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PROPTECH: HOUSING



INTRODUCTION

In this brief viewpoint we consider how technology will disrupt the residential sector, right across the value chain, creating new business models and new partnerships.

The waves of change, particularly from digital technologies and platform models, that have ruptured banking, insurance, manufacturing, as well as earlier industries such as retail and the music industry, have so far had little impact on the real estate industry. As a result, it is not regarded as an especially innovative sector, with comparatively low R&D and labour productivity. The size of real estate markets hint at the potential for change and the resulting impact it could have, given the right combination of factors.

There are signs that some of the drivers needed to transform the industry are on the horizon, if not already here in a disjointed sense. Some 52 percent of 'Rental, Hiring and Real Estate Services' already use digital technologies, if at times prosaically, while a further 22 percent of the industry is expected to be affected by digital disruption¹. At an all industry level, only 8 percent of CEOs believe their business model will survive the current levels of large-scale digital disruption².

One key change, as experienced by the computer and then smart-phone sectors in the previous twenty years, is the ongoing shift from hardware to software as the principle driver of revenue³. The connected era lends weight to more differentiation and additional value being generated by software and the further digital services it enables. New revenue streams and monetisation efforts will therefore be needed. Real estate players would do well to remember that organisational and personnel changes are as key as technology in unlocking new opportunities, but that said the emergence of proptech is one that the industry cannot afford to ignore. In its most utilitarian definition, property technology (proptech) relates to any technology that makes it easier to buy, sell and/or manage property⁴. Arguably the definition could be expanded to refer to innovative technologies, processes, standards and uses which are transforming the real estate industry⁵.

It need not be a panacea for the industry for it to be transformative, nor will proptech likely avoid cycles of hype, disappointment and cynicism before delivering sustained success. Smart houses are an obvious example of proptech, but the development of new processes, standards and how we do things – as opposed to what we do – will have a significant impact on the way we develop, invest in, manage and use various types of real estate⁶. With the rate of change accelerating, previously fantastical views of the future are becoming reality⁷. The real estate industry will undergo change, whether incumbents are ready or not.

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1 Source: Property me, 2019 <https://www.propertyme.com.au/blog/industry-news/future-of-real-estate-industry>

2 Source: Raconteur, 2019 <https://www.raconteur.net/digital-transformation/digital-transformation-guide>

3 Source: McKinsey, 2018 <https://www.mckinsey.com/industries/advanced-electronics/our-insights/laying-the-foundation-for-success-in-the-connected-building-era>

4 Source: Forbes, 2019 <https://www.forbes.com/sites/forbestechcouncil/2019/07/29/the-new-frontier-that-could-outrun-ai-and-blockchain-real-estate-tech/#5e832bfc22bb>

5 Source: Mondaq, 2019 <http://www.mondaq.com/unitedstates/x/831888/real-estate/Proptech+Is+It+The+Future+Of+Real+Estate>

6 Source: Forbes, 2018 <https://www.forbes.com/sites/forbesrealestatecouncil/2018/02/28/how-are-fintech-and-proptech-changing-the-real-estate-industry-in-2018/#300dbafd6617>

7 Source: FM Link, 2019 <https://fmllink.com/articles/will-facility-managers-still-exist-2030/>

Focus on residential

There are over 400 UK proptech companies, comprising approximately 58 percent of the ecosystem, focused on the residential sector⁸. Given that the total value of the UK's housing stock reached £7.29 trillion in 2018⁹, this focus is understandable. Technology in the home is already a significant market, with a forecast 225 million smart speakers in people's homes globally by 2020¹⁰. The smart home industry will emerge as a significant ecosystem, replete with multiple key players in various sub-segments. Some of these segments could feasibly morph into territory earmarked by real estate players, suggesting the need to stay abreast of developments in adjacent industries and consider the type of partnerships that could be of benefit¹¹.

CONSUMER DEMAND

Consumers will look for increasingly personalised services and options. In the coming years, it will likely be much easier to design your living space, as apps and platforms such as Mody and Hutch use VR and AR to help you visualise changes before they happen¹². Mixed reality is also likely to become a key technology in the marketing and sales process. Such personalisation will evolve further, with robotic apartment systems plausibly adapting spaces to the occupants, rather than occupants adapting to spaces¹³. Big data is key in developing such personalisation and is central in enhancing what is meant by personalisation. By 2025 the average connected person, anywhere in the world, is forecast to interact with connected devices nearly 4,800 times a day, or once every 18 seconds¹⁴. With consumer data covering habits, behaviour and the type of life-events that often result in house buying are all becoming more 'knowable,' giving the consumer what they want, even before they realise it is becoming increasingly possible¹⁵.

THE EVOLVING CONCEPT OF HOUSING

From the materials they are made of, the processes used for construction, to how people use the spaces within, the entire concept of housing is evolving. With it, the entire real estate value chain and ecosystem, from construction and the building industry to real estate players, need to respond and help set the direction of evolution. Flexibility is key in allowing houses to reconfigure to their owners' life stage, employment status, re-arrange for different events and ultimately in allowing rapid repurposing for new tenants or owners¹⁶. Organising for such a change will require more than just a technological response. Boston Consulting group suggests that '...industry stakeholders will need to respond to the challenges that demand for new housing forms will create through planning, ingenuity, investing in R&D, and collaborating with value chain partners¹⁷.



8 Source: Unissu, 2019 <https://www.unissu.com/proptech-resources/proptech-in-the-uk>

9 Source: BM Magazine, 2019 <https://www.bmmagazine.co.uk/news/total-value-of-uk-housing-stock-reached-7-29-trillion-in-2018-report-finds/>

10 Source: Mobile Syrup, 2018 <https://mobilesyrup.com/2018/07/09/canalys-smart-speakers-225-million-2020/>

11 Source: Boston Consulting Group, 2018 <https://www.bcg.com/publications/2018/mapping-smart-home-market.aspx?linkId=58447876&redir=true>

12 Source: Bloomberg, 2018 <https://www.bloomberg.com/news/articles/2018-02-16/this-is-the-smart-home-of-the-future>

13 Source: MIT, 2018 <http://news.mit.edu/2018/startup-ori-robotic-furniture-0131>

14 Source: Raconteur, 2018 <https://www.raconteur.net/business-innovation/data-city-transport-systems>

15 Source: Housing Wire, 2018 <https://www.housingwire.com/articles/47730-expert-heres-where-real-estate-tech-will-be-in-five-years>

16 Source: Curbed, 2018 <https://www.curbed.com/2018/11/14/18093134/home-movie-theaters-game-rooms-mcmansion-hell-wagner>

17 Source: Boston Consulting Group, 2019 <https://www.bcg.com/publications/2019/building-the-housing-of-the-future.aspx>

THE FUTURE OF THE MORTGAGE

The future of the mortgage may have little directly to do with proptech, yet changes here indicates the degree to which technology can shift behaviour, the benefit of direct to consumer/user relationships, and the extent to which doing new things can radically reposition products and services. Overall, the market share of fintech lenders in the U.S grew from 2 percent in 2010 to 8 percent by 2016. They ostensibly solve pain-points since mortgages offered by fintech lenders close about 20 percent faster than others, and, they help lenders since default rates for fintech loans are 38 percent lower for purchase loans and 29 percent lower than for refinances¹⁸. The emergence of fintechs has also prompted innovation levels within incumbents to rise. SinoPac Taiwan, for example, decided to offer a flexible lifetime mortgage whereby a given customers' mortgage payments can be adjusted monthly simply and online, ensuring the mortgage adapts to life circumstances rather than the other way around¹⁹.

Some even see changes to the mortgage, whether through greater flexibility or investment options, as able to supplant the current account as the primary way for financial services organisations to build long term relationships with customers²⁰. This could also have ramifications for the build to rent sector, especially if it results in greater liquidity and democratisation. With an extra 250,000 build-to-rent units forecast in the UK by 2030, start-ups have already appeared that could remedy issues in the rental system, with UK start-up Canopy initiating a tenant scoring system that allows for a deposit free system²¹.



PLATFORMISATION

Platformisation of transport and retail is well established, and has helped raise consumer expectations that transcend industry boundaries. Attempts to build such platforms within real estate, with all the winner-takes-all implications, are imminent. In the U.S, Zillow has introduced its Zillow Offers platform, letting potential sellers request direct offers from Zillow. The entirety of Zillow brought in \$1.3 billion of revenue in 2018. The plan for Zillow Offers is to create \$20 billion of revenue within five years²². With Amazon fully invested in smart homes - and the data they reveal - it is likely that various ecosystems or networks will coalesce in spaces traditionally claimed or closely associated with real estate players.

Given that some 58 percent of predictive power in real estate investment comes from non-traditional variables²³, real estate players including investors and developers will need to make advanced data competence a priority. In Seattle, one proptech application combines a '...large database of traditional and non-traditional data in order to forecast the three-year rent per square foot for multifamily buildings. These machine-learning models predicted rents with an accuracy rate that exceeded 90 percent²⁴.' The secondary benefit of such analytics programmes is the ability to scale them for use in other areas.

18 Source: The M Report, 2019 <https://themreport.com/daily-dose/03-11-2019/the-new-technology-mix-in-mortgage>

19 Source: Wealth and Society, 2018 <http://www.wealthandsociety.com/updates-and-articles/innovation-comes-to-mortgage-loans-with-flexible-repayments/>

20 Source: Wealth and Society, 2018 <http://www.wealthandsociety.com/updates-and-articles/innovation-comes-to-mortgage-loans-with-flexible-repayments/>

21 Source: Kennedy's Law, 2018 <https://www.kennedyslaw.com/thought-leadership/article/the-rise-and-rise-of-proptech>

22 Source: Geekwire, 2019 <https://www.geekwire.com/2019/zillow-2-0-real-estate-giant-embarks-fundamental-shift-projecting-home-sales-operation-will-become-20b-business/>

23 Source: McKinsey, 2018 <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/getting-ahead-of-the-market-how-big-data-is-transforming-real-estate>

24 Source: McKinsey, 2018 <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/getting-ahead-of-the-market-how-big-data-is-transforming-real-estate>

AFFORDABLE HOUSING AND CO-LIVING

One potentially significant UK trend sees a hybrid of contech and proptech, with modular construction enabling more affordable, accessible and faster built housing. 'Identified as a promising solution to the UK's ongoing housing crisis... companies like Ilke Homes are leading the way²⁵.' This trend also holds potential for housing in the era of ever more footloose work. Workspaces have been disrupted by the flexibility provided by WeWork for example and alternative accommodation typologies are rapidly emerging too.

Co-living '...refers to residential real estate offerings with communal facilities and shared spaces that move the emphasis away from buying and renting homes. The focus is instead on individual or group access to attractive accommodation without the burden of ownership²⁶.' In places experiencing structural imbalances in their housing markets, such models have already launched. San Francisco start-up OpenDoor already accommodates some 65 residents across five properties, and has a waiting list of more than 800 people. In London, 'The Collective' is a 546-room co-living venue operating a high-volume, low-margin model where an '...en-suite room starts from £250 per week including rent, council tax, utilities, room cleaning and access to communal spaces and events²⁷.'



²⁵ Source: Unissu, 2019 <https://www.unissu.com/proptech-resources/proptech-in-the-uk>

²⁶ Source: Medium, 2019 <https://medium.com/swlh/co-living-and-the-future-of-residential-real-estate-490d4215f2fe>

²⁷ Source: Medium, 2019 <https://medium.com/swlh/co-living-and-the-future-of-residential-real-estate-490d4215f2fe>



KEY POINTS

- When it comes to technology, we tend to overestimate the impact of change in the short term, and underestimate the impact in the long term²⁸.
- Demand for new forms of housing will require an assembly of skills, aptitudes and partnerships not currently found in the industry.
- Personalisation will be sought, with agility and flexibility key for an expanding range of buyers.
- Review the existing product portfolio and assess where new business opportunities could arise.
- New technologies (such as sensors, big data and data analytics) enable – and perhaps compel – the real estate market to innovate. Accessing the data from an array of in home sensors could help develop new propositions and services.

²⁸ Source: BisNow, 2018 <https://www.bisnow.com/london/news/technology/real-estate-in-2030-will-be-totally-different-here-are-the-skills-youll-need-to-survive-94014>

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