From resilience to resurgence: paving the way forward for Hong Kong with confidence and vision

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Introduction

One year on since Chief Executive John Lee took office, Hong Kong has demonstrated economic and social resilience at large and continued its steady path to recovery, scoring positive year-on-year real GDP growth in the first and second quarter of 2023. Hong Kong's accession to the Regional Comprehensive Economic Partnership (RCEP), China's strong backing for Hong Kong to fulfil its super connector role in the development of the Belt and Road Initiative (BRI), the return of tourists marked by the successful launch of landmark events in recent months, and the International Monetary Fund's (IMF) reaffirmation of the city's status as a robust and reliable international financial hub, were among some of the headlines worth celebrating.

However, the Hong Kong Special Administrative Region (HKSAR) government still faces strong headwinds in the form of a global economic slowdown, the looming climate emergency, financial market volatility, let alone home-bound issues such as weak retail consumption and the ongoing talent shortage.

To navigate the challenging landscape with confidence and vision, Hong Kong must give full play to its strengths as an international financial hub while fostering strong regional cooperations. By tapping into a comprehensive strategy toolbox – from recalibrating its capital market strategies to fostering innovation and developing robust infrastructures – the HKSAR government will be able not only to brave those challenges but also to create the environment necessary for upgrading and transforming its economic structures.

Our recommendations, which capture the insights from our expansive network of subject matter experts, are rooted in six key principles: 1) cementing Hong Kong's status as an international financial centre, 2) fostering a robust sustainability ecosystem in Hong Kong, 3) unlocking the next phase of growth with innovation and technology, 4) providing more support and flexibility for attracting and retaining talent in Hong Kong, 5) establishing Hong Kong as a regional data hub for frictionless flow and exchange of data, as well as 6) optimising infrastructure development to bolster long-term growth and competitiveness.

Figure 1: A summary of PwC's recommendations for the HKSAR government

Six key focus areas	Recommendations
1. Cementing Hong Kong's status as an international financial centre	• Enhancing stock market liquidity and supercharging the development of the city's capital market • Consolidating Hong Kong's competitive advantages to further advance financial services • Expediting Hong Kong's development as a leading hub for family offices
2. Fostering a robust sustainability ecosystem in Hong Kong	• Improving disclosures on sustainability and driving corporate action • Promoting innovation and development of new sectors • Using green and sustainable finance to catalyse investments • Improving climate resilience to tackle worsening urban heat and extreme weather
3. Unlocking the next phase of growth with innovation and technology	• Striving to be the generative artificial intelligence (GAI) hub of choice for the GBA • Strengthening Hong Kong's e-hub with tax measures • Addressing the I&T development needs in the Shenzhen-Hong Kong Innovation and Technology Park (HSITP) and other infrastructure projects • Increasing support to innovative start-ups to back up and accelerate their growth
4. Providing more support and flexibility for attracting and retaining talent in Hong Kong	• Accelerating the expansion of Hong Kong's tax treaty network • Exploring new tax incentives and non-financial measures to attract and retain talent in specific industries • Prioritising investments in capacity building for ESG talent to strengthen Hong Kong's expertise in sustainable finance • Creating cross-boundary regulatory measures that facilitate seamless operations • Providing support for full-time parents to return to the workforce • Adopting a multi-pronged strategy to encourage workforce participation of the silver-haired group
5. Establishing Hong Kong as a regional data hub for frictionless flow and exchange of data	• Creating, improving, and implementing harmonised legal and regulatory frameworks as well as common mechanisms for cross-boundary data sharing • Developing and implementing initiatives that support the HKSAR government's vision of becoming a digital-first, data-driven organisation
6. Optimising infrastructure development to bolster long-term growth and competitiveness	• Reinventing infrastructure delivery models with the private sector • Accelerating the coordinated development of the Northern Metropolis and Kau Yi Chau artificial islands projects • Diversifying sources of infrastructure funding

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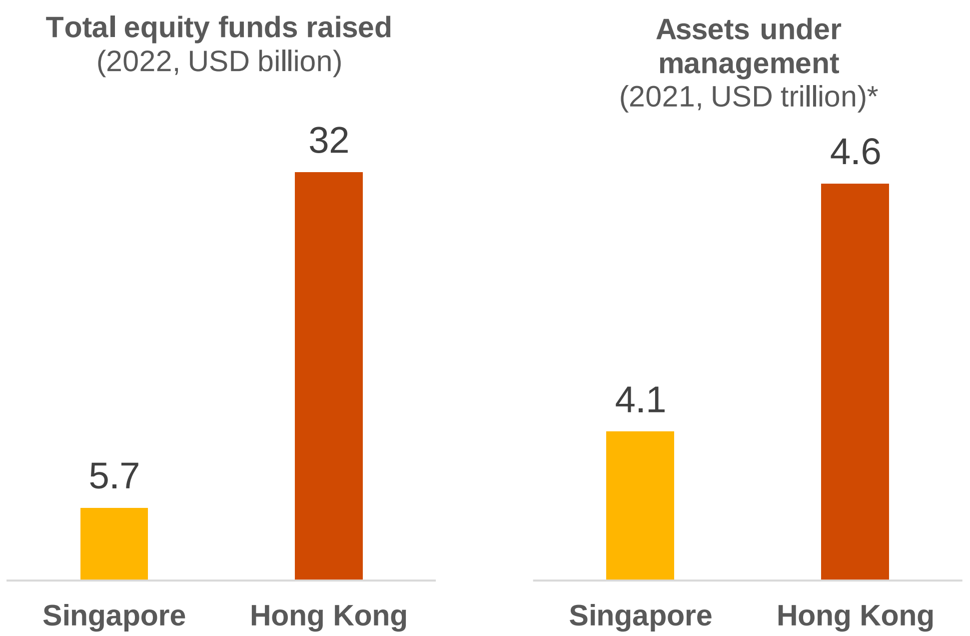
Cementing Hong Kong's status as an international financial centre

As the global economy races to resume normalcy and invigorate its economic activities, Hong Kong has found itself in a whole new race for growth, capital and talent, particularly stemming from fierce competition with Singapore in recent years in its quest to become the go-to financial hub in Asia Pacific. While Hong Kong is still far ahead of Singapore in term of equity funds raised (with approximately USD 32 billion raised for Hong Kong against USD 5.7 billion for Singapore) and assets under management (USD 4.6 trillion against USD 4.1 trillion), it is important for Hong Kong to further consolidate its position as the preeminent financial centre in the region, particularly leveraging its unique strengths in financing and professional services in the high-quality development of the BRI.

On the plus side, with the linked exchange system acting as an anchor of financial stability, the city also has unparalleled advantages from its close integration with the Chinese Mainland, along with a favourable tax and regulatory system that allows free flow of capital and access to a diverse array of financial products and services. To sustain this competitive edge, we recommend implementing measures to facilitate initial public offerings (IPOs) and listings with both foreign and Chinese structures, as well as enhancing regional integration.

Figure 2: Comparative statistics between Hong Kong and Singapore



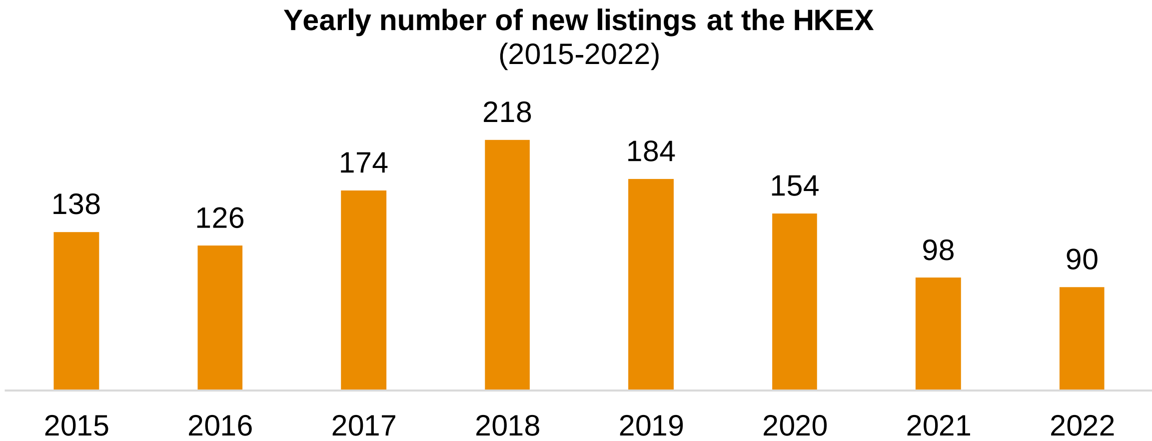
* The latest available data from Monetary Authority of Singapore is as of 2021, while the 2022 figure is yet to be published.

Source: The HKEX, Singapore Exchange Market

Enhancing stock market liquidity and supercharging the development of the city's capital market

The Hong Kong Stock Exchange (HKEX) is one of the largest in the world and for a long time has been the fastest growing stock exchange in Asia. However, the number of new listings at the HKEX has seen a steady decline since 2018. In order to revitalise Hong Kong's capital market, we recommend **strengthening collaboration** with global stock exchanges, especially those in the **Middle East and Southeast Asia**, **through exploring dual listing opportunities and leveraging the GEM market as a channel to attract small-medium enterprises with high growth potential.** Dual listing offers the advantage of expanding the investor and issuer base, making Hong Kong an even more appealing destination for IPOs.

Figure 3: Comparative analysis of listings in Hong Kong, Indonesia, and Saudi Arabia



	2019	2020	2021	2022
Number of listed companies				
Indonesia Stock Exchange	668	713	766	825
Saudi Exchange (Tadawul)	199	203	210	223
Number of IPOs				
Indonesia Stock Exchange	55	51	53	57
Saudi Exchange (Tadawul)	5	4	15	36

Source: The HKEX, Indonesia Stock Exchange and Saudi Exchange

The Primary Equity Connect (PEC) initiative, introduced in the HKEX's 2016-2018 strategic plan, unveils a mechanism to allow Mainland investors to directly subscribe for IPOs in the Hong Kong market and vice versa. We recommend **the implementation of the PEC initiative** as it holds significant potential to enhance connectivity and promote companies to list in Hong Kong by raising funds in RMB. Additionally, it would allow Mainland investors to participate in Hong Kong IPOs using RMB while Hong Kong investors can subscribe to Mainland IPOs using HKD or RMB. Expanding the Stock Connect scheme from secondary markets to IPOs can significantly enhance liquidity of both markets.

While foreign and Chinese Mainland companies are still typical candidates for new listings and IPOs in Hong Kong, local SMEs and start-ups are also a source for untapped potential. In 2018, the HKEX discontinued the streamlined process for transfer from the Growth Enterprise Market (GEM) to the Main Board, concurrently increasing the minimum market capitalisation and cash flow requirement for GEM applicants.

To unlock the listing potential of SMEs and start-ups, we recommend that regulators **review and reposition the GEM by relaxing some of its existing listing requirements**, such as minimum market capitalisation, public float value of securities, cash flow, and "track record period". A dedicated team could be established to accelerate the vetting process of GEM applicants, simplify the listing procedures, disclosure and reporting requirements such as by eliminating mandatory quarterly reporting. This approach can effectively reduce IPO costs and ongoing listings compliance expenses, ultimately enhancing the appeal of GEM as a desirable listing platform. In addition, regulators should consider allowing secondary listing on GEM to diversify investor base and enhance liquidity of GEM.

Furthermore, GEM-listed companies should also be able to migrate to the Main Board once they fulfil the listing requirements of the latter, subject to the approval of the Listing Committee. The transfer from GEM to the Main Board could be further expedited by replacing the existing IPO prospectus with a standard transfer application form.

Another way to draw more investment into the city's entrepreneurial and innovative sectors would be through **the enrichment of the Capital Investment Entrant Scheme** introduced in the 2023-2024 Budget **by expanding investible areas to include domestic start-ups, listed shares, public and private funds domiciled in and managed by fund managers in Hong Kong.**

Finally, policy makers should reconsider the possibility of **reducing stamp duties by half** for stock trading and conduct a thorough review of the impact of stamp duty on the market intermediaries and the impact on the development of financial products in Hong Kong. The reduction of transaction costs, especially the stamp duty levied on share purchases, would yield substantial benefits. It would invigorate trading volume, amplify liquidity, and foster long-term investment.

Hong Kong's stamp duty rate on share transfers currently surpasses that of the Chinese Mainland (0.05% applied to the seller only) even before the recent increase from 0.20% to 0.26% of transaction value, effective from 1 August 2021.

Figure 4: Stamp duty rate comparison in the Chinese Mainland, the US, and Hong Kong

Jurisdictions	Effective stamp duty rates
Chinese Mainland	0.10% to the seller only and recently further reduced to 0.05% in August 2023
United States	No stamp duty in the US, but has a SEC fee of 0.0008% levied to the sale of securities
Hong Kong	0.13% to both seller and buyer

Source: Ministry of Finance of the People's Republic of China, US Security and Exchange Commission, HKSAR Government

Consolidating Hong Kong's competitive advantages to further advance financial services

Hong Kong's medical services are in high demand within the GBA. The incoming implementation of the GBA Insurance Connect is expected to further boost the popularity of health insurance products offered by Hong Kong insurers for people in other GBA cities.

In the eye of such growing demand, it is advisable that the HKSAR government act as the facilitator to advocate for an integrated proposition of medical services and health insurance development in the GBA by **encouraging Hong Kong insurers and reinsurers to expand their presence in the GBA market**, while proliferating medical service facilities in the Northern Metropolis to cope with growing South bound demand.

Launched in September 2021, the Wealth Management Connect (WMC) scheme has provided eligible GBA residents the opportunity to invest in wealth management products distributed by banks across the GBA through a closed-loop funds flow channel. With the necessary building blocks now in place and a track record of nearly two years, it is now the perfect time **to envision the future roles of the WMC initiative** to ensure it is fit-for-purpose for years to come. This is essential considering the rapid growth of Hong Kong's wealth management industry, which is largely driven by evolving investor preferences.

To this effect, we suggest **expanding beyond the retail investor channel to include other investor groups**, such as institutions, high net worth individuals, and family offices.

Additionally, introducing a broader range of products, particularly alternative asset classes like private funds and infrastructure opportunities, will offer investors greater exposure and opportunities for diversification.

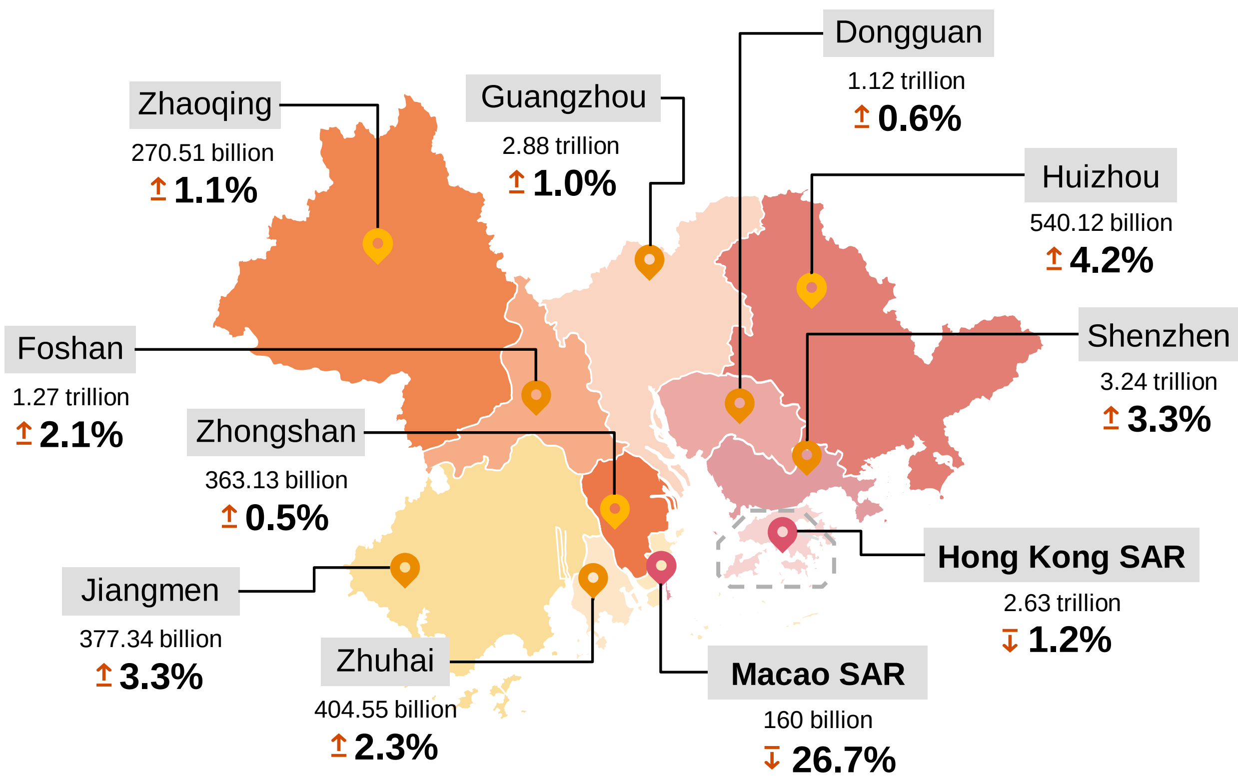
Historically, retail investors have faced several obstacles that prevented them from investing in alternative assets, most notably, regulatory restrictions on investor protection, the complexity of such investments, illiquid product structures, long investment horizons, and significant capital requirements. With technology advancements, increasing regulatory acceptance and greater interest from product manufacturers to make the asset class more accessible for retail investors, it is now possible for investors to gain exposure to alternative investment strategies through retail structures in other jurisdictions. Innovation and product structuring have provided alternative assets an avenue to reach a larger base of investors worldwide. This shift towards "retailisation" has opened up new opportunities for alternative asset managers to reach a larger global investor base. As such, it is recommended that relevant regulations be developed in Hong Kong with an aim to facilitate this transformation and **enable retail investors to access a broader range of alternative assets**.

In some jurisdictions, the establishment of new marketplace platforms to distribute private funds has gained traction, broadening the range of distribution channels for investors. One example of this is the emergence of exchange-based fund distribution platforms, where unlisted funds can be transacted and settled through stock exchanges. These platforms bring together asset managers and investors, providing clearing and settlement services. We thus recommend **developing private funds exchange platforms through broadening distribution channels via the HKEX**, with the goal of increasing accessibility and liquidity of private funds and other platforms.

Expediting Hong Kong's development as a leading hub for family offices

In recent years, Hong Kong has made significant strides in establishing itself as a leading hub for family offices. The HKSAR government has prioritised this endeavour, as seen in the implementation of a tax concessionary regime and greater regulatory clarity. Leveraging on the existing "Connect" schemes such as Stock Connect, Bond Connect, and Wealth Management Connect, it would be beneficial for the HKSAR government to explore the possibility of **codeveloping a Family Office Connect scheme with the Mainland authorities** to allow the wealth of Chinese Mainlanders to be managed in Hong Kong.

Figure 5: **GDP growth in the Greater Bay Area in RMB (2022)**



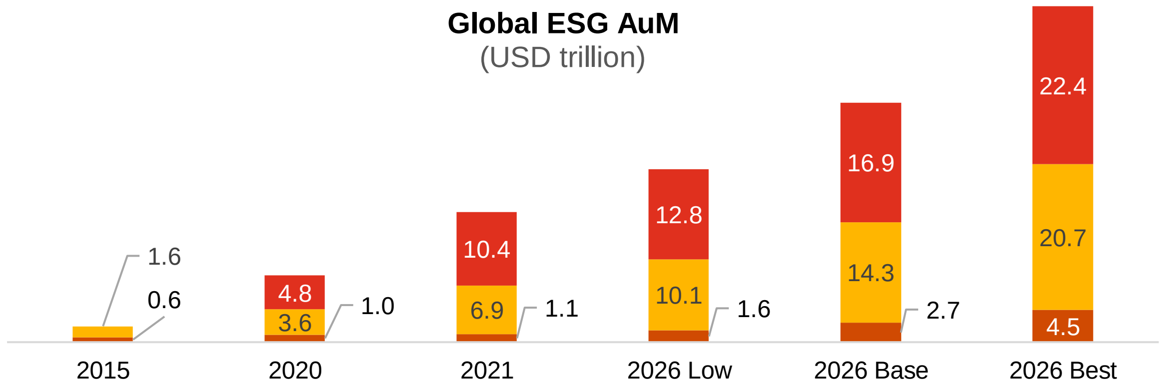
Source: Constitutional and Mainland Affairs Bureau of the HKSAR

Tax concessions provided to family offices should be regularly reassessed to stay competitive. The HKSAR government should explore new tax incentives and other measures to attract and retain talent of specific industries, for instance family office professionals, thereby deepening the talent pool and capabilities of the industry. This can be achieved via tax measures such as granting tax deductions for children's education and removing the current limit on unilateral double taxation relief for employment income, as well as non-fiscal incentives such as housing subsidies.

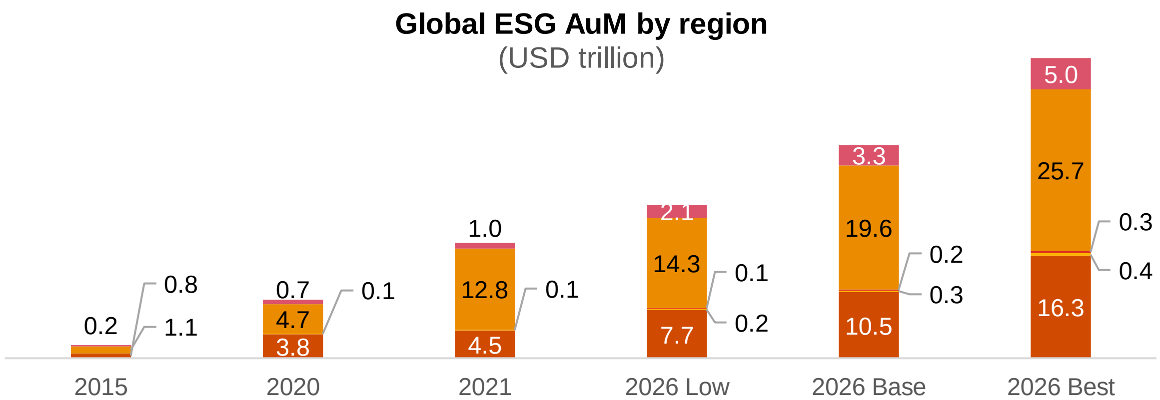
2 Fostering a robust sustainability ecosystem in Hong Kong

The increasing severity of the climate crisis has led to a global push for more sustainable corporate practices. Governments and the public are raising the bar on sustainability standards, prompting the private sector to invest heavily in Environmental, Social, and Governance (ESG) initiatives. This shift towards ESG investment in the finance sector has been driven by both regulatory mandates and investor expectations. In the Asia Pacific region alone, we expect to see ESG assets under management (AuM) to triple by 2026. This presents a notable opportunity for Hong Kong, which serves as a regional hub for sustainable innovation, embraces green technology, and a gateway to the Chinese Mainland.

Figure 6: Forecasts of global ESG investments



	2015	2020	2021	2026 Low	2026 Base	2026 Best
Mandates	0.0	4.8	10.4	12.8	16.9	22.4
Mutual funds	1.6	3.6	6.9	10.1	14.3	20.7
Private markets	0.6	1.0	1.1	1.6	2.7	4.5
Total	2.2	9.4	18.4	24.5	33.9	47.6



	2015	2020	2021	2026 Low	2026 Base	2026 Best
Asia-Pacific	0.2	0.7	1.0	2.1	3.3	5.0
Europe	1.1	4.7	12.8	14.3	19.6	25.7
Latin America	0.0	0.0	0.0	0.1	0.2	0.3
Middle East & Africa	0.0	0.1	0.1	0.2	0.3	0.4
North America	0.8	3.8	4.5	7.7	10.5	16.3
Total	2.1	9.3	18.4	24.4	33.9	47.7

Source: PwC Global ESG and AWM Market Research Centre Analysis, Lipper, Preqin, ESG Global

Improving disclosures on sustainability and driving corporate action

The 2022 Policy Address encouraged the adoption of localised International Sustainability Standards Board (ISSB) standards for public and private entities. This year, the HKEX proposed mandating all issuers to make climate-related disclosures in their ESG reports and to introduce new disclosures that are aligned with the ISSB Climate-related Disclosure Standard. Our recommendation is for the HKSAR government **to continue to enhance the ESG regulatory framework**, ensuring it is robust, while concurrently offering clear guidance to issuers on the effective implementation of the new guidelines. We also propose **continuing to monitor and strengthen the disclosure of ESG information**, aligning it with international standards, including expanding to nature-related disclosure referencing the recently launched Taskforce on Nature-related Financial Disclosures (TNFD) framework.

Promoting innovation and the development of new sectors

In October 2021, the HKSAR government unveiled its proactive climate action plan towards achieving carbon neutrality by 2050. With electricity generation alone accounting for 62.7% of Hong Kong's annual greenhouse gas emissions in 2021, we recommend that the HKSAR government adopt a **data-driven approach to monitor energy efficiency** of its public services and formulate a comprehensive energy consumption strategy in order to monitor and achieve their carbon neutrality objectives. This approach has been successfully implemented overseas, most notably in Singapore's public housing sector or in the city of Daegu in Korea. By implementing efficient energy monitoring practices, the HKSAR government can serve as a role model for the private sector, encouraging them to follow suit in their own sustainability efforts.

Climate tech is a fast-growing area attracting substantial investments in recent years. Since 2021, over 25% of global venture capital funding has consistently been directed towards climate tech start-ups. To capitalise on this trend, we recommend continuing to **promote and incubate innovative financial products or measures that link with climate mitigation and adaptation**. This can include the development of insurance products that cover commercial losses caused by flooding and heatwaves, green and sustainable bonds and loans, and the formation of an ESG data repository, among other measures. This would help foster a green finance and technology ecosystem in Hong Kong to encourage enterprises and start-ups to set up their operations in the city and engage in acceleration programmes.

Hydrogen fuel cells have gained recognition as a promising technology for reducing reliance on fossil fuels, particularly in the transportation sector, and with applications in other industries. This year, Hong Kong is piloting a network of hydrogen buses alongside the city's first hydrogen refuelling station. To support this development further, we recommend the HKSAR government **support the expansion and capability building for a hydrogen ecosystem within and beyond road transport applications**. This includes considering applications such as energy storage, portable power, and green shipping, as further avenues to strengthen Hong Kong's status as an international logistics hub. Ammonia, unlike methanol which is a non-zero carbon fuel traditionally used by the shipping industry, is a zero-carbon emissions fuel that can be produced by combining hydrogen with nitrogen. The International Energy Agency (IEA) projects that ammonia and hydrogen will satisfy 60% of shipping fuels demand by 2050, with ammonia alone accounting for 45%, in its net zero scenario.

Continuing to **develop safety standards** covering the value chain of hydrogen from production, liquefaction, storage, distribution, regasification, to infrastructure design and actual usage is also essential. Finally, it is advisable to **encourage the development of green financing** to support hydrogen projects by raising market awareness within the financial services sector.

Using green and sustainable finance to catalyse investments

Hong Kong has positioned itself as a crucial intermediary in connecting capital and opportunities in Hong Kong, the Chinese Mainland, Asia and beyond. We recommend that the HKSAR government take actions to enhance governance and cement its status of global gateway for the China Certified Emission Reduction scheme by developing measures to **enhance confidence in carbon trading.** This includes establishing oversight rules and regulations to protect market participants from fraud, excessive speculation, money laundering, and other illicit activities. Coordinating efforts between the authorities of Hong Kong and the Chinese Mainland is also required to harmonise **legal and accounting treatments for carbon transactions**, whether they should be classified as intangible assets, commodities, financial instruments or other assets, because different classifications could lead to different potential tax and compliance consequences for cross-boundary carbon trading and financing. Establishing a governance framework would instil confidence and assurance among market participants, let alone adding creditability to the market.

We assess based on current market trends that **cross-boundary securitisation** has a great potential as a tool to attract international capital for funding infrastructure projects, including renewable energies in the Chinese Mainland and SME business expansion. On this front, we propose **establishing Hong Kong as a PRC cross-boundary green and sustainable securitisation and, in the context of the Green Belt and Road Initiative, a sukuk (sharia-compliant bond) platform** to channel international capital towards green and sustainability projects in both Hong Kong and the Chinese Mainland. This will contribute to job creation and long-term economic growth while supporting sustainability initiatives and goals.

While leading by example is an important approach, there are other effective strategies to foster a greener and more sustainable economy. Tax incentives should be considered to encourage more private investments in ESG and green projects. For example, **expanding the scope of tax exemption of existing qualifying debt instrument schemes to cover green and ESG bonds** would attract more investors to invest in such bonds traded in Hong Kong.

Funding schemes are another proven effective way of nudging businesses in adopting more sustainable practices. For example, the three-year Pilot Green and Sustainable Finance Capacity Building Support Scheme, launched in late 2022, should be further proliferated to encourage the participation of local eligible and prospective practitioners in **training programmes related to green and sustainable finance**. Similar funding schemes are also needed to support Hong Kong SMEs in **strengthening their ESG management.**

Improving climate resilience to tackle worsening urban heat and extreme weather

Climate projections suggest that the risks of extreme weather events – from flooding, typhoon to heatwaves – are increasing in the city, particularly in urbanised and dense areas. To combat these, we recommend undertaking a comprehensive study to thoroughly understand the impacts of extreme weather events in Hong Kong. While the city has a long history of managing typhoons, extreme rainfalls and landslides, establishing a heat adaptation strategy will also be important to identify sectors at risks and analyse the impact on local economies.

Establishing a dedicated taskforce is crucial to addressing urban heat effectively. This taskforce should focus on integrating heat adaptation strategies into urban planning, **adopting heat-resilient urban design principles**, and implementing effective and innovative measures. These may include nature-based solutions such as enhancing urban forests and water bodies or reducing the urban heat island effect through appropriate building design and pedestrian-friendly infrastructure. Other equally important solutions include **promoting community awareness and education** on relevant issues and leading research efforts in energy-efficient and affordable urban cooling technologies that have applications in China and the wider Asian region.

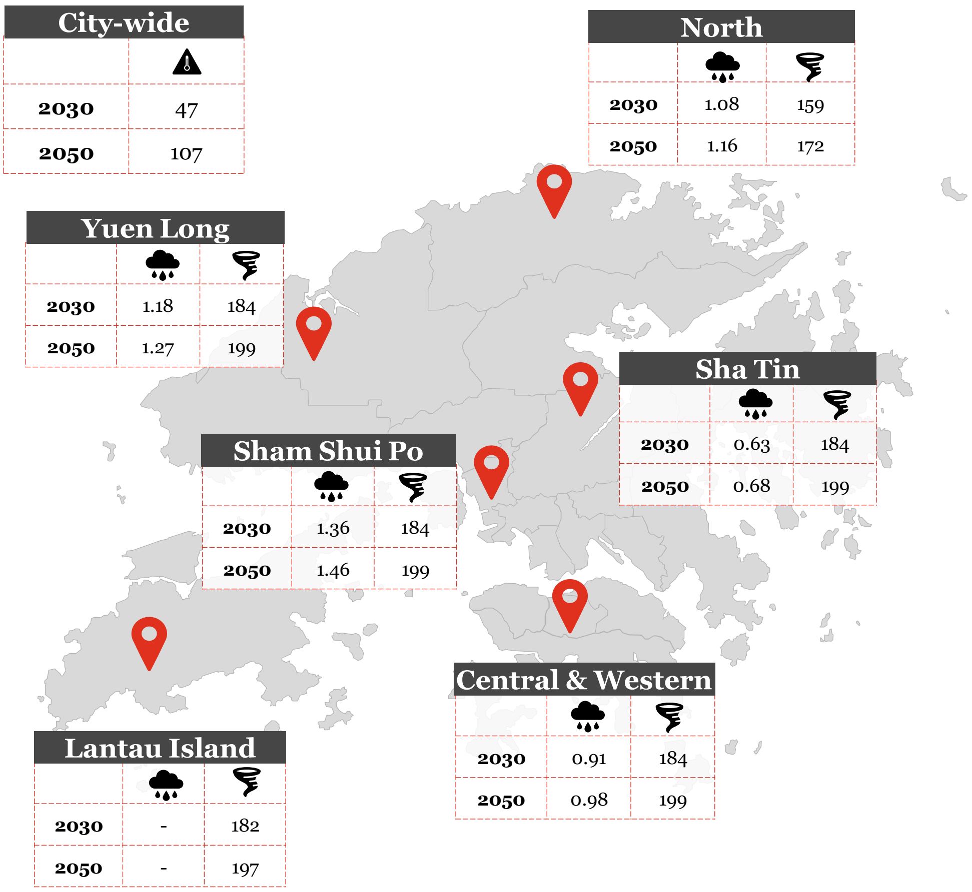
Figure 7: Extreme weather projections in Hong Kong under a severe climate change scenario

Legend

- Rainfall Flood (meters)
- Typhoon (km/h)
- Heat Index 35 (days)

Definitions

- **Rainfall floods** refer to inundation resulting from heavy rainfall, elevation, and climate change.
- **Typhoons** bring intense wind gusts and rainfall, the spatial extent and intensity of which are a function of historic tropical cyclone tracks, temperature, and wind speeds.
- **Heat Index 35** refers to total count of days per year where the daily mean Heat Index rose above 35°C A Heat Index is a measure of how hot it feels once humidity is factored in with air temperature.



City-wide

	Heat Index 35
2030	47
2050	107

North

	Rainfall Flood	Typhoon
2030	1.08	159
2050	1.16	172

Yuen Long

	Rainfall Flood	Typhoon
2030	1.18	184
2050	1.27	199

Sha Tin

	Rainfall Flood	Typhoon
2030	0.63	184
2050	0.68	199

Sham Shui Po

	Rainfall Flood	Typhoon
2030	1.36	184
2050	1.46	199

Central & Western

	Rainfall Flood	Typhoon
2030	0.91	184
2050	0.98	199

Lantau Island

	Rainfall Flood	Typhoon
2030	-	182
2050	-	197

Source: Intensel, World Bank Climate Change Knowledge Portal

3 Unlocking the next phase of growth with innovation and technology

The HKSAR government has long prioritised the promotion of I&T as a key driver of economic growth. This commitment is reflected in the establishment of the Innovation and Technology Bureau in 2015, subsequently renamed the Innovation, Technology and Industry Bureau. The bureau has been instrumental in fostering the advancement of I&T and related industries within Hong Kong and enhancing the city's competitiveness in this field. In line with these objectives, we have identified several actionable measures that the HKSAR government can undertake, including bolstering the local start-up ecosystem, increasing cooperation in the GBA, and more.

Striving to be the generative artificial intelligence (GAI) hub of choice for the GBA

The increasing adoption of GAI is poised to bring disruptive changes to existing business processes and has the potential to greatly enhance work efficiency. To position Hong Kong as a regional GAI hub, it is crucial to establish close collaboration with stakeholders in the GBA in **building a regional large language model** designed to cater to social and business applications and developing GAI use cases specific to the region, having due consideration of a variety of languages used in the daily living and business context of the GBA.

The HKSAR government has been actively seeking digitalisation of its services for years, and GAI will provide a powerful way to speed up this transformation, through its capabilities in summarisation, original content creation, semantic search, and coding. **We recommend launching a city-wide action plan for AI adoption** for both the public and private sectors. The action plan would assess the impact of AI adoption on the local workforce, the need for reskilling and retraining, risk management for AI adoption, and priority areas for AI pilots, among other aspects.

Strengthening Hong Kong's e-hub with tax measures

To support the growth of a vibrant digital and metaverse ecosystem, we recommend **exploring new tax policies, measures, and incentives**. These measures could involve clarifying tax provisions for digital activities, introducing tax incentives for **specified qualifying expenditures, expediting the implementation of the patent box regime** outlined in the 2023-2024 Budget, aligning intellectual property-related tax deduction rules with the proposed patent box regime, allowing tax deductions for Research and Development (R&D) activities in the GBA to encourage collaboration, and developing a **comprehensive policy framework** to facilitate the adoption of Web3 technologies.

Addressing the I&T development needs in the HSITP and other infrastructure projects

According to the State Council's notice issued on 29 August, 2023 on the "Development Plan for Shenzhen Park of Hetao Shenzhen-Hong Kong Science and Technology Innovation Co-operation Zone", the HSITP will jointly develop with the Shenzhen side to act as a pioneering zone for innovation and technology cooperation amongst Shenzhen and Hong Kong, as well as a pilot production cluster in the GBA.

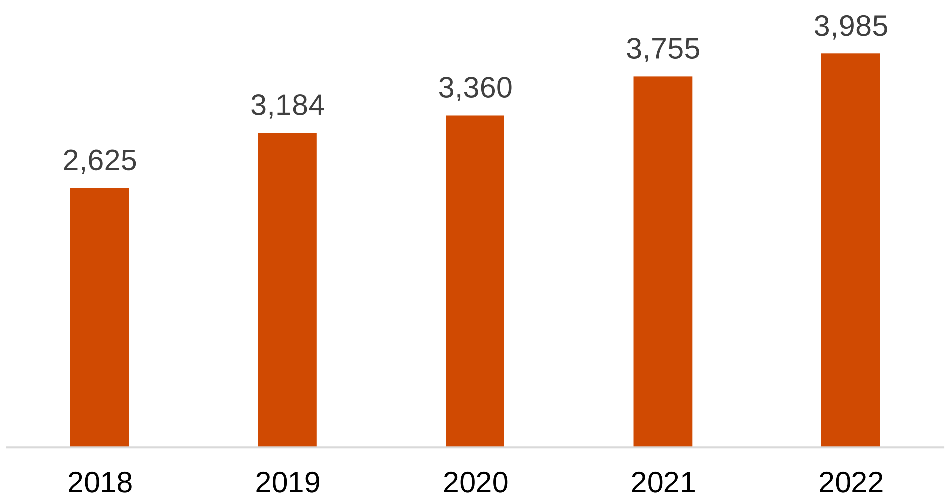
Considering Hong Kong's I&T development, PwC suggests **HSITP to speed up the land allocation process** to adapt to the ever-changing market, such as **adopting a flexible mixed model that includes the self-user model and the investor model** to encourage commercialization of I&T findings at the HSITP.

To cultivate a vibrant and diverse I&T ecosystem, we suggest the HSITP to **implement exclusive support policies for enterprises and talent as soon as possible**. This would effectively attract diverse talent, enterprises, and investors, providing cross-border flow for the convenience of enterprises through the "four flows" – talent, capital, data and logistics flow, as well as offering companies the same benefits as Mainland companies, and providing various subsidies, tax concessions, and incentive measures to encourage talent and companies to conduct their I&T work in the park. In addition, efforts should be channelled towards attracting leading international and national companies, investors, private equity funds, Contract Research Organizations (CROs), and professional certification bodies. It is also crucial to implement industrial and supporting facilities such as enterprise accelerators, joint incubation programs, one-stop service windows, talent accommodation facilities, and international schools, in order to fulfil the needs of the enterprises and talent at the HSITP.

Increasing support to innovative start-ups to back up and accelerate their growth

Since its establishment in 2017, the Innovation and Technology Venture Fund (ITVF) has played a vital role in incentivising venture capital funds to invest in local I&T start-ups in Hong Kong. We recommend **accelerating the use of the ITVF for identifying and directly investing in innovative companies, with a particular focus on Hong Kong-based start-ups** intending to scale up their commercialisation efforts in Hong Kong and beyond. This would serve the purpose of encouraging and supporting local investment in innovation R&D and motivating funded portfolio companies to be listed in Hong Kong when they reach the appropriate stage.

Figure 8: Total number of start-up companies in Hong Kong (2018-2022)



Source: InvestHK

Various governments in Asia Pacific have introduced subsidies to foster innovation and support start-ups in their founding and early stages. In line with these initiatives, we recommend creating similar direct subsidies in Hong Kong for start-ups in the founding and early stages and support their listing in Hong Kong, thereby fostering an innovative and vibrant ecosystem.

4

Providing more support and flexibility for attracting and retaining talent in Hong Kong

In recent years, Hong Kong has been grappling with a significant labour shortage resulting from the surge in emigration and rising global competition for talent, compounded by low birth rates and demographic shifts. The trend has persisted into the current year, with finance, insurance, and real estate sector experiencing a 1.3% loss in employees during the first quarter of 2023, while overall vacancies in the private sector have risen by 6.3% since December 2022.

Recognising the urgency of this issue, the HKSAR government unveiled a series of measures in late last year, including the introduction of specialised admission schemes targeted at professionals and high-calibre migrants, as well as the implementation of the Talent List and Testimonial Scheme. These targeted measures, which are designed to attract and retain talent from diverse global pools, have had early success in attracting 100,000 applications in just the first half of 2023.

Figure 9: Number of vacancies and vacancy rate by industry (March 2023)

	Vacancies			Vacancy rate
Industry	Number	Year-on-year % change	% change over 3-month period	%
Manufacturing	2,378	+69.5	+26.3	3.1
Mining and quarrying, electricity and gas supply, waste management	271	+11.5	-13.7	2.2
Construction sites (manual workers only)	644	+139.4	+20.1	0.6
Import/export, wholesale and retail trades	10,656	+60.8	+3.0	1.5
Transportation, storage, postal and courier services, and information and communications	10,466	+65.1	+2.5	3.7
Accommodation and food services	8,633	+126	+12.1	3.2
Financing and insurance, and real estate	10,835	+15.7	+6.6	2.8
Professional and business services	8,574	+18.8	+6.6	2.2
Social and personal services	25,294	+37.4	+5.6	4.4
All industry sections covered	77,751	+44.8	+6.3	2.8

Source: Census and Statistics Department of the HKSAR

The boundaryless nature of talent also means that Hong Kong needs to constantly benchmark its talent policies against those of Mainland cities and Southeast Asian countries to identify competitive advantages and areas to enhance. By offering attractive incentives such as tax benefits, industry-specific subsidies, training and upskilling, and educational support, Hong Kong can re-establish itself as an attractive destination for both local and international talent.

We propose that Hong Kong employ a more proactive and focused approach to address the current talent shortage, summarised in six key aspects:

- **Accelerating the expansion of Hong Kong's tax treaty network**, particularly with key trading partners and jurisdictions along the BRI. Hong Kong can proactively play its part in the wider national strategy and leverage its unique advantages within the BRI, serving as a favourable business platform for the Chinese Mainland and rest of the world. The signing of tax treaties can enhance international cooperation between Hong Kong and other jurisdictions, promote cross-boundary talent mobility, mitigate double taxation, and provide favourable tax arrangements for businesses and individuals.

- **Exploring new tax incentives and non-financial measures** to attract and retain talent in specific industries. such as professionals in family offices. This can be done in conjunction with tax concessions for single-family offices (SFOs) to support Hong Kong's aspiration in becoming a regional hub for family offices. When considering these incentive measures, the aggregate needs of the talent, their spouses and children should also be taken into account, with an aim of enhancing the level of commitment of highly sought-after professionals and their families to long-term employment, education, residence, and settlement in Hong Kong. These measures may include providing tax deduction for children's education and housing subsidies. These family-oriented, long-term incentives are key to deepening Hong Kong's "talent reserve" and ensuring the long-term success of its talent strategy.

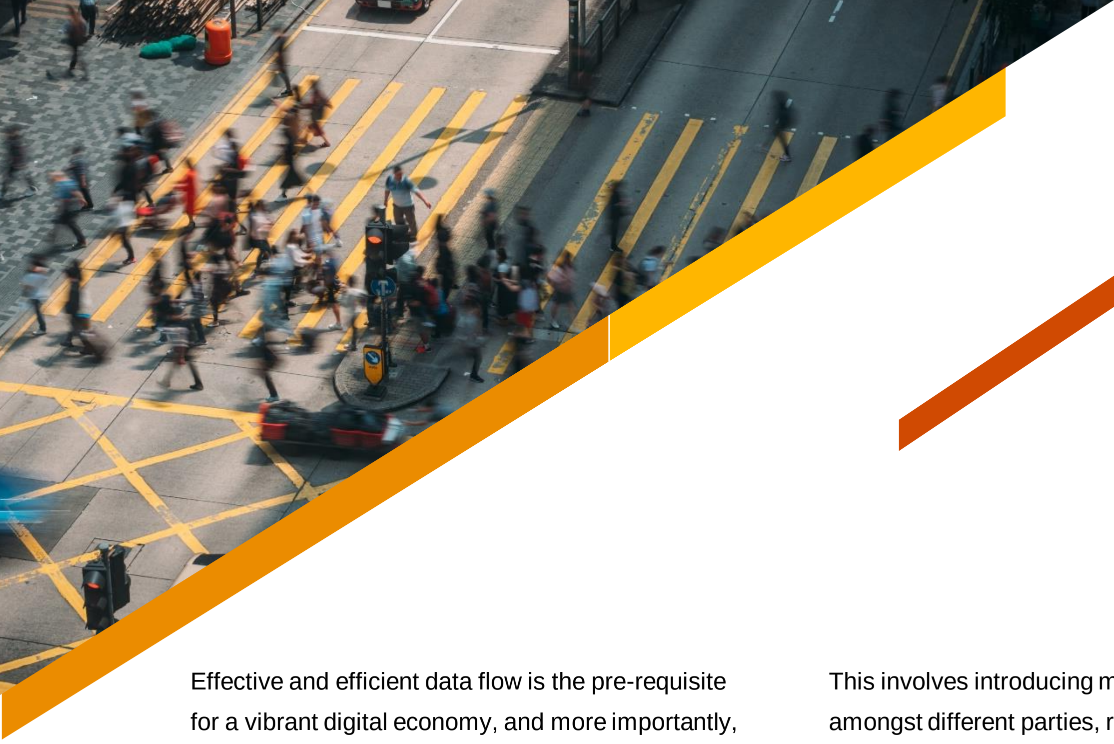
- **Prioritising investments in capacity building for ESG talent to strengthen Hong Kong's expertise in sustainable finance** and its leading position in green finance. The HKSAR government can continue to enhance the Pilot Green and Sustainable Finance Capacity Building Support Scheme, launched in December 2022, by providing additional subsidies for eligible local individuals and aspiring professionals to participate in relevant training. This will assist Hong Kong in effectively addressing the new opportunities of low-carbon and sustainable economic development, sustaining its long-term competitive position amid the new global ESG race.

- **Creating cross-boundary regulatory measures** that facilitate seamless operations. Hong Kong's development is becoming increasingly intertwined with that of the Mainland under the engine of national development and its closer integration with other GBA cities. In light of this, The HKSAR government can consider further coordinating with government agencies in the Chinese Mainland and exploring new business models that facilitate seamless operations for talent, employers, products, and services. Examples of such measures include mutual recognition agreements for professional qualifications, product certifications, among other facilitative arrangements.

- **Providing support for full-time parents to return to the workforce**. Many professionals in Hong Kong choose to take career breaks for the caring for their children, which results in significant economic losses to individuals and the society. The HKSAR government can consider implementing additional measures to provide comprehensive support for families with childcare needs. For full-time parents, that may translate into subsidies for daycare services and tax deductions for domestic helper expenses. Furthermore, employers can be encouraged, through means of subsidies or additional tax deductions, to provide upskilling and reskilling training opportunities to their employees. These initiatives will support the return of full-time parents into the workforce and enhance talent quality in the workplace.

- **Adopting a multi-pronged strategy to encourage workforce participation of the silver-haired group** so that they can continue to contribute their knowledge and expertise to the society. On top of the introduction of the Employment Programme for the Elderly and Middle-aged (EPEM) by the Labour Department, the Financial Secretary announced in the fiscal budget earlier this year the proposal to increase the tax deduction rate, from 100% to 200%, for employers' voluntary contributions to the Mandatory Provident Fund (MPF) schemes for employees aged 65 or above. To further incentivise senior citizens to remain in and return to the workforce, the HKSAR government can also consider raising the basic tax allowances for salary tax or personal assessment to reduce their tax burden, thereby retaining valuable active citizens to the betterment of society.

5 Establishing Hong Kong as a regional data hub for frictionless flow and exchange of data



Effective and efficient data flow is the pre-requisite for a vibrant digital economy, and more importantly, an essential cornerstone for the seamless movement of goods and capital in any modern economy. Hong Kong's status as both an international financial hub and a gateway to the Chinese Mainland can make data transfer challenging due to the diverse nature of the many stakeholders involved. It is thus imperative for Hong Kong to create the needed framework, systems, and infrastructure to facilitate as much as possible the free flow of information. To establish its position as a regional and international data hub, Hong Kong must both foster a regulatory framework that complies with regional and international requirements, and in doing so develop and harmonise its own digital infrastructure to meet global standards.

Creating, improving, and implementing harmonised legal and regulatory frameworks as well as common mechanisms for cross-boundary data sharing

Hong Kong has the potential to become a prominent hub for cross-boundary data exchange, connecting the city, the Chinese Mainland, and the rest of the world. To this end, the HKSAR government must **take the lead in executing the memorandum** signed between the Cyberspace Administration of China and the Innovation, Technology and Industry Bureau in Hong Kong.

This involves introducing measures to enhance trust amongst different parties, reducing compliance costs and streamlining regulatory approval processes. At a regional level, this would require working closely with the respective governments of key jurisdictions in the GBA as well as regulators, industry associations, and financial institutions with an aim to establish a harmonised legal and regulatory frameworks and common mechanisms.

To pave the way forward for enterprises to reflect in a tangible way the value of data assets they own, we recommend **seeking convergence and alignment with national initiatives governing data assets and providing technical support in implementation.** This includes activities such as asset valuation, setting up governing standards, and establishing platforms for cross-boundary trading of data assets.

Finally, for Hong Kong to become a regional data hub, **data standards and protocols must be eased**. We propose engaging with business stakeholders, such as telecom operators and utility companies, in discussions on data standards, protocols, and governance arrangements. Reviewing and amending regulations to facilitate B-2-B, B-2-C, and B-2-G data sharing may be required in light of data security and privacy considerations.

Developing and implementing initiatives that support the HKSAR government's vision of becoming a digital-first, data-driven organisation

Apart from the need for harmonised data regulations and framework, it is imperative for the HKSAR government to develop and implement actionable measures as it seeks to digitalise its various public services leveraging on its wealth of data. For example, the HKSAR government should build upon the its e-Gov audits **to continue piloting and adopting novel I&T solutions aimed at enhancing public services in a more efficient manner**. This approach ensures a systematic and managed approach to digitalisation efforts.

Besides, we recommend that the HKSAR government develop **a unified, comprehensive catalogue of data that it currently holds** to facilitate data exploration and sharing within and beyond the public sector.

This would promote the collection and interoperability of big data among different government departments, between the government and different sectors, and between the government and the general public.

Taking a broader perspective and implementing mechanisms that support efficient and managed data sharing amongst stakeholders can contribute to the advancement of the ESG agenda of Hong Kong. Data can serve as a catalyst for innovation and creativity in the city, thereby allowing it to create better citizen services that span both the public and private sectors and ensuring a seamless and excellent experience for its citizens and visitors alike.

Figure 10: **Overview of the critical building blocks for a Smart City**

E	S	G
• Circular economy • Climate resilience • Sustainability • Waste management • Air and water quality • Biodiversity	• Awareness • Education • Reskilling and upskilling • Capacity building • Benefits realisation • Technological impact	• Transparency • Accountability • Inclusiveness • Stakeholder engagement • Regulatory requirements • Standards • Technology deployment

Enabling City Experience in ESG

City Intelligent Base

- Adaptive, predictive and responsive
- Self-learning and continuous innovation in a citizen-centric manner
- Public, private and citizen collaborations

Supplying Data: 1010101011…

1	2	3	4	5	6	7
City Management	**Contact Centre**	**Digital Twins**	**Digital Identity Cybersecurity**	**Digital Payment**	**HPC and Data Centre**	**Utilities**
A robust framework underpinning city operations and planning, delivery of public services, and provision of city dashboard and reporting, and common operating picture (COP)	An omni-channel, single point of contact with government whereby citizens can contact the government and get their needs addressed in their preferred manner	A platform that allows physical assets to be reflected accordingly in the digital world, supporting city management and "what-if" scenario planning	A critical "trust" infrastructure that facilitates identity authentication of individuals in a digital economy, and measures to protect privacy and cybersecurity	A secured and scalable payment infrastructure underpinning electronic transactions that is essential for the development of a vibrant digital economy	High-performance (or super) computing centres and data centres supporting AI- and data-driven economic and R&D activities and policy formulation	Utilities infrastructure (power, telecom etc.) that is able to support both existing and future use cases and demand ,and offer improved city resilience

Harmonised standards and regulations, allowing city activities to be conducted in an efficient, managed, secured and privacy-protected manner

Source: PwC Analysis

Figure 11: **Global and Asia-Pacific rankings of data centre markets (2023)**

Global Ranking		Asia-Pacific Ranking	
1	Northern Virginia	1	Singapore
1	Portland	2	**Hong Kong**
3	Singapore	3	Sydney
4	**Hong Kong**	3	Seoul
5	Atlanta	5	Tokyo
5	Chicago	6	Beijing
5	Silicon Valley	7	Mumbai
8	Dallas	8	Shanghai

Source: Legco of the HKSAR

With respect to digital infrastructure, the HKSAR government should **formulate a roadmap for the growth of new Green Data Centres**, including a comprehensive review of the current regulatory regime governing data centre development projects. Other proposed measures include promoting the application of Beidou, alongside GPS, to enhance the resilience of the city's location infrastructure and keeping abreast of quantum computing development and assess its implications for governmental and commercial operations in a timely manner.

6

Optimising infrastructure development to bolster long-term growth and competitiveness

Just as data flow facilitates economic growth, infrastructure serves as a fundamental element to bolster competitiveness. Value-creating and comprehensive infrastructure projects not only pave the way for future growth but also instil investor confidence in Hong Kong's potential. In the face of an increasingly competitive regional and international landscape, Hong Kong must prioritise the development of forward-looking infrastructure projects. By fostering diverse funding avenues and steadfastly supporting local and regional initiatives such as the Northern Metropolis project, Hong Kong can establish a strong foundation for future growth while enhancing the city's long-term competitiveness.

Reinventing infrastructure delivery models with the private sector

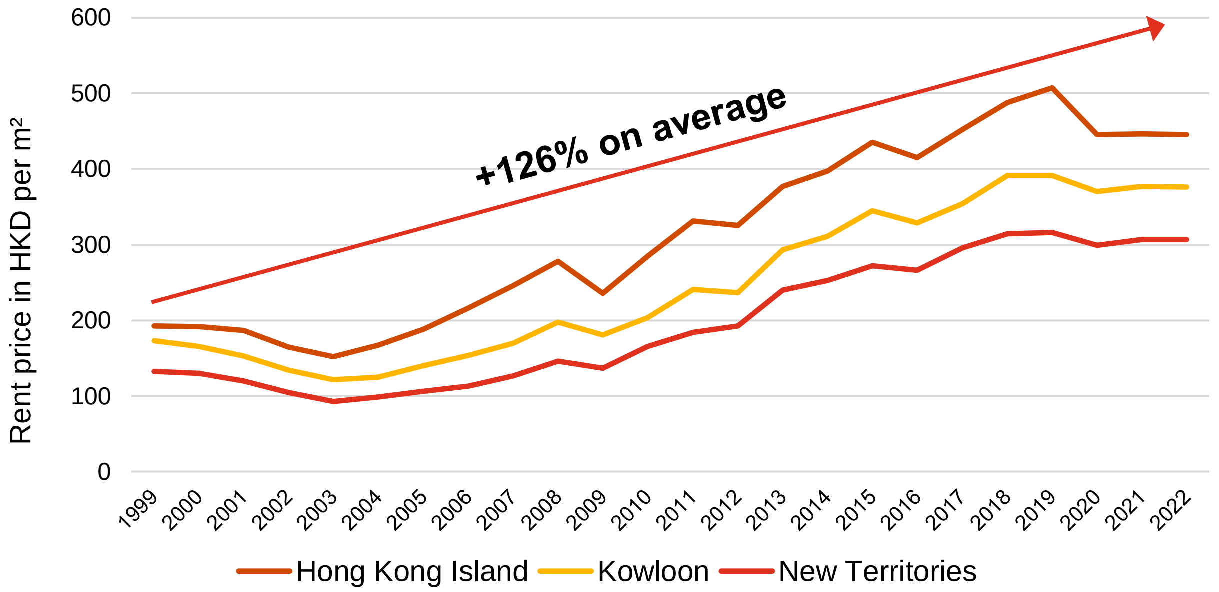
One way to restore investor confidence in the future of Hong Kong is **to establish a robust, transparent pipeline of infrastructure projects**. This long-term pipeline, spanning over 10 years, will provide clarity to investors and demonstrate a commitment to engaging the private sector in infrastructure delivery. Creating this pipeline, potentially through the newly-established Office for Attracting Strategic Enterprises (OASES), is highly recommended. It should be periodically updated and publicised to the local and international business community. Some industry associations are willing to engage their members in this pipeline and actively seek interest in specific projects.

Secondly, the effective management of such pipeline would require the HKSAR government **to assign responsibility to a central agency for the oversight of infrastructure procurement**. This agency would serve as a subject matter expert in drafting tender documents and procuring infrastructure projects in collaboration with the private sector.

The central agency's role would involve consolidating best practices, ensuring optimal risk allocation between parties, and maximising value in infrastructure projects. Currently, different government bodies procure infrastructure projects in different ways without sufficient exchange of collective expertise and leveraging of good practices. Establishing a central agency would address these challenges and enhance the overall efficiency and success of infrastructure procurement in Hong Kong.

To promote social cohesion and foster collaboration with the private sector, **integrating affordable housing with private housing developments** is recommended. This approach entails funding and delivering affordable housing in partnership with the private sector. Various international delivery models, such as Public-Private Partnerships (PPPs), can serve as a basis for implementing this strategy. Under this model, developers allocate a certain proportion of housing units at discounted, affordable prices to qualifying individuals.

Figure 12: Average private domestic rent for small housing units* in Hong Kong (1999-2022)



*Small housing units are housing units 40m² or smaller.

Source: Rating and Valuation Department of the HKSAR

Accelerating the coordinated development of the Northern Metropolis and Kau Yi Chau artificial islands projects

To expedite the development and management of significant projects, Hong Kong should explore various **PPP mechanisms to leverage diverse funding approaches**. Additionally, establishing a dedicated infrastructure fund can provide financing and investment opportunities for infrastructure and I&T projects, supporting long-term economic growth and competitiveness.

It is clear that **coordinated efforts and ongoing communication with the Chinese Mainland authorities (particularly Shenzhen)** are crucial to accelerating the development of the Northern Metropolis.

This collaborative approach will harness the synergies between Hong Kong and the GBA for shared growth and prosperity.

To facilitate the "four flows" — talent, capital, data, and logistics — in the Northern Metropolis, implementing supportive policies is essential. This can include offering subsidies, tax concessions, and incentives to encourage talent and companies to engage in I&T activities within the Northern Metropolis, fostering a conducive environment for innovation and economic development.

Diversifying sources of infrastructure funding

With respect to diversifying sources of infrastructure funding, one recommendation is **to facilitate infrastructure financing in both HKD and RMB** tapping into Hong Kong's unique position as an international bond hub and a bridgehead for RMB internationalisation. This can be achieved by further developing the long-term HKD and RMB bond markets. At present, the relatively low volume of HKSAR government bonds and long-term low-risk company bonds presents ample space for growth. Increasing, the availability of these bonds would enhance the stability of the local pension and annuity markets and support cross-boundary RMB clearance and RMB globalisation.

Hong Kong's robust public and private fund management regimes also provide an effective platform to channel private sector funding to infrastructure projects in Hong Kong, the Chinese Mainland, and overseas. The upcoming infrastructure projects in the Northern Metropolis and Lantau Tomorrow development are excellent opportunities for infrastructure companies to issue both HKD and RMB-denominated long-term investment grade bonds, as a way to obtain infrastructure financing under the framework monitored by the HKSAR government. This also presents a favourable environment to promote the development of green bonds.

Lastly, to ensure a steady funding source for infrastructure development and to reinvent the current infrastructure delivery models in Hong Kong, we propose **expanding government asset-backed securitisation initiatives**. Conventional delivery models, which heavily rely on developer-led funding, need to be re-evaluated.

The solution involves engaging private sector investors and lenders as a source of infrastructure funding. By expanding government asset-backed securitisation initiatives, significant capital can be generated for reinvestment in the city's infrastructure pipeline. This approach also aims to channel institutional investment into infrastructure, such as leveraging MPF funds, the Exchange Fund of Hong Kong and the new Hong Kong Investment Corporation. Additionally, promoting the growth of Infrastructure Real Estate Investment Trusts (REITs) as well as private investment funds can facilitate the recycling of capital from existing infrastructure assets to new ones. These measures will help diversify funding sources and ensure sustainable financing for infrastructure development in the city.

It is worth noting that within a short span of three years leading up to August 2023, a total of 29 infrastructure REITs have been launched in the Chinese Mainland in the form of C-REITs. These C-REITs are exclusively accessible to Chinese domestic and foreign investors holding the Qualified Foreign Investors status. As a new financial product, Hong Kong 's Infrastructure-REITs have a strong growth potential that could lead to an “Infra-REITs Connect“. However, it is important to highlight that the definition of “infrastructure” under Hong Kong's tax law only encompasses traditional infrastructures, and as such we recommend that the HKSAR government **review and expand the definition making reference to those in the Chinese Mainland, the EU, the US, the UK, and other major economies**, ensuring the inclusion of new infrastructure types of the new economy.

Conclusion

In summary, our comprehensive recommendations encompass six pivotal areas that align with and bolster HKSAR government's stated goals. We believe that implementing these measures will elevate Hong Kong's overall competitiveness both regionally and internationally, cementing its place as an international financial centre, Asia's sustainable finance hub for ESG transformation, and a trusted data hub with a competitive tax system, as well as a vibrant metropolis attracting regional and international talent.

At PwC, we support the administration's current commitment to attracting and nurturing talent, promoting growth in emerging industries, and engaging with diverse stakeholders and communities. In light of these efforts, we would be delighted to engage in further discussion with the HKSAR government to refine and develop the initiatives herein proposed, working together to shape a prosperous vision for Hong Kong.

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