REflexions

A Biannual digest for the real estate investment management industry | Issue 4 | EMEA | 2016

Leadership in a changing landscape

Interview with Bryan K. Davis of Brookfield

Page 4

The Long Goodbye

UK investment in Brexit's wake

Page 10

Is the real estate industry equipped to face the prevailing market and IT challenges?

Page 18

Tax in a Time of Uncertainty

Page 28



Deloitte.

Foreword





Dear readers,

hange comes in many ways and forms. Sometimes we strongly drive it, sometimes we are just the audience. Regardless of the source, whether it is technology, regulatory or economy causing the transformation, we need to take a strong stand and react in a confident way.

In this edition of REflexions we have sought to put together a balance of all these elements. This is one of those moments when leaders need to show the way. How do we deal with a landscape that is changing rapidly? We also must look at the other side of the Atlantic when examining the transformation of the retail landscape.

You cannot make intelligent investments within your organization unless you understand where the entire industry is heading. In a fascinating and thought-provoking conversation with Brian K. Davis, Chief Financial Officer of the Brookfield Property Group, we asked about investment strategies, opportunities, and the hot topic of the Year—Brexit.

Speaking of the change, Brexit and 24 June 2016 will remain at the forefront of discussion for many months, years, and possibly decades to come. What will happen next is not yet clear but we must

be ready to embrace the transformation. It is essential that the real estate players take the challenges facing the industry seriously, as the competition is constantly growing. What does seem certain is that the tax landscape for real estate investment and funds in the UK will continue to evolve. You will find a thoughtful piece about it on page 28.

Technology continues to be a catalyst for change in all areas of the business and industry, and the real estate market is no exception. In order to meet the industry goals, especially when it comes to technology, the real estate industry should be ready to deal with new information in the business and to accept the Internet-of-Things challenge. Last but not least, Deloitte is undergoing its own vivid transformation. REflexions shows Deloitte's new Brand identity and tone of voice: clear, confident, and human.

We trust that you will enjoy reading the magazine as much as we enjoyed conceptualizing it, and we look forward to your feedback and even contributions for future issues so that this modest endeavor may continue to be multifaceted, rich, inspiring, solid, and reliable—all the qualities, contradictions, and complementarities that characterize our industry.

Benjamin LamEMEA Real Estate Funds Co-Leader

David BrownEMEA Real Estate Funds Co-Leader

Contents







e 10 Page 2

Page 28 Page 34

04

Leadership in a changing landscape

18

Is the real estate industry equipped to face the prevailing market and IT challenges? 28

Tax in a Time of Uncertainty

10

The Long Goodbye

UK investment in Brexit's wake

22

B-REIF

The new Belgian recipe for Real Estate funds

34

Smart buildings

How IoT technology aims to add value for commercial real estate companies

22

Leadership in a changing landscape

Ciro DeCiantis, National Investment Properties Sector Leader and Partner in the Deloitte Audit practice in Canada, meets with Bryan K. Davis, Chief Financial Officer of the Brookfield Property Group, to discuss investment strategy and opportunities of the real estate markets and new challenges after Brexit.

1. Brookfield Asset Management Inc. (BAM) is one of the most important and strategic investors in the global real estate market. Could you summarize the different ways in which Brookfield invests in real estate, both for itself and for its strategic partners?

Brookfield invests in high quality commercial real estate assets around the globe primarily in two ways—either directly on the balance sheet of our flagship public partnership, Brookfield Property Partners (BPY), or through Brookfield-managed private equity real estate funds (hereafter referred to as the funds). Approximately 80 percent of our invested capital is in premier class A office and retail assets in many of the world's most dynamic and resilient markets, including North America, Europe, and Australia. The remaining 20 percent represents BPY's equity participation in the Brookfield-sponsored funds. That sponsorship encompasses fundraising, deal sourcing, capital deployment, operations, liquidity distributions, and ultimately fund wind-up and dissolution.

In addition to the funds, we often invest alongside our strategic partners through joint ventures at the asset level, whereby we will manage a property or properties on their behalf. Collectively we have over US\$140 billion in real estate assets under management, making BAM one of the largest real estate investors in the world.

Generally we seek to earn 12-15 percent returns on our equity on a long-term basis, which includes stable 10-12 percent return expectations from our core strategies, supplemented by 18-20 percent return targets from our opportunistic strategy.

2. What do you believe differentiates Brookfield in its approach to real estate investment compared to other leading asset managers in the real estate space?

A few things: first, our time-tested investment approach and strategy is value-oriented, and often contrarian and countercyclical in nature. We specialize in executing multi-faceted transactions that enable us to



acquire high quality assets at a discount to replacement cost.

Secondly, unlike many large public real estate companies, our global and multi-sector investment scope affords us the flexibility to allocate capital to the sectors and geographies where we see the best risk-adjusted returns at various points in a real estate cycle.

Finally, we are extremely active in recycling capital out of stabilized assets into higher-yielding opportunities in order to build long-term value and provide an attractive total return for our unitholders and investment partners.

Generally we seek to earn 12-15 percent returns on our equity on a long-term basis, which includes stable 10-12 percent return expectations from our core strategies, supplemented by 18-20 percent return targets from our opportunistic strategy.



3. In the period subsequent to the financial crisis, Brookfield has achieved tremendous success, both in terms of global penetration and delivering solid returns for your investors. Could you discuss the key markets where you are looking to focus your effort and capital regarding asset class and geography?

From an asset class perspective, we have significantly diversified over the past few years, most recently in 2016 into self-storage, student housing, and manufactured housing. We are actively sourcing opportunities to gain greater market exposure to these sectors, which are highly fragmented and lack significant institutional ownership. We are also in the process of building a core urban multifamily platform to complement our class A office and retail portfolios.

From a geographic standpoint, Brookfield has a history of real estate investing in North America and Brazil for over 100 years, and within the last two decades we have expanded into the UK, Australia, continental Europe, and select emerging markets in Asia. Our strategy to invest globally is not centered on targeting capital deployment into a specific market, country, or region. What we look for is mispriced opportunities in markets that are out of favor—or that are otherwise experiencing a scarcity of capital, but nonetheless have positive long-term investment and socioeconomic attributes.

There are several drivers embedded in the business that position BPY to increase earnings, grow distributions to our unitholders, and reinvest capital to grow the business.

4. Much of the growth in your business has been achieved through the development of a robust fund platform that meets the needs of your global institutional investment partners. You have simultaneously launched and developed Brookfield Property Partners LP (BPY) as a strong publicly-traded company with a unique investment thesis in which BAM is also a significant investor. Could you describe your view on the value proposition available through BPY and how this interrelates with the fund platform managed by BAM?

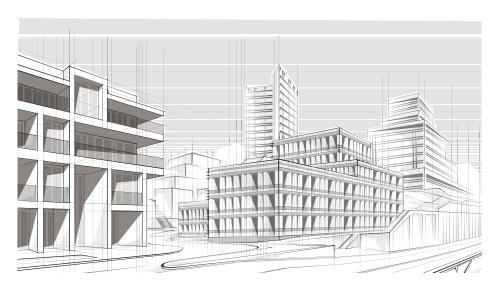
BPY's balance sheet totals US\$66 billion of assets spanning five continents and across various real estate sectors, including office, retail, multifamily, industrial, hospitality, triple net lease, self-storage, student housing, and manufactured housing.

The backbone of BPY's current value proposition is organic growth. There are several drivers embedded in the business that position BPY to increase earnings, grow distributions to our unitholders, and reinvest capital to grow the business. These drivers include increasing occupancy to more stabilized historical levels, bringing maturing leases with below-market rents up to the current market value upon renewal or re-lease, and recognizing new revenue streams over the next several years as

we plan to deliver nine million square feet of newly developed properties into the market.

With regard to the BAM funds platform, BPY is aligned with their value-add and opportunistic investment strategies as an equity partner in each of the funds. This exposure to shorter-term, higher-yielding strategies is a strong complement to BPY's long-term core businesses that provide stable, predictable cash flows.

The UK's decision to exit the EU came as a surprise to most observers, and although we as an organization would have preferred the alternate outcome, we remain steadfast believers in London and the UK overall as an attractive market to invest capital.





The UK's decision to exit the EU came as a surprise to most observers, and although we as an organization would have preferred the alternate outcome, we remain steadfast believers in London and the UK overall as an attractive market to invest capital. While there may be further uncertainty and volatility in the years ahead as the UK adjusts to a new relationship with the rest of Europe, it is our belief that with a favourable tax and regulatory framework for foreign investors, sound rule of law, a respect for capital, and a culture of free enterprise, the UK will continue to be an attractive place to invest and for businesses to locate their operations.

Regarding to our current UK investments, our London office portfolio is 98 percent leased, with an average remaining lease term of nearly 12 years, and less than 15 percent of our leases expire over the next 5 years, providing a great deal of certainty and stability in our portfolio through this period. Our other major business in the UK, Center Parcs, is a short-stay resort operator, catering primarily to domestic visitors and is likely to benefit from a weaker local currency.

6. Could you provide your perspectives on the opportunities you see in Europe and, in particular, how they may be evolving as a result of the Brexit vote?

As we have seen in the past, uncertainty often leads to attractive investment opportunities for patient investors with a long-term view, and we will be ready should any such opportunities present themselves.

Immediately post-Brexit there was extreme volatility in currency, within the public equity markets and in some open-ended UK property funds. Although currency remains deflated and interest rates are trending toward zero, we are not seeing any signs of acute distressed selling. In fact, investors are forming queues to invest at what they believe may be discounted pricing. Since we avoid participating in auctions, we actually would have preferred that less institutional capital was seeking entry to London at this time.

7. There appears to be an enhanced focus on development by Brookfield as a way to generate return or as an enabler of future strategic investment. Could you share your views on development for Brookfield and how you broadly go about managing the unique opportunities and risks that come with a significant global development program?

We engage our development strategy in order to earn premium, risk-adjusted returns versus acquisitions while at the same time upgrading our portfolio with new, trophy assets in key strategic markets. To mitigate risk we typically secure an anchor tenant (or tenants) for 40-50 percent space commitments in the building prior to launching construction. Once the anchor tenant is in place, we have secured maximum-price construction contracts and financing, and we have kicked off the project, we often choose to reduce our financial exposure by engaging joint venture partners. This enables us to realize some of the development profit upside and to

further mitigate our forward risk. At the moment, we have more capital invested in development than ever before in our history. With premium valuations currently being paid in many of our core office and multifamily markets in recent years—most notably North America, the UK, and Australia—we typically are able to capture 200-300 basis point yield spreads on development projects versus the acquisitions of existing properties. The best returns we are seeing is in redevelopment, where we can typically earn 8-15 percent yields on cost by refurbishing and repositioning office and retail assets. Although development is a key component of our current growth strategy, we expect our invested capital in this strategy to peak over the course of the next two years, and will then stabilize on a go-forward basis at less than 10 percent of our total assets. >

In 2016, we targeted raising approximately US\$2 billion of net equity from asset sales, and as of the end of August we were about 75 percent complete on that goal.

8. Brookfield has recently made some important real estate investments in India, and has also historically been an active investor and operator in Brazil. You have also made some investment in China. While very different markets, could you share your views on making real estate investments in emerging markets and how you broadly address the unique opportunities and challenges that are associated with managing investments in these markets?

As part of our global expansion we identified select emerging markets where the investment, geopolitical, and socioeconomic landscapes would be accommodating to foreign capital investment. When entering these new markets, our approach is a measured, long-term risk-adjusted strategy. First, we establish local offices, often several years ahead of making an initial investment in that market, in order to assess risk and learn local business and government customs. Once we are comfortable, we begin sourcing attractive investment opportunities, and once we own the assets, manage those investments on the ground. We're not simply flying to India or China for a few days and cutting large equity checks and then flying back to North America. India is a great example of where our global operating platform is advantageous. Many of our tenants there are large, multinational corporations that require premises to house support functions such as IT, telecommunications, and data centers. Those tenants know from their experiences with Brookfield in places like North America, Europe, and Australia that we are a first-rate landlord and operator. This affords them great assurance and confidence in doing business with us in an emerging market.



9. Brookfield continues to drive forward with a capital recycling strategy, wherein interests in assets in certain portfolios or markets are sold to raise capital that is then redeployed into new global real estate investments. Could you share some thoughts on how Brookfield approaches capital recycling?

Our approach is to stabilize assets through proactive leasing, asset management, and capital projects, including large-scale redevelopments in select instances, then selling a partial or full interest in that asset at premier valuations, and redeploying that capital into higher yielding strategies. Again, our unique global and multi-sector strategy affords us this flexibility that is generally not available to single-market or pure-play sector investors.

In 2016, we targeted raising approximately US\$2 billion of net equity from asset sales, and as of the end of August we were about 75 percent complete on that goal. Proceeds were redeployed in a number of ways: to fund capital calls associated with our commitments to the funds, to fund our active development pipeline, to reduce leverage, and to repurchase BPY units at times when they were trading significantly below their underlying net asset value.

10. Technology is being looked at by many as a significant source of both disruption and opportunity for the real estate industry in all asset classes. Could you briefly share any thoughts on how you are thinking about the impact of technology to your business?

We are leveraging and implementing various new technologies across all of our operating businesses. For instance, we are putting resources toward using digital technology to aid in brick and mortar sales in our class A mall portfolio, with the goal of having customers start a product search on Google, find that product at one of our malls, be digitally guided to an open parking space at the property, and then to the store to find the desired product. In hotels, we are continuously rolling out cashless payment technologies to increase on-site spending patterns. In office, we are focused on mobile and wireless technologies to support the trend toward less personal and more collaborative workspaces.

It all very much follows the Apple model: people want to utilize and embrace the latest available technologies, specifically those that support speed, comfort, and ease of access. We want not only to keep up in our industry, but to be a leader and innovator.





The Long Goodbye UK investment in Brexit's wake

William Matthews

Director Deloitte

hat a difference a day makes. As dawn broke on Friday 24 June, it became clear that, contrary to the expectations of many commentators, the UK had voted to leave the European Union (EU). Turnout was high and the margin was clear: the result was beyond a doubt.

The following days marked the start of frenzied media activity as events unfolded, and as the days turned into weeks, the UK underwent a political evolution that saw in a new Prime Minister, cabinet, and a commitment to push ahead with Brexit negotiations.



These events may be unprecedented in the UK's recent history, but will they really lead to the almost binary outcome for UK investment that some were predicting prior to the referendum?

Short-term volatility...

The extent of the impact on real estate investment quickly became a focus of discussion, both within the industry and also as part of wider economic

commentary. Initially this was largely a function of the significant fall in the value of the sterling, which swiftly created a compelling discount to UK property for overseas buyers. Press reports picked up on anecdotal evidence showing a clear rise in interest from overseas investors in the days following the vote.

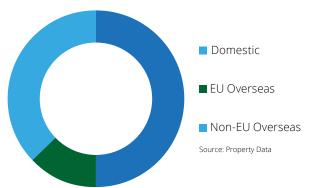
Overseas investors have played a very strong role in the UK's property market for at least the past 20 years, and in the last five, they have rarely accounted for much less than 50 percent of overall investment activity. For some, the sterling devaluation offers a way to reconsider a market that had become significantly more expensive in recent years.



What already does seem clear, is that the process of leaving the EU will take many years to be fully resolved.

TELEPHONE

Share of Investment in UK commercial property, 2015



Meanwhile, the initial post-referendum stock market volatility saw listed real estate companies sell off, as concerns over future occupational demand and consumer confidence gained greater significance. The sector largely failed to join the subsequent stabilization seen across other areas of the UK's main stock indices. Shortly after, a number of property funds closed to redemptions, as they struggled to meet the liquidity requirements of rising number of investors that were attempting to cash-in their holdings.

...long-term focus

For all of the undeniable short-term disruption caused by the Brexit vote, investors have been quick to turn their attention to the medium and long-term picture. Some aspects, such as the ultimate political outcome of the vote, will remain difficult to forecast, even as elements of the eventual settlement start to become clearer over the next few years. Equally, important questions such as the likelihood that UK-based financial firms will be able to retain their passporting rights (which allow them to operate in the EU from a UK base) is hard to gauge at this stage, and yet may have particular consequences for tenant demand in parts of London. What already does seem clear, is that the process of leaving the EU will take many years to be fully resolved. For most investors, "waiting until it is all over" is not a realistic option. In any case, to do so would risk missing out on some of the opportunities that will undoubtedly

continue to exist during this period.

Sterling to the rescue?

Firstly, there are a number of factors which could cushion the medium-term impact of the vote to leave. One is the weakness of the sterling, which has already sparked renewed interest among overseas buyers. However, more importantly than the individual deals seen so far, history shows that sterling weakness corresponds reasonably well with a sustained increase in the general level of overseas demand for UK property, ultimately supporting liquidity.

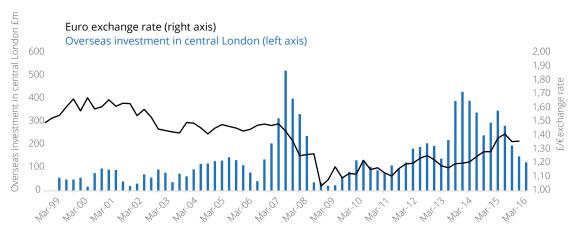
The impact of sterling weakness has not been the only reason that UK property has started to look like a better value: a number of the deals that have been struck since the vote have simply been priced more competitively, and IPD's recent data point to modest easing in capital values across most property sectors.

It could be tempting to see this as purely a result of the vote to leave, but while the referendum may have been the catalyst, a consensus around the softening of prices in 2016 had been forming for a year or more.

Crucially, loan-to-value (LTV) ratios both on built stock and developments are significantly lower today than in the years leading up to the 2008 downturn.

This means that even if capital value declines were to accelerate, investors would be much further from breaching loan agreements than in the last downturn. Completing the virtuous circle, on the whole, owners and lenders are much better insulated from the distress situations of that time, reducing the risk that large numbers of forced sellers quickly push down capital values in the first place.

Overseas investment in central London



Source: Bank of England/Property Data/Deloitte

Max LTV



Source: De Montfort University

Should I stay or should I go?

Valid concerns are also being raised in relation to the medium-term outlook for leasing activity and rental levels. Evidence from Deloitte's Q2 2016 UK CFO survey, conducted in the weeks following the referendum, showed that the UK's large corporates were reining in their appetite for expansionary strategies, and focusing instead on cost reduction. In particular, hiring intentions have continued to fall, suggesting that, in aggregate, firms may be under less pressure to lease office space.

Yet even if these intentions turn to actions, a meaningful impact on office rents is likely to take time to become visible. Firstly, the combination of the relatively benign economic slowdown predicted and generally long lease terms means that many firms will be under no immediate pressure to downsize or move. Secondly, and perhaps more importantly, the low levels of current office availability in many large UK cities could go a long way toward offsetting the impact on rental levels, even if demand

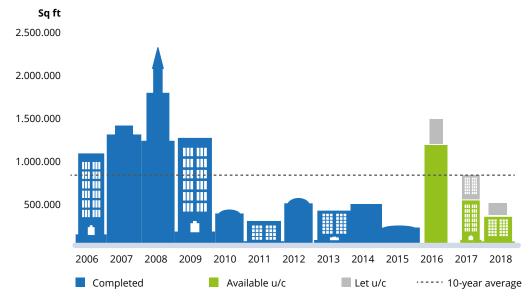
were to decline. In London, for example, vacancy rates are currently running at less than half the level that historically corresponds with rental falls.

Deloitte's Crane Surveys show that the UK's major regional cities have undoubtedly seen a recovery in office development over the past two years, but most are still simply making up for the dearth of delivery during the last recession.

In London, where the development pipeline is much greater, a large proportion of the space under construction today is already let, and developers may decide to postpone some speculative schemes that are not yet under construction. None of this can entirely guard against the possibility of more significant falls in rents, and it is certainly likely that the unseen incentives offered to prospective tenants start to rise. But it does suggest that the situation is likely to be more benign than during the global financial crisis.

Hiring intentions have continued to fall, suggesting that, in aggregate, firms may be under less pressure to lease office space.

Office development pipeline - Birmingham, Manchester & Leeds



Source: Deloitte Real Estate

Looking further ahead

For some investors, however, it will be long-term, not medium-term considerations that matter most. EU membership undoubtedly enhanced the attractiveness of the UK's property markets on the global investment stage, but it was clearly not the sole factor at play. A deep pool of investible assets, strong legal and regulatory frameworks, and high quality "soft factors", such as cultural and education institutions are characteristics that the UK shares with other leading European investment destinations.

Naturally, however, London stands out as one of the world's few truly global cities. Deloitte research stands testament to the pace of growth within its high skilled workforce, already larger than that of any other global city and part of the reason for the prevalence of global headquarters.

The coming years may see changes to the structure, type of employment, and companies headquartered in London, but it is difficult to see that its position as a key global city will be challenged.

EU membership undoubtedly enhanced the attractiveness of the UK's property markets on the global investment stage, but it was clearly not the sole factor at play.



The UK as a whole also continues to present interesting investment opportunities, especially beyond the traditional office, retail, and industrial property. In 2015, investment in UK alternative property, such as student housing, healthcare, and motor trade related assets reached almost £9 billion, nearly 20 times the amount invested in 2009

Student housing accounted for around half of the investment into the UK's alternative property types during 2015. However, as a large, growing, and aging country, there may eventually be even greater opportunities for investment within healthcare property.

Putting everything in perspective

The decision of the UK to leave the EU was a shock. The aftermath is in many ways much more mundane, and in the medium-term should not fundamentally alter the UK's position as a leading global investment market. Perhaps the broader perspective comes from thinking of property as a small part of the global investment market—one which has grown accustomed to chasing ever smaller yields. On that basis, whether London, the UK, or indeed other European cities and markets, property is likely to be an increasingly popular asset class.

The UK as a whole also continues to present interesting investment opportunities, especially beyond the traditional office, retail, and industrial property.



Is the real estate industry equipped to face the prevailing market and IT challenges?

Basil Sommerfeld Partner Deloitte Stephane Cravatte Director Deloitte Francesco Piantoni Director Deloitte

Setting the scene on RE markets

Investment volumes are at their highest levels since 2008, with investors continuing to strengthen their capital allocation into the real estate sector. This has been caused by the current low interest rates that are generating a phase of increased liquidity throughout the market and make the returns on real estate more attractive. In addition to this, the real estate market has become progressively more mainstream, being now considered as a "standard" asset class. In such a maturing market, investors are more experienced now than ten years ago, leading to rises in their result expectations, and their requirements for more sophisticated reporting. Moreover, since the global recession of 2008, major directives and rules are redesigning the regulatory framework of the real estate industry, with the introduction of FATCA in the US, and AIFMD, EMIR, PRIIPS, and BEPS in Europe.

All in all, this has led to an increase in pressure on the real estate players for more transparent, accurate data, including more comprehensive reporting and metrics. As a result, it has pushed the real estate players to review their organization and IT architecture models, while also urging software vendors to develop systems aligned with these requirements.

Why the real estate stakeholders have to change

Heavy workflow

Real estate is by nature a local business requiring specific local expertise, knowledge, and skills. As a consequence, all stakeholders are operating independently, in a non-integrated way, reducing the communication between them. This ultimately burdens the workflow processes, utilizing ample amounts of staff time to contact all the stakeholders in order to obtain all the required information.

This is somehow conflicting with the globalization trend initiated by the assets managers, who are seeking economies of scale in rationalizing the operating model (bigger mandate allocation and fewer asset servicers).

Paper-based processes

Real estate processes are heavily paper-based, with paper documents being the major source of financial data: property sale and purchase documents, lease agreements, loan contracts, rent invoices, etc. This implies challenging technical issues for data collection, data storage, data processing, and data sharing. It makes digitalization processes relatively heavier.

Due to the market experiencing significant growth, asset managers' workload has increased; they are now in need of ways to improve efficiency and limit expenses, resulting in outsourcing part of their activities.



Multiple Systems

Most stakeholders are still using differing systems, including MS Excel spreadsheets, or systems that are not "real estate oriented" but rather tailored toward "plain vanilla" investment schemes. As a result, a lot of data has to be collected from numerous varying sources across the entirety of the real estate value chain, requiring an inordinate amount of time, and leading to a greater risk of errors and inefficiency. This process becomes significantly costly, as high-quality staff are required to spend a copious amount of time on low added value activities.

Real estate industry facing the challenges

The real estate industry of today finds itself in a period of significant change; in one way by reshaping the value chain and putting significant pressure on the various players, while simultaneously offering potential new service opportunities. Data analytics, digitalization, risk and management exposures, IT platforms, and regulatory and complex investor reporting are just a few of the new challenges facing the real estate industry.

Asset managers horizon is ever changing

Today, asset managers' agendas are overburdened due to increased requirements resonating from the key drivers—investors and regulators:

Investors are searching for accurate comprehension and association of risks and returns. They require clear and frequent dissemination of quality information regarding their investments. Moreover, investors require the availability of real-time information on demand through various means such as periodical statements, web portals, and smartphone or tablet applications.

Regulators have established a wide range of risk measurements which have generated a list of management and reporting requirements that have an impact on the entire business, from the front office to the back office. The majority of the players do not consider regulation as only an obligation, they also see opportunities—for instance by increasing the number of mandates managed by a single AIFM. The global financial crisis, alongside the deterioration in real estate markets across

large parts of Europe in 2008/2009, led managers to focus their attention largely on the area of risk management, such as incorporating risk analytics and data management for enhancement and optimization of risk reporting.

Therefore, providing transparency is becoming the biggest challenge, which some software providers are ready to face.

Asset servicers get opportunities

Due to the market experiencing significant growth, asset managers' workload has increased; they are now in need of ways to improve efficiency and limit expenses, resulting in outsourcing part of their activities.

Asset servicers are reacting by remodeling their core operations comprising of value-added services such as: post trade compliance, regulatory reporting, and enhanced middle and back office operations (i.e., client portals, investors reporting, operational and client dashboards, self-service tools, and risk analytics).

As a result, one of the biggest challenges facing asset servicers is the integration of the ever-expanding volume of intricate data, to produce consistent and easily accessible information. In order to achieve this objective, asset servicing firms are pursuing initiatives to develop solutions that leverage on an integrated technology architecture to provide aggregated and uniform data to clients.

In addition, beyond the cost and the service quality criteria, systems are becoming a significant key criteria for asset managers to delegate part of their activities to assets servicers.

Property managers' role is beyond rent collection

Property managers of today have augmented responsibilities, far beyond that of rent collection and invoice paying. They must manage and motivate staff, arrange insurance, collect renovation bids, ensure compliance with the government regulations, hire, design marketing plans, provide tax information, produce income and expense reports, supervise property security; all the while maintaining strong tenant relationships and client satisfaction. Property managers must also be efficient in rigorously managing their costs, while simultaneously uncovering additional revenue sources.

Within the last 15 years, the amount of property management software has soared, making life more efficient and less

costly for tenants, managers, and owners. Most of these software providers offer web-based applications connecting all stakeholders through various services such as online leasing, tenant screening and applications, property maintenance, online rent payments, accounting and budgeting, facilities, contact center, performance and investment analytics, and many more. In addition, property managers are focusing their attention on mobility, utilizing basic tools such as smartphones, tablet solutions, and cloud-based platforms to allow access to information from anywhere.

Globalization as a key driver for growth

In a constantly growing market progressing toward globalization, we notice a trend in some real estate actors to reshape their organizations, adopting a global operating model. In order to support this model, they tend to move toward a unique IT platform solution deployed across countries. This platform would enable a more fluid process between all the systems utilized throughout the front office, middle office, and back office; it would also be adjustable for further requirements.

Software companies propose new IT solutions

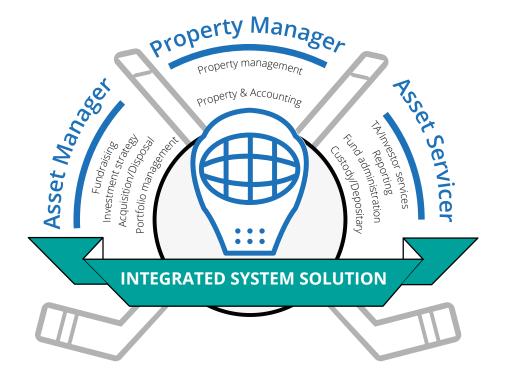
It is clear that software vendors have well anticipated the needs of their real estate clientele, enabling them to offer integrated solutions such as EAM, IWMS, and ERP systems. For example, real estate EAM systems are programs for real estate management, capable of improving and reorganizing processes throughout the

entirety of the real estate lifecycle. Such systems are capable of consolidating numerous otherwise disparate systems and data into a common and highly integrated operating environment. Most of these solutions are generally webbased solutions, which would make their implementation and management easier and cheaper, and could cover the entirety of the real estate life cycle (from front to back office).

Some solutions consist of central data collection and data warehouse to consolidate information from multiple stakeholders and diverse systems. The most advanced solutions will include workflow management tools for processing the various transactions, integrated with treasury management with automated and real-time payment processes, cash repatriation, and smart cash reporting.

They also propose true end-to-end automated solutions, including centralized databases allowing the automation of all investment calculations, investor specific reporting, and providing fund managers timely, complete information about investment performance and risks. As information is centralized, dashboard tools monitoring the compliance at each level of the real estate investment universe are offered more and more.

Across all solutions, digitalization of RE documents, digitalization of workflows, as well as mobile accessibility are increasingly considered.



In Conclusion

It is clear that the real estate players cannot ignore the challenges facing the industry: competition is constantly growing for new client business and the complex regulatory and tax landscape. For those wanting to gain ground in the industry, significant efforts and investments appear necessary, focusing on three main topics: operational efficiency, economies of scale, and transparency. In order to meet their goals, they will need to build a strong model converging toward a global integrated operating model, incorporating a sole core IT platform, while developing holistic regulatory and data solutions proficient in coping with the various regional regulations.

A need to alter norms

Aside from these challenges, an even bigger issue is expected in the real estate industry, concerning the willingness to change. The real estate industry has been categorized as "slow to adopt"; this branding is linked to how certain players in the industry prefer

to stay with their individual systems that they have now, which favor local business ruled by local laws, tax, and accounting GAAP, and do not adopt new integrated systems. It requires a huge effort from those concerned to alter their mentality, dispose of their old and individual systems suited only to local business, and adopt a new global integrated model in which they will have to rebuild their workflow. The challenge is prevalent, but its achievement has the potential to be slower than the rapid market growth.

Confidentiality risk

A further issue lies within the realm of confidentiality. Many firms are hesitant in regards to sharing their confidential data on such web-based solutions, as they fear leakage of such private information. As most of the providers' solutions revolve around SaaS or wed-based platforms this is daunting for such firms, since there is always a risk of data leakage, which could have numerous consequential effects.



The new Belgian recipe for Real Estate funds

Michael Van Gils

Partner Deloitte **David Roelens**

Partner Laga Sylvie Ryon

Senior tax consultant Deloitte



The Program Law (II) of 3 August 2016 introduces a new real estate investment fund in Belgium called B-REIF (in French "Fonds d'Investissement Immobilier Spécialisé" and in Dutch "Gespecialiseerd VastgoedBeleggingsFonds"). A Royal Decree further defining the legal characteristics of the B-REIF is expected soon. Once the Royal Decree is adopted, it will be possible to effectively set up a B-REIF.

Why a new regime?

With the introduction of the B-REIF, Belgium aims to position itself as an attractive location for real estate investors. Until now, the Belgian legal framework did not foresee the possibility to establish a non-quoted real estate fund. By doing so, Belgium follows the example of other countries with comparable regulated vehicles that can invest in real estate, such as France (OPCI), Luxembourg (RAIF), the Netherlands (VBI), and Ireland (RREF).

Primary targets are international investors and asset managers seeking a platform to pool their European and international investments in a flexible and efficient way. Also, investors owning properties located in Belgium are offered a tool to restructure their operations in a tax effective and financially efficient manner. Finally, the B-REIF clearly creates a momentum for corporates with an important Belgian real estate portfolio to rethink their real estate strategy.

Legal considerations

The definition of the exact regulatory framework of the B-REIF is still subject to the adoption of the Royal Decree. However, it is expected that the main characteristics would be as follows, resulting in a light registration procedure and a minimal number of restrictions.



The REIF is a closed-end real estate fund (i.e., investment company with fixed capital) only open to institutional and professional investors having the legal form of SA/NV, SCA/Comm. VA, and SCS/Comm.V. It cannot be directly held by private individuals but only by qualifying legal entities:

- Per se qualifying entities such as pension funds or insurance companies
- Companies meeting certain thresholds, being at least two of the following: (i) balance sheet of €20 million, (ii) net turnover of €40 million and (iii) net equity of €2 million
- Companies accepted as professional investors by the Belgian Financial Services and Markets Authority (FSMA

That securities issued by the B-REIF cannot be listed on a stock exchange. Further, the B-REIF is subject to AIFMD regulations and exceptions applying thereto. In practice, this means that the B-REIF will need to observe the rules applicable to AIFMs and their managers in the field of remuneration policy, liquidity risk, custodian, etc. However, B-REIFs may qualify for an exemption under the AIFMD regulation (such as the "de minimis" exemption applying to managers with assets under

management of less than €100 million or less than €500 million in case there is no leverage).

In general, the B-REIF is a very flexible vehicle and subject to only a few regulatory restrictions, making it quite competitive compared to other EU real estate fund vehicles:

- There is no minimum investors requirement (e.g., a sole investor may hold all the shares of the B-REIF)
- There are no risk spread criteria (e.g., the B-REIF may hold one single real estate asset)
- There is no oversight by the FSMA
- There is no required pre-accreditation process with the FSMA as only a request for inscription with the Ministry of Finance has to be submitted
- There are no leverage limitations
- The amount of investment categories is rather broad (real estate properties, real estate certificates, shares in other B-REIFs, shares in foreign real estate companies, etc.)
- Loan financing of its subsidiaries is allowed

The B-REIF normally has a duration of ten years. However, this period can be extended with subsequent periods of five years, subject to unanimous decision by the shareholders (with a de facto unlimited duration potential in case there is only one shareholder).

The minimum asset value of the properties in the B-REIF (after two accounting years) must amount to at least €10 million. Furthermore, the fund must annually distribute at least 80 percent of its profits (subject to off-balance sheet corrections). Purely development-related activities are prohibited within the B-REIF (waiting period of five years before selling after construction).

In addition, the B-REIF may not hold Belgian real estate indirectly. Indirect investments through Belgian subsidiaries are only allowed temporarily; the B-REIF that acquires Belgian real estate indirectly will benefit from a 24-month period to proceed with restructuring.

B-REIFs will be subject to IFRS accounting, which implies a fair value measurement for its investment properties (no "trapped cash" through amortizations).

In general, the B-REIF is a very flexible vehicle and subject to only a few regulatory restrictions.



Tax considerations Tax treatment at the B-REIF level

The B-REIF is subject to corporate income tax, but on a very limited basis. This means that, in practice, its income and capital gains (such as rental income or capital gains on real estate assets) are not subject to tax. Yet per its tax regime, it will generally be able to invoke the double tax treaties.

Upon assumption of the B-REIF status, or contribution of properties into an existing B-REIF (e.g., (partial) (de)merger or contribution in kind or of a "branch of activities" involving real estate), latent capital gains are subject to a so called "exit tax" of 16.995 percent, which is half of the Belgian statutory corporate tax rate. Yet, due to the technical calculation method (based on the gross asset value, but excluding implicit transfer taxes), the effective exit tax rate is normally somewhat lower. Carried forward tax attributes can be used to compensate the exit tax basis.

As a general note, we point out that the federal government is considering a corporate tax reform with a reduction of Belgian's corporate tax rate. This will likely also have an impact on the exit tax rate.

Furthermore, the REIF is subject to an annual subscription tax of 0.01 percent, but generally only to the extent *Belgian* investors hold its shares. The management of the B-REIF is exempt from VAT.

Tax treatment at the shareholder level

Participation exemption

Since the B-REIF, although subject to corporate income tax, benefits from a regime that deviates from the common rules, dividends distributed by the B-REIF to its Belgian corporate shareholder cannot benefit from the Belgian participation exemption regime (DBI/RDT) and will therefore be taxed at the general rate of 33.99 percent in the hands of Belgian shareholders. Yet, it will be able to use tax assets to shelter these dividends.

Similarly, as the B-REIF does not meet the "subject-to-tax" condition, capital gains realized upon the transfer of shares held in a B-REIF will be taxed at the general rate as well, in the hands of Belgian corporate shareholders.

Non-resident shareholders will have to look into their domestic participation exemption rules to see whether the B-REIF dividends will be taxable or tax exempt (fully or partially). For example, the Netherlands, the UK, Germany, and Switzerland could offer dividend exemption regarding B-REIF dividends, provided certain conditions are fulfilled.

Withholding tax
 As the EU Parent-Subsidiary Directive does not apply to B-REIFs from a Belgian perspective, dividends distributed by B-REIFs are normally subject to withholding tax at the (current) rate of 27 percent (although a parent-sub exemption applies in purely domestic situations).

The B-REIF should nevertheless normally be entitled to tax treaty benefits based on Article 4 of the OECD Model Convention. Dividends distributed to foreign investors could therefore invoke tax treaties withholding tax reductions or exemptions.

In addition, Belgian domestic law foresees a withholding tax exemption provided that distributed dividends stem from income other than Belgian dividends or Belgian real estate income (e.g., dividends from foreign subsidiaries or capital gains in relation thereto). This means that the use of the B-REIF to pool non-Belgian real estate investments is not burdened with any withholding tax cost upon profit repatriation.

There is also a specific domestic withholding tax exemption on dividends distributed to foreign pension funds.

B-REIFs will be subject to IFRS accounting, which implies a fair value measurement for its investment properties (no "trapped cash" through amortizations).

For whom will this vehicle be relevant? Asset Management Industry

It is clear that the B-REIF serves as an ideal platform to structure pan-European real estate investments for asset managers operating for international investors. Indeed, the fund benefits from a very light regulatory framework and submission process combined with an efficient tax regime for cross-border investments (no tax leakages on repatriation of non-resident income).

International investors owning Belgian real estate

For international real estate owners, the attractiveness of the B-REIF will largely depend on whether or not they are able to convert their existing real estate portfolio into an efficient holding structure (taking into account any withholding tax and local tax treatment on B-REIF dividends). In addition, investors may see an opportunity in "re-leveraging" existing real estate portfolios with currently low debt capacity due to low book values under Belgian GAAP, considering that the REIF will book its investments at a fair value under IFRS.

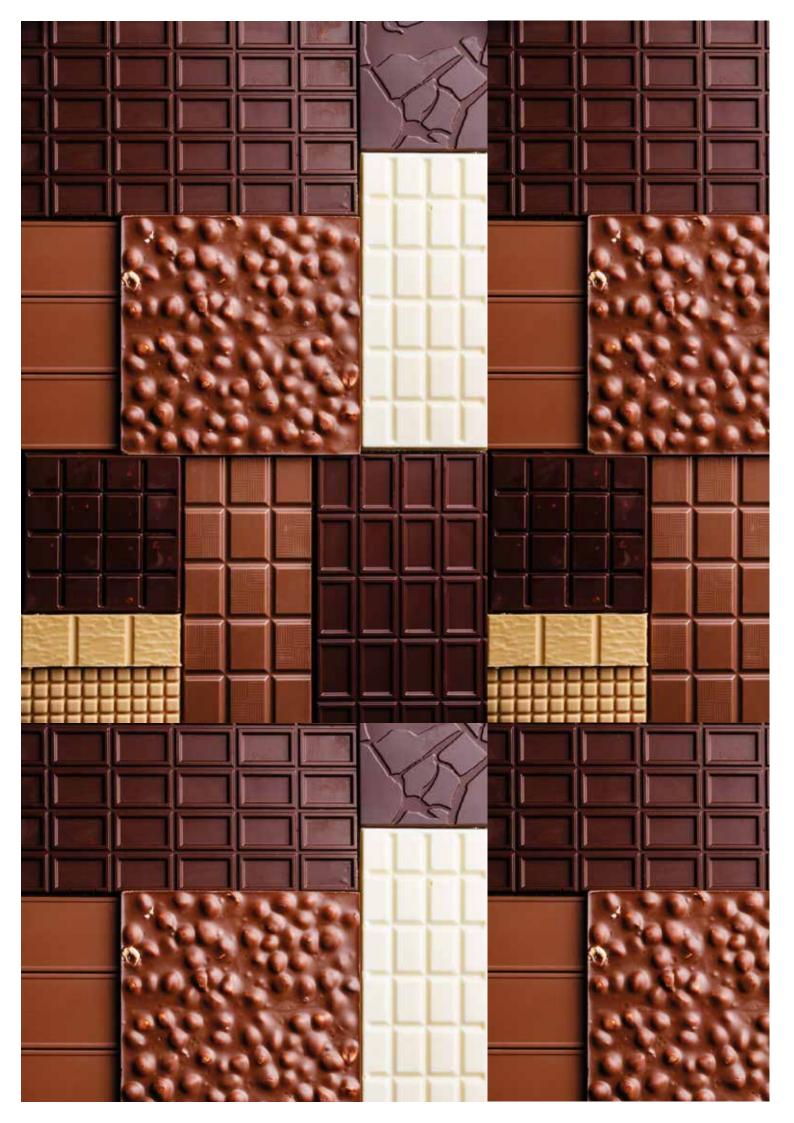
Belgian real estate investors and corporate real estate owners

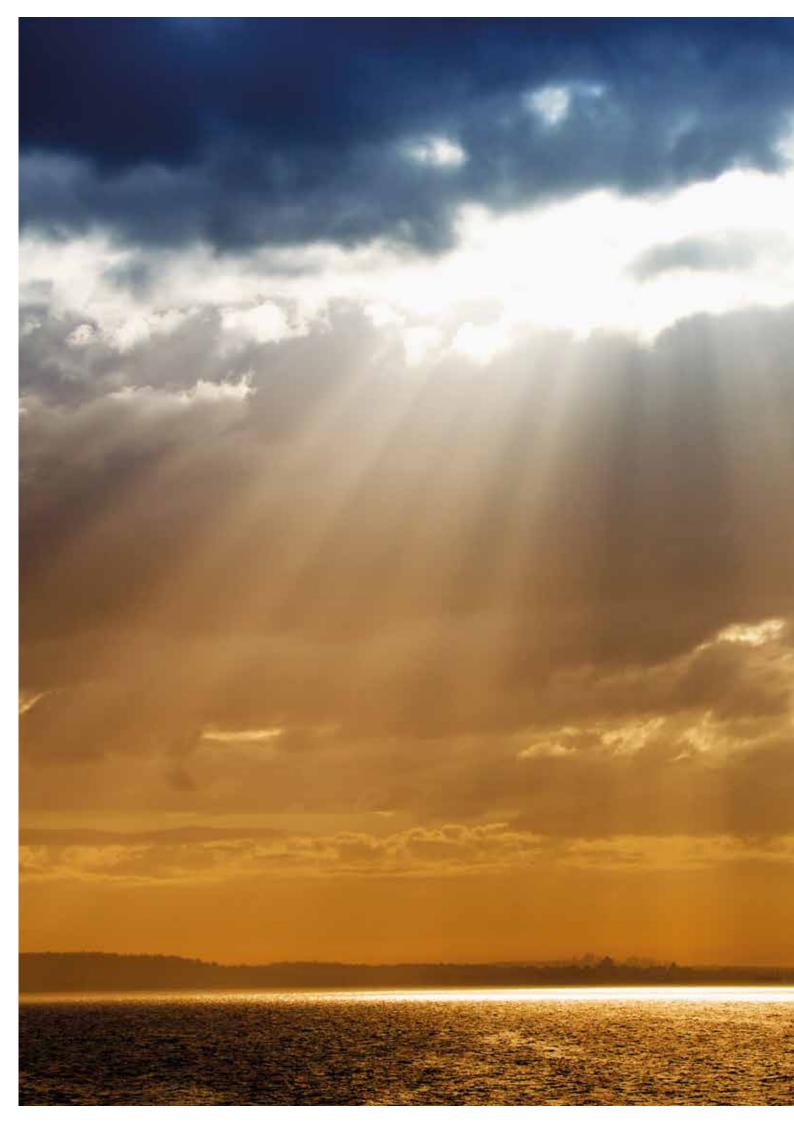
Due to the fact that the B-REIF is subject to a distribution obligation (of 80 percent), that its dividends do not qualify for Belgian participation exemption, and that it cannot be directly owned by private individuals, the B-REIF will, at first sight, only be an attractive investment structure for Belgian resident investors in a specific number of cases.

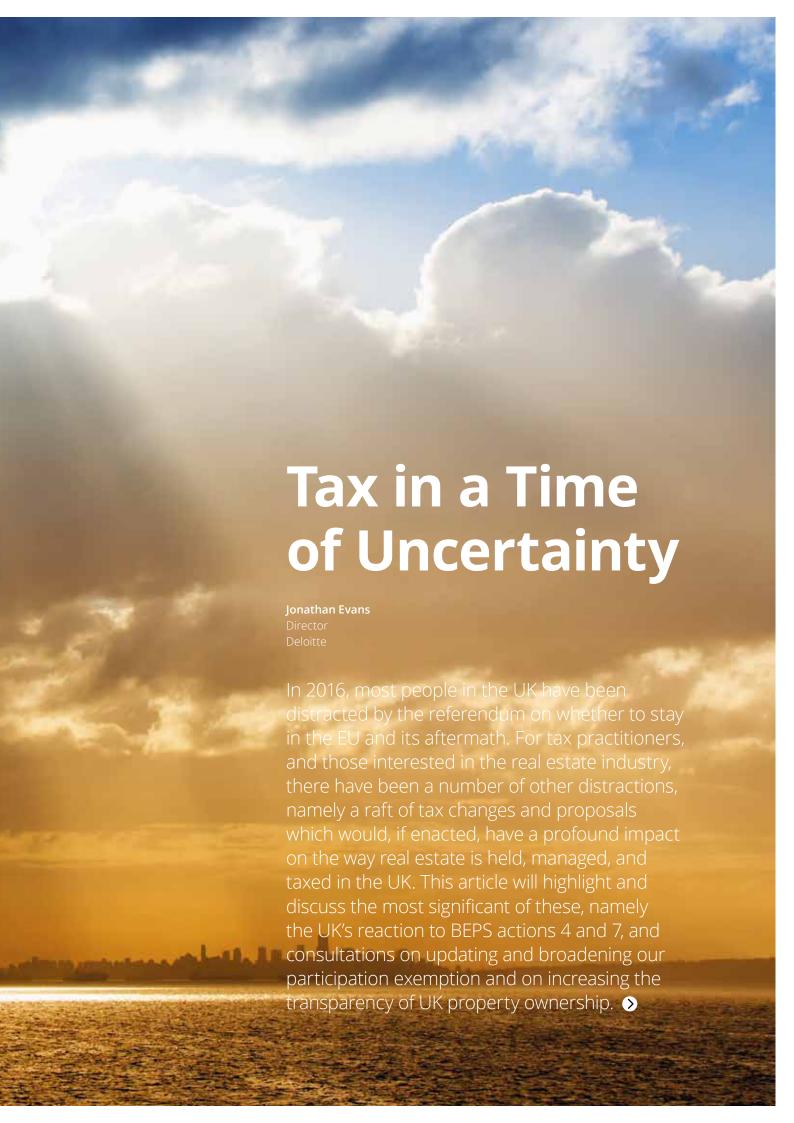
Examples include Belgian pension funds, corporates with substantial unrecognized tax assets, investors that are internationally organized in a way that enables an efficient upstream of dividends from the B-REIF, etc.

This being said, the B-REIF offers momentum for property-rich corporate players to rethink their real estate strategy. It can be a tool to de-leverage (by selling a part of the shares of the B-REIF); it can also be a tool to re-leverage (i.e., attract more leverage into the corporate structure). Furthermore, in the context of potential new interest deduction limitations under BEPS/EU ATAD (Anti-Avoidance Tax Directive), the attractiveness of the B-REIF may increase, knowing that pure rental payments to the fund should normally not be subject to these limitations.

It is clear that the B-REIF serves as an ideal platform to structure pan-European real estate investments for asset managers operating for international investors.







or many years the tax climate for investment, particularly from overseas, into UK real estate has been relatively benign. Such investors paid a rate of tax on rental income lower than corporate tax rates, after being able to deduct arm's length finance costs and some items of depreciation. Profit on the sale of the investments was exempt from UK tax. Acquisition taxes were modest by international standards and there were no annual wealth taxes levied on property other than very low rates of local tax. Over the last five years this climate has changed completely, and is much more complex and unsettled, particularly for residential property. The table opposite highlights the main changes for residential real estate.

The UK government has been a leading player in progressing the BEPS agenda, and is firmly committed to implement the agenda in full.

Residential Property Tax Changes

- 01. Transfer taxes have increased from a top rate of 5 percent in 2010 to 15 percent now.
- 02. From 1 April 2016, an additional transfer tax of 3 percent applies to the purchase of second homes and many buy-to-let properties.
- 03. From 2013, residential properties held through a corporate wrapper (other than for business purposes) are subject to an annual charge ranging from £3,500 for properties worth more than £500,000 to £218,200 for those worth more than £20 million.
- 04. Such companies, whether UK resident or not, are now subject to UK capital gains tax at a rate of 28 percent on sales of the property.
- 05. From 2015, non-residents are generally subject to UK capital gains tax on sales of residential property that are not their main residence. This does not apply to diversely held vehicles such as listed companies and many funds.
- 06. Individual landlords will have their tax relief restricted to 20 percent of interest costs associated with their rental business.
- 07. From April 2017, non-domiciled individuals will no longer be able to shelter their UK property assets from UK estate duty at rates of up to 40 percent by holding such property through a non-UK company.

These changes, although motivated by a tax avoidance and political agenda, have had a direct impact on institutional and fund investors and have also induced changes to the way commercial property is taxed. This year, for example, the rates of transfer tax on commercial property acquisitions and leases have finally been increased after years of increases only to the rates for residential property. When budgets are under pressure, these changes show that property taxes are a good way to raise revenue in an age of mobile work and capital.

In addition, of course, the UK government has been a leading player in progressing the BEPS agenda, and is firmly committed to implement the agenda in full. It has already drafted provisions to enact the anti-hybrid work as a result of Action 2; these rules will take effect from 1 April 2017.



Anti-Hybrid Rules

- 01. Rules are effective for payments (and quasi-payments) on or after 1 January 2017.
- 02. Their objective is to counteract mismatches generated by hybrid instruments, entities, and transfers and certain permanent establishments.
- 03. Mismatches include timing mismatches.

- 04. The counteraction varies but typically involves a denial of UK deductions, or an imputation of additional UK income.
- 05. Mismatches can be imported into the UK through offshore investment structures that have hybrid instruments or entities within them that are not counteracted in the foreign jurisdiction.

It also appears that the Revenue found the rules unsatisfactory, because in March they announced that all offshore developers and traders in UK land would be subject to UK corporation tax without the need for a UK PE.

Interest Restrictions

The Business Tax Roadmap, published on 16 March 2016, set out the government's proposals for introducing a restriction on the tax deductibility of corporate interest expense. The restriction will apply from **1 April 2017**.

The proposals are subject to a consultation process that ended on 4 August 2016¹. The key elements are as follows (broadly consistent with recommendations of the OECD's BEPS Action 4):



Limiting corporation tax deductions for net tax-interest expense to 30 percent of UK tax-EBITDA (with a de minimis threshold of £2 million).



Calculated as the ratio of net qualifying group-interest expense to group-EBITDA. Insofar as this ratio is greater than 30 percent, this greater ratio would, optionally, override the 30 percent fixed ratio rule.



Restriction of the overall UK interest deductions to the group's net interest expense—so it would restrict a group below the 30 percent fixed ratio if appropriate.



Limited rules intended to prevent the restriction from impeding the provision of private finance for public infrastructure projects in the UK and other specific tax regimes.



Rules addressing volatility in earnings and interest (e.g., carry forward of interest restrictions and spare capacity).



The real estate industry has taken a keen interest in these proposals, because as a capital intensive industry with higher levels of gearing, the concern is that if these rules are not drafted properly they will unnecessarily increase tax costs and affect the contribution made to the economy as a whole. The main issues identified for real estate are as follows:

- The proposed rules will not ensure that genuine third party interest costs for a group are deductible In particular, the group ratio is based on accounting concepts of profit, and therefore includes items such as unrealized gains and losses. Those items can produce a much reduced ratio when compared to interest costs for the group as a whole. In addition, for widely diversified groups such as funds that will invest in a number of asset classes, the ratio will even out debt levels on different asset classes, thereby reducing the availability of deductions for assets such as real estate, where the levels of gearing are higher for commercial reasons.
- There is not yet clarity as to whether the rules will apply to non-UK investors in real estate and if so when such investors are not subject to UK corporation tax but only UK income tax. This measure is phrased as a corporation tax measure, but the government has raised the question of whether the rules should be extended to non-resident landlords. Given that some 25 percent of all investors into UK real estate fall into this category, this is a key issue. The hope is that the government will at least delay the application of these rules to such investors.

- Related party interest is excluded from the group ratio, which will mean many funds and joint ventures where the parties borrow and lend down into the structure are restricted to a deduction capped at 30 percent of UK taxable profits.
- For UK REITs, the main issue is to what extent the rules will affect their ability to comply with their mandatory distribution requirement. It is hoped that they will be given some flexibility to manage the impact of these proposals.
- For fund groups, the definition of what constitutes a group is a key issue with the current proposals requiring a corporate parent, meaning that funds constituted as partnerships or other non-corporates will not constitute a single group for these purposes.
- The industry is actively discussing these issues with the government. They are also being urged to introduce some grandfathering for existing debt, and to take more time to introduce the proposals that will constitute a major change to the UK corporation tax system.

Avoiding a UK PE

In response to BEPS Action 7, the UK government introduced the Diverted Profits Tax last year at a higher rate of 25 percent. While this was primarily aimed at digital, IT, and internet-based businesses, the government confirmed at the last minute that it would also apply to real estate structures—in particular, development structures where the property owner and developer were based offshore and did not have a taxable presence in the UK for corporation tax purposes. The new rules

have created a lot of uncertainty for these structures, which has largely affected residential developments.

It also appears that the Revenue found the rules unsatisfactory, because in March they announced that all offshore developers and traders in UK land would be subject to UK corporation tax without the need for a UK PE. Although there was a brief consultation on some aspects of the rules², the legislation was published on 5 July as the rules came into effect. In some major respects they go further than seems necessary and in particular call into question whether the exemption from UK capital gains tax for offshore investors still applied where one of the main purposes of the investment is to realize a profit on sale rather than being the sole or main object. Discussions with the Revenue and a ministerial statement have indicated that the rules should not affect investment in UK property. This is welcome, but it appears we will have to wait and rely on Revenue guidance when applying these new rules.

It is clear that sales of interests in offshore property companies where the property has been developed are now much more likely to be taxable in the UK. Under the old rules, such sales could be taxable but were often protected by a tax treaty; the government has now agreed on amendments with the Channel Islands and the Isle of Man to ensure that treaty protection for holding companies based in those jurisdictions is no longer is available. We understand that other treaties are being renegotiated.

Transparency of Ownership

The new charges to sales of offshore companies holding UK property will be difficult for the UK authorities to monitor, but a non-tax proposal arising out of the work on anti-corruption may prove to be a key tool. In March, a paper on beneficial ownership transparency was published³, which proposed that a register of beneficial ownership should be established for all UK real estate.

This proposal follows from the introduction of a register of people with significant control for all UK registered companies and LLPs earlier this year, as well as the EU 4th Money Laundering Directive. As with those proposals, the register would need to record all individuals or entities with significant control over the registered owner of the land. "Significant" here means 25 percent of the shares, voting rights, or the right to appoint a majority of the board of directors. For real estate, the new owner would not be able to be registered as the owner of the land without providing the required beneficial ownership information. If, as suggested, the register also applies to the 100,000 or so foreign companies already registered as owning UK land, then it could prevent those companies from dealing with their UK land holdings. This is potentially a radical change to the land ownership rules in the UK, but would also provide a useful back up for the new tax changes discussed above.

A Reformed Participation Exemption

The final proposal on the reform of the UK participation exemption (called the Substantial Shareholder Exemption) was issued in May⁴. This is currently focused narrowly on groups that carry on active trading activities, and is not available for funds and passive investments. It is therefore not available to UK REITs, which can suffer corporation tax on the sale of investment subsidiaries. The government recognizes, however, that this encourages funds and others to establish offshore holding vehicles.

The UK has a number of features that are attractive to headquarters or holding companies activities, such as a comprehensive dividend exemption, an extensive tax treaty network, the absence of withholding tax on dividends, a broadly territorial regime for taxing UK company profits, and low (and falling) tax rates. However, the consultation considers whether the current exemption should be widened to increase the UK's attractiveness as a holding company location. The consultation also raises the possibility that the exemption could be available to investment groups, although whether it would be available for the sale of shares in a purely passive property holding company is doubtful. For funds, the Government wants to consider whether there is a case for reform of the exemption targeted toward the funds sector, which could benefit funds with significant exempt investors, such as sovereign wealth and pension funds. UK REITs could also benefit if the exemption is made available to them.

Conclusion

four of the current changes that could affect the UK real estate and fund sectors. All of these pre-date the referendum vote to leave the EU, however, and Brexit now adds an additional layer of uncertainty appears that there may be a change of direction on issues such as the a rethink or delay on proposals that we will not know more before the end of the year when the new chancellor gives his Autumn What does seem certain is that the tax landscape for real estate investment and funds in the UK will continue to change. One beneficiary of these changes may be the UK flexible and substantially tax exempt vehicle, may prove to be a investment into UK real estate.

³ Beneficial Ownership Transparency, Department for Business Innovation and Skills, March 2016. 4 Reform of the Substantial Shareholdings Exemption: Consultation, HM Treasury, May 2016.

Smart buildings

How IoT technology aims to add value for commercial real estate companies

Enhancing performance and reimagining tenant experience

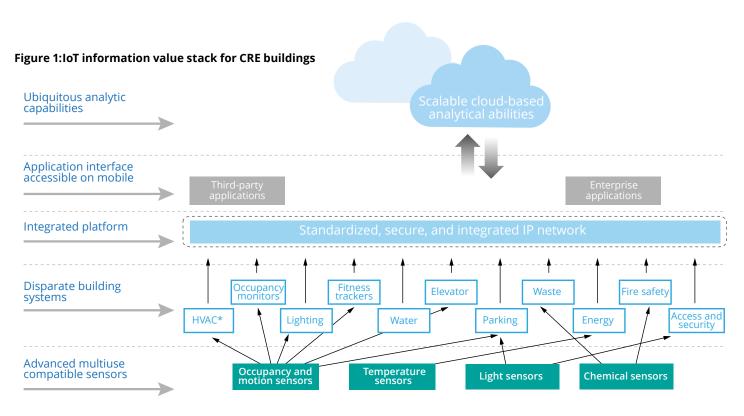
Technology is changing the most fundamental truth about commercial real estate (CRE)—that value is based solely on location, location, location. While it still matters that a space be close to customers, employees, or suppliers, information-based applications have the potential to add new ways for the CRE sector to create value for customers, differentiate from competitors, and even find new sources of revenue. Specifically, the Internet of Things (IoT) is already having a significant impact on the CRE industry, helping companies move beyond a focus on cost reduction. IoT applications aim to grow margins and enable features such as dramatically more efficient building operations, enhanced tenant relationships, and new revenue generation opportunities.

While consumer IoT devices have drawn the most press attention, it is enterpriselevel adoption of technology that will likely have the bigger impact on the industry. Indeed, the CRE industry is perhaps uniquely positioned to implement the technology, using IoT-enabled building management systems (BMS) to make building performance more efficient and also using sensor-generated data to enhance user experience. Gartner's recent smart-city forecasts highlight the potential: "Smart commercial buildings will be the highest user of Internet of Things (IoT) until 2017, after which smart homes will take the lead with just over one billion connected things in 2018." This not only allows CRE to expose wide segments of the population to IoT technology—it provides owners an opportunity to have direct conversations and relationships with building users rather than only with their tenants. For instance, sensors in shopping malls can help owners connect directly and offer services to the end customers. This would lead to building relations with the end customers and also strengthen tenant engagement.

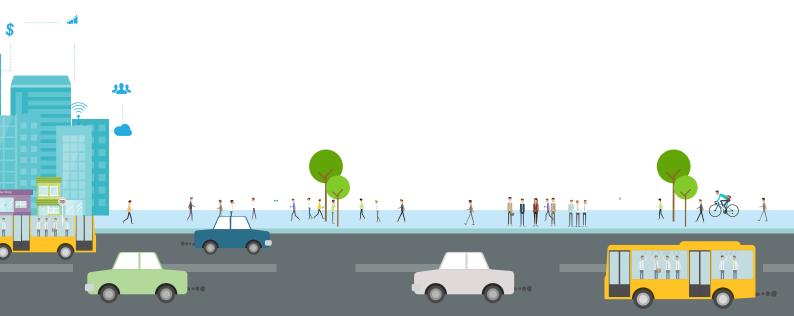
What is the Internet of Things?

The IoT is a suite of technologies and applications that equip devices and locations to generate all kinds of information—and to connect those devices and locations for instant data analysis and, ideally, "smart" action. Conceptually, the IoT implies physical objects being able to utilize the internet backbone to communicate data about their condition, position, or other attributes.² CRE companies may find it most relevant to understand how various types of sensors can track features such as motion, air pressure, light, temperature, and water flow and then, with the internet backbone, enable the BMS to autonomously sense, communicate, analyze, and act or react to people or other machines in a non-intrusive manner (see figure 1).

- Gartner, Inc Press Release, "Gartner Says Smart Cities Will Use 1.6 Billion Connected Things In 2016," December 7, 2015, http://www.gartner. com/newsroom/id/3175418.
- Jim Eckenrode, "The derivative effect: How financial services can make IoT technology pay off," Deloitte University Press, October 13, 2015.



Source: Jim Young, "BIoT – BUILDING Internet of Things"," Realcomm, January 23, 2014, and Deloitte Center for Financial Services analysis Note: HVAC refers to heating, ventilation, and air conditioning.



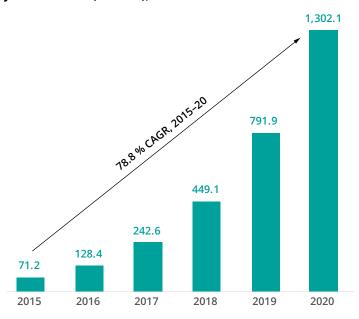
A recent Deloitte Center for Financial Services study suggests that IoT technology has huge potential in CRE.

With the cost of sensors, data storage, and connectivity all falling,³ we expect more CRE firms to move forward in adopting IoT applications. A recent Deloitte Center for Financial Services study suggests that IoT technology has huge potential in CRE: In fact, sensor deployment in the sector is likely to grow at a compound annual growth rate of 78.8 percent between 2015 and 2020 to nearly 1.3 billion (see figure 2).

Using such sensors, the IoT promises to turn any object into a source of information about that object and its environment. This creates both a new way to differentiate

products and services and a new source of value that can be managed in its own right. Realizing the IoT's full potential motivates a framework that captures the series and sequence of activities by which organizations create value from information: the Information Value Loop (see figure 3). In the CRE context, the value created from the information generated by IoT-enabled buildings has the potential to widen the lens on value creation beyond location through a level of efficiency and effectiveness that could distinguish buildings within a marketplace.

Figure 2. Potential growth in worldwide IoT sensor deployments for CRE (2015–20), millions

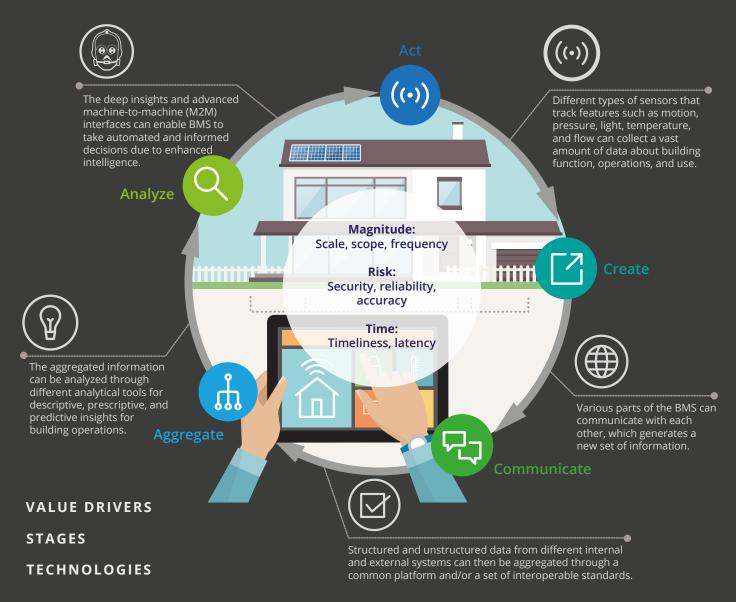


Source: Chart created and analysis performed by the Deloitte Center for Financial Services based on Gartner research: "Forecast: Internet of Things, endpoints and associated services, Worldwide, 2015," Gartner Inc., October 29, 2015.

The Information Value Loop

For information to complete the loop and create value, it passes through the loop's stages, each enabled by specific technologies. An act is monitored by a sensor that creates information, that information passes through a network so that it can be communicated, and standards—be they technical, legal, regulatory, or social—which allow information to be aggregated across time and space. Augmented intelligence is a generic term meant to capture all manner of analytical support, collectively used to analyze information. The loop is completed via augmented behavior technologies that either enable automated action or shape human decisions in a manner leading to improved action.

Figure 3: CRE Information Value Loop



Source: Deloitte Center for Financial Services

In the CRE context, different types of sensors that track features such as motion, pressure, light, temperature, and flow create vast amounts of data around building operations and the environment. This information passes through a network such that various parts of the BMS communicate with each other and the vast set of structured and unstructured data can be aggregated on a real-time basis at a building, portfolio, and even metropolitan

level. The aggregated information can be analyzed using different tools to develop descriptive, prescriptive, and predictive insights for building operation teams (both landlords and tenants). The loop is completed when the BMS demonstrates augmented behavior in the form of increased automated actions related to monitoring and tracking, among other things, or influencing human decisions for both the landlord and tenant.

The amount of value created by information passing through the loop is a function of the value drivers identified in the middle. Falling into three generic categories—magnitude, risk, and time—the specific drivers listed are not exhaustive. Different applications will benefit from an emphasis on different drivers.



The uses of IoT: Far beyond motionsensor lighting

For CRE executives who have long looked to automate building maintenance activities, all the loT hype may sound inflated: Is this just a new buzzword for old practices? But it may not be. Yes, CRE companies have been installing sensors and automating activities for some time, primarily aiming to realize the benefits of low-hanging fruit such as cost savings and operational efficiency through improved energy management and reduced personnel costs. Figure 4 depicts approaches to developing a connected BMS, each progressively more connected and integrated than its predecessor.

The way in which IoT-generated information creates value represents a fundamental shift for CRE companies. In creating value through information generated by connected systems, IoT applications can not only improve efficiency but provide new opportunities for differentiation and even new revenue. CRE companies can do this by implementing full sustainability programs with supportive analytics, a deeper focus on tenant and end-client relationships and experiences (footpath technologies that assess shoppers' movement patterns in a mall through signals from their cellphones), or even enhanced revenue-generating services to tenants (infrastructure, analytics, and so forth).

With so many options, determining which is right for a particular CRE company requires understanding exactly how IoT technology can create value for them, and their tenants and the end users.

The way in which IoTgenerated information creates value represents a fundamental shift for CRE companies.

Figure 4: Difference between building automation and IoT applications

Increased cost savings due to operational effiency; minimal revenue benefits

- Individual BMS with limited interconnectivity
- Reduced manual intervention, though companies need to manage disparate systems
- · Slower decision-making with minimal to no analytics
- · Requires dedicated infrastructure per BMS solution
- · Individual sustainability initiatives
- · Negligible focus on tenant and endclient experience

Higher order cost and revenue benefits due to full integration and deep customer

- Greater interconnectivity due to more integration at the front-end interface through specialist software solutions
- · Relatively lower manual intervention in managing operations
- · Faster decision-making due to an integrated view
- Enhanced sustainability initiatives driven by minimal analytics
- Enhanced integration into Enterprise Resource Planning (ERP), asset management and basic business intelligence solutions
- Increased focus on tenant and end-client experience through individual initiatives (open WiFi access, rewards programs etc.)
- · Minimal revenue generating services to tenants beyond rental income.

PARTIALLY INTEGRATED BMS

- More open communication at device level, integrated storage and analysis of diverse information on common platforms, including cloud
- · Minimal-to-no manual involvement
- · Intelligent decision making as IP-enabled devices result in automated point decisions and enhance strategic insights
- Leveraging one infrastructure to operate all BMS solutions
- Full integration in to ERP, asset management and predictive analytical solutions
- · Full sustainability program with supportive analytics
- Deeper focus on tenant and end-client experience (foothpath technologies)
- Enhanced revenue generating services to tenants (infrastructure, analytics, directmarketing, etc.)

FULLY INTEGRATED, IOT-ENABLED BMS



Where the value is: Leveraging IoT data

Given the current focus on costs and margins, CRE companies may be predisposed to seek to improve margins first through tried-and-true methods of cost savings and operational efficiency, rather than connectivity. But IoT applications offer more possibilities to build upon those efficiencies, enabling CRE companies to use data generated through connected systems to differentiate their services and identify new revenue opportunities.

Creating value through efficiency

With BMS already firmly established in the CRE sector, it is perhaps no surprise that many of the initial uses of IoT technology help CRE companies by increasing efficiency through enhanced building performance and better portfolio and liquidity management.

Enhanced building performance

IoT-enabled BMS can be used to reduce energy use, repair and maintenance, and administrative costs. For instance, property owners can use the data collected by motion and occupancy sensors at a building level to regulate air conditioning and lighting in real time, thereby reducing energy costs and optimizing the internal environment for its intended purpose. CRE companies can also offer clear value to tenants, since the system could lead to lower energy bills. According to Bettina Tratz-Ryan, research vice president at Gartner Inc., "Especially in large sites, such as industrial zones, office parks, shopping malls, airports, or seaports, IoT can help reduce the cost of energy, spatial management, and building maintenance by up to 30 percent."4

The continuous monitoring and predictive capability of IoT-enabled buildings can also preempt a repair or maintenance issue by enabling a building manager to take appropriate corrective action before tenants even notice a problem. According to a Johnson Controls survey of the company's Building Efficiency Panel, 70 percent of respondents believe that the ability to predict and diagnose problems and provide or propose solutions will be a "game changer" technology feature.⁵

IoT-enabled buildings can alleviate security concerns for both owners and tenants. Real-time monitoring can bolster internal security, and specialized weather sensors provide advance warnings of adverse weather events. As the frequency and severity of hurricanes, floods, and tornadoes increases under a changing climate, so too does the value of disaster preparedness and resilience.

Better portfolio risk management and liquidity

Enhanced tracking and monitoring at a building and portfolio level, along with the use of portfolio analytics, can result in lower asset risk, more granular valuations, and enhanced portfolio management capabilities. For example, tracking the flow of people can enable CRE owners to analyze occupant behavior and space usage patterns, while acknowledging privacy limitations. This information may help them identify excess capacity and develop action plans for peak hours, ultimately resulting in more efficient portfolio management.7 Separately, the same technology can also boost customers' ability to find and choose CRE properties. Several tech startups

are automating brokerage and leasing tasks and activities, openly sharing CRE pricing and valuation information, lowering barriers between potential tenants and CRE owners.8 Now, brokers can add information generated and analyzed through IoT sensors, opening new possibilities. Potential buyers could see not only static data about price and valuation but also real-time area data about traffic, crime, or other real-world factors that affect property values. For real estate investors, this development would improve their ability to understand and profile risks on an individual asset basis, opening the opportunity to sell or swap assets to rebalance portfolios. Conversely, it may also empower tenants to have more informed negotiations at rent review.

Creating value through differentiation

With the amount of connectivity and data generated by IoT-enabled buildings, CRE owners have an opportunity to differentiate themselves by using the information to identify unmet consumer demands, provide more sophisticated services to their tenants, transform tenant and user experience, and contribute to the broader ecosystem. By offering services their competitors currently lack, CRE companies using IoT in this way could charge premium prices and improve margins. In fact, it is not too long before IoT features become a standard expectation of tenants and a building lacking it may trade at a discount. Some of these opportunities include:

- Focus on employee and occupant health and productivity
- Service innovation to tenants
- Benefits to the broader ecosystem

- 4. Gartner, Inc Press Release, "Gartner Says Smart Cities Will Use 1.6 Billion Connected Things in 2016," December 7, 2015, http://www.gartner.com/newsroom/id/3175418.
- 5. "Where Can Smart Equipment Technology Reduce the Headaches?," The Building Efficiency Panel, Johnson Controls.
- 6. "How Internet of Things will help in weather forecasting," IOTWorm.com, February 6, 2015, http://iotworm.com/internet-of-things-technology-weather-forecasting/.
- 7. Joe Costello, "Unlocking the IoT in Commercial Buildings With Smart Sensor Technology," MagazineXperts LLC. With content repurposed from Construction Executive's Tech Trends eNewsletter, Sept. 1, 2015. Copyright 2015.
- 8. Surabhi Sheth, "Commercial real estate redefined How the nexus of technology advancements and consumer behavior will disrupt the industry," Deloitte, October 2015.

Focus on employee and occupant health and productivity

The potential impact of IoT applications is hardly limited to machines—it can track and help to improve employee and occupant health and productivity as well. In addition to enabling predictive maintenance, wearables such as smart glasses can combine IoT technology with augmented reality to provide prompt information and guidance to workers in the field, particularly during the construction stage.⁹ Furthermore, as the technology advances, sensors will likely be able to help CRE companies capture data on occupant health—assuming the occupants are amenable.

Combining BMS-captured environmental data (temperature and air quality) with movement data from motion sensors and other sources could allow CRE companies to understand the optimal ventilation and temperature levels for a specific day. The buildings' HVAC and lighting systems can make necessary adjustments in ventilation and space conditioning and provide a healthier environment for occupants.10 Additionally, data about the movement of individuals through open spaces can help tenants boost the productivity of workers by better designing tasks and breaks to facilitate collaboration and even socializing between employees. Carnegie Mellon University studies suggest that natural ventilation or mixed-mode conditioning can help reduce health costs by 0.8-1.3 percent and improve productivity by 3-18 percent, with an average ROI of at least 120 percent.¹¹ In other instances, retail tenants can potentially use peak hour footfall data to make smarter decisions on employee work hours in order to boost productivity.12



Service innovation to tenants

Fierce competition and changing consumption and work patterns are forcing companies in many sectors to reevaluate their CRE space usage as they look for innovative ways to cut costs and derive value. Many companies now continuously resize their CRE requirements to adapt to lower demand for physical space. The retail sector is a classic example of this trend, as online sales growth is eroding demand for physical stores: Analysts expect 50 percent of American malls to close by 2030.¹³

The strategic importance of CRE space in a company's business plan and the resulting shrink in demand are pushing CRE owners to think harder about predicting demand and using new ways to attract and retain tenants.

CRE owners can use IoT data to create differentiation immediately from the development stage. Developers can adapt design and construction of CRE buildings to the changing consumption patterns such as combined "live/work/play" by using tenants' and end-users' behavioral data.¹⁴

- Further, information from IoT-enabled buildings will potentially enable existing and potential tenants to make smarter site location decisions and differentiate themselves. For example, AirSage, a location-based service provider, collects real-time location data for billions of mobile devices each day.¹⁵ The company aggregates and analyzes anonymous wireless signaling data to provide insights on the movement and flow of traffic and consumer behavior.¹⁶ This information, combined with socio-demographic information on population and job growth, crime, pollution, noise, and climate patterns, should result in better-informed decision making.
- To help illustrate the wide variety of possible IoT uses in differentiating CRE companies, Table 1 shows a number of examples broken down by property type.

IoT-enabled buildings can alleviate security concerns for both owners and tenants. Real-time monitoring can bolster internal security, and specialized weather sensors provide advance warnings of adverse weather events.

- 9. Dan Ledger, "Inside Wearables Part 2," Endeavour Partners, July 2014.
- 10. Michael Marcotte, "The Smart Building: How IoT Will Reshape Real Estate Management," Digitalist Magazine, Feb 4, 2015.
- 11. "Health, Wellbeing & Productivity in Offices," World Green Building Council, 2014.
- $12. \ \ Carl\,Krupitzer, "Improving Employee Productivity Through IoT," ThingLogix, November 30, 2014.$
- 13. Lisa Millar, "Dead malls: Half of America's shopping centres predicted to close by 2030," ABC News, January 28, 2015.
- 14. Jim Eckenrode, "The derivative effect: How financial services can make IoT technology pay off," Deloitte University Press, October 13, 2015.
- 15. www.airsage.com, accessed on November 30, 2015.
- 16. Ibid.

Table 1: Service innovation for tenants and their customers

All property types

Common benefits

Lower operating costs such as lowr energy bills

Improved health and productivity benefits for occupiers

Tighter security due to real-time surveillance and faster emergency response systems

Retail

Service innovation opportunities through IoT

Draw key insights around preferences and decision making behaviors of end-consumers, such as identifying "buyers" and "Browsers" by using footpath technologies.

Provide smart offers and enhanced information on parking availability using mobile phones and beacons based on knowledge about end-customer location and condition.

Use case

Simon Property Group is investing in iBeacon TM location and proximity detection technology to help retailers enhance in-store shopping experience and take personalized shopping to the next level. Using location data iBeacon TM enables personalized marketing, indoor navigation, automatic check-in, and contactless payment.

Illustrative usage view



Recognize me

Beacons enable customers to be recognized in the mall and mapped to their CRM profile and browsing history



Inspire me

Customers experience a personalized home screen and targeted special offers



Inform me

Customers can access product information and reviews to help make a decision



Guide me

Once a product is selected, a guided map allows customers to easily find their way to the selected product



Expedite me

Towards the end of shopping experience, customers can pay using the in-app payment service, avoiding any que at payment counters

Multifamily

Service innovation opportunities through IoT

Improve space design and tenant experience by using insights captured through smart devices and sensors on personal habits such as consumption, health stats, movement, etc.

Provide pre-emptive maintenance and automated maintenance request management and enable renters to remotely customize and personalize their home environment through IoT-enabled appliances.

Use case

Real estate developer, Capstone Partners, has teamed-up with IoT startup, IOTAS, to offer smart home environemtn for renters at Grant Park Village apartments in Portland, OR. Apartments have installed different sensors, smart outlets and switches in every room to be able to monitor different aspects such as temperature, humidity, lights, motion, and water flow. Systems track the habits and preferences of the dwellers and enable renters to create rules to customize their home environment from anywhere and at anytime through a mobile app, thereby increasing convenience and lowering energy bills.

Illustrative usage view



Know me

Smarter home devices and sensors track and learn renters'habits and preferences



Offer me confort

renters get a customized experience for greater ease and convenience



Empower me

Renters can remotely access, control, and track the usage of their home systems



Secure me

Renters get increased security due to real-time monitoring and advance notification of potential mishaps



Save me money

Anywhere, anytime access and customied automation helps reduce utlity costs for renters

Office

Service innovation opportunities through IoT

Use case

Illustrative usage view



Track staff

Sensors track staff members'location and movement across the office premises



Know staff

Different sensors identify patterns in workspaces usage and staff interaction



Comfort staff

better insights into staff behaviors help design more comfortable workspaces and automate redundant



Secure staff

Connected systems and location tracking help improve the effectiveness of security and emergency response systems



Motivate staff

More convenient and customized workspace helps improve staff motivation and productivity

Industrial

Service innovation opportunities through IoT

Enable faster shipments by using automated pick-up process through IoT-enabled cart-like robots Ensure accurate shipments by meticulously tracking the complex chain of movements of items across large warhouses

Use case

Lids, an Indianapolis-based fashion retailer, uses cart-like robots which wirelessly receive a list of items to be shipped. The robots then fetch the items from storage racks and help the workers to efficiently manage each shipment. All the details around the movement and condition of items and preparation of shipments is tracked through sensors by a ccentralized remote monitoring unit. This not only enables the firm to effectively manage the items stored, but ensure accurate and faster shipments from the warehouse.

Illustrative usage view



Track items

Sensors help track the location and movement of items both inside and outside the warehouse on a real-time basis



Ship right items

Appropriate RFID tags on products ensure that the correct items are shipped



Ship faster

Automated robots retrieve products for the pick-up agents and help in faster delivery



Protect items

Sensors enable 24/7 monitoring of items conditions to avoid theft or spoilage



Improve service

More efficient operations and faster and accurate shipments improve service delivery

Source: Deloitte's IoT Reference Architecture; Simon Property Group, "Simon and Mobiquity technologies to expand iBeacon network nationwide, creating opportunity for new level of connection between shoppers and retailers," August 4, 2014; IOTAS company website; Gizmag, "Deloitte's new Amsterdam HQ has connected, sensor-packing LED lighting," July 28, 2014; SupplyChain24/7, "Enter the smart (Internet of Things) warehouse," July 5, 2015; Deloitte Center for Financial Services analysis; Note: "Smart buildings: How IoT technology aims to add value for CRE companies" is an independent publication and has not been authorized, sponsored, or otherwise approved by Apple Inc.; iBeacon is a trademark of Apple Inc.

Benefits to the broader ecosystem

The IoT's interconnected nature means that the value of the collected data is not limited to CRE and tenants—companies can link to the broader ecosystem as well. Connected buildings can drive meticulous tracking of information on sustainability initiatives related to energy, water, and waste management and boost efforts to reduce the impact of climate change. Further, sustainability analytics can help CRE companies decrease their carbon footprint, have more sustainable properties in their portfolio, and eventually differentiate themselves in the marketplace.

In the case of energy, increased IoT adoption can imply more detailed and real-time monitoring of all devices that consume energy in a building and better connectivity with the smart grids.¹⁷ This would allow power utilities to enhance the efficiency of energy distribution and conservation.¹⁸

Likewise, in the case of water, different sets of information (such as lower rainfall and pipeline burst) can potentially help buildings identify possible supply shortages and better plan their usage and overall water conservation. For waste management, sensors in smart trash bins can communicate volumes to help collectors optimize pick up timings and appropriately plan disposal of different forms of waste.

Creating value through new revenue sources

While creating value through new revenue sources is likely a longer-term prospect, CRE companies can perhaps offer analytics-as-a-service. This essentially means that companies can combine, analyze, and present insights from the large sets of data in a manner that tenants or other stakeholders can purchase and augment

their actions and behavior. As an example, data on people moving within a building can potentially be sold to advertisers or urban planners to help them in their decision making. In another example, retail real estate owners can capture and analyze end-customer demography, purchase, and movement data and sell it to their tenants. CRE companies can sell building performance information to institutional investors to allow them to make informed investment decisions.

Value capture: How to maximize IoT value?

IoT technology offers many potential benefits, but its implementation largely remains in infancy. At issue are the bottlenecks that limit the flow of information and therefore reduce the applications' value to CRE companies. A bottleneck is characteristically seen as a bad thing—a limiting factor in an otherwise smooth, even flow—²¹ but in the Value Loop, it is also an opportunity for the company that removes that bottleneck, because in creating new value for all, the company can capture a large part of that value for itself.

The bottleneck in any flow is going to depend on what is flowing and under what circumstances. Therefore, much like we see IoT creating three categories of new value created by IoT in CRE, there is a different bottleneck in each case, as well as cybersecurity and privacy issues that cut across all, as Table 2 illustrates:

We believe CRE companies will likely have a competitive edge if their IoT strategy ameliorates the bottlenecks and optimizes the use of the large sets of structured and unstructured information that various value loops create.²²

The IoT's interconnected nature means that the value of the collected data is not limited to CRE and tenants—companies can link to the broader ecosystem as well.



- 17. Olivier Monnier, "A smarter grid with the Internet of Things," Texas Instruments Incorporated, October 2013. Used with permission.
- 18. Ibid.
- 19. Laura Adler, "The Urban Internet of Things: Surveying Innovations across City Systems," Data-Smart City Solutions, Ash Center for Democratic Governance and Innovation, Harvard Kennedy School, http://datasmart.ash.harvard.edu/news/article/the-urban-internet-of-things-727.
- 20. Ibid
- 21. Michael E. Raynor and Mark J. Cotteleer, "The more things change: Value creation, value capture, and the Internet of Things," Deloitte Review 17, July 27, 2015, http://dupress.com/articles/value-creation-value-capture-internet-of-things/.
- 22. For more information on how these bottlenecks and key challenges can be resolved, see Deloitte Real Estate's analysis published by the Deloitte Center for Financial Services, "Smart buildings: How IoT technology aims to add value for Commercial Real Estate companies", which can be found on the Real Estate Industry page of Deloitte com.

Table 2: Bottlenecks and key challenges to value capture

Value to CRE	Bottleneck	Key challenges
Efficiency	Aggregate	Key challenges
Differentiation	Analyze	Ability to leverage the data created by IoT- enabled buildings
New revenue	Act	
Cybersecurity & dat	a privacy	

Source: Deloitte Center for Financial Services



Further, sustainability analytics can help CRE companies decrease their carbon footprint, have more sustainable properties in their portfolio, and eventually differentiate themselves in the marketplace.

Contacts

Austria



Alexander Hohendanner Partner +431 537 002 700 ahohendanner@deloitte.at

Belgium



Jean-Paul Loozen Partner +32 2 639 4940 jloozen@deloitte.com



Frédéric Sohet Partner +32 2 639 49 51 fsohet@deloitte.com

Central Europe



Diana Rádl Rogerová Partner +420 603 809 719 drogerova@deloittece.com



Michal Melc Senior Manager +420 603 809 719 mmelc@deloittece.com

CIS



Steve Openshaw Partner +74 95 787 06 00 sopenshaw@deloitte.ru

Denmark



Lars Kronow Partner +45 22 20 27 86 Ikronow@deloitte.dk

Finland



Jan Söderholm Partner +358 20 755 5509 jan.soderholm@deloitte.fi

France



Laure Silvestre-SiazPartner
+ 33 1 55 61 21 71
lsilvestresiaz@deloitte.fr



Jean Csuka Partner +33 1 58 37 95 13 jcsuka@deloitte.fr



Sylvain Giraud Partner +33 1 40 88 25 15 sgiraud@deloitte.fr

Germany



Michael Müller Partner +49 892 903 684 28 mmueller@deloitte.de



Jörg von Ditfurth
Partner
+49 211 877 241 60
jvonditfurth@deloitte.de



Christof Stadter Partner +49 89 29036 8269 cstadter@deloitte.de

Greece



Michael Hadjipavlou Partner +30 210 67 81 100 mhadjipavlou@deloitte.gr

Ireland



Brian JacksonPartner
+353 1417 2975
brijackson@deloitte.ie



Padraic Whelan Partner +353 1417 2848 pwhelan@deloitte.ie

Italy



Elena Vistarini Partner +390 283 325 122 evistarini@deloitte.it



Claudio Tierno Director +390 283 325 078 ctierno@deloitte.it

Luxembourg



Benjamin Lam Partner +352 451 452 429 blam@deloitte.lu



Pierre Masset Partner +352 451 452 756 pmasset@deloitte.lu



Basil SommerfeldPartner
+352 451 452 646
bsommerfeld@deloitte.lu

Middle East



Robin WilliamsonManaging Director
+966 1 288 86 00

+966 1 288 86 00 rwilliamson@deloitte.com

Netherlands



Paul Meulenberg

Partner +31 88 2881 982 pmeulenberg@deloitte.nl



Jef Holland

Partner +31 882 881 991 jholland@deloitte.nl

Norway



Thorvald Nyquist

+47 95 75 31 41 tnyquist@deloitte.no



Stig Ingve Bjorken

+47 97 75 24 47 sbjorken@deloitte.no

Portugal



José Gabriel Chimeno

Partner +351 21 042 25 12 jchimeno@deloitte.pt



Jorge Marrão

Partner +351 21 042 25 03 jmarrao@deloitte.pt

South Africa



Patrick Kleb

Partner +27 828 208 363 pkleb@deloitte.co.za

Spain



Javier Parada Pardo

Partner +349 143 818 06 japarada@deloitte.es



Alberto Valls

Partner +349 143 811 26 avalls@deloitte.es

Sweden



Magnus Larsson

Partner +46 733 97 73 17 maglarsson@deloitte.se

Switzerland



Karl Frank Meinzer

Partner +41 58 279 8086 kmeinzer@deloitte.com

United Kingdom



David Brown

Partner +44 20 7007 2954 debrown@deloitte.co.uk



Nigel Shilton

Partner +44 20 7007 7934 nshilton@deloitte.co.uk



Siobhan Godley

Partner +44 20 7007 2745

US



Robert O'Brien

Partner - Global Real Estate Sector Leader +1 312 486 2717 robrien@deloitte.com

Canada



Ciro DeCiantis Partner +1 416-601-6237 cdeciantis@deloitte.ca



Sheila Botting Partner

+1 416-601-4686 sbotting@deloitte.ca



Anthony Cocuzzo Partner 1-416-601-6432 acocuzzo@deloitte.ca



Contacts



Robert O'Brien
Partner - Global Real Estate Sector Leader
+1 312 486 2717
robrien@deloitte.com



Javier Parada Pardo
Partner - EMEA Real Estate Leader
+34 914 381 806
japarada@deloitte.es



Benjamin Lam
Partner - EMEA Real Estate Funds Co-Leader
+352 451 452 429
blam@deloitte.lu



David Brown
Partner - EMEA Real Estate Funds Co-Leader
+44 20 7007 2954
debrown@deloitte.uk

Please do not hesitate to contact your relevant country experts listed in the magazine

Deloitte.

Deloitte is a multidisciplinary service organization which is subject to certain regulatory and professional restrictions on the types of services we can provide to our clients, particularly where an audit relationship exists, as independence issues and other conflicts of interest may arise. Any services we commit to deliver to you will comply fully with applicable restrictions.

This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collectively, the "Deloitte network") is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No entity in the Deloitte network shall be responsible for any loss whatsoever sustained by any person who relies on this communication.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see **www.deloitte.com/about** for a more detailed description of DTTL and its member firms.

Deloitte provides audit, consulting, financial advisory, risk management, tax and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries bringing world-class capabilities, insights, and high-quality service to address clients' most complex business challenges. To learn more about how Deloitte's approximately 225,000 professionals make an impact that matters, please connect with us on

Facebook, LinkedIn, or Twitter.

© 2016. For information, contact Deloitte Touche Tohmatsu Limited. Designed and produced by MarCom at Deloitte Luxembourg