



# REflexions

A global look at the real estate sector

## About the REflexions

REflexions is a bi-annual digest dedicated to the real estate fund industry. It features hot topics and thought-provoking insights relevant to real estate investment management professionals.

Deloitte Global's real estate industry group and its member firm practices are recognized for bringing together teams with diverse experience and knowledge to provide customized solutions for clients across the full spectrum of the real estate community.

# Contents

Introduction	2
Market views	
An interview with Blackstone's Head of Real Estate Europe, James Seppala	4
Interview with FREO Group CFO, Sven Andersen	9
Technology	
Data analytics: Enabling smart decision-making for real estate institutional investors and managers	12
Geographic focus	
Zooming in on the niche: Special purpose properties in Germany	16
Market focus	
Deloitte Property Index 2019: How Europeans live and what it costs them Where does residential price growth end?	22
A round-up of Deloitte's 2019 Operations and Technology Survey results	25
Endnotes	29





# Introduction

**D**EAR READERS, WELCOME to this tenth edition of REflexions, with its wide range of insights into trends and developments in the real estate (RE) market across the globe.

After 9 editions in the familiar shape, we present this edition for the first time in a new format, and move from an EMEA magazine to a global Deloitte Insights publication. This will not only reflect the international presence of the industry. We will be able to tackle a wider range of topics from and for all parts of the Globe, to provide you with relevant and comprehensive insights into real estate.

Published in spring and autumn, each edition will revolve around 4 topic areas: market views, technology, a spotlight on a geography and a focus on a specific market segment.

‘Market views’ presents insights into the RE investment from leading figures in the industry. In this edition, we present two interviews. One is with James Seppala, Blackstone’s Head of Real Estate Europe, in which he explains the company’s proactive approach to RE investment, and the use of real-time data from across its global network in support of decision-making. He also comments on the importance of culture in shaping the company’s success in RE investment, and how challenging opportunities are given to individuals, even at relatively junior levels, to develop the business; on the implications of interest rate changes for investing in growth; and on investment in technology.

Our second interview, with Sven Anderson, CFO of FREO Group, explores sustainable development and the role that the RE industry plays in mitigating the environmental impact of energy consumption. He explains how the trend toward construction of

‘green’ buildings in urban areas to meet changing lifestyle demands of the population is creating value and offering the potential for attractive investment returns. He also identifies problems that exist, such as choosing between different approaches to sustainable building and, not the least, the challenge of adapting the traditional approach to investment appraisal in RE to take account of the value from gains in energy efficiency.

In the ‘Technology’ section in this edition, we present an article on the use of data analytics, a fast-developing feature in the RE industry. As growth and profitability in the commercial RE sector come under pressure, data analytics and artificial intelligence (AI) can assist with identifying investment opportunities, using the increasing volumes and granularity of data from a wider range of sources. Although some concerns remain, data analytics is being used increasingly for predictive analytics and risk analysis to make objective decisions for portfolio management and identify investment opportunities to generate a high alpha. To get started with data analytics, there has to be a development plan for data management, and a shift in the organization’s mindset.

Our article in the ‘Geographic focus’ section looks at investing in special purpose properties in Germany, as an alternative to investing in the ‘traditional’ asset classes of offices, retail, and hotels. Investing in special purpose properties presents opportunities for higher returns; however, a good knowledge of the market is needed to make sound decisions because demand for these types of property are driven more by social and demographic trends than by economic decisions of companies. The article looks in some detail at three segments within the special purpose property sector. The first is health care properties, where demand is being driven by the growing proportion

of Germany’s population aged over 65 and by increasing life expectancy. The second sector is industrial real estate, and particularly properties for warehousing and logistics, where demand for more space is being driven by the growth in e-commerce but may be affected by changing conditions in the German economy. The third sector is micro-apartments, which offer ‘turnkey’ full facilities accommodation in coveted city centre locations and affordable single living accommodation. Demand for this type of accommodation comes mainly from professionals and executives wanting hotel-like facilities with communal spaces, and from students (with smaller budgets).

There are two articles in our ‘Market focus’ section. One presents a summary of the Deloitte Property Index 2019 review of residential property in countries and cities across Europe. This looks at trends in residential property prices and changes in the availability of housing to meet the high demand. The second article provides a round-up of the findings in Deloitte’s 2019 European Operations and Technology Survey of RE investment managers and their insights into developments in the industry. This covers a range of issues, such as the outsourcing of services, the use of software for day-to-day administration and investment decision-making, the shortage of digital talent in the industry, the pressure on fees, and the impact of regulatory compliance on operations and costs.

The RE industry is continually changing, and we recognize the importance of keeping on top of developments and recognizing what is happening. We hope that the articles we present in REflexions will be both informative and entertaining. Enjoy this edition!



## Market views

An interview with Blackstone's head of Real Estate Europe, James Seppala

By David Brown, head of Real Estate, Deloitte North and South Europe, and Matt Townsend, partner Real Estate Tax and Blackstone Real Estate partner Deloitte UK

IN TIMES OF digitalization and change, real estate asset management has to face a number of challenges. Leveraging data analytics, revising the existing operating model, and people development are thereby at the top of the agenda.

David Brown, head of Real Estate Deloitte North and South Europe, and Matt Townsend, Real Estate Tax partner at Deloitte in the UK, met James Seppala, head of Real Estate Europe at one of the leading real estate asset managers: Blackstone.

**Deloitte:** James, what do you believe differentiates Blackstone in its approach to RE investing compared to other leading asset managers in the space?

**James Seppala:** Generally speaking, our approach to real estate investing is quite thematic. There are certain themes which we have conviction in, and we pursue those in scale. That's instead of being purely opportunistic and sitting back and letting things come to us. We do a lot of work on the sector or location and then commit. We draw huge benefits from our scale: by virtue of owning

a portfolio in Europe of over €70 billion, we have access to a wealth of real-time information. We can evaluate performance—areas of strength and of weakness—and then draw conclusions to inform our investing strategies in a way that others might not have the benefit of. We have over 500 people globally in our team and can leverage this global expertise across every transaction.

## Data and analytics

**Deloitte:** So you have a demonstrable network effect from scale. I'm interested in how you actually draw benefit from the data and analytics. We find sometimes that real estate is still in the 'steam age' in its approach to data analytics.

**James Seppala:** Real-time data is a priority for us. We work closely with our asset management team, portfolio companies, and partners to gather and analyse as much data as possible.

**Deloitte:** Do you make decisions off the back of your data feedback?

**James Seppala:** All the time. Say we want to buy a Milan office. Owning 18 office buildings and doing a number of real-time capex projects and lease negotiations give you more valuable and timely data. Those leases are telling you what the market is doing right now. On the flip side, if we followed a certain theme but our capex requirements are trending higher over time, we would factor that in to acquisitions going forward. We learn from mistakes too. That's just as important.

**Deloitte:** Have you made or would you make investments that are even partially driven by access to data. Take The Office Group for example. When you buy a business like that,

does it give you access to a certain type of data that you wouldn't otherwise have had?

**James Seppala:** We don't invest specifically to acquire access to data, but it is a beneficial outcome of entering differentiated segments of the market, as we did with TOG. In that case, we also benefit significantly from the management team's knowledge and perspective of the coworking space. They are talking to their customers and feeding back to us. We have regular board meetings and talk to them all the time, giving us a perspective that we wouldn't otherwise benefit from.

## Culture and people development

**Deloitte:** Blackstone has been at the top of the tree in the RE field<sup>1</sup> for a decade or more, in terms of fund and deal size and overall AUM. Tell us something about the culture of the firm that allows it to maintain this performance.

**James Seppala:** Across the firm, there is an enormous sense of ownership and responsibility which tends to inspire all of us to do more. We also invest personally in the transactions, aligning our interests with those of our investors and reinforcing the sense of ownership. We are a meritocracy, rewarding people who perform well, giving them access to opportunities, such as moving to different groups or offices for periods of time, accelerating their careers, giving them a new challenge, or encouraging them to help grow a new business. That creates a lot of energy, and by virtue of people always seizing opportunities in different sectors or moving to different offices, it also allows younger, talented people to move up quickly.

**Deloitte:** Given the growth in the size and specialisms within your team, what is your strategy around people development to ensure future succession in your business?

**James Seppala:** We frequently give team members new opportunities, pushing people out of their comfort zone, and very often we are positively surprised by the outcome. Suddenly a relatively junior person has exceeded expectations and we're much more productive in a certain region, for example. When the team see others around them always try and deliver their best that becomes the standard that everyone expects of themselves.

**Deloitte:** To touch on people development, are there specific programmes that you do here, or is it case by case that you look at what is best for people's development?

**James Seppala:** We are quite programmatic about moving people around the world. We try to move certain of our professionals around every year, for example always having someone from London in New York and someone from New York in London. We do that in a disciplined way. Several times a year, we also think a lot about moving people into certain positions across groups, how they would perform, and how we can help accelerate their career progression. With the continued expansion of our business lines, we are also able to offer people increased responsibilities in these new areas of growth.

**Several times a year, we also think a lot about moving people into certain positions across groups, how they would perform, and how we can help accelerate their career progression.**

## Operating on a multidisciplinary platform

**Deloitte:** Blackstone continues to evolve its business, from PE, to RE, hedge fund, and now growing credit and infrastructure strategies. How does the firm derive benefits from operating on a multidisciplinary platform? Is the intelligence from different strategies deployed all across the organisation?

**James Seppala:** That is absolutely what we are striving to do. At our review and investment committee meetings, for example, as well as at our regional strategy sessions, if we are able to share any intelligence that might support another region or business division and there are no MNPI [Material Non-Public Information] considerations, we will do so.

**Deloitte:** Do you have the sort of situation where you would like to invest in something, but can't invest because another part of the business is doing it?

**James Seppala:** Not really. The way things are structured, certain funds or strategies often have exclusivity on a certain space should they want to pursue an opportunity in that space, and we have very differentiated strategies when it comes, for example, to opportunistic vs. core-plus investing. There are also times when we co-invest, for example, when we bought Hilton, Real Estate and Corporate Private Equity co-invested because we believed our strategies and skill sets were complementary in this situation.



## The interest rate cycle

**Deloitte:** Your Q2 earnings report mentioned that the low interest rate environment played a part in driving demand for Blackstone funds. How do you think the end of QE (Quantitative Easing), and ultimately its reversal, will play out for your business?

**James Seppala:** There is a difference between the US and Europe, obviously, because rates in Europe are likely to stay lower for longer. Reversing QE, or rising interest rates, is typically driven by GDP growth, which then tends to lead to top-line revenue growth. We are always looking to invest in sectors and markets that we expect to have outsized growth. This is ever more important in a rising rate environment, such as the one we have been anticipating in the US.

**Deloitte:** You have been successful in growing new ‘perpetual’ capital sources alongside your series of classic fixed life funds. How does the Blackstone model flex to deal with the different discipline of underwriting in the core space?

**James Seppala:** It’s one investment committee, one approach to underwriting, and one approach to the themes we like. The different vehicles may have different holding periods, different leverage structures, and of course there is a different risk profile for core-plus or opportunistic, but it’s exactly the same approach to sourcing and underwriting.

**Deloitte:** So what would you say is different, other than the holding period?

**James Seppala:** Core-plus assets have a stable cash flow profile and an ability to increase revenues over longer periods of time, but not through intensive near-term asset management or capital investment. So, the management required is more modest, and so is the leverage. The bar is higher for core-plus and the amount of lift required is lower. For example, investments that require relatively limited asset management over the hold period may fit well in core-plus.

**We are always looking to invest in sectors and markets that we expect to have outsized growth. This is ever more important in a rising rate environment, such as the one we have been anticipating in the US.**

**Deloitte:** In terms of sourcing those deals, are you effectively relying on the same network?

**James Seppala:** Yes, all we are doing is broadening our teams’ spectrum of potential activity.

**Deloitte:** So is this a question of Blackstone publicising to the market that you’re interested in core-plus and opportunistic deals?

**James Seppala:** Yes, and that tends to open more doors and is therefore helpful for both businesses.

## Impact of technology

**Deloitte:** Can we discuss the impact of technology on your business and your investments. What impact do you consider digitization will make to construction and the built environment? How do you consider the impact of wider technological change—such as driverless cars—on your investments? How is digital transformation affecting your own operations?

**James Seppala:** Technology is impacting everything in our world, including real estate. Our recent investment activity has been concentrated in logistics assets globally, which we believe are benefitting from the global trend in consumption patterns toward e-commerce. Also, cities that are attracting companies focused on tech and media are doing particularly well today in our opinion. We as a business are also investing to improve our technology, across each business division and at a group level. We have dedicated professionals within the team focussing on tech applications and tech companies and we are deploying prop tech to seek to make us better investment managers. At a portfolio company level, there is a lot of investment too and we share that across portfolio companies where it makes sense. So in aggregate, the investment is quite significant.

**Deloitte:** Is central location increasingly a driver of value in Europe, as well as in London?

**James Seppala:** Yes, that's why we have a focus on tier-one cities in Europe where innovation is happening—such as Berlin, Stockholm, Amsterdam, Paris, and Barcelona. These cities are benefitting disproportionately because it seems that is largely where young educated people want to be, where employers want to be, and that is what's driving growth and incremental demand.

**Deloitte:** How do you view London's competitiveness going forward?

**James Seppala:** Despite political uncertainty, we are long-term believers in London and it retaining its place as the truly global city in Europe. Certain investment banks may be increasing their space requirements in other cities such as Paris, Milan, and Frankfurt, but that doesn't mean they are halving their space in London, far from it.

**Deloitte:** Does Europe retain its attractiveness against Asia and North America?

**James Seppala:** Yes, it has been amongst our most active regions globally in the last seven years and we believe a number of interesting investment opportunities still remain across the real estate spectrum for us. That said, given our differentiated approach and positioning, we continue to see compelling opportunities in Asia and North America as well.

**Deloitte:** Thanks for your time today James.



## Market views

Interview with FREO Group CFO, Sven Andersen

By Lize Griffiths, partner and Real Estate leader, Deloitte Continental Europe, and Julie Castiaux, senior manager, Deloitte Luxembourg

**O**VER THE LAST months, ESG (Environment, Social and Governance), SRI (Socially Responsible Investment) or Impact

Investing moved from buzz words to concrete products strategy bringing clear values and competitive advantages for the financial players investing in them. It is now publically recognized that making profit is compatible with sustainable growth, while evidences show a positive correlation between ESG consideration and financial performance.

When thinking about the future of any business or industry, it is inevitable to consider sustainability—and the real estate sector is a key actor with an important role to play in sustainable development over the coming years.

**Deloitte:** How does FREO Group see the link between real estate and sustainability?

**Sven Andersen:** We fully recognise that the real estate sector is responsible for high consumption of energy and other resources and that we have a role to play in helping the industry mitigate its environmental and social impact. We also believe that by being proactive towards sustainable real estate investments and having an asset management strategy, we can make a big impact.

**Deloitte:** Over the coming years, major changes are expected in the way that people live. One trend is the move to urban areas. Some projections and studies show that by 2050, it is expected that roughly 70 percent of the population will live in cities.<sup>2</sup> How is real estate preparing for these possible changes?

**Sven Andersen:** Our view at FREO is that real estate is being transformed fundamentally by several key trends: adapting to new working patterns, environmentally friendly ‘buildings’ and through technology and innovation, more services can be offered to tenants to improve well-being. Our aim will be to help clients take these changes into account in their investments.

**Deloitte:** A major trend seems to be a shift in the population toward a sustainable and green lifestyle. Do you see a corresponding change in your clients’ perceptions? And are concerns about sustainability consistent with financial interests?

**Sven Andersen:** We are seeing a shift in mindset. Developers now see green buildings as a way of creating value. We are finding that investors increasingly demand ‘green labels’—and in our experience this appears to be paying off financially for all parties involved. All of this is just the start of a long-term sustainability commitment. The next challenge for the real estate industry is to ensure that green building practices are self-sustaining. It’s not just a temporary trend, but it is here to stay. A critical factor is to have a business environment that values green spaces and the people who create them.

**Deloitte:** We understand that there is a demand and market for more sustainable investment in real estate. However, what can be done to convert this demand into active measures?

**Sven Andersen:** An excellent example of sustainable investment from our portfolio is the concept 2226—a new building concept developed in Switzerland. To achieve net zero energy performance and excellent energy efficiency, brand 2226 buildings include industry-leading technologies and solutions such as water treatment and recycling,

grey water use for toilet flush, electricity for the public areas from rooftop solar panels public areas, and creating roof areas with flowers and plants for tenants to relax or use as co-working space.

**Deloitte:** What are the advantages of sustainability in buildings from the occupant’s perspective?

**Sven Andersen:** We can point out two aspects from the value of green buildings for our buildings’ occupants. First, people who work in buildings care about things that affect their health. If employers capitalize on this, they can make large business savings. Product and service providers that can prove benefits in these areas can increase market share. Secondly, we have seen that people are satisfied by things they notice. Which is why managers and owners should communicate and engage with people working in their buildings to point out and capitalize on green efforts. In short, it appears that green building occupants tend to report higher productivity and health benefits.

**Deloitte:** Can you name some obstacles to sustainable real estate?

**Sven Andersen:** First, there is a question of what’s the best approach to sustainable building. New Environmental Social and Governance (ESG)—related products and technologies are available now in relative abundance, and it is difficult to choose between all these innovative solutions, determine their impact, and validate their benefits. And when it comes to implementation, many goals may be set without internal knowledge about how to proceed or a view of the financial implications. The progress achieved is also hard to measure, as most of the benefits are inherently more qualitative than quantitative in nature. And perhaps most fundamentally, existing calculations of investment return and the whole thinking around ‘what constitutes a good investment’ do not take energy efficiency into account. In particular, the established investment analysis methodology does not provide any insights on ‘why’ energy is consumed. Overcoming this narrow financial thinking around real estate investments calls for a cultural shift—and as we know, this can be very difficult to achieve.







# Technology

Data analytics: Enabling smart decision-making for real estate institutional investors and managers

By Surabhi Kejriwal and Saurabh Mahajan

## A challenging environment for real estate investors

Growth and profitability in the commercial real estate (CRE) market are under pressure. CRE investors posted negative average annual returns in 2018, both globally and in the United States.<sup>3</sup> Deloitte's *2018 Global Real Estate Institutional Investor survey* of 500 global institutional investors found that investors remained committed to CRE as an asset class and were planning to increase their capital commitments through 2019.<sup>4</sup> However, their investment decisions would likely be influenced in particular by geographic market, tenant, and financing/interest rate risks. There are also growing headwinds around the 2020 US presidential election, the threat from trade tariffs, an inverted

US yield curve, and the global economic slowdown. To respond to these challenges, investors should consider new ways to improve decision-making.

## Using data analytics: The barriers

An option for investors and investment managers is to use data analytics and AI in their acquisition, disposition, and portfolio management processes to manage risks more effectively and mitigate pressure on fees and margins. Much more data is available today than even just a few years ago. Information about net effective rents, leasing spreads, lease comps, market demand, and tenant information is now more accessible and granular. In addition,

increasing use is being made of alternative datasets, from IoT sensors, social media, geospatial information, and satellite imagery. New forms of analytics solutions, backed by AI, can help investment managers harness this broad range of data to make more informed decisions faster.

To date, however, most CRE managers and investors continue to make heuristic decisions, based on instinct rather than data analytics. There may be various reasons for this. There may be problems with available datasets; managers and investors may lack analytics capabilities; and there may be concern about data risks involved.

- **Problems with available datasets and analytical techniques.** Process inefficiencies may be a deterrent to exploring the possibilities of data analytics. There are no commonly accepted industry standards around data definitions and governance. As such, data gathering, analysis, and reporting require substantial human effort and often results in information silos. Managers could spend as much as 80 percent of their time on gathering or manipulating data, rather than on analysis.
- **Limited analytical capabilities.** Investors and managers often lack the skills, tools, and technology for sourcing, aggregating, and analyzing huge datasets from multiple sources.

**With increased availability and transparency of data, access to information may no longer be a competitive advantage.**

- **Data risks and uncertainty of return on investment (ROI).** New technologies come with their own risks. Investors and managers need to carry out due diligence to verify the origin and authenticity of the data. There could be privacy risks if the sourced data includes personal information or material nonpublic information. If there is a lack of transparency about the data collection method, there will likely be concerns around its accuracy and validity. Finally, investor organizations may not be confident about the ROI from using alternative data sources.

The industry has long thrived on relationships, which is how many investors have traditionally gained access to unique information, which they combine with their gut instincts to make investment decisions. However, with increased availability and transparency of data, access to information may no longer be a competitive advantage. And some newer business models, such as short-term rentals for cosharing spaces, have different dynamics and a limited track record of performance and returns. For investors and managers evaluating these new business models, relying on intuition may not be enough.

## Embracing data analytics and AI

CRE data has improved over the past few years: One can now track buildings across several markets and in greater detail. Technologies such as AI and machine learning can be used to identify patterns and opportunities, predict future scenarios, and even automate certain tasks.

Investors and managers can leverage analytics and AI across the investment life cycle, from deal sourcing to portfolio management and risk management. In addition, technology can help improve the efficiency and effectiveness of information integration, investment accounting, and reporting.

For **portfolio management**, predictive analytics can be used to forecast performance based on a range of traditional and alternative datasets. For instance, to analyze consumer buying behavior for a geography or to profile retail tenants, retail mall investors can combine traditional property performance data with alternative retail sales data from mobile sensors, social media, and physical store sales.

Advanced analytics can contribute to a **better understanding of risk**—asset level, macroeconomic, and regulatory—and drafting appropriate mitigation measures, by assessing risk and return across multiple property types, geographies, and regulators.

The application of advanced analytics to traditional and alternative datasets can help reduce human bias through more objective decision-making,

and also result in faster decision-making, lower operating costs, and more rigorous risk management and portfolio optimization.

- **Deals and acquisitions.** Analytics and AI can improve deal sourcing by analyzing wider datasets across markets; enable more rigorous due diligence by digging deeper into property performance; and use algorithm-based valuations for smarter bidding and negotiation.
- **Portfolio and risk management.** Analytics and AI can be used to predict performance from trends across a range of internal and external variables, and facilitate smart monitoring of assets and portfolio risks.
- **Operational processes.** Analytics and AI can provide real-time tracking and integration of data from multiple sources, accurate investment accounting, automated reporting, and responses to queries through machine learning and chatbots.

**Technologies such as AI and machine learning can be used to identify patterns and opportunities, predict future scenarios, and even automate certain tasks.**



## Getting started

Although most institutional investors and managers are beginning to use alternative data and advanced analytics, these tools are expected to become essential in the future investment landscape. The starting point should be to consider two goals: developing a data management plan and changing the organizational mindset.

**Developing a data management plan.** To use advanced analytics and AI, CRE investors and managers should first build a data foundation. Typically, this involves establishing data standards, eliminating data siloes, and establishing data governance protocols. A better understanding should be obtained of the different types of dataset and analytics solutions currently available, and of their suitability; and firms should develop or acquire the right combination they will need of data analytics skill sets and industry experience.

A cost-benefit analysis can be performed to decide whether to develop in-house databases and data analytics capabilities or to outsource these efforts to a third-party vendor or proptech.

**EMBRACING A DATA-DRIVEN MINDSET**  
Changing behavior throughout an organization is not easy. Instilling a more data-driven mindset could require employees to think and behave differently. C-suite leaders should articulate clearly the benefits of using alternative datasets and analytics.

They should act as change champions for creating a data-driven culture. For organizations that don't yet have one, adding a chief data officer to the C-suite would signal a seriousness of intent.

Achieving success depends on a fundamental belief that data is an important enterprise asset and should be treated as such.

**Changing behavior throughout an organization is not easy. Instilling a more data-driven mindset could require employees to think and behave differently.**

## New roads, new rules, new insights

Investors looking for investment opportunities that generate higher alpha can benefit enormously from the use of analytics, especially AI.

There tends to be concern around loss of human touch (or even jobs) in decision-making. Contrary to this belief, however, the benefit lies in carving out more time for investors and managers to think, innovate, and use in-depth insights to underpin their decision-making.



# Geographic focus

Zooming in on the niche: Special purpose properties in Germany

By Jörg von Ditfurth, Nina Schrader and Tamara Terhalle

**A** FEW YEARS AGO, institutional investors had just three asset classes on their shopping lists: office, retail, and hotel. Except for a few outliers, these defined the potential investments.

Due to the pressure in the German market for high returns and falling yields from traditional asset classes, there has been a paradigm shift and special purpose real estate has become attractive as an asset class to many institutional investors. A higher return can be obtained from these complex niche products, but it generally requires specific knowledge of the market.

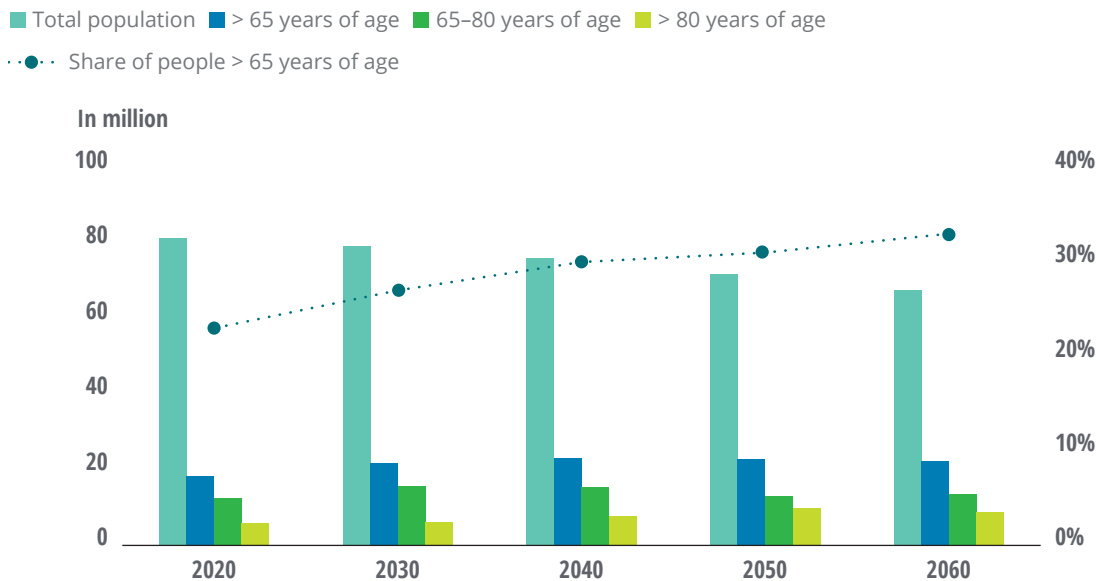
In particular, health care, industrial real estate, and microliving have gained importance as asset

classes in recent years, and have become a regular component of professionally managed portfolios.

The emergence of these investment opportunities can be traced to changing social and demographic developments. In general, special purpose property is often driven by different factors than the overall commercial real estate market, which is subject primarily to economic decisions by companies. The future of special asset classes can usually be predicted much more reliably, since demographic trends can typically be forecast more accurately than shifts in economic cycle, and this can provide a basis for profitable and secure investment. However, reliable forecasts of social and demographic change cannot replace a detailed knowledge of the market, especially with regard to the operating and income models of real estate usage.

FIGURE 1

## Growth in German population and proportion of people >65 years until 2060<sup>7</sup>



Source: Deloitte, JLL.

## Health care properties

Currently, more than 20 percent of the German population is aged over 65. This proportion is expected to rise to more than 30 percent by 2060, while the total population is in decline. Moreover, it is forecast that the number of people over 80 will rise to more than nine million by 2060, and the proportion of this age group in the total population will rise faster than for any other age group in the coming decades. Another expected development by 2060 is an increase in life expectancy from 84.5 years to 88.3 for women and from 80.3 to 84.8 years for men.<sup>5</sup> Older people are generally more dependent on care services, and the number of people in need of long-term care is expected to increase almost 30 percent to 3.61 million by 2030, and 70 percent to 4.82 million by 2060. This would result in demand of more than 300,000 additional beds in health care properties. This market segment therefore offers numerous opportunities for investors.<sup>6</sup>

The health care market is divided into various types of care: senior housing, ambulatory health centers, clinics, and rehab facilities. Some investments characteristics differ in comparison with the traditional asset classes: lease contracts are

usually concluded in a double or triple net agreement without special termination right. The usual lease term is 20–25 years plus a possible renewal option. The minimum bed capacity should be 90+ per facility with an average occupancy rate of at least 80 percent. Most of the rooms are single rooms, but with the potential for adding another bed. The choice of locations is based on having sufficient skilled labor in the region, a competitive structure, and a long-term need for health services in the hospital and rehabilitation sector.<sup>8</sup>

The prime yield from health care real estate is 5 percent, which is much higher than for traditional commercial asset classes. Nevertheless, the yield from this asset class has fallen by almost one-quarter since 2013. The investment volume, on the other hand, does not show such a clear trend and is subject to fluctuations. While health care real estate worth €2.8 billion was sold in 2016, the figure for 2017 was only €1.0 billion, a decline of around 64 percent, and it seems that the first half of 2019 opened even weaker. However, the high value in 2016 was due mainly to supra-regional portfolio transactions. The average annual transaction volume in recent years has been about €701 million.<sup>9</sup>

Another special feature of this asset class is the operator model: Some operators are tenant only and others are both owner and tenant. If an operator wants to grow with the company, the necessary resources are often released in the form of a sale-and-leaseback deal. Market participants pursue this strategy if they want to monetize their property, which is not part of their core business, in order to improve their equity ratio. In such an arrangement, triple-net contracts are common in which the operator assumes responsibility for operating costs, insurance, and maintenance.<sup>10</sup>

The health care real estate market often suffers from a lack of transparency. This can be due to fragmentation within the market and a large number of regulations. Almost every federal state has different regulations for health care—from single room quotas to fire protection regulations. In addition, the operating landscape is fragmented and there are many small providers as well as operators linked to religious institutions. This results in potential for consolidation, with enormous growth potential.<sup>11</sup>

## Almost every federal state has different regulations for health care—from single room quotas to fire protection regulations.

In the future, health care real estate is expected to become more differentiated, in terms of the structure of the lease contracts and methods of operation, and investing in the sector would require specific skills. Nevertheless, the health care sector could be an excellent supplement or even alternative to the current investment asset classes. Given the predicted demographic change, there could be strong growth prospects for this market. Health care properties, both existing and under development, that are operated on sound business principles might be attractive for investors looking for sustainable investment opportunities.<sup>12</sup>

## Industrial real estate

The logistics sector delivers raw materials and goods to the market within Germany and internationally. A major development in this sector is the growing importance of e-commerce, which is driving an increase in the volume of shipments and therefore the property space required for the associated logistics. In 2018, e-commerce turnover rose by 11 percent to €65.1 billion and further double-digit growth to just under €71 billion is forecast for 2019. With this trend, new challenges are emerging: Time- and cost-effective methods must be found for the last mile in the delivery of goods. In addition, Industry 4.0 is bringing production, ordering, and logistics closer together. Customer behavior patterns are also changing requirements for individualization of goods and delivery times—most companies need extra logistics space in order to act flexibly and meet demand.<sup>13</sup>

The light-industrial asset class combines different types of real estate, such as office, warehouse,

production, research, service, and retail space. It can be divided into four different categories: converted properties, business parks, warehouse/

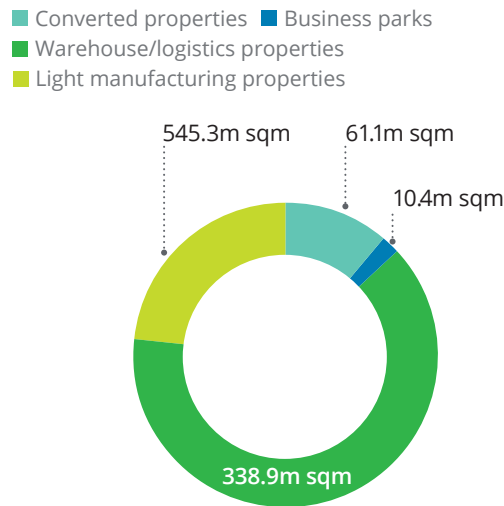
logistics properties, and light manufacturing properties. It is characterized by mixed use and proximity to production. Tenants are predominantly medium-sized companies in a multi-tenant structure. A common advantage is that required plots of land are often provided already with building rights. Furthermore, the previous conversion of properties often results in a high third-party usability and they are typically located on the periphery of cities or bigger conurbations.<sup>14</sup>



FIGURE 2

## Division of the light-industrial assets in Germany<sup>15</sup>

First half 2018



Source: Deloitte, ZIA, JLL.

Following record results in 2017 for the asset subclasses of logistics and industrial real estate in terms of investment volume and completions, a shortage of available properties was apparent in 2018. Land for construction was also in short supply. This, together with long approval procedures, slowed down completion activity in the market and the annual results for 2018 lagged behind 2017. However, the logistics real estate sector in Germany saw its third largest performance in 2018 in terms of investments and construction activity. Compared to other asset classes or countries, the German logistics market still offers a high rate of return, even though yields have fallen in recent years. Many institutional investors continue to see this as an attractive addition to their portfolios. The German market is home to some well-known industrial groups with strong credit ratings and various well-regarded small- and medium-size enterprises. With a high degree of industrialization, low cyclical, and a high cash yield, this asset class is particularly attractive, and investor interest is reflected in the

steadily increasing share of the total transaction volume in Germany. While only 7.7 percent was invested in logistics real estate in 2015, it rose to 11.5 percent in 2018. The total transaction volume in this segment in 2018 was about €6.8 billion, 48 percent above the five-year average, of which €2.9 billion, over two-fifths, were light-industrial properties. While yields on traditional industrial properties are falling, this is not the case for light-industrial properties. The prime yield for light-industrial typically varies between 4.3 percent and 6 percent, depending on the type of property.<sup>16</sup>

Due to the lack of available space, take-up in 2018 fell sharply by 40 percent to 856,000m<sup>2</sup>. Top rents are around €8.70/m<sup>2</sup> for light manufacturing space, €17.30/m<sup>2</sup> for flex space, and €14.20/m<sup>2</sup> for office and social space. While top rents are developing steadily, average rents are rising across all usage types within a light industrial property.<sup>17</sup>

The biggest concern for this asset class tends to be the trade discussions between the US, China, and Europe and a possible tightening of global trade restrictions. Even a disorderly Brexit could adversely affect Germany's economic situation. However, as the European Central Bank postponed any change in interest rate to 2020 and the current low interest environment continues, real estate remains attractive for investors. The prospects for growth in rental and capital values are generally good for industrial assets. The scarcity of designated land for industrial use in the (high-demand) metropolitan agglomerations has been a continuing driver of land prices and rents in recent years, particularly in the logistics sector. The conversion of land could therefore become increasingly common and, in response to current global developments, a growing number of companies are expected to adapt their supply chain to the new situation and bring their various operations closer together. In addition, the continuing expansion of online retail is helping to increase the demand for industrial property.<sup>18</sup>

## Microapartments

The Federal Statistical Office predicts that by 2030 single flats will make up 44 percent of the total of German households, and even though the country overall has an ageing population, there is expected to be a rise in the proportion of younger people in the big cities such as Berlin (+9 percent), Hamburg (+5.6 percent), and Munich (+18.3 percent). The number of students in Germany is increasing steadily, having risen by 8 percent since 2013 due to low tuition costs, an expansion higher education and English language courses and growing numbers of international students. Furthermore, people are getting more mobile, moving around more, and groups such as students, commuters, city travelers, and digital nomads prefer sharing instead of owning. This is having a direct impact on the structure of demand for accommodation. In response, new concepts in housing are needed.<sup>19</sup>

The concept of micro-living takes into account these changes in society, and also makes affordable single living in coveted city locations. The market for microapartments has grown out of classic forms of short-term accommodation such as furnished rooms and student halls of residence: It combines the fit-out of a residential apartment with the convenience and flexibility of a hotel. While commercial concepts typically focus on professionals and executives by offering hotel-like services and sophisticated furnishings, residential concepts tend to attract students or young professionals in need for a fully furnished apartment in a communicative environment. Every concept enables new residents to start living in the space immediately.<sup>20</sup>

Microapartments are offered as turnkey full-facility accommodation, targeting groups such as students, young professionals, business people and long-distance commuters of all ages who do not want to live in hotels. A room is typically around 20-25 m<sup>2</sup> including bathroom and kitchen, and larger types extend to 35m<sup>2</sup>. Rather than having a living room or home office, residents of micro-apartments use communal spaces, which makes it easy for residents to meet like-minded people after a day at work or at lectures. Properties are usually located in the central districts of metropolitan areas or

**Rather than having a living room or home office, residents of microapartments use communal spaces, which makes it easy for residents to meet like-minded people.**

university towns with a good public transport system. The monthly rent is an 'all-in' that covers regular ancillary costs and also internet access, furniture, and services such as a concierge or a gym. These services are usually not provided by the owner, but by an operator. The operator concept provides a high level of service, but the market for operator companies is still fragmented and only a few of them have much of a track record. New market participants in this area often focus on one region and manage only a few buildings.<sup>21,22</sup>

The prime yield for residential concepts amounts 6.5 percent and 7 percent for commercial concepts. The attractiveness of micro-living is particularly reflected in the growth in transaction volume. While the transaction volume for commercial concepts has increased by 122 percent since 2013, for residential concepts it has grown by 322 percent.<sup>23</sup>

The emergence of micro-living as an asset class is closely related to the question: 'How will we live and work in the future?' In a highly globalized, digitalized and urbanized future, microapartments are a solution for many of the challenges facing the housing and hospitality market. Minimal/coliving is becoming the new lifestyle for many urban single people. The majority of microapartments in Germany are still quite expensive due to the cost of included services, but there is further potential for targeting student groups with a smaller budget.<sup>24</sup>

## Summary

Special purpose property includes different asset classes that can offer great investment opportunities provided the necessary know-how is available. Social and demographic trends are expected to influence the development of each type of property. These trends can be reliably predicted in the medium term.

The numerous possibilities for generating long-term income and the prospect of solid rental performance will likely continue to attract the interest of tactical investors looking for an alternative to the more moderate returns from traditional asset classes. Other investors could look for the security and potential of risk diversification in asset classes that are less exposed to economic cycles. However, in addition to monitoring financial returns, careful due diligence of the operating model can help to understand the opportunities and risks with these asset classes



## Market focus

Deloitte Property Index 2019:  
How Europeans live and what it costs them?  
Where does residential price growth end?

By Petr Hana

OUR EIGHTH EDITION of the *Property Index, Overview of European Residential Markets*, looks again at factors influencing developments in the residential real estate markets and compares property prices in selected European countries and cities. The key issue this year has been price growth in the housing sector.

Based on previous editions of the Property Index, housing prices have been on the rise since 2015 in 15 out of the 16 selected countries. The only exception is Italy, where prices have fallen continually since the beginning of the financial crisis. The average annual growth in residential

property prices in the European Union (EU) in the past three years was 5 percent but was double this amount in the Czech Republic, Hungary, Latvia, and Portugal. Due to the significant increase in property prices in these countries, the prospects for home ownership are lower. The culprit may be the fallout from the debt crisis, or poor and slow administration by government authorities, which can hamper the construction of new residential properties. These factors can limit the supply of housing to meet the high demand.

Despite close economic ties within the EU, the residential markets differ widely between countries.



For the first time, Norway was the most expensive country in our survey for the price of a new dwelling (€4,043/m<sup>2</sup>), taking over the leading position from the United Kingdom. France came second (€4,016 /m<sup>2</sup>), where prices rose in the big cities such as Paris, but tended to fall in the rest of the country. Portugal recorded the lowest prices, with an average of €1,088/m<sup>2</sup>. Surprisingly, the highest percentage rate of growth in 2018 was in the Czech Republic, followed by Hungary, where prices rose by 16.8 percent and 13.7 percent, respectively.

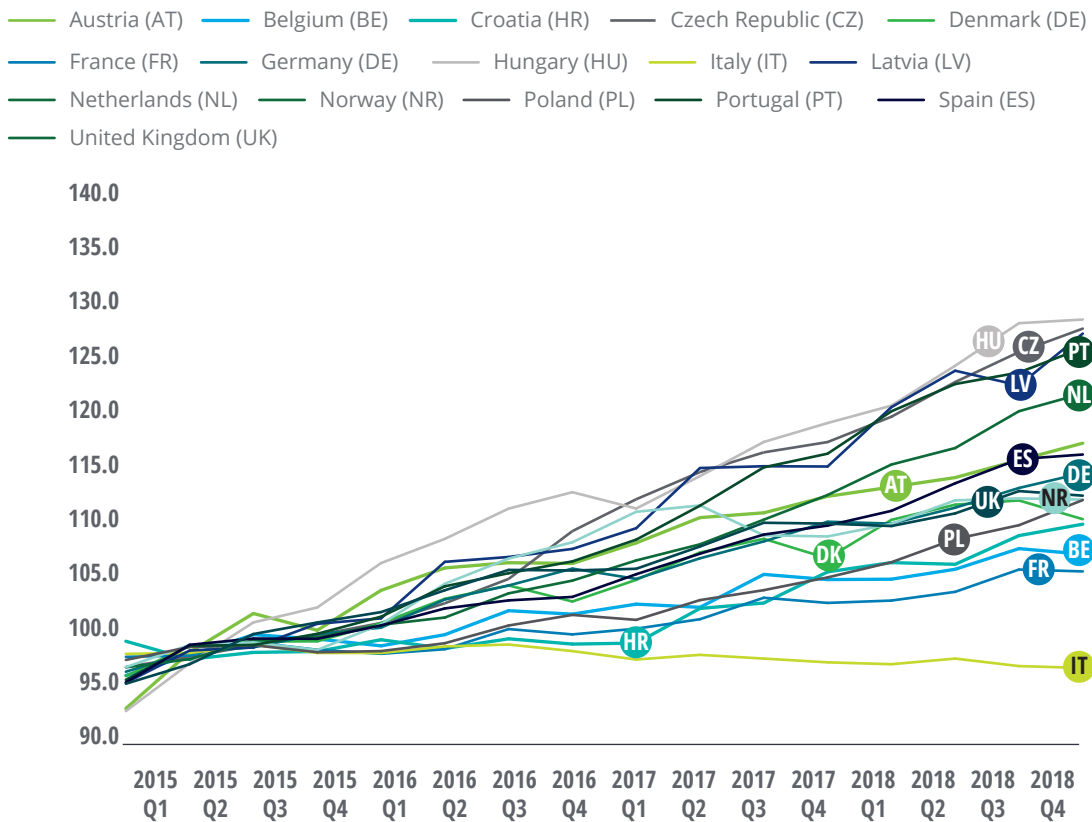
Inner Paris was the most expensive city in the Property Index, where the average price was €12,910/m<sup>2</sup>, followed by London (€11,185/m<sup>2</sup>), where a new benchmark methodology was applied for this survey, measuring an average value for the city as a whole. Debrecen in Hungary was again the cheapest city in the survey with

a price tag of €1,110/m<sup>2</sup> in 2018, followed by Győr (€1,195/m<sup>2</sup>). For anyone looking for cheap residential property outside Hungary, Łódź in Poland (€1,237/m<sup>2</sup>) might be the perfect place.

To assess the affordability of housing, we measured how many average gross annual salaries it would take to buy a standard new dwelling (70 sq m). The most affordable housing can be found in Portugal, where you would need to save on average for just 3.8 years to buy a new dwelling. Portugal is closely followed by Belgium (4.0 years), although it should be noted that the difference between gross and net salary in Belgium is larger than in most other countries. The least affordable housing was, for the third time in a row, in the Czech Republic where you would need to save for more than 11 years to buy a new apartment. The second least affordable housing was in Latvia (10.1 years).

FIGURE 3

### House price index (2015 = 100) - quarterly data



Source: Deloitte.

As in previous issues of the Index, we researched rental prices in selected cities. A dwelling in the centre of Paris was again the most expensive in 2018, where the average monthly rental price was €27.8/m<sup>2</sup>. Rents in Norway are also comparatively expensive: Oslo followed by Trondheim occupied second and third places in our research (€25.3/m<sup>2</sup> and €21.3/m<sup>2</sup> per month, respectively). Despite the current situation in Berlin, where rent levels have risen significantly in recent years, average rents in the city are still modest (€7.3/sq m per month) compared to other European cities. The lowest average rental price was in Debrecen (€6.4/m<sup>2</sup> per month), followed by Győr (€6.5/m<sup>2</sup> per month) and Ostrava (€6.6 m<sup>2</sup>).

With regard to new residential construction in 2018, the lowest number was in Latvia where only 3,000 dwellings were completed, although this was still almost 100 percent more than in 2017. The highest number was again in France, where more than 459,000 new dwellings were completed. When we consider new construction per head of the population, our research found that for all the

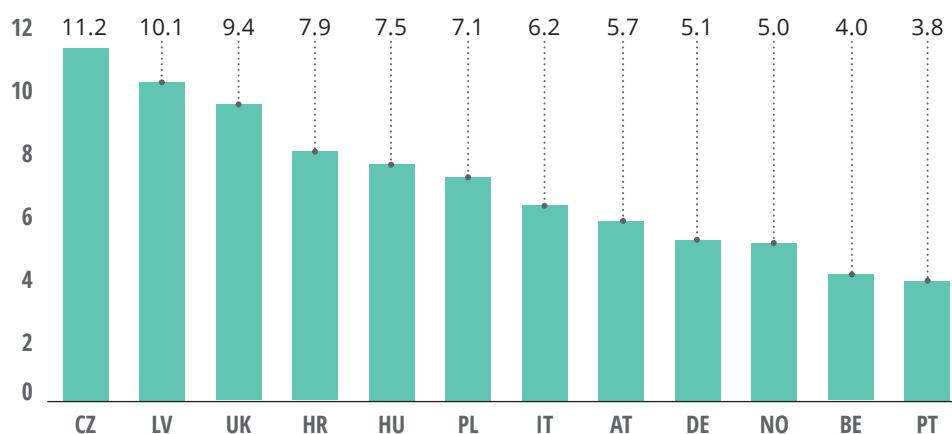
countries in the survey, the average number of new starts was 3.8 dwellings per 1,000 citizens. The worst performance was in Portugal, where only 1.2 new dwellings per 1,000 citizens were completed. The highest year-on-year growth was in Belgium, where the number rose from 4.4 initiated dwellings per 1,000 citizens in 2017 to 5.5 initiated dwellings per 1,000 citizens in 2018. The largest total number of dwellings per 1,000 population was in Portugal (580 dwellings per 1,000 citizens), closely followed by Italy (578) and France (528). The highest total number of dwellings was in Germany, where the housing stock amounts to 42.2 million.

The mortgage market and interest rates have significant influence over conditions in the housing market. The cheapest country for a bank-financed mortgage in 2018 was Portugal, where mortgage interest rates averaged 1 percent. The most expensive country was Hungary, with an average interest rate of 4.5 percent. In traditionally strong markets such as the United Kingdom, France, Italy, and German mortgage interest rates ranged between 1.4 percent and 1.9 percent.

FIGURE 4

### Affordability of own housing

Gross annual salaries for the standardized new dwelling (70 m<sup>2</sup>), 2018



Source: Deloitte.



## Market focus

A round-up of Deloitte's 2019 Operations and Technology Survey results

By Andrew Carey, Benjamin Lam, Arnaud Bon and Hendrik Aholt

**I**N LINE WITH wider business practice, the global real estate market is beginning to see significant investment in advanced technological solutions. The 2019 European Operations and Technology Survey for real estate investment managers shows an industry adapting to evolving market conditions, a changing regulatory environment, and a fast-growing technological landscape.

The survey of 18 global real estate investment managers reviewed the main trends in technology and operations in the industry and their associated challenges. Here, we examine how investment managers are rethinking their operating models and technological capabilities, in response to these trends and to stay ahead of the curve.

The report covered trends in investment management operating models, including the extent of outsourcing, software and application use, and investment in systems.

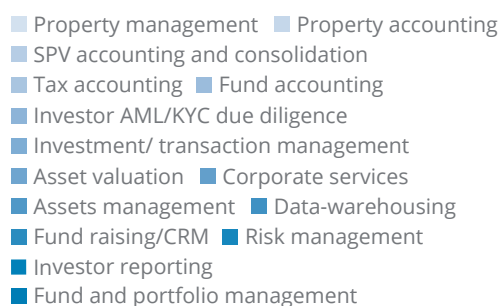
### Property management is the most commonly outsourced activity

Findings from the survey confirm that outsourcing is a common strategy, and show that property management, including both rental payments and general property maintenance, is the most frequently outsourced activity by investment managers. This is perhaps to be expected: Real estate

requires local expertise and as such it is common for investment managers in the field to liaise with service providers. Overall, service providers are utilised mainly for ‘support’ activities such as property accounting, SPV accounting and consolidation, and tax accounting: The majority of investment managers in the survey outsource these activities. Understandably, the least outsourced activities were those relating to risk management, investor reporting, and fund and portfolio management.

FIGURE 5

### Outsourcing rate (%)



Source: Deloitte.

## Software use is most prevalent in asset and fund management, but less so in other areas

The use of software applications to perform daily tasks is becoming increasingly common across the industry: The survey found that almost 50 different software applications and platforms were used by real estate investment managers. Systems such as SAP, Oracle, and Yardi can transform the way a business operates, and have been adopted for various real estate activities. The survey found that system implementation is most common in fund and portfolio management, with the majority of those surveyed having a technology system in place for these activities, and often having two or three coordinated systems.

While limited software use is understandable in property management due to the high degree of outsourcing, fewer than half the investment managers surveyed have developed internal applications for data warehousing. However, as the ease of data transfer improves with lower cost, dynamic tools, and more suppliers in the market, we should expect to see a step change in the appeal of data warehouse solutions.

## The least outsourced activities were those relating to risk management, investor reporting, and fund and portfolio management.

## Data warehousing and asset valuation are a target for future investment in systems

The survey shows increasing demand for data warehousing solutions to support real estate investment activities. Although only 13 percent of managers in the survey have invested in this field to date, over 60 percent plan to increase their investments over the next 18 months. Asset valuation and asset management are also areas where managers expect to invest significantly in the same time horizon. The growing interest in data warehousing, asset valuation and asset management reflects a longer-term desire to have a platform for analysing both structured and unstructured data using advanced analytical tools.

## Operating model satisfaction varies significantly across activities

The survey also explored the overall level of satisfaction among investment managers with their operating models. Among those surveyed, 21 percent reported a low level of satisfaction with some aspects of their operating model. The highest level of respondents' satisfaction was with governance and processes, particularly in fund and portfolio management, an area that, interestingly, has also seen the highest level of software investment. There was also a high level of satisfaction among respondents with risk management, anti-money laundering and know-your-client due diligence, and fund accounting. In contrast, within the same operational area, data warehousing, asset management, and property accounting were seen by those surveyed as areas needing improvement. This result may not be surprising: There is generally a direct correlation between strong governance and processes and an effective data warehouse/asset management solution.

## Investment in technological innovation is on the rise

Despite being a near-silent participant in digital transformation for almost four decades, the real estate industry is now increasing their use of technology. All the investment managers in the survey considered asset management, transaction management, and investor reporting as likely avenues for technological innovation. However, almost a quarter believed that activities such as property management, fund accounting and tax compliance and reporting would gain little from technology compared to current performance.

## The growing interest in data warehousing, asset valuation and asset management reflects a longer-term desire to have a platform for analysing both structured and unstructured data using advanced analytical tools.

Overall, the focus areas for innovation were not surprising, as they centre on those that can improve processes and efficiency or provide a greater degree of data-driven insight. Almost all managers in the survey intend to invest in digitalisation of contracts and documents, while 81 percent have already invested or are planning to invest in big data and data analytics, and 75 percent in robotics process automation. Despite being regarded as 'impactful', AI and 3D printing are attracting less investment than might be expected, with fewer than one in two survey participants intending to invest in these areas. Some innovations may be at too early a stage in the cycle, or may be targeted more effectively by other parts of the real estate sector.



## Yet, challenges remain

Despite intentions to expand software offerings and capitalise on state-of-the-art technologies, investment managers currently face a number of challenges in the market.

‘Talent’ was highlighted in the survey as one of the key challenges, with fierce competition for recruitment and retention of experienced employees. As fee structures tighten and investment vehicles become ever more sophisticated, maintaining a strong talent base is increasingly crucial for the continued success of investment management organisations. Seen as the most important challenge by respondents, it appears there is a need for more robust employee incentives.

‘Market conditions’ also weigh heavily on investment performance: Almost all survey participants considered real estate pricing and deal flow to be of particular importance, with pressure on fees another area of concern. Increased consolidation in the market combined with fewer larger players is a key factor adding to the pressure on fees, and many real estate investment managers cited feeling required to be increasingly creative in finding and developing assets that meet their expected return targets.

In the past decade real estate funds, like all alternative investment vehicles, have been affected by a wave of regulations, and the 2016 survey found that many real estate investment

managers felt as though they were being forced to reconsider the way they were operating. Regulations, such as the AIFMD, were relatively new when previous editions of the survey were undertaken, resulting in investment managers making substantial operational changes to ensure correct adoption. This year, regulation impact (83 percent) and increased compliance and structural costs (72 percent) were a significant concern amongst survey respondents. While there was similar concern about changes in tax environment, respondents had a neutral view about regulatory reporting and financial controls and the extent of the challenge they pose. As the new regulations have become embedded into the ‘ways of working’ for Real Estate investment managers, there may be less need for direct management focus, although its importance will remain high.

*Despite the challenges, the overarching message from the survey respondents remains positive. Findings suggest that investment managers’ satisfaction with their current operating model corresponds with their level of technological capability. There are strong intentions by respondents to invest more heavily in technology over the next 18 months and beyond, so we could see a dramatic shift in both software use and investment manager satisfaction. As such, the outlook for investment managers remains optimistic—a sentiment that should be reflected in future reports.*

## Endnotes

1. Source: IPE, RE Asset Managers Ranking 2018; <https://realassets.ipe.com/top-100-and-surveys/top-100-real-estate-investment-managers-2018/realassets.ipe.com/top-100-and-surveys/top-100-real-estate-investment-managers-2018/10027996.fullarticle>.
2. OECD: <http://www.oecd.org/env/indicators-modelling-outlooks/oecdenvironmentaloutlookto2050theconsequencesofinaction-keyfactsandfigures.htm>.
3. FTSE EPRA NAREIT U.S. and Global Real Estate Index Returns, Nareit, December 31, 2018.
4. Surabhi Kejriwal and Saurabh Mahajan, "2019 Commercial Real Estate Outlook: Agility is key to winning in the digital era", Deloitte, October 2018.
5. German Federal Statistical Office – 13th Population projection, 2019, retrieved from <https://service.destatis.de/bevoelkerungspyramide/index.html#!l=en>.
6. JLL, Pflegeheime in Deutschland, 2018, retrieved from <https://www.jll.de/content/dam/jll-com/documents/pdf/research/emea/germany/de/pflegeheime-in-deutschland.pdf>.
7. Figure of Deloitte following: German Federal Statistical Office – 13th Population projection, 2019, retrieved from <https://service.destatis.de/bevoelkerungspyramide/index.html#!l=en>.
8. JLL, Pflegeheime in Deutschland, 2018, retrieved from <https://www.jll.de/content/dam/jll-com/documents/pdf/research/emea/germany/de/pflegeheime-in-deutschland.pdf>.
9. JLL, Pflegeheime in Deutschland, 2018, retrieved from <https://www.jll.de/content/dam/jll-com/documents/pdf/research/emea/germany/de/pflegeheime-in-deutschland.pdf>.
10. Deloitte research.
11. Deloitte research.
12. Deloitte research.
13. JLL, Logistics Property report, 2019, retrieved from <https://www.jll.de/content/dam/jll-com/documents/pdf/research/emea/germany/en/Logistics-Property-Report-JLL-Germany.pdf>.
14. Deloitte research.
15. Figure of Deloitte following: Bulwiengesa, Initiative Unternehmensimmobilien, 2018, retrieved from [https://www.bulwiengesa.de/sites/default/files/rz\\_iui\\_marktbericht\\_10.pdf](https://www.bulwiengesa.de/sites/default/files/rz_iui_marktbericht_10.pdf).
16. JLL, Logistics Property report, 2019, retrieved from <https://www.jll.de/content/dam/jll-com/documents/pdf/research/emea/germany/en/Logistics-Property-Report-JLL-Germany.pdf>.
17. Bulwiengesa, Initiative Unternehmensimmobilien, 2018, retrieved from [https://www.bulwiengesa.de/sites/default/files/rz\\_iui\\_marktbericht\\_10.pdf](https://www.bulwiengesa.de/sites/default/files/rz_iui_marktbericht_10.pdf).
18. Deloitte Research.
19. Cushman & Wakefield, Micro-living study, 2019 retrieved from <http://blog.cushmanwakefield.de/wp-content/uploads/2019/04/19-04-16-CushWake-Microapartments-EN.pdf>.
20. Deloitte Research.
21. Cushman & Wakefield, Micro-living study, 2019 retrieved from <http://blog.cushmanwakefield.de/wp-content/uploads/2019/04/19-04-16-CushWake-Microapartments-EN.pdf>.
22. Cobalt Recruitment, Micro Living auf dem Vormarsch – neue Investitionschancen für den Real Estate Sektor, 2018, retrieved from <https://www.cobaltrecruitment.de/Neuigkeiten-Blog/item/micro-living-real-estate-sektor>.
23. Deloitte research.
24. Deloitte research.

## About the authors

### **Surabhi Kejriwal | [sukejriwal@deloitte.com](mailto:sukejriwal@deloitte.com)**

Surabhi is the Real Estate research leader at the Deloitte Center for Financial Services where she is responsible for driving eminence and thought leadership for the Real Estate practice. Prior to joining Deloitte, she led the captive credit research unit of Bank of America Merrill Lynch and tracked the investment grade real estate and homebuilders sectors.

### **Saurabh Mahajan | [samahajan@deloitte.com](mailto:samahajan@deloitte.com)**

Saurabh is a manager at the Deloitte Center for Financial Services with Deloitte Services India Pvt. Ltd. He researches a broad range of themes with a focus on technology innovations and sustainability. He has more than 10 years' experience in financial analysis and strategic research in real estate.

### **Jörg von Ditzfurth | [jvonditfurth@deloitte.de](mailto:jvonditfurth@deloitte.de)**

Joerg has more than 19 years' experience in strategy and real estate consulting. He leads the Global Real Estate Transformation Service Offering for Operation Transformation (OT) and the Service Line Real Estate Consulting. He specializes in the areas of strategy development, real estate portfolio management, and the development of finance alternatives in the field of asset and property management.

### **Nina Schrader | [nschrader@deloitte.de](mailto:nschrader@deloitte.de)**

Nina is the Director responsible for the Real Estate Investment Line at Deloitte and is a member of the German Real Estate Management Team. She has 17 years' experience in real estate and strategy consulting. She is in charge of projects focusing on real estate valuation and analysis and portfolio management systems, as well as transaction-related services and due diligence.

### **Tamara Terhalle | [tterhalle@deloitte.de](mailto:tterhalle@deloitte.de)**

Tamara is a Consultant in the Real Estate practice of Deloitte Consulting. Before joining Deloitte she studied Real Estate Management at HAWK Holzminden specializing in investment banking and project development. She has work experience as a graduate trainee at JLL focusing on Retail Leasing, Residential Investment, Big Cap Office Investment and Valuation & Transaction Advisory.

### **Petr Hana | [phana@deloittece.com](mailto:phana@deloittece.com)**

Petr is a Senior Consultant with Deloitte Advisory in Prague. His work focuses mainly on projects with clients in the real estate development and construction industry in the Czech Republic and Slovakia, in the area of organizational restructuring, project management, project control, real estate market analysis and process optimisation.

### **Andrew Carey | [ancarey@deloitte.co.uk](mailto:ancarey@deloitte.co.uk)**

Andrew is the Lead Partner for Real Estate Technology in Deloitte UK. He has 25 years' experience advising 'blue chip' clients across Europe, the US and the Middle East, and has a market-leading international reputation for thought leadership around strategic technology solutions and operational improvements in real estate. He leads transformational programs involving real estate technology, organizational change and business process improvement, from initial concept through to successful implementation. He is highly experienced in assisting management teams with the alignment of business strategy to operational execution.

**Ben Lam | [blam@deloitte.lu](mailto:blam@deloitte.lu)**

Benjamin Lam is a senior partner within Deloitte Luxembourg. He has 27 years of experience in the financial services industry. He co-leads the Deloitte EMEA Real Estate Funds group. He has extensive experience in cross-border engagement and advises many large real estate investment management groups on their future operating model. He is a Réviseur d'Entreprises Agréé in Luxembourg, an Expert Comptable and a Chartered Accountant in England and Wales.

**Arnaud Bon | [abon@deloitte.lu](mailto:abon@deloitte.lu)**

Arnaud is a Director in Deloitte's Strategy and Corporate Finance department, where he currently leads our Alternative Industries initiatives. As Head of Fund Services, he has set up and managed the fund administration and alternative depositary services lines at a global trust company specializing in alternative assets, and has been responsible for business and product development for private equity and real estate clients. Arnaud is a lawyer by training.

**Hendrik Aholt | [haholt@deloitte.de](mailto:haholt@deloitte.de)**

Hendrik began his career in 2007 at Deloitte in the Real Estate Consulting division. The main focus of his work is strategic and operative consultancy for real estate investors and investment managers with regard to their strategy, their Target Operating Model, and the functional fit of their IT solutions. Hendrik is also responsible for innovation and digitization within Deloitte Real Estate in Germany.

**David Brown | [debrown@deloitte.co.uk](mailto:debrown@deloitte.co.uk)**

David is a senior partner in the Real Estate tax group of Deloitte in London and heads the Real Estate Funds practice, working extensively on UK and pan-European real estate capital flows. He specializes in advising on the taxation aspects of real estate investment and development transactions, and has led teams advising a number of real estate funds, property companies and private investors.

**Matt Townsend | [mtownsend@deloitte.co.uk](mailto:mtownsend@deloitte.co.uk)**

Matt is a real estate tax partner who leads Deloitte's Private Equity funds practice and is the lead partner responsible for Blackstone Real Estate in Europe. Matt is focused on the Real Estate Private Equity market and has provided transaction and other tax advice in relation to investments across Europe and the rest of the world.

**Julie Castiaux | [jucastiaux@deloitte.lu](mailto:jucastiaux@deloitte.lu)**

Julie has more than 12 years' experience in sustainability, with a focus on climate change and strategy. She has been involved with various industries, from manufacturing to investment, in Luxembourg, Belgium, France and the Ukraine. She advises organizations on adapting their strategy for a more sustainable and responsible impact. She also advises companies on sustainability reporting, and is part of the Deloitte Sustainability initiative.

**Lize Griffith | [lizgriffiths@deloitte.lu](mailto:lizgriffiths@deloitte.lu)**

Lize is the Real Estate Industry leader for Deloitte Luxembourg and Deloitte Continental Europe, with primary responsibility for real estate services across audit, tax and consulting functions, and driving related business initiatives and activities. She has 20 years' experience with Deloitte, mainly in the real estate industry in Luxembourg, and also the United States and South Africa.

## Contact us

*Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, we should talk.*

### Industry leadership

**Robert O'Brien**

Partner | Global Real Estate sector leader  
+1 312 486 2717 | robrien@deloitte.com

**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.co.uk

### Asia

**Richard Ho**

Partner  
+852 2852 1071 | richo@deloitte.com.hk

### Australia

**Alex Collinsen**

Partner  
+61 293 227 921 | acollinson@deloitte.com.au

**Robbie Robertson**

Partner  
+61 293 223 595 | rorobertson@deloitte.com.au

**Jeremy Pitchford**

Partner  
+61 293 225 163 | jepitchford@deloitte.com.au

### Austria

**Gabriele Etzl**

Partner  
+43 1 513 09 13 | g.etzl@jankweiler.at

### Belgium

**Frédéric Sohet**

Partner  
+32 2 639 49 51 | fsohet@deloitte.comt

### Canada

**Ciro DeCiantis**

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

**Sheila Botting**

Partner  
+1 416-601-4686 | sbotting@deloitte.cat

**Anthony Cocuzzo**

Partner  
1-416-601-6432 | acocuzzo@deloitte.ca

### Central Europe

**Maciej Krasoń**

Partner  
+48 601 383 010 | mkrason@deloittece.com

**Miroslav Linhart**

Partner  
+420 246 042 598 | mlinhart@deloittece.com

### France

**Laure Silvestre-Siaz**

Partner  
+ 33 1 55 61 21 71 | lsilvestresiaz@deloitte.fr

**Jean Csuka**

Partner  
+33 1 58 37 95 13 | jcsuka@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

### Alexandra Kostara

Partner

+30 210 6781 100 | akostara@deloitte.gr

## Ireland

### John Doddy

Partner

+353 1 417 2594 | jdoddy@deloitte.ier

### Brian Jackson

Partner

+353 1 417 2975 | brijson@deloitte.ie

## Italy

### Elena Vistarini

Partner

+390 283 325 122 | jdoddy@deloitte.ier

### Claudio Tierno

Partner

+390 283 325 078 | ctierno@deloitte.it

## Luxembourg

### Benjamin Lam

Partner

+352 451 452 429 | blam@deloitte.lu

### Francisco da Cunha

Partner

+352 451 452 337 | fdacunha@deloitte.lu

### Lize Griffiths

Partner

+352 451 452 693 | lizgriffiths@deloitte.lu

### Pierre Masset

Partner

+352 451 452 756 | pmasset@deloitte.lu

### Basil Sommerfeld

Partner

+352 451 452 646 | bsommerfeld@deloitte.lu

## Middle East

### Robin Williamson

Managing director

+971 4 506 4738 | rwilliamson@deloitte.com

## Netherlands

### Jef Holland

Partner

+31 882 881 991 | jholland@deloitte.nl

### Jurriën Veldhuizen

Partner

+31652048770 | jveldhuizen@deloitte.nl

## Nordics

### Tinus Bang Christensen

Partner

+45 30 93 44 63 | tbchristensen@deloitte.dk

## Portugal

### Jorge Marrão

Partner

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

## Spain

### Alberto Valls

Partner

+349 143 811 26 | avalls@deloitte.es

## 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 | sgodley@deloitte.co.uk

### Andrew Carey

Partner

+44 77 1470 8842 | ancarey@deloitte.co.uk

## United States

### Jim Berry

Partner | US Real Estate & Construction leader

+1 21 4840 7273 | jiberry@deloitte.com

# Deloitte. Insights

Sign up for Deloitte Insights updates at [www.deloitte.com/insights](http://www.deloitte.com/insights).



Follow @DeloitteInsight

## **Deloitte Insights contributors**

**Editorial:** Sara Sikora, Rupesh Bhat

**Creative:** Mark Milward

**Promotion:** Maria Martin Cirujano

**Cover artwork:** Mark Milward

## **About Deloitte Insights**

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

## **About this publication**

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

## **About Deloitte**

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. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see [www.deloitte.com/about](http://www.deloitte.com/about) to learn more about our global network of member firms.