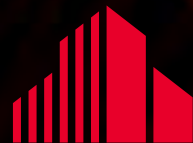


proptech **TOP5**

ASIA PACIFIC ASSET SERVICES



**CUSHMAN &
WAKEFIELD**

INTRODUCTION

Technology is transforming the world and commercial real estate is no exception. The rise of proptech is transforming how we manage buildings today and will continue to transform the way they are managed into the future.

The Asia Pacific region is uniquely placed to adopt and harness the power of proptech. Its youthful population, accounting for 62% of the world's millennials, is ready to adopt new technology. There are in excess of 1 billion smartphone users in China and India alone, while smartphone penetration is as high as 69% in Australia. These drivers, together with a government desire to create leading edge smart cities generates a powerful force for change.

Proptech is no doubt an exciting and transformational phenomenon, but at the same time can be hard to navigate. With this firmly in mind, Cushman & Wakefield, in conjunction with our clients, has sought to identify what's hot now and what's hot next in proptech and provide insights on how to adopt a proactive approach. These are the findings of our recent survey.

Click on the tabs to find out what's topping the charts in Asia Pacific.

TOP 5 NOW



**SMART
HVAC (78%)**



**SMART
THERMOSTATS (67%)**



**SMART
ELEVATORS (67%)**



**SMART
LIGHTING (56%)**



**FACIAL
RECOGNITION (56%)**

There is a wealth of proptech available or currently under development, however, there is a clear message on what's hot right now – cost efficiency. This is not surprising and tallies closely with the early adoption of building sustainability measures, where the initial focus was on cost mitigation before progressing to Environmental, Social and Governance (ESG).

In line with this, the main proptech being adopted are focussed on improving efficiency in major operational expense items. Over three-quarters of respondents are currently focussed on smart HVAC systems, while two-thirds are looking at smart lighting and lift systems.

Chiller plants account for around 60% of maintenance costs, so any improvement in performance, through greater efficiency and reduced downtime can drive significant dividends. Smart systems that reduce load on these systems therefore offer clear operational advantages.

While elevator costs are typically a small component of building energy usage, at around 2-5%, the savings of switching to smart elevators can be as high as 40% according to US studies (ACEEE). Furthermore, as a by-product, such improvements can also improve tenant experience.

Lighting is also a high-cost item, with the Australian Government estimating it at around 30% of an office tenancy's energy consumption. A move to smart lighting can produce energy savings of 20%-70%, with a 5-year payback period. A regional push to more sustainable buildings has now seen smart-lighting as the rule rather than the exception in high quality, Grade A stock.

Beyond reduction in operational costs, facial recognition rounded out the top 5 technologies most in demand today. Here the focus is on improved efficiency of entry-exit as well as increased security. However, such data needs to be carefully managed with lingering concerns on how the data are used and stored.

In contrast, proptech such as 3D printing, drones, chatbots and tenant apps are currently considered much less important. In some ways this is surprising given the amount of media attention they have received. Scepticism persists around their applicability, likely as the technology is still in its infancy. However, rapid advances have been made, especially in drone technology and we are already seeing increasing benefits and versatility.

78% of respondents desire smart HVAC systems in their buildings

Drone technology is increasingly being adopted by the commercial real estate sector, specifically for use in building inspections to improve safety. It has become increasingly common for drones to perform roof and cladding inspections which otherwise would expose personnel to fall-from-height risk and prolonged exposure to outdoor environments, both of which are significant concerns across the Asia Pacific region.

TOP 5 NEXT



**CHATBOTS
(59%)**



**TENANT
PORTALS (54%)**



**PREDICTIVE
MAINTENANCE (50%)**



**SMART WASTE
MANAGEMENT (45%)**



**SMART BUILDING
FACADES (45%)**

Looking to the future, the focus shifts from cost mitigation to “experience”. Over the next five years, an investable timeframe, the pieces of most desired proptech are chatbots and real time occupancy portals as indicated by over half of our respondents.

Running costs for helpdesks have remained stagnant over recent years with little opportunity for cost reduction other than geographical location and occupier density. Chatbots present a game-changing opportunity to simultaneously handle increasing call volumes and enhance customer experience.

Research from IBM suggests that 40% - 80% of common customer service calls can be taken by Chatbots and that by 2025, 85% of all customer interactions will be handled without a human agent. The upshot of this technology is helping manage costs whilst providing a superior level of service.

Tenant portals are nothing new, but the services they will come to offer in the future will be. The current offering is mainly around concierge services or to promote events. The future lies in real time analytics and interpersonal connectivity.

To build engagement, portals need to offer value. We are already seeing the evolution from concierge services to social sustainability and wellness. In the future, expect this to further transform to include real time occupancy data, connecting workers from different companies within buildings or the landlord’s portfolio of buildings, and drive new revenue streams. The next wave is XaaS – Anything as a Service.

Third-placed predictive maintenance is also expected to come to the fore in the next five years. Here we see a switch from the current focus on low-energy/high-efficiency building operations to keeping these services in optimum operating condition. Multiple studies have shown that preventative maintenance activity costs just 10% of a major repair. Value generated from preventative and predictive maintenance programmes include reduction of equipment downtime, improved asset reliability and improved uptime metrics.

59% of respondents indicated that Chatbots are the #1 desired new technology over the next five years

In recognition of the need for chatbot services, C&W Services in Singapore has developed Chatbot technology to manage high-frequency/fast-resolution service calls. Benefits of the service include reduction in human error, increased efficiency and removing bias from customer service interactions. Further developments of this service are underway to work through logical self-check questions before work orders are raised.

TOP 5 DRIVERS



1
**OPERATIONAL
EFFICIENCY (58%)**



2
**CAPITAL
GROWTH (58%)**



3
**TENANT
EXPERIENCE (55%)**



4
**SUSTAINABILITY
(55%)**



5
**COST
SAVINGS (53%)**

The development of proptech to date has been driven by the needs of the industry, facilitated by the availability of wider technology that can be appropriated.

The first wave of proptech, driven by the need for quantitative data and improved data searches, resulted in improved searchability – making it easier to find residential space, initially, and commercial space subsequently.

The second wave, the current wave, has coincided with an expansive period of investment and entrepreneurial optimism on the one hand and rapid technological developments in cloud computing, sensors, IoT, open-source code and mobile connectivity on the other.

Against this backdrop, it is not surprising that the main drivers of proptech adoption are financially oriented, taking out three of the top five places. Landlords are clearly directing their core focus on efficiency and the asset's capital growth prospects. These internal drivers produce positive benefits in the short-term, helping improve annual financial performance and so suit the current investment climate.

However, this approach will need to change. While operational costs will remain under the microscope, a wider viewpoint also needs to be taken – that of the tenant.

Going forward, proptech will be used to drive tenant experience. A smart building can drive operational performance but it can also enhance human experience. Without tenants, a building as an asset will perform poorly, regardless of how operationally efficient it may be, or the amount of capital growth targeted. This change is already being recognised, with tenant experience a top-three driver. As operational efficiency increasingly comes under control, we expect the next wave of proptech to focus on satisfying the future needs of the occupier, wherever and however they choose to work.

Further considerations that drive the adoption of proptech including futureproofing a building as well as using proptech to enhance company branding. The overarching message at play here is clear - in an increasingly technology-oriented world it does not pay to lag behind.

55% of respondents expect tenant experience to be the key driver of proptech over the next five years.

The overarching opportunity in adopting proptech is to generate data-driven reporting more quickly, which in turn will facilitate more insightful decision making. Doing this will link the building to the corporate occupier and ultimately to the asset's financial performance in a clearer, more systematic way.

TOP 5 BARRIERS



HIGH COSTS
(39%)



UNCLEAR ROI
(39%)



RATE OF CHANGE
(32%)



IMPLEMENTATION
RISK (23%)



DEPLOYMENT
PRACTICALITY (18%)

Although there is considerable interest in proptech, implementation appears somewhat lagging.

Two thirds of respondents indicated that they had undertaken major asset refurbishment programmes within the past few years. However, for the most part, respondents identified that smart building technology was operational in less than half of their portfolio. Furthermore, just 17% of respondents said that they would consider three-quarters or more of their portfolio as “smart”. This aligns with wider studies that show most organisations give themselves a “fail” regarding their technological maturity (Deloitte).

So, what are the barriers to entry? First order concerns include the higher costs of implementation and an uncertain return on investment.

To an extent these concerns, together with the key drivers of efficiency and cost savings, explain why smart operational systems have been the main technology adopted to date. Expenditure savings are much easier to quantify and therefore build into a budget, which then will inform the financial performance.

Some of the more emerging technologies are seeing rapid, exponential improvement. It is here that the return on investment becomes more unclear, respondents are therefore more circumspect, being fearful of “backing the wrong horse”. It is also for this reason that the rate of change in technology was ranked only slightly behind the first two barriers to entry.

Closely associated with this is implementation risk – will it work? And is it the right technology for us? Again, new technology is likely to be more difficult to implement and may not be practical for the asset or the portfolio at the current time. In this regard, landlords appear more conservative in their approaches, unwilling to be too bold.

More widely it is apparent that many companies lack a clear vision of what they are seeking to achieve through proptech and a strategy to achieve that vision. Without this, all of the barriers listed here become larger and seem insurmountable.

39% of respondents cited high costs and unclear ROI as key barriers to proptech adoption.

Surprisingly, respondents told us there is comparatively little concern around security, privacy or the complexity of the task at hand. Undoubtedly data encryption and storage have become increasingly secure, though data breaches remain a regular part of the media cycle.

Lesser concerns on security risk may result from the perceived lack of value in the data to potential hackers. However, we argue the focus should be on securing access to a building’s management system rather than the actual data it logs.

TOP 5 TIPS FOR NEW PROPTech ANXIETY

Our findings show that when it comes to asset management in Asia Pacific, landlords have adopted a relatively short-term view on proptech. Furthermore, the future technology that they are intending to implement is already in existence. However, implementation of emerging technology that has gained media attention such as blockchain, 3D printing and robotics still seems somewhat distant. While this may be due to lack of development and operability, such as some of the issues facing blockchain, there are likely additional drivers at play. Here are our tips to overcoming these new proptech “anxieties”:



BE AWARE

One of the greatest fears is being left behind the pack as corporate occupiers crave technological innovation. The greatest way to alleviate this anxiety is to be aware – aware of the technology currently available as well as technology that is on the immediate horizon. You cannot engage with tenants if you do not speak their language.



KEEP UP

While you need to be aware, you also need to keep up. Rapid advances in technology mean that previous perceptions of the applicability, versatility or usability of technology can change quickly. The key here is to keep up and keep an open mind.



KEEP GOING

Proptech needs a strategic approach, but not one that is set-and-forget. An asset has a long life and technology will constantly evolve over time. The strategic vision is to identify a suite of integrated technology opportunities for deployment throughout the lifecycle of the asset, not only at the time of initial construction.



STEP UP

Taking the first step is the hardest. With the vast array of technology available today it is hard to know where to start. However, once that first step is taken, it is then a matter of keeping up and keeping going.



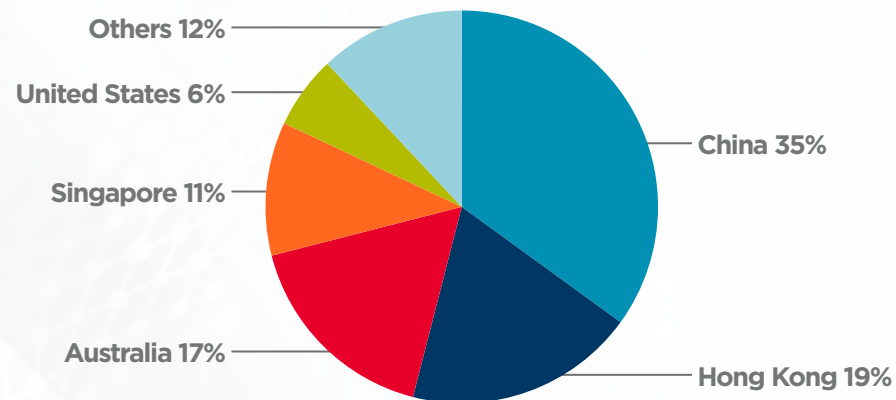
PARTNER UP

Partnering with an advisor is the quickest and most effective way to alleviate proptech anxiety. The role of a strategic partner is to make landlords aware, keeping them on pace and taking every step of the journey alongside. This is especially important for building management given the lifecycle of the asset.

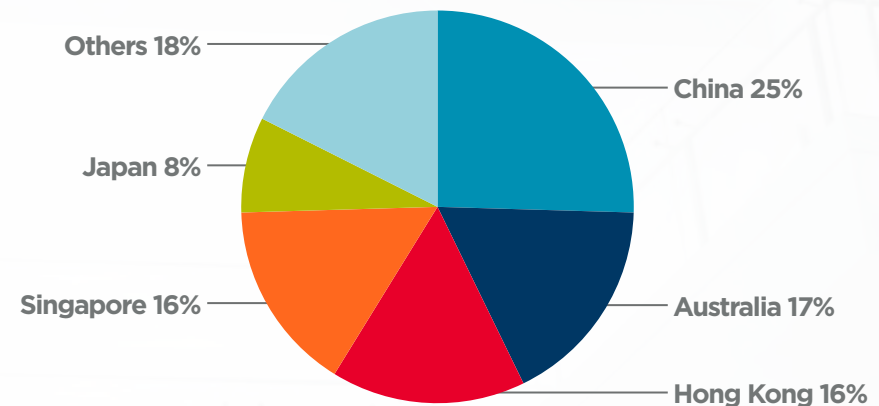
METHODOLOGY

In May to July 2019 Cushman and Wakefield canvassed the views of over 100 clients spread across the Asia Pacific region to gauge their sentiments on proptech. The majority of respondents were office asset managers, though also included technology specialists, development managers and leasing managers. Companies were mainly headquartered in Australia, China, Hong Kong and Singapore, though respondents had properties located throughout the entire region.

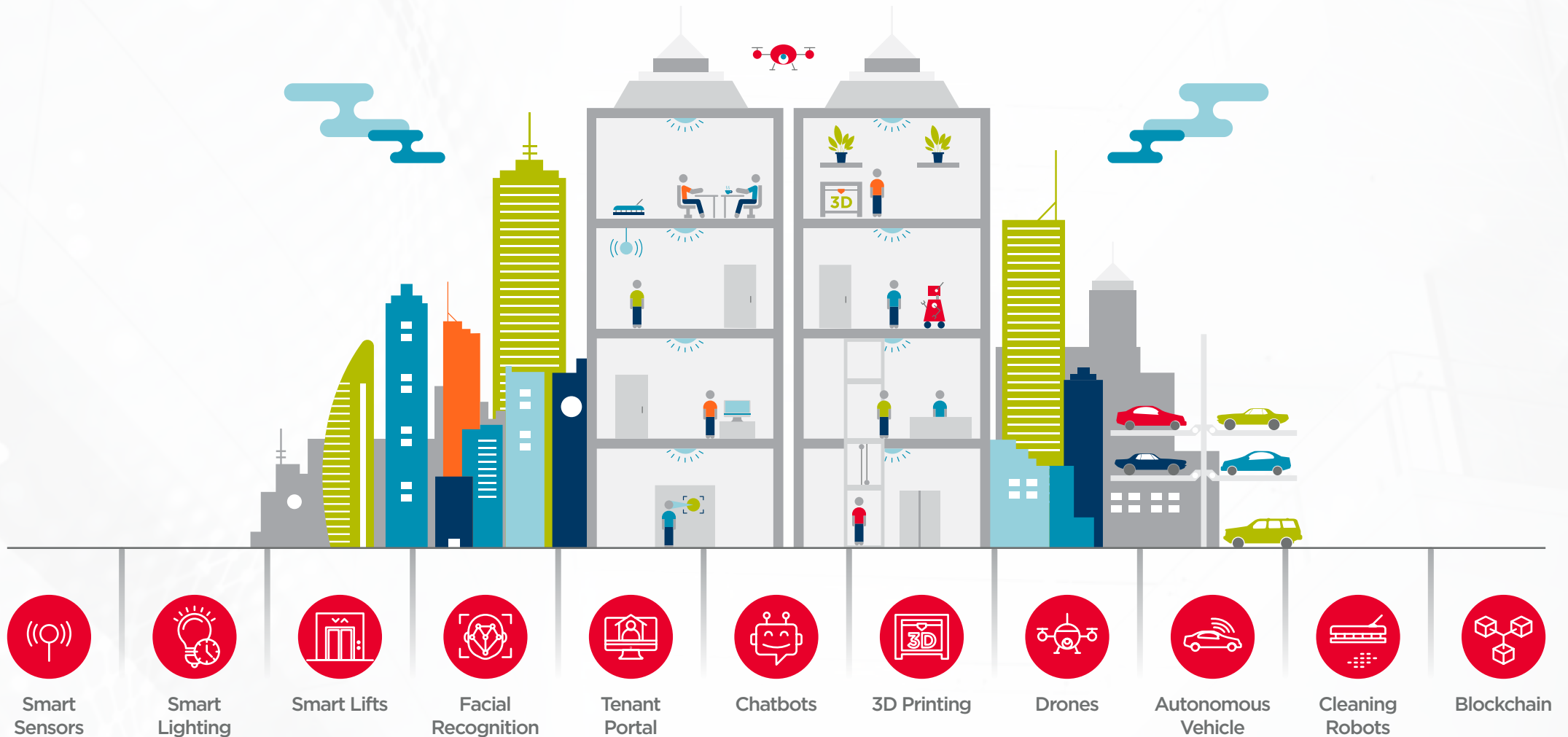
RESPONDENT HEADQUARTERS



RESPONDENT PROPERTIES



DEVELOPING A PROPTECH ECOSYSTEM



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About Cushman & Wakefield

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