



Emerging Trends in Real Estate®

The global outlook for 2018

Contents



2 Executive summary

4 Maintaining balance

16 Top cities for real estate investment in 2018

18 New models for a changing world

30 Sponsoring organisations

31 Interview participants

32 Authors and Editorial Oversight Committee

“Real estate has always evolved. It serves a need in society for people to occupy space, and of course those needs change. In some sectors, the requirements are shrinking and in others they’re growing. Anticipating those changes and staying ahead of them is really what good investors can do.”

European investment manager,
Global Emerging Trends in Real Estate 2018

Executive summary

Real estate has rewarded investors with strong returns in a world of falling interest rates and established business models. The positive outlook for the global economy is an encouraging sign that the rewards will continue for some time to come.

Yet there is an undercurrent of caution in the three regional *Emerging Trends in Real Estate*® reports, and more so from the 24 senior professionals interviewed for this *Global Emerging Trends* edition. These industry leaders all acknowledge that this is a late-cycle property market influenced by a gradual reversal of monetary policy. There remains a disconnect between the sheer volume of capital raised and the opportunities in the market to deploy it effectively in assets that can withstand a downturn.

As a consequence, risk management has become increasingly important, while at the same time changing human behaviour and new technology are transforming the nature of real estate, not just as an investment class but as a product or service we all use as consumers. These are the conclusions of PwC/Urban Land Institute's recent *Emerging Trends in Real Estate 2018* surveys, conducted across Asia Pacific, Europe and the Americas.

The last financial crisis has had a lasting effect on the industry, including lower leverage and less apparent risk of over-supply. But there is a new “over-supply” challenge, which comes from the vast legacy stock of assets and fast-changing use of real estate. The time-frame for building obsolescence has become squeezed as a result of changing occupier needs and a greater information transparency. In effect, new supply is being created by technological developments in areas such as co-working and hospitality.

Real estate is continuing to evolve into something that is less about ownership and more about access – or services and outcomes. In simple terms, this means that we are seeing a relative value-shift from the passive “bricks and mortar” component to a more dynamic, operational business. This is important for investors – who either need to find innovative and cost-effective ways of accessing operational expertise and innovation, or face diminishing returns.

“One of the interesting things – it’s a challenge, it’s an opportunity, but it’s happening – is how real estate as a productive part of the economic equation is changing. And what is it going to look like in the future, whether that’s ten years or beyond?”

Global asset manager,
Global Emerging Trends in Real Estate 2018

These forces are informing the current round of consolidation among property-owning companies, particularly in the retail sector. Scale is important at this stage in the cycle, but there is far more to it than stock market M&A among companies of similar heritage. The lines between traditional real estate companies and new entrants, mainly from the tech field, are becoming blurred. There is plenty of opportunity for new entrants to disrupt the sector and steal value and market share, which is why many of those interviewed believe that now is a crucial point in the sector's evolution. Those companies unwilling or unable to embrace change risk being left behind permanently.

There are two main reasons cited for this. Huge amounts of capital are flowing into the sector, and it will flow to the companies that can use technology to give themselves even the smallest edge. With real estate late in the cycle, investors and owners will need to utilise any means necessary to improve performance of assets – or maintain performance during a downturn. The greater the sophistication, the easier it will be to raise money and make money in a crowded field. One related theme here is the increased capex costs as owner-operators seek to keep their real estate relevant to occupiers – whether that's retail, office, logistics, or residential.

At the same time, there is a need for more diverse skills and expertise in the real estate industry. The more progressive businesses are hiring new specialists in technology, customer relationships, and strategy/disruption. It is easy to see why, given the risks for investors of getting some of these calls wrong. And there are numerous, game-changing disruptions with timescales that extend beyond conventional property cycles.

The emergence of driverless cars – no longer a fantasy scenario – is just one example of disruptive technology that has polarised opinion in the real estate industry as to its impact. As the interviewees for *Global Emerging Trends* all agree, these are challenging times for an industry that must somehow strike the right balance between risk management, innovation and entrepreneurship.

“Operating skills and complexity are becoming more important for most if not all sectors. Of course, it's still all about location, but the operational management is more and more important in driving values. That's much the same thing in how you operate retail and how you operate a residential platform. Having the right operating platform is crucial to creating value, which is why we don't just invest in the assets, but also typically try to buy into the operating companies.”

European pension fund investor,
Global Emerging Trends in Real Estate 2018

Maintaining balance



Real estate continues to attract capital, demonstrating its appeal over other asset classes in an otherwise uncertain investment world that is starting to betray signs of nervousness over inflation and rising interest rates.

According to Real Capital Analytics (RCA), global volumes for completed sales of commercial properties totalled \$873 billion last year, matching the total registered in 2016. A 6 percent rise in Asia Pacific and an 8 percent increase in Europe offset a decline in the US, the world's largest commercial real estate investment market.

Though the past two years rank behind 2015 as the decade's most active for investment, the rising deal flow in Europe and record levels of activity in Asian markets, such as Hong Kong and Singapore, are nonetheless remarkable at a time when real estate is universally acknowledged to be late in its cycle.

This late cycle period undoubtedly informs the caution expressed by the industry leaders canvassed for this global edition of *Emerging Trends*. But they are also reassured by the relatively strong macro-economic outlook for most major markets around the world, which is underpinning occupier demand. If anything, the talk is of real estate being in a prolonged late cycle.

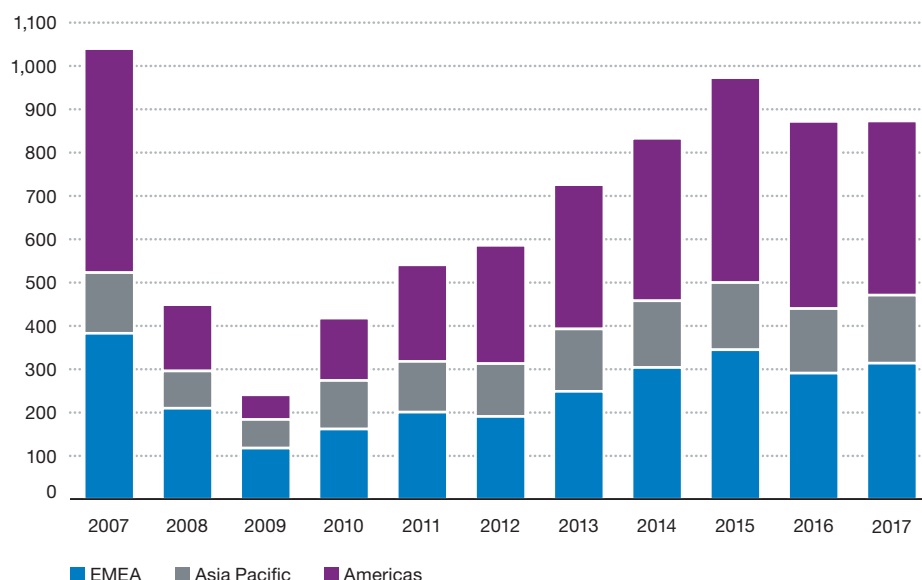
"Real estate still offers a comparatively attractive spread to bond yields across the globe right now. But it's more fundamental than that," says one global institutional investor. "For the first time in a long time, there is increasing economic growth in virtually all major markets. That's self-reinforcing, and certainly bodes well for real estate as an asset class."

At this stage in the cycle, pricing of core assets remains an issue around the world although not necessarily something to cause alarm just yet, according to one global player. "If Paris is trading at sub-3 percent, the fact that it is so low has been viewed by some investors that we are in bubble territory. I don't think we're in bubble territory at all. Assets are expensive, and they may or may not correct, but it's entirely possible that we're in a low bond yield environment and the returns available going forward are simply going to be lower than we've been used to in the past."

"Prices are very high, and in some markets, they are above pre-crisis levels. What's in place for a prolonged high level is the fact that operational performance is still very strong."

Global investor,
Global Emerging Trends in Real Estate 2018

Figure 1-1 Global capital flows 2017 (\$ bn)



Source: Real Capital Analytics

Another interviewee comments: “We’re still not seeing the uptick in supply that you would expect. And that has to do with banks being much stricter in what they’re asking for when it comes to speculative development loans. In fact, in many countries they are still not really available at reasonable margins, and that helps the market to stay in sync.”

Not surprisingly, however, investors are diverting their search for secure, long-term income into alternative real estate sectors. Debt is increasingly seen as a safe means of exposure to the sector – nearly four fifths of respondents to the *Emerging Trends Europe* survey expect non-bank lenders to increase their activity in 2018.

There is another dimension to the relative attraction of debt finance, and that comes from the recent tightening up of the capital requirements for banks, known as Basel IV. The reaction from the banking sector has been positive although that is partly to do with the long phase-in period for the new regulations – they will not take full effect until 2027. Much will depend on the interpretation of Basel IV by national regulators.

In both Europe and the US, meanwhile, there is a shift by some investors to second-tier cities away from the expensive major markets. There is a clear distinction, though, between second-tier and secondary. Rising stars – such as Copenhagen and Raleigh/Durham – are lauded for their diverse economies and skilled workforces as much as affordability.

“You certainly get the sense that when capital starts to move laterally to less traditional asset classes to find value, or when it starts to move laterally geographically, these are usually the symptoms of a late cycle,” observes one global investor. “The big difference from a financing point of view is that funding costs are still quite low, and that’s what makes it easier for investors to wait it out a bit longer.”

Rising interest rates and ‘no more easy money’

With growing economies come rising interest rates as a check on inflation, and the expectation of more to come, at least this year in the US and the UK. Continental Europe is further behind although the European Central Bank has signalled the end of its asset purchase programme by the end of 2018, and rate rises are expected to follow in 2019. “No more easy money,” says one interviewee.

Rising interest rates – and inflation – are now on the agenda for real estate. There is nothing like the anxiety that prompted a huge sell-off in global stock markets in January this year. The expectation among European interviewees for *Global Emerging Trends* is that it will be one to two years before rising rates exert a major influence on real estate markets. It would be hard to describe the interviewees for this report as complacent, however.

“Over a ten-year view, we expect yields to move out, but they could very easily go down further before they go up,” says a global investor. “It really depends on what happens with regard to monetary policy. At the moment the US is tightening, the UK is clearly likely to do so in May, and there are signs that Europe might follow.”

As for Asia Pacific, another global player suggests that inflation pressures across the region are not as strong as in the US and Europe. “And in [Asia Pacific] real estate markets generally there’s a good spread between yield and cost of money, so there’s a built-in shock absorber offsetting the impact of potential interest rate increases.”

However, one European interviewee observes: “My first guess was that the raising of interest rates would take longer, but it has happened more strongly and globally than expected. This is going to be the caveat to the solid growth we are experiencing here.”

There is another caveat, and that’s politics. Brexit casts a long shadow, still, but national elections in the US, The Netherlands, France and Germany have come and gone, leaving property markets unscathed and economies growing. Notwithstanding the outcome of the Italian election in March this year, there is a sense of the industry taking a deep breath after all the political noise of 2016 and 2017.

Even so, with the major global investors increasingly thinking long-term – and well beyond the current property cycle – the political backdrop to real estate is still at the back of their minds. “For most of my career in Europe, we’ve not spent a lot of time worrying about politics. That’s one of the things that is so different,” says one global investor. “We’re now in a scenario where something like 1 percent of the world’s population are controlling an enormous proportion of the wealth. With that imbalance, politics is going to become more and more important going forward, and that will bring potential volatility.”

US – smaller cities rising, taxes falling

Investors completed a total of \$375.6 billion of transactions greater than \$10 million in the US during 2017, an 8 percent decline from 2016 and the second successive year of falling investment, according to RCA.

The slowdown in activity reflected a reassessment of pricing throughout the year in the major cities following the US Federal Reserve raising interest rates three times, with the expectation of further increases in 2018.

Investment tumbled by 32 percent in New York City during 2017. Of the 14 US metro areas ranked in the top 30 global investment destinations, RCA says only Washington, D.C., and Houston registered stronger activity.

The investment numbers also indicate an ongoing investor appetite for smaller markets, as highlighted in *Emerging Trends US and Canada*. More selective than before, investors are increasingly drawn to cities such as Salt Lake City and Raleigh/Durham for their relative affordability and skilled workforce.

Such a focus is not new – it is reminiscent of the shift in investor interest in the 2005–2007 period – but the staying power of secondary markets may be, not least because they have avoided the level of overbuilding seen in previous cycles.

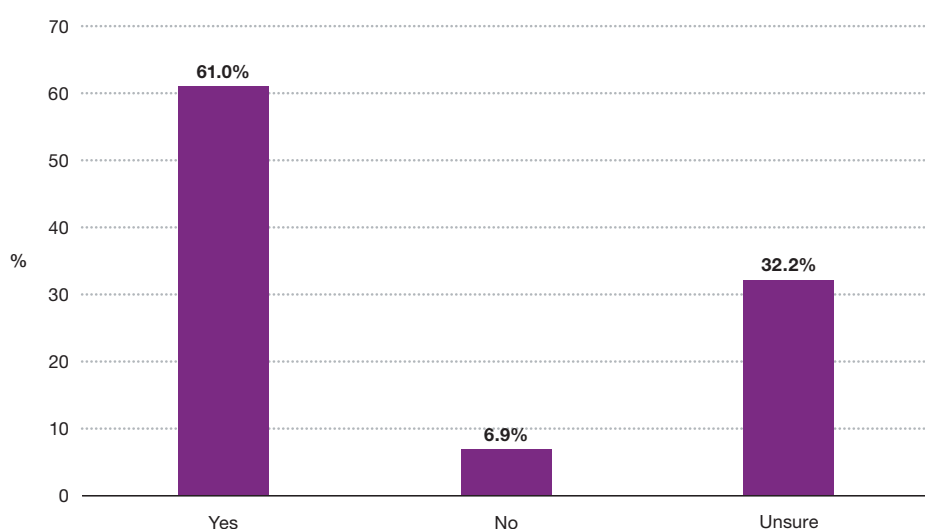
As one *Emerging Trends Global* interviewee cautions, though, investors must resist “a broad brush” approach to how they assess the smaller cities. “We’re working very hard not to make the mistake of the past and go to secondary and tertiary cities simply to chase yield at the wrong point in the cycle. But instead we’re very focused on what I’d call second tier cities that demonstrate really strong economic growth prospects and include well-established institutions, whether medical, educational, or governmental, which stabilise those markets. We’re trying to be very tactical and chase markets that exhibit strong fundamentals, which should make them more attractive places to invest.”

In any case, major and second tier real estate markets alike are destined to prosper from what has been heralded as the most sweeping US tax reform in decades. President Trump’s long-awaited Tax Cuts and Jobs Act was finally approved by Congress in December 2017, and many US property players believe the market could feel the benefit, possibly as early as this year.

“The tax changes have helped create some clear momentum. There are good reasons to be optimistic on the US despite the political noise, although large chunks of that are already in the price in equity and real estate markets. But a degree of caution is warranted given the fact that we are in the eighth or ninth inning, to use a baseball expression, of the cycle.”

Global investor,
Global Emerging Trends in Real Estate 2018

Figure 1-2 Do you think the new tax law will be good for real estate?



Source: *Emerging Trends in Real Estate 2018 Mid-Year Survey*

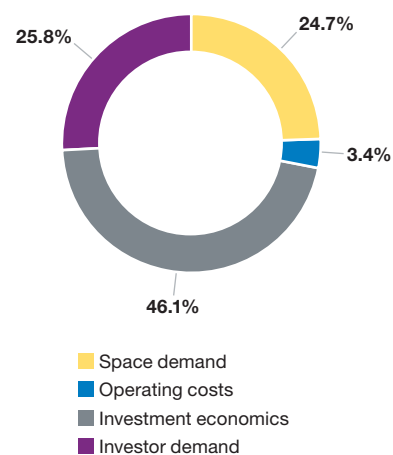
“Rising interest rates have been well telegraphed by central bankers, and we’ve been looking at spreads since late 2016. The only difference now is that we’ve had three rate rises in the US, so we’re in that process, but it’s not something that spooks us. Given where yields are now relative to the cost of money, we have the ability to absorb modest increases.”

Global investor,
Global Emerging Trends in Real Estate 2018

According to the *Emerging Trends 2018* mid-year survey conducted in the US, 61 percent of respondents believe the new tax law will be good for real estate although nearly a third are unsure. Around a quarter of respondents say the tax reform will boost investor demand, and a similar number say it will improve occupier demand.

The full impact on commercial real estate remains to be seen but the three main fiscal levers are: foreign investors will be able to invest and repatriate profits more easily than before; US companies that until now parked some of their profits overseas at lower corporate tax rates can repatriate those earnings into the US; and a reduced corporate tax rate in the US. As one *Emerging Trends Global* interviewee observes of the latter two reforms: “You would presume some of those accumulated earnings and tax savings will lead to the expansion of corporate America, which will spill over into increased demand and take-up of offices and industrial space.”

Figure 1-3 The new tax law will be good for...



Source: *Emerging Trends in Real Estate 2018 Mid-Year Survey*

“In 2017, there was a lot of talk about the late cycle and pricing bubbles, and concern that the end had to be near,” adds another interviewee. “What’s shifted over the last six months is the boost provided by the tax cuts, the continued strength of the US economy, the continued strength of the global economy. The conclusion is indeed we are at a late point in the cycle, but it’s certainly being extended by those factors.”

Europe – renewed optimism in the core economies

Europe's property industry is "cautious but positive", drawing comfort from the fact that the European Union (EU) economy is growing at its fastest pace in a decade, which in turn is supporting occupier demand as well as investment.

Figures from the EU statistics office Eurostat show that the EU grew by 2.5 percent in 2017 – its strongest performance since 2007 when it grew by 2.7 percent. In the final quarter, both the EU and the 19-nation Eurozone grew by 0.6 percent compared with the previous quarter.

Much of the growth has been driven by the core economies of Germany, France, Italy, and Spain, which has reassured the industry leaders interviewed for *Global Emerging Trends*. "The demand side is improving, and we're seeing rent increases in most product types," says one. "We don't have retail rents going up, but we do have office rents rising in most markets in Europe, and you certainly see logistics rents rising. We think that's going to continue."

Against that backdrop, Europe registered \$314 billion of investment sales in 2017, according to RCA, and the transactions were many and varied, from major portfolio deals to corporate mergers and acquisitions, as well as large single property sales – particularly in London.

Led by Germany, each of Europe's five largest markets for commercial real estate investment reported higher volumes than 2016, RCA data show, with the Netherlands and Spain setting new records.

For European property professionals, it is hard to dissociate London from the continuing uncertainty around Brexit, which is why the UK capital languishes at the lower end of the *Emerging Trends Europe* city rankings for investment and development prospects in 2018. But the report also suggests that Asian investors – less bothered by Brexit than their European peers – are looking to the long-term by deploying capital in London. And according to RCA data, London saw the highest volume of international capital in 2017, particularly from Hong Kong.

"There is more activity on the Continent," says one global investor interviewed for *Global Emerging Trends*. "It feels like there's more optimism on the back of economic growth, but the returns would be relatively low because prices are still high. That's been the case for the last year."

In fact, as with the US and Asia Pacific, pricing of core assets across mainland Europe is an issue for most investors, and too high a hurdle for some. "We feel there are still opportunities, but you have to move more into value-add and the opportunistic space," says one pan-European fund manager. "If you look at core, or prime, assets, the prices are too high for us. We're not willing to pay 3 percent cap rates. That's not a product of interest to us."

"There is still quite a bit of capital that will be allocated to Europe. I don't get the sense that Europe is going to be capital-starved any time soon."

Pension fund manager,
Global Emerging Trends in Real Estate 2018

Another interviewee concludes: "Global interest in Europe is quite high at the moment. It's due to economic growth, but if you think back to early 2017, we were all worried about the French and Dutch elections and about populism, the disintegration of Europe following Brexit. Now we have much, much stronger pro-European sentiment on the Continent. Money still wants to come into real estate and still wants to come into Europe, so there's no immediate concern over the next couple of years of yields de-compressing."

Asia Pacific – excess liquidity fuels competition for assets

The Asia Pacific region registered a record year for investment in income-producing real estate in 2017, with transaction volumes of \$158 billion, according to RCA.

Singapore saw decade-high levels of activity on the back of recovering office and residential sectors. Japan, meanwhile, recorded a 3 percent upturn in activity, reinforcing its status as a destination for yield investors due to the healthy spread between current yields and the country's super-low sovereign bond prices.

When RCA factors in development land, then the standout performer in 2017 was Hong Kong, which saw site sales jump 78 percent to a record \$21.4 billion, partly in response to a tripling in the value of income-producing assets over the past decade.

If anything, says one global investor, the economic outlook for Asia Pacific is “better in 2018 than it was in 2017”, which in turn is boosting occupier demand in many cities. At the same time, rents have been supported in core office markets, such as Hong Kong, Singapore, and Sydney.

The region – as well as global markets – is benefiting from its own sovereign and institutional funds bearing vast stockpiles of accumulated capital and investing it increasingly in property. As *Emerging Trends Asia Pacific* points out, of all the various influences that have combined to shape recent investment flows into Asian real estate, one continues to stand out: excess liquidity.

Interviewees for *Global Emerging Trends* point out that “not only is there a lot of dry powder but dry powder is being assembled”. Says one: “Globally, institutions are increasing allocations to real estate, and also increasing allocations to Asia Pacific. And that's just institutions. The rise of high-net-worth individuals in the region is more dramatic than anywhere else in the world, and they are also players in the real estate space, and so you've got that capital also going into the market.”

The resulting competition for assets is changing the industry in fundamental and often unexpected ways. Traditional risk/return classifications are breaking down. Many core investors are moving up the risk curve in an effort to meet target returns. Others are going down the risk curve to seek the type of steady but safe yield no longer available from sovereign bonds.

Core and opportunistic investors are converging in the value-add space. Increasingly, therefore, investors are looking to make money from working their assets rather than via leverage or rental growth.

One by-product of this increased competition for assets is the migration of investors into markets and asset classes that in the past did not attract much interest. In particular, fund managers are now considering data centres, healthcare assets, affordable housing projects, build-to-rent facilities, student accommodation, and senior housing.

Another trend quickly gaining traction across Asia is the boom in shared workplaces, with co-working operators now the biggest demand driver for new office space in many cities across the region. As one interviewee says: “We've never seen change at the speed we're seeing now. So how do you respond to that, or how at least do you allow yourself the margin to be able to respond? It's as if ultimate flexibility, whether it's physical or financial, is the overriding theme.”

“For all asset management firms, across their product lines, Asia is an area of expansion. It has superior overall growth to the rest of the world ... you want to be positioned in Asia.”

Global asset manager,
Global Emerging Trends in Real Estate 2018

Allocations are up and capital continues to flow

The continued strength of logistics real estate across the Americas, Asia Pacific and Europe has been one of the key trends in recent years. According to RCA, investment in the sector rose by as much as 33 percent last year to \$127 billion, reflecting the fact that investors are targeting logistics warehousing as companies change their supply chain management, particularly where online retailing is involved.

CIC's acquisition of Logisor – Europe's largest deal last year – and the GLP/Gazeley transaction also underline the extraordinary volume of Asian capital still being deployed in global real estate. *Emerging Trends Asia Pacific* reveals “unprecedented growth” in capital outflows from Asian markets in 2017 – almost double the outflow seen in 2016 – with \$45.2 billion in outbound capital directed at global property assets.

While the full impact of China's recent tightening of capital controls remains unclear, the consensus among industry leaders canvassed for *Global Emerging Trends* is that overall outflows are unlikely to decline significantly, given that sovereign and state investors will probably be unaffected. In addition, there is already a substantial body of Chinese-owned capital held outside mainland China, much of it in Hong Kong, that is not subject to the rules. And, of course, the narrative around Asian capital extends well beyond China.

“If you look at what's happening in Asia in terms of building up social security systems with pension schemes and insurance companies, they will want to have 5 to 10 percent allocations to real estate, then you're talking big numbers,” says one global player. “Real estate and infrastructure is on the agenda of all pension schemes. And within Europe there are a lot of pension schemes that have to build up a real estate portfolio, and so we will see more cross-border money in Europe.”

Another global investor concludes: “Over the coming five years, I think there will continue to be healthy interest for all three regions. Economic growth is quite evenly spread, so I can't see why one region would attract more capital than another, and that consistency is reinforced by the fact there is an overall average increase in allocations to real estate.”

“The key thing for me is less about whether we prefer China over Korea or Germany over the Netherlands or one region over another. It's more the fact that there is a continued build-up in dry powder. Either capital gradually goes into private markets without disturbing pricing levels, or it goes in a lot more rapidly, in which case investors will bid marginal deals up, and there will be underwriting errors.”

Global investor,
Global Emerging Trends in Real Estate 2018

Retail inflection point – consolidating for scale

All three regional *Emerging Trends* reports highlight the problems – and opportunities – arising out of a retail sector undergoing “a period of incredible flux” at this late point in the property cycle. It is also evident from interviews for this global edition that the perception of retail among investors in Europe and Asia Pacific is influenced by the flow of negative news from the US.

Emerging Trends US and Canada points out that while US retail sales continue at a long-term annual growth rate of 4 to 4.5 percent, the retail and retail real estate sectors are at an inflection point: major department stores are undergoing a process of deconstruction and smaller mid-price apparel brands are failing, footfall at many shopping centres is falling, and new retail brands are emerging at a slower and slower pace. At the same time, out-of-town shopping centres come dead last in *Emerging Trends Europe*’s sector rankings, with city centre shopping centres only slightly higher, 16th out of 20 sectors.

This retail malaise is routinely attributed to expansion of e-commerce sales, but there are more and bigger factors: department store obsolescence, overall retail sector maturity, evolution of the apparel industry, and changes in the mix of consumer demographics and preferences.

As the report suggests, a more nuanced outlook for US retail emerges, given the abundant capital available to owners and investors at historically low cost. And while retail overcapacity is widely acknowledged, financial markets have largely priced this risk into individual asset valuations and investors are still widely attracted to well-conceived, well-positioned retail real estate assets.

However, similar market conditions have led to retail consolidation elsewhere in the world, and industry leaders interviewed for *Global Emerging Trends* anticipate further corporate transactions as a means of building scale and shoring up value.

One global institutional investor believes the industry is complacent about the robustness of so-called fortress malls or high-quality retail locations simply because retail is changing from a low-tech to a high-tech endeavour, and from a transactional to a leisure focus. “What that means for investors at the high end is that it is very easy to overstate rental growth. There will be more power in the retailer going forward than the mall operator, particularly given the oversupply in the US,” he says. “Customers’ footfall will be harder to capture in individual malls. Operators are not going to be able to push rents so much and they are going to have to pay more on the capex side. So, underwriting errors on both of these could be quite substantial and expensive. There is a grave danger as that unwinds investors like us could over-pay for the better locations. That’s what we are giving a lot of thought to.”

As this investor suggests, such “massive change” is evident “in the US in particular, but it’s going to push through into Europe and elsewhere”. In many respects, it already has in the form of consolidation among major shopping centre owners, culminating late last year with Europe’s Unibail-Rodamco taking over Australia’s Westfield Corp and Hammerson taking over its UK competitor Intu (see table, p 14).

“M&A activity is very much driven by the importance of specialisation, and also the complexity that is related to managing a shopping mall portfolio and company,” says another global institutional investor. “You need to have the scale to build in e-shopping, to do the right marketing and to secure attractive debt finance. The scale will pay off in being able to run a company efficiently and build the operating skills that are needed. It’s not easy to run a portfolio of, say, six malls. It starts to pay off more and more by creating further scale, and from that perspective I think a lot of M&A activity is now taking place.”

“I think there is a grave danger of complacency at the top end and understating the amount you’re going to have to spend to maintain the vibrancy of your mall and therefore maintain the attraction to the best retailers and ultimately your customer footfall.”

Global investor,
Global Emerging Trends in Real Estate 2018

Not everyone is persuaded by the merits of retail scale. “Particularly in the US they’ve also gone too far [negative] on poorer-quality malls,” says one global player. “I always find it interesting when there is an apparently clear consensus ... that poorer-quality malls are dead and better-quality malls are very, very safe. I think both of those things are wrong.”

Another institutional investor observes: “There’s no doubt rents are under pressure from the internet, but I think these types of trends are cyclical. It wouldn’t surprise me if in five, ten years’ time, we suddenly decide secondary shops are great, there’s too many people in the larger centres and we’d rather go to the neighbourhood place.”

Indeed, as *Emerging Trends Asia Pacific* points out, neighbourhood malls are something of a haven in Australia, partly because of the big distances between warehouses and customers meaning that e-commerce deliveries will be both slow and expensive, slowing growth. The report also points out that elsewhere in the region the retail industry is modestly upbeat because it is relatively immature, meaning there are inefficiencies in the way malls are built and managed and therefore the potential for savvier operators to differentiate their retail offer. Equally important, shopping centres in Asia do not generally use the department store anchor model that has been the downfall of so many centres in the US.

It may just be that the consolidation-for-scale narrative will be restricted to mature Western markets. But in those markets, there is a clear sense among industry leaders interviewed for *Global Emerging Trends* that further consolidation among retail REITs is likely, leaving them stronger and better equipped to deal with the longer-term trends around technology and e-commerce. “I don’t think it’s over by any stretch of the imagination,” says one global player. “Amazon and its competitors are going to continue to invade the physical space, blurring distinctions between the physical and the online. That will put technology costs up for anybody from our side wanting to compete, which in turn will take our return on capital down.”

“We’re seeing structural changes across all of the sectors: retail and e-commerce; in offices with WeWork and WeWork-type formats; and 2017 was a huge year of activity in the logistics space. All of that’s been happening when we’ve seen the market hunting for strong cash-flows. You’ve got to stay relevant for the occupiers if you want to produce a stable cash-flow. What we will see in the future is more focus on operating platforms.”

European investment manager,
Global Emerging Trends in Real Estate 2018

M&A activity continues across sectors

As data from Green Street Advisors show, corporate consolidation in the listed REIT sectors in the US and Europe is by no means restricted to shopping centre owners. Residential, office, healthcare, hotel, and multi-sector companies have all figured in real estate M&A over the past two years (see tables).

“It’s a late-cycle type of move,” suggests one investor. “It can be seen both in a positive way and as an indication that we are near the top of the cycle.”

Another interviewee observes that “M&A transactions are all about opportunities”. In other words, the corporate deal can be a more expedient and cost-effective way for investors to gain market share than buying assets individually. This was true of two massive deals in the European logistics sector last year: China Investment Corp (CIC) buying Logisor for €12.25 billion, and Asia’s biggest warehouse operator, Global Logistic Properties, acquiring Gazeley for \$2.8 billion.

“It’s not an objective to do M&A, but it can answer some strategic ambitions,” says one CEO interviewee. “If we are talking about REITs as internally operated companies, you need to have market share because of all the trends which are changing all over the world and the fact that today, you need to be able to handle all the big data. We are shifting globally from ownership to usage, which means you need to understand what makes the difference between one brand and another.”

Table 1-1 **Mergers and acquisitions in Europe’s listed real estate sector, 2016–17**

Date	Acquiror	Target	Sector	Transaction	Transaction	Premium to share price	Premium to NAV
18/12/17	Vonovia	BUWOG	Residential	Public-to-public	€ 5,200	18%	33%
12/12/17	Unibail-Rodamco	Westfield Corp	Shopping Centres	Public-to-public	€ 24,700	18%	22%
06/12/17	Hammerson	Intu Properties	Shopping Centres	Public-to-public	£3,400	28%	–21%
13/11/17	Inmobiliaria Colonial	Axiare Patrimonio	Multi-sector	Public-to-public	€ 1,100	13%	7%
21/06/17	Gecina	Eurosic	Office	Public-to-public	€ 3,300	25%	16%
05/06/17	Blackstone	Sponda	Multi-sector	Privatisation	€ 1,763	21%	2%
05/09/16	Vonovia	Conwert	Residential	Public-to-public	€ 2,878	9%	7%
04/03/16	Eurosic	Foncière de Paris	Office	Public-to-public	€ 2,505	23%	8%
Average						19%	9%
Median						17%	8%
Average (ex-German Resi)						21%	6%
Median (ex-German Resi)						19%	8%

Source: Green Street Advisors

Table 1-2 Mergers and acquisitions in the US listed real estate sector, 2016–17

Date	Acquiror	Target	Sector	Transaction	Transaction	Premium to share price	Premium to NAV
10/08/17	Invitation Homes	Starwood Waypoint Homes	Single-Family Rental	Public-to-public	\$7,835	1%	–13%
09/06/17	Digital Realty Trust	Dupont Fabros Tech	Tech	Public-to-public	\$7,727	16%	50%
07/05/17	Sabra Health Care REIT	Care Capital Properties	Health Care	Public-to-public	\$4,050	14%	20%
24/04/17	RLJ Lodging Trust	Felcor Lodging Trust	Hotel	Public-to-public	\$2,452	17%	N/A
14/11/16	Regency Centers	Equity One	Strip Center	Public-to-public	\$5,938	13%	0%
15/08/16	Mid-America Apartment Communities	Post Properties	Apartment	Public-to-public	\$5,005	16%	–1%
29/04/16	Cousins Properties	Parkway Properties Inc.	Office	Public-to-public	\$3,604	13%	N/A
19/01/16	Brookfield Asset Management	Rouse Properties	Mall	Privatisation	\$2,689	39%	10%
						Average	18%
						Median	16%

Source: Green Street Advisors

Managers seek scale and credibility through consolidation

Investors clearly have a preference for consolidation among fund and asset managers, according to senior property professionals canvassed by *Global Emerging Trends*.

The market has seen a clutch of mergers and takeovers among managers serving ever-demanding institutional investors in a low-return market in which it is difficult to source deals and deploy capital. Credibility counts among clients. Faced with a growing regulatory burden, too, for many managers that means scaling up.

“After the financial crisis, investors were often keener to work with niche operators but because of the growth of the real estate investment universe, for many that meant years later having to deal with 50 to 100 managers just in real estate, and they maybe found that to be inefficient,” says one interviewee.

“There is a real advantage for managers now who can offer a broader spectrum of activities to the investor. And investors will go for that if they trust the manager. If a manager performs well on offices, the investor would be more likely to give that same manager more allocation on other product types rather than look for three other managers for residential, logistics or student housing.”

There is some scepticism in the market, too. “I’m not sure bigger is better. I’d argue that better managed and more effective is better,” says one interviewee. “I think fund managers run their own businesses and there’s probably an element of their fee income, their overhead, and maybe from their own point of view, bigger is more efficient in their own capital allocation. Whether that translates into better service and alignment with their investors, I think it’s for them to show it through their performance.”

Better performance or not, most interviewees anticipate more mergers among managers. “As a general trend, we will continue to see consolidation. Strategically, it offers more rapid penetration of markets and product types versus organic growth. At the same time, there will still be new entrants, and that is what creates vibrancy in our industry,” says one global manager.

As one institutional investor concludes: “I can see more consolidation in investment management. To be a global player, you have to be above \$100 billion assets under management. I wouldn’t be surprised if the big get bigger and the small remain niche players. The ones in the middle will have to figure something out.”

Top cities for real estate investment in 2018



Canada

Vancouver
Toronto
Montreal

United States

Seattle
Austin
Salt Lake City
Raleigh/Durham
Dallas/Fort Worth
Fort Lauderdale
Los Angeles
San Jose
Nashville
Boston

Europe

Berlin
Copenhagen
Frankfurt
Munich
Madrid
Hamburg
Dublin
Stockholm
Luxembourg
Amsterdam

Asia Pacific

Bangalore
Bangkok
Guangzhou
Ho Chi Minh City
Jakarta
Manila
Mumbai
Shanghai
Shenzhen
Sydney



Table 1-3 Top 10 global and continental cross-border trade routes, 2017

Rank 2017	Rank 2016	Source country	Destination country	Volume (\$m)	YOY %
1	2	Canada	United States	14,347	24%
2	4	United States	Germany	10,349	57%
3	3	United States	United Kingdom	9,971	0%
4	41	United States	Spain	8,855	414%
5	38	China	United Kingdom	7,259	308%
6	14	Hong Kong	United Kingdom	7,092	111%
7	15	Singapore	United States	6,391	95%
8	6	Hong Kong	China	5,578	-3%
9	1	China	United States	5,368	-64%
10	18	United States	Netherlands	5,328	74%

Source: Real Capital Analytics

Sources: Emerging Trends in Real Estate Europe 2018, Emerging Trends in Real Estate Asia Pacific 2018, Emerging Trends in Real Estate United States and Canada 2018



“In Asia, Europe, and the US overall, I think there will be increasing allocations to real assets. That’s a reflection of what’s happening in the fixed-income market and the bond market. We’re coming to the end of what’s been a 30-year bull market in bonds.”

European investment manager,
Global Emerging Trends in Real Estate 2018

“The reality is that post the financial crisis, it’s become harder and harder to spot where you are in the cycle. In many ways, prudent investors have been quite defensive for the last couple of years. Investors around the world are looking for cash-flow that’s sustainable, as well as quality and location. The pricing of assets is strong everywhere, and so some of it is about not getting it wrong rather than getting it right.”

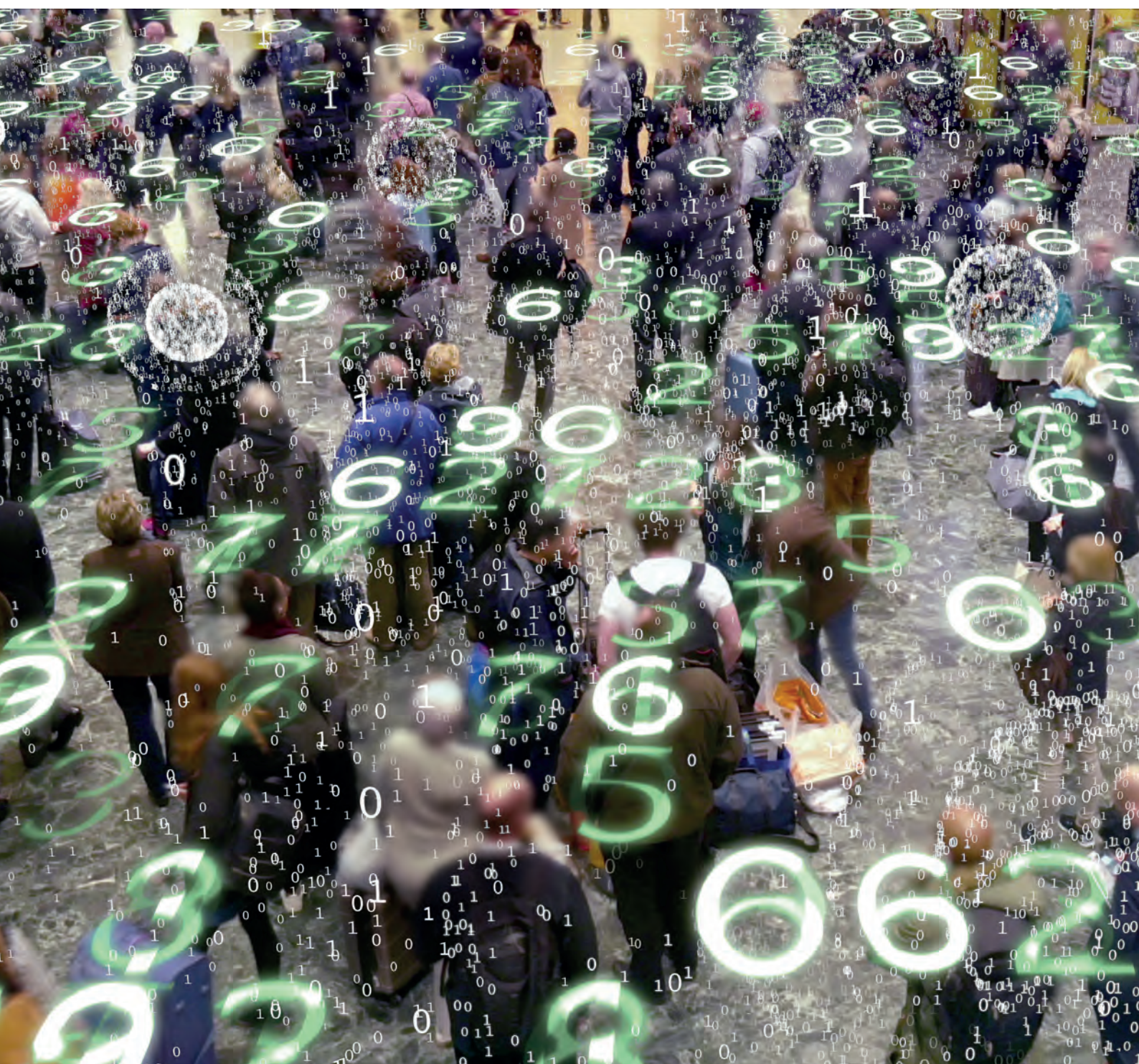
European investment manager,
Global Emerging Trends in Real Estate 2018

Table 1-4 11–20 global and continental cross-border trade routes, 2017

Rank 2017	Rank 2016	Source country	Destination country	Volume (\$m)	YOY %
11	168	United States	Finland	4,879	2,093%
12	19	France	Germany	4,229	44%
13	5	Germany	United States	4,138	–32%
14	10	United Kingdom	Germany	3,672	–7%
15	12	United States	Japan	3,666	1%
16	21	Switzerland	Germany	3,575	38%
17	31	Singapore	Australia	3,266	64%
18	146	Netherlands	United States	3,219	1,052%
19	40	Sweden	Denmark	2,798	58%
20	81	Germany	Austria	2,749	356%

Source: Real Capital Analytics

New models for a changing world



The real estate industry is gradually recognising the need to adapt to the disruptive change that technology is bringing about in the sector, and starting to come up with the strategies it thinks are the best way to address and profit from this change.

Some still have their head in the sand. But while many industry leaders do not want to face up to the fact that their businesses need to alter radically, some are setting up R&D facilities in Silicon Valley to build and invest in the technology that could change the sector.

The sector is starting to think about some of the challenges it will face from technology, such as driverless cars and blockchain. It is starting to adapt properly to the biggest technological change of the past decade – the smart phone. The answers are not all there, but the right questions are starting to be asked.

The human resources challenge is huge – real estate is still not hiring enough of the right people, or putting the right people in positions of influence, according to many of the senior professionals canvassed for *Global Emerging Trends*. There is not enough leadership from the front on these matters, with real estate chief executives in particular perceived to be reluctant to hire the right people and undertake the change in business models required to keep up with the pace of change.

Embracing change matters now more than ever

The need to embrace disruptive technology and business practices is more acute than ever, because real estate is at a liminal moment.

Many of those interviewed believe that now is a crucial point in the sector's evolution, and those companies unwilling or unable to embrace change risk being permanently left behind.

There are two main reasons cited for this. Huge amounts of capital are flowing into the sector, and it will flow to the companies that can use technology to give themselves even the smallest edge.

And with real estate late in the cycle, investors and owners will need to utilise any means necessary to improve performance of assets – and maintain performance during a downturn.

On the first point, one investor cites the sharply increased competition they are currently facing, as record amounts of capital move into the real estate sector.

"Increased liquidity, combined with improvements in data that bring greater transparency to the sector make it harder to find alpha," they say. "In the 1980s there was very little competition, and institutional investors were not sophisticated, so it was pretty easy to make money from them. Not any more."

"Where value resides in the real estate sector, it will shift to new or hybrid models of existing and new players who manage to harness data as a competitive operational advantage and create entirely new revenue opportunities that leverage the scale of their portfolios."

Real estate technology executive,
Global Emerging Trends in Real Estate 2018

With that in mind, to raise money and make money in an increasingly crowded field will require greater sophistication. And those that have this greater sophistication will be rewarded.

"Being at the forefront of change and capturing some of this new inflow will give companies an outsize advantage," one interviewee says. "If you look at Blackstone and Brookfield, they are maybe 5 to 10 percent better than their peers and they are hoovering up capital. Technology creates outsized winners and that is what will happen in real estate, too."

This will be especially important as real estate, inevitably, approaches the point when values start going down rather than up.

“Cap rates can’t go down any further, the only way is up, so you have to improve the efficiency of your property and your company,” one interviewee says. “Software is one way of doing this, as are things like energy efficiency and the internet of things, things that make buildings run more efficiently. On the management side, anything replacing spread sheets and allowing greater analytical capability has a big return on investment.”

“If you do stick to working with spreadsheets, you are not going to go bust over night, but it will be death by a thousand cuts,” another adds.

“If you do stick to working with spreadsheets, you are not going to go bust over night, but it will be death by a thousand cuts.”

Proptech consultant,
Global Emerging Trends in Real Estate 2018

Table 2-1 **How concerned are you about the following business threats to your organisation's growth prospects?**¹

	Real estate (30)	Global (1,293)
Cyber threats	17%	40%
Speed of technological change	10%	38%
Changing consumer behaviour	7%	26%
New market entrants	7%	20%

Source: PwC Global CEO Survey 2018

People matter – is real estate getting it right?

Central to this change will be the people that real estate firms hire and the way they run their businesses, as much as the buildings that companies in the sector buy and build. And the evidence suggests that the sector has not embraced change in the way necessary to flourish.

Survey data compiled by PwC indicates that real estate chief executives are less concerned with changing the way they run their businesses in the face of disruptions of all kinds, but particularly in the face of technological change.

The survey reveals that just 10 percent of real estate chief executives are concerned about the speed of technological change, compared with a global average of 38 percent. Similarly, just 43 percent are rethinking their human resources function compared with a global average of 60 percent.

PwC's survey is borne out to a great degree by interviewees for this report, from all parts of real estate. On why they had set up a proptech investment firm, one interviewee points out that real estate had the lowest spend on IT of any business sector. “The only way is up,” they say, adding that they believe only around 25 percent of property companies are really thinking about how to adapt to the changing world.

Echoing this sentiment, one investor makes a similar comparison to other sectors. “If you look at Goldman Sachs, about one third of its business today is tech related, and it spends about 25 percent of its earnings before interest, tax, depreciation, and amortisation on technology – the equivalent figure for real estate would be 5 percent or less,” they say.

One or two interviewees have hired chief technology officers or chief data officers, or say they are looking to hire more people with science and engineering backgrounds. But there is certainly a feeling that on the whole real estate companies are not hiring people with the kind of backgrounds needed to help them adapt to the changing world.

1) PwC Global CEO Survey: Respondents who stated 'Extremely concerned'

“In terms of hiring, real estate companies are not shaking up the org chart. Too often, they are doing things like making the head of IT the chief data officer or chief technology officer, and they are fundamentally different roles.”

But beyond this, there is the feeling that a generational shift would be required to instigate more meaningful change – a potentially slow process. “It is more important to be hiring lots of people at the bottom of the organisation who understand technology and its impact rather than one person at the top,” one interviewee says.

There is also a feeling that senior leaders are not doing enough to accelerate the process of change in companies. But before they are judged, there are compelling human reasons why leaders might prefer to maintain the status quo.

“Implementing cultural change takes investment, and many CEOs don’t want to spend the money,” one interviewee says. “But there is also the issue that many leaders are near the end of their careers and don’t want to implement big expenditure and strategic shifts that might be the last thing they do in their careers, but have no guarantee of bearing fruit.”

The same interviewee argues that there are very few tangible examples that can be held up where a real estate company, either a principal or a services firm, has radically altered their business to take account of disruptive technology or business practices, and come out the other side able to prove that change has been beneficial.

Rather, there are examples where companies have tried and failed and serve as a warning about the pitfalls of changing too quickly or getting change wrong.

“Implementing cultural change takes investment, and many CEOs don’t want to spend the money.”

Proptech consultant,
Global Emerging Trends in Real Estate 2018

Dealing with proptech – buy, build, or bury your head

The interviewees for this report covered the entire spectrum of views when it comes to proptech – technology utilised by real estate companies to enhance the running of their business. For some it is just a buzzword, and they have not changed how they run their business or applied much in the way of new technology.

At the other end of the spectrum, four investors or developers interviewed have set up their own divisions to invest in and develop proptech. One investor has even set up their own dedicated proptech investment and R&D facility in Silicon Valley to get access to the best talent and ideas that the technology sector can offer.

In the main, these are some of the largest investors in the world, with portfolios running into the tens of billions of dollars. But that is not always the case – one such firm is a much more modest single-sector investor and developer.

As to why these companies have decided to invest in and create their own proptech solutions, rather than buy them in from external firms, the answer tends to be fairly harmonious.

Table 2-2 **Venture capital investment in proptech**

Year	Amount raised (\$m)	Deals
2011	186	40
2012	218	70
2013	446	105
2014	1,142	170
2015	1,714	191
2016	2,600	277
2017 (estimate)	3,400	n/a

Source: CB Insights

“Proptech is one small part of the wider digital transformation of the property industry. It describes a movement driving a mentality change within the real estate industry and its consumers regarding technology-driven innovation in the data assembly, transacting, and design of buildings and cities.”

James Dearsley and Andy Baum,
PropTech Consult

“We are an operator as well as an owner of real estate, so we need technology that helps us maximise our portfolio and manage it efficiently,” one investor says.

“It is quite an expensive and labour-intensive thing to do, but we want to be at the forefront of the changes affecting real estate. It is important to be an early participant in this,” another says.

There is, of course, another element to this – proptech companies or applications have the potential to turn a profit in and of themselves. “The theory is you can invest in technology that will help your own portfolio, but also invest in companies that should make a good profit, too,” another says.

How are investors going about this? Some are taking a venture capital approach, investing in companies building particular products. Some are hiring the people to build those products. But in all cases there is consensus that being an investor in this sector requires blending of the new skills of the tech world and more traditional real estate expertise.

“We have hired people with a more technology and venture capital background. The companies in this world are almost all not from the real estate sector, so they have a different mindset and you need someone that understands that mindset,” one investor says.

“You also need a VC background as investing in companies is very different to investing in real estate.”

“But you also need to have them work very closely with your teams that understand real estate – asset managers, etc. – to find what will be truly useful to the real estate community.”

There are, of course, pros and cons to this strategy, and not every investment will bear fruit. One of the investors with a proptech focus outlines how one piece of artificial intelligence software now allows it to sort through huge stores of documents from development projects and categorise them in minutes, a process that used to take a project manager a week or more.

But on the downside, a project that attempted to standardise leases using blockchain technology has ultimately proved to be useless, wasting time and money. An answer might seem to be to ensure that companies have a good balance of staff with traditional real estate skills and also knowledge of newer technology and business models, to ensure that the technology being developed is useful as well as innovative.

Disruption vs. stability: how various sectors are affected

In terms of specific sectors of real estate that are facing disruption, there is little surprise that interviewees most commonly cite logistics and retail. The two sectors are two sides of the same coin, impacted positively and negatively by e-commerce. Most interviewees believe more mature markets like the US, China, and the UK will see growth moderate but continue nonetheless, and the rest of the world is catching up.

One development in the retail sector is the fact that shopping mall investors and developers are past the phase of wondering what to do with empty space in their properties. They are getting on and converting it to other uses, such as co-working space, libraries, health care centres, and even mini-golf courses, as is the case with a huge empty department store on London's Oxford Street².

While in general the consensus remains that fortress malls in the best locations would perform well, and that Asian investors are furthest along the path of adapting malls to new technology and ways of living, some anticipate that even here the need to convert space from retail use would eventually be felt.

"The extension to Westfield London will have a John Lewis department store. Will that still be a department store in 20 years? I don't think so," one investor says. "People are underestimating how capex will impact the valuation of even the best centres, because they can hide it below the line."

There were two sectors where the effect of disruption was increasingly felt in 2017, and which interviewees felt would continue to see huge changes over the coming years, and that is offices and hotels.

In the office sector, WeWork – and co-working and flexible offices more generally – dominate almost every conversation. One tech investor paints a picture of the scale of the opportunity. According to CBRE estimates, revenue from global office rentals is a \$600 billion a year business. If flexible offices grow from 1 percent to 20 percent or more of that market, as the same broker estimates, that is \$120 billion of revenue up for grabs.

"As an industry, we are not as vulnerable to disruption as other sectors of the economy. On the contrary, it is unlikely that apartments will be replaced by digital products. But we can use digital products ourselves and offer them in addition to the apartment to customers. And by building houses using modules that are produced in the factory and only installed on site, we can quickly realise cost-effective new construction in existing neighbourhoods."

European investor,
Global Emerging Trends in Real Estate 2018

2) <https://europe.uli.org/trading-dining-leisure-amenities-new-shopping-centre/>

The path to growth will not be smooth. As one investor in the sector says: “This is an inherently volatile business because of the short-term nature of the cash flow, and there will be even greater volatility when the next recession hits.”

But beyond the performance of individual companies or even the sector itself is the fact that co-working has changed the office real estate sector forever. Landlords are now obliged to treat tenants as customers, rather than just pay lip service to the idea, because of the plethora of alternatives available for even large corporate occupiers. “If you are focused on cash-flow rather than service then you will go out of business,” one investor says.

Office space is being designed to offer a greater variety in ways of working, with forward-thinking owners now having to incorporate and mix open-plan space, quiet areas for when workers require solitude, as well as break out areas for collaborative work. And the usage of all of this space needs to be monitored and quantified to ensure maximum efficiency.

As is the case with shopping centres, the capital expenditure for the owners of offices that do not meet these criteria will be significant. A much-repeated mantra in relation to this is that there will be “winners and losers”.

Co-working and flexible space is also a threat to the business model of the advisory firms that have thus-far benefited from the outsourcing of corporate office management. “Only 5 percent of a company’s office is really personal, the thing that makes it a Google office or a McKinsey office. So co-working companies can create office space for companies, and then work with human resources (HR) to get that last 5 percent. And it is HR they are working with now, not the head of real estate, as the office is an HR tool.”

In the world of hotels, Airbnb is evolving. So far, business travel has been fairly impervious to Airbnb, but platforms like Parallel Travel are looking to provide the benefits of Airbnb – lower-cost apartments rather than hotel rooms – with none of the downsides business travelers do not like, such as occasionally sketchy service from hosts.

The areas of traditional real estate most impervious to disruption is “anything to do with beds”, according to one investor. More than one million people per year will turn 18 in the US over the next few years, making student accommodation resilient; while Airbnb has eaten some of the hotel trade’s business, tourist numbers continue to rise year on year as people spend money on experience rather than possessions; and while luxury multifamily is oversupplied in some US markets, it is heavily undersupplied in most markets in Europe and many markets in Asia.

“The WeWorks of the world, the whole co-working space, is becoming a significant part of the real estate market. No one knows what the depth is to that. But it is not just millennials who are flocking to that; you have corporates that are looking at that as a cost-effective alternative for space usage. I think this is going to be one of the interesting challenges. Do you have physical assets facing obsolescence because they are just not designed to accommodate these new uses?”

Global asset manager,
Global Emerging Trends in Real Estate 2018

Disruption: from blockchain to driverless cars

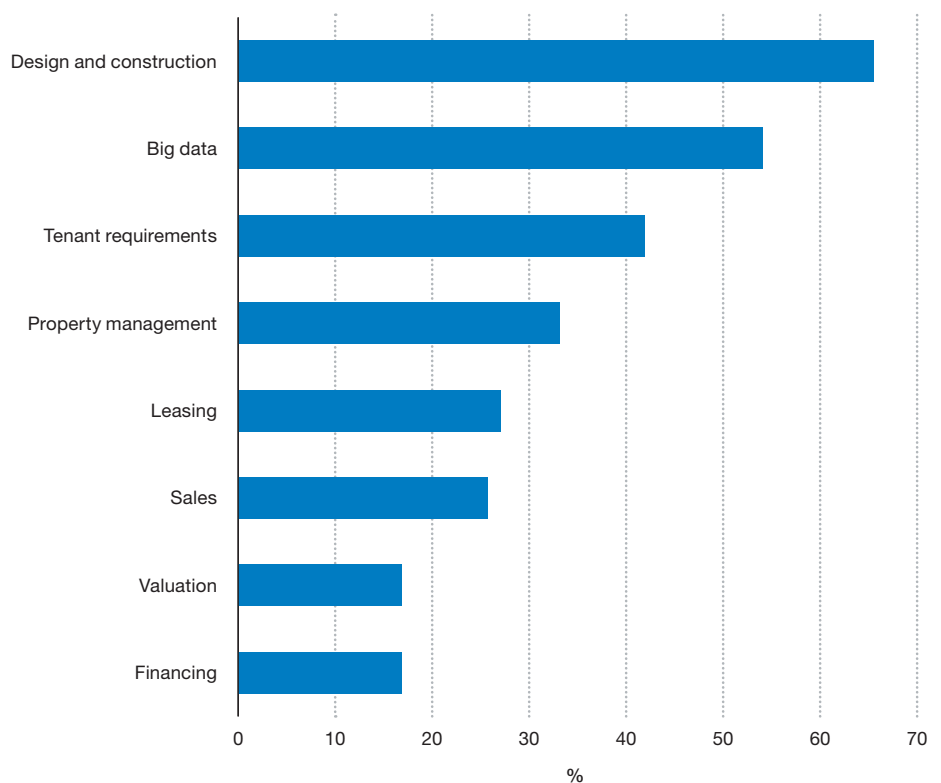
In terms of specific technologies that will have a significant impact on the operation and value of real estate, two areas are cited much more consistently than others: driverless vehicles and blockchain.

It would seem as if the real estate sector now has an intense focus on how the implementation of driverless cars and Heavy Goods Vehicles (HGVs) will impact its world: virtually every interviewee, when asked about big technological disruptions in the sector, mentions autonomous vehicles.

Some of the potential effects are tangible: for instance, what happens to the space currently given over to parking when people no longer own cars and need to park? In Los Angeles alone, for instance, there are 17m sq m devoted to parking, according to German visualisation software company Moovel. Shopping malls will suddenly have huge amounts of parking space that need to be reconfigured. “When we are building retail now, we make sure that the parking space can easily be converted to other uses,” one developer says.

Beyond this, however, there is the potential to reconfigure totally some sectors of real estate. Logistics is currently the darling of investors, but if HGVs can drive almost continuously, less logistics space might be needed – HGVs would essentially become moving warehouses – and it might not need to be as close to urban centres. “Maybe everyone is currently overpaying for these last-mile logistics assets,” one investor muses.

Figure 2-1 **Area most likely to be affected by technology**



Source: *Emerging Trends in Real Estate 2018 Mid-Year Survey*

And beyond this even, there is the social impact caused by the fact that driving as a profession would essentially become obsolete – and more than 3 million Americans are employed as drivers.

One interviewee points out that driverless cars provide a good example as to why some investors need to think more closely about technological change than others. The technology is perhaps ten to 20 years away from becoming commonplace. That means that an opportunistic investor can to some degree discount it from their evaluations right now. But core investors that want to hold assets long-term need to be thinking about this right now.

Blockchain is a technology that the real estate industry knows will have big implications, but currently finds somewhat difficult to get its head around. There is consensus that the technology will have the capability to create a new system of property title documentation and transfer, and that governments across the world are likely to adopt this to complement or replace land registries.

“Exogenous technology is a threat to many businesses, and knowing about them and embracing them is important as you could find yourself in a Blockbuster situation and becoming extinct.”

Proptech consultant,
Global Emerging Trends in Real Estate 2018

In terms of its impact on the value and operation of real estate, there is less focus on the idea that blockchain might be used to buy and sell property instantaneously, or the idea that it could be a method to syndicate the equity of a property. The big impact on values could come from its interaction with big data and the fact that as blockchain is increasingly used to document information about a property or company, the due diligence process becomes a lot cheaper and quicker.

One investor explains that in a recent corporate transaction, due diligence took more than six months and accounted for 10 percent of the total deal cost. Reducing both of these elements using blockchain could affect the value of assets and companies. “A 10 percent change is meaningful,” they say.

Rather than a specific technology, there is also great interest in the impact of technology on the construction industry. Off-site modular construction, construction robotics, building information management systems, drones, and artificial intelligence are seen as having the potential to improve hugely the construction process, with the benefits being reaped by developers. “As that industry becomes more efficient and standardised and costs come down, that will have a major impact on developers. Construction times could be halved,” one developer says. Such technology could significantly aid the delivery of more affordable housing – a major focus of *Emerging Trends US and Canada*.

An exemplar in the construction field cited several times is Katerra, the start-up construction technology firm in which giant Japanese investor Softbank recently invested £865m, valuing the company at nearly \$3bn. Rather than trying to bolt these newer technologies on to existing working practices, the company was set up to build in technology from the very start of the company, and try to change fundamentally the way construction firms work.

“It is answering the question of what the construction company of the future looks like,” one interviewee says. “Not many developers or investors are answering that question in their field.”

Blurred lines – the merging of old business models with new

We have reached a moment when the lines between traditional real estate companies and new entrants from the technology, services, and hospitality sectors are becoming blurred. It is a cliché, but this represents both a threat and an opportunity for the traditional real estate sector.

The threat is clear: it is conceivable that technology companies or new entrants come to dominate entire sections of real estate, with a level of change even greater than that seen so far in the retail sector. This would be possible because of technology companies’ better access to and analysis of the new oil: data.

One example is logistics. What is to stop, hypothesises one interviewee, Amazon coming to dominate the entire logistics sector and becoming many times larger than even the biggest incumbent companies? “Amazon is already setting up its own delivery company; why would it not set up its own developer of logistics, and not only develop for itself but for others?” they argue. “Who knows better where to build and how to deliver than Amazon, given its access to data?”

Table 2-3 Real estate into tech

Company name:	Investment/collaboration with:	Business product/service:
Brookfield	○ Airbnb/Niido	Multifamily properties that can be rented out on Airbnb
Brookfield	○ Convene	Flexible conference, meeting space, and range of services for office tenants
Tishman Speyer	○ Zo	Branded platform for tenant amenities
Westfield	○ Onemarket	Services/capabilities platform that empowers retailers to digitise their sales and fulfilment process
Sansari	○ Hostmaker	Upmarket Airbnb Platform
Greystar	○ Amazon	Install locker systems – consolidating deliveries
Lennar	○ Opendoor	Home Trade-Up Program revolutionises the way consumers purchase and sell homes.
Colliers	○ LiquidSpace	Real-time network for office space. Connecting growing teams and professionals looking for space, directly with venue partners, space providers, real estate professionals and service providers.
Durst Organisation	○ Convene	Flexible conference, meeting space, and range of services for office tenants
Moda Living	○ Uber	Aims to reduce need for tenants to have private cars
WeWork	○ MeetUp	Creates communities, gatherings based around the ideas, activities, common interest, goal, or cause.
Hines	● Fifthwall	Real estate tech VC fund
Equity Office	● Fifthwall	Real estate tech VC fund
Varde Partners	● Pi Labs	Real estate tech VC fund
Prologis	● Fifthwall	Real estate tech VC fund
Starwood Capital	● Concrete	VC fund focused on innovations that impact the real estate industry
Westfield	● Westfields Labs	VC fund and tech accelerator
Simon Property Group	● Simon Ventures	VC fund and tech accelerator
Unibail Rodamco	● UR Labs	VC fund and tech accelerator
JLL	● SeedCamp/Starwood	Concrete real estate VC fund
Blackstone	● Entic	Tech company that optimises energy usage in large buildings
Blackstone	● VTS	Tech-based leasing/management platform
Brookfield	● Honest Buildings	Cloud-based platform allows landlords to track repair projects/vendors across entire portfolio
PGGM	● Geophy	Alternative data: maps real estate portfolios on sustainability and CO ₂ footprint
Oxford Properties	● Honest Buildings	Cloud-based platform allows landlords to track repair projects/vendors across entire portfolio
K11	● ObEN	AI startup seeking to create new experiences for consumers
Union Invest	● Architrave	Proptech strategic partnership to develop industry-wide real estate data platform
Durst Organisation	● Honest Buildings	Cloud-based platform allows landlords to track repair projects/vendors across entire portfolio
CBRE	● Floored	3D visualisation software for the commercial real estate industry
Blackstone	○ TOG	Co-working
Gaw Capital	○ Naked Hub	Co-working
Carlyle	○ Uncommon	Co-working
LeFrak	○ Common	Co-living
Brockton Capital	○ Fora Spaces	Co-working
Aviva	○ Ollie	Co-living

○ Services ● PropTech Funds ● Tech/Data ○ Co-working/Co-living

Source: PwC Research

Table 2-4 **Tech into real estate**

Company name:	Investment/collaboration with:	Business product/service:
Fifthwall	 LimeBike	Shared bike – smart mobility. First/last-mile transportation. Expand accessibility to buildings. Seen as a way to make properties more valuable.
Fifthwall	 Industrious	Partners with managers to provide co-working space/ workplace services
Facebook	 Real estate	Plans to create mixed-use campus town
Softbank	 WeWork (co-working), Katerra (modular housing)	Tech fund invests in 'real estate' business
Airbnb	 Newguard	Enables long-term tenants to sublease apartments
Google	 Real estate	Development of city region in Toronto
Amazon	 Wholefoods	Acquisition opens up access to physical retail/distribution

 Services  PropTech Funds  Tech/Data  Co-working/Co-living

Source: PwC Research

Another example is Google's smart city project in Toronto, or WeWork's encroachment in the office sector. "Given that the ultimate end goal of buildings is to attract talent and retain loyalty, tech companies will be able to do this better than existing real estate companies," an interviewee argues.

WeWork is clearly following the tech company playbook of trying to become so big that it dominates the office sector and has greater leverage than any single traditional office landlord. It remains to be seen how this plays out. But with a valuation of \$20 billion from its last funding round, it is already theoretically valued at more than the world's largest office REIT, Boston Properties, which has a market capitalisation of \$19 billion.

The counter argument is that real estate is too large and fragmented an industry to see true consolidation. Blackstone and Brookfield own more than \$200 billion of real estate, but in an industry of more than \$2 trillion, that is still small. "The value of real estate goes into trillions, think about the net worth of a city like London. So, this will not change hands quickly."

"Given that the ultimate end goal of buildings is to attract talent and retain loyalty, tech companies will be able to do this better than existing real estate companies."

Real estate tech executive,
Global Emerging Trends in Real Estate 2018

The likelihood is that the two worlds will increasingly collide and complement each other, and that being successful in real estate over the coming decades will be about being best positioned to profit from these collision points. As a sign of things to come, two global giants of e-commerce, Amazon and Alibaba, have both made big moves into the world of physical real estate. The former paid \$24 billion for the US grocery chain Whole Foods, and the latter has spent more than \$10 billion on shopping centres and other retail assets in the past couple of years.

“The traditional real estate sector will not sit just there and wait to have its lunch eaten by new digital companies, they will respond.”

Global investor,
Global Emerging Trends in Real Estate 2018

Indeed, many interviewees point to Alibaba as an interesting example of how physical and online retail can be profitably merged. As well as its investment in department stores and shopping centres, which complement its delivery network, the company has equipped more than 600,000 small stores across China with computer software that allows them to be linked to a wider network, helping customers find goods in networked stores nearby, and giving store owners information on what goods they could profitably sell. The challenge for real estate will be to do the same thing but from the position of the owner of the physical assets.

“The traditional real estate sector will not sit just there and wait to have its lunch eaten by new digital companies, they will respond.”

An example is in the world of multifamily housing, where some developers are building schemes that contain units specifically designed for use on Airbnb – or in some cases even entire schemes. “It provides Airbnb with supply, which is the company’s biggest constraint,” one interviewee points out, “and in the multifamily sector, it is a good way of finding demand in a market that has been oversupplied in some areas, particularly at the luxury end.” In a similar way, in the hospitality sector big companies like Accor have created multiple brands and styles of property to appeal to different kinds of consumer and try to see off the threat of Airbnb.

And companies like Vonovia have pivoted from being traditional institutional owners of real estate to being much more consumer-facing. “It is now a consumer company that touches the lives of 700,000 Germans where its product just happens to be real estate,” one interviewee says.

All interviewees were asked the question: Where will the real future value reside in the real estate industry? Will it be captured by non-traditional business and new entrants or remain with the traditional businesses?

The answer, in short, will be both. There is plenty of opportunity for new entrants to disrupt the sector and steal value and market share. But there is enough willingness to adapt from incumbent businesses to ensure that they are also able to profit from change.

“The ideal solution would be older businesses recognising the change and bringing about new profit pools in business they didn’t have previously,” one interviewee says. “Digitising the past will not help them evolve and move forward. However, digitising the past may help them realise their market position and how subtle changes to operations can develop new areas to monetise in their sector and safeguard their future.”

Sponsoring organisations



PwC's real estate practice assists real estate investment advisers, real estate investment trusts, public and private real estate investors, corporations and real estate management funds in developing real estate strategies; evaluating acquisitions and dispositions; and appraising and valuing real estate. Its global network of dedicated real estate professionals enables it to assemble for its clients the most qualified and appropriate team of specialists in the areas of capital markets, systems analysis and implementation, research, accounting, tax and legal.

Global Real Estate Leadership Team

Craig Hughes

Global Real Estate Leader
PwC (UK)

Bart Kruijsen

European, Middle East & Africa Real Estate Leader
PwC (Netherlands)

Byron Carlock

US Real Estate Practice Leader
PwC (US)

KK So

Asia Pacific Real Estate Tax Leader
PwC (China)

Gareth Lewis

Emerging Trends in Real Estate Global Project Director
PwC (UK)

www.pwc.com



The Urban Land Institute is a global, member-driven organization comprising more than 40,000 real estate and urban development professionals dedicated to advancing the Institute's mission of providing leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 76 countries.

The extraordinary impact that ULI makes on land use decision making is based on its members sharing expertise on a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2017 alone, more than 1,900 events were held in about 290 cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

Ralph Boyd

Chief Executive Officer
Urban Land Institute (Americas)

Lisette van Doorn

Chief Executive Officer
Urban Land Institute (Europe)

John Fitzgerald

Chief Executive Officer
Urban Land Institute (Asia Pacific)

Anita Kramer

Senior Vice President
ULI Center for Capital Markets
and Real Estate

Elizabeth Rapoport

Content Director
Urban Land Institute (Europe)

Urban Land Institute

2001 L Street, NW
Suite 200
Washington, DC 20036-4948
U.S.A.
202-624-7000
uli.org

Interview participants

AEW

David Schaefer

Allianz Real Estate

François Trausch

APG

Patrick Kanter

AXA IM – Real Assets

Stephen D McCarthy

Beos

Stephan Bone-Winkel

Blackstone

James Seppala

Brookfield

Niel Thassim

Canada Pension Plan Investment Board

Andrea Orlandi

Fifth Wall Ventures

Roelof Opperman

Gecina

Méka Brunel

Global Logistics Properties

Seek Ngee Huat

Hines

Lars Huber

Innovation in Real Estate

Antony Slumbers

Internos Global

Jos Short

KKR

Ralph Rosenberg

Patrizia Immobilien

Anne Kavanagh

PGGM Investment

Guido Verhoef

PropTech Consult

James Dearsley and Eddie Holmes

PSP Investments

Neil Cunningham

QuadReal Property

Dennis Lopez

Signa

Jürgen Fenk

Vonovia

Rolf Buch

VTS

Brandon Weber

Authors and Editorial Oversight Committee

Authors

Doug Morrison
Editor and Author

Mike Phillips
Author

Editorial Oversight Committee

Allianz Real Estate
Dr Alexandra Krystalogianni

AXA IM – Real Assets
Nathalie Charles

JLL Asia Pacific
Megan Walters

Kempen Capital Management
Egbert Nijmeijer

Urban Land Institute Americas
Anita Kramer

Urban Land Institute Asia Pacific
Colin Galloway

Emerging Trends in Real Estate®

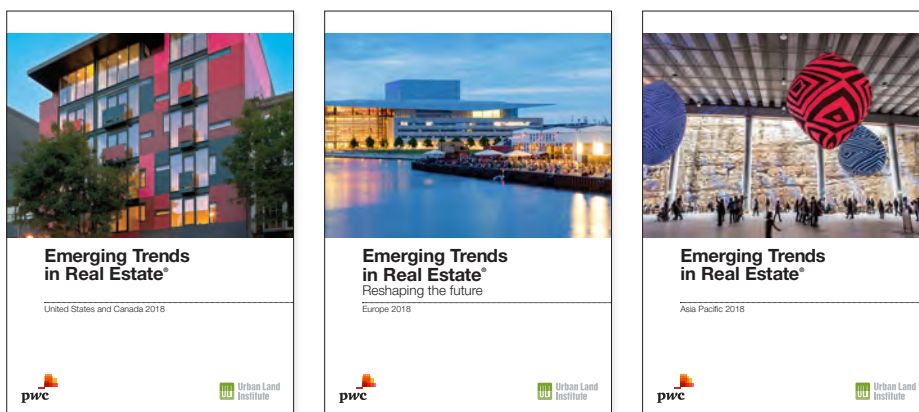
The global outlook for 2018

Based on interviews with the most senior property professionals, the *Emerging Trends in Real Estate® United States and Canada*, *Europe*, and *Asia Pacific* reports, produced annually by the Urban Land Institute and PwC, are key indicators of sentiment in global real estate.

We have drawn together those regional insights with additional interviews to focus on the most relevant investment and development trends across the globe, the outlook for real estate finance and capital markets, and the long-term influence of megatrends over the industry.

www.pwc.com/real-estate-trends-global

www.uli.org



The *Emerging Trends in Real Estate 2018* series of reports are available at: www.pwc.com

Emerging Trends in Real Estate® is a registered trademark of PricewaterhouseCoopers LLP (US firm) and is registered in the United States and European Union.

© March 2018 by the Urban Land Institute and PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details. No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, without written permission of the publisher.

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and to the extent permitted by law, the Urban Land Institute and PwC do not accept or assume any liability, responsibility, or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

Recommended bibliographic listing: PwC and the Urban Land Institute. *Emerging Trends in Real Estate®: The Global Outlook for 2018*. London: PwC and the Urban Land Institute, 2018.

ISBN: 978-0-87420-265-6

Emerging Trends in Real Estate®: The Global Outlook for 2018

