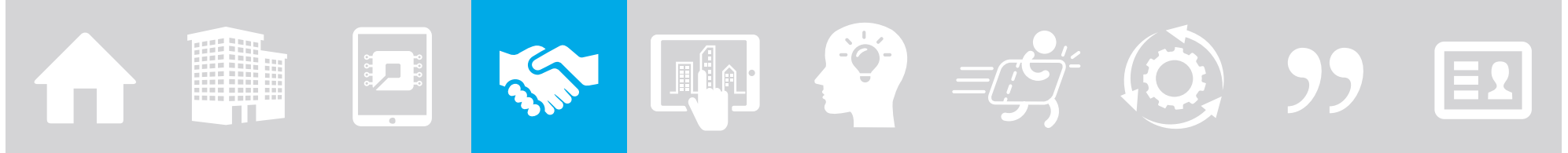
Corporations may reassess the need for long-term leasing of large office spaces as on-demand space availability fits in perfectly with the growing preference for flexi-work of many of their employees. There could potentially be an evolution of multi-tier leases, wherein a cluster of tenants such as WeWork lease large office spaces and subsequently sublease them. This would spur a broader subleasing phenomenon.

Beyond those possibilities, traditional CRE companies will face increased competition from individual real estate owners who are using online marketplaces like Airbnb to rent their physical real estate space.

### Our CRE forecast

The growth of the collaborative economy will have far reaching implications for traditional CRE players:





### **Seizing opportunities through the clouds**

Clearly, many existing hotel, office, retail, and health care spaces will likely lose utility as new players in the sharing economy redefine space usage. CRE owners need to rethink their approach to designing, developing, and redeveloping both new and existing spaces to accommodate the need for dynamically configurable spaces by the end tenant. Along with fluid spaces, companies should consider new ways to enhance tenant experience and optimize the value of space to tenants.

Traditional CRE owners may need to change business processes to meet the evolving demand, a daunting challenge to navigate. They can, for example, consider partnering with the coworking startups, as the latter have innovative value propositions and insights. Vornado Realty Trust, for one, is redeveloping existing spaces to make them leasable to WeWork.<sup>15</sup> In another example, W Hotels has partnered with Desks Near Me to provide guests access to premium workspaces.<sup>16</sup> Such collaboration will allow incumbents to use the unused and underutilized spaces more efficiently and maximize the value of their real estate assets.

Many CRE owners may have to adapt to a hybrid approach, as tenants are likely to prefer a mix of long-term lease agreements for core space needs and short-term flexible leases to manage peaks and valleys of workforce and project-related needs. As a result, incumbents will have to reinvent their leasing approach and lease administration processes as their traditional approaches become increasingly irrelevant. They will also have to adapt to a dynamic revenue model because the short-term leasing phenomenon will provide opportunities to drive better demand-based pricing on rental rates, but reduce predictability in their revenue streams.



## Disintermediation of brokerage and leasing

### Brokerage companies will transform into technology firms

Technological advancements are increasingly automating brokerage and leasing tasks and activities, bringing down barriers between potential tenants and real estate owners. Developments in cloud computing combined with mobile and social media are resulting in cost-effective and real-time availability of property information and are enabling many leasing activities online. This has reduced entry barriers for niche and smaller companies. For example, property listing websites provide several services ranging from basic aggregation of leasable space to offering an online marketplace for CRE owners and prospective tenants. Companies like Hubble<sup>17</sup> and 42Floors<sup>18</sup> provide office space listings in the United Kingdom and USA, respectively. Some also complete lease deals—startups such as Rofo are online marketplaces for property listings and potential tenants that also enable lease deals without broker intervention.<sup>19</sup> Additional relevant information, such as CRE lease comparables (comps), is increasingly accessible, which was available only privately in the past. Companies such as CompStak<sup>20</sup> and DealX<sup>21</sup> use technology to crowdsource lease comps and offer it for public consumption, including information such as tenant name, rent, lease duration, and landlord concessions. In other examples, companies such as Real Massive and VTS have even broader platforms, offering property listings as well as market and other related information to owners, tenants, and brokers.

Such online marketplaces are empowering tenants to make more informed decisions without broker intervention.

Indeed, technology enhancements can further disrupt the traditional brokerage model that already obviates the need for human touch by revolutionizing data ubiquity and transparency, and by providing even more information to tenants.

For example, geospatial technologies aid and automate several activities with respect to site analysis, sales, and marketing. They also provide additional information that can allow more informed location-related decision-making for both CRE owners and tenants. In contrast to physical maps, online demography maps and reports for a particular area allow CRE owners to understand the purchasing behavior and socioeconomic status of the end consumers of their existing and potential tenants.<sup>22</sup> These technologies also allow tenants to make efficient and customized analyses that could combine details about a specific property, with market and competitor data. Companies such as eLocations, a global online marketplace, provide detailed location-based information to retail property owners, prospective tenants, and investors on an absolute and comparative basis.<sup>23</sup> The website allows tenants to choose their desired area and match it to a broker listing instantaneously.

Technology enhancements can further disrupt the traditional brokerage model that already obviates the need for human touch by revolutionizing data ubiquity and transparency, and by providing even more information to tenants.

Artificial intelligence and cognitive technologies will allow automation of many tasks that before only humans could do.<sup>24</sup> BrokerSavant's Property Index uses deep learning to scan property flyers, analyze the data, and provide the most relevant property information to the market.<sup>25</sup> DigitalGenius uses its proprietary natural language processing framework to offer scalable and automated human-like conversations, which facilitate communication with online leads and minimize the need for an agent.<sup>26</sup> Online property sites are also using virtual reality technology to offer property tours anytime, anywhere, including showing virtual space design possibilities to meet a prospective tenant's specific needs and tastes. For example, using a remote-control robot called Robot View, Brazilian real estate website VivaReal offers virtual access to model apartments.<sup>27</sup>



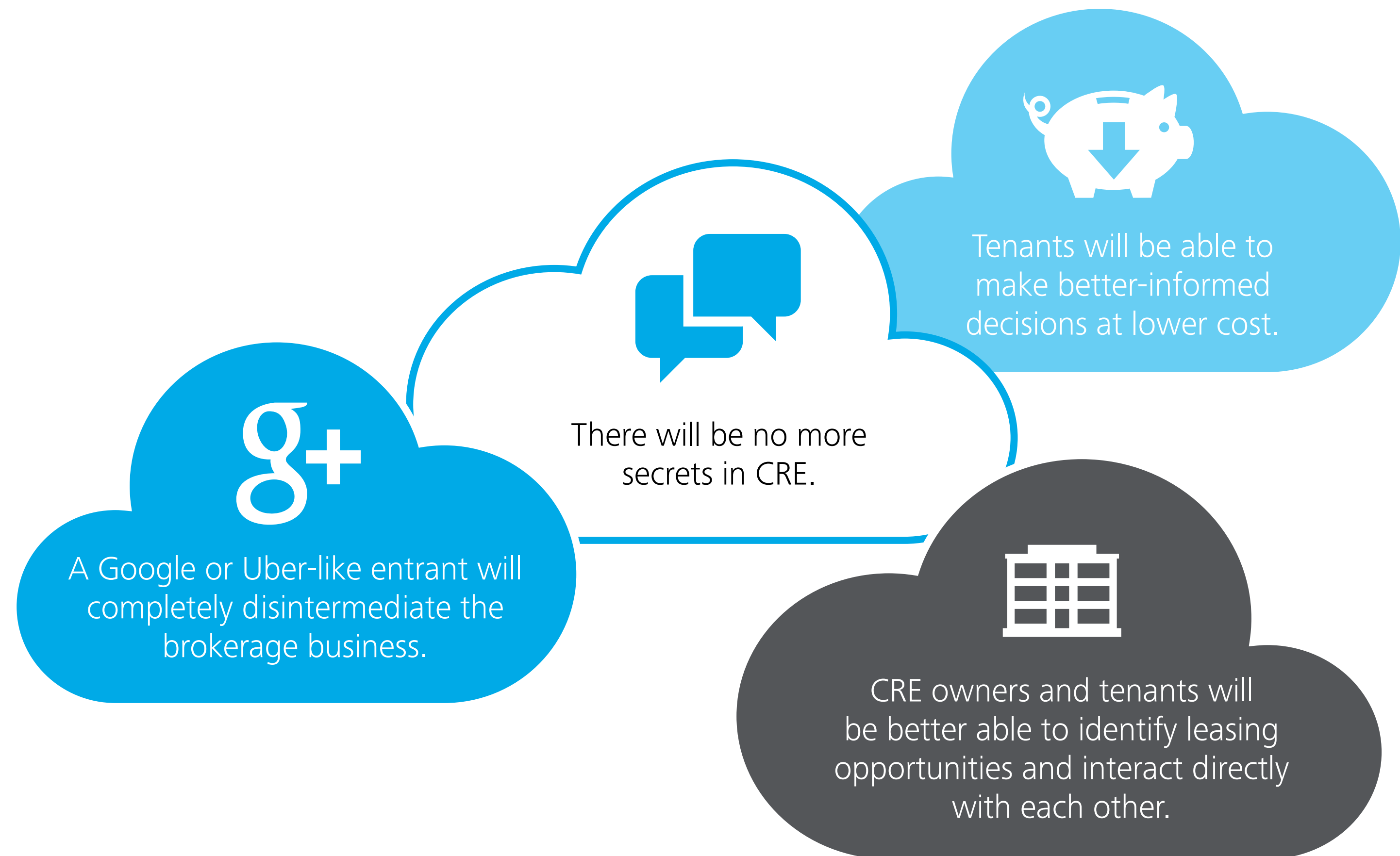
### How will disintermediation in brokerage and leasing impact CRE?

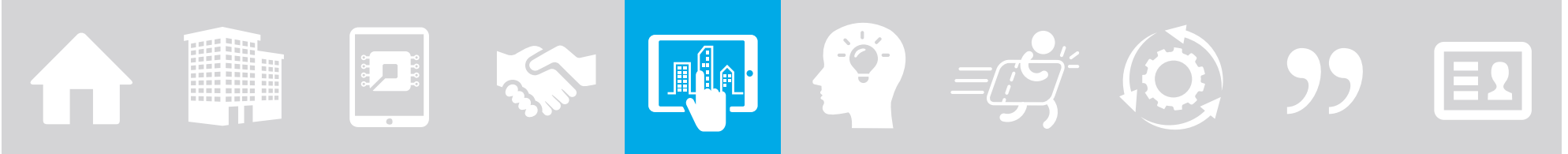
The onslaught of technology in the brokerage and leasing business will have a two-fold impact on traditional brokers. On one hand, it enables usage of unproductive CRE by meeting demand and supply gaps in real-time. On the other hand, the rapid automation is making the traditional model for selling and aggregating CRE information inefficient and irrelevant. Armed with technology, new entrants are using innovative client acquisition and servicing strategies, which minimize the need for a broker to complete a CRE lease transaction.

Incumbents will also lose their edge on proprietary data as new entrants aggressively promote data ubiquity and transparency that offers more decision-making ammunition to clients. These factors have the potential to squeeze topline growth and margins from the traditional brokerage business. That said, the technology advancements create an opportunity for incumbents to extract inefficiencies from the current model. We may see a spike in global consolidation as traditional players acquire companies to achieve additional capabilities and scale, or as smaller firms find it unviable to remain in business. (For more on startups and their impact on CRE, read our blog, [“Commercial real estate startups: Catalysts for disruption?”](#))

### Our CRE forecast

There is every possibility that the current brokerage model will undergo a metamorphosis over the next decade:





### **Seizing opportunities through the clouds**

We believe traditional brokers should consider diversifying their core business focus, from largely brokerage to consultative opportunities in space need and location advisory, as well as property and facility management. Similar to consulting firms, they should redirect their service delivery model toward central client relationship management, rather than regional. Further, incumbents use technology to offer innovative services to clients. To enable this, they should capitalize on their prior experience and client relationships. For instance, companies can combine the rich bank of tenant data with geospatial and cognitive technologies to generate superior insights on future choices.

Alternately, incumbents can consider investing in or collaborating with startups, as this would allow them to combine their client relations with the tools and technologies of the startups. As an example, JLL's HiRise venture is an online marketplace for renting office space, covering all aspects of leasing, including documentation.<sup>28</sup> This trend will be particularly beneficial for smaller companies that not only may lack the capital and infrastructure to enhance their capabilities and scale their operations to accommodate changing tenant expectations, but would also be likely to lose business faster than the larger brokerage firms.



## War for talent

### Revolutionize demand for office and mixed-use properties

Multiple forces in the employment marketplace are expected to result in a significant war for talent over the next 10 years. Slower US population growth combined with a significant number of soon-retiring baby boomers will potentially slow labor force participation.<sup>29</sup> Separately, employment patterns are likely to change, as health care, community services, and science, technology, engineering, and math (STEM) jobs are likely to be the fastest-growing occupational clusters.<sup>30</sup> Furthermore, cognitive technology-driven automation will eliminate or redesign some existing jobs, and create new kinds of roles.<sup>31</sup> These changes will result in a higher demand for knowledge workers with a minimum of postsecondary education and specialized skills. One estimate suggests that 60 percent of millennials will need to have some form of postsecondary education to fuel economic growth, which means 62 million new degree holders by 2025.<sup>32</sup> Unfortunately, at the current rate, only 39 million Americans will obtain that higher education by 2025, leaving a gap of 23 million.<sup>33</sup>

Can immigration fill the talent gap? We believe the current US immigration laws do not allow for the necessary and continuous flow of international talent with STEM skills to fill the widening gap. The current laws either serve other goals such as enhancing diversity,<sup>34</sup> or there are huge backlogs in immigration categories,

where the wait for entry can stretch over decades. There are backlogs in certain categories in which annual caps are reached quickly, and regular surpluses in still other categories are also being observed.<sup>35</sup> Further, the time delays involved in the temporary categories frustrate employers who need to match workers with jobs within tight time constraints.<sup>36</sup> The United States will have to make significant changes to its immigration policies if it hopes to use this population to help bridge the talent gap and remain competitive.

Another transformative trend is the influx of a large proportion of millennials to the workforce, a group that generally demands a different employment experience. Having grown up in a technology-enabled world, millennials, who will comprise 75 percent of the workforce by 2030, prefer an open and flexible work culture that allows them to work anywhere, anytime.<sup>37</sup> They expect employers to be less hierarchical and to encourage emotional and physical well-being. Globalization, the collaborative economy, and technology are also promoting the virtual work environment, which doesn't necessarily require people to come to their workplaces. Many millennials favor part-time, contract, or freelance employment.<sup>38</sup> An estimated 40 percent of the workforce will be freelancers, temps, independent contractors, and solopreneurs by 2020.<sup>39</sup>

How will the war for talent impact CRE? The talent gap and evolution in the talent marketplace will have a significant impact on where CRE is located and the way it is designed and used. There will be greater demand for integrated urban-lifestyle centers that cater to the live, work, play mantra.

Because of this trend, mixed-use spaces that include office, residence, and recreation options will be favored over stand-alone properties. For example, Chicago's West Loop, which was once packed with large industrial buildings and warehouses, is undergoing this kind of transformation. Offices for large technology firms, retail spaces, and luxury condos are replacing many old industrial buildings.<sup>40</sup> Corporations too would prefer to have workplaces closer to where knowledge workers reside to reduce the latter's commute time.

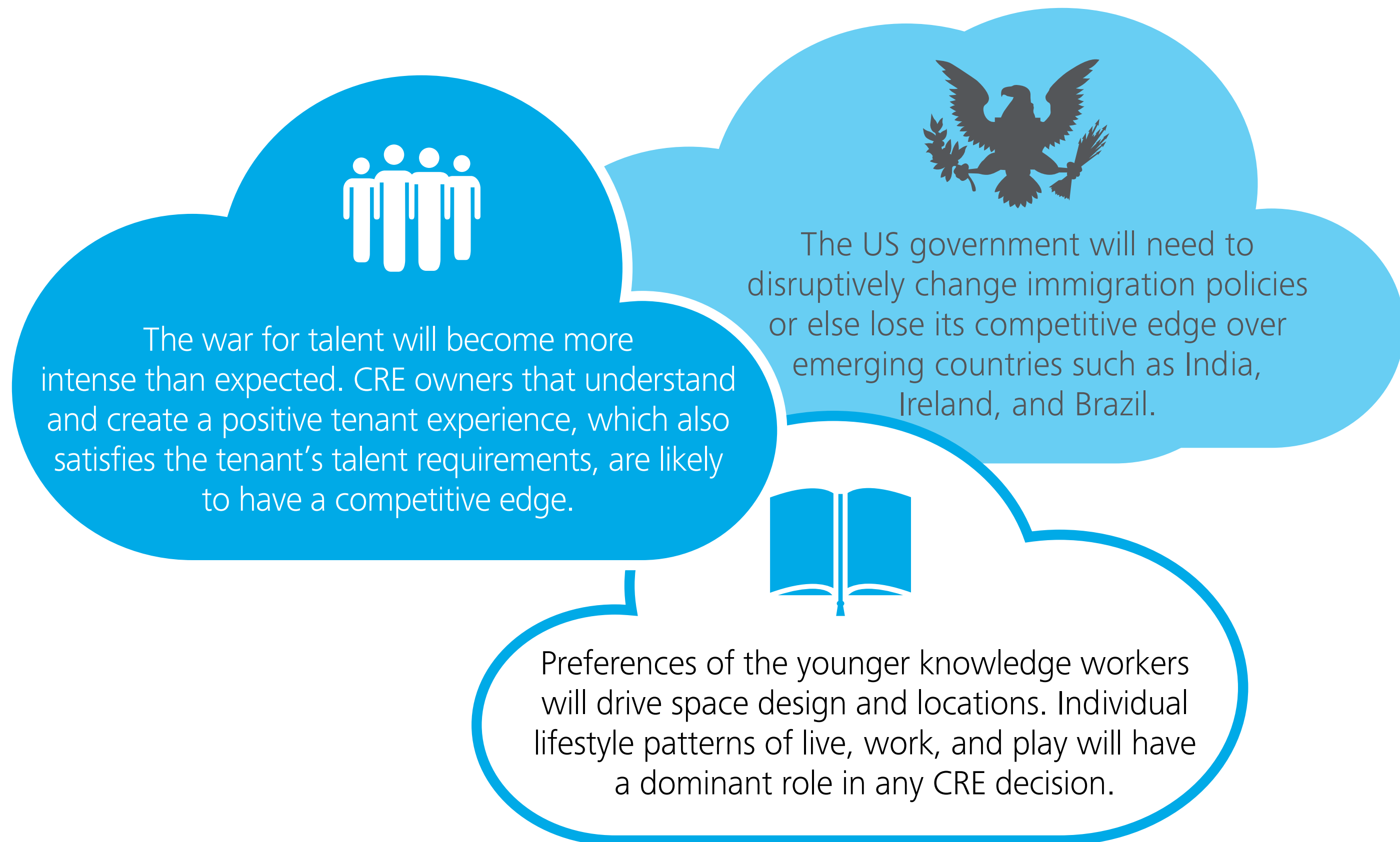
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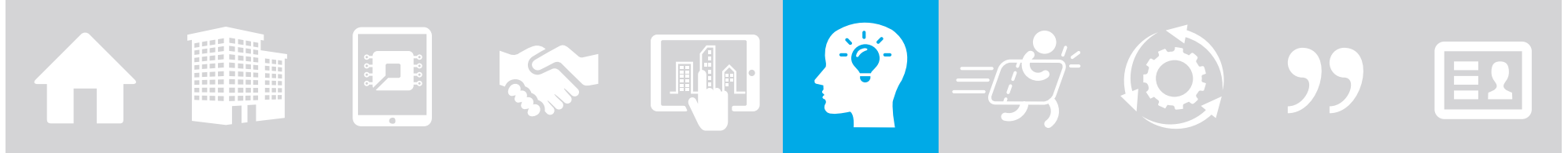
Millennials, who will comprise 75 percent of the workforce by 2030, prefer an open and flexible work culture that allows them to work anywhere, anytime.

In essence, office-space demand will tilt in favor of open, flexible, cosharing spaces, a trend made evident by companies such as Google, Facebook, and Hewlett Packard.<sup>41</sup> And the per-employee office space requirement is likely to shrink. According to a [Deloitte Canada report](#), the average office space per employee is projected to decline from 250 square feet in 2000, to 150 square feet in 2017, and companies that have nimble workplaces would see a further decline to 90–100 square feet.<sup>42</sup> Offices could morph into an office-as-a-service model, acting as physical meeting points rather than daily workplaces. Further, the increase in contract workers, or talent preference for flexible work locations, will result in knowledge workers preferring to work from home, with many tenants demanding small offices in their apartments.

### Our CRE forecast

We believe the war for talent will have a significant impact on where CRE is developed and how it is used:





### **Seizing opportunities through the clouds**

CRE companies should consider a broader set of parameters for any location and design decisions on future development and redevelopment. As the war for talent intensifies, talent dynamics should be an integral factor in location-based decisions, especially for office property owners. Companies should estimate the future workforce using existing employment data, and evaluate areas where knowledge workers are likely to live, work, and play, which in turn would be closer to the regions where they study and grow. Such neighborhoods are likely to see a significant rise in rents. Further, CRE companies should evaluate areas where STEM talent growth will outpace the impact of retiring workers, as these regions will likely see an increase in business investments.<sup>43</sup> A Deloitte study identifies Texas, Florida, Nevada, Arizona, and Utah as the five states that are likely to see such growth by 2030.<sup>44</sup>

CRE companies must also strategize their redevelopment of existing property, tailoring it to the changing talent dynamics. One option could be to refurbish existing buildings. In such cases, property design will play a critical role in meeting the changing needs of the workforce. Companies may need to revamp their design and development teams, to build expertise for mixed-use and flexible properties. Alternately, owners of different property types could consider collaborating with one another to share both their expertise and the nuances of each property type.

Another option could be to dispose of a few existing properties, and acquire and develop new ones. For example, Kilroy Realty has sold nonstrategic office and industrial properties totaling \$850 million over the last several years and reinvested the proceeds in both new developments and existing assets that will suit the needs of millennials.<sup>45</sup>



## The last mile

### Blurring lines between retail and industrial properties

Retailers continue to evaluate and implement innovative solutions to enhance consumer experience by adapting to their changing preferences. Currently, a large part of experiential retailing is being driven by increased competition from the exponential growth (CAGR of approximately 15.5 percent for 2004–2014)<sup>46</sup> in online retailing, a trend that continues to lower entry barriers and fragment the industry. Online retailers are also fulfilling on-demand as well as tailored orders for individual consumers. Another evolving competitive factor likely to challenge retailers is the growth in 3D printing. 3D printing will not only enable small-sized, customized, and on-demand production, but its lower costs may even result in reshoring manufacturing activities. (To learn more about the impact of 3D printing on manufacturing, read our reports on [dupress.com](http://dupress.com).) This essentially means that manufacturers will have the option to move to a build-to-order model rather than build-to-stock, which will allow them to connect, customize, and sell directly to consumers.

Retailers and some retail real estate owners are using different and flexible delivery options such as same-day or next-day delivery to create differentiation at the last mile. For example, Deliv, Amazon Prime, and Google Express are offering same-day delivery.<sup>47</sup> Sidecar Deliveries and UberRUSH are leveraging their driver networks for same-day delivery and instant pick-up and delivery within individual city limits, respectively.<sup>48</sup>

A large part of experiential retailing is being driven by increased competition from the exponential growth in online retailing, a trend that continues to lower entry barriers and fragment the industry.

Indeed, same-day delivery competition is on the rise, as it is an important consideration in consumer purchase decisions. A recent survey suggests that one-in-four shoppers are open to abandoning an online shopping cart in the absence of same-day delivery.<sup>49</sup> It's no surprise that retailers are constantly experimenting with new concepts to improve last-mile delivery. For example, Tower 24, a Germany-based company, and Amazon Locker are offering automated electronic lockers, which can be accessed with a security code to retrieve packages.<sup>50</sup>

We believe the use of drones for last-mile connectivity can result in ground-breaking changes in delivery options. Amazon.com, Inc. with its "Amazon PrimeAir"<sup>51</sup> and Google with its "Wing"<sup>52</sup> are working on enabling package deliveries through the aerial route by using unmanned drones. However, according to industry leaders, the Federal Aviation Administration (FAA) has been slow in developing rules and regulations for commercial use of drones, although it recently allowed Amazon Inc. to test

drone delivery.<sup>53</sup> That said, if successful, drones would take the last-mile competition to the next level from same-day to even less-than-an-hour delivery.

### How will the last mile impact CRE?

We believe disruption in manufacturing and retail and consequently last mile connectivity will significantly impact retail and industrial properties.

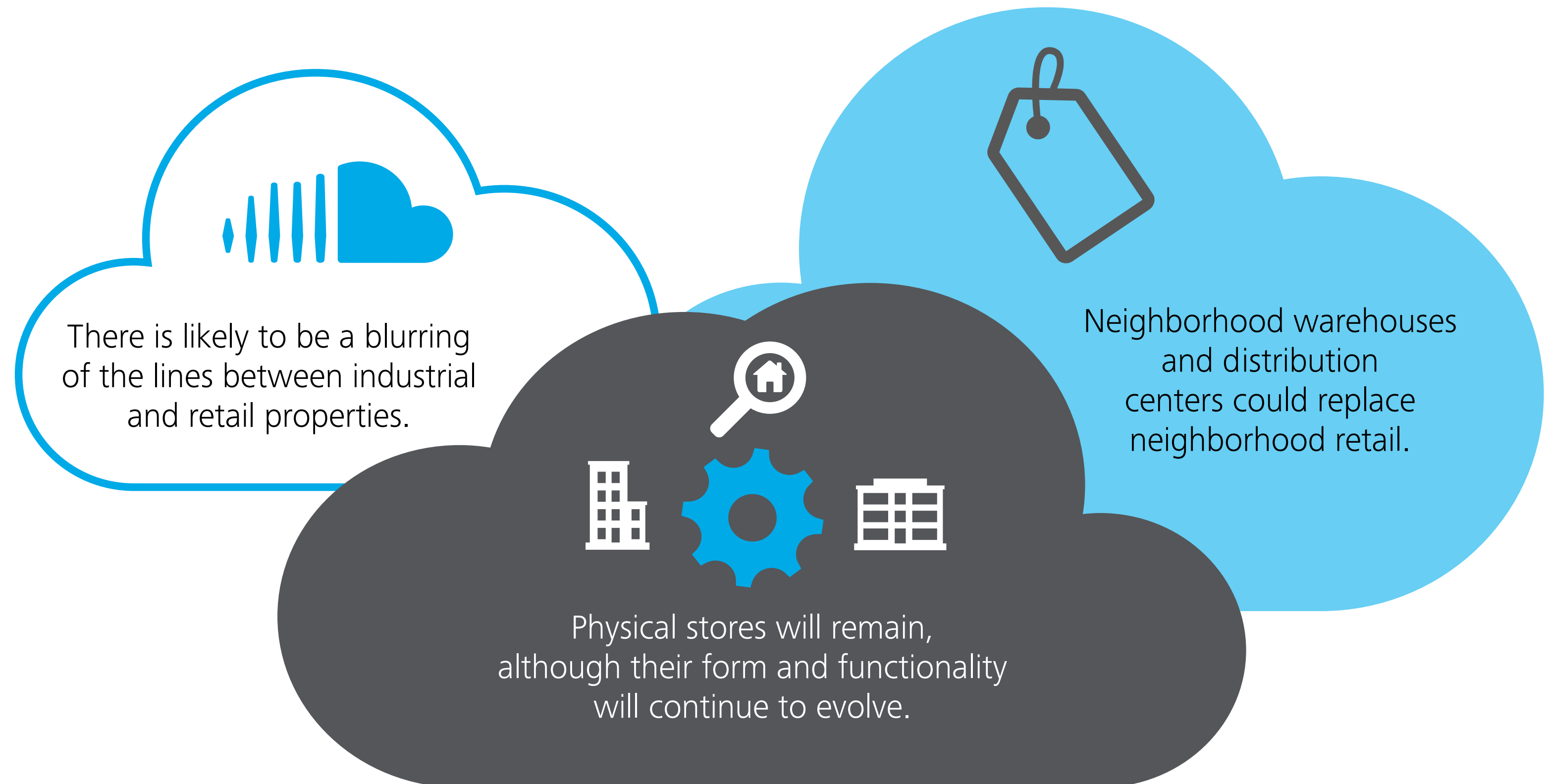
Brick and mortar stores will still remain integral to creating customer experience, but primarily for products that require 'touch and feel' or have significant service components. The store-in-store concept where one retailer provides dedicated space to another retailer in its own store, will also continue to find favor, although there may be less demand for stand-alone stores. As a result, there will be less demand for large stores and weak overall demand for traditional stores. Further out, analysts expect 50 percent of American malls to close by 2030.<sup>54</sup> We believe retail properties will instead be utilized in different ways. They could double up as fulfillment centers, especially for commoditized products that do not necessarily require touch and feel for purchase decisions. Many neighborhood mom-and-pop stores could end up being package pick-up and drop-off points.

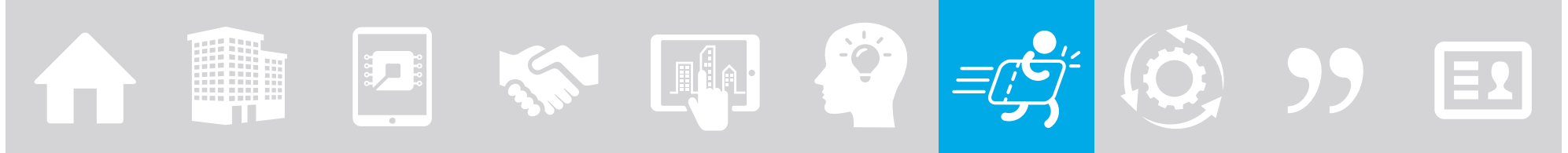
On-demand retailing and manufacturing will reduce inventory holding, and potentially the demand for large warehouse spaces. In addition, traditional CRE owners will be challenged by new and innovative on-demand storage space providers such as Lockitron, Boxbee, Roost, and Swapbox.<sup>55</sup> Existing distribution centers developed on a regional basis to serve on the logistical chain between global manufacturers and large box retailers will increasingly be disrupted by smaller, local distribution and fulfillment centers promising efficient, same-day or next-day delivery to the ultimate consumer. As such, there will be fragmentation of warehouse space, with higher demand for smaller warehouses and distribution or fulfillment centers spread out at frequent intervals within city limits.

The upshot is that physical real estate spaces that support last-mile delivery are being preferred by institutional investors over traditional industrial and retail space, which may not bode well for incumbents from a pricing and valuation perspective.<sup>56</sup>

### Our CRE forecast

We believe technological developments and consumer demand for speedy delivery will significantly impact last-mile connectivity as well as the demand for both industrial and retail real estate:





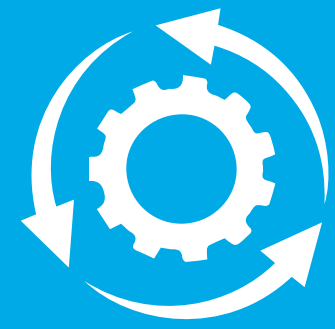
### **Seizing opportunities through the clouds**

Retail property owners should continue to try different store formats, tailored spaces, and innovative techniques to enhance end-consumer experience. This would require incumbents to embrace sophisticated technologies. For example, a few large retail property owners have made strategic investments in Deliv to enable same-day delivery for their tenants.<sup>57</sup> Retail property owners can also consider offering tag-reading robots that would use radio frequency identification (RFID) technology to help their tenants optimize in-store inventory.<sup>58</sup> They should continuously evaluate the number, location, and optimal size of stores, based on the need for “touch and feel of products” and consider revamping the nonstrategic stores into fulfillment centers. Ultimately there may be opportunities for retail property owners to become distribution infrastructure providers by using their nonstrategic assets or repurposing vacant space in cities as local distribution hubs for smaller and fragmented retailers.

Distribution and fulfillment centers should be a prominent part of industrial real estate owners’ property portfolios. As incumbents plan new development, they will likely benefit from acquiring and developing smaller and flexible spaces within city limits that meet the demands for rapid delivery to end consumers. Alternately, they can partner with the new on-demand storage space providers to offer a mix of long- and short-term leases and extend their tenant-servicing capabilities. Industrial real estate owners will be well served to evaluate both the evolving needs and business strategies of their tenants, as well as the changing requirements of their tenants’ end consumers, as these will likely be impacted significantly by technology and new logistical strategies. Accordingly, it will be important for incumbents to evaluate and reposition existing warehouse space, particularly the larger ones, to improve their utility. They can consider multi-tenant solutions to reduce costs and enhance capabilities for manufacturers preferring to sell directly to end consumers. Further, the use of advanced RFID technology, geotagging, and Internet of Things would enable smart, intelligent, and efficient use of space and enhanced services to tenants.

The location of retail stores and distribution centers will be more important than ever. Companies should use geospatial technologies and predictive analytics to identify strategic retail and warehouse locations. They will also need to understand the nuances of managing and operating both industrial and retail properties given the likely overlap in their use.





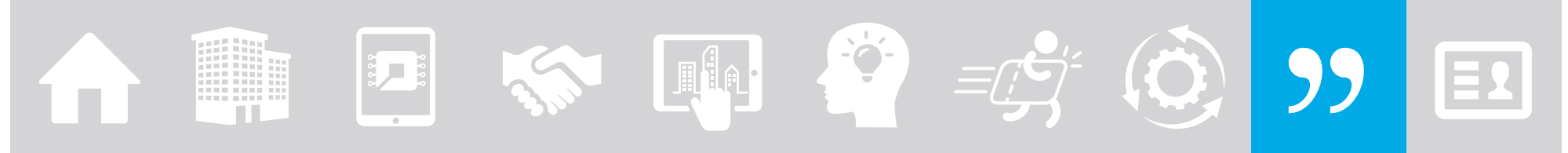
## Disrupt or get disrupted?

### **The writing is on the wall: CRE usage will undergo a metamorphosis over the next decade**

Deeply rooted in the convergence of technology and evolving consumer behavior, the physical and digital worlds are blurring fast. While the collaborative economy will redefine the use of every kind of property, the war for talent will promote demand for mixed-use space. Disintermediation in brokerage and leasing will disrupt and significantly transform the age-old brokerage business. And retailers' and manufacturers' rush to meet ever-increasing consumer demand for speed through last-mile delivery will blur the lines between retail and industrial properties. These disruptive forces have the potential to redefine the current property market segmentation of primary, secondary, and tertiary, and consequently, valuation. Incumbents will have to be smart about their location strategy as property location will be more important than ever. They will have to focus significantly on designing or redesigning flexible physical space that can be customized to tenant and ultimately consumer needs in order to remain relevant.

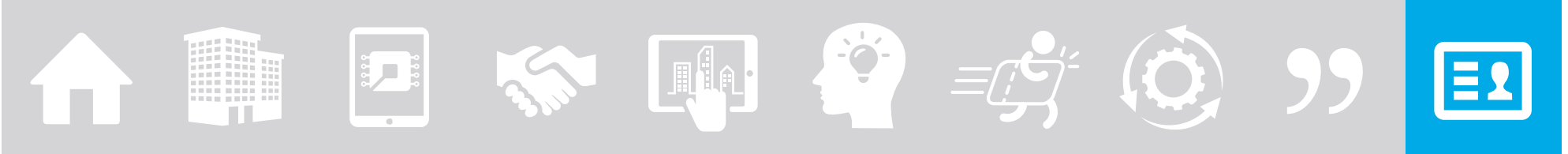
Incumbents' traditional business models are unlikely to work. They will need to have dynamic strategies and respond with dexterity to the rapid changes in the business landscape. Interestingly, the technology that is disrupting their businesses is the one that will help them meet these new challenges as well. Of course, appropriate cybersecurity measures will be equally critical. Companies will have to re-engineer operations and figure out optimal ways to organize and access talent. As incumbents combat this disruption, intangibles such as tenant relations will be their biggest assets.<sup>59</sup>

We firmly believe that it's a myth that traditional players will remain insulated from these disruptive forces. They will have to make a choice between proactive responses to the evolving business landscape or be disrupted by the new entrants and lose their competitive edge.



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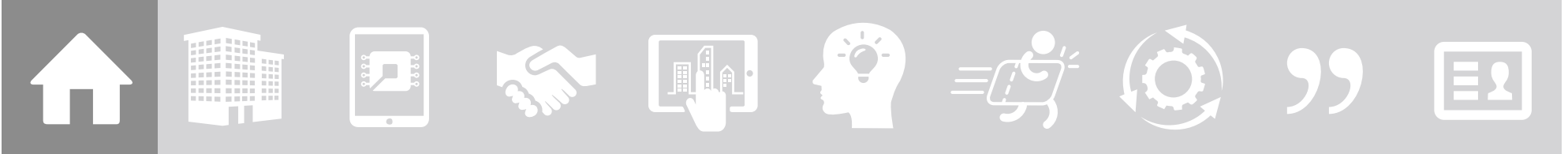
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