

HONG KONG:

A TESTBED FOR PROPTech INCUBATION



InvestHK
The Government of the Hong Kong
Special Administrative Region

Deloitte.

PropTech^{HK}
Hong Kong PropTech Association

Foreword

Hong Kong is one of the most mature and active real estate markets worldwide. In 2021, approximately 9% of Hong Kong's economy comprises construction, real estate, and related professional and business services industry¹.

Property technology ("PropTech") in Hong Kong is a fast-growing sector that will transform the real estate industry and present new opportunities for real estate technology and investment.

“ With the Northern Metropolis and Hong Kong-Shenzhen Innovation & Technology Park, Hong Kong is repositioning itself as an international I&T hub to drive growth in parallel with its long-established financial hub. Looking ahead, we would like to see cross-border connectivity and support strengthened to better integrate Hong Kong property technology startups into GBA networks for their expansion and accelerate Hong Kong's smart city and urban transformation. ”

Edward Au — Southern Region Managing Partner, Deloitte China

“ Hong Kong is uniquely positioned as a hub to orchestrate property technology development as it brings together decades of profound sophistication in real estate and construction, world-class financial and legal systems, as well as convenient access to the technology talents and supply chain within the Greater Bay Area. Therefore, we see a strong proposition of Hong Kong creating value for the PropTech ecosystem from innovation and investments to commercialization and long-term sustainable development. ”

Vivian Chan — Chairman, Hong Kong PropTech Association

¹ Gross Domestic Product (GDP) by major economic activity, Census and Statistics Department, HKSAR Government



HOW HONG KONG RIDES ON PROPTECH DEVELOPMENT IN MAINLAND CHINA

With President Xi Jinping's recognition of Hong Kong's solid foundation in science and technology, and high-quality technology talents, the national Ministry of Science and Technology ("MOST") rendered his support for the development of Hong Kong into an international Information & Technology hub in May 2018². Since then, the MOST and the Ministry of Finance introduced a new initiative to enable universities and research institutions in Hong Kong to bid for science and technology funding of the Central Government on the basis of merit and competition, and the funding granted can be used in Hong Kong.

The Arrangement on Enhancing Innovation and Technology Co-operation between the mainland and Hong Kong signed between the MOST and the Innovation and Technology Bureau ("ITB") in September 2019 has provided an overarching framework for mutual I&T collaboration, injecting confidence and positive prospect of the development of technology.

Meanwhile, Hong Kong government announced Hong Kong Innovation & Technology Blueprint in December 2022 to establish a clear development path and formulate systematic strategic planning for the city's innovation and technology development, including property technology ("PropTech"), in coming next 5 to 10 years.

With the Northern Metropolis Plan, Lantau Tomorrow Vision Project, and Hong Kong-Shenzhen Innovation & Technology Park, Hong Kong is repositioning itself as an international I&T hub to drive growth in parallel with its long-established financial hub. Looking ahead, we would like to see better cross-border connectivity and support strengthened to better integrate Hong Kong technology startups into Guangdong-Hong Kong-Macao Greater Bay Area ("GBA") networks, particularly in PropTech for startups seeking expansion.

HOW HONG KONG DRIVES PROPTECH AGENDA IN THE GREATER BAY AREA

Most of the major Hong Kong real estate developers, along with Hong Kong SAR government, have begun promoting innovation by investing in PropTech startups or supporting them through different events and development projects to drive the demand and adoption of real estate technology in Hong Kong. With reference to Hong Kong 2050 is Now, buildings account for 90% of electricity used in Hong Kong, generating over 60% of Hong Kong's carbon emissions. Meanwhile, Guangdong Province is expected to invest not less than RMB1.9 trillion in green infrastructure under the 14th Five-Year Plan.

Leveraging the niche positioning in GBA, Hong Kong act as the sandbox and launch pad of many local and global PropTech startups and a technology hotbed for the real estate sector in GBA. Given its proximity to the Shenzhen, the tech hub of mainland China, which hosts a pool of talent embedded in mainland tech giants, the actively trading Hong Kong real estate market could become a PropTech testing ground through collaborative efforts.

Combining strong access to capital as a regional financial hub, sophisticated roots in the property business, and mature legal infrastructure, Hong Kong is a unique international city that can play a critical role in growing and incubating solutions for the real estate industry and serve as an important gateway to mainland China and the rest of Asia.

² The Chief Executive's 2018 Policy Address, the Hong Kong Special Administration Region of the People's Republic of China

Overview of PropTech in Hong Kong

What is PropTech

PropTech, which stands for “Property Technology”, is the application of technology to drive innovation and business transformation in the real estate sector. Broadly speaking, PropTech can be applied to everything from planning and building to managing, using, and investing in properties and beyond.

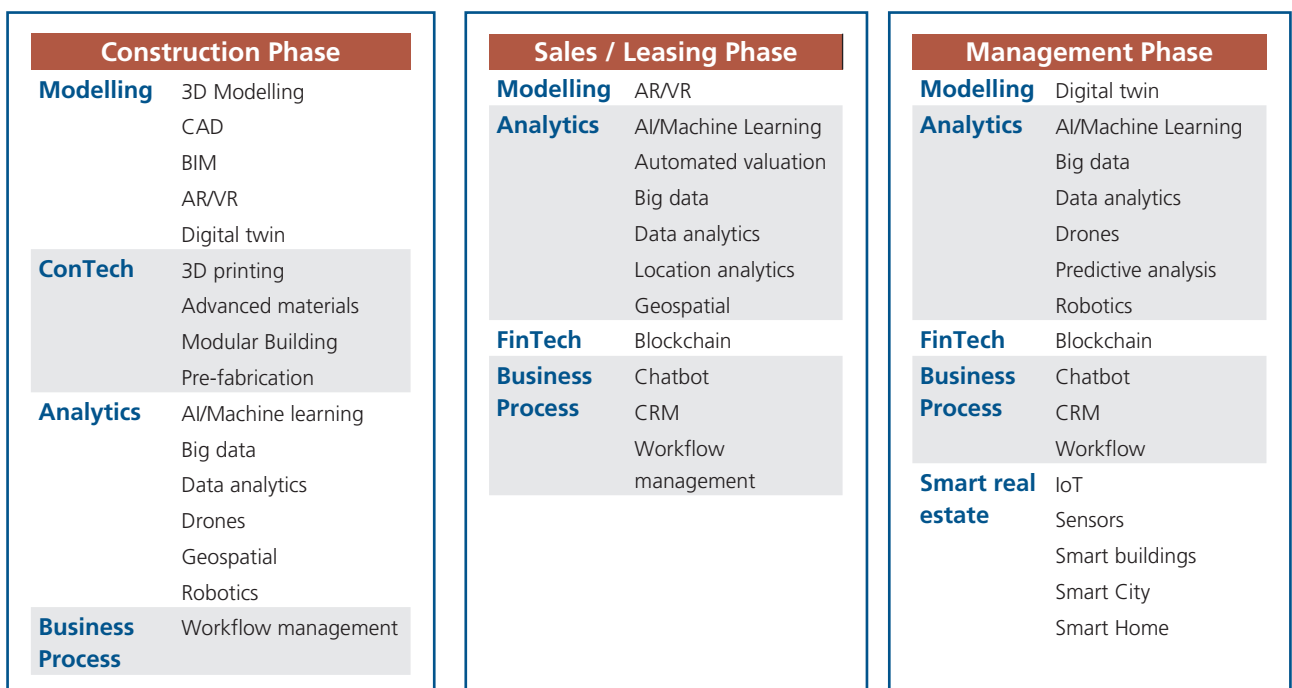
Technological innovation has empowered, revolutionized, or even disrupted countless industries, from food delivery and ride-hailing to cashless payments and industrial automation. Similar benefits — streamlining operational efficiency, improving the consumer experience, and creating more sustainable solutions — would be applicable to the real estate industry. Further, PropTech is also interesting in the context of another fast-growing and related sector — FinTech — as PropTech spans innovations not only from the service perspective of the industry but also in many ways the physical side of the building and managing real assets.

Smart cities, smart buildings, and smart homes have gradually shaped today’s commercial and residential property landscape. Apart from the examples of PropTech verticals as shown in Figure 1, the enabling technologies underneath PropTech, such as virtual reality, blockchain, artificial intelligence, advanced censoring, new materials etc., can manifest in various ways for different use cases.

Figure 1
PROPTech LANDSCAPE



THE MAJOR PROPTech CATEGORIES



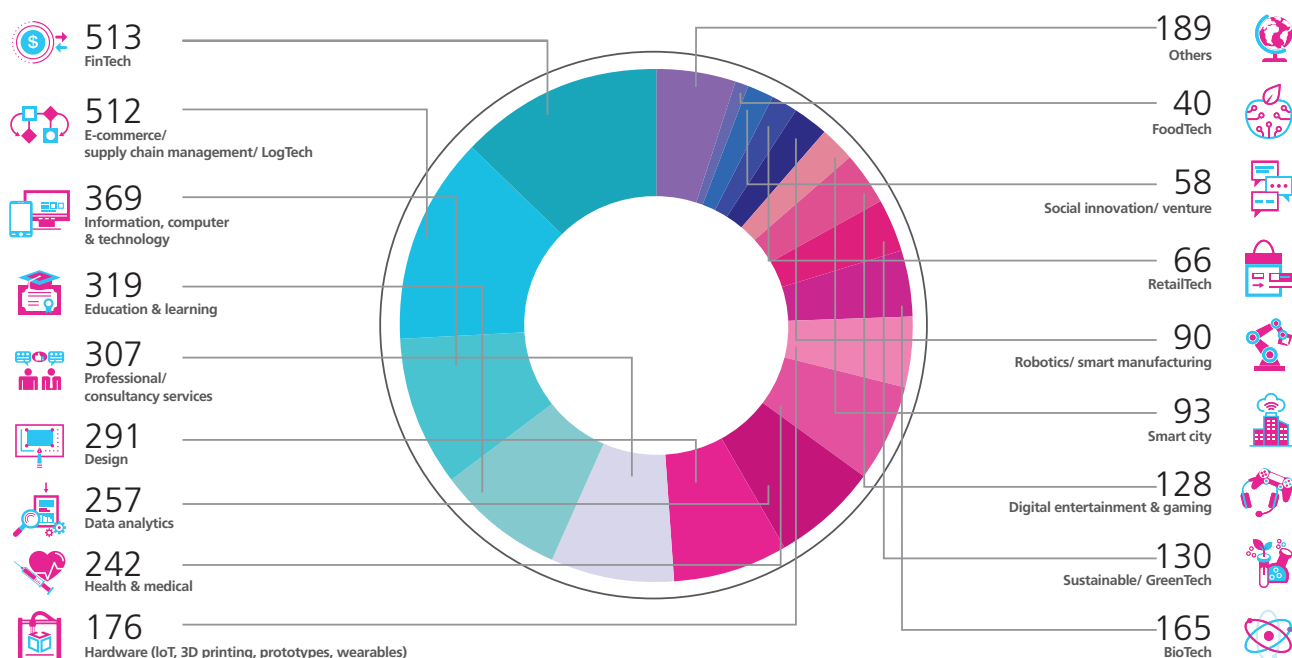
The rise of PropTech is being touted as a game-changer for the world's real estate industry. Over 7,800 companies are providing PropTech solutions in various parts of the built environment, collectively raising over US\$97 billion of equity funding in the 10 years to H1 2021³. In 2021, venture-backed companies in the PropTech space raised nearly US\$21 billion, as shown by Crunchbase data.

Why Hong Kong Attracts PropTech Startups

According to the 2022 Startup Survey conducted by InvestHK, the number of start-ups continues to rise despite the global pandemic challenge, up 6% from 2021 to a record high of 3,985 start-ups, building the capacity and vibrancy of Hong Kong's startup ecosystem.

As a rooted commercial hub, Hong Kong has successfully gathered a pool of need-for-continual-development start-ups and has equipped with an all-rounded PropTech ecosystem. Apart from the predominant aspects such as Fintech and E-commerce/supply chain management/logistics technology to support rapid financial and trading activities, based on StartmeupHK, sustainable/green technology and smart city which are directly related to PropTech are the emerging material topics followed by the launch of Hong Kong's carbon neutrality action plan and pledge.

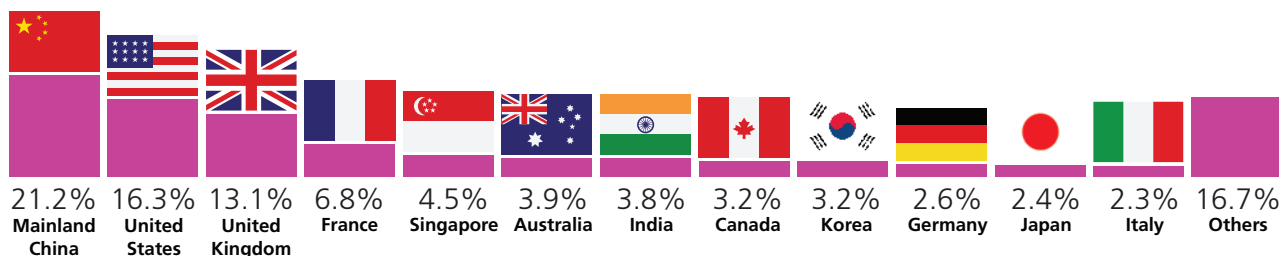
Startups in Hong Kong across a Wide Range of Industries



The above information is based on an online survey conducted by InvestHK with results finalised in September 2022. The survey was conducted in collaboration with a total of 64 operators of co-work spaces, incubators and accelerators.

Hong Kong Continues to Attract the World

Major origin countries/ territories of non-local founders



Percentage based on the total number of non-local founders with origins provided

Source: StartmeupHK (link: <https://www.startmeup.hk/about-us/hong-kongs-startup-ecosystem/>)

³ Transform with technology – Shaping the future of real estate, Jones Lang LaSalle

The map below shows the diversity of Hong Kong startups, covering every aspect of emerging business needs.

Hong Kong's PropTech Ecosystem Map



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PropTech in Hong Kong

While PropTech startups are predominately homebred in the US and Europe, as one of the world's largest financial hubs and real estate markets, Hong Kong has strong potential for PropTech's future development and leadership in Asia.

Hong Kong is a springboard to accelerate business successes. With an established international and diversified culture in all means, Hong Kong has been attracting entrepreneurs from core business-oriented countries around the globe and facilitating cross-border business activities and development. Besides out of the 72% of local startups, 25% of the startup founders were coming from overseas. Mainland China continued to have the largest share in 2022, followed by the United States, the United Kingdom and France, which was in the same order as 2021. Singapore overtook India and occupied the fifth position.

“ The COVID-19 pandemic has significantly increased world awareness on the importance of air safety and cleanliness. This has accelerated demand for technology integration with building and city technology infrastructure on air quality monitoring improvement in Hong Kong. Many startups, public bodies and corporations have already adopted smart solutions involving air quality antiviral tech, IoT, big data analysis, and A.I. The determination in transforming Hong Kong into a smart city is in the air. ”

Philip Yuen — CEO, Aurabeat Technology Limited

PropTech development in Hong Kong requires collaborative efforts from both public and private sectors. The introduction of BEAM Plus, an initiative to offer independent assessments of building sustainability performance and therefore making buildings more efficient with less carbon emissions, is one successful example of strong government steering and support from Hong Kong real estate developers of applying PropTech solutions in Hong Kong real estate and infrastructural projects⁴.

Because of the global pandemic outbreak, Hong Kong has reacted responsively not only with effective public health monitoring policies, but this has also increased public awareness on issues like air quality, creating opportunities for new businesses and improving the liability of the city in the long run.

In the 2018-2019 Budget, the Hong Kong SAR government set up a HK\$1 billion Construction Innovation and Technology Fund to boost the capacities of enterprises and practitioners in the construction industry and further support and adopt new innovative technologies in the construction industry. Eligible applicants can apply for financial support from the Fund to acquire the necessary hardware and software required for using any new local and overseas construction technologies.



⁴ Please refer to <https://beamplus10.hkgbc.org.hk/> for showcases

The Fund will also support students and practitioners of the construction industry to receive training on innovative construction technologies.

To achieve carbon neutrality by 2050, the Hong Kong government will spend HK\$240 billion in the next two decades on various green initiatives — this provides the backdrop of accelerating Hong Kong PropTech investment in the future.

With Hong Kong's strong roots in the real estate market, there is incredible potential for Hong Kong to become a PropTech hub not only in GBA but also in Asia, leveraging the technology talent and capabilities of sister cities such as Shenzhen and Guangzhou in the neighboring Guang Dong Province.

According to a report published by International Data Corporation (IDC), spending on mainland China's smart cities initiatives is expected to exceed US\$38.92 billion by 2023⁶, almost double the size in 2018. Moreover, according to Financial Times, 500 of the 1,000 smart cities built globally were in mainland China in 2021. As a result, the mainland market presents massive opportunities to PropTech players.

Locally, PropTech development is also well-supported by institutions such as the Hong Kong Science and

Technology Park and Cyberport, providing sandbox and incubation opportunities for those looking to grow in Hong Kong and expand into the vigorous mainland market.

“ Hong Kong has been an international business hub for finding great talents and identifying business opportunities. With Arup's long-established history in the city, we always view Hong Kong as a strategic location to enter into the mainland market and to expand into regions across Asia. As real estate stakeholders progressively stand behind digital transformation, we have been gaining insights to become more critical for stakeholders to improve building efficiency, drive sustainable outcomes and enhance user experience. We have launched Neuron, an app that integrates our insights into the built environment with emerging digital technologies — like a brain for buildings. PropTech is increasingly significant in building and construction applications such as carbon emission, material optimization, health and safety, tenant engagement, and more.

We look forward to embracing innovation with Hong Kong to transform it into a world-renowned Smart City.”

Michael Kwok — Chairman, East Asia of Arup Group



⁶ Investment in China's smart cities to approach \$39b by 2023, China Daily

Section 1 — Future of PropTech innovation and application in Hong Kong

PropTech in Hong Kong has risen as an ecosystem of startups, emerging growth companies, innovative products, services and business models across various aspects of the commercial and residential real estate markets. It applies to all aspects of the real estate development process covering the pre-development, construction and post-development phases.

The Paris Agreement came into force on 4 November 2016, with its central goal to strengthen the global response to the threat of climate change by pursuing efforts to limit the global temperature increase to 1.5 °C compared to pre-industrial levels. In response to the Paris Agreement, in January 2017, the Government of Hong Kong published Hong Kong's Climate Action Plan 2030+ report, setting a carbon emission reduction target for 2030 and outlining the city's action plans. In September 2020, the Chinese National Government announced the target of reaching peak carbon dioxide emissions before 2030 and carbon neutrality by 2060. This announcement was soon followed in November 2020 by the Council for Sustainable Development, the Hong Kong Government's official environmental advisory body, recommending an updated 2050 net-zero target. And the updated Hong Kong's Climate Action Plan 2050 was released in October 2021 to provide a list of more precise goals and focus.

With overarching carbon neutrality objectives set by the National and HKSAR governments, the real estate industry is expected to see a significant impact as it is not surprisingly one of the largest brown sectors. For instance, the buildings in Hong Kong account for over 60% of the city's total carbon emissions from electricity consumption⁷. In the following, we will discuss the reason why you should invest PropTech in Hong Kong.

Energizer #1 — The chosen hub for scaling up information and technology development

Being a bridge of one of the world's leading economies — the mainland China, Hong Kong has what it takes to fulfill the criteria of becoming the selected international Information and Technology hub.

1,457
regional headquarters⁸

405,800
IT talents⁹

13,804
employees, +118% VS 2017¹⁰

Together with the renowned quality infrastructure, concentrated urban development and sophisticated talents to support the "need-for-speed", efficient and growing Hong Kong has a predominant commercial environment for PropTech companies to grasp the underlying opportunities and boom to achieve business objectives.

- 99 Mass Transit Railway (MTR) Stations, route length of 271 km within Hong Kong¹¹
- Cross border infrastructure including Express Rail Link and Hong Kong-Zhuhai-Macao Bridge as an alternative transport than airplane¹²

⁷ October 2021 Hong Kong's Climate Action Plan 2050

⁸ Table 133: Number of Regional Headquarters in Hong Kong by Country/Territory where the Parent Company was Located, Census and Statistics Department; and number as of 2021.

⁹ Table E003: Number of employed persons by industry and occupation, Second Quarter 2022, Census and Statistics Department (31 August 2022); total number of Transportation, storage, postal and courier services, information and communications employed persons

¹⁰ Hong Kong's

Startup Ecosystem, StartmeupHK (link: <https://www.startmeup.hk/about-us/hong-kongs-startup-ecosystem/>)

¹¹ 2022 Interim Report, MTR Corporation Limited

¹² World Class Infrastructure, InvestHK

Energizer #2 — The Regional Integration of Hong Kong and GBA

GBA's GDP is expected to reach US\$2.8 trillion by 2025¹³. More importantly, the major infrastructure projects in the 14th Five-Year-Plan of Guangdong Province are expected to have a total investment of RMB5 trillion (US\$776.9 billion), of which green infrastructure investment is not less than RMB1.9 trillion (US\$299 billion)¹⁴. Along with the estimated HK\$600 billion Hong Kong Northern Metropolis development plan¹⁵ and HK\$580 billion potentially estimated for the Lantau Tomorrow Vision project in Hong Kong¹⁶, the GBA (including Hong Kong) presents immense opportunities for PropTech startups and investors in the coming decades.

The Hong Kong Northern Metropolis development plan is another key for Hong Kong's regional integration with Shenzhen and GBA. The 2022 Policy Address presented the vision of the Northern Metropolis development. An additional 600 hectares of land, combined with the existing planned new towns and neighbouring rural areas, will provide at least 900,000 residential units to accommodate approximately 2.5 million people. Thus, innovative PropTech solutions on how to overcome obstacles, including the lack of labour supply, high building material costs for construction, and the need for comprehensive infrastructure development, will surely be in high demand.

The Hong Kong government has been actively encouraging the construction industry to use BIM (Building Information Modelling), a PropTech solution, for enhanced productivity and sustainability. Hong Kong's building sector continually explores innovative technologies such as BIM and MiC (Modular Integrated Construction) during the construction phase to develop strategies to overcome the barriers to future urban development and the regional integration of Hong Kong and GBA. The application of PropTech can accelerate the construction process, reduce waste, improve construction quality, safety and procurement — ultimately, driving down overall construction costs.

mainland China is also investing in PropTech solutions for the country's smart city initiatives. In the quest to successfully reach China's 14th Five-Year-Plan and 3060 targets, strong demand is created for PropTech-enabled, data-driven solutions, including:

- Obtaining and utilizing market data to screen and evaluate development, investment, leasing and home purchase opportunities;
- Managing the investment underwriting process and evaluating post-investment performance to assess the original underwriting;
- Disintermediating the property purchase and sale process, including facilitating the execution of real estate transactions remotely;
- Supporting the leasing process and lease administrations;
- Providing additional insights about tenants and how they utilize their space, to enhance tenant relationships and the value equation for tenants and;
- Operating buildings and homes more efficiently and in a more sustainable way with sophisticated building and home management systems, utilising sensors to capture data and analytic tools to predict occupant needs, whether for health/safety, lighting, security, elevator usage or heating/cooling.

Ultimately, the integration of Hong Kong and Shenzhen's innovative technology sectors will provide an excellent platform for the emergence of new PropTech entities to improve real estate planning, design and construction, leveraging new technologies such as virtual augmented reality, drones, and technology-enabled design and construction. They can easily connect to investors via local and regional technology parks/venture funds to connect eager investors with PropTech companies wanting to raise debt or equity capital. Other platforms can also be developed to enhance the transparency and liquidity of the market ecosystem in this well-established regional real estate market.

¹³ August 2018 ECONOMICS CHINA — HSBC Global Research

¹⁴ Greater Bay Area — Green Infrastructure Investment Opportunities — Climate Bonds Initiative

¹⁵ October 12, 2021 “拆解「北部都會區」四大疑團改變思維迎接蛻變機遇” — MingPo

¹⁶ LC Paper No. CB(1) 930/2022(01) – Study on the Artificial Islands in the Central Waters – Legislative Council

Energizer #3 — Hong Kong's Urban Renewal Plan

As stated previously, Hong Kong has approximately 41,000 privately-owned buildings. As of 2019, approximately 7,000 of them were aged 50 and above¹⁷. Among them, over one-third were in disrepair and suffered from poor long-term maintenance. According to the press release by The Urban Renewal Authority (URA) in June 2021, The URA will spend HK\$100 billion (US\$13 billion) over the next five years to build 18,000 homes for Hong Kong's private sector under a massive drive to help first-time buyers while regenerating different neighbourhoods in the city¹⁸. The authority also revealed it would launch a public consultation on redeveloping areas in Yau Ma Tei and Mong Kok, home to some of the city's oldest and most densely populated neighbourhoods. The 18,000 new flats will be situated in urban sites across the city, and the programme includes a significant starter-home project in central Kowloon.

To assist the local workforce in adopting new technological expertise in the next decade, especially in the building sector, the Hong Kong SAR government is turning to PropTech solutions. The previously mentioned CITF is one of the initiatives supporting technology (including machinery, equipment and software) with proven effectiveness in boosting productivity, uplifting built quality, improving construction site safety and enhancing environmental performance, by leveraging automation, industrialization and digitization. The CITF, which Construction Industry Council administers in Hong Kong, is dedicated to 1) encouraging wider adoption of innovative construction methods and technology in the construction industry (in short, technology adoption), and 2) building up the capacity of industry practitioners and tertiary students of construction-related disciplines to foster an innovative culture to espouse new technology for the continuous improvement of the industry (in short, manpower).

Many PropTech solutions can improve construction processes, such as BIM and geographic information systems ("GIS") for urban planning and building design, advanced construction technologies ("ACT") that convert manual operations to machine and robot operations under the supervision of skilled and knowledgeable construction personnel, MiC which decreases on-site construction processes and thus construction waste through off-site prefab standardization, and prefabricated steel rebar ("STB") for reducing laborious bar-bending work on construction sites. By improving productivity and reducing material wastage and thus overall costs, these innovative construction solutions will encourage public and private stakeholders to accelerate the city's urban renewal plan.

Preservation and urban revitalisation are critical initiatives in Hong Kong's urban renewal planning, both of which need inventive PropTech solutions. An example of this is the Central Market revitalisation project (to be completed in two phases, with the first phase of operation commencing in 2021). The once again opened Central Market, an iconic 82-year-old grade three historic building, is now also reserved for public and community uses, including a 24-hour public passageway and green open spaces totalling about 1,000 square metres.

The new Central Market is now a testbed for local PropTech innovations, with 10 technology startups selected to deploy their building solutions at this urban landmark. These startups currently showcase their innovative building operations and maintenance solutions with:

- **Apicem Technology Services Company Limited** — a smart air purifying system that prevents cross air contamination and maintains high air quality standards for increased health and productivity. It uses a high voltage direct current air purifying system with a patented metal foam material with fully automated monitoring in a totally green device. Using this keeps buildings up to sustainability standards and air quality high for better health and productivity;

¹⁷ ISSH08/20-21 Legislative Council — Building management in Hong Kong

¹⁸ June 23, 2021 "URA speeds up redevelopment work" — The Standard

- **Dayta AI Limited** — a real-time plug and play solution that collects visitor data in shopping malls, retail outlets and exhibitions. It is an all-in-one service which integrates with existing cameras and provides data analysis and visualisation of visitors;
- **i2Cool Limited** — a passive radiative cooling paint (patented in Hong Kong) that can achieve an electricity-free and refrigerant-free self-cooling effect. By applying this paint on the roof or external walls of buildings, the indoor air temperature can be decreased, saving the energy usage of air-conditioning systems and reducing carbon emission. Apart from that, adopting this technology would cut down both running and installation costs of cooling equipment and reduce the amount of maintenance needed. At the same time, by reducing the amount of equipment, more spaces can be freed up for other amenities;
- **Megasoft Limited** — a real-time temperature monitoring and track & trace solution for the F&B providers to preserve food safety during transportation, assuring the temperatures of several food types across multiple outlets can be tracked;
- **Negawatt Utility Limited** — an Anti-COVID Management Solution and implemented Negawatt artificial intelligence (A.I.) solution on-site to deliver a high-quality air disinfection system. Multiple Indoor Environmental Quality (IEQ) Sensors and people count devices are deployed at Central Market and continuously collect IEQ data. Based on the activities of the site and immediate IEQ data, A.I. calculates the risk factor for indoor environmental safety;

“ With the GBA as our core development zone, New World Development (NWD) has been driving sustainable innovation through certified green building designs, operational efficiency improvements, renewable energy adoption and proptech across its regional assets. To drive innovation in sustainable building and construction, retail, and other services, NWD also set up a GBA startup accelerator in 2021 to help robotics and AI startups scale in the area by providing exposure to our business units and network partners. ”

Adrian Cheng — CEO, New World Development

- **Novelte Robotics Limited** — a robot tour guide designed to provide interactive experiences for visitors wanting to learn more about the historic site. This robot is fully automated, increasing the appeal of the area with its personalised service which decreases staff workload;
- **Optical Sensing Limited** — a fibre optic sensor monitoring system developed to enhance building and facility management digitally. The system uses optical fibre cables as tools and is installed in targeted facilities such as air conditioning systems, water and sewer pipes and power network. Optical fibre cables can collect data from difficult-to-reach pipelines to understand their condition;



- **Rice Robotics Limited** — an unmanned, autonomous robot that guides customers during the day and patrols for security at night. It is fully integrated into elevators and gates, a seemingly becomes part of a building’s day-to-day operation. It increases shopping outlets’ appeal with its futuristic functions, alleviates staff workload from repetitious and tedious tasks and gives a unique and enhanced visitors experience;
- **RV Automation Technology Company Limited** — a people-centric patrol and food tray collection robot deployed in the Dining Ground of Central Market aims to help enhance operational efficiency, reduce labour costs, and ensure consistent performance; and
- **Tech Hill Limited** — a 3D multiple radar array bird deterrent that protects the building from damage and reduces maintenance in hard-to-access areas.

Energizer #4 — Building Sector Decarbonisation is Trending Up in Hong Kong and mainland China

In recent years, low or zero-carbon buildings have attracted much attention in Hong Kong and China because they are considered an important strategy to achieve the carbon neutrality of Hong Kong and China. These buildings can produce on-site or procure enough energy from renewable resources off-site to offset the carbon emissions related to the energy used in all phases of its lifetime, both operational and embodied.

Hong Kong has a total land area of about 1,110 ha, with about 600km² occupied by country parks, marine parks, wetlands, sites of special scientific interest and water gathering grounds¹⁹. And because of this, land resources available for development is limited and the urban development approach generally utilise much building to add surfaces and floor areas for productivity generation and efficient land utilisation. This makes Hong Kong always in the progress of constructing, occupying, maintaining and improving buildings, Trends including Environment, Social and Governance (ESG), green building and carbon neutrality have definitely stimulated buildings to look for solutions to build resiliency and improve environmental performance. With many buildings and associated initiatives, the PropTech solutions and services are in high demand. With a current rate of construction of between 300 and 500 new buildings per year, between 60% and 80% of the buildings that will be in existence in 2050 have already been built²⁰.

Embodied carbon makes up 30-40% of buildings’ total lifecycle emissions, with the majority emitted during the construction process. Addressing the total emissions of both new and existing buildings is therefore critical in decarbonising the building sector with creative PropTech solutions.

It is also extremely important to address commercial and residential buildings on the path to net-zero in mainland China. Data from the 《中國建築能耗研究報告(2020)》 shows that in 2018, the country’s total carbon emissions from the built environment stakeholders were 4.93 billion tons, accounting for 51.3% of the national carbon emissions.

Case study

Hong Kong Flagship Project — Net Carbon Building

Situated in Kowloon Bay, Hong Kong, the Net Carbon Building has showcased state-of-the-art zero carbon building technologies to raise community awareness of sustainable living in Hong Kong, and the possibility to pursue carbon neutrality or even, net zero. It contains features including PV panels on the roof and solar thermal hot water features to develop an ecosystem within the building.

¹⁹ Information Sheet (2) Land Usage Distribution in Hong Kong, Civil Engineering and Development Department

²⁰ Decarbonising Hong Kong Buildings Policy Recommendations and Next Steps — Hong Kong Green Finance Association



According to the China Academy of Building Research, carbon reduction in mainland China's construction sector has become a key goal of achieving carbon peaks and carbon neutrality by 2030 and 2060, respectively ("3060 Target"). As the demand for the construction of heat infrastructure in Southern China continues to rise, mainland China's and GBA's carbon emissions in the construction sector will continue to grow until 2030.

The role that PropTech can play in the building sector in the blueprint of China's 2060 carbon neutrality is crucial. As a major carbon emitter, mainland China's building sector has developed a consensus to undergo a major low-carbon transformation. The "14th Five-Year-Plan (2021–2025) for National Economic and Social Development" ("14th Five-Year-Plan") and the "Long-Range Objectives Through the Year 2035" also pointed out the importance of this low-carbon transformation. In July 2020, the "Green Building Creation Action Plan" issued by seven departments, including the Ministry of Housing and Urban-Rural Development and the National Development and Reform Commission, proposed that by 2022 the proportion of green buildings in urban new buildings of mainland China will reach 70%. In March 2021, the Ministry of Housing and Urban-Rural Development issued the "Technical Guidelines for Green Construction (Trial)," which clarified that green construction should incorporate the concept of green development into the entire construction process, including engineering planning, design, construction, and delivery, for reducing the consumption of resources in the whole construction process. Thus, PropTech solutions for reducing the total embodied carbon of building materials are necessary. Meanwhile, controlling the carbon emissions in the construction sector will be critical for achieving the goal of carbon neutrality in 2060.

China's local governments have also issued relevant policies to clarify the development goals of green buildings. For example, Chongqing City has proposed that by 2022, the proportion of new buildings classified as green buildings will reach 70%, and the proportion of newly started prefabricated buildings in the city will not be less than 20%. Meanwhile, Jiangsu Province has proposed the target to achieve the lowest carbon emission intensity of buildings in the country. Overall, China's central government provided legal support for green building development by issuing legislation guidance to Jiangsu, Zhejiang, Ningxia, Hebei, Liaoning, Inner Mongolia, Guangdong, and other 7 provinces (regions) to develop local green building ordinances and encourage Shandong, Jiangxi, Qinghai and other provinces to issue green building government regulations.

In response to the Paris Agreement to tackle climate change and the China "3060 Target", the Hong Kong government has initiated the Climate Action Plan 2030+ to reduce carbon emissions by 26 to 36 percent by 2030 and become carbon neutral by 2050. To achieve these goals, the government has announced a series of measures and incentives, one of which is to promote and invest in the development of green buildings in mainland China. Top prospects for decarbonising the building sector in Hong Kong include 1) green building materials and equipment; 2) low/zero carbon design and technologies; 3) energy efficiency equipment and technologies; 4) building management systems; and 5) air quality control systems. Hong Kong developers and architects actively seek out mainland and overseas expertise on energy efficiency design and technology for design projects as Hong Kong works to catch up with the rest of the world in green building practices. Progress in this area is steady. Prominent buildings with a top green ratings in Hong Kong include K11 Musea (New World Development), Taikoo Place (Swire Properties), and the International Commerce Centre (MTR and Sun Hung Kai Properties).

Market Insights: Navigating on Hong Kong PropTech's Accelerators — The need for real estate sector's digital transformation

1) *Developers are actively seeking green and sustainable practices for green funding, ensuring their brand and products remain competitive, and improve more disclosure on their green practices*

“ With one of the most robust and transparent financial and legal systems, Hong Kong leads as the most mature capital and property market in the world that serves as the center for SEA with global investments.

ESG has been a key indication for real estate developers, not only on environmental and social impact, but also serves as a guidebook on operation efficiency and resilience. In order to boost stakeholder confidence, developers are constantly seeking property technologies (proptech) to ensure ESG data is more quantifiable and accessible.

Negawatt is an award winning AIoT (Artificial Intelligent of Things) company that assists building owners to fight climate change by digitally transforming building operations with a focus on ESG, operation resilience, decarbonization and cost saving. With 4 years of operational experience, Negawatt has deployed its smart building platform (BOS) in over 140 investment grade buildings, managing 340,000,000 kWh per year to ensure developers obtain green building certificates, as well as improve operation resilience and accelerate their carbon neutral journey, in other words: reduce, report, offset. ”

Arthur Lam — Co-Founder and CEO, Negawatt

Case study

“ Committed to creating shared value in the community through its “Triple Bottom Line” approach, which puts equal weighting on people, prosperity and planet, Chinachem Group sees PropTech adoption as crucial to its long-term aim of helping Hong Kong become a smart and sustainable city. The Group is actively working with local start-ups to explore new technologies and trial them in real-life environments before further scaling and development. For example, Negawatt cloud based smart building platform with IoT sensors, which uses artificial intelligence to manage energy consumption, are currently being trialled at several Chinachem properties as well as Group-managed Central Market, where they can monitor airborne virus transmission risk.

Recent green loans secured by the Group and its partners include financing of HK\$12.95 billion to progress a green commercial project that will feature 60,000 sq ft of green landscape as well as various measures to enhance resource efficiency, providing an eco-friendly and comfortable environment for tenants and visitors. ”

Damian Wu — Director of Business Transformation and Innovation, ChinaChem Group

2) **Hong Kong is transforming into a smart city to merge with GBA. China's Five Year Plan — Indicate what China plans to change**

Case study

“*Hongkong Land is an agent of placemaking, and has adopted proptech as a tool to add value for their customers, and stakeholders. Three focus areas include customer experience, operational efficiency & sustainability, and data/data analytics. We foresee proptech not only saving costs, but also reducing carbon emissions, one of our core KPIs. We can also develop with higher safety and efficiency compared to before.*”

Based on development of smart cities elsewhere, we would recommend the private sector to work closely with the government, which is an essential partner in all of this. For instance, we could use proptech to solve traffic jam problems in Central. But we cannot install the cameras and sensors on public property. Our desire is to see Hong Kong develop into one of the world's great smart cities.”

Ivan Chan — Group Chief Digital Officer, Hongkong Land

Kent Jan — Director & Head of Corporate Development, Hongkong Land

“*With Proptech in Hong Kong started to warm up in 2017, but really caught fire in 2020 due to COVID, as the needs for real estate have changed. Despite shifting attitudes, Hong Kong developers are still generally conservative. For example, even when a developer's chairman greenlights a project, it may subsequently be handed over to a CTO who is less inclined to follow through. Nevertheless, the new generation of property owners are beginning to understand, and they are interested to adopt and invest in proptech.*”

Cloud-enabled solutions like Parkingbnb may enjoy an advantage since they can provide secure, real-time feedback and management, at a very reasonable cost. We are so excited to see interest in our solutions from overseas markets, which demonstrates that we can appeal to a wider market than just our homebase. We just completed our first sale and installation in Miami.”

Vitaly Pentegov — Founder and CEO, Parkingbnb



3) Construction, development, and refurbishment would be much needed

“ The whole world is moving towards Smart and Digital — Property and Construction sector are no exception although moving on slowly. Everyone is trying their best to adopt and implement innovations and technology into their organisations in order to stay ahead of their competitions and be sustainable! Hence the study on PropTech is very timely to identify drivers for accelerating these processes and looking at where are the pain points to overcome. Collaboration and fully integrated PropTech tools seems to be badly needed and vital for success and ‘Real Data Management integrated tools’ could be the focus for PropTech Companies in the next few years to come. ”

Thomas Ho — Chairman, Construction Industry Council

“ A Forbes article mentioned Hong Kong as a major location for PropTech development. It’s not just changing the way the real estate sector works, but also paving the way for new entrepreneurs. A PR Newswire report recently listed data analytics, AI, business process automation, and IoT as among the top technologies that would impact Asia’s property industry over the next five years. This resonates with the trend in Hong Kong.

In the past few years, especially after COVID, Hong Kong’s property sector has adopted numerous upgrades such as cloud computing, 3D visualization and VR, big data, IoT, and robotics; all of this, in order to withstand the challenges posed by the pandemic, and which is paving the way for the PropTech revolution. Seeing this from the construction technology side (Contech), I strongly feel that PropTech will thrive in Hong Kong, and will be responsible for bringing new milestones to the real estate sector. ”

Gary Ng — CEO, ViAct

Case study

“ There are many factors which are driving the need for a transformation of the global construction industry. An ageing workforce with diminished interest from younger generations to take on these roles, an ever-increasing demand for housing and a technology boom which is light-years ahead of the construction industry.

Manufactured construction is not a new concept, it has been used in some form for over 2,000 years but now the time is right to make a difference. Technology and manufacturing have worked hand in hand to develop better, smarter, greener products from cars to aeroplanes to mobile phones. We are now at the point where all this can feed into the construction industry and solve our biggest challenges.

Global leaders in this field include organisations from the UK, Scandinavia and Singapore but with recent successful projects such as the InnoCell MiC project at the Hong Kong Science and Technology Park it looks as if Hong Kong is now ready to join this exciting movement. ”

Michael Crane, Head of Innovation — CIMC-MBS of CIMC Group



4) Infrastructure and funding support are available for the early stages and programs of PropTech

Case study

“ Building on 20 years of making innovation happen, HKSTP is powering up I&T as the new economic engine for Hong Kong by creating a world-class I&T ecosystem across Hong Kong and the Greater Bay Area.

HKSTP brings stakeholders and partners together, plugging them into an ecosystem of over 1,000 technology ventures and start-ups. To advance the region’s smart city vision with smart property solutions, we will collaborate in a series of innovation initiatives with major property developers. The goal is to accelerate data-driven innovation through various pilot-testing programmes and platforms including the city-wide virtual lab STP Platform. These initiatives will continually help innovators fast-track their ground-breaking ideas into market ready solutions for the property sectors. ”

Albert Wong — CEO, Hong Kong Science and Technology Parks Corporation

“ Real estate and property development are the major pillars in Hong Kong’s economy. From construction to property management operations, adopting ESG compliance will create impact for the communities. Building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation are important to achieve the Sustainable Development Goal (SDG). All the above will provide perfect soil for PropTech startups to grow and prosper, and will set the foundation for the Innovation Vortex of smart city. ”

Mingles Tsoi — CXO, ParticleX

“ While real estate developers and property management companies are keen on adopting advanced technology in their operation, start-ups can offer a wide range of PropTech solutions from construction project management, energy efficiency, smart household and IoT applications to facility management and customer services. These solutions not only improve operation efficiency and save costs, but also uplift user experience and create new business opportunities. Cyberport is delighted to connect the real estate and property management sectors with our community start-ups through the Cyberport Enterprise Network (CEN) and other initiatives in order to foster the digital transformation of the industry and create a vibrant PropTech ecosystem. ”

Eric Chan — Chief Public Mission Officer, Cyberport



Section 2 — Roadmap Ahead on Hong Kong PropTech's Development

PropTech will surely have an increasing impact on Hong Kong's real estate sector in the near future, with the potential to disrupt one of Hong Kong's oldest and largest industries. The rapid increase in the number of PropTech startups, the competition between them, and the breadth of their involvement in the real estate sector make it difficult for real estate owners and managers to decide which to utilise and support. Many PropTech entities have excellent technology but lack insight into how they can add value to real estate businesses. Players in Hong Kong's real estate industry now have an opportunity to evaluate carefully which PropTech companies show the most promise. They may wish to seek collaborations in becoming the pioneer and industry leaders of their mainland China peers.

We expect the following trends in the roadmap ahead on Hong Kong PropTech's development:

Trend #1: Digital Transformation for Sustainable Businesses

The global COVID-19 pandemic has been a catalyst accelerating the digital transformation of the real estate industry as new solutions have emerged to address challenges of sourcing local property deals, managing properties remotely, and other safety and hygiene-related concerns. However, the level of digital maturity and technology adoption in Hong Kong's real estate industry generally lags many other peer sectors.

In brokerage businesses, there has been an increasing trend of leveraging AR/VR capabilities for remote, digital viewing of properties. More importantly, this space is also expecting increasing

data availability and transparency to potentially offer data capabilities as-a-service, particularly with the Hong Kong government's open data initiatives.

Technology adoption in the construction space is more common. More advanced robotics and AI technologies can be expected to improve precision and productivity further; for instance, aerial drone integration with BIM for surveying and digital twin tools for infrastructure stress testing. On the other hand, workflow software would also emerge further in this space, enabling streamlined processes among architects, engineers, developers and maybe even local authorities.

With the increasing effort of data collection, measuring and monitoring from PropTech solutions, we also expect more applications in carbon reduction.

“ It is not lack of technology that is inhibiting adoption of proptech. What we need is a concerted approach to embrace proptech to make processes more efficient, and to change the traditional mindset of equating KPIs with “improving the bottom line”. Given the HK government's smart city and ESG initiatives, as well as our dynamic real estate market, we see Hong Kong as a key city for proptech innovation. ”

Goodwin Gaw — Chairman, Managing Principal and Co-Founder, Gaw Capital

“ A small city like Hong Kong can produce big impact by offering limitless opportunities to young talents and new technologies. Headquartered in Hong Kong, CR Capital Management is the alternative investment platform of CR Group. Combining Hong Kong's world class business environment and infrastructure with our parent company's deep knowledge and unparalleled access to China market, we are able to assist PropTech companies to make the next leap. ”

Dennis Choi — Managing Director, China Resources Capital Management and Managing Partner, Runnovation

“ At Swire Properties, we appreciate the power of and need for technological innovation in real estate, and we are active champions of tech across various applications. Our New Ventures team drives technology adoption and leads a US\$50MM Corporate Venture Capital fund. Through New Ventures, we strive to become leading strategic partners with PropTech startups. Since we launched our fund in 2020, we have invested in 8 companies globally, with 3 based in Hong Kong. Our corporate footprint across Hong Kong, China and the US allows us to help PropTech startups scale, conduct pilots to finetune their products and gain access to actionable insights across different global markets. ”

Angela Chan — Investment Lead, Swire Properties New Ventures

“ The importance of PropTech is evidential especially as everyone in the industry faces the current pandemic challenges. The rapid adoption of innovation and technology to meet the severe circumstance has contributed significantly for asset owners and management to overcome the extremity. In this process, PropTech shows the way for Hong Kong as a well-managed and sophisticated property market to jettison into the future, especially given our future rests in meeting the global challenge beyond the pandemic, into zero carbon, waste reduction, climate change and demands by stakeholders in all EGS dimensions. Hong Kong is poised to lead the region in PropTech development, adoption and poses as a hub for global players to converge and prosper. ”

Ir. Andrew Young — Associate Director (Innovation), Sino Group

For example, the Hong Kong property developer Chinachem Group recently applied MiC to streamline on-site construction processes, reducing waste generated during construction.

MiC has most processes completed off-site in a factory environment which is safer and more controlled than the traditional construction site. It allows superior quality control for the engineering and commissioning teams, resulting in higher-quality buildings and about 70% less on-site manpower. With MiC technology, the developer expects a 68% cut in construction waste, and a 75% reduction in noise pollution, all of which contribute to a lower carbon footprint and improved well-being of the surrounding neighborhoods²⁰.

Trend #2: Creating a PropTech Innovation Hub in GBA

Hong Kong's overall real estate transaction volume reached HK\$465.6 billion in the first nine months of 2022²¹. The large, actively traded, the liquid property market is one of the key factors why Hong Kong can be considered as a sandbox and launchpad of PropTech innovation in the GBA region.

While the pandemic brought challenges to the industry, it also served as an alarming bell to industry players that innovation and transformation are needed to adapt to the increasingly changing nature

throughout the entire real estate life cycle — from design, construction, sales and leasing to property operations and maintenance.

As a leading global financial center, Hong Kong is well positioned to grow PropTech startups from incubation at local and regional technology parks to fundraising with onshore and offshore investors. More uniquely, Hong Kong also has the advantage of creating synergies between innovation with physical real assets and developments in the FinTech space to create novel approaches to verticals such as real estate financing, investing, crowdfunding or even tokenizing. Combining characteristics from both the West and the East and leveraging various regional government funding and policy tailwinds, Hong Kong is also a solid “stepping stone” for local and international PropTech companies are looking to enter the large, vibrant mainland China market. According to UrbanLab's survey in 2019, “Big Data Analytics”, “Virtual/Augmented/Mixed Reality”, and “robotics” technologies are the most popular technologies in PropTech for mainland China. From the policy perspective, mainland China has set favourable policies that help accelerate the growth of PropTech. The national policy of “Action Outline for Promoting the Development of Big Data”, issued by the State Council in September of 2015, for example, promotes high-tech development and big data analytics to upgrade domestic manufacturing and research capabilities. In December 2016, the

²⁰ <https://www.chinachemgroup.com/news/latest-news/2021/chinachem-tonkin-street-redevelopmentadopt-mic>

²¹ Statistics of Properties Transactions in Land Registry — 2022

State Council issued the 13th Five-Year National Informatization Development Plan, which considers virtual reality a key information and communications development technology.

Trend #3: Acceleration in PropTech Infrastructure Development

Apart from the HK\$1 billion CITF (Construction Innovation & Technology Fund) to support PropTech development in the construction industry, the local government is also accelerating other PropTech infrastructure development. One of the HKSAR government's critical initiatives is accelerating digital transformation through data-driven innovation. Data and Internet of Things ("IoT") are at the heart of digital transformation in the property industry. The government is driving Hong Kong as a testbed and pioneer for adopting and deploying IoT technologies and applications, which aims to drive IoT standards to sustain high-quality technology R&D and solutions in real estate and beyond.

To support greentech innovation, the Hong Kong Government set up the HK\$400 million GreenTech Fund in 2020 to provide funding support for the research and development projects which can help Hong Kong decarbonise and enhance environmental protection.

With the Hong Kong Government and MOST support, other innovation and technology venture funds are also set up by many local institutions and authorities which are available for PropTech startups to apply.

Meanwhile, the Hong Kong Smart City Blueprint has clearly directed the adoption of BIM PropTech solutions. The Development Bureau has also stipulated guidelines for improving the mandatory BIM uses for certain applications in public works projects. Furthermore, the Hong Kong Lands Department has initiated the following data management initiatives: 1) establishing a BIM data repository (a data-sharing platform) for all BIM data collected from works departments and the construction industry; 2) spearheading the development of BIM/GIS integration to support government applications, and 3) collaborating with different government bureaus, departments and the Construction Industry Council enables the use of BIM technology in compliance checking electronic building plans. These initiatives will help achieve the city's goal in property data digitization and standardization and can significantly expedite the transactions of properties in Hong Kong in the future.

Building a PropTech talent pool is also a cornerstone of Hong Kong PropTech infrastructure development. Aside from FinTech, RegTech, and LegalTech, Hong Kong is raising talents in PropTech to drive growth and strengthen the city's smart city cluster. Local universities and technology parks provide strong support in PropTech talent development to fuel ecosystem development.

The Hong Kong Policy Address 2022 mentioned that within next five years, 35% of students at local universities should be studying STEAM subjects and 60% studying related to developing Hong Kong into an international innovation and technology centre under mainland China's 14th Five-Year Plan. This initiative provides strong support for Hong Kong technology talent pool building for accelerating PropTech infrastructure development.

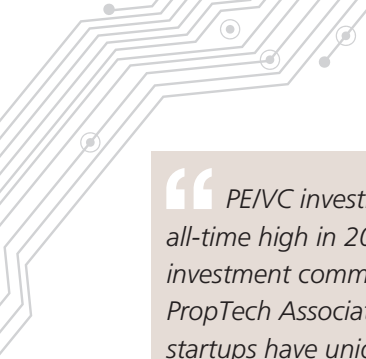
“As our physical and digital worlds converge, digital twins are playing a key role in helping society and organisations to overcome some of its most important and urgent sustainability challenges — like how we can make the best use of space, make better decisions during the entire property lifecycle to reduce wastes and costs, and eventually ensure a higher quality of life for all.

Digital twins are on the rise and it's just the start of the start. To harness their full potential, we need to work towards an interconnected ecosystem. It's our pleasure to work with HK PropTech Association on this journey together.”

Rex Lei — Country Manager, Matterport

“Centaline Property Agency, rooted in Hong Kong since 1978, have long believed in using technology to improve the customer experience, such as introducing the Centaline Map as early as 1999. In recent years, the adoption of VR had greatly improved the overall efficiency in the property search process. Not only does VR technology provide a more comprehensive view of the property than photos and videos, it also provides useful tools such as real-life measurements and themed renovation renderings, enhancing the overall online property viewing experience and helping the consumer more easily find their preferred property.”

Alex Shih — CEO, Centaline Group



“ PE/VC investments into PropTech was at an all-time high in 2021 at US\$32 billion. As the investment committee chair of the Hong Kong PropTech Association, I recognize that PropTech startups have unique characteristics that make their fundraising journey different from their peers in other startup verticals. Choosing the right investor/VC in the early rounds of fundraising could be the difference between success and failure. To improve a startup’s chances to reach the elusive unicorn status, I would recommend startups focus on finding smart money. Resist the temptation to settle for dumb money which is a common mistake most hungry early stage founders make. Sure, dumb money is easier and faster to secure but then what? I say, follow the path to find strategic partners who will share their resources and network to accelerate your growth. You will find that POC’s and commercial contracts would come a bit easier. At the end of the day, it is all about the quality of your network and a founder’s ability to leverage that to their advantage. ”

James Kwan — Chairman, Jumpstart Media

“ Aspiring to become a leading global university, excelling in research and professional education, City University of Hong Kong, in its recent Strategic Plan 2020-2025, aims to excel in five strategic interdisciplinary areas including One Health, Digital Society, Smart City, Matter and Brain.

As a game-changing technology, PropTech helps accelerate the world’s development on Smart City, Digital Society and One Health. Young talents in architecture, civil engineering and information technology should capitalize on the upcoming opportunities of PropTech and devote to developing novel IoT devices, computer vision algorithms, machine learning models, artificial intelligence platforms, blockchain applications, etc. to improve the efficiency, reliability and safety of our society when facing exacerbating uncertainties caused by man-made disruption, pandemic and climate change.

The City University of Hong Kong will continue to nurture and develop students’ talents in PropTech through our HK Tech 300 and HK Tech Tiger programmes, and to create applicable knowledge on this emerging technology for social and economic advancement. ”

Professor Way Kuo — President and University Distinguished Professor, City University of Hong Kong



Forward-looking

Whilst Hong Kong has great foundations as home to many real estate developers, an international financial hub, a gateway to the rest of GBA and China, and a multi-culture city with diversified talents, we have to admit that there is still a long way ahead for PropTech to boom in this city.

On one hand, we hope to have more success stories and case studies to show how PropTech can help developers and property owners. On the other hand, the market still needs more education and awareness raising such that one does not perceive technology disruptions as inconvenience or unnecessary costs to their as-is businesses and teams. These are indeed areas which the Hong Kong PropTech Association has been working on with public and private sector stakeholders, such that awareness and track records will be gradually built and the right technologies can be deployed to help asset owners and operators improve their operational efficiencies.

Catalysts are needed in most transformations. COVID has been one for PropTech and we believe the increasing adoption of setting net-zero targets would be the next strong wave of motivation for property owners to adopt technological changes in order to sustain, and more importantly thrive.

“*Hong Kong’s strategic location and highly developed infrastructure make it an ideal place to build PropTech. Still, one major challenge is grooming talent. The next generation of urban designers must incorporate IoT, VR/AR, and other technology at different scales: human, building, and city. Developers may be slow to adapt without proper incentives and policy. Also, career motivations are shifting: money is not the main priority. Young talent wants to implement their innovative ideas on real world situations, to make positive impact on society — which PropTech can facilitate.*”

Sunnie Lau — Director of Smart City Research and Industry Collaboration, MIT Innovation Initiative

“*In 2021, we have recorded over 100,000 hours of visiting duration and 5.35 million sessions on our VR property listings on our online platform, which has shown well proven figures on the market readiness of the VR flat viewing especially under the pandemic situation across 2019-2022.*

We are aiming to further leverage VR technology in our whole ecosystem and establish a partnership with HKSTP (Hong Kong Science and Technology Park) and 5-year strategic partnership with global leading-VR solution company – Matterport (referred by HKPTA) – which is looking for an industry champion of their APAC’s market. More advanced technology such as Digital Twins and detailed BIM (Building information model) will be developed to enhance the seamless experience of the users.

Seeing is believing – is the motto of success in the real estate brokerage business. We see AR/VR as a successful first step to more promising creativity in the virtual world of viewing our future homes, and we are reaching out to different start-ups or corporates who can join in the game and create an amazing future ecosystem.”

Angela Wong — Deputy Chairman, Midland Holdings Limited

“

Hong Kong welcomes overseas companies to participate & PropTech is the enabler for smart city — a sustainable future for real estate

Hong Kong is one of the world's most dynamic and densely populated urban landscapes in the world, where people live, work, travel and relax in close proximity. As Hong Kong and places around the world strive to improve people's lives and to meet carbon neutrality targets, like elsewhere the HKSAR Government embraces the application of technology to drive innovation and business transformation in the built environment through its entire life-cycle. We have a Smart City blueprint and a plan to achieve carbon neutrality before 2050. A HK\$1 billion Construction Innovation and Technology Fund set up by the government can support new initiatives. PropTech development in Hong Kong is also supported by the Hong Kong Science and Technology Park and Cyberport providing sandbox and incubation opportunities for those looking to grow in Hong Kong and expand into the vigorous mainland market. Major real estate and infrastructure projects are under planning such as the Hong Kong Northern Metropolis development plan, the Lantau Tomorrow Vision plan and the integration of Hong Kong with various GBA cities. Which means we have needs and opportunities. We encourage you to play your part in solving our needs, growing your business and making a difference to the people of Hong Kong.

”

Stephen Phillips — Director, General of Investment Promotion Invest Hong Kong

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Invest Hong Kong (InvestHK) is the Hong Kong Government's department for attracting foreign direct investment. Our goal is to help overseas and the mainland companies to set up and develop their businesses in Hong Kong. For those foreign companies that are already established here, we extend our services to help them expand in our city.

All of our services are free, confidential and tailored to clients' needs. Our comprehensive range of services includes:

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InvestHK has offices in major cities around the world and industry experts across a range of business sectors. Contact us for free advice on setting up in Hong Kong or for details on how we can support your expansion in our city.

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About Hong Kong PropTech Association

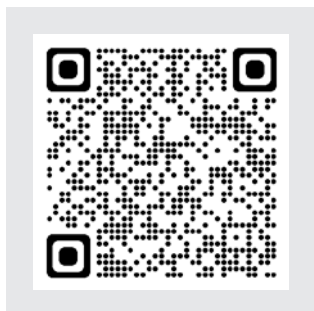
The Hong Kong PropTech Association (HKPTA) is an independent organisation representing Hong Kong's PropTech community. The Association aims to build a collaborative ecosystem of real estate technology stakeholders from property developers and technology companies to investors and startups by creating awareness, employment, education, advocacy, and investment opportunities around PropTech. We are dedicated to fostering communication, innovation driving agenda within the property industry, and encouraging technology-enabled solutions to improve our lives, businesses, cities, and environment.

Leveraging Hong Kong's position as a regional hub, the Association connected with more than 20 sister PropTech associations around the world as well as other institutions from the academic and public sectors that share similar visions.

To support our continuous expansion, development and know-how enhancement, we have established a multi-functional committee with more than 20 members that consists of public sector stakeholders, start-up entrepreneurs, private equity and venture capital funds c-suites, financial and business analysts, as well as sustainability, marketing and technology professionals to further connect and outreach wider networks and steer the PropTech implementation and transition journey.

We are directly addressing economic, environmental and social issues that matter to our community and us. The Association is committed to advocating for and integrating the adoption of sustainable strategies that follow the United Nations Sustainable Development Goals. Above all, we are committed to the well-being and the greater good of the Hong Kong community.

Please access the link directly (www.hkproptech.org) or scan the QR code below to visit our website and learn more about us.



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