



The road to opportunity

An annual review of the real estate industry's journey into the digital age

KPMG Global PropTech Survey

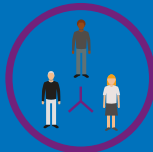


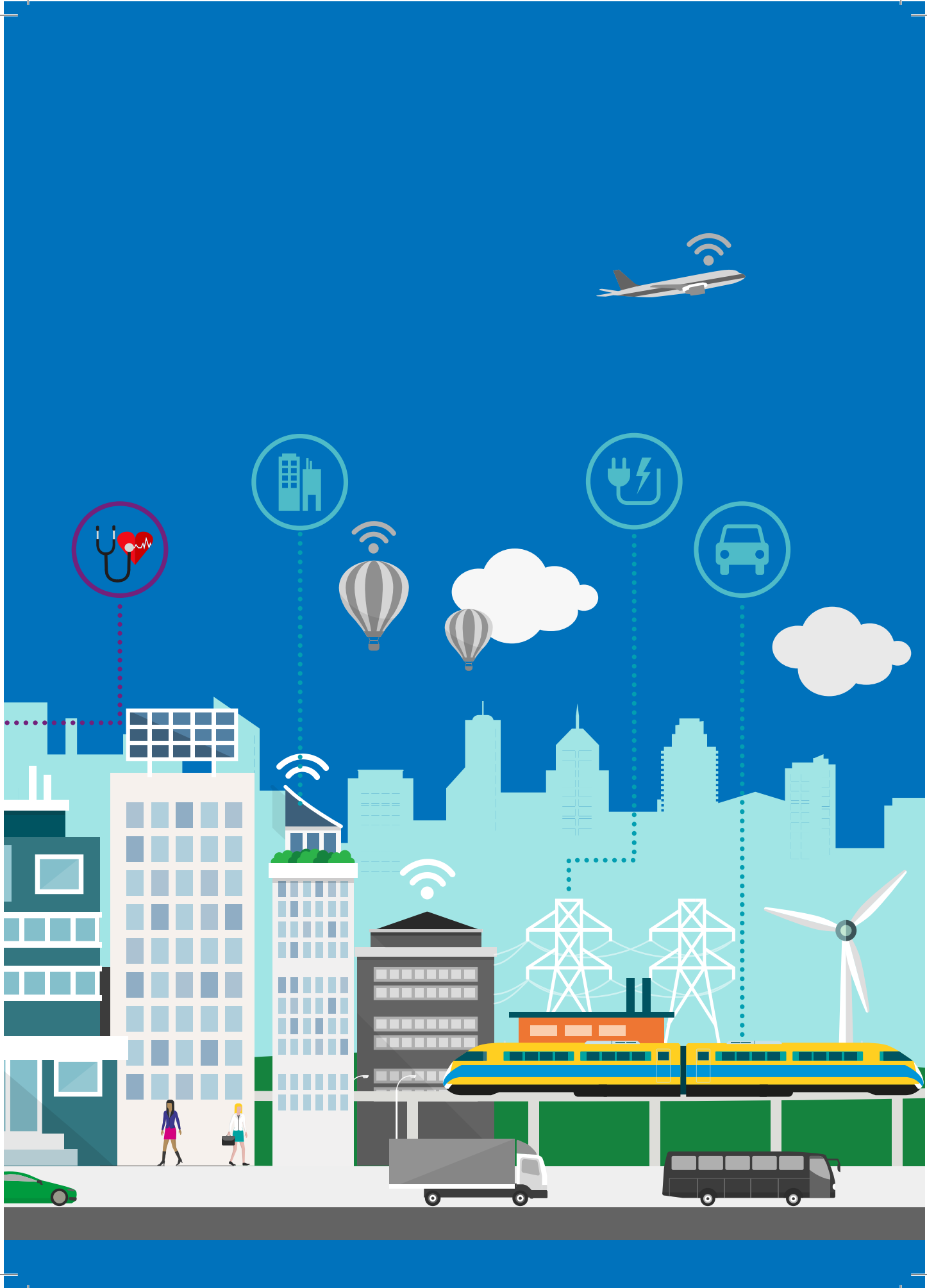
September 2018

kpmg.com/realestate

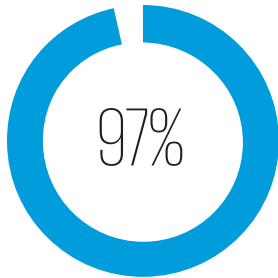
“It is not the strongest of the species that survives, nor the most intelligent. It is the one most adaptable to change.”

Charles Darwin

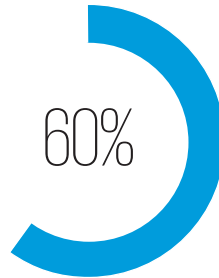




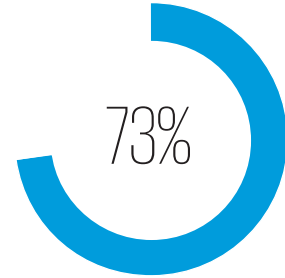
Headline results



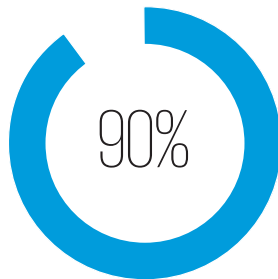
think that digital and technological innovation will impact their business



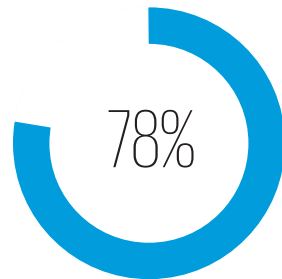
think that this impact will be very significant



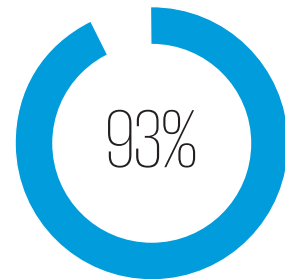
see digital and technological innovation as an opportunity. A further 25% see it as both an opportunity and threat



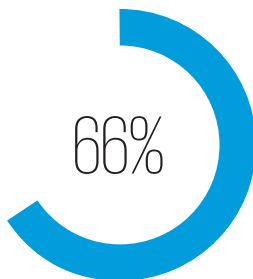
think that the corporate real estate industry views PropTech as an opportunity/enabler



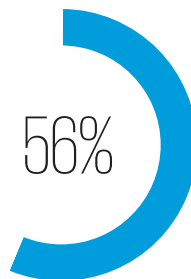
feel that digital and technological innovation engagement from across the corporate real estate industry has increased over the last 12 months



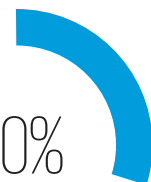
agree with the statement "Traditional real estate organizations need to engage with PropTech companies in order to adapt to the changing global environment"



do not have a clear enterprise-wide digital and technological innovation vision and strategy



rate their business 5 or below out of 10 in terms of digital and technological innovation maturity



of traditional real estate organizations say they currently invest or plan to invest in PropTech start-ups

Foreword

THE DIGITAL REVOLUTION IS UNDERWAY...BUT THERE IS STILL MUCH TO BE DONE!

Innovation, disruption, virtual reality, D&A, blockchain, IoT, artificial intelligence...over the last several months, the media has been abuzz with news of the digital revolution shaking up the real estate industry.

Like FinTech in financial services and e-commerce in retail, PropTech companies are transforming the well-structured real estate industry, long considered impervious to innovation. The results of KPMG's Global PropTech Survey in 2017 suggested that it was not just progressive, continuous improvement that was underway, but a real cultural and industrial metamorphosis.

In France, the first KPMG Real Estech barometer, published in January 2018, confirmed this analysis. One year later, what steps have property firms taken? KPMG's international Real Estate professionals wanted to address this question in the second edition of the Global PropTech Survey. The fourth industrial revolution has redefined the relationship between the digital and built environments. The emergence of new technologies and digitization of society have transformed our work habits, consumer behaviour and daily lives.

Consequently, technology has become a core issue for all players in the Real Estate sector, who have sought to gain a solid understanding of the impact of digitization on their business activities. The survey clearly illustrates the progress made across the sector, both in France and abroad. Innovation is no longer taboo and sector players are aware of the opportunities afforded by new technologies. Very often, usage disruption follows technological disruption. The need to provide property as a service and enhance the customer/user experience drives change. However, the survey results demonstrated that increasingly widespread recognition of PropTech's potential within the industry has not always led to real engagement. The sector's attitudes to PropTech remain somewhat "theoretical". It may be argued that the industry is still in the transition phase, laying the groundwork for an ecosystem of audacious, agile and innovative PropTech firms. Let us hope that future editions of the survey will highlight concrete action and mid-caps in the PropTech sector!

RÉGIS CHEMOUNY, FRICS

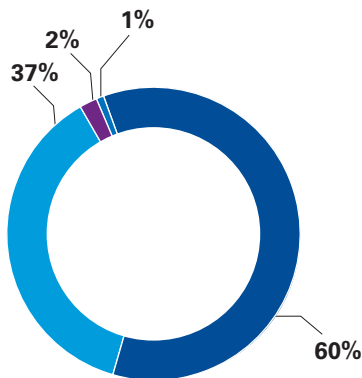
Partner, KPMG France,
Head of Real Estate & Hotels



A positive path to acceptance

The industry recognizes the potential opportunities and challenges PropTech poses but real progress has been slow. Is there a risk of all talk and no action?

How much do you think digital & technological innovation change will impact your business?

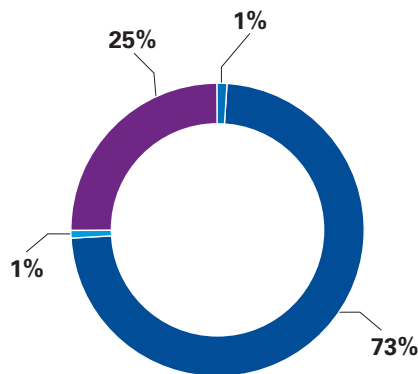


- Very significantly
- Somewhat significantly
- No fundamental changes
- None of the above

Note: question not asked to property technology respondents

Technology continues to demand considerable attention across all industries – as an enabler, a disruptor and indeed a risk. The real estate industry is no exception and the survey results show that property organizations are increasingly aware of its impact. A total of 97% of respondents think that digital and technological innovation will impact their businesses. This is an increase from 92% in the 2017 survey. A majority of organizations surveyed are also starting to recognize quite how

Overall, how does your company see digital & technological innovation?



- An opportunity
- A threat
- Both
- Not a major factor

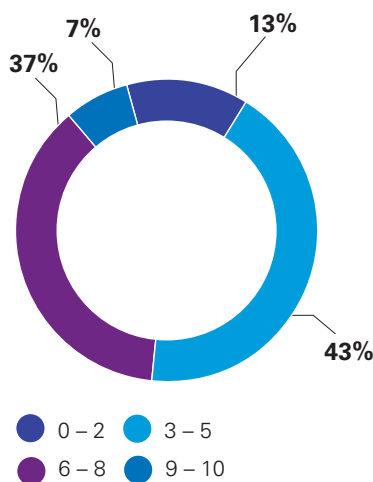
Note: question not asked to property technology respondents

transformative this will be. Those who think the impact will be very significant has risen by 14% in the last year – from 46% in 2017 to 60% this year. This acknowledgment is also evident in the rising prominence of tech-related topics on property conference agendas. In addition, more companies are looking to hire Heads of Innovation or at the very least tasking someone to look at technology and innovation within their business.

“It is encouraging to see that positive sentiment around digital and tech innovation is continuing on an upward trajectory. There is a fundamental shift happening within the real estate sector as new technologies emerge and it is paramount for future proofing that businesses see this as an opportunity and not a threat. Companies should be looking at the impact technology will have in the next five, ten, fifteen years and apply that to their investment, business and cultural strategies today.”

William Newton – President and EMEA MD, WiredScore

Where would you rank your organization with regards to digital & technology innovation maturity? (Zero is behind the curve, ten is cutting edge)



Note: question not asked to property technology respondents

The vast majority of respondents view technology and innovation positively; 73% see it as an opportunity and a further 25% see it as both an opportunity and a threat. However, whilst property professionals increasingly understand the benefits, the continuing theme from this year’s survey is that few are actually putting their words into action. More than half of respondents (56%) ranked themselves as 5 or less out of 10 with regards to their digital and innovation maturity. Only 7% consider themselves to be at the cutting edge of PropTech.

Real estate organizations need to be aware that the potential threats are only likely to materialize if they fail to adapt and grasp the opportunity.

This requires ownership from the top – something that many CEOs recognize. In KPMG’s 2018 global CEO Outlook Survey, 71% of respondents said that they are prepared to lead their organization through a radical transformation of its operating model. Furthermore, over half (54%) of respondents said they are seeking to actively disrupt the sector in which they operate, rather than waiting to be disrupted by competitors. Some real estate CEOs are taking a similar proactive approach, but many are still waiting for their peers to make the first move and will likely look to be “fast followers.”

Executives also have the challenge of ensuring that there is engagement across all areas of the business and throughout all levels of the workforce. This often requires a change in the organization’s culture and mind-set – its core DNA should be geared towards fostering innovative ideas and being adaptable to change. Critical to this is identifying any pockets of resistance that may be barriers to change.

Further reading:

2018 Global CEO Outlook Survey
www.kpmg.com/ceooutlook

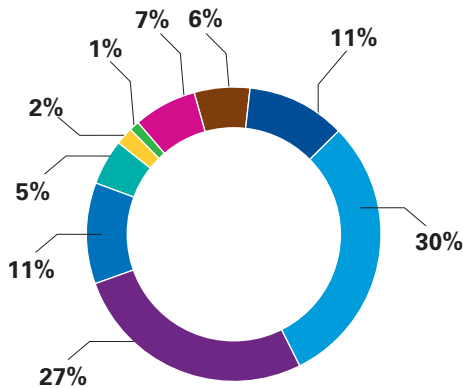
Gauging the future

The potential benefits of data, automation and Artificial Intelligence are widely recognized, but is the industry giving enough attention to less mature but potentially hugely transformative technologies?

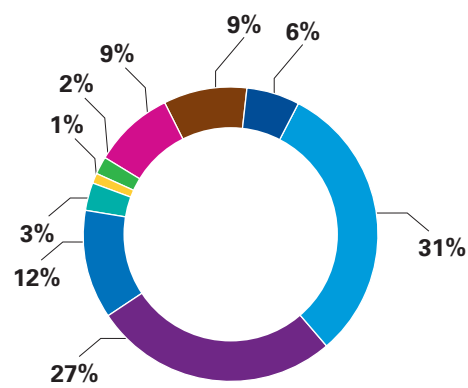
Data and automation are the main areas that respondents expect to generate most change in the property industry. 30% of respondents ranked automation as having the biggest impact on the industry in the short term. A further 27% placed big data and data analytics first. In the long term, 32% of respondents focused more on Artificial

Intelligence, with 17% and 8% focusing on data and automation respectively. This is also reflected in the technologies that incumbent real estate organizations are most likely to utilize. Almost a third (31%) ranked automation highest and 27% voted for big data and data analytics in the short term. 28% placed Artificial Intelligence highest in the long term.

Which technological innovations will have the biggest impact on the real estate industry in the short term?



Which technological innovation is your business most likely to utilize in the short term?



- Artificial Intelligence (AI)
- Automation (e.g in finance and other key processes)
- Big Data and data analysis
- Internet of things (IoT)
- Blockchain

- Autonomous Vehicles (including autonomous drones and driverless cars)
- 3D printing
- Virtual/Augmented reality
- 5G

Note: question not asked to property technology respondents

“Automation will address many inefficiencies that exist in the property sector. The challenge with Big Data & analytics is that as we collect more and more information, we need to constantly consider ‘why are we collecting this data.’ For those organizations that are truly customer focused this will become a differentiator.”

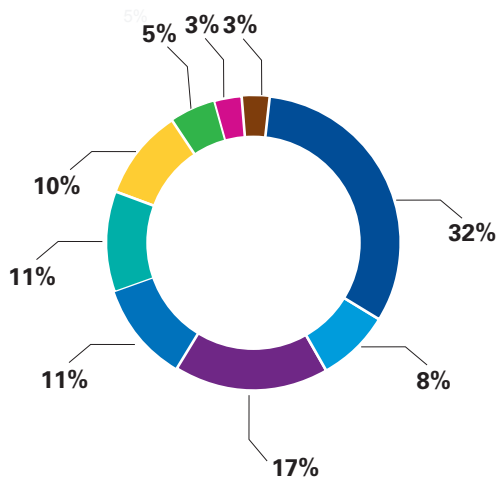
Jonathan Hannam – Managing Director, Taronga Group

Given the inter-connected nature of data, analytics and automation it is unsurprising that respondents gave these a similar ranking.

However it is possible that the industry is underestimating the pace at which Artificial Intelligence technology is developing. There are

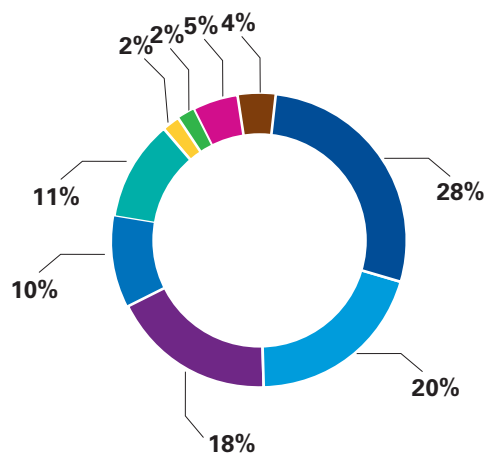
already numerous examples of Artificial Intelligence being used in multiple industries, and the hype is fast becoming reality. In property for example, Artificial Intelligence is being used in areas such as property management bots and predictive maintenance, investment selection and valuations.

Which technological innovations will have the biggest impact on the real estate industry in the long term?



- Artificial Intelligence (AI)
- Automation (e.g. in finance and other key processes)
- Big Data and data analysis
- Internet of things (IoT)
- Blockchain

Which technological innovation is your business most likely to utilize in the long term?



- Autonomous Vehicles (including autonomous drones and driverless cars)
- 3D printing
- Virtual/Augmented reality
- 5G

Note: question not asked to property technology respondents

While the industry recognizes the value of data, anecdotally organizations appear to still be working on establishing what data they have – and what they actually need – and developing a clear strategy on how to use it successfully and responsibly. This is all the more important with the introduction of the General Data Protection Regulation. There is already an abundance of data available from a multitude of sources, but it is often of varying quality and historically little thought has been given to its value. One of the key actions for real estate organizations will be to establish what data is useful to them and how to structure it in a usable format.

This will enable them to make smarter, faster, data-driven decisions throughout their business. This potentially has multiple benefits, such as delivering better and more targeted services to customers, increasing business efficiency and agility, and improving building performance and management. Better quality data can also enable Artificial Intelligence solutions to learn more effectively and ultimately automate processes to free up human resources for more value-add activities. For example, investment teams can use automation, AI and cloud based solutions to integrate real-time data and model different scenarios. This will ensure that analysts can spend their time analyzing the data rather than inputting and aggregating it. Furthermore, it can help reduce the risk of human error and speed up the decision-making process.

Beyond data, the industry appears to still be unconvinced by the impact of less mature technologies such as autonomous vehicles, virtual reality, 5G and 3D printing. Whether this is due to a perceived lack of impact or the fact that these technologies are too early-stage for real estate decision makers to pay attention to them yet remains to be seen, but we would caution against both approaches.



The likes of autonomous vehicles, for example, have the potential to transform today's built environment and fundamentally change current location drivers for both commercial and residential property. Autonomous vehicle technology is maturing quickly and with the alignment of both public and private players we expect there to be rapid development over the next 10 to 15 years, if not sooner. The world's first driverless taxi trial took place in Singapore back in 2016 and, whilst there are clear challenges to overcome still, there are several companies globally competing to bring autonomous vehicle technology into the mainstream for both commercial and passenger vehicles.

5G technology is also likely to have a profound impact on the property industry. Not only might it help to facilitate Internet of Things connectivity and the ability of organizations (and buildings) to collect, analyze and respond to huge volumes of data in rapid time, but it could impact areas such as property and land values, as a result of increased demand from technology firms to build cell towers in dense urban areas. Furthermore, improved connectivity could play a role in the development of smart cities and autonomous vehicle technology.

Emerging technologies may sometimes seem a long way off, indeed many will not even be on the radar yet, but they all have the potential to increase the spectrum of risks for property owners. It is critical that the industry carefully considers both the direct and indirect potential impacts of these and builds flexibility into both their buildings and businesses, in order to react quickly as they materialize. For example, how much and what kind of office space will companies require in the future, as robotic process automation reimagines today's workforce; what will the parking requirements be for both commercial and residential buildings in urban areas when autonomous vehicles and

mobility as a service becomes the norm; and what will be the optimal locations for logistics warehouses as customer demand for instant gratification continues to rise and autonomous vehicle technology reduces the travel time of delivery lorries? When you consider the lifespan of buildings, and the lead time for new developments and changes to existing plans, it is vital that property players take long-term changes and trends into account when making decisions – black swan events can often be predictable if you know where to look.



“In the short term there is a lot of focus on automating processes, where there are undoubtedly huge opportunities. There is however a risk that the focus on short term opportunities, which are very real and substantial, distracts us from the longer term threats that technology presents, as the fundamentals of the property sector change. There are clearly a number of different approaches to engaging with technology, and different approaches will suit different companies, but it is essential that companies ask themselves how technology can help them today and how it will change tomorrow, and then have robust plans in place to address both of these.”

Dan Hughes - CEO, LIQUID REI & Alpha Property Insight



Decoding disruption

With disruption here to stay, organizations should avoid short-sighted, 'me too' or overly knee-jerk reactions, in favor of building a more holistic view and strategy on disruption. KPMG professionals propose a four-step approach to deciding where to play, how to win and what actions to take:



Step 1: Map the disruption landscape – filter through the noise to identify the most relevant disruptors.

With technologies developing at a rapid rate and new PropTech solutions and market entrants emerging all the time, property organizations need to be aware of current and emerging trends and consider which ones will impact them and how. As well as observing trends and developments within the property sector, real estate organizations can gain valuable insight from looking at patterns in other industries and evaluating how they have responded.



Step 2: Conduct a threat assessment – study the likely impacts of potential disruptors.

Property companies should think about how technology could impact their properties, their business (both processes and people), the needs of their customers and consumers, and how those needs may evolve as new technologies emerge. Different technologies and products will apply to and change each of these to varying degrees.



Step 3: Chart the course – recalibrate the strategy and realign ongoing initiatives.

Organizations should consider how their value proposition may need to evolve in future and develop an enterprise-wide digital and innovation strategy to achieve their vision. This may require companies to develop or procure new solutions and tools, collaborate with others, and hire new skills. In some cases these will be drawn from outside of the property industry.



Step 4: Transform the DNA – build the capability to recognize and harness disruption.

Some property companies may be criticized for being "dinosaurs" who are slow to accept and adapt to change. Many will have to learn to be more innovative, technologically-engaged and customer-focused in order to be successful in the digital age. It is important that this change in cultural mind-set occurs across the entire organization.

Further reading:

Real estate in the digital age <https://home.kpmg.com/uk/en/home/insights/2017/06/real-estate-in-the-digital-age.html>

Advantage digital: www.kpmg.com/uk/advantagedigital

Mobility 2030: www.kpmg.com/uk/mobility2030

GDPR, data privacy and the customer <https://home.kpmg.com/xx/en/home/insights/2018/06/gdpr-and-data-privacy.html>

Decoding disruption <https://home.kpmg.com/xx/en/home/insights/2017/09/decoding-disruption-navigating-a-world-of-constant-change.html>

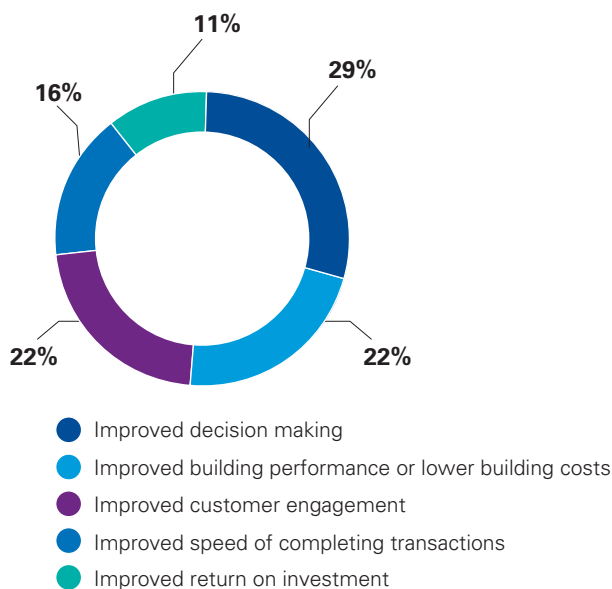
Aligning perspectives

Incumbents and disrupters need to work together to ensure solutions are focused on the biggest pain points for the sector and solve real-world problems.

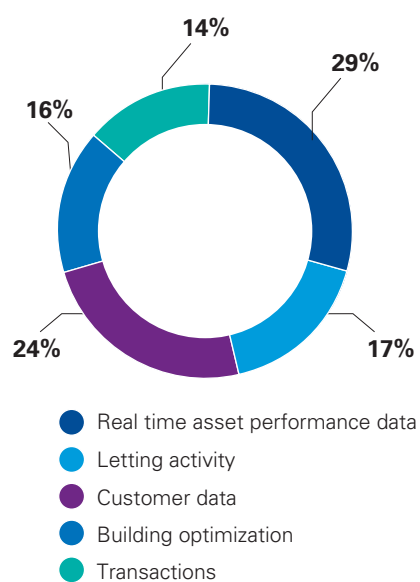
When it comes to the question of which digital and technological innovation improvements will have the biggest impact on the sector, the results are very similar to 2017. The biggest focus remains on improved decision making, building performance and customer engagement. Interestingly, when looking at responses from property technology companies only, there was greater emphasis on the speed of completing transactions (33% vs 13% for the rest of respondents). They also gave far less importance to building performance (6% vs 25%). It could be argued that this demonstrates a disconnection between areas where the industry sees potential for technology to add value and where PropTechs are focusing their efforts.

Responses from PropTech organizations also differed from industry incumbents when asked which areas will be most disrupted by technology and innovation. 31% of incumbents ranked real time asset performance data highest, compared with 17% of PropTechs. While PropTechs gave greater weighting to letting activity (24% compared with 16% of incumbents). This is perhaps due to a large proportion of the current PropTech solutions primarily targeting the residential and B2C market. However it will be interesting to see if this disparity continues as PropTechs start to pay more attention to the B2B market.

Which digital and technological innovation improvements will have the biggest impact on the real estate sector?



Which areas do you see as being most disrupted by digital and technological innovation in the short term?



“It is pleasing to see that the importance placed on the application of digital and technological innovation by the real estate industry is growing. It has taken time, but the industry is really beginning to recognise the fundamental role PropTech can play, and is playing, on so many areas of the real estate industry, from planning to asset performance and data mining.”

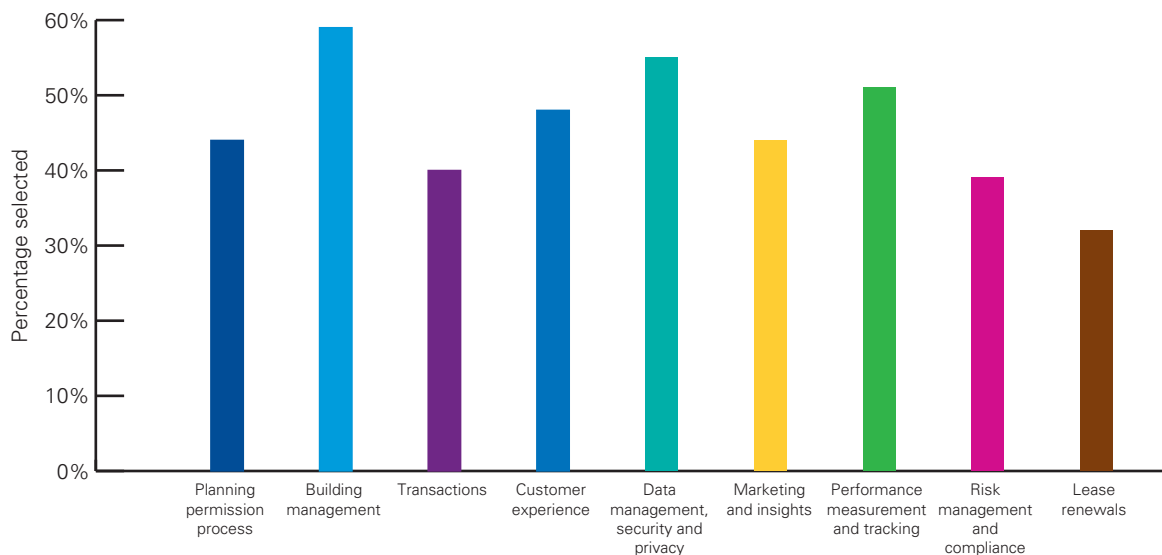
Oli Farago – CEO, Coyote

To gain a better understanding of the industry’s priorities for PropTech, we asked real estate incumbents what they see as the biggest pain points where technology could produce efficiency gains. Building management, performance measurement and tracking, and data management, security and privacy were selected by over half of respondents. 48% also selected customer experience. Lease renewals and transactions attracted the least responses (32% and 40% respectively), implying that not everyone buys into the hype around blockchain revolutionizing property transactions.

However, the spread of responses is relatively even across the different areas and clearly there are opportunities across all areas of the industry for technology to provide benefits.

In order to successfully bridge the gap between property and technology, and ensure that both are able to make the most of the opportunity presented, it will be important for the two to align their perspectives on where they see potential for efficiency gains and value-add. KPMG member firms sometimes hear from clients that PropTechs do not truly understand traditional real estate businesses and are developing solutions that do not solve their biggest problems, or only deal with part of the problem. In some cases solutions are even aimed at perceived problems that real estate organizations do not actually have. Property and technology organizations will need to invest in working together and helping to translate each other’s languages in order to overcome this challenge.

What do you see as the biggest industry pain points where technology could produce efficiency gains?



Note: question not asked to property technology respondents

Property as a Service

The real estate industry is gradually recognizing the need to become more customer-centric. In KPMG in the UK's survey of global investors at the MIPIM RE-Invest summit in March 2018, over half of the audience (57%) said they think that "Property as a Service" will become fundamental to the real estate offering in ten years' time. Today's customers are more informed, more vocal and more willing to look elsewhere if they are not satisfied with the level of service that they're receiving, and that includes property customers. Gone are the days when landlords could sign tenants up to a twenty year plus lease and simply cash the rent checks until renewal. For starters, many tenants are no longer willing to sign up to a twenty year lease in today's ever-changing global environment and there is an abundance of flexible workspace offerings to choose from if traditional real estate landlords are unwilling to cater for this. Tenants are also expecting more of a service experience from their landlords – real estate isn't just about providing four walls and a roof any more.

The first step for the property industry is to start actually using the word "customer" rather than "tenant" or "occupier" and then giving more thought to who the customer actually is. KPMG professionals see three separate groupings:

- **Customers** are the counterparty who you have the commercial agreement to take space with. Note this agreement may not necessarily be in the form of a lease in future.
- **Consumers** are the individuals that interact with the building and its environs, either the employees of your customers, or others visiting and moving through the space.

- **Capital** represents the stakeholders who have provided you with the funds to invest. Many fund managers would see this group as their "customer"; in general there is surplus capital and individual property companies and investors need to compete for it.

Mapping the customer journey and experience of each of these groups will lead to a much deeper appreciation of customer needs and how to address them, along with how technology can help.

Developing a customer-centric approach

Being customer-centric goes to the heart of an organization's strategy and focuses the mind on a number of key questions:

- What will we be famous for?
- What role do we want to play in customers' lives?
- Where will we play?
- How will we win?

Answering these questions helps to develop a clear view on a number of tough choices and trade-offs – and which business model the company should adopt. There are three elements:

1. **Markets & sectors:** Identify which markets/ sectors represent the greatest opportunity for profitable growth. Prioritize these markets/ sectors based on their attractiveness and the organization's relative business strengths. Continual market monitoring is key to building contingency plans.
2. **Customers:** Develop effective customer segmentation to evaluate your customer and really understand their priorities – and how you can shape your offering to fit.
3. **Propositions and brands:** Understanding your customers will help develop and position your brand to build on the financial and strategic objectives set by your organization.

Creating value from customer insights

The fixed nature of property means as an organization you need to understand your locations and micro-markets (including transport access, amenities, shopping and leisure). That allows you to build in the associated network effects and deeper knowledge of your customer requirements. Micro locational knowledge is now critical.

A deeper understanding of your customers is an essential requirement to developing a customer value proposition. Analyzing how customers interact with their built environment can also help to reduce the potential for building obsolescence and expensive retrofitting. This level of insight is beyond the data traditionally collected by organizations. It can include:

- Churn by type of customer – which ones are sticky and which churn more
- Characteristics (age, socio demographics, income)
- Needs and requirements: how is the asset used and what are the frustrations they face?
- The role the asset plays in their day-to-day life
- The trade-offs they are willing to make (such as price versus distance from transport, amenities on site versus local alternatives and so on). This will help inform value based pricing.

Effective use of technology to collect and analyze data about the building and its occupiers will improve the way an organization can segment and communicate with its customers, while allowing organizations to enhance the customer experience.

Developing a winning value proposition follows a few key steps:

1. **Understanding the customer:** There are a number of needs based analytical techniques and approaches to customer segmentation that can be used to inform the process.

2. **Design the value proposition:** Insights on customer segments can be consolidated to help support the development of new propositions and develop the brand.

3. **Business implications:** It is important to assess the internal implications of different value propositions and how to prioritize these, as well as monitoring external factors like competition, societal and technological change.

4. **Financials:** Spend time testing and selecting a proposition based on key performance indicators such as reduced vacancy rates and rental rates, as well as ease of implementation.

Further reading:

Tomorrow's experience, today
<https://home.kpmg.com/xx/en/home/campaigns/2018/06/tomorrows-experience-today-harnessing-a-customer-first-approach-in-a-changing-world.html>



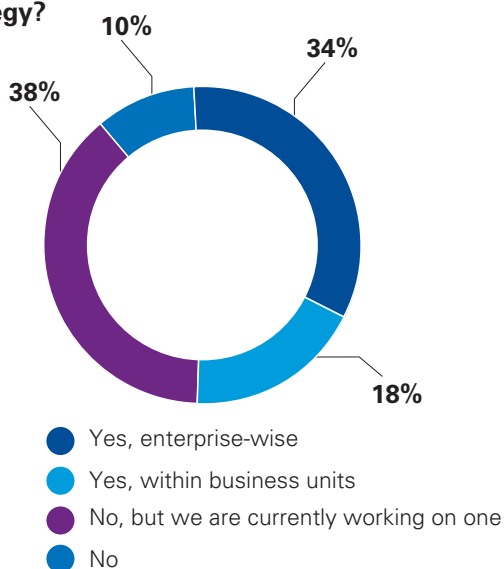
Becoming truly digital

Many property organizations may still be behind the curve in developing an enterprise-wide digital and innovation strategy.

Last year less than a quarter (24%) of real estate incumbents claimed to have an enterprise-wide digital and innovation strategy in place, but the latest survey results are more promising with this having increased to one-third (33%). The proportion of respondents who neither have a strategy nor are working on one also decreased from 17% in 2017 to 10% this year. However, this is still a significant proportion of the industry who feel that they do not need to have a plan for managing change in the digital age.

There were some differences in responses between geographical regions, with 43% of EMA respondents stating that they have an enterprise-wide strategy, compared with just 23% of Americas respondents and 21% for ASPAC. Only 5% of respondents answered no, compared with 10% for Americas and 20% for ASPAC.

Does your organization have a clear digital & technological innovation vision and strategy?



Note: question not asked to property technology respondents

It will be interesting to see if these results move forward in the next survey as the digital debate gains traction globally.

2016/17 was widely acknowledged by industry commentators as a turning point when attitudes to PropTech started to shift from disruption to acceptance, and over the last 12-18 months there have been more changes in the industry as that acceptance has gradually turned into adoption. In this time innovation and digital transformation roles have evolved from a '20% project' off the side of a desk to new hires who report directly into, or even sit on, the Board. Often these new hires have come from outside of the real estate industry, bringing with them fresh ideas, new skills and learnings from other how other sectors have approached the challenge. Still there are many property organizations who haven't taken this step and indeed some who do not recognize the need to. Adoption of technology is still too often confined to piecemeal improvements or stop-gap measures and there is a tendency for organizations to think that simply procuring a tech solution will be enough.

It is critical that the industry recognizes the need for a more holistic transformation process that looks at every part of an organization. Executives should consider the potential impact of technology on their buildings, their business model and their customers' businesses.

"Successful innovation requires organizations to bring disruption by nature into their core company culture."

Sander Grunewald – Global Real Estate Advisory Network Lead, KPMG in the Netherlands

This may require them to rethink what markets they operate in, what problems they are solving for themselves or their customers and what roles they play in the value chain.

Only when an end-state strategic vision is in place, does it make sense to drill down to the tools that can help to deliver it in practice.

To achieve this strategic vision, a more innovative culture will need to be embedded in an organization's DNA. Some traditional organizations often struggle to encourage new ideas, take risks, experiment and fail.

Their implementation programs can also typically be linear and inflexible, with return on investment (ROI) metrics focused on immediate results. Organizations need to create an environment that fosters innovative ideas, allows them to develop, and enables them to be integrated 'back' into the core business. This needs to be driven from the top, with buy-in across all levels of the workforce. Consideration should also be given to the appropriate measures to track ROI, which take into account the lag effect of adoption and wider positive implications beyond economic value.

Finally, agility is key. A successful digital and innovation strategy allows for optionality to change course if transformation unfolds in unexpected directions.

Further reading:

Becoming truly digital <https://home.kpmg.com/xx/en/home/insights/2018/06/becoming-truly-digital.html>

“When you decide to do something you are not actually doing it. So start with really doing it. And do it with an open innovation strategy so new developments can fit in easily. PropTech is about the future of real estate and of your business, so you want to make sure you do this the best way possible. Start working with the best start-ups or scale-ups and get your inspiration from the best events in the world. Start with small experiments but have a plan to scale it within the whole organization or different portfolios.”

Wouter Truffino – CEO and Founder, Holland ConTech & PropTech

Innovation often involves entering uncharted territory – what are key characteristics for success? Here are some guiding principles for Real Estate organizations seeking to adopt PropTech successfully:

Dedicated

Dedicated team implementing PropTech innovation – a team that has developed strong, collegial relationships across all business units and departments in the organization in order to ensure PropTech is being used effectively to solve real business problems.

Strategic

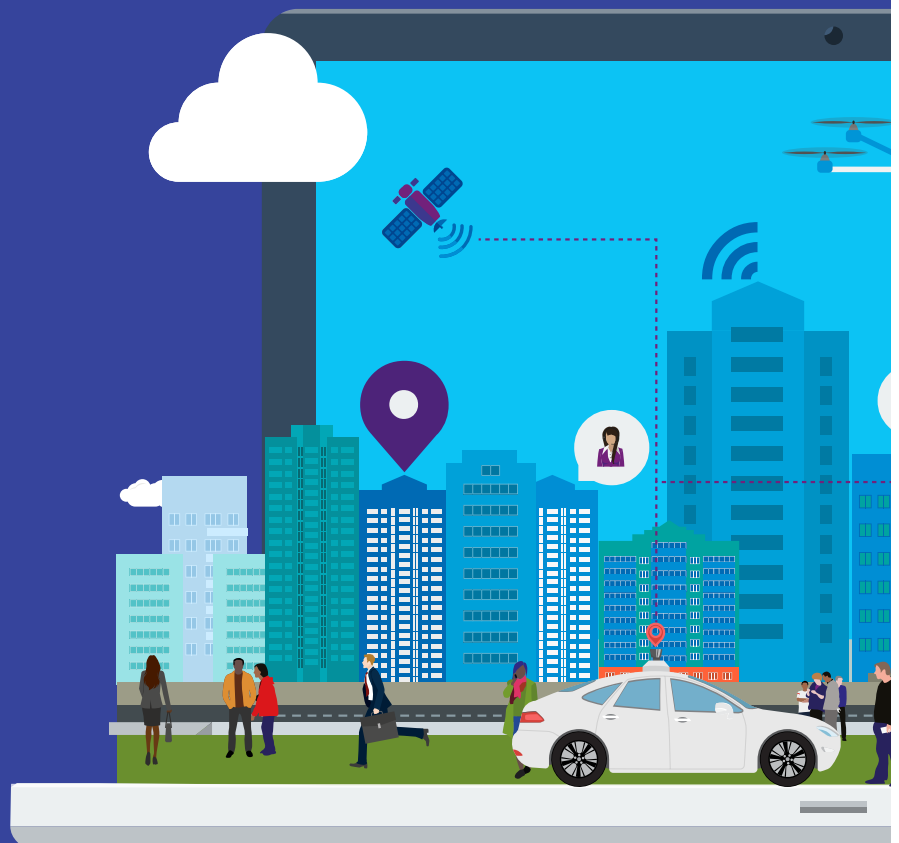
Well-developed yet adaptable strategy for leveraging PropTech innovation in order to achieve strategic business objectives.

Collaborative

Looks to create both internal and external relationships in order to drive its PropTech strategy and buy-in for specific initiatives.

Customer-centric

Focused on customers first – using customer demands, pain points and challenges to drive technological innovation from outside in, rather than inside out.



Long-term and short-term focused

Able to focus on implementing the long-term, transformative changes required to reshape the business, whilst also implementing incremental changes required to respond to day-to-day challenges. Finding a balance between incremental changes and the guiding principles of the business' long-term innovation strategy.

Outcome-orientated

Focused on outcomes, with specific plans to measure and assess the impact of PropTech innovation. At the same time, recognizing that ROI may take time to achieve and so identifying a range of other measures and metrics in order to help guide PropTech-related decisions.

Clarity of vision

Concrete vision for the future with a CEO and leadership team thoroughly committed to seeing the vision implemented.

Awareness

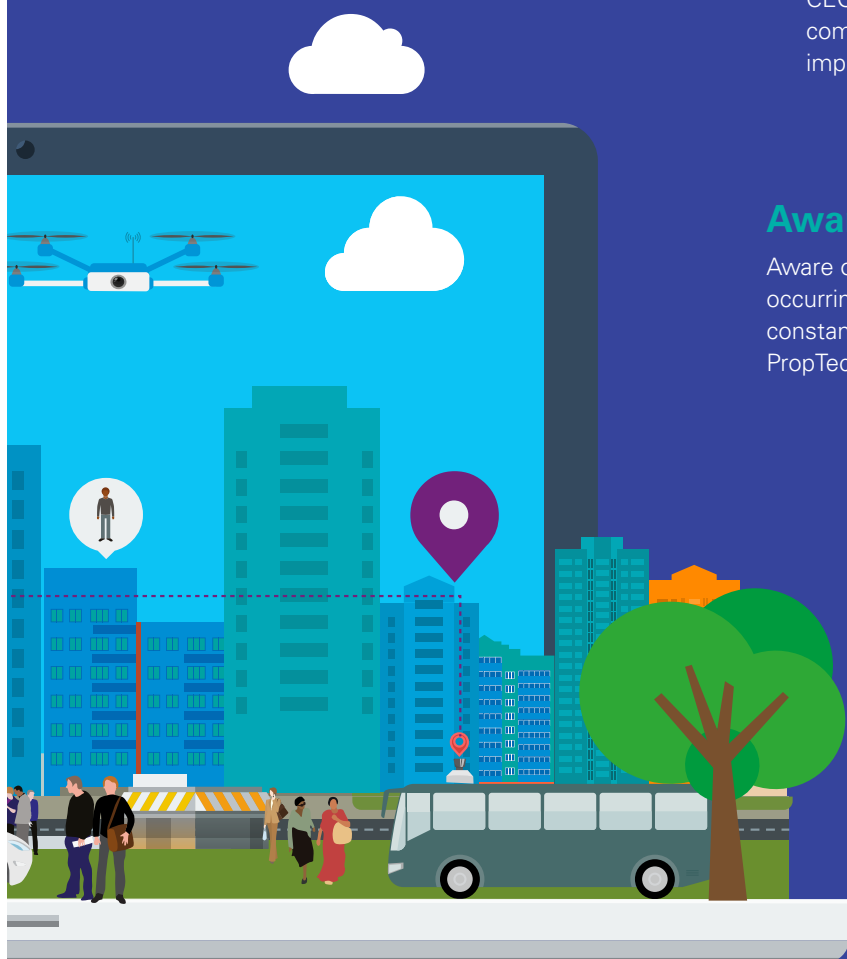
Aware of the signals of change occurring in the market and constantly seeking insights into how PropTech will evolve in the future.

Willing to learn

Open to learning – not only from personal experience, but from the experiences of others, both within and outside the industry. It goes without saying that this also requires a willingness to fail and resilience to continue trying new ideas – starting with small experiments and establishing a foundation for larger steps.

Agile and adaptable

Able to make changes as required to address the challenges associated with a constantly evolving business and PropTech environment.



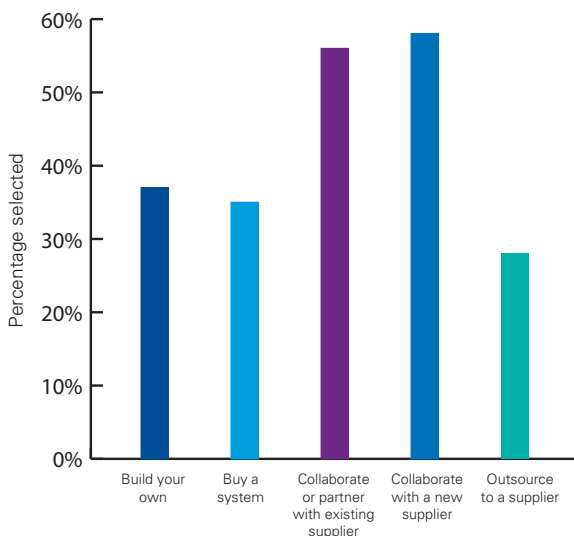
Growing the ecosystem

The PropTech sector continues to mature and evolve, and incumbents are recognizing the value start-ups can add to their organizations.

Collaborating with a supplier remains the most popular option for how incumbents expect to develop their digital and innovation capability. However, more respondents this year were open to new suppliers in addition to existing suppliers. Firms in the Americas are more likely to consider collaborating with a new supplier (77%), compared with 62% EMA and 41% ASPAC. This could be the reason that new US PropTech companies often experience quicker traction amongst customers compared to elsewhere.

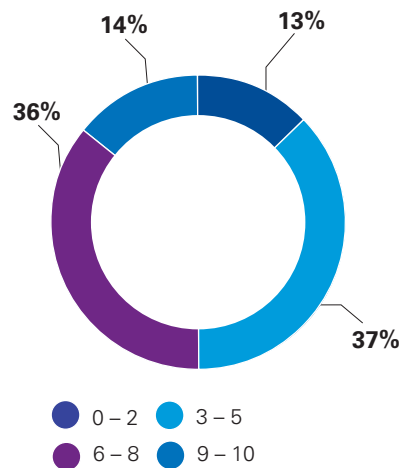
Collaborating with start-ups can help incumbents keep up with the pace of change by leveraging the start-up's agility to move quickly to adapt to new trends and market demands. In addition to bringing talent, technology and ideas, start-ups are typically unencumbered by the infrastructure, culture and regulatory burden of established institutions. Successful collaboration however requires both parties to respect their differences and adapt to each other without compromising their core business ethos. It needs to be an equal and symbiotic relationship.

How do you expect to develop your digital and technological innovation capability?



Note: question not asked to property technology respondents

How actively is your organization looking for collaboration with technology partners? (Zero is not at all, 10 is very actively)



Note: question not asked to property technology respondents

“Currently start-ups have to wait for 6 – 9 months for a contract to start. Companies that bring the sales cycle down to a couple of days (max one week) will be the winners of the future.”

Wouter Truffino – CEO and Founder, Holland ConTech & PropTech

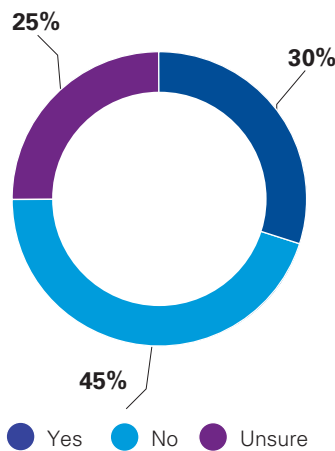
“A number of the agents and global developers have started their own start-up accelerators and/or invest as LPs in PropTech funds. If we want to maintain the open and collaborative atmosphere, it will be important for these portfolio companies to work with whoever they want, without their investors being able to veto client lists.”

Eden Dwek – PropTech lead, KPMG in the UK

Whilst we have witnessed a dramatic rise in corporate Venture Capital (VC) participation in global venture deals across all industries, real estate incumbents have been less active in setting up corporate VC arms and accelerator programs than other sectors, such as financial services. Only a third of incumbents surveyed had plans to invest in PropTech start-ups. This will likely foster a more collaborative market amongst tech and real estate, with VC continuing to fund the majority of

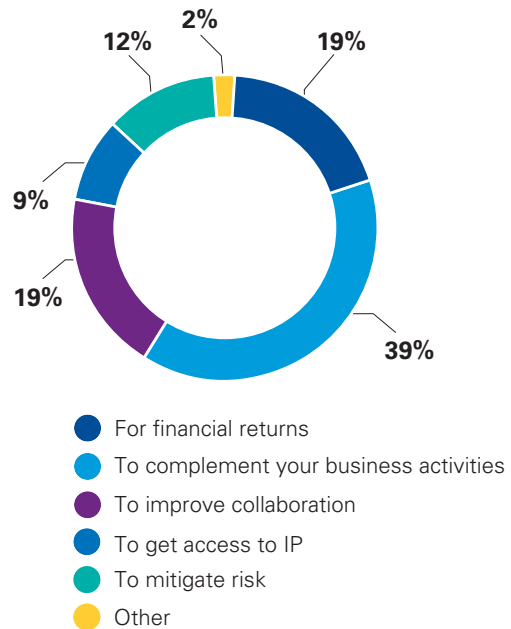
growth, and start-ups being able to operate in an open ecosystem of clients without worrying about conflicts. Those that do invest need to be aware of the effort and patience required, as well as the potential for culture clashes, in order to ensure that the venture is successful for both the corporate and the start-up.

Do you currently invest in or have plans to invest in PropTech start-ups?



Note: question not asked to property technology respondents

What is the primary reason for your investment, or planned investment, in PropTech start-ups?



Note: question not asked to property technology respondents

Key factors to consider when investing in start-ups

Some organizations are setting up corporate VC arms or establishing accelerator programs in order to gain early access to technology and new business models as they emerge. This is particularly the case in sectors such as financial services, although we have also seen a number of the property agents and global developers following suit. This can be both costly and time-consuming, and with unreliable payback. To help mitigate these risks, organizations should carefully consider the following factors before making investment decisions:

1. What is the purpose of your investment?

Are you seeing it as a means to hedge the risk on your own business model and invest in disruptors, or is this a way to identify products that would complement your own business? Whichever option, the investment needs to be considered alongside your core competencies to assess whether it is commercially viable.

2. Does the company have a clear product market fit?

Ultimately it is the intended market that will drive a company's success, so an entrepreneur's good idea is only valid if it delivers real benefit to customers.

3. How much traction does the company have?

Real estate is no different to most other industries, in that users rarely want to be the first to try a new product. Traction and customer lifetime value calculations not only validate product-market fit, but show the basics of the product's commercial viability.

4. How scalable is the product?

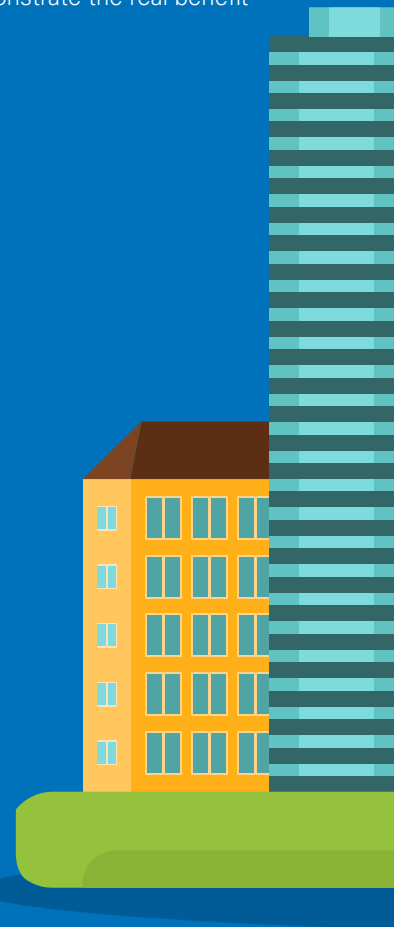
With significant amounts spent on research and development, any start-up needs to demonstrate its ability to scale, and often scale rapidly in order to capture market share.

5. What is the background of the management team?

Start-ups will often have a lean team in order to keep costs at a minimum and allow them to focus funds on further development. It is therefore critical to know that a strong management team is in place, with experience of the sector or problem they are trying to solve.

6. Has the company got their pricing right?

Pricing naturally plays a critical role in whether a business will succeed or not. If a solution is priced too low, doubts around the quality of the solution are likely to arise. Similarly, solutions priced too high are likely to be unfeasible. Often it all boils down to the perceived value of the product. In the age-old world of real estate, it can be a little more challenging to break away from tradition and demonstrate the real benefit in technology.





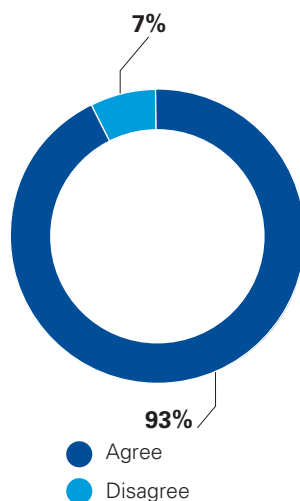
Speaking the same language

Bridging the gap between property and technology organizations can help both "sides" maximize the opportunities that the digital age presents for the industry.

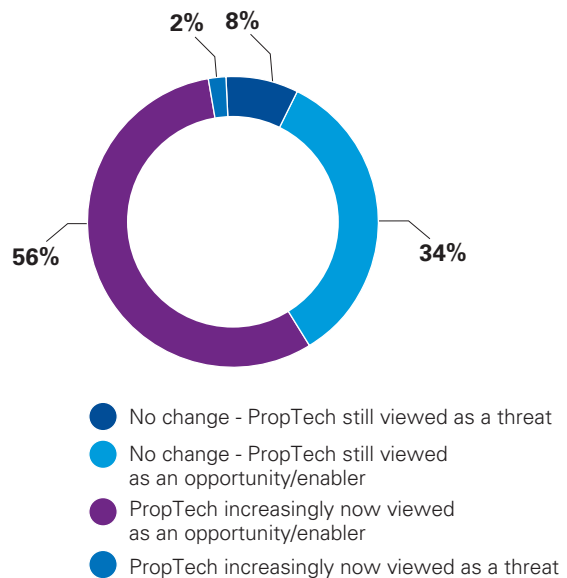
There remains a consensus amongst incumbents that they need to engage with PropTech companies in order to adapt to the changing global environment – the proportion of respondents who agreed with this statement increased slightly from 89% in 2017 to 93% this year. There is also a perception amongst 90% of all respondents that the corporate real estate industry views PropTech as an opportunity.

Interestingly, PropTech respondents appear to think that this shift has been slower than incumbents do. While 92% of incumbents and 81% of PropTech respondents said that PropTech is viewed as an opportunity, 37% of incumbents felt that this acceptance does not represent a change from the position 12 months ago. This is compared with just 19% of PropTech respondents.

Do you agree with the statement "Traditional real estate organizations need to engage with PropTech companies in order to adapt to the changing global environment"?



How have the attitudes of those in the corporate real estate industry changed towards PropTech over the last 12 months?

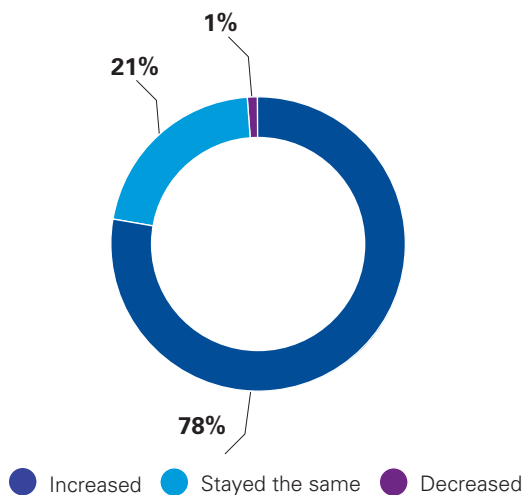


Note: question not asked to property technology respondents

19% of PropTech respondents also feel that the corporate real estate industry views PropTech as a threat, compared with 8% of incumbents.

Whether PropTechs' perspectives are perception or reality, there is a clear need for real estate organizations to better articulate their openness to engagement and collaboration with start-ups. Once again this demonstrates a slight disconnect between incumbents and start-ups, and the importance of both "sides" learning to speak the same language and working together for the benefit of each other.

How do you feel digital and technological innovation engagement from across the corporate real estate industry has changed over the last 12 months?



Promisingly the industry does appear to be on a gradual upward trajectory of engagement, with 78% of respondents saying this has increased over the last 12 months – up from 74% in 2017. Only 1% feel this has decreased, and 20% think that it has stayed the same.

When asked what the industry could do to increase engagement between traditional real estate companies and newer technology companies, 56% of respondents were able to offer a suggestion.

Of these, nearly two-thirds mentioned increased collaboration, communication and openness between property and PropTech companies, and more events to facilitate this. Other respondents talked of a need to educate the industry, change mind-sets and allocate more resources to innovation within businesses. Some even suggested an exchange of staff to see how the "other side" works. It has been interesting over the past 12 months to see a larger proportion of incumbents attending PropTech events and conferences, however many are still missing out on the opportunity to join and engage in the technology and innovation conversation. Through open discussion with peers, organizations in other sectors, and indeed disruptors, incumbents will be able to learn from others and develop a digital and innovation strategy that works best for their business.

"Finding the right stakeholder(s) within a business to champion the trialing or adoption of new technology remains nearly as hard for innovative start-ups as developing the technology itself. This inevitably means that great technology may slip through the net of most, some innovations will not see the light of day or, in the worst cases, the competition pounces on the opportunity and will gain material advantages."

Geoff Dunnett – Real Estate Director, Shieldpay

Evolving the workforce

It is important that organizations consider workforce planning when developing their digital and innovation strategy – legacy talent strategies and mind-sets can prove as big a stumbling block to innovation as legacy technology and systems. This will require a balance between maintaining existing skills, as well as retraining the workforce and sourcing new talent to fill any skills gaps. Competition for the right skills is also increasingly fierce and organizations need to think about how they position themselves as an employer of choice in the war for talent. This includes considering how their physical buildings attract and retain talent, and critically, how they enable a productive and innovative working environment.

Organizations can take the following steps to evolve their workforce and help facilitate change associated with technology-driven innovation:

- 1. Create a culture of innovation:** Change starts with culture – and major cultural change comes from the top down. Top leadership must instill the message that not only is innovation required for the organization to survive, but that innovation requires everyone within the organization to start thinking differently. That means fostering an openness to learning, change, and improvements at all levels. Leadership must also commit to workforce diversity to enable diversity of thought and capability within their teams.
- 2. Focus on education:** While education around specific skills and competencies will be important, for many organizations the more immediate needs are education and communication around innovation and change. Employee anxiety is high, with much of the workforce feeling threatened by the impacts of new technologies. Proper positioning of these innovations can alleviate fear while creating excitement

and buy-in surrounding new technology's positive impacts to the business, customer experience and employees' own careers.

- 3. Recognize the growing complexity of the employment market:** The natural shift in the employment market, from permanent, full-time employees to a balance with more skilled contract labor, robotics and automation, adds layers of complexity to any talent strategy. Organizations' abilities to skilfully integrate these different worker groups and other elements will increasingly be key to success. Creating and maintaining connectivity with specialist contractors will also be an important component.
- 4. Evolve leadership competencies:** Traditional models where leaders manage vertically integrated teams with direct control over resources need to be challenged. Rethinking leadership roles and competencies, as well as mapping leadership to end-to-end customer experiences, can drive improvements in customer outcomes and advocacy. Removing the distinction between 'build' and 'run' functions as organizations move to more agile change models will ultimately support improved prioritization and enhance the speed of change.

The key message for real estate organizations is that responding to digital and technological change requires a holistic approach that refocuses the entire business on being more innovative and agile. You cannot succeed simply by procuring a tech solution, investing in a start-up or hiring a tech SME. The culture of the organization needs to evolve to ensure that these changes are integrated into the core workings of the business. This means change being driven from the top and infiltrated into all levels of the workforce.

It might involve looking outside of the property sector in order to fill skills gaps, or identifying current employees who could be retrained as the company develops. There will also be many traditional skills that continue to be required, and it will be important for organizations to ensure that any change in strategy, culture or existing processes is communicated effectively so that these team members do not feel under threat.

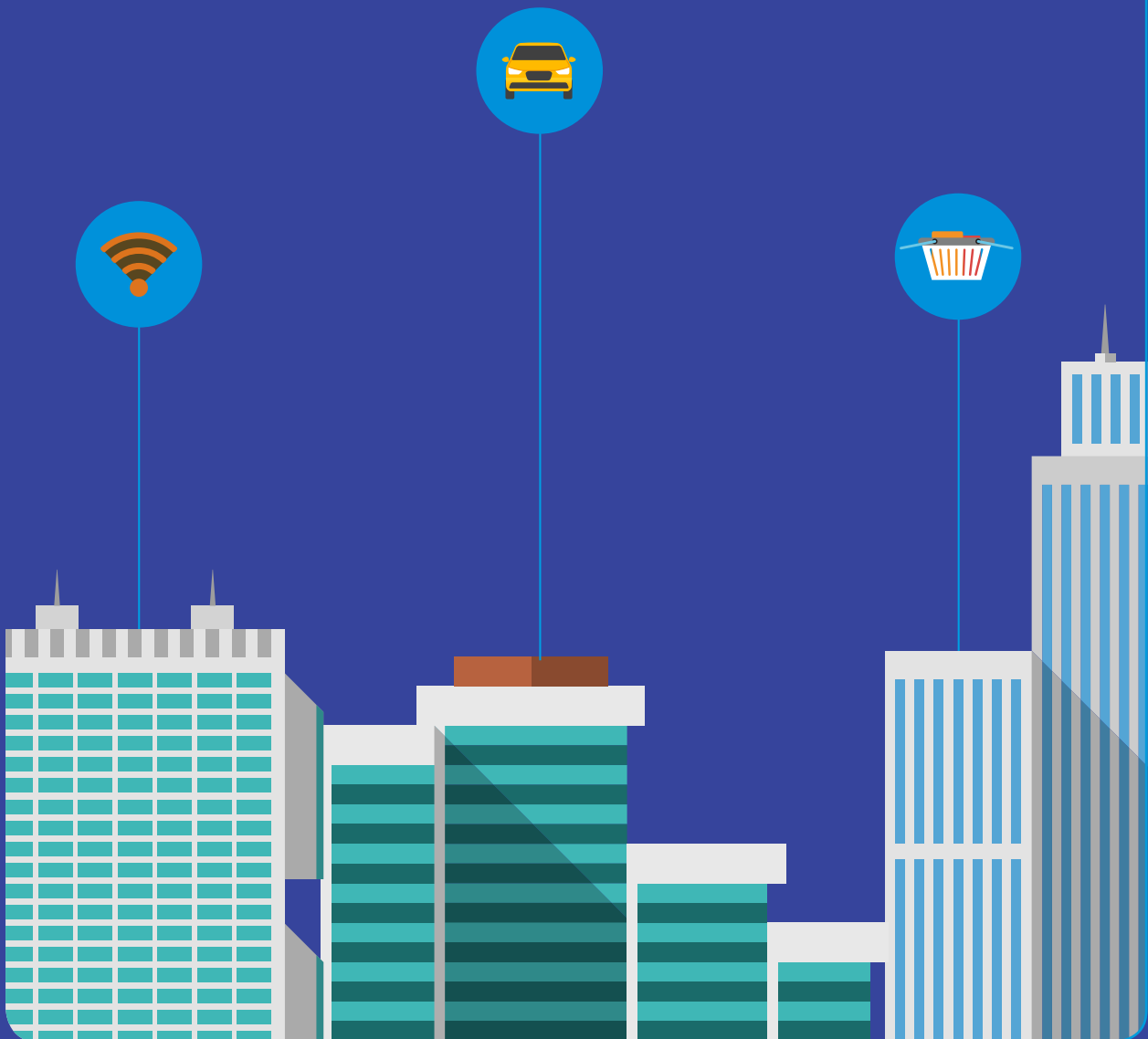
Further reading:

Beyond tech talent

<https://home.kpmg.com/xx/en/home/insights/2018/06/beyond-tech-talent-fs.html>

Building an innovation culture

<https://home.kpmg.com/xx/en/home/insights/2018/06/building-an-innovation-culture-fs.html>



Bridging the gap

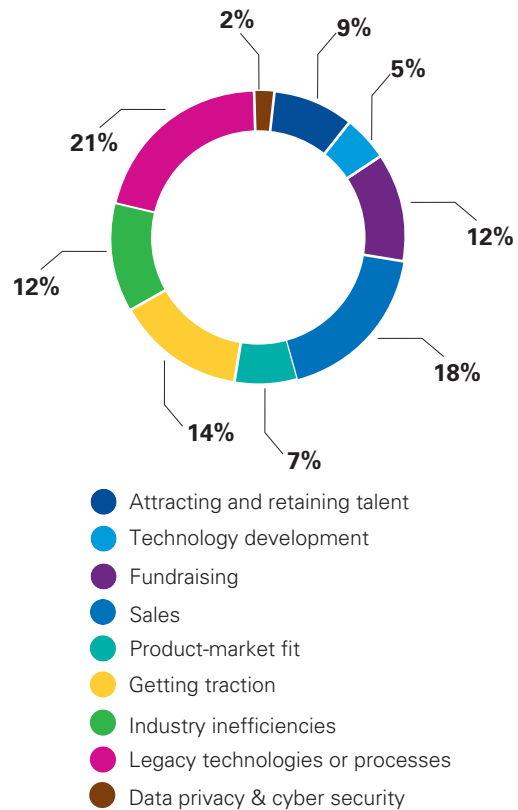
Understanding the industry they are trying to disrupt will help start-ups to improve their product-market fit and make it easier to sell their product's benefits.

Traction is a key metric for growing tech companies and it is hard to gain the initial momentum if lengthy sales cycles are preventing them from getting validation and initial feedback to iterate the product. When asked how long the average sales cycle was when selling to corporate real estate organizations, 30% of PropTech respondents felt this ranged from 1-3 months, and another 30% said 3-6 months. Whilst this is promising, it is clear from KPMG professionals' observations in the industry that one of the key challenges for start-ups is in dealing with the B2B model, which is always plagued with the dangers of long sales cycles and lengthy procurement processes. Furthermore, there is a cultural gap to be bridged. Real estate organizations are understandably naturally cautious – core real estate is a relatively low risk, low return asset class and the cost of failure when making capital investment decisions that run into the tens or hundreds of millions, on buildings and places that will endure for decades, is extremely high. This contrasts with the innovative, high risk, high return culture of start-ups. Both "sides" can play a role in overcoming the challenges.

Many start-ups would benefit from a better understanding of the industry they are trying to disrupt – both in terms of the challenges that companies face and the culture of the industry itself. This can help them to improve their product-market fit and understand their customers better, making it much easier to ensure they are using the right language for their audience and to sell the benefits of their products. It's no coincidence that the most successful start-ups have got this right.

Furthermore it will help start-ups to work out when they need to partner with others to produce a complete solution for their customers.

What is the biggest challenge for your organization?



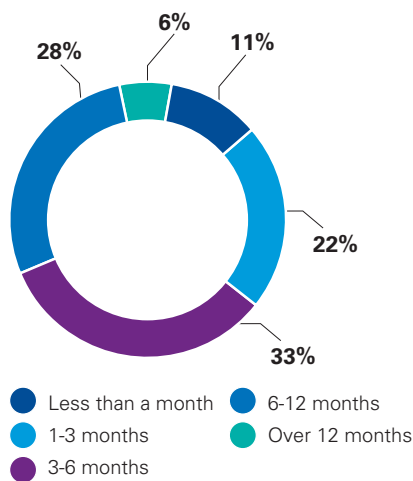
Note: question only asked to property technology respondents

Incumbents also have a role to play in being less risk averse when they can be. There are plenty of areas where a more innovative, risk-taking approach may not have the potentially catastrophic impact property players often fear. For example, PropTech solutions that help make buildings 'smarter' can often be tested without significant risk, and so property companies could trial many potential solutions in different buildings across their portfolio and then choose the ones that have the best results. Organizations also need to get better at isolating new products from critical systems, under what is known as a 'sandbox' approach. This allows new products to be tested under a light-touch governance model, but in a safe and responsible manner. This test environment is a well-trodden path in FinTech, where the Financial Conduct Authority has set up a regulatory sandbox system, to the benefit of consumers and companies. A PropTech Sandbox was launched in the Baltics at MIPIM in March 2018. Other countries and companies should look to implement this approach as it would enable a higher quality of feedback for start-ups, and ultimately more companies solving the real problems that the industry wants to solve.

"There's still a way to go, but as is recognised in this year's KPMG PropTech Survey, collaboration and partnerships, which are core to our business, are crucial in ensuring that the industry continues to catch up with the rest of the business world in harnessing the competitive edge technology can provide. We believe that there will never be one platform that will deal with the entire lifecycle of commercial real estate investment. It's my feeling that the key to successful growth in PropTech, whichever side of the fence you're on, is collaboration and partnerships."

Oli Farago – CEO, Coyote

What is the average sales cycle when selling to real estate organizations?



Note: question only asked to property technology respondents

Incumbents also have a role to play in helping start-ups to navigate their complex organizational structures, which often span multiple business units. There is sometimes a need for traditional corporates to adapt their procurement processes to the fast-moving nature of start-ups. For many start-ups it can take a number of months to get to the right buyer or stakeholder within an organization. Far too often they get blocked by individuals who don't understand the risks of not adopting technology, and believe that their current operating model will be relevant in perpetuity. In a number of cases senior leaders will identify young, digital natives to drive innovation at a grassroots level, often creating separate "innovation labs". These have the advantage of breaking from the culture and routines of the core business and are often located in a different working environment aimed at attracting the relevant talent. However it is important that they remain integrated with the core business to avoid the lab facing the same challenges as start-ups in aligning and assimilating their ideas and solutions with the business. Once again, the key for property organizations is to foster a culture of innovation across all levels and areas of the business.

"PropTech start-ups tell us their biggest concern is corporates not making any decision. Often a quick "No" is a far better outcome than a maybe."

Jonathan Hannam – Managing Director, Taronga Group

Further reading:

Innovative start-ups
<https://www.kpmgenterprise.co.uk/innovative-startups/>



Next steps

Property companies should be embracing technology and innovation today to ensure that they are successful in tomorrow's world.

The real estate sector has made promising progress over the last 12 months as more incumbents become aware of the potential for technological and digital innovation to transform their business. Whether this transformation is positive or negative remains in the hands of decision makers – those that choose to act now and engage with the digital age will be the ones to thrive, whilst those who do not may not survive. We are not yet at a point where failure to engage with technology may lead to imminent collapse, but organizations need to recognize that now is the time to be trialing solutions, making mistakes and understanding how their value proposition may have to evolve in the future. This means developing a holistic strategic vision and taking steps to become more agile and innovative in implementing it, which often takes time and requires a cultural shift in the organization.

Organizations should also be thinking about how emerging technologies and trends will impact their buildings in the future. Long-term horizon scanning is key to avoiding any black swans that may render today's buildings obsolete or requiring expensive retrofitting in future. For example, do you add electric vehicle charging points to every car parking space now when autonomous vehicles and mobility as a service could vastly reduce personal vehicle ownership in 10 years' time?

Harnessing data on factors such as customer insights and micro locational knowledge will help organizations to make informed decisions on where and when to play, although human intuition and interpretation remains important. As we have seen with other aspects of the digital revolution, success requires a degree of flexibility. That might mean

developing office space that can be reconfigured as serviced apartments if automation of jobs reduces occupier demand, or ensuring that your buildings can be adapted with the latest smart features as they emerge.

The property industry is notoriously slow moving and the vast majority of organizations are followers rather than trailblazers, waiting for others to pave the way. But it can be a brutal fall from grace for those who miss the opportunity to adapt to the rapidly changing global environment. As their competitors start to re-imagine their value propositions and benefit from efficiency gains through the implementation of technology solutions, and tenants increasingly demand a higher level of customer service tailored to their specific ever-changing needs, followers will need to adapt fast. Ultimately KPMG professionals expect in 5-10 years' time there will come a point when real estate and tech are so intertwined in every aspect of the business (and buildings) that there is no longer a distinction between the two and the term "PropTech" will cease to exist.

“It’s exciting to see real estate executives acknowledging the property industry’s rising tide of innovation. The 93% PropTech engagement result is particularly encouraging. I believe that 2019 will be the year that the best organizations figure out how to ‘observe, test, scale, and invest’ in new PropTech.”

**Aaron N. Block – Co-Founder & Managing Director,
MetaProp NYC**

“The real estate sector faces the risk of the ‘frogs in a slowly boiling pot effect’: no real action while in the meantime they move towards a bankrupt business model.”

**Sander Grunewald – Global Real Estate Advisory Network
Lead, KPMG in the Netherlands**



What steps can Real Estate organizations take to successfully adapt to the digital ecosystem?

Assess where you are now and where you want to be

Honestly review your organization's current position and set a board-sponsored target of where you want to be and how you will get there. And importantly, identify what the challenges are to getting there. Companies that do not set a digital strategy and realign their business goals to the new digital ecosystem now will struggle in the future.

Appoint a board member to drive innovation

In order to succeed, innovation needs sponsorship from the top. It requires board level responsibility and accountability, and a complete integration across the business.

Set up an innovation board or lab

Having an innovation board or lab with representatives from across the business helps to review all aspects of an organization's digital strategy and ensures it is aligned with overall business goals. It is important to include those who will be using new technologies, as well as the decision-makers who will purchase them, and ensure that new ideas and approaches can be integrated 'back' into the core business.

Re-evaluate your purpose

What services do you want to provide and what do you want to be famous for? Think about what your organization does now that won't be relevant in five, 10 or 15 years' time? What is your customer value proposition?

Re-assess your company culture

Developing a digital strategy is often as much about transforming an organization's culture as it is about new technologies. Organization should foster new ideas and encourage employees of all levels to buy into them and be constantly learning and evolving.





Make your data work for you

Review what data you have access to and clarify what questions you want it to answer.

Identify who your customers and consumers are

The customer signing the lease is important, but equally key is who your consumers are – who is using the space, what do they want and need, and how will this change over time. As property continues to develop into a service industry, gaining a better and more granular understanding of your customers and consumers is fundamental to developing success.

Become more agile

Fast-growing businesses have the ability to respond quickly to today's rapidly changing environment and pivot their organization to meet customer demand and adapt to emerging trends and technologies. Traditional corporates can learn from this approach.

Identify and fill any skills gaps

Are there people in your organization who can dedicate more time to innovation and digital strategy? If not, identify where you can find these skills in order to plug the gap, and think about how you can attract them. Be open to looking outside of the real estate sector.

Engage

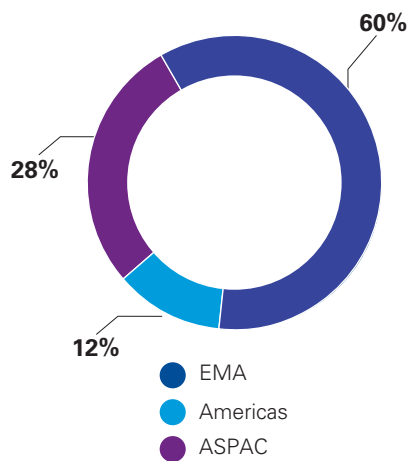
Actively engage with PropTech. Whether this involves speaking with, procuring or even partnering with fast-growing businesses, or simply attending seminars about the topic, the key is to engage. And encourage all levels of your organisation to do the same.



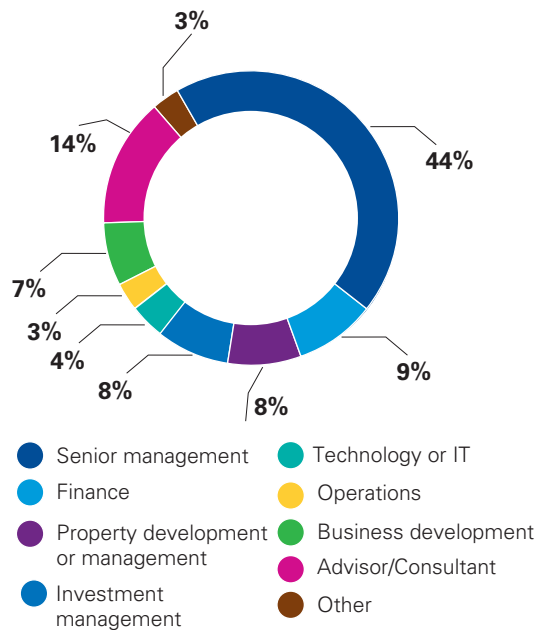
About the survey

The KPMG Global PropTech Survey 2018 involved 270 respondents and was conducted in June and July 2018.

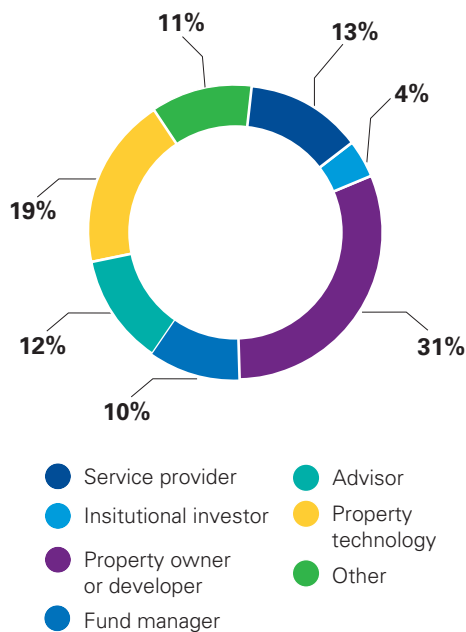
Responses by region



Respondents by job role



Respondents by company type





Contact us

Andrew Weir

Global Chair Real Estate
& Construction
+852 2826 7243
andrew.weir@kpmg.com

Régis Chemouny, FRICS*

Partner, KPMG France
Head of Real Estate & Hotels
+33 (0)1 55 68 68 18
rchemouny@kpmg.fr

* Fellow of Royal Institution of Chartered Surveyors

Andy Pyle

Head of Real Estate
KPMG in the UK
+44 (0)20 7311 6499
andy.pyle@kpmg.co.uk

kpmg.com

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

The views and opinions expressed herein are those of the survey respondents and do not necessarily represent the views and opinions of KPMG International.

© 2018 KPMG International Cooperative ("KPMG International"), a Swiss entity. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

CREATE | CRT101184A | September 2018