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# ABC of Proptech

2018

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## A

### Artificial intelligence

Computer systems ability to perform tasks that imitate human intelligence, such as the ability to adapt and learn.

This has huge potential for the real estate sector and AI is already being used to develop, smarter buildings, new property management solutions, deeper data analytics and more intelligent search platforms.

CMS have published a series of AI insight papers exploring the varied impacts of this technology.

Please [click here](#) to access these papers.



## B

### Blockchain

A distributed, public ledger technology that Bitcoin and many other cryptocurrencies run on.

By recording and combining transactions into a decentralised, secure ledger system, it creates a 'chain' of chronological data that no one party controls. The value lies in the system's ability to authenticate and track transactions in real time without the use of a third party, such as a bank.

One of the biggest impacts of Blockchain on commercial real estate could be a smoother, faster contract management process that expedites deals.

Please [click here](#) to listen to our podcast on this theme: 'Using blockchain in property transactions – is it really the future?'

To subscribe to our full podcast series, please [click here](#).



## C

### Crowdfunding

The practice of funding a project or venture by raising many small amounts of money from a large number of people, typically via the Internet.

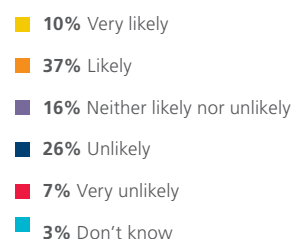
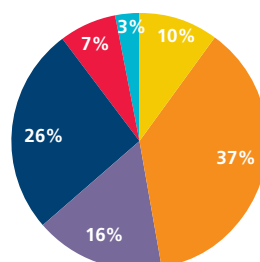
Property crowdfunding is a relatively new form of investing, which allows many investors to buy a share in a building. They then get back their proportion of rental income and any increase in the property's value. A range of equity crowdfunding property platforms and peer-to-peer lending platforms are now in operations.

In our 'Real Estate in the Digital Age' thought leadership report, 47% of our respondents were positive about crowdfunding becoming a mainstream way to raise capital over in the next 10 years.

Please [click here](#) to access the full report, which contains an interview with leading residential crowdfunding company, Property Partner.



*Will new ways of raising capital through crowdfunding platforms become mainstream in the next 10 years?*





### *Data*

Facts and statistics collected for reference or analysis.

More than 90% of today's data was created in the past two years and it is not only growing in volume, but also in breadth and influence. 'Data is the oil of the modern world.'

Increasingly, real estate market data such as sale values, rental levels, and square footage are becoming widely accessible to commercial real estate professionals, adding more transparency. This, coupled with improvements in data analytics, delivers better decision-making and improved efficiency across the industry.



### *Efficiency*

Achieving maximum productivity in an organised way.

Historically the real estate process, for both commercial and residential, had a reputation for being slow. However, increasingly there is an industry drive towards efficiency in all forms.

One way greater efficiency is being delivered is through online leasing and asset management platforms, such as that offered by VTS. For real estate businesses, the ability to centralise asset management activity for large portfolios on a single platform with real time dashboards leads to improved visibility and analysis, and faster data-led decisions.



### *Flexible*

A growing emphasis on agile arrangements.

In our 2017 CMS research report on offices, '*Smart, Healthy, Agile.*' 82% of workers found the idea of working in a co-working or flexible space appealing; and 89% of real estate professionals think that co-working spaces will become a component of real estate strategies for large companies in the next five years.

Recent research from Cushman and Wakefield reported that Central London saw 2.5 billion sq ft leased to flexible workspace providers in 2017, a 190% increase from 2016.

Co-working giant WeWork has become the biggest overall occupier of office space in London, having acquired three of the buildings it occupies, most recently Devonshire Square Estate.

**To access our full 2017 research report, please [click here](#).**



### *Generations*

Demographics are changing. People are living and working longer than ever before. This means there are now up to four different generations in the workplace at the same time and their varying needs must be catered for within the office environment.

There is a particular spotlight on the millennials who will make up 75% of the workforce by 2025.

In our '*Smart, Healthy, Agile.*' report, Carissa Kilgour, Workplace Director at Landsec commented: '*the power has shifted due to the scale of this generation. What matters to them is purposeful, meaningful work and they want their values aligned to the organisation they work for.*'



## H

### *Hackaton*



The concept of a Hackathon is to turn an idea that solves a problem into a working prototype within a very short space of time. Participants are expected to think outside the box.

Hackathons based around PropTech bring together Real Estate professionals with coders, designers, software developers, technology innovators and marketers to create apps and products to improve and enhance the property sector.

## I

### *Internet of Things (IoT)*



The IoT is a network of interconnected devices or systems, which communicate and share data with other smart devices. It is all around us — and it is connecting our smartphones, PCs, cars, homes and more.

Buildings are becoming a host for a wide range of IoT based applications. Sensors are increasingly being installed inside and outside buildings to gather a vast array of data, which can then be analysed and exploited in order to optimise how a building is occupied and operated.

## J

### *Jobs (CTO, DOI etc)*



Technological disruption to the property sector is giving rise to a whole host of new job roles and titles.

Roles such as Chief Technology Officers, Big Data Engineers, Chief Data Officers and Mobile Application Developers have grown. This reflects the responsibility that all businesses have when it comes to the management and effective application of technology to guard against risk and gain competitive advantage.

## K

### *Knowledge*



With the vast amount of data being collected and the information that is widely available, there is a need to ensure this knowledge is used for investment, marketing and innovation in the real estate sector. Systems need to be in place to control this data-flow, with specialists in data management playing an increasingly significant role in the real estate industry.

## L

### *Logistics*



Technological advancements are increasingly influencing logistics operations.

The growing challenges of cost, efficiency, speed and scale makes logistics ripe for disruption. The sector is an emerging battleground for some of the largest companies in the world. In addition to Amazon, Alibaba, DHL and UPS, retailers of all types and tech firms like Uber and Tesla are investing heavily in the sector.

Consumer expectation for ever faster delivery is ultimately going to drive innovation in logistics. 39% of the millennials we surveyed in 2017 would pay a premium for delivery in under 12 hours.

Our 2018 thought leadership report titled 'Box Clever' looks at the growing logistics property sector. Our research shows that 85% of real estate professionals agree that keeping pace with technological change is a challenge for the logistics market.

**To access the full report, please [click here](#).**

M



### *Modular construction*

The process in which a building is constructed off-site in sections (modules), using the same materials and designing to the same codes and standards as conventionally built facilities.

Modular construction can make it quicker and easier to re-configure, extend or upgrade buildings to adapt to the needs of owners and occupiers.

Legal & General plan to use modular construction to address housing shortages.

**To watch a clip of their vision, please [click here](#).**

N



### *Networks*

We are now better networked than ever before. New advancements in communication technology – including improvements to virtual private networks, remote desktops, and the cloud – allow for instantaneous information and file sharing. This allows us to work anywhere, anytime, whilst staying connected. What this means for real estate, is varying degrees of occupation, with a blend of remote working and workers docking in at the central office.

O



### *Omni-channel*

Omni-channel is most closely associated with the world of retail where increasingly a combination of both digital and physical methods of marketing, buying, selling and distributing goods is used.

Our most recent thought leadership publication, 'Box Clever', considers the world of retail logistics and the changes that have taken place in view of the rise of e-commerce.

**To read more, please [click here](#).**

P



### *PropTech*

Property technology (PropTech) refers to all aspects of technological innovation that is having an impact on the built environment. It is estimated that USD 20bn will be invested in PropTech globally by 2020, according to KPMG.

Q



### *Quantum computing*

Traditional computers store information in the form of bits (using a binary code), whereas quantum computers store information using qubits. They are able to handle operations at speeds exponentially higher than conventional computers... watch this space!

## R

### *Robots*

Machines designed to perform a task or carry out a series of actions automatically.



Robotics in all shapes and forms is increasingly used across every aspect of the building lifecycle, from drones used to survey potential sites from above, to automated cranes in construction, to 3D printers creating building blocks, to robot security guards, receptionists and cleaners used as part of facilities management, to name but a few examples. More automation is undoubtedly set to sweep across our industry as the efficiency drive continues.

Alibaba has launched their own 'smart warehouse', in which it is entirely staffed by robots.

[Click here](#) to find out more.

## S

### *Smart buildings*



A smart building uses interconnected technologies to make it more responsive, ultimately improving its performance in terms of cost, sustainability and user experience. These can include wireless technologies, digital infrastructure, adaptive energy systems, sensors/data gathering devices and a whole host of other assistive technologies.

To gain further information around the different functions of a smart building, please [click here](#) to see our vision for an AI-enabled smart office of the future.

## T

### *Three D printing*



The process of making a physical object by building up layers of printed material. This is also known as additive manufacturing. This has the potential to change how buildings are constructed and there are some early examples of 3D printed houses, for example, on this scheme in the Netherlands:

**To read more on the scheme in the Netherlands, please [click here](#).**

## U

### *Uberisation*



This concept, often linked with the ridesharing service Uber, is now considered a movement. It reflects a new generation of consumers who are open and willing to share.

Sharing economy business models are booming with Airbnb and WeWork riding high on this wave. Airbnb now has four million listings worldwide, more than the top five hotel brands combined. On any given night, two million people are staying in other people's homes around the world on Airbnb.

## V

### *Virtual reality*



An artificial environment that is created with software and presented in such a way that the user experiences this as a real environment.

Immersive, three-dimensional walkthroughs of properties are increasingly available in both the residential and commercial spaces, which helps boost speed and simplicity in leasing, particularly for speculative developments.

Total revenue estimation for virtual reality software in the real estate sector globally is USD 2.6bn by 2025.



### *Wiredscore*

A rating system empowering landlords and occupiers to measure the digital connectivity standards of a building.

William Newton, UK Director of WiredScore commented, '*we need connectivity standards in our industry. It is business critical*'. In the research, 88% of real estate professionals saw Wired Certification as being important in making an office building attractive to occupiers. Fast and reliable internet connection came top of the office facilities which office workers rated most highly (88%).



### *Xperiential*

The process of improving user satisfaction by enhancing the ease of use, accessibility and enjoyment of a person in a particular environment.

New retail models in particular are evolving to meet demand for consumer experiences in order to draw customers back into bricks and mortar stores rather than shopping online. For example, pop-up shops and temporary experiential retail spaces are becoming more appealing to retailers as a way to create brand excitement and engage with new customers.



### *YOPA, Purple Bricks, Openrent, Nested, easyProperty*

Online estate agencies are providing a less costly service for buyers and sellers of residential real estate. This is challenging the traditional players who have extensive high street estates and higher overheads.

In our 2016 thought leadership report, we interviewed the CEO of easyProperty, Rob Ellice.

**To read the full report, please [click here](#).**



### *Zoopla, Rightmove etc*

Online real estate portals in the residential space, focused on improving visibility and empowering buyers with the resources they need to make informed property decisions.



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