

How Proptech could revolutionise real estate

INSIGHTS ON THE INNOVATIONS THAT MATTER

CATALYSTS

One of the clichés about real estate investing is that it has traditionally been conservative and slow to change. However, this caricature is rapidly becoming out of date.

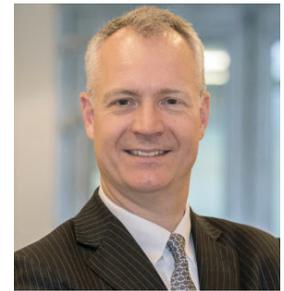
Under the umbrella term 'Proptech', a wide range of new technologies are arriving in the space to inject more flexibility, find new efficiencies, and improve investor experiences and outcomes.

As cities worldwide re-evaluate how they will use space post-Covid, is this Proptech's time to shine?

Hans Vrensen and **Mina Kojuri**, Head of Research & Strategy and Director, Investor Relations, at AEW, here discuss where the opportunities lie for investors.

KEY TAKEAWAYS

- 'Proptech' has three key pillars: smart buildings, platform models, and increasingly flexible uses of space. All three overlap significantly.
- Smart buildings promise to unlock new capabilities for ESG and more efficient, creative uses of space.
- Platform models are maturing in residential real estate and their arrival in the commercial sphere promises to radically streamline the investing process.
- Agility and resilience are even more critical than they were before, with both set to benefit.
- Innovative technologies such as blockchain have the potential to increase liquidity in the space.



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Mina Kojuri,
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'PropTech' is shorthand for the maturing of digital technologies in the real estate space. How would you open that up?

Hans Vrensen

As you say, we think about it essentially as the application of technology to property. From investing to construction to management, every link in the value chain stands to benefit, with different market participants using new technologies and ideas at different stages in the process

It becomes important to be specific and delineate what you're talking about, otherwise you can get lost. Are big data and the internet of things (IoT) different concepts, or are they manifestations of the same idea? There's a lot of talk about creating digital twins of buildings – but the IoT also allows the creation of smart buildings. These concepts do blend into one another.

However, these ideas can be boiled down to one simple idea: empowering better-informed decision-making.

How can the building be most efficiently managed for its users? How should an existing building be modified as its users' needs change? Technology is now both accelerating and improving the quality and the speed of decision-making in these critical areas.

Mina Kojuri

Smart buildings and IoT are probably the most concrete and agreed-upon examples of what people mean by 'PropTech'. They have become key considerations in how we apply ESG principles to investment decisions and our underwriting requirements.

We believe there is a significant growth opportunity as the IoT is still mostly confined to the residential asset class. The IoT allows devices to exchange actionable data with one another, which delivers things like home security, home automation and energy management, and our research suggests there is an opening for these capabilities to expand further into commercial real estate.

Sensors can alert building managers to overheating, or if inventories are running low, or track customer movements around stores to allow better placement of products. In offices, footfall tracking can lead to significantly more efficient use of expensive office space – something that, post-Covid, is going to become far more of a flexible question than it would previously have been.

Real estate is generally seen as quite conservative. Does PropTech represent a cultural shift?

HV

If we look at the cultures of tech firms, they are highly iterative – they have a baked-in acceptance of multiple failures or initially imperfect products that are improved with time, in the hope of that one success that redeems everything else. Frankly, change and risk are easier pills to swallow in emerging asset classes.

In commercial real estate investment, there is more at stake and our clients understandably prefer to minimise risk. There's a reason why venture capitalists don't tend to fund office blocks. Returns on investments are relatively moderate, but they are also far less risky. Commercial real estate as an asset class is more in competition with fixed income rather than the far more frothy tech space.



In real estate, ways of operating that were once considered set in stone are now open to question.



That said, design and construction firms have been more pro-active in adopting new technologies and taking the inherent risks in experimenting with technology.

MK

The arrival of smart technologies into property has been delayed by the huge initial outlays required and the sheer scale of the asset class. However, the narrative has moved on in recent years, and there is now a growing awareness that these technologies can pay for themselves pretty rapidly.

I think there is also an ever-rising ceiling for technical provision in any industry – and that each sector can really feel it when another is moving ahead. If we look at fintech, professionals and consumers alike are now very familiar with a level of digital service that has improved rapidly in recent years. These expectations are bleeding into other sectors and are now driving innovation in very exciting ways.

In real estate, this means ways of operating that were perhaps considered set in stone are now open to question.

If we can buy and sell property online, why not empower people to see all the available stock online, consolidated into one platform? Why does my contract and money exchange need so many third parties, from lawyers to surveyors? Why does it need to take three months to buy anything?

There is a rapidly growing tech infrastructure around things like 5G which we didn't have a decade ago. A new ecosystem is emerging, with startups engaging with real estate in hugely forward-thinking ways. This allows the sector to focus on its expertise while

new firms concentrate on delivering the technologies, with the two worlds eventually integrating and creating new sources of value.

ESG is an increasingly core component of investment strategies. Where is Proptech in that picture?

HV

The traditional challenge for real estate has been to deliver solid financial returns while taking only moderate risks. Traditionally, there have been various pressures on this, especially as abundant and cheap debt has caused cyclical behaviours in the market. Climate change and the various regulatory responses to it – both those already in place and those we can anticipate – promise structural changes to the industry. Mobilising new technology to meet the increasing data and measurement challenges associated with new ESG targets and legal requirements is an exciting new frontier for Proptech.

MK

I think Proptech can be a meaningful facilitator for the scalable and sustainable ESG initiatives the industry needs. ESG and climate change together require completely new approaches to analysing risk and reward compared to what the industry has been doing for a long time.

For example, energy monitoring in large buildings, when taken to scale, could deliver vast savings in emissions across the entire world. To put it very simply, of one the easiest ways to make savings in whatever you're doing is to eliminate waste – and that's what smart buildings make possible.



From investing to construction to management, every link in the value chain stands to benefit from the application of new technology.



How different have risk/reward profiles become?

MK

There are the obvious risks connected to climate change, like building on areas likely to flood, but that's nothing new – it's just a widening of the lens.

There is, however, the idea of transition risk – how easy is it to reduce the carbon footprints of buildings? How can they be made energy efficient? Are they adaptable for new ways of using space post-pandemic? How long would it take, and how much would it cost?

These are not small questions, but the overall challenge emerges: how can the answers to these questions be converted into data, which is then used to make credible risk/reward profiles?

This is where Proptech enters the ESG conversation: gathering, processing, analysing, and reacting to data are all key to the process, and these are what Proptech delivers in spades.

We can't talk about real estate without talking about the impact of Covid. Where is Proptech in 'the new normal'?

HV

Recent shifts in working practices in response to the pandemic are obviously going to be with us to some degree permanently, with hybrid working for white collar jobs likely here to stay.

That said, we did some stress tests early in the pandemic for what it could mean for commercial rents, and I have to say we have been nowhere near our worst-case scenarios at any point. Part of that has resulted from government support in various countries, but a larger part is that the death of the city centre has been greatly exaggerated.

However, if the move to hybrid working is going to persist, this makes things like

analysing footfall statistics all the more important. As we've already discussed, Proptech stands ready to meet this demand. If we are moving to more flexible ways of using space, finding efficiencies and opportunities to adjust how spaces are used will become critical.

MK

The pandemic has clearly been a catastrophe in many ways for human life, but it has also been Proptech's time to shine. It's shown us that nothing is forever, and that when a crisis hits you build your response around the technologies available to you at that time.

Hans mentioned using data to adjust how we use cities, but it can also allow us to future-proof our cities, especially as – one way or another – this won't be the last global crisis. If truly smart cities are the goal, then truly smart assets are your starting point.

Agility and resilience have been the two key struts supporting the response to Covid, and technology overall has played a key role. Change is not necessarily a bad thing. It's quite the opposite – if managed right, it can open up opportunities by redefining sectors and anticipating needs.



Gathering, processing, analysing, and reacting to data are all key elements in sophisticated ESG strategies, and these are what Proptech delivers.



If we think about a longer time horizon, what trends do you see emerging now that will characterise the market in years to come?

HV

In a similar way to fintech, we see residential – what you could call ‘consumer’ – real estate as ahead of the curve in its application of technology if you compare it to the institutional or commercial side of the market. If you’re moving house in any large European city, there are platforms like Zoopla and Rightmove that deliver sophisticated and user-friendly experiences that are way ahead of the commercial space.

However, there is a strong underlying need for more transparent data in the commercial market. We think there are going to be significant pull factors dragging the commercial real estate market into a platform model similar to what retail consumers enjoy.

Incumbent and traditionally dominant players have so far been able to ‘hoard’ data and monetise it in their advisory business. But, as has happened in the US, we anticipate significant pressure from new Proptech entrants that are likely to find new ways to unlock value from granular data. This will make the slower-moving incumbents redundant, especially if data is not their core service offer.

One characteristic of real estate is its notoriously low liquidity. Could Proptech enable a more dynamic market?

MK

Liquidity is dependent on trading volumes, and technology promises to unlock them in real estate as never before.

The maturing of blockchain technology – beyond the digital currencies that may appear to have the most direct relevance to financial services – is likely to lead to practical applications in real estate.

Whether it’s the tokenisation of REITs or the creation of specific currencies for trading in real estate, this is a highly exciting real-world application of the technology that should deliver greater liquidity and flexibility to investors.



If we are moving to more flexible ways of using space, finding efficiencies and opportunities to adjust how spaces are used become critical – and Proptech is the solution to this challenge.

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