CUSHMAN & WAKEFIELD

NORDIC OFFICE -A PREVIEW OF THE FUTURE

A Cushman & Wakefield Research and Insight Report February 2018



GENERATIONS AND WHO THEY ARE



BABY BOOMERS

1945 to early 1960s

The demographic group born during the post-World War II period. Today they are dominant in business board and management positions. They are conscientious and hard-working, loyal to employers and place high importance on job security. They believe in meetings for solving problems, prefer to communicate face-to-face, and use telephone or email if required.



GENERATION X 1960s to early 1980s

Having grown up with hard working parents this generation is very family orientated. They want to have everything, a big family, a career, a nice house, a car, a boat, holidays and a second home. This can often lead to stress. Generation X strive for a work-life balance with loyalty to a profession, not necessarily to an employer. They prefer to communicate through a mix of face-to-face and emails.



MILLENNIALS

1980s to early 2000s

Generation WHY? They are hardworking but need to work for a cause. They challenge business with questions on values and purpose which baby boomers find both interesting and irritating. Digital entrepreneurs, they work "with" and not "for" organisations. They value freedom and flexibility, and prefer to communicate on text or social media.



GENERATION Z Late 1990s to today

Super digital. entrepreneurial and individual. They have had Internet technology readily available at a very young age, and social media is a normal way of socialising. Led to believe they can have everything, they require instant gratification and are generally impatient. Career multi-taskers, their world is in constant change and they will move seamlessly between organisations and "pop-up" businesses.

Nordic Office -A Preview of the Future

Baby Boomers, Generation X, Millennials and Generation Z. Each have grown up in differing economic, social and historical contexts, resulting in varying aspirations and behaviour. Technology is redefining the workplace, as employees or "gig-workers" can work anywhere, only who will be using the space, but how and causing businesses to reconsider their real estate strategy around more flexible options. Being "digital natives", Millennials and Generation Z will adopt remote and flexible working practices to an extent not seen in preceding generations (Cushman & Wakefield, Well workplace, 2017). Richard Baldwin in his book "The Great Convergence" talks about the 3rd wave of globalisation, the reduction in the cost of moving people for face-to-face interaction, which interpreted in a virtual way has the potential to reinforce an even more fragmented working environment.

The new fragmented "gig-economy" also impacts traditional business culture and employee engagement. With so many freelancers in the mix, it's more important than ever to demonstrate a commitment to all workers, whether full-time or temporary. Constant change is the new norm. From restructuring to digital transformation to changing consumer and employer preferences and expectations, companies are operating in an environment of constant change and uncertainty. Speed and agility will trump perfection as businesses are pressured to address these challenges with faster innovation, enhanced customer experience and cost reductions, calling on agile and efficient leadership involving high levels of collaboration, engagement, empowerment and communication (Barry, 2017).

Millennials are often criticized for their obsession with technology and general egocentricity, but like it or not, this is the up-and-coming generation that's going to shape the workplaces of tomorrow. By about 2020, nearly half the working population will be composed of Millennials (Alton, 2017). Combining the fierce war for talent with the search for technical and digital competence, addressing millennials working preferences will become key to businesses prosperity.

Now more than ever, commercial real estate needs to secure a seat at the table with other business unit leaders when discussing the company's strategy and forward-looking plans. There needs to be a good understanding of not when they will be using it. For instance, according to Deloitte, 70% of Millennials might reject traditional employment and choose to work independently in the future. A survey of 400 business students in Paris (ESSEC) showed that 93% didn't want a traditional office and 87% wanted to work in a city centre. Everyone needs to take notice. In addition, artificial intelligence and robotics will be more prevalent in the near future and their presence should be factored into the planning as well. Armed with this type of information, businesses can design and continually redesign a workplace that works for their organisation going forward. At the end of the day, businesses that are successful in the future will be those that break down the barriers between people, workplaces and technologies and empower their employees to be productive and creative no matter where they are (Cushman & Wakefield, "The gig is up", The Occupier Edge - Ed.4, 2017).

In this report, we highlight how we envision a future office would look, summarised into 10 key trends

TRENDSPOTTING

TREND 5: URBAN **TECH ENVIRONMENTS**

Location has a direct impact on all top C-suite challenges: access to talent, ability to innovate, strong customer relationships, operational excellence, and sustainability

TREND 1: COGNITIVE BUILDINGS

Combining big data from IoT and sensors with machine learning allows for improved utilisation and user experience.



TREND 2:

built environment.

WELLBEING



Curate the experience by being part of something greater. It includes quality dining, convenience service, wellness amenities, community spaces and onsite events with access for both tenants and the public.



TREND 4: CSR

The wellbeing phenomenon, and eroding work and

life boundaries, requires improved understanding of

its strategic importance and implications for the

Millennials' attention to CSR (Corporate Social Responsibility) requires corporates to review their policies. As a tool to attract and retain talent, CSR in the built and working environment becomes a strategic imperative.

TREND 6: CO-WORKING

Driven by flexibility requirements, resource utilisation, knowledge sharing and Millennials' preference for access economy, work will increasingly take place in social surroundings and co-working spaces.

TREND 9: ROBOT WORKERS

Security, room delivery, concierge, receptionist, autonomous cleaning, and property maintenance services. Both humanoid and non-humanoid robots are gradually able to handle more building and service tasks.



Where FinTech and PropTech meet. Blockchain has the potential to increase the transparency, efficiency and liquidity of rental and real estate transactions.



TREND 7: GIG WORKER

Consultants, contractors, freelancers and temp workers create flexibility and change the corporate landscape and how we work.

TREND 8: VIRTUAL & AUGMENTED REALITY

Improved virtual meeting facilities can reduce the need for "face-toface" interactions and support work anywhere and anytime. Possibilities exist for virtual tours and projection of scale models.

5



TREND 1 COGNITIVE BUILDINGS

Does the building think? Is it intelligent? Can it talk to us? In short, yes. It communicates to us in the only language it knows, data. With advances in technology, particularly with the Internet of Things (IoT) and sensors, we are seeing vast amounts of data produced at a rapid pace. A building becomes 'smart' when you use that data to make strategic decisions around efficiency, quality, productivity. Gone are the days of measuring occupancy, the new buzzword is utilisation. Based on data gathered by Cushman & Wakefield, physical spaces are the second-largest corporate cost but shockingly are less than 45% utilised. With statistics like these, it is imperative we monitor our portfolio and increase utilisation to minimise costs, with enhanced user experience being the catalyst. So how can sensors help? We want speed, we want live feedback, insight, learning and we want instant adaptation. Here are three ways cognitive buildings will help us achieve that:

Responsiveness

Workplace technologies allow space changes to happen more quickly and more frequently. This allows the often static workplace to respond to people's needs in a more flexible way. Imagine a scenario where you can physically see on an app or kiosk software which part of the building is hot/cold, noisy/quiet and dynamic/static. Where is the right work setting for you? Which part of the building will tend to your wellbeing needs? Where is my colleague sitting? This allows employees to perform at the highest level of engagement by matching environment to their personal workstyle.

Proactive Management of Space

Coupled with predictive analytics, proactive management of space allows property teams to gain meaningful insight and make data driven decisions around their workplace. For example, department X will run out of space in two months, floor X is nearing peak capacity, neighbourhood X is too loud. Data is collected in real time to allow for immediate adjustments.

Curated Experiences

As machine learning collects these data streams and sensor data, it can begin to make predictions and recommendations, curating employee experiences. The future of implementing a digital workplace approach is that people will receive curated recommendations based on their profiles and preferences.

From the article "<u>All Eyes, Ears (and Sensors)</u> on You" in "The Occupier Edge – Ed.4, 2017". By Maciej Markowski, Aleksander Szybilski and Kawsar Miah



TREND 2 WELLBEING

The future workplace will look radically different as employers respond to a growing requirement for a work-health balance. The wellbeing industry is a worldwide global phenomenon, which grew by over 10% in 2013-2015, but corporates are only beginning to understand and interpret the implications for the built environment. More than a 'fad', this is a global socio-economic shift - rue the industry that is not moving to address it.

Technology has eroded work life boundaries, whilst also empowering employees to change the nature of the work contract. Employees will increasingly choose where they want to work and how they want to work. Technology will allow the relationship between 'where we are' and 'how we are' to be laid bare, and it will redefine how we determine the value of real estate. Workplaces that are not 'well' impair employee performance and are at risk of heightened vacancy levels and loss of income potential. Mounting evidence all points in one direction: wellbeing in the workplace is fast becoming a strategic imperative.

According to EHS Today, mental health problems are a major cause of "presenteeism", which costs businesses ten times more than the cost of absenteeism. According to the Swedish Work Environment Authority, an employee who experiences workplace problems has an average production loss of 38%. A study of FTSE 100 and S&P 500 companies demonstrated out-performance by those focusing on health, engagement and wellbeing. A study by PwC found cost benefit ratios ranging from 2:3 to 1:10 – meaning for every € spent, an organisation can expect to receive up to €10 in value back.

The focus on health and wellbeing in the workplace includes, but is not limited to, better air quality control, enhanced natural lighting, improved temperature control, greater access to green views, reduction of unwanted noise, at the same time as employing building design strategies that encourage physical activity, and discourage sedentariness and bad eating habits.

Wellness in the workplace has emerged as a critical issue because it is simply too fundamental to be ignored. And the call to action for the real estate industry, and broader built environment, is loud and clear. The design and building of workplaces must change to meet a flexible future.

From the report "<u>Well Workplace - Making</u> <u>spaces human again</u>" by Sophy Moffat A Cushman & Wakefjeld Besearch and Insight Report / / /

TREND 3 COMMUNITY

Occupiers are focusing on curating the experience of their employees, which includes where they work. Previously, just being downtown, proximity to public transport was sufficient, but now that employers are expected to offer so much more, the stakes are rising. Occupiers are interested in food quality and variety, wellness, access to the outdoors, exercise options and collaboration created through community spaces where people interact. They want places where their people will linger and remain connected to the organisation and each other in meaningful ways. Instead of creating suburban campuses with in-house facilities, which can be prohibitively expensive, they can find high quality amenities in existing buildings located downtown. The motives of occupiers and landlords create a positive tension which has driven an emerging and significant trend in the corporate office market: amenity-laden high-rise towers in the downtown core. What we used to only see in corporate campuses, we are now seeing in large office buildings nestled together in our CBDs. This move to city centres is borne out by recent research of occupiers needs.

Landlord provided amenities, where some are provided exclusively for tenants and others are available to both the tenants and the public, create vital and energetic community spaces. These include fine dining restaurants, aggregated tenant-convenience services to elevate tenant wellness such as fitness management companies, information bars & concierges that add a residential or boutique hotel-like feel to the corporate environment, and outdoor spaces like rooftop gardens, internal atria, green walls and podium decks converted to gardens.

In addition, destination marketing can be used as a value-added benefit: for example, maintaining a heritage building onsite and converting it to a food hall, creating an outdoor concert/event forum for performance, viewing platforms and tourist attractions, all features that position the building as a destination. This involves aggregation of multiple amenities into one integrated, branded 'club' - offering a feeling of being part of something greater.

TREND 4 CORPORATE SOCIAL RESPONSIBILITY

Three-quarters of Millennials consider a company's social and environmental commitments when deciding where to work and nearly twothirds won't take a job if a potential employer doesn't have strong CSR practices. More than any other generation, Millennials see a company's commitment to responsible business practices as a key factor in their employment decisions (Cone Communications, 2016). Millennials are attracted to employer brands that they admire as consumers and look for employers with values that match their own, and would even consider leaving an employer whose values no longer meet their expectations (PWC, 2011). People today bring their whole selves to work and the more you know about your people and your community, the more you can align your goals (Hutchisson, 2016).

How does this play into real estate and the workplace? For years, sustainability has been seen as a measure to reduce cost and attract organisations focusing on sustainability. With the reinforced attention on CSR from Millennials, offering attractive workplaces that also reflect talent values is becoming increasingly important. The emphasis placed on sustainability varies by organisation, and is often tied to larger enterprise goals and objectives, but a discussion about CSR takes place with almost every occupancy decision made today (Cushman & Wakefield, "The corporate view of

This interest in CSR among Millennials has a two-fold benefit for companies. Firstly, they can use their CSR initiatives to attract top talent; and secondly, they acquire an additional avenue for positive reputation-building (Bennett, 2017).



TREND 5 URBAN TECH ENVIRONMENTS

Where a corporation locates has a direct impact on all of the top C-suite challenges: access to talent, ability to innovate, strong customer relationships, operational excellence and sustainability. Location selection reveals the ways that strategic drivers are translated into practical decision-making (Cushman & Wakefield, Occupier Strategy Drivers: Nordic Survey, 2017).

Throughout this and most other business cycles we hear that tech cities have outperformed other markets by virtually every relevant economic and commercial real estate metric, including GDP, jobs, space absorption, rents, and more. In these markets, tech plays a larger role in the city's economic trajectory. It's also a "vibe". Certain cities have a tech feel in



the air, on the signage, in the conversations in the bars, in its population's habits and preoccupations. In certain cities, tech is more deeply woven into the fabric of the city itself, and it's dramatically shaping those local real estate markets. The ingredients, the "tech stew", essentially boil down to six key elements: local universities, capital, tech workers, knowledge workers, educated workers, and an entrepreneurial spirit. Each thriving tech market has a distinct essence based on the proportions of each metric (Cushman & Wakefield, Tech Cities 1.0, 2017).

In today's competition, with digital disruption knocking on the door. locating in proximity to a tech environment can provide an advantage not only due to proximity to knowledge and talent, but through its relation to the business environment. Cushman & Wakefield research demonstrates a growing preference for occupiers to locate in urban areas that offer strong transportation infrastructure and the opportunity to engage talent.

TREND 6 CO-WORKING

Your first space is hopefully your home. If you are a service industry worker, your second space is likely to be your company's office. You co-working operator brands or out-sourcing are now increasingly likely to do work in a third the relationship with the end-user. place, or a whole range of third places. This could be a coffee bar, a hotel, a park or a train, a shared social space.

Co-working is built on the opportunity to create third places which support collaboration by workers from different backgrounds to encourage knowledge sharing, innovation and user experience. The demand for co-working space has been driven by the growth of the creative and tech industries as well as the changing nature of work. Co-working has three distinctly separate drivers. The first two colliding forces were the increasing demand from big businesses to be more flexible in a fast-moving world and the length and inflexibility of the traditional office lease. One result of this collision was Regus, a multinational corporation launched in 1989 that now operates 4,000 business centres supplying flexible quantities of space on short leases or licences across 120 countries.

When we add the third driver of co-working, the Millennials' preference for the access economy, we provide the conditions for WeWork and many other co-working brands.

The above from <u>PropTech 3.0: the future of real</u> estate by Andrew Baum

The real estate sharing economy providers range from aggregators of available space, think Uber or Airbnb for commercial real estate, e.g. Liquid Space, to operators like We-Work or Regus. Examples of Nordic operators include Epicenter (Stockholm & Helsinki), Mesh (Oslo), Regus, Spaces, Work Around (Stockholm), The Impact Hub (Stockholm), SoHo (Copenhagen) and Kenno Lounge (Helsinki & Turku). The complete list is much longer and keeps growing.

A new model in the Copenhagen suburbs is Workstation, where the landlords own the fa-cilities and Workstation operates them without leasing the space. That way the tenants rent directly from the landlord. It is also interesting to see real estate investors launching their own concepts of sharing facilities to assist in main-

clude: MOW by Sponda, Our Office by Nordea Ejendomme, Lautrupsgade 7 by Aberdeen As-set Management (owner Danica Ejendomme), Flyt by Braathen Eiendom and Technopolis.

Investors need to decide how to navigate in this territory going forward, building their own

TREND 7 **GIG WORKERS**

A fragmented labour market is an emerging pattern and standard employment contracts are under pressure. 70% of Millennials might reject traditional employment/business and choose to work independently in the future (<u>Deloitte, 2014</u>). "Gig" workers, often referred to as consultants, contractors, freelancers or temp workers, are changing the corpo-rate landscape and how we work. Currently these comprise 20–20% of the working open these comprise 20-30% of the working population worldwide and similar figures have been reported for Sweden (McKinsey, 2016). Companies can more easily hire non-permanent employees on an as needed basis, while gig workers can enjoy the freedom, flexibility and work life balance they seek. According to Raymond Torres, Director of the International Labour Organization Research Department, this could be both a positive and negative development. The chance to work independent is good for those who want to live and work in rural areas where there aren't that many jobs, but employers can exploit the system, pay less and offer zero insurance against illness or accidents" (Nordic Labour Journal, 2016).

A Danish expert on the sharing economy and digitalisation, Anna Ilsøe, also predicts that the Danish and Nordic labour market models will come under increased pressure because of new trends. She is an associate professor and PhD at the Employment Relations Research Centre FAOS at the University of Copenhagen. "The structure of the labour market is changing. We are moving from a job economy to a gig economy, and this has major consequences. Many jobs will disappear and new ones will emerge, but many of these new jobs are less

safe than we have been used to in the Nordic countries so far." She expects in the future more people will have part-time jobs, be paid per gig or work both part-time and undertake fee-based work on the side. The Nordic model needs to adapt to this, as it is now based on having a majority of the workforce working full-time (Nordic Labour Journal, 2017).

The gig economy is here to stay. Globalisation these trends aren't going away anytime soon. Since we are working differently, corporate workplaces must be prepared to support these changes. To this end firms are increasingly redesigning their offices to provide fewer pri-vate offices and cubicles, and more open and collaborative space to address the fact that a significant part of their workforce are not actual employees. The goals are twofold: first, to provide workplaces that facilitate discussion and collaboration. Second, to decrease the firm's overall rent bill by providing less physical space per worker (Cushman & Wakefield, The gig is up, The Occupier Edge - Ed.4, 2017).

TREND 8 **VIRTUAL &** AUGMENTED REALITY

As headset technology continues to improve, companies are already exploring the possi-bilities of virtual and augmented reality (VR/ AR) for virtual property and city tours and projections of scale models, and they see even greater marketing opportunities down the road. The promises of VR and AR have been described many times before: Fully immersive video games, touchline-quality views of sportsurgeons reviewing a patient's medical records and scans mid-procedure without leaving the operating table and many other imaginative applications. The problem has always been the limits of the technology. Processing speeds in headsets have traditionally been too slow to keep up with the movements of human eyes and limbs, and the headsets' visual displays have lacked the high definition necessary to resemble the real world (for VR) or integrate seamlessly with real-world vision (for AR), leaving users frustrated.

That could soon change. According to a research report by Goldman Sachs (2016), VR/ AR hardware and software are finally begin-ning to catch up with consumer expectations and are poised to disrupt a number of markets, including real estate. The report sees VR/AR becoming a \$2.6 billion market in real estate by 2025 as headsets such as the Oculus Rift

New Reality for Real Estate" in "The Occupier Edge - Ed.4, 2017". By Geoff George, Adam

According to The Wall Street Journal, public tech companies and venture capitalists are from video games to medicine. And some are betting that virtual-reality headsets could be call (WSJ, 2016).

Dell & Intel Future Workforce Study (2016), a global survey of attitudes toward technology in the workplace, found that 57% of global employees today still prefer to exchange faceto-face conversation with their colleagues. However, 51% say that remote teams and better communications technology will make faceto-face communications obsolete in the future. new technology where 77% said they were "totally willing to use AR/VR in the workplace".

In short, full functioning and quality virtual, and augmented, reality will improve virtual busi-ness-meetings, support working anywhere/ anytime, and support increasingly fragmented organisational structures, at the same time as younger generations are ready to adapt to it.

TREND 9 ROBOT **WORKERS**

Mobile security robots are appearing in commercial properties around the world. So far, the total number of robots patrolling buildings is small, but with additional manufacturers currently rolling out products, the stage is set for this trend to take off. The appeal of security robots stems from a number of factors: they typically cost less to operate than human guards; they never complain, strike or need days off: and they offer special skills that humans don't possess. Knightscope, a U.S.-based firm that makes security robots for shopping malls, hospitals, and corporate campuses, equip their robots with regular and infrared cameras. These robots can tell the difference between workers and intruders, and can scan up to 300 license plates per minute. Otsaw Digital, a Singapore-based firm, offers an outdoor model that uses LIDAR and ultrasonic sensors and can recognize unattended bags. Cobalt Robotics, another brand, provides a two-way intercom so security personnel can talk with people remotely. What security robots don't have is weapons, or any way to detain suspects. They're useful for identifying and recording suspicious activity, but if a situation calls for aggressive action, robots can only call on their human counterparts to respond.

Security isn't the only job robots are handling in commercial buildings. Aloft Hotels is using delivery robots for some room service items and Hilton is rolling out a humanoid looking concierge that answers common questions and uses its artificial intelligence to improve its responses over time. In Singapore, robots receptionists by leading guests to meeting rooms and conveying refreshment orders in hotels and offices. And local cleaning companies such as WIS are deploying robots such as the Fairmont, local universities, and polytechnics. In the healthcare industry, two Belgian hospitals recently added humanoid robots to their reception desks to not only check people in, but to accompany visitors to the departments they are looking for. Mobile robots can also help us maintain properties more efficiently. Not only are they increasingly being used to conduct industrial inspections on power plant facilities, tanks, vessels and pipes, mobile robots can also clean, polish and even paint hard to reach areas within a building. Although some of these initiatives seem to be driven by the novelty effect rather than to improve service quality or reduce cost, as the robotics field continues to advance, more and more building tasks will likely be handled by mobile machines in the future.

From the article "<u>A Perfect Match: Robots &</u>

TREND 10 BI OCKCHAIN

THE REPORT OF THE PARTY OF THE

FRANCE ASERSEDUCTION

NAMES OF TRANSPORT

1 8

"Silicon Valley and Wall Street are betting that the underlying technology behind it, the Blockchain, can change... well everything." - <u>Gold-</u> man Sachs (2015).

"10% of global gross domestic product stored on blockchain technology" - World Economic Forum (2015). 58% from a WEF survey expect this to happen by 2025.

When adopted by the commercial real estate industry, blockchain technology will make leasing, buying and selling of property much more informed, fluid and efficient.

The potential impact of blockchain on processes and practices could be enormous. The blockchain could provide information regarding all buyers, sellers, title work, reporting, lease comps and vendor work on any individual commercial property. Having this information at your fingertips could cut out paperwork, enhance market transparency and shorten the speed to transact to minutes or seconds. With the digitalisation of smart real estate contracts, which have been designed to replace leases, blockchain could:

(1) Enable a commercial property to have a building performance (including rental and information could be accessed online by authorised parties in seconds.



**** AAAAAAAA

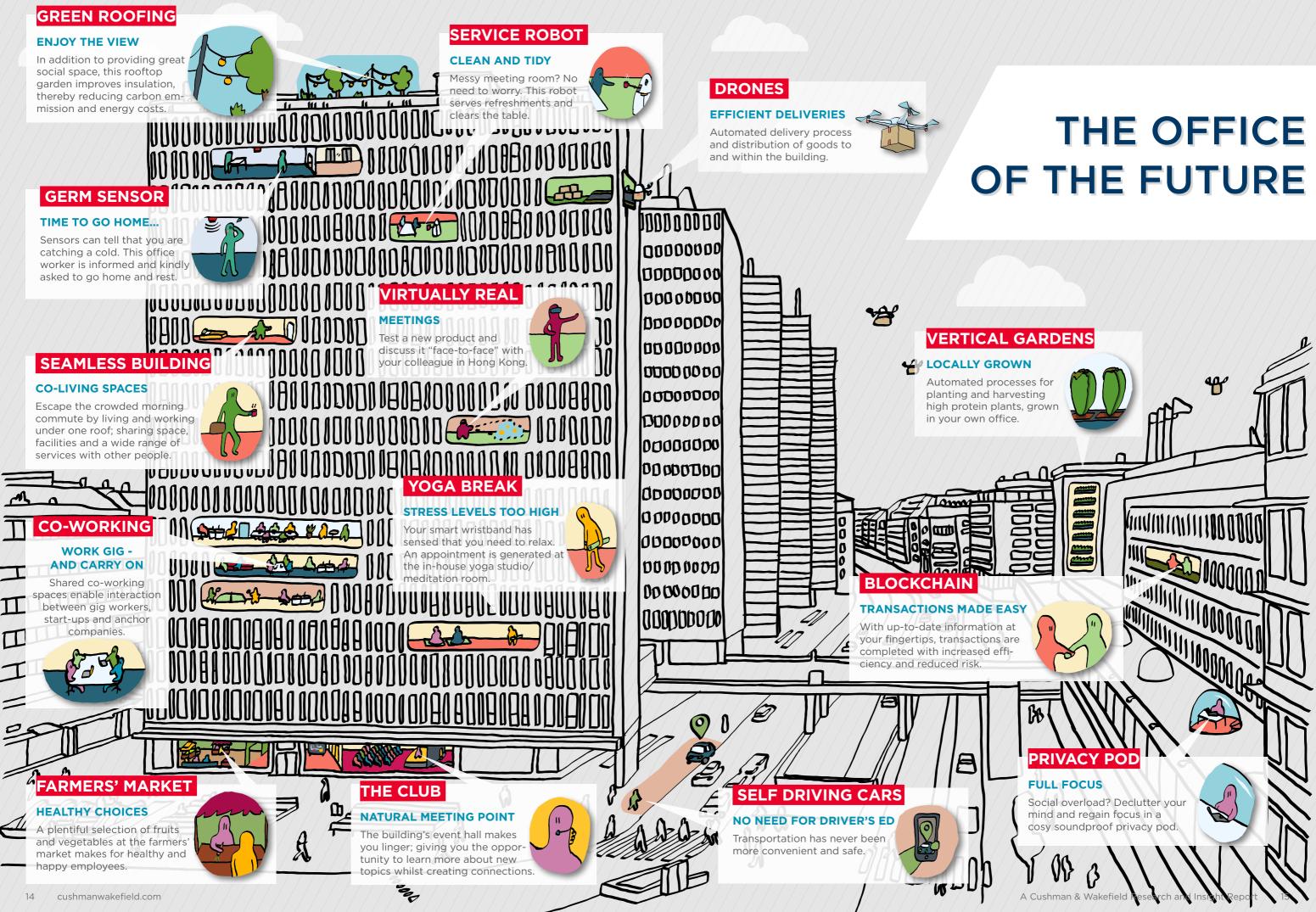
> (2) Allow for commercial real estate deals to transact in seconds rather than days, weeks or

(3) Better facilitate the commercial property sale and/or leasing payment process, once a deal has been concluded.

Not only will real estate transactions begin to resemble the buying and selling of stocks/ commodities with blockchain, but properties in bustling areas could change hands many times a year, many times a month, or even many times a week, depending on the strategy. In addition, as publicly-accessible ledgers, blockchains can make all kinds of record-keeping more efficient. For example, in Sweden, the government land registry is already testing all land titles and transfers on blockchain ("The Land Registry in the Blockchain", 2016). It aims to make property purchases quicker, cheaper and more secure by holding all title information digitally and enabling virtual transactions.

Blockchain may not happen overnight within the commercial real estate industry, but it's an inevitable reality and we need to prepare for it. The more informed we all are, the sooner we will be able to realise the cost savings, efficiencies and conveniences this innovative technology can offer.

From the article "<u>Blockchain - the building</u> blocks for a new way of conducting business' in "The Occupier Edge - Ed.4, 2017", by Shaun Brodie and Rob Parker.



CUSHMAN & WAKEFIELD



HÅVARD BJORÅ Head of Research, Nordics +47 479 69 660 havard.bjora@cushwake.com



MILENA KULJANIN Occupier Services Sweden +46 76 720 34 66 milena.kuljanin@cushwake.com



MARIE CRONSTRÖM Head of Occupier Services Sweden +46 70 606 41 10 marie.cronstrom@cushwake.com



TOR SVEIN BRATTVÅG Head of Occupier Services Norway +47 91 55 70 47 tor.svein.brattvag@cwrealkapital.com



HANNA LAMADON Head of Occupier Services Finland +358 50 585 8780 hanna.lamadon@cushwake.fi



MARIE HELMS Head of Occupiers Services Denmark +45 2578 2831 mhe@cw-red.dk

This report has been prepared solely for information purposes. It does not purport to be a complete description of the markets or developments contained in this material. The information on which this report is based has been obtained from sources we believe to be reliable, but we have not independently verified such information and we do not guarantee that the information is accurate or complete.

Published by Cushman & Wakefield ©2018 Cushman & Wakefield All rights reserved.