## Urban Futures Hong Kong

Urban issues that will shape Hong Kong's future

#### **About Arup University**

Arup University ensures that our firm evolves and adapts over time and delivers excellence in everything we do - for the benefit of our members, our clients, and the communities we serve - both today and in the future.

#### **About Arup Foresight**

Foresight is Arup's internal think-tank and consultancy which focuses on the future of the built environment and society at large. We help organisations understand trends, explore new ideas, and radically rethink the future of their businesses. We developed the concept of 'foresight by design', which uses innovative design tools and techniques in order to bring new ideas to life, and to engage all stakeholders in meaningful conversations about change.

#### About the Urban Futures Hong Kong cards

This set of workshop cards was developed as a collaboration between the Arup University Foresight team and the University of Hong Kong (HKU) Common Core programme. A series of workshops were held at the HKU campus to define ideas from a trans-disciplinary set of students.

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#### **Urban Futures Hong Kong cards**

The Urban Futures workshop cards are designed to help stakeholders at all levels – citizens, planners and officials – prioritise and explore issues that will shape the future of their city and explore the notion of city vitality thinking. They can help start conversations, enhance understanding, facilitate decision-making, and build solutions.

The cards highlight urban issues that Hong Kong will face in the future. Each card contains an issue title, a short description and an illustration. The issues are organised according to their primary area of influence across the STEEP framework: Social, Technological, Economic, Environmental, or Political. While each issue is assigned to one category, it will always have implications for all five.

Turn this card over for some ideas on how to use the card set in your workshops. The cards are designed to allow you to develop your own activities in a myriad of contexts.

If you want to discuss how to use the cards in your organisation, please contact ea.arupuniversity@arup.com.



#### How to use the Urban Futures workshop cards

#### Trends and implications

Workshop participants are grouped into teams; each team is assigned one STEEP category. The teams are asked to choose five key issues from that category driving change in the city, and to explore future possible implications.

#### **Potential outcomes**

Better understanding of issues shaping the city ecosystem. This exercise is particularly useful for identifying current friction points and methods for enhancing city vitality.

#### Future news

Using the card set for inspiration, workshop participants create a set of five future newspaper headlines representing city-related news and events. As premise, participants are given a topic of particular relevance to Hong Kong.

#### **Potential outcomes**

Revealing insights about how urban issues may play out over time.

This exercise is particularly useful for detecting and shaping emerging contexts and trends.

#### **Design charrettes**

Workshop participants are grouped into teams. The facilitator acts as a 'client' and randomly selects five cards for each team. These cards are used as inspiration and constraints during design development for an urban area or set of city systems.

#### **Potential outcomes**

Innovative design ideas that promote sustainable urban planning.

This exercise is particularly useful for reevaluating and developing existing strategic plans.

### Ageing society

The past decades of continuous low fertility rates, combined with a long life expectancy, have led to an ageing population. It is projected that by 2064, the proportion of people aged 80 or above will surge from the current 4.6% to 15.9%. As a result, public policies will be more inclined to the interests of the elderly, including the allocation of medical care funds and subsidies for elderly homes.



### Ageing in place

Hong Kong has the world's longest life expectancy. Age-friendly urban planning is anticipated to be further developed supported by the Age in Place policy, aiming at reducing long-term care services. Priority will be given to intergenerational neighbourhoods, community facilities, equipped housing and sports amenities to support the physical and mental wellbeing of the older population.



### Migration surge

# Departures

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Hong Kong has witnessed a surge in emigration, facilitated by countries introducing new immigration pathways for Hong Kong residents. Research conducted in 2023 showed that nearly two out of every five respondents would choose to emigrate overseas if given the opportunity, 9.3% higher than that in the previous year. There has also been a decline in the number of student enrolments since 2022.





social

### Brain drain

Hong Kong has been facing declining birth rates and mass emigration, resulting in a concerning imbalance in human capital. A mid-to-long-term issue for Hong Kong is the potential failure of society to effectively accommodate individuals with diverse perspectives and values, as well as individuals' sense of global citizenship.



### Preservation of cultural identity

Hong Kong is known for its vibrant and bustling street markets and iconic neon-lit night view. These cultural elements not only define the identity of Hong Kong but also serve as significant tourist attractions. However, due to newly issued government policies and regulations, the number of street markets and local neon signs is gradually diminishing, posing a threat to Hong Kong's vernacular culture.



#### Recreational public space

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People residing in urban areas are 40% more likely to experience depression and 20% more likely to suffer from anxiety compared to those in rural areas. As an ultra-compact city, Hong Kong's previous planning policies have resulted in a shortage of public open spaces and amenities. To improve liveability, the government has set a target to increase the minimum amount of public space per capita from 2.0m<sup>2</sup> to 3.5m<sup>2</sup> by 2030. It is crucial to promote public accessibility to most of the green spaces and revitalise waterfront areas as public spaces.



### Mental health crisis

61% of Hong Kong adults suffer from poor mental wellbeing and it is estimated that one in every seven people experiences a common mental disorder at any given time. Also, there has been a 50% increase in the number of child and adolescent psychiatric patients between 2011 and 2016. However, the number of registered psychiatrists and psychologists in Hong Kong is insufficient to meet the growing demand for wellbeing support, reaching only 50% of the recommended number by the World Health Organisation for Hong Kong's population size.



### Youth suicide

Hong Kong is witnessing an alarming surge in student suicides, with 37 deaths and 269 attempts recorded in 2023, according to The Hong Kong Jockey Club Centre for Suicide Research and Prevention. While the Education Bureau has expressed concern and implemented various initiatives, there is a pressing need for a comprehensive and consistent approach to mental health literacy and suicide prevention in schools. However, the effectiveness and reach of these efforts remain unclear. Accelerating these initiatives can potentially save lives and improve the wellbeing of Hong Kong's youth.



### Low fertility rate

The fertility rate in Hong Kong, one of the world's lowest, has remained consistently below the replacement level for the past 30 years. One of the contributing factors is the heavy economic burden. The high cost of living in Hong Kong, particularly in housing, leads young people to prioritise their own careers or aspirations instead of dedicating time to raising children.



### The disappearance of small shops

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Small-scale family-owned stores, such as comics shops and hair salons, represent the old-fashioned businesses that emphasise human touch and community bonding, embodying the spirit of old Hong Kong. Unfortunately, due to the rapid rise in rent and the dominance of chain stores, these small shops are disappearing. The consequence is a loss of cultural attachment of Hong Kong's new generations to their roots, limiting cultural transfer and intergenerational relationships.



### Family reconfiguration

The court recently overturned the decision of the Hong Kong Housing Authority about the prohibition of housing applications from same-sex couples, thereby enhancing their legitimacy and urging the government to establish a more diverse local marriage system. This reconfiguration acknowledges that the definition of a 'family' is no longer limited to traditional heterosexual couples.

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### The resurgence of Cantopop

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Mirror, a local boy band formed in 2018, has gained mass popularity during a period of social unrest and global pandemic. After experiencing tough times in the past few years, Mirror successfully shifted citizens' attention towards local music and entertainment, attracting over 180 branded endorsements. Not only does it bring joy and relief to citizens, but it also represents a revival of Cantonese culture, following the steep decline of Cantopop since the1990s.



### Language barrier in education

social

Over 60% of ethnic minority students face difficulties in learning non-language subjects in Chinese. Their Chinese language skills lag behind their Chinese-speaking peers, even after years of education. While a recent educational support programme has resulted in increased enrolment of non-Chinese speaking (NCS) students in kindergartens, three out of every four teachers reported that they have never received sufficient professional training. The mismatch between professional training and the needs of NCS students further exacerbates their learning opportunities, hindering city inclusiveness in the long run.



### Medical staff shortage

The shortage of healthcare labour in the public sector has become increasingly alarming in recent years. In 2022/23, the attrition rates of full-time staff in the Hospital Authority (HA) rose to 12.9% from 8.2% in 2020/21. The decline in available manpower can be attributed to various factors such as retirement, professionals joining the private sector and emigration. To address this pressing shortage, the HA hired 100 non-locally trained doctors in 2023, two-thirds of whom coming from the UK, alleviating patients' waiting time for services.





### City of contrasts

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Hong Kong, a city of contrasts and contradictions, reveals its multifaceted nature to visitors and residents alike. Besides safe streets, efficient transport, and a competitive economy, Hong Kong faces challenges ranging from exorbitant property prices and a widening wealth gap to the plight of domestic helpers and modest households. These complexities bring to the forefront a nuanced picture of a city where the good, the bad, and the ugly coexist, shaping its identity and leaving a lasting impact on those who experience it.

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### Physical fitness

Whilst physical fitness in Hong Kong has improved in the past decade, a recent survey reveals that more than half of the population still fails to engage in sufficient exercise and meet the recommended levels set by the World Health Organisation. Obesity rates remain a concern. There is a need for increased awareness and promotion of exercise to improve overall health and combat obesity-related risks in Hong Kong.

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#### Subculture clash

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The Animation-Comic-Game is an inclusive showcase of anime and comics cultures held annually in Hong Kong. Cosplayers embody their favourite characters and find joy in connecting with fellow enthusiasts, overcoming social anxiety and providing an escape from life's challenges. Dressing up in costumes irrespective of their age, gender, and body figure is claimed to boost confidence and self-motivation. However, the conservative social attitudes in Hong Kong can result in stigma and judgment towards subcultural practices, making it difficult for individuals to openly express themselves.

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#### Talent shortage

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Hong Kong has been suffering from a loss in human capital in recent years. Research reveals that 74% of companies in Hong Kong have been suffering from labour shortage, 61% of which have been grappling with this challenge for 1-3 years. Top factors contributing to this issue are desire for higher salary (79%) and emigration behaviour (70%). 83% of the private sector is ready to offer better remuneration packages and the government launched its Talent List to attract international talent to the city. The future of work will require adaptive strategies to bridge the gap.



## Ageing infrastructure

social

Nearly 10,000 structures are now approaching the end of their lifespan (50 years and above) and 1,000 buildings need urgent repairs. These dilapidated buildings are not only energy inefficient, but also 'urban bombs' due to their potential to cause harm to nearby structures and pedestrians with risks of fatalities resulting from falling objects, such as windows, signboards, or fire hazard.



#### Housing crisis

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Hong Kong faces a land shortage of approximately 3,000 hectares between 2019 and 2048. This land scarcity has far-reaching implications across multiple sectors in the society. The demand for public housing is far greater than its supply. The growing ageing population is also driving the need for healthcare and welfare facilities, such as elderly homes and open space for better liveability.



## Hong Kong's 'leftovers'

A common sight in Hong Kong is elderly people, mostly women, carrying carboard and waste on trolleys they hope to resell. Nicknamed 'cardboard grannies', they highlight the social inequalities in Hong Kong and the need to refine the social welfare policies, especially the marginalised elderly. A large number refuse to apply for social security allowance as they strive for respect. More recognition, job opportunities, and labour protection shall be provided to improve their physical and emotional security.



### Vanishing of 'Dai Pai Dong'

Hong Kong's traditional food stalls, or Dai Pai Dongs, operate open-aired along the streets, sidewalks or alleys. They are unique to Hong Kong's culture and have been popular for over a century. From over 3,000 at the height of their popularity to only 25 today, Dai Pai Dongs are bound to completely disappear due to licenses not being renewed since 1956. They are currently hot spots for boosting Hong Kong's tourism.



#### Gentrification

social It is estimated that over 28% of the buildings in Hong Kong will be older than 50 years old by 2030. As of March 2022, there were 47 on-going urban renewal

projects which could result in gentrification, a phenomenon that describes the displacement of original residents and shop tenants as investment is needed to execute the redevelopment projects, to be supported by higher-income residents and branded chain stores. This could worsen the existing social inequality.



#### Homelessness

Low social welfare, high cost of bedspace, long waiting time for public rental housing combined with the recent unemployment peaks and physical and mental health issues are the key ingredients creating the Hong Kong housing crisis leading to homelessness. Hostile architecture has also been introduced to keep the homeless off the streets.





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The Hong Kong Government enacted the Urban Renewal Authority Ordinance in July 2000 to provide a new framework for the implementation of urban renewal. The Urban Renewal Authority (URA) required to adopt the '4Rs' (Redevelopment, Rehabilitation, Revitalisation and heritage pReservation) as its redevelopment strategy.



### Hydrogen fuel cell bus

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technological

Hong Kong's bus company, Citybus, has introduced hydrogen fuel cell bus to the city in 2022. Research showed that it can reduce noise and emit zero carbon emissions, comparing to traditional diesel buses. The government supports this initiative and encourages all bus companies to leverage sustainable solutions in decarbonising Hong Kong's transportation in the future.



#### Food delivery e-commerce

The pandemic has bolstered food e-commerce, enabling food orders placed through mobile apps to be delivered to the doorstep within an hour, with options for in-store pickup. It is forecasted that the industry in Hong Kong will reach US\$4.01 billion of revenue in 2024. Foodpanda, Deliveroo, and Keeta are currently the key local players, with Foodpanda dominating over half of the market share. Post Covid-19, the self pickup service is favoured by users because of the cheaper offers resulting from reduced operating costs. Platform providers have also started to expand their businesses to on-demand grocery delivery, responding to the change in shopping preferences.



#### The rise of artificial intelligence

Artificial intelligence (AI) encompasses machine learning and deep learning, with algorithms to make predictions and classifications based on input data. The rapid development of AI brings profound impact to almost all industries in the world. AI is everywhere, from automated transportation services and virtual assistants to medical and educational applications. ChatGPT, a form of Generative AI, has the ability to generate human-like responses in real-time based on user input, making it more conversational and interactive.





## Modular integrated construction

Modular integrated construction (MiC) is an innovative construction method in which components are assembled module by module. The modules are manufactured, installed, tested in factories. Completed modules are then transported on-site for assembly. This method reduces 90% of on-site installation procedures, 80% of construction incidents, 85% of construction waste and 20-50% of construction time, contributing to environmental protection, worker safety and addressing labour shortages. The increasing MiC demand from the public sector and private developers stimulates investment in the establishment of MiC factories within the Greater Bay Area.

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### Cybersecurity

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With increasing cyber threats, such as hacking, data breaches and ransomware attacks, businesses and individuals face financial losses, reputational damage, compromised personal information, damaged computer systems. While Hong Kong is positioned to develop itself into an international innovation and technology hub, strengthening the cybersecurity barrier in infrastructure is crucial to attract investment opportunities and build confidence as a digital economy.



### Addictive user-generated content



The addictive nature of app under the influence of creators' economy where anyone can create and curate content to attract views and make money online, leads to excessive screen time, decreased social interactions, and potential mental health issues on users, especially adolescents. According to South China Morning Post, "Hong Kong ranks among the worst for the proportion of social media and internet addicts". Promoting digital well-being and providing education on responsible internet use are essential to mitigate these negative impacts.

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technological



#### Non-fungible token

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Non-fungible token (NFT) has the potential to transform Hong Kong's future by revolutionising digital ownership and creative industries. With NFTs, artists and content creators can monetise their work directly, empowering local talent and fostering a vibrant creative ecosystem. In November 2023, the crypto art brand Bored Ape Yacht Club held a festival where top NFT collectors were invited to celebrate and connect. Embracing NFT technology can position Hong Kong as a global hub for digital art, collectibles, and innovative blockchain solutions.



### Digital wallet

technological

Hong Kong's digital wallet market has rapidly expanded as more people were forced to shop online due to social distancing measures during the pandemic. To stimulate the local economy, the government launched consumption voucher schemes, distributing vouchers through digital wallets. This has substantially increased the adoption rate. Major providers like Octopus, Alipay HK, and WeChat Pay have already garnered over millions of users and claimed deployment at over 150,000 retail outlets, with transaction values reaching HK\$249 billion, accounting for 19% of the total retail gross merchandise value.



# Energy-efficient lighting technology

technological

The share of lighting-related energy consumption for commercial buildings in Hong Kong is almost 20% of the total energy consumption. Only 10% of the electricity used by incandescent light bulbs (ILBs) is actually converted into light, with the remaining 90% being emitted as heat. Alternatives like compact fluorescent lamps (CFLs) and light-emitting diode (LED) technology are recommended to optimise energy use. Specifically, CFLs could save 75% of electricity compared to ILBs and have a lifespan would last 6-8 times longer. In the long run, switching to these alternatives could save more than 6% of the total electricity consumption for lighting.



#### Autonomous transportation

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Smart mobility is a key initiative outlined in the 'Hong Kong Smart City Blueprint', with the facilitation of autonomous vehicles (AVs) trials as a core development goal. A new regulatory framework for AVs came into effect in March 2024, allowing for wider and more flexible trials to facilitate the adoption of AVs in Hong Kong. The city is planning to apply the use of AVs on the Airportcity Link, connecting The Airport Island and the Hong Kong Boundary Crossing Facilities Island to provide seamless transportation for people. This service will be extended to Tung Chung town in the future.



## Carbon capture, utilisation and storage

In 2020, natural gas accounted for 48% of Hong Kong's electricity generation, while coal accounted for 23%. In 2023, Hang Lung Properties, a real estate giant in Hong Kong, signed a 2-year strategy collaboration with CLEANCO2, a carbon capture, utilisation and storage company, to apply low carbon recycled concrete aggregate and carbon storage concrete bricks to reduce the embodied carbon impact in buildings.



# Smart waste sorting and recycling

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The Waste Blueprint 2035 outlines the medium-term target of reducing per-capita waste generation by 40-45% and increasing the recovery rate to 55% to achieve 'zero landfill' in the long run. The Integrated Waste Management Facilities (IWMF) are designed to minimise landfill waste and recover useful resources. I·PARK1 has been selected as one of the IWMF and is expected to be fully commissioned by 2025.

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### Green data centres

The Hong Kong data centre industry was ranked second in Asia and fourth in the world in 2023. It is estimated that by 2025, data centres will consume onefifth of the world's power. To facilitate the retrofitting and retro-commissioning of existing data centres and the design of new ones, the Electrical and Mechanical Services Department has implemented two data centre-related energy efficiency enhancement measures called the Building Energy Efficiency Ordinance and the Fresh Water Cooling Towers Scheme to promote the

Ordinance and the Fresh Water Cooling Tower development of greener data centres.

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### Net-zero electricity generation

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To achieve net-zero emissions by 2050, it is crucial to explore more zerocarbon energy technologies, with wind and solar power being the key viable energy sources for Hong Kong's environmental conditions. CLP had previously proposed to build Hong Kong's first offshore wind farm in the waters southeast of Basalt Island. The project was expected to generate 2.8% of the overall power supply but was later scaled back due to high costs. HK Electric also planned to build one in the southwest waters of Lamma Island, which is estimated to contribute 4% to its annual power generation. The project is expected to be operational in 2027.



### Cryptocurrency fraud

economic

Hong Kong has an estimated US\$64bn in crypto transactions. Discerning this trend, the Hong Kong Monetary Authority has released a discussion paper to regulate stablecoins, a form of digital asset of cryptocurrency. Courts have also recognised cryptoassets as a form of property. However, the city recorded 4,331 fraud cases with losses of around HK\$2.8bn in 2023. The JPEX scandal in November 2023, involving a HK\$1.6bn alleged fraud, left over 2,623 victims unable to access their virtual assets. Following this fraud incident, the Securities and Futures Commission of Hong Kong started publishing a list to inform the regulatory status of virtual asset trading platforms in the city.

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## Belt and Road Initiative





Hong Kong plays a crucial role as a 'super-connector' between mainland China and the rest of the world under the Belt and Road Initiative. Hong Kong and Beijing have pledged US\$2.05bn to create an investment platform targeting projects focused on environmental, social, and governance (ESG), energy transition and infrastructure. Chief Executive John Lee has proposed positioning Hong Kong as a metropolis capable of fostering culture exchange between the Mainland and other Belt and Road regions, leveraging its robust business environment, culture and services.

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#### Free container port

economic

Hong Kong continues to serve as an important, tax-free port, with statistics showing that in 2022, 46% of re-exports were from and 57% were destined for mainland China. However, the value of total exports of goods dropped by 9.4% and the value of imports declined by 7.3% in the first 11 months of 2023 compared to the same period in 2022, due to the sluggish global economy, including China. These challenges pose difficulties for Hong Kong in maintaining its status as an international trade hub.



## Air cargo and logistics

economic

Hong Kong's logistics industry serves as a vital economic pillar, contributing 6.2% to the city's GDP and providing 185,500 jobs in 2021. The Hong Kong International Airport, as the world's busiest international cargo airport, handled a total cargo throughput of 4.2m tonnes in 2022, accounting for about 48% of the total value of Hong Kong's external trade. Nevertheless, Hong Kong faces intense competition from neighbouring ports like Shanghai and Singapore, which puts pressure on its position as a global cargo hub. Hong Kong is also challenged by land scarcity and high land costs, limiting its ability to capitalise on its logistics potential through port facility expansion and supporting infrastructure development.

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## Competition for talent

With major economies offering attractive incentives and more lenient residency policies, the ability to retain and attract skilled talent and investment becomes crucial for Hong Kong to sustain its economic growth and competitiveness. The challenge lies in creating an attractive and liveable city environment that fosters innovation, provides a favourable business climate and offers competitive incentives to talents and enterprises. One immediate policy response to address this is the introduction of the Top Talent Pass Scheme in late 2022, aiming to recruit 35,000 skilled talents annually until 2025.



### Increasing fiscal deficit

鄭小姐 # 8208-0126

economic

The Hong Kong government is grappling with a significant challenge of an escalating budget deficit, with a deficit of over HK\$100bn in the fiscal year of 2023/24. This sustained deficit highlights a substantial gap between government revenue and expenditure, potentially leading to long-term financial instability. Consequently, the goal of maintaining a low, simple and competitive tax regime in Hong Kong is being jeopardised.



### Revitalisation of Hong Kong tourism

The pandemic has significantly impacted the global travel sector. In Hong Kong, visitor arrivals in 2023 only reached a quarter of that in 2018, highlighting the decline in tourism, which is a key contributor to the city's economy. Besides, residents are opting for more affordable destinations in mainland China, Japan and Taiwan. To counter these challenges, the government launched the 'Hello Hong Kong' and 'Night Vibes Hong Kong' campaigns in 2023, aiming to attract both visitors and locals. It is crucial for the city to continue diversifying its offerings by preserving and promoting its unique cultural and scenic characteristics, setting itself apart from other Asian cities.



### Economic diversification

economic

Hong Kong's economy is currently heavily reliant on the financial services and real estate sectors. This heavy dependency increases vulnerability to economic fluctuations and uncertainties. Therefore, diversifying into other industries becomes crucial to mitigate risks, enhance economic resilience and generate new revenue streams. A prime example of this diversification is the development of the Northern Metropolis into an international innovation and technology city, which not only enhances economic resilience but also provides more job opportunities for residents.





#### Income inequality

economic

The income gap in Hong Kong has been widening since the 1980s. In the first quarter of 2023, the richest group earns almost 60 times more than the poorest group. This polarisation has been further exacerbated by the pandemic, which has resulted in the displacement of low-skilled workers. A survey also reveals that 45% of respondents aged 15-31 feel that Hong Kong does not provide enough opportunities for young people to experience upward mobility and move to higher social classes. This highlights the importance of focusing on supporting young workers in their career advancement.



### Economic power shift

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According to the 2023 Index of Economic Freedom, Singapore has surpassed Hong Kong as the world's leader in economic freedom. This shift in economic power follows Hong Kong's overall post-COVID trajectory, as it has struggled to compete with neighbouring regions, particularly in the wider Asia-Pacific area. Hong Kong appears to be caught up in the current Cold War dynamics between the US and China. Nevertheless, Hong Kong remains one of the world's freest economies and continues to be one of the most liberal cities in modern China.



#### Scam artists

economic

SCAM

With a looming economic recession, an increasing frequency of scam artists appear to be at work. It seems as they often aggregate in larger syndicates, infiltrating social media channels such as WhatsApp to con unsuspecting users. A recent local case involved the swindling of a grand total of HK\$320 million, affecting at least 25 victims with the largest single loss being HK\$1 million.





# Sluggish market demand

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While Hong Kong retains its position as the most expensive city in the world for real estate, the market has seen a cool down in recent quarters. Its residential property price index declined by 6.56% in November 2023, striking a  $22^{nd}$  consecutive month of year-on-year drop record. Still, the promise of property remains an elusive dream for many of the city's youth, whose salaries have stagnated as real estate prices have soared.

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#### Economic dependence

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economic

China's economic integration strategies such as the Cross-Strait Service Trade Agreement (CSSTA), and the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), have made Hong Kong economically dependent on the Mainland under its United Front strategy. Hong Kong political opposition has shown concerns about the converging policies via economic power expressed.



## Overconsumption behaviour

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economic

Study shows that overconsumption is severe in Hong Kong, with impulse buying due to price discounts seen as a top driver. Around one-third of clothing in people's wardrobes is never or rarely worn; 20% of consumers only keep their clothing for one year or less, sending 196 tonnes of clothing waste to landfills every day. Despite that the pandemic has shifted local consumption behaviour to re-wearing clothes more often and donating unwanted items to charities, it requires a much greater commitment in reducing footprint within the industry.



# Supermarket/department store monopoly

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'Supermarket/department store' refers to supermarkets, convenience stores, and food and beverage at department stores. These stores offer a comprehensive shopping experience with a wide variety of items available onsite. Its market share has risen from 44% of total retail sales in 1995 to 62% in 2020 and is expected to grow at the expense of traditional street markets. The two Hong Kong's grocery giants, Wellcome and ParknShop dominate the supermarket category with almost 70% of share combined; the recent expansion and upscaling of their premium outlets signal that consumers continue to seek high-quality products.

economic



## Zero emission mobility

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environmental

Hong Kong is committed to achieving zero vehicular emissions before 2050, focusing on initiatives such as banning new fossil-fuel private cars by 2035 or earlier, promoting electric commercial vehicles, developing supporting infrastructure for electric vehicles (EV), upscaling and reskilling labour, and regulating battery recycling. In 2021, the government has amended the first registration tax (FRT) concession arrangement for EV which under the One-for-One Replacement Scheme, private car (PC) owners who scrap and de-register their old PC for a new electric PC would enjoy a higher FRT concession, effective till end of March 2024.

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# Renewable energy

The main sources of renewable energy (RE) in Hong Kong are from wind and sunlight. The Hong Kong's Climate Action Plan 2050 highlights the major commitment in RE is to increase its share in the fuel mix for electricity generation to 7.5-10% by 2035, and to 15% by 2050.



# The feed-in tariff scheme

environmenta

The Feed-in Tariff (FiT) Scheme is an initiative to promote renewable energy development in Hong Kong, by allowing people who install solar or wind energy generation systems to sell the energy generated at their premises to the power companies at more attractive tariff rates. The payback period for private renewable energy (RE) systems is also shortened to about 10 years. While only around 200 private RE systems were connected to the power grid in Hong Kong prior to the launch of the FiT, its introduction approved over 18,000 applications in between 2018 to 2022. This signals a greater collective responsibility in RE generation could help achieve carbon neutrality by 2050.



# Urban heat island effect

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Hong Kong as a densely populated city has been experiencing urban heat island effect (UHI), an abnormal increase of temperature within the cities due to heat being unable to naturally dissipate. The average rise of temperature was 0.28 °C per decade during 1993-2022. The UHI makes the heat harder on the populations, especially the most vulnerable, accentuating public health concerns.



# Air pollution

environmental

Hong Kong faces significant air pollution challenges that are mainly contributed by street-level pollution from diesel vehicles and regional smog that comes from motor vehicles, industry and local power plants in the Pearl River Delta. Tightening air quality standards by 2025 could prevent 2,300 hospitalisations, 927,900 outpatient cases a year and a reduction of HK\$275 million in medical costs annually. Government initiatives include Clean Air Plan for Hong Kong 2035, Hong Kong Roadmap on the Popularisation of Electric Vehicles, and continuous collaboration with the Guangdong Provincial Government to address regional pollution.



#### Plastic waste

environmental

Studies show that microplastic levels in the sea of Hong Kong are 40% higher than the global average. In other words, as high as 5,600 pieces of microplastic could be found in every square metre of the sea. Plastic not only disrupts the marine ecosystem, but also threatens humans as the gases released upon heating could cause respiratory problems. Indirect consumption of plastic particles cause the development of cancerous cells inside our bodies.



# **Biodiversity** loss

Hong Kong is home to a large number of marine life. However, the increasing land reclamation developments are harming local biodiversity. As a result, Hong Kong fell short of the Aichi Biodiversity targets with some species such as the Chinese White Dolphin on the brink of disappearance in the region. Although the government had outlined a Biodiversity Strategy and Action Plan, it alone cannot suffice. Preserving biodiversity must also be considered in new infrastructure or renewal projects.



#### Extreme weather events

Global warming has caused the formation of more frequent and intense extreme weather conditions. In September 2023, the Super Typhoon Haikui brought heavy rainfall that was considered as a 'once-in-500-years' storm, leading to widespread flooding in the city. Underground stations and facilities were waterlogged, schools had to be suspended, and traffic was severely disrupted. Experts warned the city must need to be better prepared as extreme weather events are likely to occur more frequently in the future.



#### Food waste

<u>environmental</u>

In 2020, about 3,255 tonnes (30%) of the municipal solid waste that goes to landfills every day is food waste, equivalent to the weight of 233 doubledecker buses. While there are organic waste treatment facilities like O·PARK1 and soon O·PARK2, they are mainly catered to industries and companies, not households. Recognising this problem, the government is allocating an additional HK\$62 million in the 2023/24 fiscal year budget to expand the coverage of food waste collection including public and private premises.



# Saturation of landfills

On average, over 5 million tonnes of waste are disposed in three landfills annually, two of which are reaching their full capacities. While the remaining one had finished its extension part and started receiving construction waste since 2021, the extension of the two heavily saturated landfills will only be able to fulfill the city's needs up until the 2040s.







#### Land reclamation

environmental

As of May 2023, 7% of Hong Kong's land was reclaimed. It is expected that reclamation activity will increase with the upcoming development plans where over 1,000 hectares of land is to be provided from the Kau Yi Chau Artificial Islands. The Protection of the Harbour Ordinance is to be loosened such that the 600 hectares land of Victoria Harbour can be reclaimed. This heightened concerns for marine pollution and the extinction of some of the marine life such as the pink dolphins.



# City beautification

In recent years, street art in Hong Kong has transformed ordinary cityscapes into vibrant and artistic communities that celebrate creativity, originality and freedom of expression, reinvigorating Hong Kong as an international art and cultural hub. The Government will also launch the Shining City Project, which aims to develop the Shing Mun River and Yuen Long Nullah into flower viewing hotspots, and implement landscape improvements during festivals to enhance Hong Kong's beautification work.



### Disaster risk management

Hong Kong's topographical setting brings plenty of benefits, but it also makes the city more prone to typhoons and landslides. In recent years, Hong Kong has seen an uptick in calamities related to climate change. In September 2023, Hong Kong suffered from over 600mm recorded in just 24 hours, a recordbreaking rainfall equivalent to a quarter of the annual precipitation. The event highlighted issues such as delayed emergency response, unclear guidelines in work arrangement and a lack of contingency plans, raising doubts over existing urban capabilities in combating unprecedented climate crises in the future.



# Public green space

environmental

40% of Hong Kong's land are public green spaces. Yet, most of them are in the less populated areas of the territory. Citizens only have 2.7m<sup>2</sup> per person of urban public space, which is far less than other countries. The urban parks in Hong Kong could benefit from user-centric design approaches to create a user-friendly and welcoming environment.



# Building energy efficiency

environm

Currently, about 90% of Hong Kong's total electricity consumption is attributed to buildings, accounting for over 60% of carbon emissions, two-third of which comes from commercial buildings. The government has set goals to reduce electricity consumption of commercial buildings by 30% to 40%, and that of residential buildings by 20% to 30% from the 2015 level by 2050. Measures include improving energy efficiency standards of building services installations in both new and existing buildings and updating the regulation system.

RUP



### Reclamation controversy

political

Hong Kong reclamation plans have raised controversies, particularly the shift from the East Lantau Metropolis to the Lantau Tomorrow Vision. Transparency, consensus-building, stakeholder engagement, adherence to established policy processes, and addressing the unique governance style in Hong Kong will be crucial for maintaining public trust ensuring inclusive decision-making, upholding accountability, and addressing Hong Kong's polarised society.



### US-China trade war

political

The US-China trade war severely hurt Hong Kong's economy. Events related to the implementation and announcement of tariffs led to negative market reactions. Firms associated with US sales and property were especially affected, while firms with more independent non-executive directors demonstrated better resilience. Larger firms experienced larger stock price declines, while factors like profitability, liquidity, debts, and financial risk had limited influence on stock prices during the trade war.

USA VS CHINA TRADE WAR



### The National Security Law impact on businesses

CROSS-HARBOUR TUNNEL

political

The National Security Law implemented in 2020 aimed to eliminate uncertainties in the business environment, foster stability, protect public safety, boost investor confidence, and provide a conducive environment for economic growth. Amidst heightened geopolitical tensions, there are concerns about investment risks in Hong Kong and the potential enforcement standards. Striking a balance between national security and civil liberties becomes crucial for the future of Hong Kong's attractiveness as a business hub.



## Brownfield repurposing

political

The continuous expansion of cities into rural areas and the destruction of natural habitats for human settlement contribute to environmental imbalances, climate change and social turmoil. Advocates of sustainable urban development propose redeveloping derelict and contaminated brownfield sites. This strategy could alleviate land shortages, provide temporary open spaces for recreation during phytoremediation, and curb the rapid expansion of settlements into rural landscapes.



### People identity

political

A 2022 study reveals that 39% of 1,000 respondents identified themselves as Hong Konger, with almost 3 in every 4 young adults aged 18-29 claiming this identity. In 2023, the Education Bureau announced changes in the curriculum for primary schoolchildren, so that they will have to acquire basic knowledge of national security to develop their sense of belonging towards the country, national sentiments, and a sense of national identity from a younger age.



## Shifts in freedom rankings



political

The 2023 freedom index, co-published by the Fraser Institute and the Cato Institute, reported a decline in Hong Kong's position from 3<sup>rd</sup> to 46<sup>th</sup> in the global rankings since 2010. Despite differing perspectives including those from the Central government, it highlights a sentiment that this issue needs to be prioritised by the city's officials.

TRCH Wal



### Institutional autonomy challenged

political

The Global Public Policy Institute reported a decline in Hong Kong's institutional autonomy in between 2000-2019. The recent bill passed by the Legislative Council to re-organise the governing council of the Chinese University of Hong Kong has prompted concerns in the academic community about the potential impact on university governance due to the rise in political appointees.



## One country, two systems

political



The existing governance of Hong Kong by China, termed a Special Administrative Region, sparks speculation about potential complete integration by the mainland. This anticipates significant implications for Hong Kong's future, echoing debates on autonomy and its geopolitical and socio-economic ramifications.



### Talent scheme

political

Hong Kong's Chief Executive John Lee, has unveiled strategies to attract overseas talent and firms to counter the population exodus caused by the National Security Law, social unrest and strict COVID-19 regulations. The initiatives include the launch of the Office for Attracting Strategic Enterprises (OASES) providing incentives for industries of strategic importance, a twoyear Top Talent Pass Scheme allowing high earners and graduates from top universities to come to Hong Kong without a job offer, and an extension of the Immigration Arrangements for Non-local Graduates (IANG) permit.

ARUP

CEO



### Mainland China-Hong Kong convergence

political

The ongoing endeavours to deepen economic cooperation and governance between mainland China and Hong Kong have sparked discussions on Hong Kong's evolving autonomy and the socio-economic transformations accompanying this process.



### Governance and cultural shift



The transition from British governance to Chinese sovereignty has been marked by efforts to strengthen cultural ties and shared values between Hong Kong and the Mainland, fostering a cultural integration.

ARUP

political



### Tightened public safety measures



# Artificial intelligence regulation

The 2023 Policy Address announced the establishment of a supercomputing centre at Cyberport to foster industry development. The increased adoption of AI will require better policy regulations and measures as traditional laws and regulations might no longer comply with the emerging associated risks. Clear overarching approaches governing AI are yet to be seen in Hong Kong.

ARUP

Urban Futures

Kong

Hong



## Municipal waste charging scheme

political

With the growing challenges of food waste and landfill saturation, the government will implement Municipal Solid Waste Charging (MSW charging) on 1 April 2024. The waste disposed will be charged by quantity in accordance with 'polluter-pays' principle, making citizens more accountable for the waste they generate.





### Smart city

The 2017 Hong Kong Smart City Blueprint set out initiatives in 6 smart areas including mobility, living, environment, people, government and economy, to address management challenges and improve city liveability. An additional 60 new initiatives were added to the 2020 Blueprint 2.0 to improve people accessibility of digital services and convenience to daily lives. Examples include Building Information Modelling, development of the Traffic Data Analytics System, and Smart Village Pilots.



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