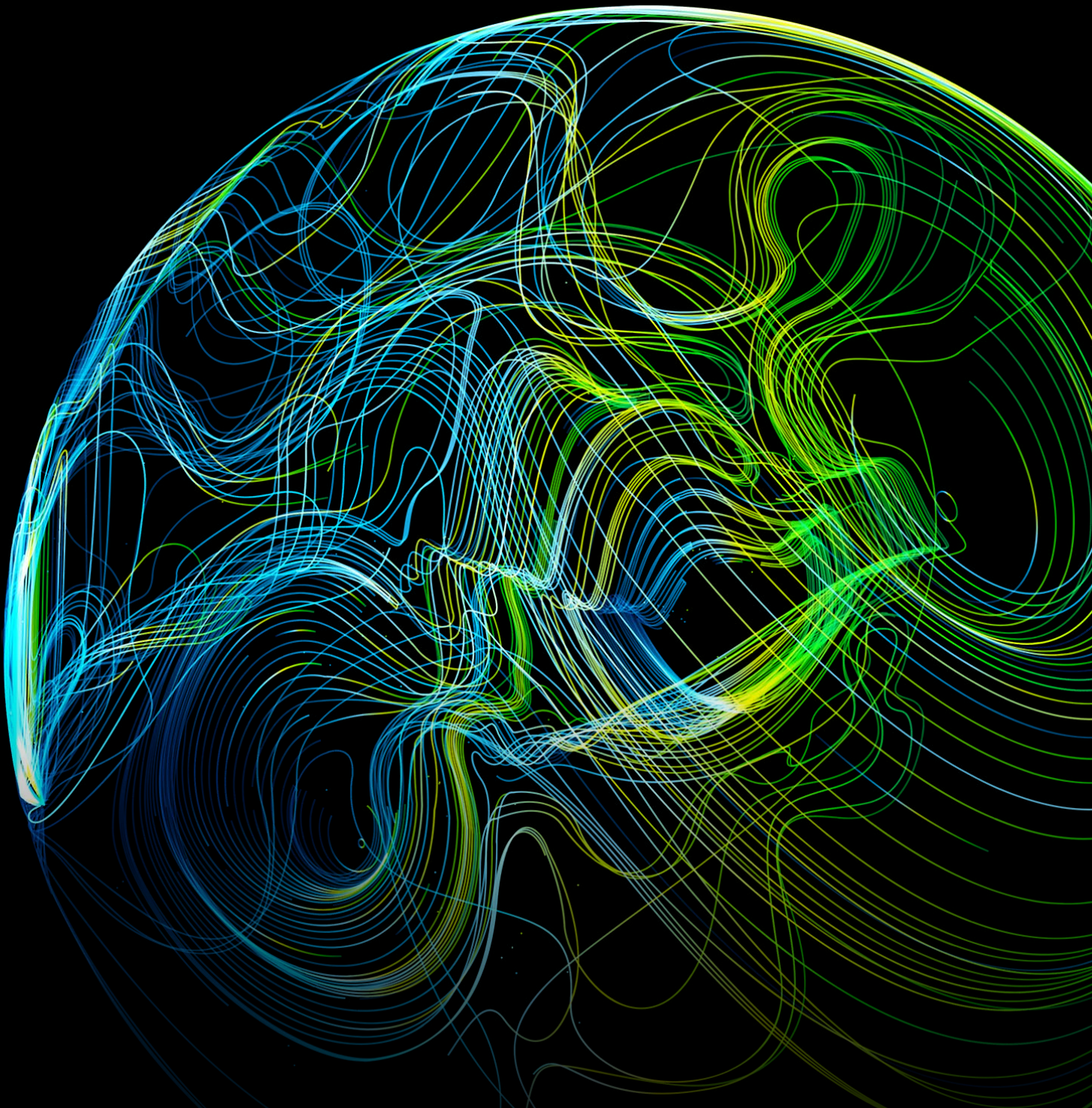


Rekindling Hong Kong's economic growth through innovation

2021



Foreword



Dr. David Chung, JP

Under Secretary for Innovation and Technology,
Hong Kong SAR Government

Hong Kong towards innovation driven re-industrialisation

The Policy Address delivered in October 2021 demonstrated the current-term Government's emphasis on, determination for, and commitment to promoting Hong Kong's innovation and technology (I&T) development. In addition to the proposed expansion of the Innovation and Technology Bureau into the Innovation, Technology and Industry Bureau to better support re-industrialisation, which forms part of the Government re-organisation proposal, several forward-looking and ground-breaking I&T initiatives have been put forth in the Policy Address. With unprecedented strides made in this respect and substantial opportunities offered by the National 14th Five-Year Plan and the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) development, we will continue to foster Hong Kong's I&T development at full steam and lay a solid foundation for developing Hong Kong into an international I&T hub.

The Policy Address announced the designation of multiple land sites for I&T uses, including (i) consolidating the Hong Kong-Shenzhen Innovation and Technology Park and the areas around Lok Ma Chau and San Tin to form the San Tin Technopole; (ii) reviving the Ma Liu Shui Reclamation project, together with the relocation of Sha Tin Sewage Treatment Works, which will provide new land

for I&T development; (iii) building landmark I&T facilities with a scale comparable to Cyberport in Lau Fau Shan; and (iv) reserving land sites for the University of Hong Kong and the Chinese University of Hong Kong for research and development. We have also invited Hong Kong Science and Technology Parks Corporation (HKSTP) to start planning for the construction of the second Advanced Manufacturing Centre.

To leverage our strength on health tech, we will also set up an InnoLife Healthtech Hub in the Lok Ma Chau Loop, with the 16 life and health-related laboratories in the InnoHK research clusters and the 8 State Key Laboratories in life and health disciplines as the basis, to focus on related research work. To support start-ups, HKSTP will set up the GBA InnoAcademy and GBA InnoExpress at its branch in Shenzhen to provide training and support them to go global and attract foreign investment.

These new initiatives will propel Hong Kong forward on the journey of I&T development. The Government will endeavour to take forward these initiatives with a view to developing Hong Kong into an international innovation and technology hub.

Introduction

Deloitte and Alibaba Hong Kong Entrepreneurs Fund jointly produced this report *Rekindling Hong Kong's economic growth through innovation*. We thank the thought leaders across public, private and voluntary sectors for their valuable insights and feedback. One recurring theme—resilient leadership amid uncertainty—stood tall. In the past year, we have witnessed startups and innovative ventures transform, exemplifying the attitude, agility and adaptability to not just recover, but vault forward with direction and purpose.

The megatrends of our times, from the pandemic and geopolitical tensions to climate change, pose unprecedented challenges. However, they also spotlight entrepreneurs as powerful economic drivers. With relentless passion for a better world, startups are the engines of economic, environmental and social progress.

This study explores the state and evolution of Hong Kong's innovation ecosystem. In highlighting the ingredients that contribute to a burgeoning innovation culture, our survey

revealed the global race for talent. We need to empower our youth, foster entrepreneurial mindsets to develop agents of change, and seize opportunities under the National 14th Five-Year Plan and in the Greater Bay Area.

Innovation and technology are the keys to unlocking sustainable growth. To this end, the Government has spearheaded I&T development, with more than HKD130 billion invested over the last four years. The 2021 Policy Address includes the visionary development of Hong Kong's Northern Metropolis into a world-class cluster embodying the "Live, Work, Learn, Play" mantra, and will strengthen Hong Kong's connections with Shenzhen and the GBA.

Transforming Hong Kong into an international I&T hub requires government, industry, startup, academia and research sector collaboration. As we celebrate the remarkable progress made in the Hong Kong innovation ecosystem, we invite our readers—whether founders, investors, policymakers, students or ecosystem builders—to join hands on this I&T agenda and advance together.



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Executive summary

Innovation and technology (I&T) is key to Hong Kong's economic growth plans and entrepreneurship is vital to maintaining its status as one of the most vibrant and competitive opportunity hubs in Asia.

This study explores Hong Kong's progress in establishing itself as a world-class innovation hub, covering government and policy, research and development, talent and education, funding, business support, and culture and norms. It also assesses Hong Kong's role as part of the Greater Bay Area's I&T ecosystem development.



Hong Kong's I&T ecosystem is increasingly vibrant against backdrop of National 14th Five-Year Plan and GBA development

- As part of China's 14th Five-Year Plan, Hong Kong is encouraged to elevate its status as an international I&T hub and reinforce its unique position of close links with the GBA, Mainland Chinese, and other key global markets.
- Hong Kong's efforts to accelerate I&T development and GBA integration over the past decade led to a two-fold increase in I&T GDP, with double-digit growth achieved for the first time in 2017-18 and again in 2018-19.¹ There was also a three-fold increase in the number of startups in Hong Kong.²
- The pandemic created new headwinds for startups, with nearly half of entrepreneurs surveyed (46%) finding it difficult to interact with customers, and about a third (29%) struggling to manage a decline in revenue. Despite this, the startup ecosystem remains vibrant with 12% year-on-year growth in 2021, reaching a record high of 3,755 companies.²
- According to the survey, 63% of Hong Kong startups have a strong interest in expanding into GBA cities. They expect this to help them access a larger market (65%), tap strong talent pools (40%) and gain exposure to and potentially enter partnerships with large corporations (30%).



The Hong Kong Government has made unprecedented strides in accelerating and extending the HKSAR's I&T ecosystem into the GBA

- Budget allocation and spending on I&T has hit new heights, with more than HKD130 billion invested over the past four years.³ More than 40% of entrepreneurs agree the Government is effective at cultivating an ideal entrepreneurial environment, boosting public confidence in adopting startup-led digital solutions, and supporting I&T startups. Most students remain neutral.
- To seize development opportunities under the 14th Five-Year Plan and in the GBA, the latest policies announced by the Hong Kong Government focus on promoting I&T cooperation with key cities in the Chinese Mainland. This includes the “Twin Cities, Three Circles” concept, the San Tin Technopole and the Shenzhen-Hong Kong I&T Cooperation Zone.
- However, having to deal with two different institutional systems is a challenge for half of the entrepreneurs surveyed, emphasising the importance of regulatory harmonisation.



Leveraging its world-class R&D capabilities, Hong Kong is set to forge new I&T collaborations with the Chinese Mainland and the world while bridging the commercialisation gap

- Hong Kong is well placed to become a global research collaboration hub. As flagship projects, its two established InnoHK research clusters—Health@InnoHK and AIR@InnoHK—have attracted world-leading universities and research institutes to collaborate with local universities in setting up 28 research laboratories. A third cluster, the InnoLife Healthtech Hub, is proposed for the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) in the Loop.³
- But much remains to be done. Respondents face large gaps in university research commercialisation, with only 21% saying they have enough support. Improving knowledge transfer and commercialisation will require concerted efforts from the Government, universities, R&D institutions and industry players.



Hong Kong must strive to cultivate talent and reverse brain drain in an intensifying global race for talent

- The government has invested ample resources in STEM education, but the onus remains on schools to plan and implement the curriculum. STEM education should be defined at the policy level to be more balanced, sustainable, far-reaching and in line with government I&T priorities. This also requires collaborative efforts, to ensure students are skilled and understand their job prospects.
- Forward-looking talent strategies are essential to attract and retain Mainland Chinese and overseas talent in Hong Kong, amid a brain drain, emigration wave and fast-ageing population. The Technology Talent Admission Scheme has prompted an influx of R&D talent. However, 80% of entrepreneurs see the high cost of living in Hong Kong as a major deterrent. Key players should join forces to support the talent base. Incubators should accelerate the build-up of infrastructure, resources and space for I&T development, and the Government should enhance tax incentives.



Venture capital funding in Hong Kong now covers the entire startup funding journey; government co-investment schemes need to be enhanced to maintain momentum

- Venture capital funding in Hong Kong has evolved to cover the entire startup journey, a total of 46% of venture capital deals in Hong Kong went to mid- and late-stage companies.ⁱ
- Since the Government set up the Innovation and Technology Venture Fund (ITVF) in 2017, it has invested more than HKD142 million in 22 startups and attracted over HKD889 million in private co-investments.⁴ HKSTP and Cyberport also play a vital role in startup financing, with a combined investment of HKD400 million in 41 startups.⁵
- Progress is evident, but the Government should accelerate vetting and revisit the ITVF scheme. The aim is to attract more long-term investments with a moderate to high risk appetite to support startups that are R&D-driven and have long research lifecycle, and encourage venture capital funds to take on additional risk through co-investment.



Hong Kong has a well-connected, supportive network for startups that will remain an essential catalyst for cross-border ecosystem development

- The number of co-working spaces, incubators and accelerators in Hong Kong doubled from 2017 to 2021, reaching 124 in 2021,² testament to the efforts of its Government, universities and large corporations.
- According to the survey, 56% of entrepreneurs agree Hong Kong has enough incubators and accelerators, with 70% finding the support for marketing, business development and networking, fundraising, mentoring and IT useful.
- There is a consensus that cross-border connectivity and support can be strengthened to better integrate Hong Kong startups into the GBA network.



Hong Kong has a sophisticated business culture with a budding entrepreneurial mindset among young people, but requires a startup friendly environment to nurture the next unicorns

- Although 60% of students have entrepreneurial intentions, less than a third want to work at a startup (33%) or establish their own startup (23%).
- This is often due to lacking a solid business idea (40%) or access to capital (38%). Hong Kong needs a risk-taking culture to foster innovation amid intensifying global competition for young talent, capital and startups, and more prominently celebrate success stories and startup heroes.

ⁱ Based on Preqin data; 2021 data refers to Hong Kong venture capital data from Jan-Oct 2021

Call to action

There have been encouraging efforts by multiple stakeholders to foster a thriving I&T ecosystem in Hong Kong. The integration of Hong Kong's I&T sector within the Greater Bay Area will be a key catalyst for growth.



Employ a comprehensive strategy to bolster integration with the Mainland GBA cities, with a focus on harmonising different institutional systems:

The GBA is crucial to scaling up Hong Kong's I&T development, but institutional differences remain a challenge. The Government should harmonise regulations and strengthen cross-border connectivity and support in order to better integrate Hong Kong startups within the GBA network. Additional marketing should be done to increase visibility and promote cross-border business support that is available to Hong Kong startups who wish to expand into GBA.



Accelerate I&T adoption through 360-degree public procurement:

To build public confidence in startups' digital solutions, the Government could enhance public procurement, for example through dynamic contracts or spiral contracting. It should increase the visibility of measures to increase startups' participation in public procurement.



Establish an independent research-industry consortium to forge long-term collaboration between academia, R&D centres and industry:

This consortium would bring together researchers and industry players in Hong Kong, Mainland GBA cities and globally to cultivate a multi-disciplinary research environment and promote technology transfer. Clear governance and guidelines on joint research, commercialisation and intellectual property (IP) should be defined at the start.



Enhance co-investment schemes by increasing risk appetite and introducing alternative models:

The Government should enhance its co-investment programmes to more aggressively inject funding into high-risk, high-impact and scalable startups. One consideration is to update ITVF's co-investment ratio, which would also encourage more private investors to invest in local ventures.

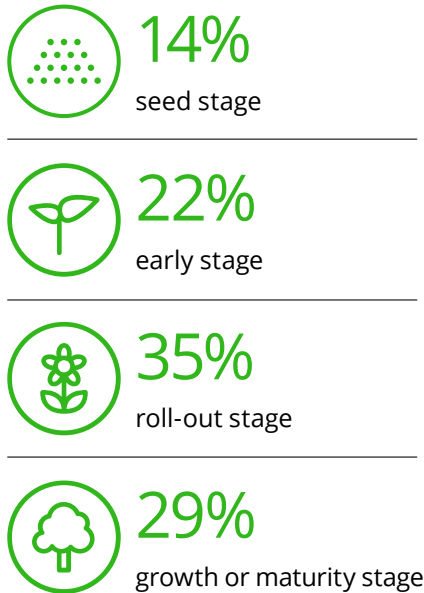


Strengthen policies to attract and retain global talent and build a sustainable pipeline of local talent:

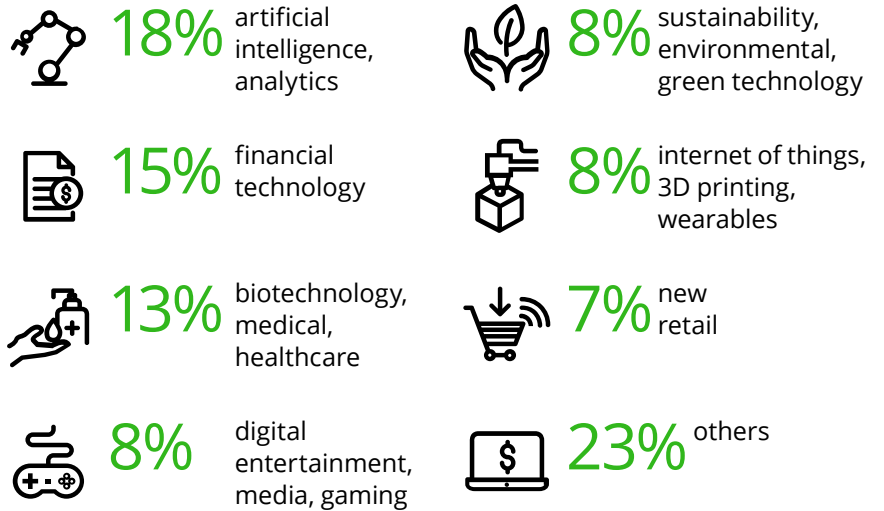
- The Government could i) expedite the hiring of foreign I&T talent and serial entrepreneurs via dedicated visa channels, ii) provide a fast-track to permanent residency for top I&T talent, iii) reduce innovation costs through affordable office spaces or tax incentives, and iv) entice talent to work in Hong Kong after outbound employee programmes end.
- To nurture local I&T talent, the Government could establish a body to facilitate the implementation of STEM education and introduce state-of-the-art technologies in schools. This would give students the experience of interacting and experimenting in the metaverse.
- Entrepreneurship must be seen as a desirable, viable career. More can be done here, such as including entrepreneurship in career education, matching students with mentors, or providing internship opportunities at startups.

About the study

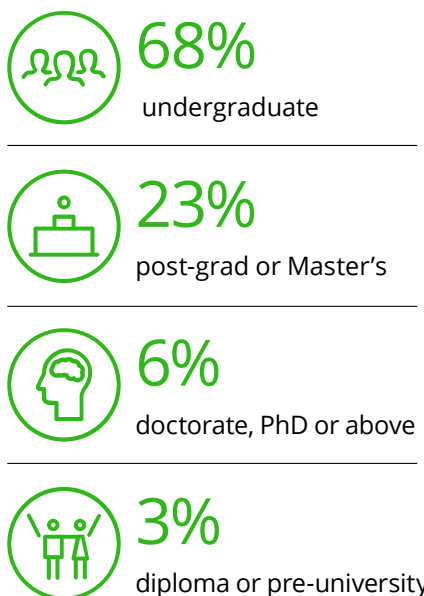
153 Hong Kong-based entrepreneurs and startup executives



Top sectors represented:



1,382 Hong Kong-based university students



Top disciplines represented:



The survey was conducted in September and October 2021. This study also includes interviews with Key Opinion Leaders in innovation and entrepreneurship, including government leaders, academics, venture capital executives and entrepreneurs.

Hong Kong's startup landscape at a glance

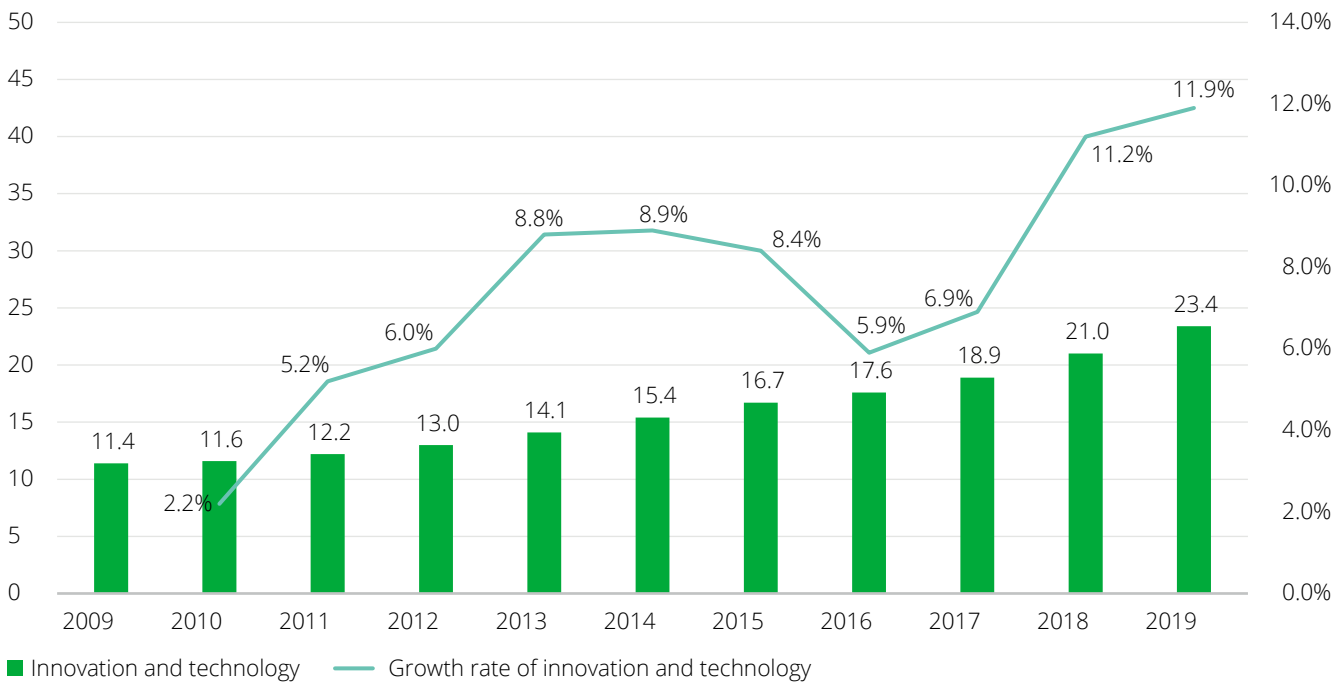
Hong Kong's I&T ecosystem is increasingly vibrant against the backdrop of National 14th Five-Year Plan and GBA development, with a two-fold increase in I&T GDP¹ and a three-fold rise in the number of startups over the past decade.² Hong Kong startups want to tap into the GBA market's emerging opportunities, with 63% of firms keen to expand into GBA cities over the next three years.

As one of the most vibrant and competitive opportunity hubs in Asia, Hong Kong is no stranger

to entrepreneurship and celebrating diversity. Its development into an international I&T hub is also part of China's 14th Five-Year Plan.⁶

Thanks to Hong Kong's efforts to accelerate I&T development and GBA integration over the past decade, its I&T GDP has increased by more than two-fold, reaching HKD23.4 billion in 2019.¹ Double-digit year-on-year growth was achieved between 2017 and 2018, and again between 2018 and 2019. This reflects the efforts of key stakeholders to build and grow Hong Kong's I&T ecosystem.

Value added of innovation and technology industry (HKD billion)

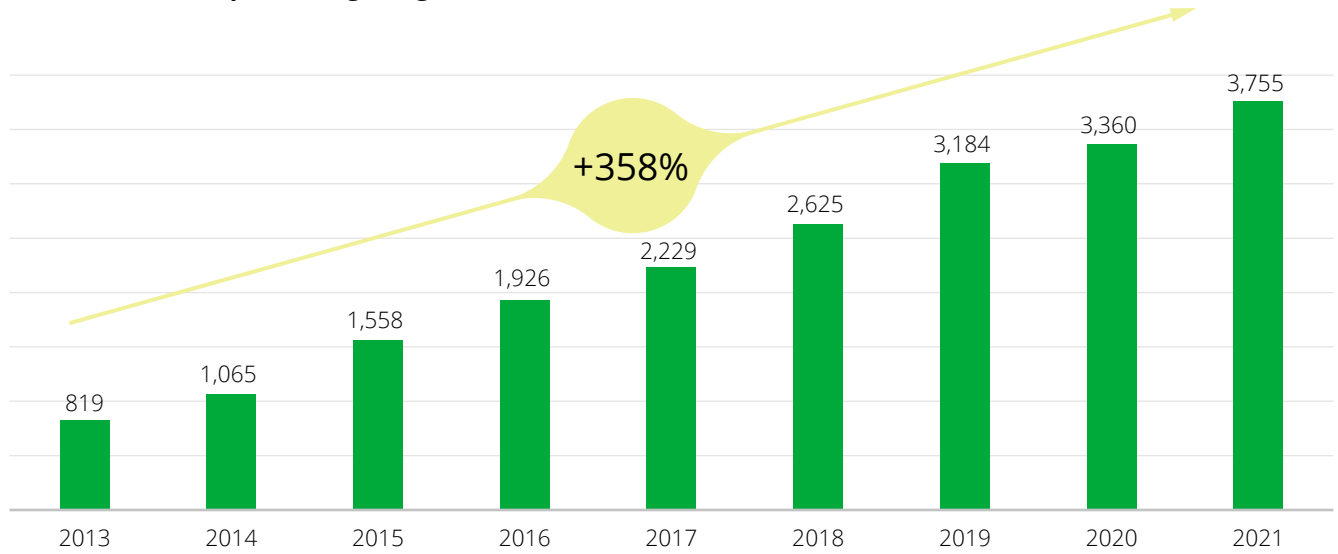


Source: Hong Kong Census and Statistics Department, Deloitte analysis

The number of startups in Hong Kong has surged by more than three-fold in the last decade and has now reached 3,755,² supported by increased funding and investment. Hong Kong is also home to 12 unicorns:

Airwallex, Amber Group, Animoca Brands, BitMEX, FTX, Gogovan, Klook, Lalamove, SenseTime, SmartMore, TNG and Welab,⁷ which is a testament to its thriving startup scene.

Number of startups in Hong Kong (2013-2021)

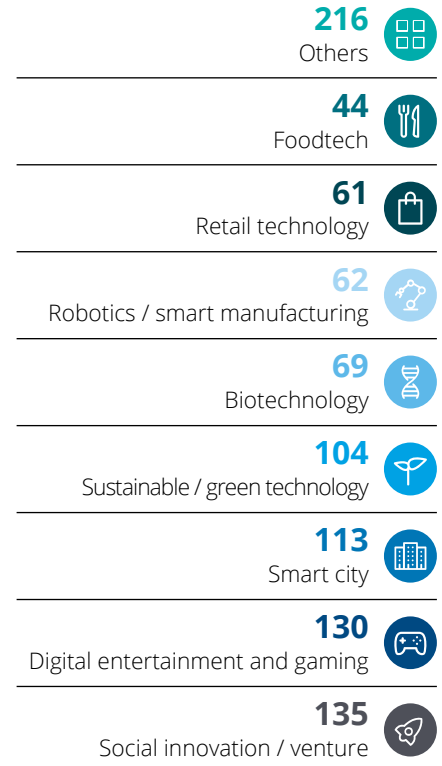
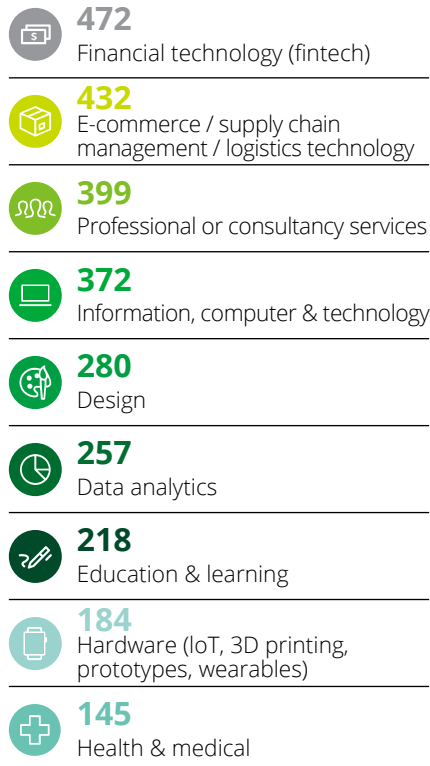


Source: InvestHK's 2021 Startup Survey

According to InvestHK's 2021 Startup Survey,ⁱⁱ fintech; e-commerce, supply chain management and logistics technology; professional and consultancy services; and

information, computer and technology dominate the landscape with 45% of all Hong Kong startups.

Hong Kong startup sector (2021)



Source: InvestHK's 2021 Startup Survey

ⁱⁱ The information in the 2021 Startup Survey is based on an online survey by InvestHK with results finalised in September 2021, in collaboration with 69 operators of co-working spaces, incubators and accelerators across 124 locations.

Key advantages and challenges of starting a business in Hong Kong

Views of the key advantages and challenges of starting a business in Hong Kong show differences between perception (students) and reality (entrepreneurs).

Most respondents agree Hong Kong's identity as an Asia hub and its close proximity to Mainland Chinese and other Asian markets are the primary advantages of starting a business in Hong Kong. This reinforces Hong Kong's unique position as a connector between the Chinese Mainland and the rest of Asia. Ease of doing business is seen as the second key advantage.

There was a substantial divergence in views on access to talent, with entrepreneurs regarding this as a key challenge in starting up a business in Hong Kong, but most students disagreeing. This is primarily due to Hong Kong's relative inability to retain graduate talent, with many students saying they want to go overseas for I&T work opportunities.

Business and tax system complexity is another area of divergence. Entrepreneurs do not see this as an issue, but students need more support to understand business and tax procedures.

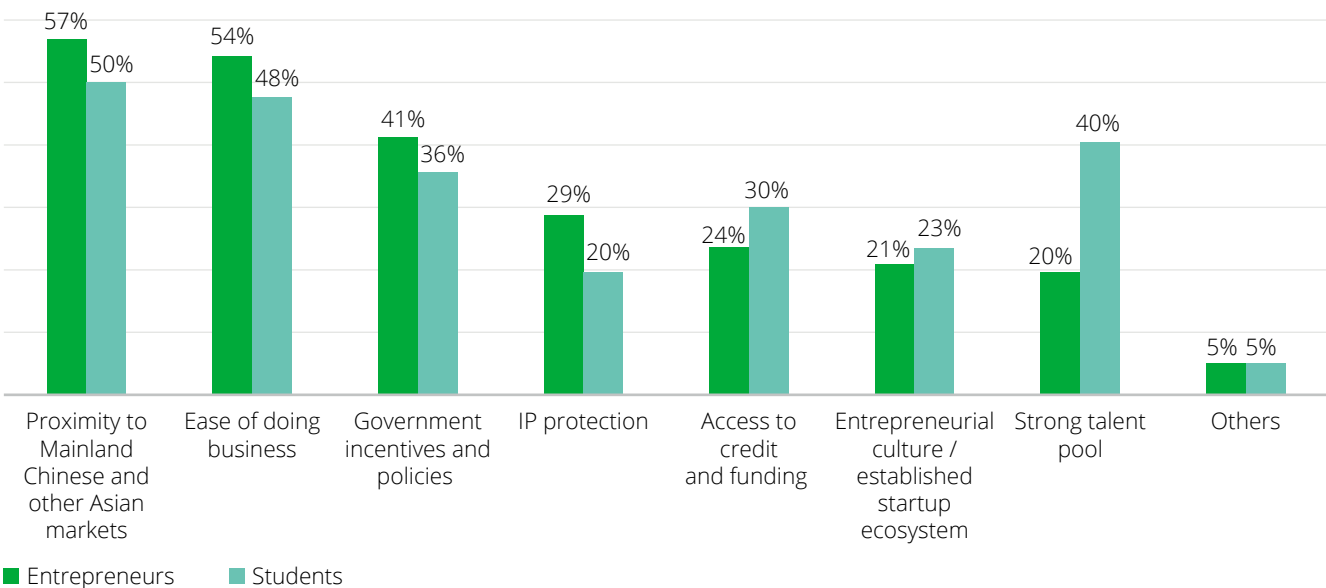


The Hong Kong Government has supported the development of I&T in Hong Kong, and allocated more than HKD100 billion to support the ecosystem in the past three years. At Deloitte, we are committed to supporting the growth of entrepreneurs and the wider I&T landscape in Hong Kong. Through the Technology Fast program, we are delighted to recognise Hong Kong's new unicorns and its wealth of technology companies with high potential growth.

Edward Au
Southern Region Managing Partner, Deloitte China

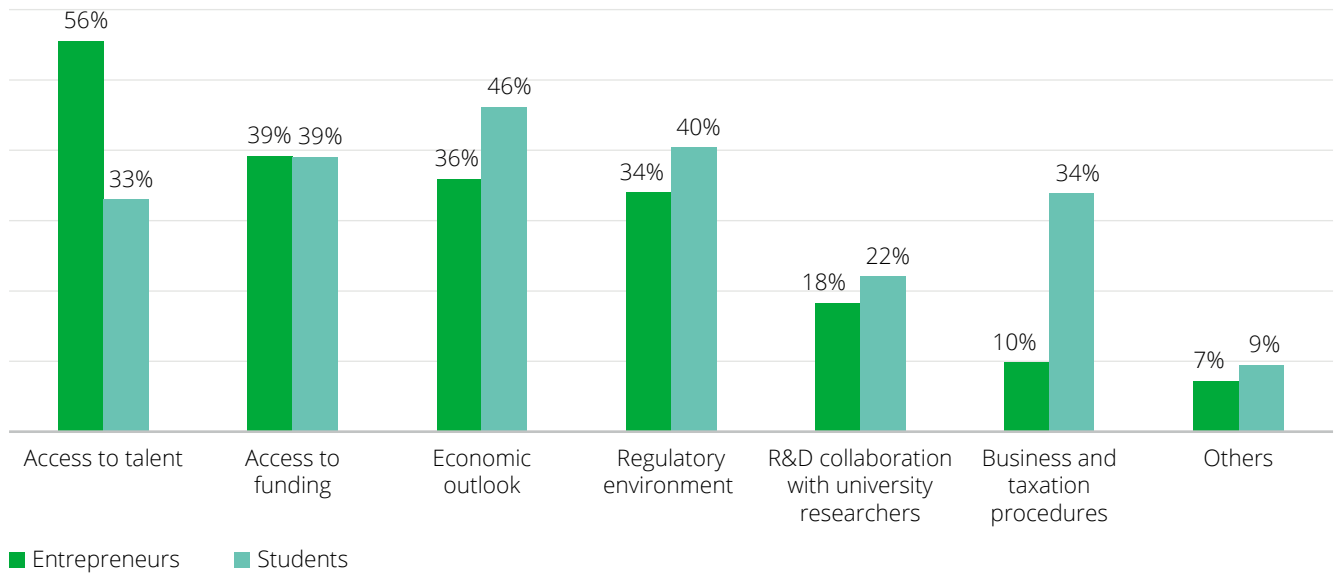


Key advantages in starting a business in Hong Kong



Source: Deloitte entrepreneur & student survey

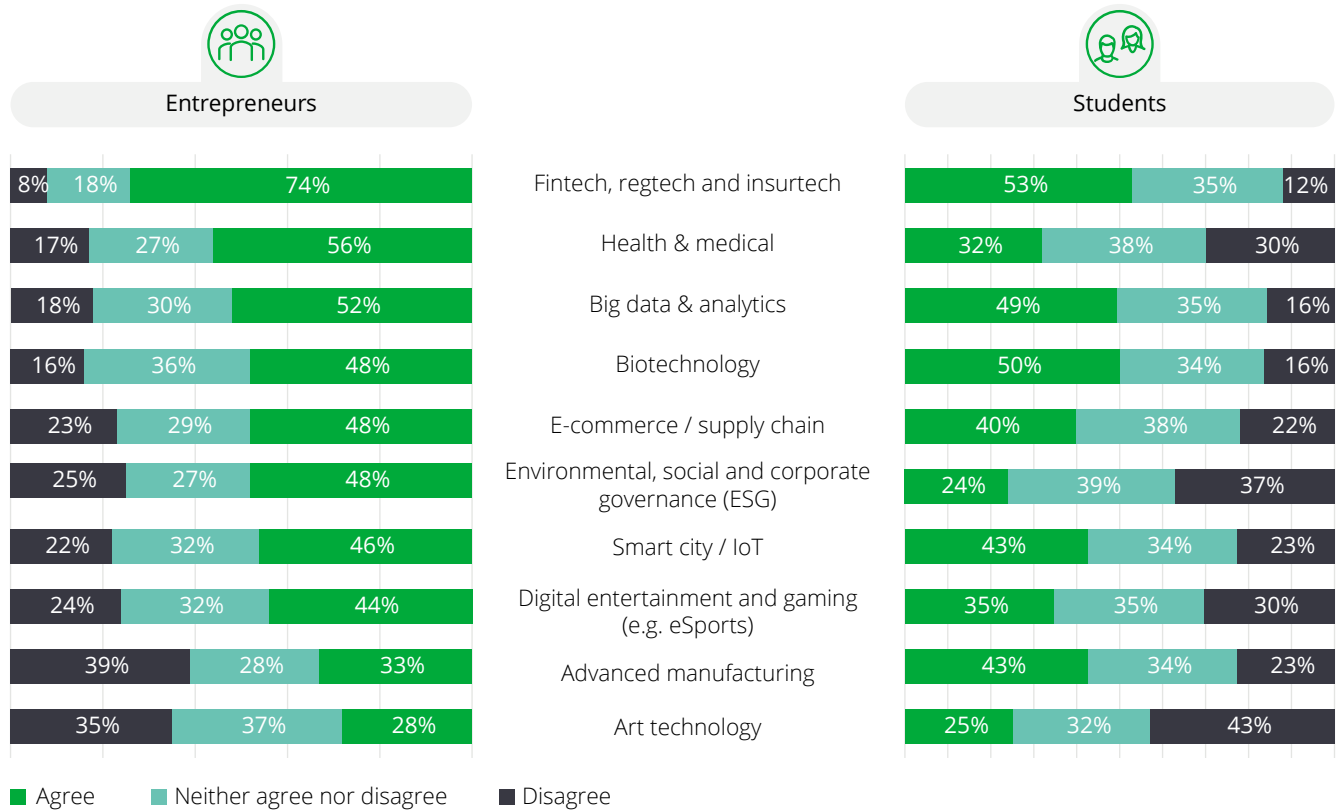
Key challenges in starting a business in Hong Kong



Source: Deloitte entrepreneur & student survey

Overall, according to our survey, most Hong Kong-based students feel it is a favourable location to start a business, with 83% choosing it as their preferred destination.

Hong Kong's status as an innovation hub (by sector)



Source: Deloitte entrepreneur & student survey

Hong Kong recognised for its mature fintech ecosystem. More than half of the students (54%) and entrepreneurs (74%) view Hong Kong as well positioned to be an innovation hub for fintech, whereas for big data & analytics and e-commerce, the figures are about 50%. Entrepreneurs are also optimistic about Hong Kong's

potential as an innovation hub for health & medical (56%), environmental, social and governance (48%), and biotechnology (48%). Students are more optimistic about Hong Kong's potential as an innovation hub for smart city / IoT (43%) and advanced manufacturing (43%).



We are entering the next phase of digital transformation in which digital assets and related services are embraced in the everyday life of individuals, businesses, and society as a whole. Hong Kong has a long history of being Asia's key financial hub. With the increasing trend of technological breakthroughs, we are certain that Hong Kong will continue to play a core role globally in the ever-increasingly digital asset finance era.

Wayne Huo
Co-Founder & COO, Amber Group



Stakeholders in Hong Kong are taking environmental, social and governance (ESG) more seriously as it becomes a key benchmark for business sustainability. In 2017, the Stock Exchange of Hong Kong made it mandatory for listed companies to disclose their ESG information. Hong Kong is participating in green bond and loan issuance, positioning itself as a regional centre for green and sustainable financing. More startups are targeting sustainable solutions, including innovations in smart buildings, lithium batteries, alternative proteins and biodegradable plastics.

Hong Kong is not yet widely perceived as an innovative hub for Art Technology (art tech). Only 28% of entrepreneurs and 25% of students agree that Hong Kong is well positioned to be an innovation hub for art tech, despite government support, calls for inter-bureau cooperation and a HKD100 million allocated in various funds to support art tech-related projects, announced in the 2020 Policy Address.⁸ There is a need to increase public awareness of art tech in Hong Kong, potentially through project showcases or hosting overseas companies.

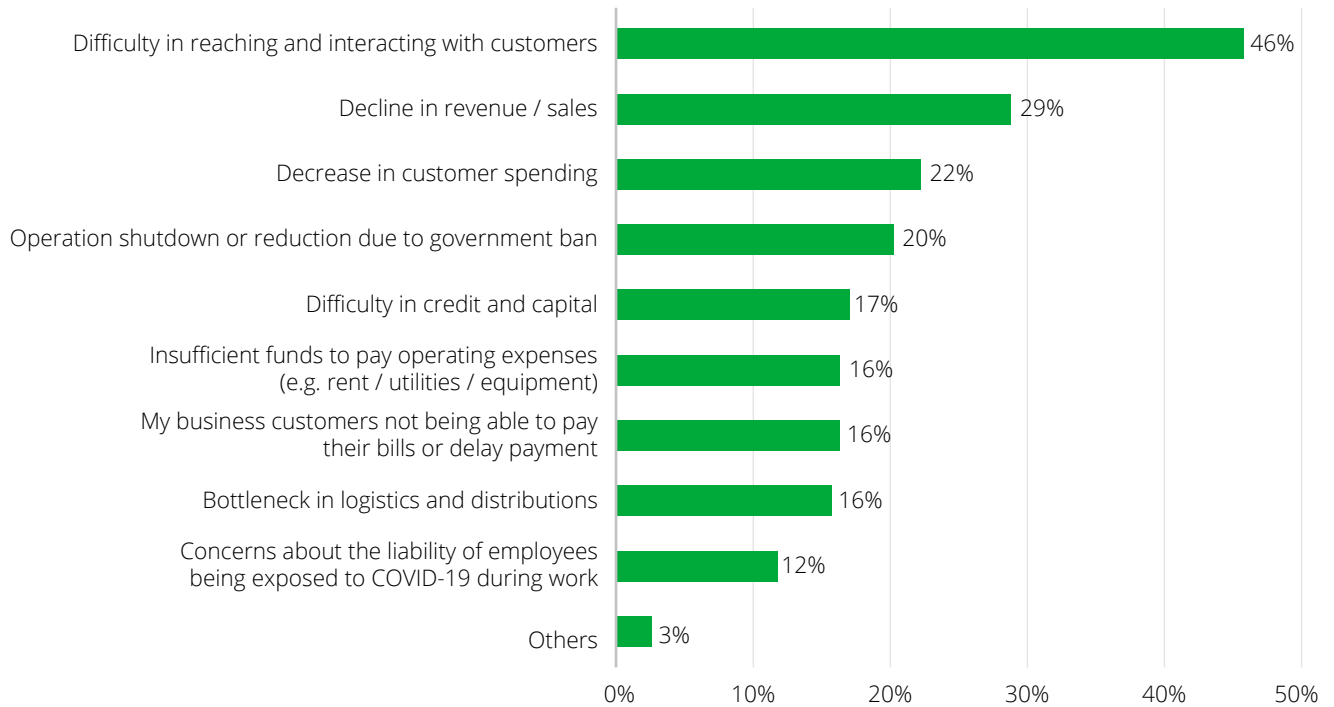
Against the tide: Startup ecosystem vibrant despite pandemic

Hong Kong's startup ecosystem remains vibrant despite the COVID-19 pandemic. In 2021, the number of startups grew 12% year-on-year, reaching a record high of 3,755.²

However, the pandemic has created new headwinds for businesses. Nearly half of entrepreneurs (46%) found it

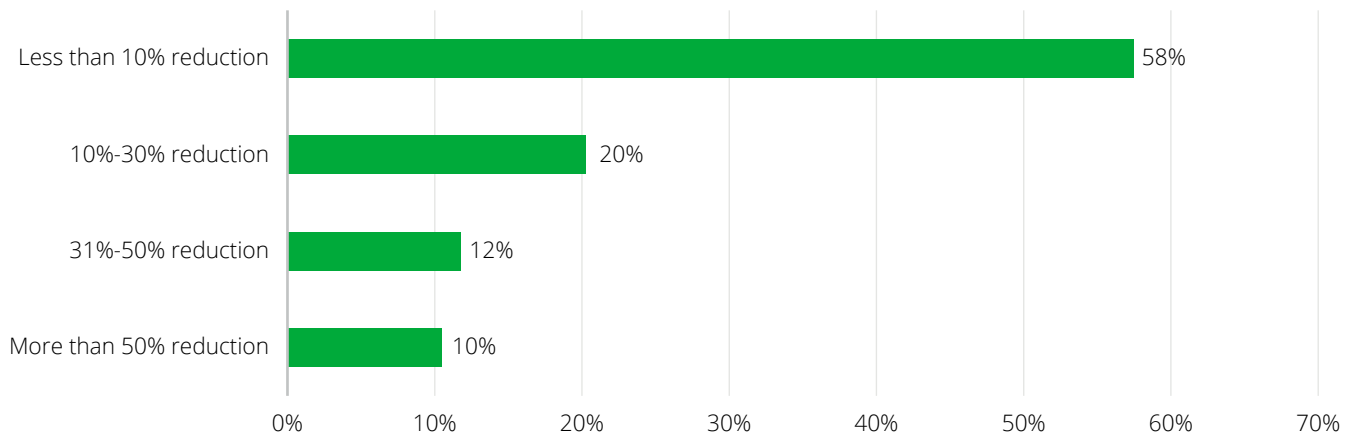
difficult to reach out to and to interact with customers. About a third (29%) found it most challenging to manage declines in revenue. That said, most entrepreneurs (58%) suffered revenue reductions of less than 10%. Accordingly to our survey, startups at the seed and early stages were more vulnerable than those at the roll-out or growth stage.

Challenges to entrepreneurs as a result of the pandemic



Source: Deloitte entrepreneur survey

How the pandemic has affected the financial health of startups

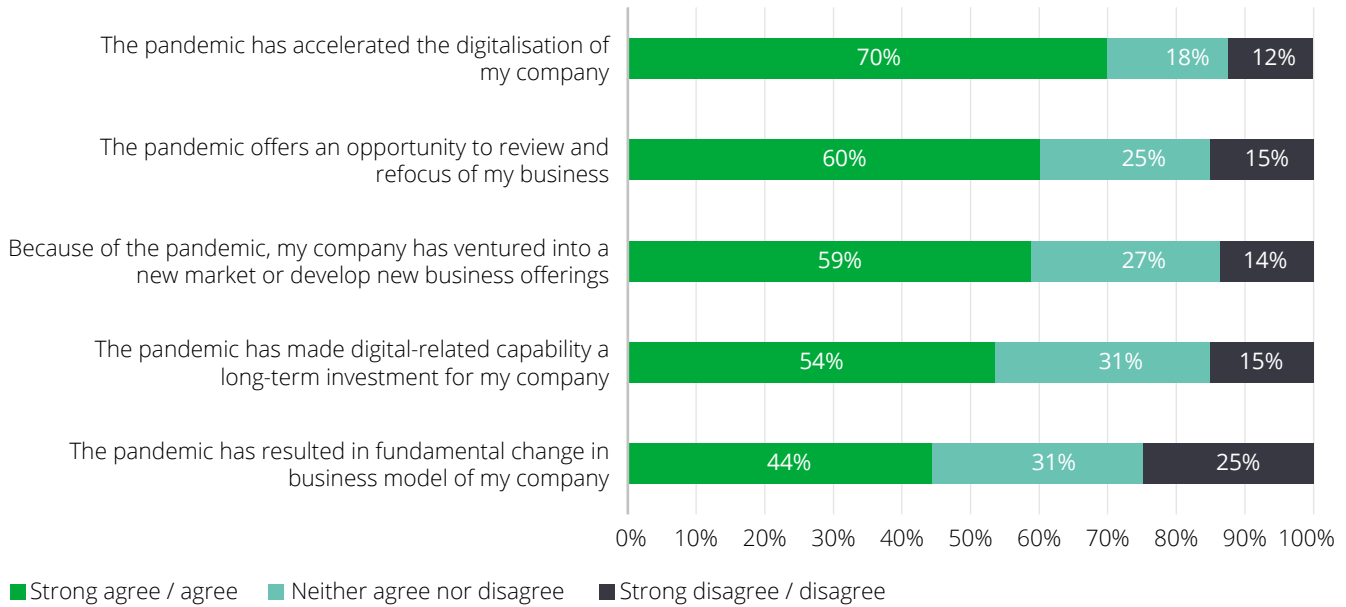


Source: Deloitte entrepreneur survey

The pandemic created a new normal, forcing entrepreneurs to adapt. A majority (70%) of startups accelerated digitalisation as a result of the pandemic, 60% took the opportunity to review and refocus their businesses, and 59% decided to expand into new

markets or develop new offerings. Many startups are deploying a long-term strategy, evidenced by more than half of those surveyed making long-term investments in digital-related capabilities.

Acceleration of digitalisation as a result of the pandemic



Source: Deloitte entrepreneur survey



Hong Kong's innovation ecosystem

The key to a successful I&T ecosystem depends not only on the presence of quality startups and high calibre entrepreneurs, but also on an orchestrated effort by all stakeholders.

This report examines the ecosystem across six domains:

- Government and policy
- Research and development
- Talent and education
- Funding
- Business support
- Culture and norms

Each is measured against metrics to identify the strengths and shortcomings of the current landscape, and inform tailored and viable solutions.

Hong Kong's I&T ecosystem framework





Government and policy

The Hong Kong Government has made unprecedented strides in accelerating and extending the HKSAR's I&T ecosystem into the GBA, with I&T spending reaching new heights. Enhanced collaboration between Hong Kong and key cities in the Chinese Mainland is being emphasised, but different institutional systems exacerbate the difficulties of expanding in the GBA, and will require efforts to bolster regional integration.

For the past two decades, the Hong Kong Government has been proactive in charting a course for the I&T sector. These efforts started in the early 2000s with the establishment of the Innovation and Technology Fund (ITF) and R&D centres. This was followed by the introduction of the Industry and Technology Bureau (ITB) in 2015 to improve policymaking and implementation.

The "Twin Cities, Three Circles" concept was proposed in the most recent Policy Address to accelerate the development of Hong Kong's I&T sector and facilitate collaboration between Hong Kong and Shenzhen.³



Hong Kong-Shenzhen Innovation and Technology Park's strategic location in the Northern Metropolis will connect Hong Kong with Shenzhen. This development is set to seamlessly integrate Hong Kong's strengths in I&T with Shenzhen's expertise in technological commercialisation, making it one of the largest and most comprehensive science and technology clusters globally. We plan to optimise the ample ecological, environmental and cultural resources within this area to create an ecosystem that fosters greater industry collaboration, advancing the economic development of Hong Kong and the Greater Bay Area.

Patrick Siu

CEO, Hong Kong-Shenzhen Innovation and Technology Park (HSITP)



The "Twin Cities" are Hong Kong and Shenzhen, and the "Three Circles", from west to east, are the Shenzhen Bay Quality Development Circle, the Hong Kong-Shenzhen Close Interaction Circle, and the Mirs Bay, Yan Chau Tong Eco-recreation & Tourism Circle. "Twin Cities, Three Circles" also covers the Shenzhen-Hong Kong Boundary Control Points Economic Belt, the most mature metropolitan core in Shenzhen, and Hong Kong's Northern Metropolis. These areas have massive development potential given their vast available resources.³

Under the Northern Metropolis Development Strategy, development of HSITP in the Loop and areas around

Lok Ma Chau and San Tin will be consolidated to form the San Tin Technopole, with about 240 hectares of land for I&T-related use. This will be a key base for scientific research collaboration that brings together the world's top enterprises, R&D institutions and higher education institutions. About HKD32.5 billion has been allocated to the project, with the first batch of facilities expected to be completed from 2024 to 2027.⁹

This, and the Shenzhen I&T zone, will form the Shenzhen-Hong Kong I&T Co-operation Zone of about 540 hectares—an essential propellant for the development of an international I&T hub in the GBA.

The government has increased budget allocations for I&T and implemented pro-innovation policies

Over the past four years, more than HKD130 billion has been invested in accelerating I&T development in Hong Kong. The Government has rolled out funding schemes, incubators and accelerators to spur tech-enabled innovation. In its last two budgets, the Government set aside resources for the HKSTP and Cyberport 5 expansions, which will provide about 28,000 and 63,000 square metres for R&D activities or the operation of I&T enterprises.

Moreover, in 2018 the Hong Kong Government introduced a super tax deduction for qualifying R&D expenditure to encourage businesses to invest in R&D. Under the two-tiered, enhanced tax reduction scheme, enterprises are offered a 300% tax deductions on their first HKD2 million of R&D expenditure. A further 200% tax deduction is applicable to any remaining R&D expenditure. For the 2018-2019 assessment year, more than HKD1.8 billion in tax deductions were claimed for qualifying R&D expenditure.¹⁰

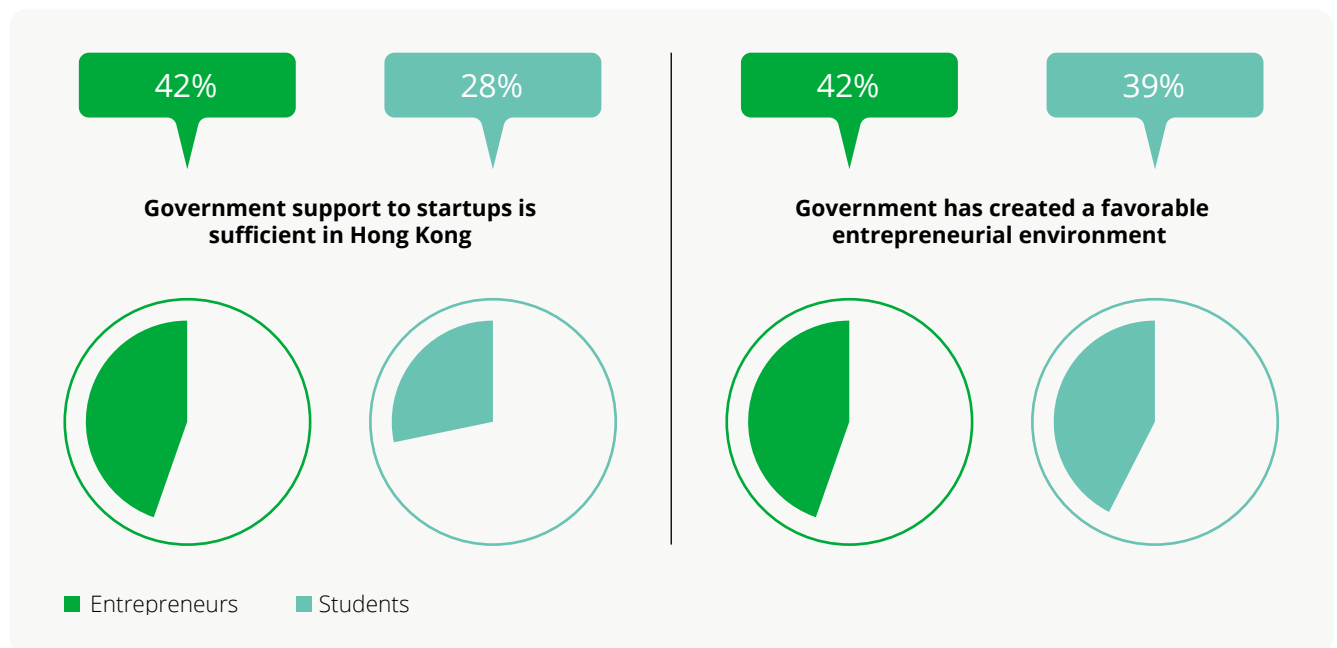
The Hong Kong Government has also moved to lower compliance costs for startups and companies adopting new technologies. A regulatory sandbox was introduced

in 2016 that allows banks and fintechs to perform trials on leading-edge products and services in a real-world environment without being subject to compliance requirements. Another example of pro-innovation regulation is the introduction of Chapter 18A in Hong Kong's reformed listing regime, under which qualifying life science and healthcare companies are not required to satisfy the main board's financial eligibility tests. This has led to a surge in the number of pre-revenue or pre-profit biotech companies seeking listings in Hong Kong. As of September 2021, 10 pre-revenue biotech companies have listed on Hong Kong Stock Exchange, with an additional 29 in the pipeline. If all 29 applications are accepted, the total number of listings would reach 39 in 2021, a substantial increase from 14 in 2020.¹¹

Effort needed to increase awareness of policies to support startups

The Hong Kong Government has introduced several policies to support startups. However, only 42% of entrepreneurs and 28% of students see sufficient support for startups. This could be due to a lack of awareness of the initiatives available. Additional marketing can increase the visibility of the various government initiatives to support startups.

View on whether the Government has provided sufficient support to startups



Source: Deloitte entrepreneur & student survey

Tech adoption is picking up; the Government can further boost public confidence in adopting digital solutions by increasing startups' participation in public procurement

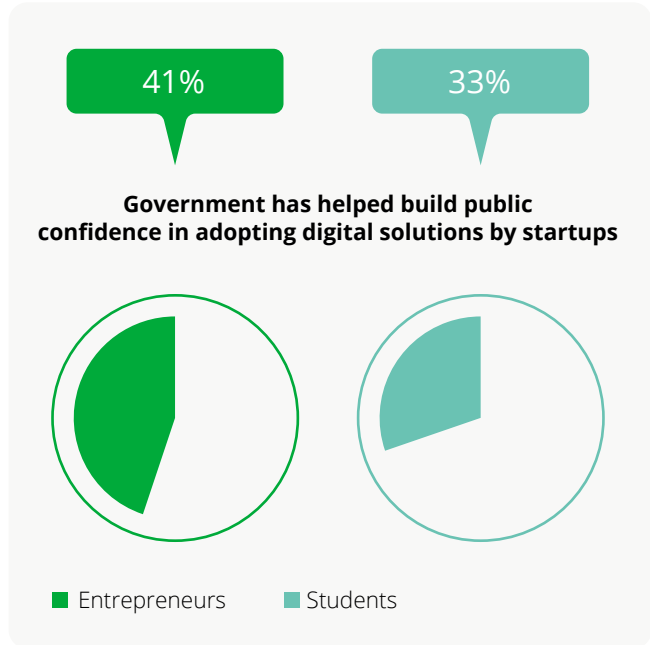
For Hong Kong to adopt emerging technology more widely, it is important to foster a culture that prioritises innovation. In 2017, the *Smart City Blueprint for Hong Kong*, set out 76 initiatives in six areas: smart mobility, smart living, smart environment, smart people, smart government and smart economy. The main goals are to address the challenges of city management and improve people's livelihoods through I&T. Of its 76 initiatives, more than 40 are completed or underway. The *Smart City Blueprint for Hong Kong 2.0*, introduced in December 2020, has an additional 130 smart city initiatives.¹²

The Hong Kong Government could further enhance public confidence in adopting digital solutions developed by startups. 41% of entrepreneurs believe Hong Kong's existing policies and initiatives have helped build public confidence in digital solutions, yet only 33% of students feel the same way, indicating targeted marketing is needed for them to recognise the Government's efforts.

Public procurement of innovative solutions can build public confidence in digital solutions developed by startups. 81% of OECD countries have developed strategies or policies to support innovative goods and services through public procurement.¹³

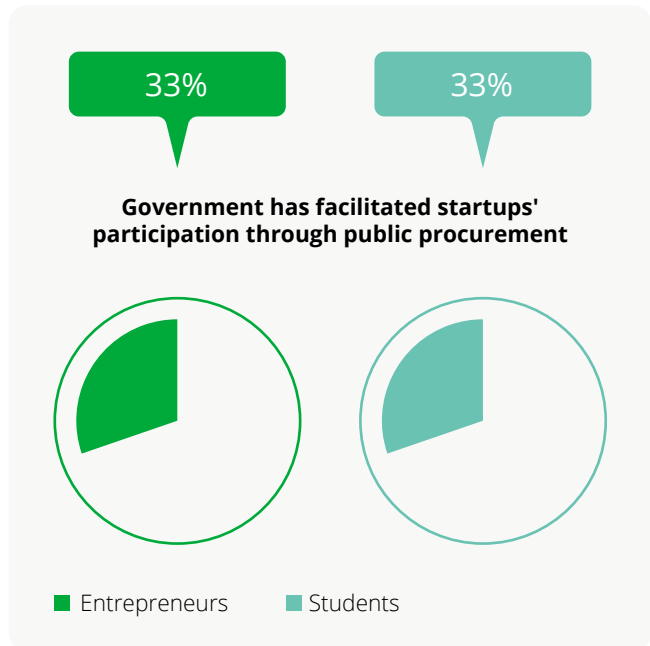
Our survey revealed that only 33% of respondents feel the Government has facilitated participation through public procurement, indicating initiatives to boost startups' participation in public tenders remain insufficient.

View on whether the Government has helped build public confidence in adopting digital solutions by startups



Source: Deloitte entrepreneur & student survey

View on whether the Government has facilitated startups' participation through public procurement



Source: Deloitte entrepreneur & student survey



Past efforts to support the participation of startups in public procurement include giving them a higher technical weighting in tender assessments and providing performance-based, rather than input-based, tender specifications. Where possible, large government contracts are broken down into smaller contracts to enable startups to participate. The Hong Kong government also established the Efficiency Office, a unit under the ITB, which implements I&T solutions to enhance the delivery of public services. Successful I&T adoption within a government setting includes the use of AI and drones to assist with external inspections of government buildings. The Efficiency Office is intended as a role model for other organisations to digitalise their businesses.¹⁴

However, the number of contracts awarded to startups in Hong Kong remains low. In 2020, the Government

revealed that in 2019-2020, about 39% of contracts not exceeding HKD3 million and 12% of those worth HKD3 million to HKD15 million under the Standing Offer Agreement for Quality Professional Services were awarded to small and medium-sized enterprises (SMEs).¹⁵ Hong Kong can increase startup participation in public procurement, especially when compared to Singapore, where about 80% of government contracts are given to SMEs¹⁶. This comparison also explains why only one third of respondents are convinced the government has facilitated startups' participation in public procurement.

New measures to promote startups' participation in public tenders could include tweaking the nature of public contracts to better adapt to the constantly changing technology industry. The Government can also increase promotion of existing measures not yet recognised by industry players.



Research and development

Leveraging its world-class R&D capabilities, Hong Kong is set to forge new I&T collaborations with the Chinese Mainland and the world while bridging the commercialisation gap. This is supported by the Government's commitment in 2017 to increase R&D expenditure to 1.5% of GDP over the next five years, the establishment of research clusters Health@InnoHK and AIR@InnoHK, and the proposal for the InnoLife Healthtech Hub at HSITP in the Loop. But much remains to be done. Stakeholders see large gaps in university research commercialisation. Improving knowledge transfer and commercialisation will require concerted efforts from government, universities, R&D institutions and industry players.



It is crucial for Hong Kong startups to make full potential of the GBA which has been at the forefront of the central government's political agenda. Hong Kong boasts terrific scientific research and we have to capitalise that capacity by taking advantage of Hong Kong's connection to the GBA to commercialise our inventions.

Albert Wong

CEO, Hong Kong Science and Technology Parks Corporation



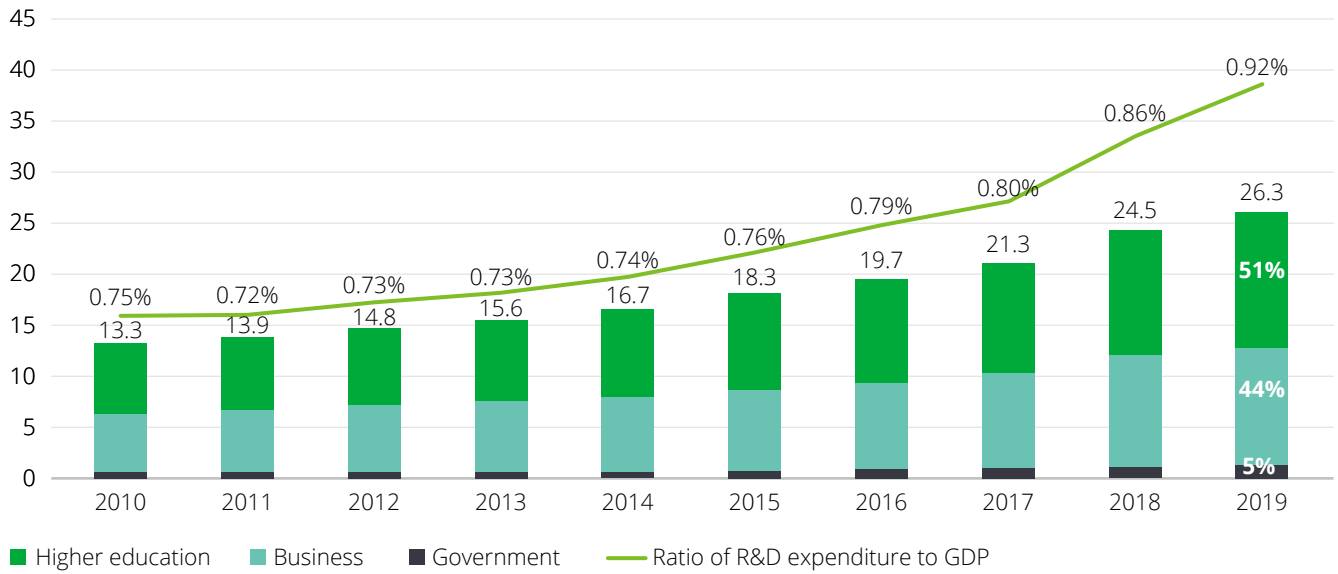
The Hong Kong Government has increased R&D spending, but there remains room for growth

R&D expenditure is central to innovation. Hong Kong has stressed improving local research and development. In November 2017, the Government pledged to double its expenditure on R&D to 1.5% of GDP over the next five years.¹⁷

However, Hong Kong's total spending on R&D in 2019 was just 0.92% of GDP,¹⁸ which is lower than its OECD

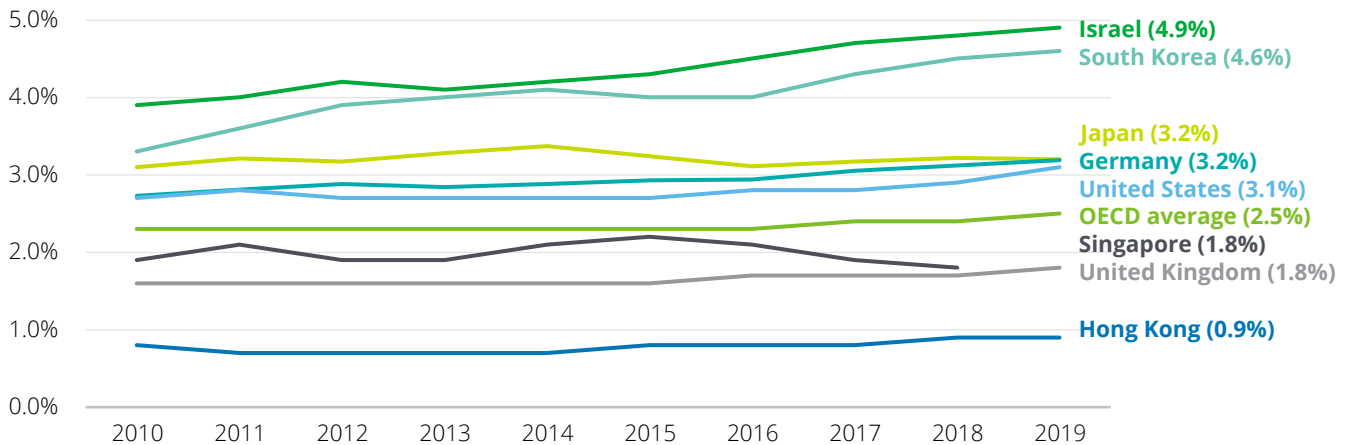
counterparts' average of 2.5%, Singapore's 1.8% and Israel's 4.9%.¹⁹ During China's annual parliamentary Two Sessions meeting in March 2021, China revealed increasing R&D spending as a priority for the next five years. This is part of its attempt to boost domestic R&D and make major breakthroughs in technology. In 2020, China's R&D spending accounted for 2.4% of GDP, and it will increase by more than 7% a year between 2021 and 2025.²⁰

Ratio of R&D expenditure to GDP in Hong Kong (HKD million; 2010-2019)



Source: Hong Kong Census and Statistics Department

R&D expenditure as a percentage of GDP (2010-2019)



Source: OECD

Universities account for more than half of total R&D expenditure, demonstrating their key role in accelerating Hong Kong's R&D progress.¹⁸

Hong Kong's ratio of full-time researchers to population, at 4,027 per million, is close to that of other developed nations, including Canada (4,326) and the United States (4,408), according to the 2019 data in the Global Innovation Index 2021.²¹ With an established pool of R&D talent, Hong Kong has ample potential to expand R&D commercialisation.

However, its ratio of resident patent applications to GDP is far lower than those of other Asian markets such

as Korea, the Chinese Mainland and Japan,²² with the proviso that this figure is based on data prior to Hong Kong's local patent system reform.

In December 2019, the Hong Kong Government introduced the original grant patent (OGP) system,²³ with the aim of ensuring local patent system advances meet the changing needs of Hong Kong's I&T industry. OGP is a direct route for innovators to seek standard patent protection in Hong Kong for up to 20 years, providing an alternative to the existing "re-registration" route, and could spur local innovation. As of 31 May 2021, 426 OGP applications had been received.²⁴

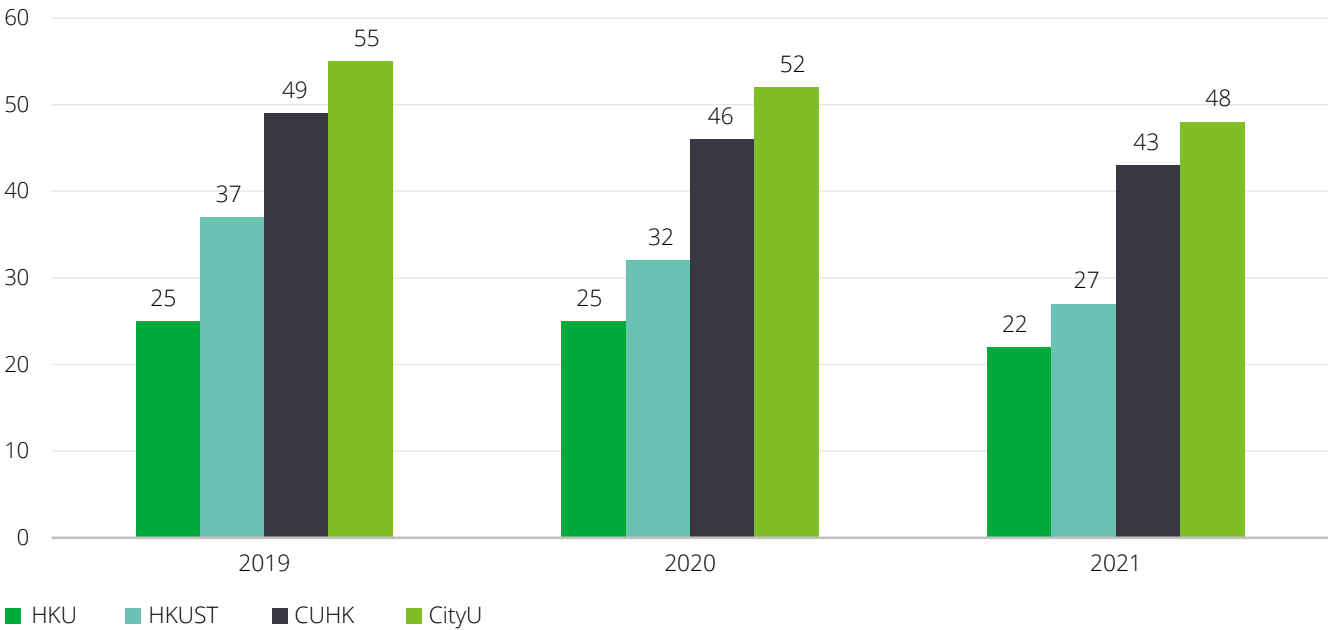
Hong Kong is a rising R&D powerhouse that will forge collaborations with stakeholders in the GBA and internationally

Hong Kong has the facilities to be a global hub for research collaboration, with 16 State Key Laboratories, six Chinese National Engineering Research Centres, and 22 Joint Laboratories with the Chinese Academy of Sciences.³

improved their overall rankings from 2019 to 2021,²⁵ driven by a substantial increase in academic output. Hong Kong universities are now among the top institutions in the world for electrical & electronic engineering, computer science & information systems, chemical engineering and chemistry, which are critical areas of today's high-tech landscape.

Furthermore, according to the latest ranking by QS World University, the top four local universities

Hong Kong universities in the QS World Rankings (2019-2021)



Source: QS World University Ranking 2021

Hong Kong universities with top 150 rankings by subject

	HKUST	HKU	CUHK	CityU	PolyU
Electrical & electronic engineering	Top 30	Top 50	51-100	51-100	51-100
Computer science & information system	Top 30	Top 50	Top 50	51-100	101-150
Mathematics	Top 50	51-100	Top 50	51-100	101-150
Chemical engineering	Top 50	51-100	101-150	101-150	101-150
Chemistry	Top 50	51-100	51-100	101-150	101-150
Medicine	101-150	Top 50	Top 50	101-150	101-150
Physics & astronomy	Top 50	51-100	51-100	101-150	101-150

Source: QS World University Ranking by Subject 2021

Through InnoHK, renowned universities and research institutes have established world-leading research clusters in Hong Kong where researchers from multidisciplinary backgrounds can conduct collaborative, impactful research activities.

Health@InnoHK and AIR@InnoHK focus on developing healthcare technologies and developing AI and robotics. InnoLife Healthtech Hub was proposed in the 2021 Policy Address, and is set to combine 16 life and health-related laboratories in the InnoHK research clusters and eight State Key Laboratories that will focus on related research work at HSITP in the Loop.

Hong Kong is also home to state of the art research and technology infrastructure. HKSTP provides extensive facilities and services to support healthcare and biotechnology R&D, including the Biomedical Technology Support Centre, the Healthcare Devices Innovation Hub,

the Chemical Co-Working Centre, the Biobank and the GMP Facilities (Cell Processing).²⁶ HKSTP plans to expand its wet lab, a crucial facility for life science experiments.

Collaboration between government, universities, R&D institutions and industry players can further drive R&D commercialisation in Hong Kong and the GBA

Stakeholders believe R&D commercialisation can be further enhanced. This is in line with the survey results, where only 21% of entrepreneurs rate R&D commercialisation support as sufficient. Bridging the gap from R&D to commercialisation requires ongoing, concerted efforts from the Government, universities, R&D institutions and industry players. This can be done by leveraging established industry connections between universities and R&D centres.



It requires a collaborative effort between the government, universities and industry to develop sustainable mechanisms to facilitate knowledge transfer and translation of research discoveries from the laboratory into commercially viable products and applications.



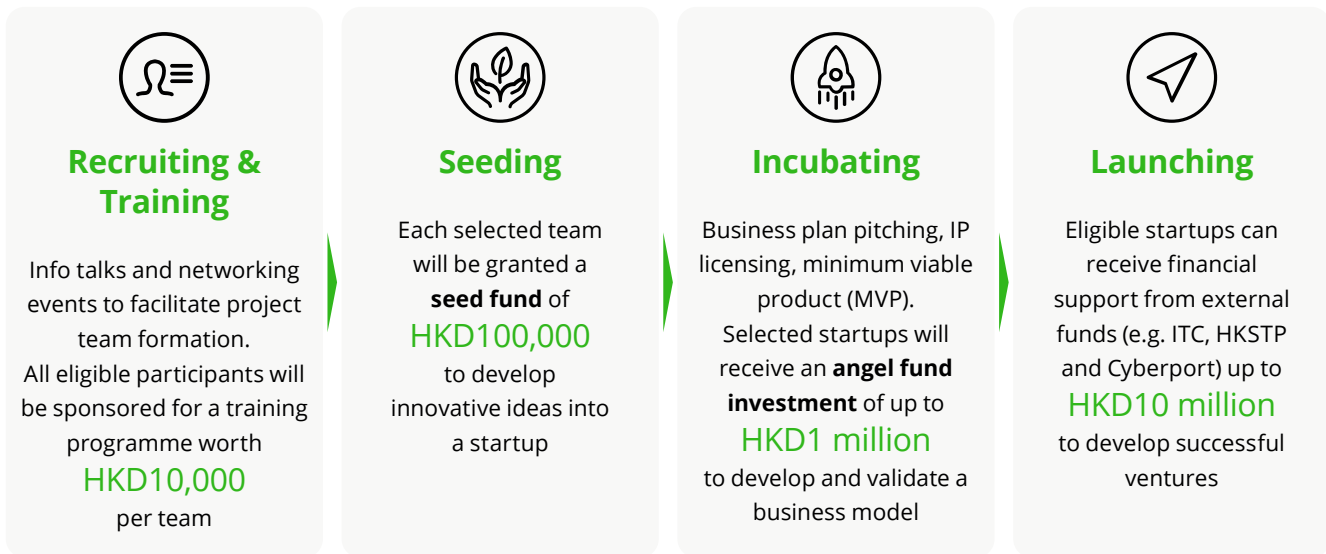
Prof. Michael Yang
 Vice President (Research and Technology)
 Yeung Kin-Man Chair Professor of Biomedical Sciences, City University of Hong Kong



Universities in Hong Kong play a key role in facilitating technology transfer. Some are championing students and faculty members who wish to commercialise their breakthroughs by promoting entrepreneurship-related activities.

City University of Hong Kong recently launched The HK Tech 300 Project to promote the commercialisation of scientific results and the application of patents. 20 seed projects and 15 angel investment projects were completed in the past six months.

The HK Tech 300 project of City University of Hong Kong²⁷



Source: City University of Hong Kong

As Professor Michael Yang from City University of Hong Kong puts it: "The HK Tech 300 Programme aims to provide diverse educational and growth opportunities to our students, graduates and Hong Kong's youth, to translate our research results and intellectual property (IP) into practical applications, and contribute to local and national social-economic and technological development strategies. With an investment of HKD500 million, the programme will launch 300 startups in the next three years by providing seed funds and angel funds for young entrepreneurs, and create the No.1 university-based entrepreneurship programme in Asia."

The collaboration of HKUST and Chiaphua Industries Limited (CIL) on Germagic's commercialisation is a highly successful case of academia-industry collaboration. HKUST's major budget reform in 2018 where 50% of each School or Interdisciplinary Programme office's performance is based on research and knowledge transfer output. "Excellence in knowledge transfer" has been a criteria for promotion since 2000.²⁸

HKUST also has extensive partnerships across a spectrum of industries, often through joint laboratories, with independent research conducted by enterprises and applied in enterprises; cooperative research with enterprises; and cooperative experimentation and

application with industry. Researchers at HKUST now work with leading industry and academic partners to drive synergistic collaboration and knowledge spillover.

The university has an extensive presence in the GBA, including a campus in Guangzhou, a research institute in Shenzhen, an R&D centre in Foshan, and a joint innovation centre in Zhongshan. These facilitate knowledge transfer and commercialisation to bridge Hong Kong's gap in high tech manufacturing.

Efforts are also being made to commercialise and translate R&D into economic outputs. For instance, in 2016 the Government premiered "re-industrialisation" in its Policy Address. Since then, this has become the major focus of I&T policy. It has supported thousands of re-industrialisation projects through ITB, HKSTP, Cyberport and the Hong Kong Productivity Council via direct funding and preferential rent support.

For example, the ITF's Re-industrialisation Funding Scheme (RFS) was launched in July 2020 to subsidise manufacturers, on a 1 (government): 2 (company) matching basis, to set up new smart production lines in Hong Kong. The response has been positive, with 13 applications and about 230 enquires received as of end March 2021.

Case study

Germagic – a successful academia-industry collaboration

Since 1999, a HKUST research team has been collaborating closely with CIL. In 2018, the HKUST-CIL Joint Laboratory of Innovative Environmental Health Technologies was established to nurture leading-edge research in environmental health technologies that enhance the quality of the environment and the health and wellbeing of individuals and communities.

One of the many successful outcomes of the joint collaboration between CIL and HKUST, the Germagic brand, a germicidal product range using encapsulation technology for controlled-release of active antimicrobials, was launched during the pandemic and has been widely adopted in public settings.

“ Through our collaboration with CIL, we were able to better understand the needs of end users. We also worked hand in hand with CIL from R&D, product development and testing, to production and quality assurance, which helped expedite the commercialisation process.

Prof. Yeung King Lun

Director, HKUST-CIL Joint Laboratory of Environmental Health Technologies ”



Talent and education

Hong Kong must strive to cultivate talent and reverse brain drain in an intensifying global race for talent. Although the government has invested ample resources in STEM education, the onus remains on schools to plan and implement the curriculum. Stakeholders emphasised the importance of forward-looking talent strategies to attract and retain Mainland Chinese and overseas talent in Hong Kong. Among other factors, 80% of the entrepreneurs surveyed cited the high cost of living in Hong Kong as a major deterrent. Key players in the ecosystem are encouraged to join forces to support the talent base.



We hope to see more opportunities provided for our talented young generation to kick off some meaningful and high-end projects in the future. As long as their abilities can be fully utilised and their work is recognised, Hong Kong startup ecosystem will grow and prosper.

Prof. Tam Kar Yan

Dean of Business and Management, Hong Kong University of Science and Technology



There is a global shortage of I&T talent. In Hong Kong, according to the Labour and Welfare Bureau in 2019, demand for high skilled labour is expected to grow at an average annual rate of 4.3%, reaching 57,600 by 2027.²⁹ Specifically, the shortage in I&T talent such as engineers and technicians has become more noticeable.

Progress has been made in promoting STEM education in Hong Kong, but sustained efforts are required to further cultivate an I&T mindset

Education that is relevant to today's world and focuses on real-life applications rather than content is vital to nurturing local talent. In Hong Kong, education increased from 3.3% of GDP in 2015 to 4.4% in 2020.³⁰ In terms of education spending as a percentage of government expenditure, it increased from 18.6% in 2015 to 20.6% in 2020. In 2018, the latest year for which comparable figures are available, Hong Kong's government expenditure on education was 18.8%, higher than the OECD average 12.2%.³¹

Prof. Tam Kar Yan points out the importance of STEM education: "STEM education is a key capability that helps our new generation unleash their potential in innovation. STEM should start at a young age. The Government Global STEM Professorship Scheme has increased funding for local postgraduate students and resources, and supported the industry in nurturing tech talent."

In recent years, the Hong Kong Government has placed a heavy emphasis on promoting STEM education, including through professional training for teachers and subsidies for large-scale learning activities like the STEM Education Fair. In the latest Budget, it set aside more than HKD200 million to extend the IT Innovation Lab in Secondary Schools Programme to primary schools, with each subsidised primary school to receive up to HKD400,000 to roll out a Knowing More About IT programme. Schools can choose how these funds are used in extracurricular activities, from hosting competitions, organising IT fairs and hiring third-party

resources, to programming workshops or site visits to local startups. They can also spend up to 50% of the funds on IT hardware and software.³²

However, according to our survey, only 38% of entrepreneurs and 35% of students say the supply of local ICT talent has increased as a result of government investment in STEM, likely due to the above-mentioned responsibility for STEM-related learning lying with individual schools.

More balanced, sustainable and far-reaching STEM education should be defined at the policy level. Hong Kong should consider establishing a working body to develop a centralised mechanism of STEM learning, including fund allocation, curriculum content design and “train-the-trainer” delivery.

There is a consensus on the benefits of exposing students to innovation and technology-related offerings throughout their educations, starting in primary school. Hong Kong is already a pioneer of learning in the metaverse. “Technology is moving at a breakneck speed. It is crucial that the education system in Hong Kong keep pace and cultivate

youth with not only STEM fundamentals, but creativity and open minds, empathy and compassion, to become the innovators of tomorrow. The race to the metaverse is a case in point—an emerging development seen as the next internet evolution and battleground.” Edwin Ty, a CUHK MSc Physics student who founded the startup Maven Access, points out the importance of education keeping pace with a changing world.

Furthermore, as Prof. Yeung King Lun from HKUST points out: “Hong Kong needs to stimulate the public, especially primary and secondary students’ interest in technology, and create an open innovation space to let them interact and explore... We have seen many European countries setting up open innovation spaces for the public to create real products through enabling tools such as 3D printing.” This would be best achieved through a mix of favourable education policies from the Government and active participation by industry players. The latter could include events to educate students on how they can innovate and make an impact at home or in school. These small steps would give students a foundation on which to base larger projects in future.



As we are seeing more unicorn companies and startups on the road to IPO, we should consider policies to retain the founders of these companies to continue invest and mentor budding entrepreneurs in Hong Kong. Active participation by serial entrepreneurs as role model can help attract more talents to join the startup community.

Cindy Chow

Executive Director, Alibaba Hong Kong Entrepreneurs Fund



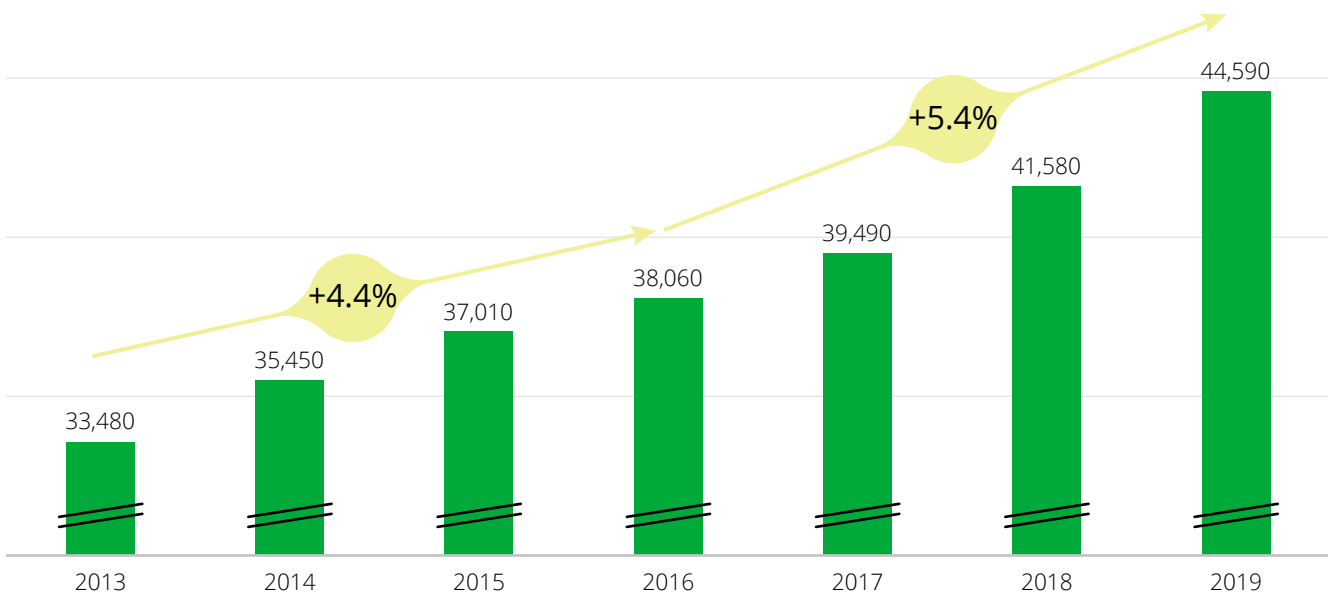
The high cost of living in Hong Kong remains a key deterrent for incoming talent – it can also be tackled via collaborative efforts

“For Hong Kong to grow into a globally competitive innovation hub, it needs to implement two major changes, one is to make the innovation and technology sector more attractive to local talent, while the other is to raise the profile of Hong Kong as a magnet for top-notch talent globally. The key to Hong Kong’s success is to bring the brightest minds from the

world to the city. Albert Wong, the CEO of Hong Kong Science and Technology Parks Corporation, points out the importance of talents in accelerating the I&T development in Hong Kong.

The Hong Kong Government has introduced various talent admission policies over the past decade to attract overseas talent and maintain a sizable pool of tech talent. Employment in the I&T sector grew at a CAGR of 5.4% from 2016 to 2019, up from 4.4% in 2013 to 2016.¹

Employment number and growth rate of I&T industry



Source: Hong Kong Census and Statistics Department

In mid-2018, the Hong Kong Government launched the Technology Talent Admission Scheme (TechTAS), under which overseas and Mainland tech talent can gain fast-track admission for R&D work. TechTAS now not only includes the tenants and incubatees of HKSTP and Cyberport, but also all employees of companies conducting R&D in specified technology areas. New technology areas have also been added, bringing the total from 7 to 13. Participation has increased substantially.³³

This year, the government increased its support for local universities by launching the Global STEM Professorship Scheme to attract world-renowned I&T scholars to Hong Kong. This will enhance Hong Kong's competitiveness in securing global talent and enable local universities to scale new heights in STEM teaching and research.³⁴

Talent admission and exchange initiatives in Hong Kong (non-exhaustive)³⁵

Year of introduction	Initiative	Objectives
2021	Greater Bay Area Youth Employment Scheme ³⁶	Encourage and support young people to work and pursue careers in Mainland cities of the GBA
2018	Technology Talent Admission Scheme	Attract overseas and Mainland R&D talent through fast-track arrangements with eligible technology companies and institutes
2006	Quality Migrant Admission Scheme (QMAS)	Attract highly skilled talent from overseas and Mainland to settle in Hong Kong
2003	Admission Scheme for Mainland Talent and Professionals (ASMP)	Attract qualified Mainland talent and professionals to work in HKSAR to meet local manpower needs
	General Employment Policy (GEP)	Attract overseas talent and professionals from places other than the Mainland

Source: Research Office of Legislative Council Secretariat

HKSTP's GBA InnoAcademy provides learning and training programmes for aspiring innovators and technologists. Its signature Technology Leaders of Tomorrow (TLT) programme awards high-potential talent with two-month internships followed by 2-year, full-time R&D roles at HKSTP partner companies. Its programmes not only give existing talent the tools to succeed in a career in I&T, but also inspire more people to view I&T as a promising career, and are also a model for other large corporations' efforts to take in and train promising young talent.

Stakeholders emphasise the importance of forward-looking talent strategies to attract and retain Mainland Chinese and overseas talent in Hong Kong. According to the survey, 80% of entrepreneurs view the high cost of living in Hong Kong as a major deterrent. Key players in the ecosystem should join forces to support the talent base. Incubators should accelerate the build-up of infrastructure, resources and space for I&T development, and the Government should further enrich tax incentives.





Funding

Venture capital funding in Hong Kong now covers the entire startup funding journey; government co-investment schemes need to be enhanced to maintain momentum. The amount of public and private funds invested in Hong Kong's tech and innovative startups has reached an all-time high. Although progress is evident, the government should accelerate vetting and revisit the effectiveness of the ITVF scheme to attract more long-term investment.



To meet emerging needs from fast-growing, early-stage companies, the way banks serve young businesses has evolved. We are committed to enhancing our capabilities across everyday banking, lending and beyond in order to support customers' growth journey. HSBC has earmarked USD1.8 billion in facilities dedicated to new economy companies in the healthcare and technology sectors, helping these entrepreneurs capture new opportunities in the GBA.

Thomas Elliott

Managing Director, Head of Client Coverage, Commercial Banking, Hong Kong, HSBC



HKEX has been driving transformations in the capital market over the past few years to fund the businesses of tomorrow and support the growth of technology and innovation both here in Hong Kong and the Greater Bay Area, as well as around the world. We launched wide-ranging reforms to our listing rules in 2018. In just three years, we have changed the DNA of our markets, with companies in New Economy sectors raising over HKD800 billion, accounting for 64% of IPOs, and making up over 25% of Hong Kong's total market capitalisation as of October 31, 2021.

Lukas Petrikas

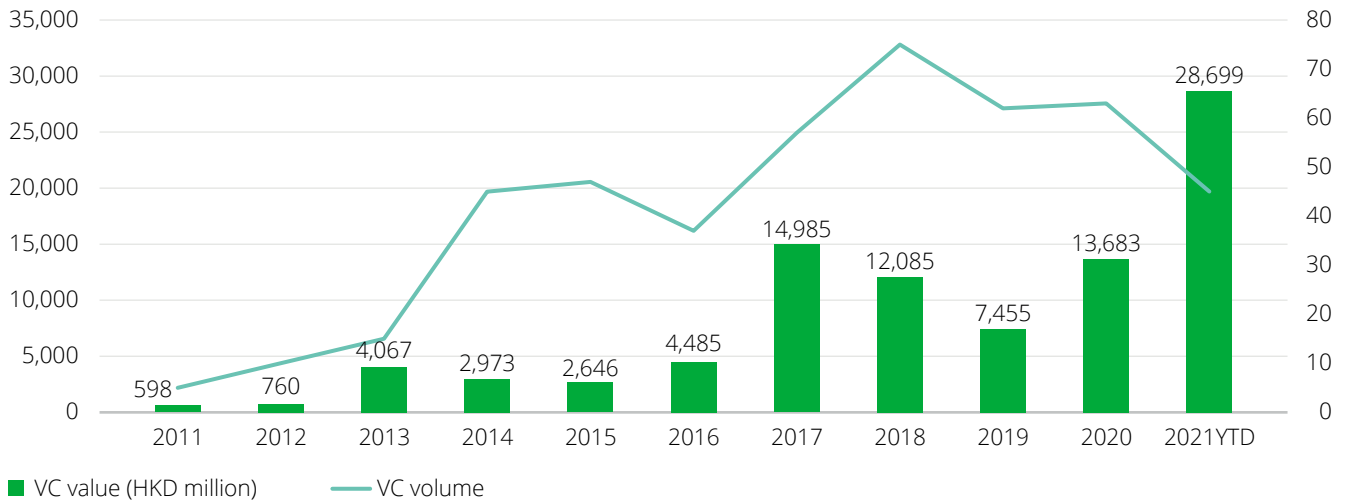
Managing Director of HKEX Innovation and Data Lab

Venture capital funding in Hong Kong now covers startups' full funding journey

Venture capital activity in Hong Kong reached a record high in 2021. As of October 2021, HKD28.7 billion was raised across 45 deals, according to Preqin. Lalamove, the on-demand logistics and delivery giant, secured the

largest amount of HKD11.67 billion. Other prominent deals include rising bioinformatics company Insilico Medicine (HKD1.98 billion), blockchain game maker Animoca Brands (HKD1.59 billion) and travel platform Klook (HKD1.56 billion).

Venture capital investment in startup in Hong Kong (2011-Oct 2021)

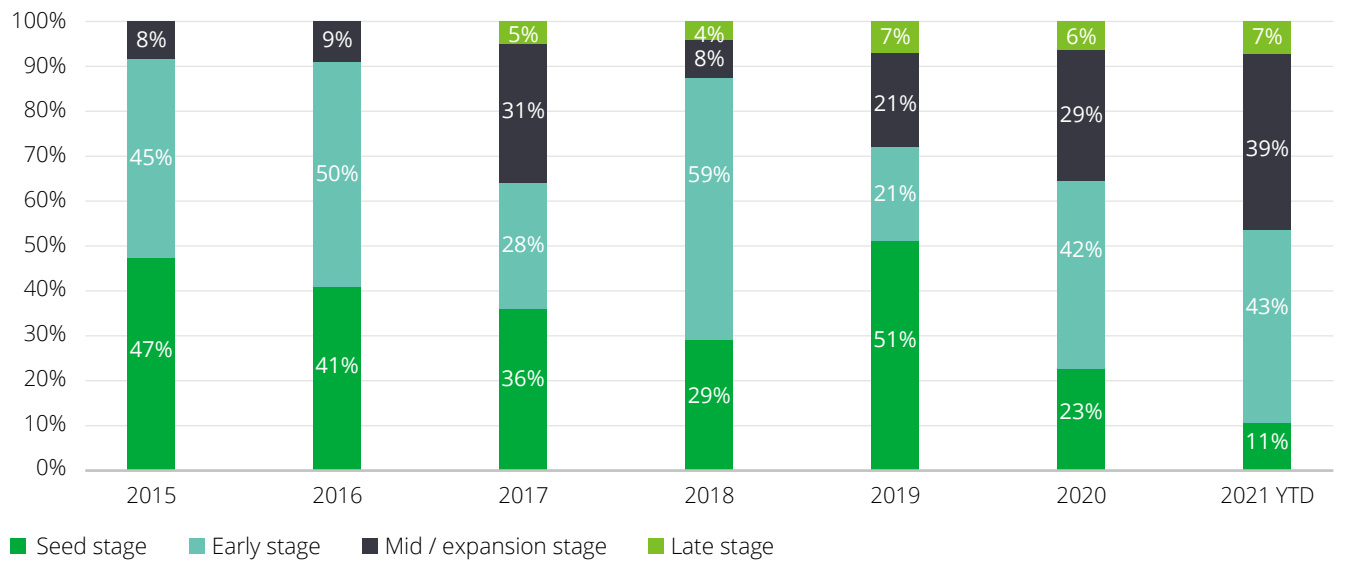


Source: Hong Kong Census and Statistics Department

Hong Kong's funding scene has transitioned from one dominated by seed and early stage startups to comprise funding across the spectrum, from conception to exit. In

January to October 2021, according to Preqin, a total of 46% of venture capital deals in Hong Kong went to mid- and late-stage companies.

Number of deals at different funding stages



Source: Preqin, Deloitte Analysis

Note: Seed stage includes seed and grant; early stage includes angel and series A; mid or expansion stage includes series B, series C and expansion; late stage includes series D, series E, series F, pre-IPO

The maturing of Hong Kong's funding ecosystem allows startups to obtain funding regardless of their size or growth stage. To maintain this vibrancy, there needs to be a mechanism to establish sustainable deal flow. This can be done by increasing investments in early stage companies with successful growth, which

will in turn support the late-stage funding pipeline. The Government can also encourage support for early-stage startups that are R&D-driven and have long research lifecycle by seeking to attract long-term investors with moderate to high risk appetites.



Many entrepreneurs in Hong Kong can be classified as a "diamond in the rough"—they have exceptional qualities and business ideas, but will require funding as well as business advisory support to unleash their potential and make them stand out from the crowd.

Lap Man

Co-Founder and Managing Partner, Beyond Ventures

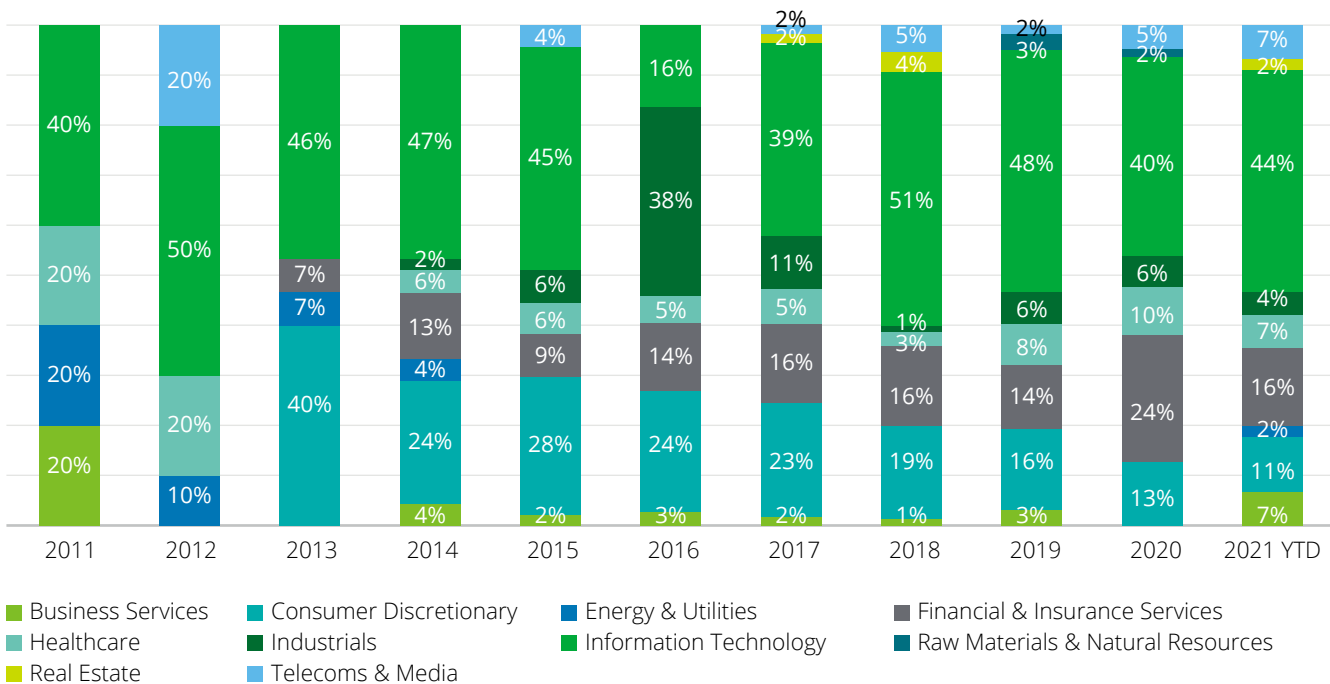


Hong Kong's growing venture capital community continues to keep a keen eye on I&T opportunities, with increasing activity in healthtech

Information technology saw the most venture capital deals in Hong Kong so far in 2021. By volume, the information technology sector (44%) has attracted the most investments from venture capital firms, followed by the financial services (16%) and consumer products and services (11%).

Information technology continued to experience strong investment activity in 2021, with the software segment taking up the most investments. There has been a shift in venture capital's interest from internet companies to software companies, in line with global trends.

VC deal volume by sector (2011-October 2021)



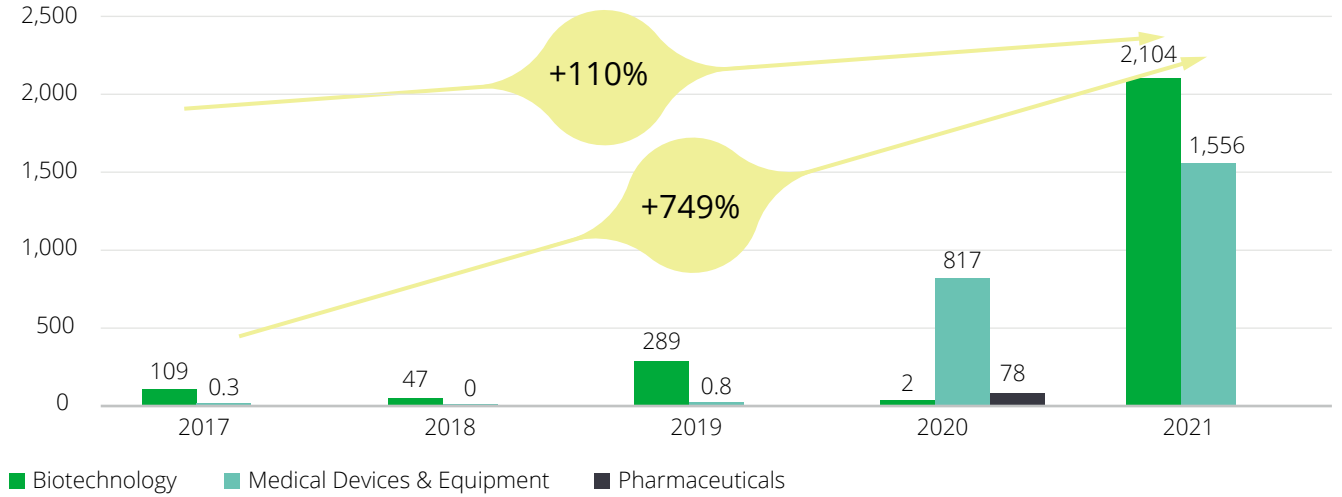
Source: Preqin, Deloitte Analysis

VC investment in healthcare hits record high

The healthcare sector in Hong Kong is receiving record-breaking amounts of investments. Funding for

biotechnology and medical devices & equipment have grown at CAGRs of 110% and 749%, respectively, from 2017 to 2021, reaching HKD2.1 billion and HKD1.56 billion.

VC investment in healthcare (by sub-sector) (HKD million)



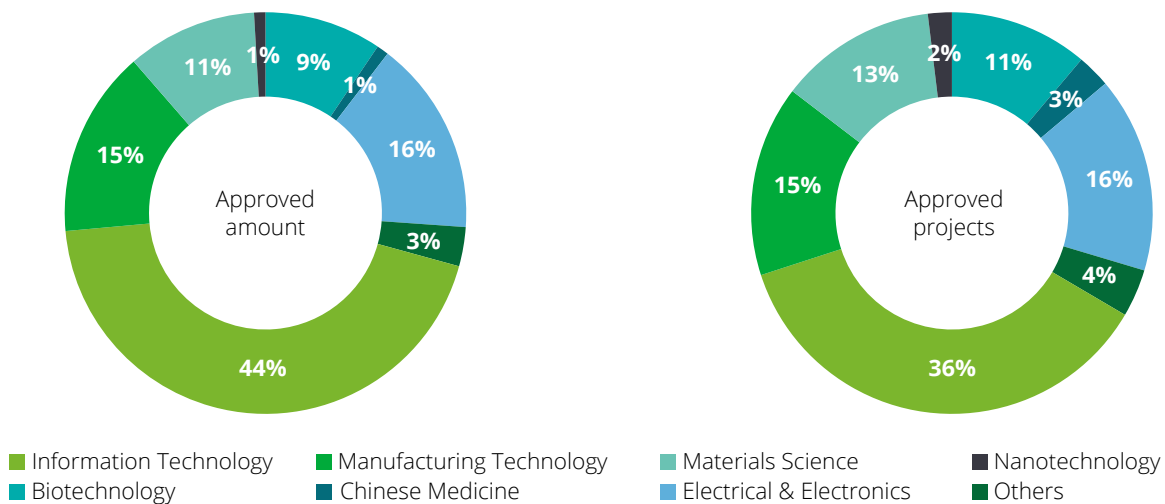
Source: Preqin, Deloitte Analysis

The surge in VC funding for healthcare is attributable to increased demand for healthtech and the growing number of biotech and medical tech companies in Hong Kong. This was driven by the COVID-19 pandemic, which has made the public more health-conscious

and accepting of remote and virtual medical solutions. Investors, meanwhile, are more aware of the innate, long-term nature of drug discovery, and are now willing to persevere throughout the journey.

Hong Kong Government as “strategic financier” to accelerate fund deployment

Approved projects and amount of ITF by technology sector (2020)³⁷



Source: ITF

The Government, through the ITF, has facilitated technological adoption and promoted innovation. The Technology Startup Support Scheme for Universities (TSSSU), established to encourage university students in Hong Kong to pursue entrepreneurship, has provided funding of about HKD120 million to 139 startups over the past three years. Over half of these startups have launched products. More than 40% have started to earn revenue and about 60% have received capital injections from other investors with a combined value of HKD530 million.³⁸

The ITVF was established in 2017 to stimulate private investment in Hong Kong I&T startups, co-investing in high potential startups on a 1 (government): 2 (private venture capital) ratio. As of October 2021, the fund has deployed around HKD142 million into 22 local I&T startups and attracted HKD889 million in private co-investments.⁴

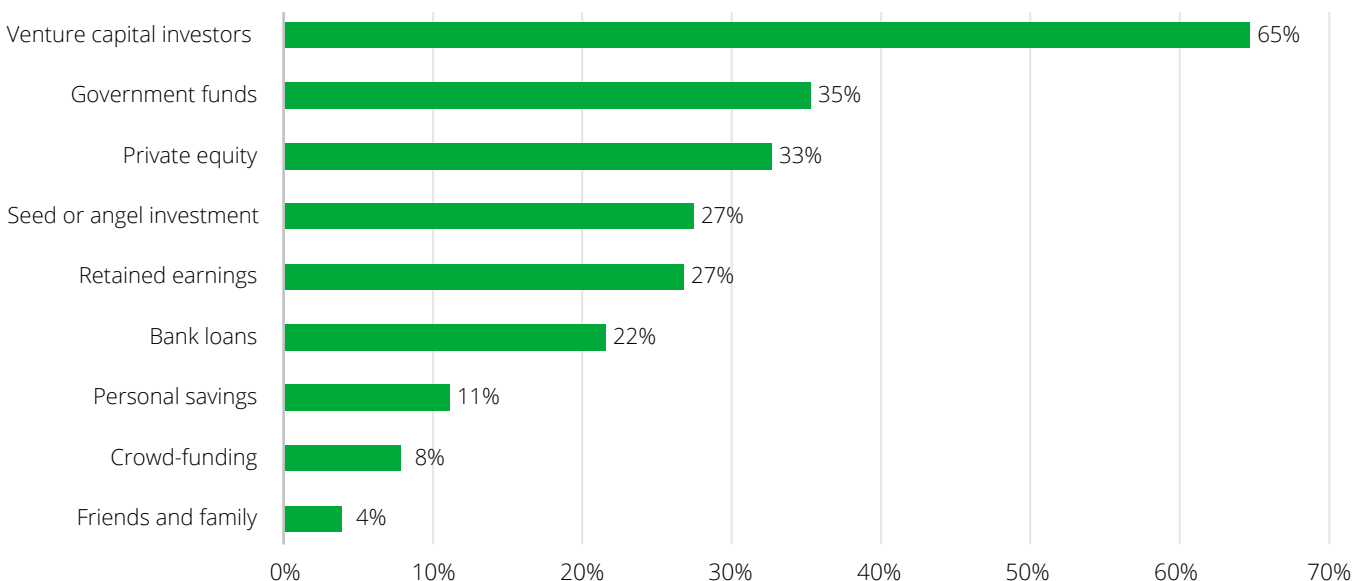
The Government also draws from other domains to boost startup funding in Hong Kong. Most recently, in the 2020-2021 Budget, it set aside 10% of Hong Kong's Future Fund to establish the Hong Kong Growth Portfolio. This is ring-fenced to invest in projects with a "Hong Kong nexus", and I&T is a target industry.³ It will expand the potential sources of funding for high-growth startups in Hong Kong.

Cyberport and the HKSTP have also played a vital role in the financing journeys of Hong Kong startups. Over

the past three years, I&T enterprises in the HKSTP and Cyberport have attracted more than HKD41 billion of investments. Today, HKSTP and Cyberport support 600 startups under their incubation programmes, with 1,300 graduates.³⁸ HKSTP has invested HKD238 million in 21 startups through its Corporate Venture Fund, attracting about HKD3.1 billion of private investment.⁵ It has also expanded three existing incubation programmes: Incu-App, Incu-Tech and Incu-Bio, and implemented the Science and Technology Entrepreneur Programme (STEP) to provide pre-incubation support to tech talent interested in starting a business. The Cyberport Macro Fund has invested more than HKD162 million in 20 companies, attracting over HKD1.42 billion of private investments, since 2017.⁵

These initiatives exist in parallel with private funding to support the financing of early and growth stage companies in Hong Kong. As the primary means for startups to gain funding, their momentum should be maintained. Over the next three years, 65% of entrepreneurs are likely to pursue investments from private venture capital investors, and only 35% plan to request government funds. This gap suggests entrepreneurs lack awareness of government funding initiatives. The Government should explore ways to make its funding programmes less administratively burdensome and increase their visibility.

What sources of funding do you expect to access in the next 3 years?



Source: Deloitte entrepreneur survey



Business support

Hong Kong has a well-connected, supportive network for startups that will continue to serve as an essential catalyst for cross-border ecosystem development. The number of co-working spaces, incubators and accelerators in Hong Kong is surging, providing startups with ample support to achieve success. To better integrate Hong Kong startups into the GBA network, there is a consensus that cross-border connectivity and support can be strengthened.



As a key incubator in Hong Kong, Cyberport is committed to uplifting the city's entrepreneurship in innovation and technology. Apart from providing startups with tailor-made support services, Cyberport also provides valuable testing and application scenarios through the adoption of digital solutions, ranging from smart building and 5G deployment, to renewable energy solutions, and more, on a pilot basis within our campus.

Peter Yan
CEO, Cyberport



Incubators and accelerators in Hong Kong host initiatives to meet the needs of high-tech startups, including by providing low-cost access to otherwise expensive research facilities, matching funds granted by venture capital firms, referring startups for new business opportunities, and providing mentoring and coaching services.

The number of co-working spaces, incubators and accelerators in Hong Kong expanded from 62 in 2017 to 124 in 2021 as entrepreneurial activity picked up.² In recent years, universities have started to launch incubation programmes. These guide students on how to turn their inventions into startups, and support faculty members and researchers looking to commercialise their scientific findings. Many large corporations, such as Eureka Nova of New World Group and Nan Fung Workshop of Nan Fung Group, have ramped up their contributions to incubators. They aim to nurture startups that could provide synergies to their core businesses. Some large corporations have invested directly in the incubated startups.

Government-funded Cyberport and HKSTP, which together incubate 200 startups a year, are among the largest incubation programmes in Hong Kong. Incubation programmes are often aimed at fostering entrepreneurial activity in a particular industry. HKSTP has Incu-Tech, Incu-App, Incu-Bio and STEP, and Cyberport runs artificial intelligence and fintech incubators.

These programmes accelerate the growth of startups and entrepreneurs by providing multiple resources. For instance, Cyberport's incubation programme offers digital technology entrepreneurs funding of up to HKD500,000, access to work space, meeting and conference rooms, networking opportunities with industry experts and other entrepreneurs, business support, investment-raising tools to nurture entrepreneurial spirit, business know-how, technical assistance, marketing support, and talent networking.

HKSTP and Cyberport also provide startups with soft services such as legal and tax consultancy, introductions to entrepreneurs, and connections to potential clients. In

some cases, HKSTP introduces companies to lawyers and IP or patent experts who can assist in polishing proposals and offer legal advice to protect and maximise the value of inventions.

Patents are vital to the success of startups in today's competitive and dynamic environment. As a leading world city, Hong Kong has a mature legal system with high standards of transparency, trust and fairness. This gives startups great assurance that their contracts will be honoured, disputes will be solved fairly, and intellectual property will be protected. Hong Kong's Intellectual Property Department encourages startups to harness their intangible intellectual property by offering training courses and free consultations.

Entrepreneurs appreciate the business support services available in Hong Kong, and hope to see additional support for cross-border expansion

Entrepreneurs in Hong Kong are generally positive on the support provided to them, with 56% convinced this is sufficient through incubation or acceleration programmes. About half of entrepreneurs agreed that they receive enough support by being introduced to industry startup networking events (53%) and investor events (50%), including business matching, trade shows and pitch competitions, although a mere 21% said R&D commercialisation support is sufficient.

Among those who have participated in incubation or acceleration programmes, 78% were satisfied with the marketing or advertising support they received, 78% with the support for business skills development, and 77% with the resources for network development.

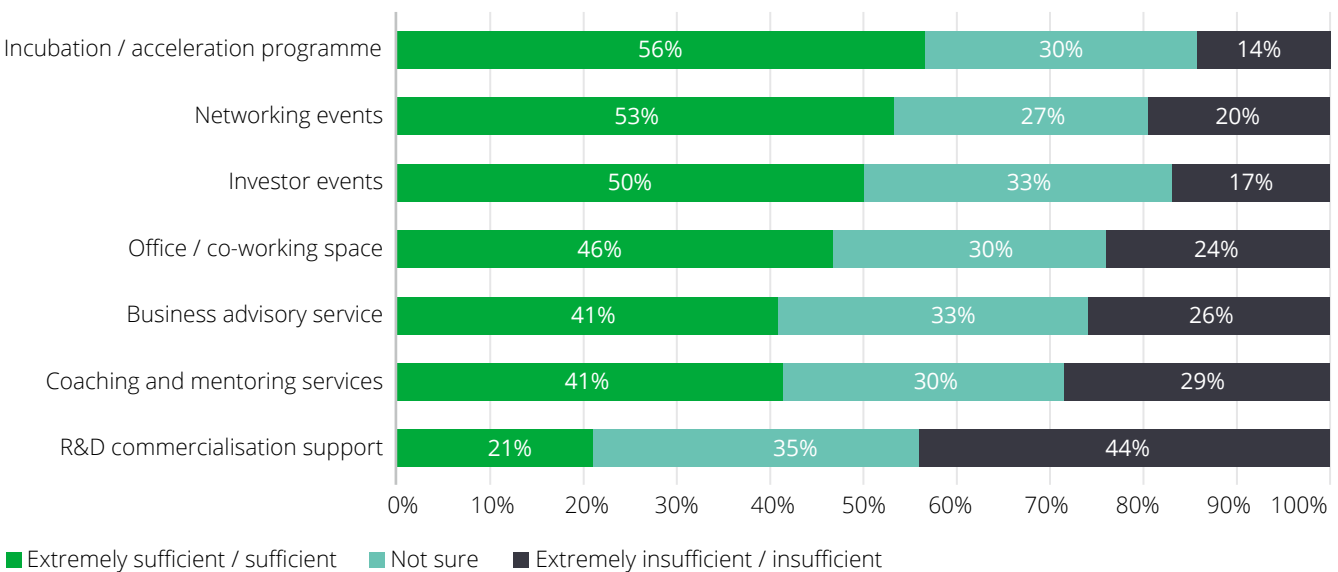


We benefited a lot from various support policies, such as preferential rental programmes and tech talent admission schemes. We also take good advantage of the leading laboratory facilities and testing equipment provided by HKSTP, and the accelerator programmes that helped turn our business ideas into an initial prototype and finally a viable product.

Marvin Ma
CEO, Bone's Technology Limited

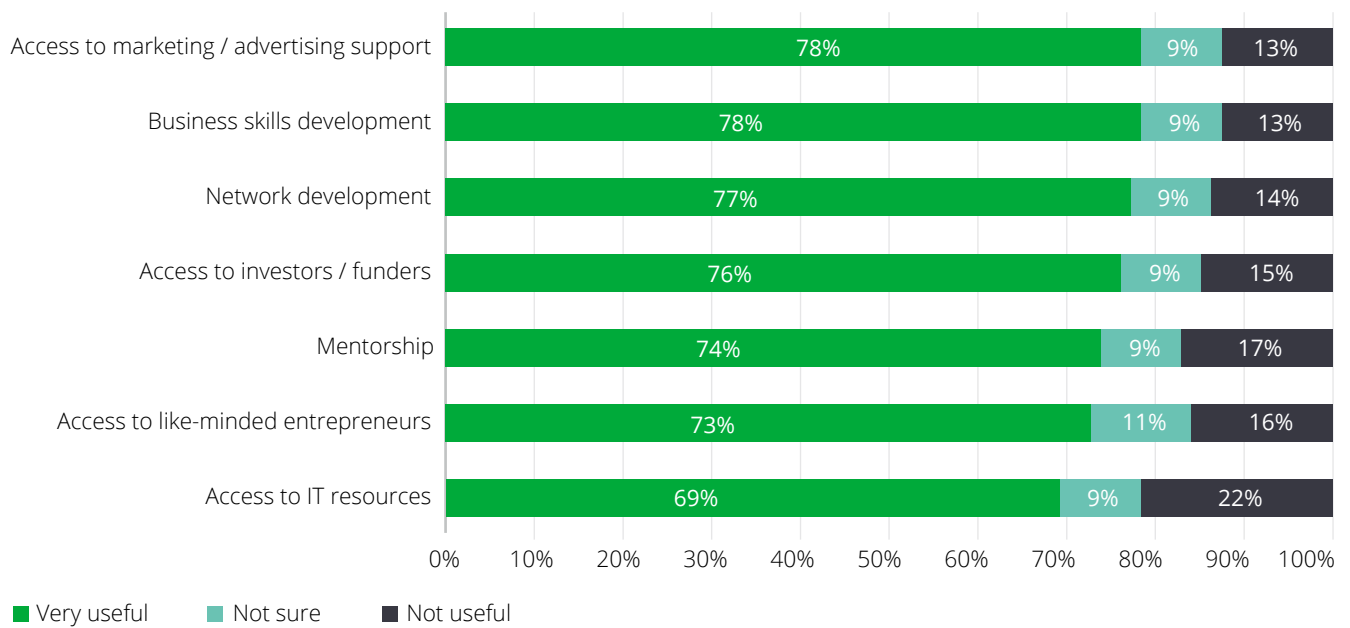


Entrepreneurs' views on whether support for startups is sufficient



Source: Deloitte entrepreneur survey

Satisfaction with the services provided by incubators and accelerators



Source: Deloitte entrepreneur survey

To better integrate Hong Kong startups within the GBA network, there is a rise of cross-border business support initiatives. For example, HKTDC introduced the GoGBA one-stop platform in June 2021, which provides small and medium enterprises in Hong Kong advisory and business support through its Transformation Sandbox (T-box), online and physical exhibitions and conferences, and WeChat mini-programme (GoGBA), etc.

However, there is a consensus among stakeholders that additional marketing should be done to increase visibility and promote cross-border business support that is available to Hong Kong startups who wish to expand into the GBA. Cross-boundary advisory support can also be strengthened, particularly legal advisory and professional services support.

Hong Kong startups that aspire to tap into opportunities in the GBA require additional resources to ensure smooth expansions. In the latest Policy Address, the Government announced that HKSTP will be establishing GBA InnoExpress to provide startups with the support required to expand internationally and attract foreign investment.³ HKSTP has extensive partnerships with key industry players such as Ant Group and Brinc, and leverages these networks to provide GBA InnoExpress participants with valuable insights into GBA expansion. The programme helps entrepreneurs think internationally and realise the potential for their businesses outside Hong Kong. A handful of key stakeholders mentioned the importance of establishing global companies to elevate Hong Kong's position as a world-class innovation hub. GBA InnoExpress will facilitate this mission.



Culture and norms

Hong Kong has a sophisticated business culture with a budding entrepreneurial mindset among young people, but requires a startup friendly environment to nurture the next unicorns.

Although many students believe entrepreneurial spirit in Hong Kong is on the rise, far fewer desire to work in or establish their own startups. Hong Kong needs a risk-taking culture to foster innovation amid intensifying global competition for young talent, capital and startups.

"We have witnessed a growing interest in entrepreneurship among our students, as demonstrated by the increasing number of startups championed by our students and graduates." Professor Michael Yang

illustrated the inherent entrepreneurial spirit of Hong Kong youth, who should venture beyond boundaries and explore opportunities in and outside Hong Kong.



Entrepreneurship has prevailed in recent years. The growth of Hong Kong's startup ecosystem indeed hinges on the collaboration of various stakeholders, including investors, academia, the Government and supportive professional services. These are essential elements that help an entrepreneur turn their innovative ideas into products.

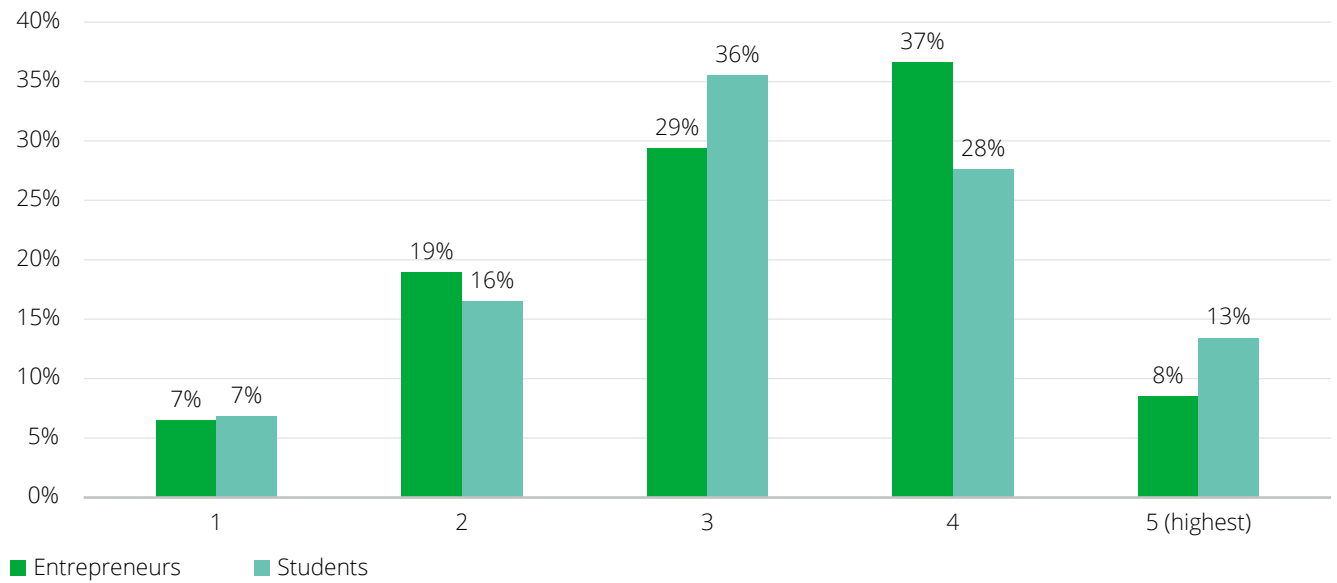
Innovate For Future was established by a group of front-line entrepreneurs. We advocate Hong Kong's economic transformation with innovation and technology and encourage startups to make efforts to grasp growth opportunities in the post-COVID "new normal".

Duncan Chiu

Convenor, Innovate For Future



Entrepreneurs' and students' views on Hong Kong entrepreneurial spirit

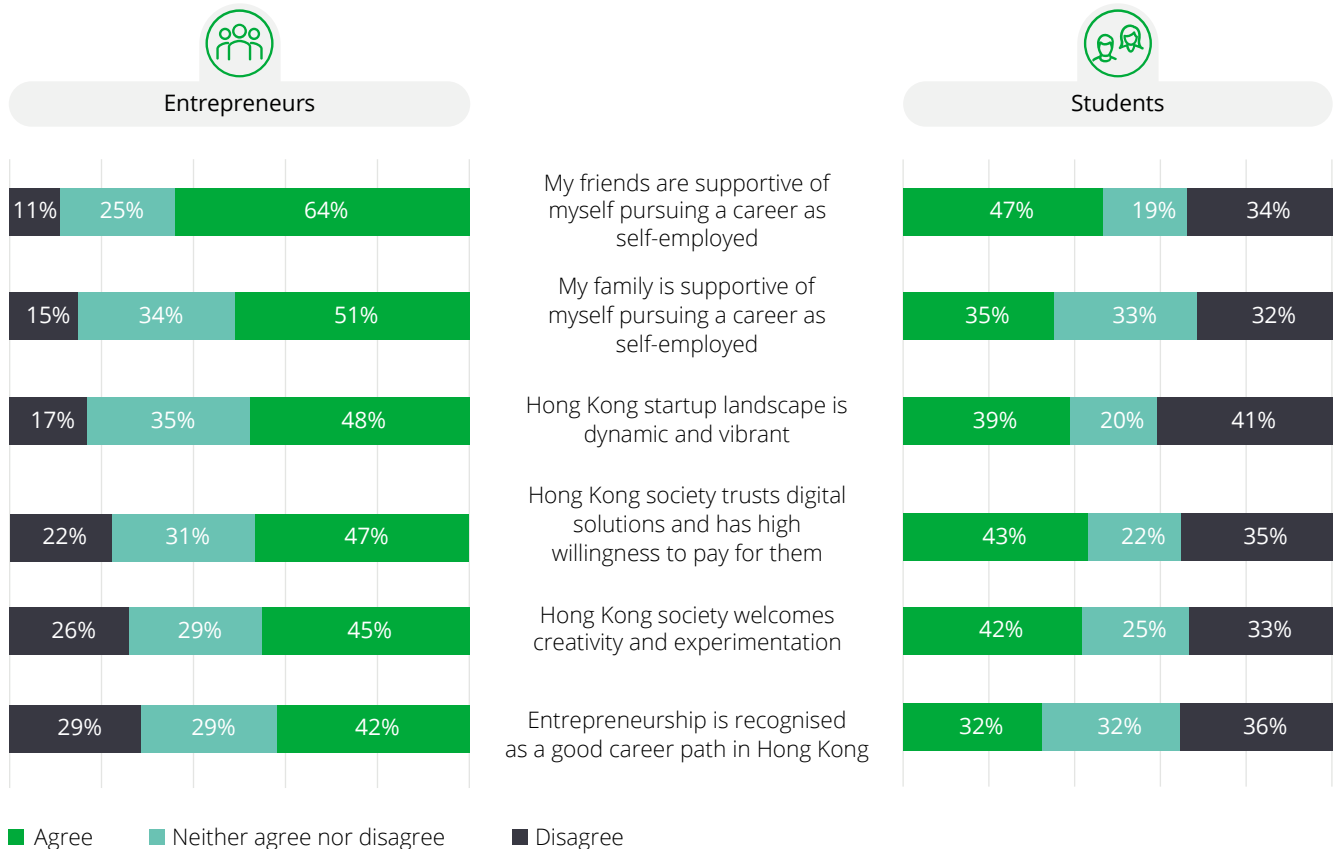


Source: Deloitte entrepreneur & student survey

More than 40% of entrepreneurs and students surveyed rated Hong Kong's entrepreneurial spirit at 4 or above. 29% of entrepreneurs and 36% of students view this as

average, with the remaining minority rating it below 3, indicating ample room for improvement.

Entrepreneurs' and students' views on Hong Kong entrepreneurial culture

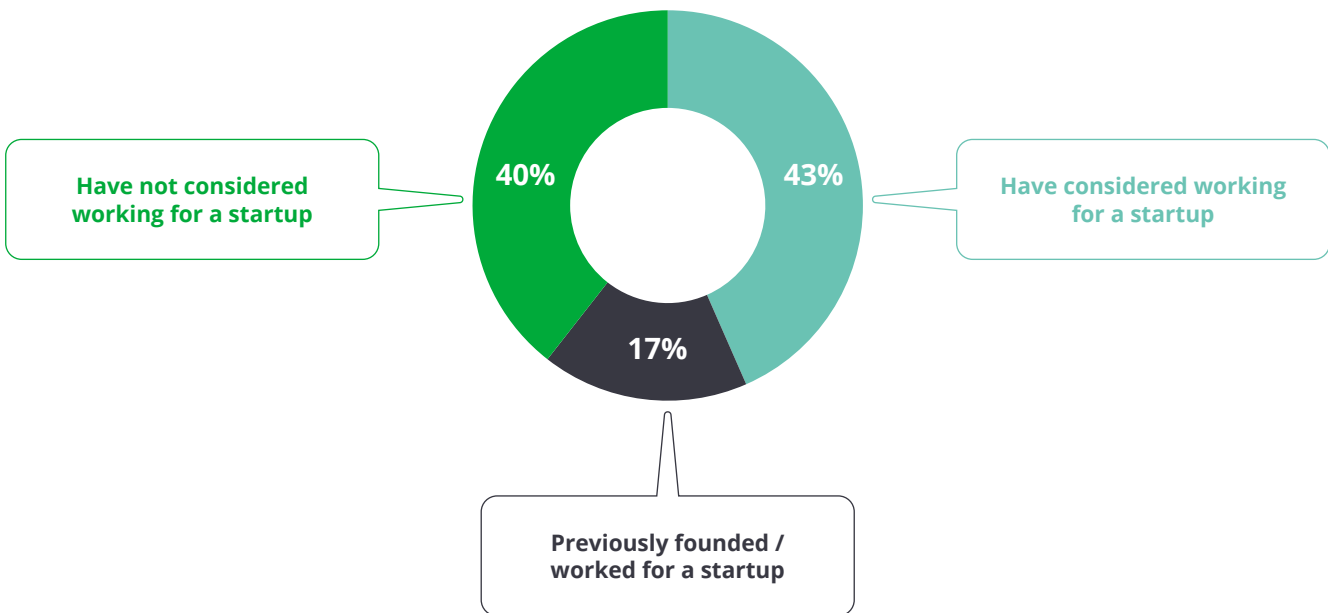


Source: Deloitte entrepreneur & student survey

Entrepreneurs tend to have a more positive view than students do of Hong Kong's entrepreneurial culture, with 64% of entrepreneurs but only 47% of students indicating they get support from friends, and 51% of

entrepreneurs but only 35% of students saying their family is supportive of them pursuing a career as self-employed.

Entrepreneurial intention of students



Source: Deloitte student survey analysis

Many students have entrepreneurial intentions, with 60% having worked at a startup before, currently working for a startup, or considering working for one.

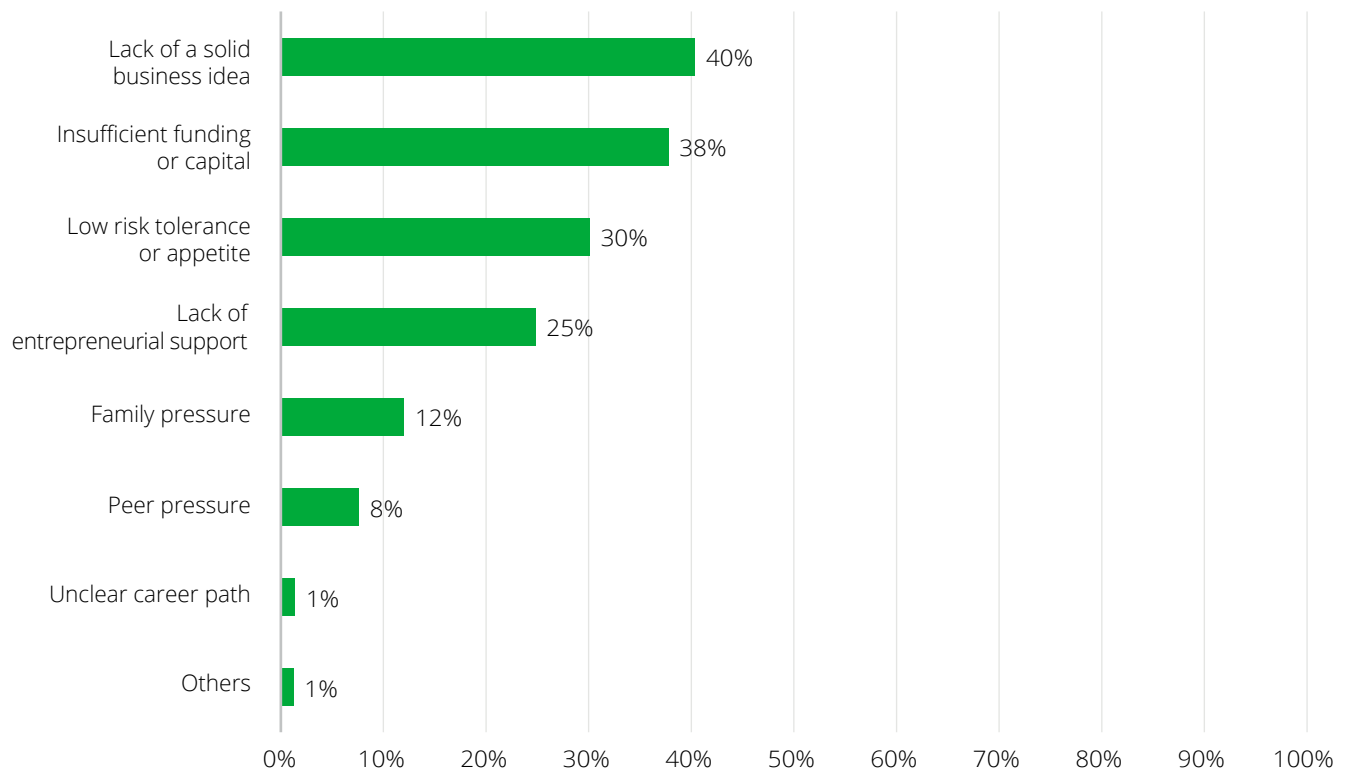
In recent years, efforts to increase students' exposure to entrepreneurship have been seen in universities' entrepreneurship-based programmes and business plan competitions. For example, PolyU and HKSTP announced a partnership in August 2021 on a joint GBA-focused entrepreneurship programme,³⁹ which aims to nurture young R&D talent to become Hong Kong's next generation of leading tech entrepreneurs and innovators. This programme will leverage HKSTP's strength in ideation and pre-incubation, and PolyU's expertise in entrepreneurship education and knowledge transfer. HKUST also signed an MoU with HKSTP in August 2021 to establish a co-incubation programme, aiming to create a cross-border laboratory platform and provide early-stage startups with R&D development and expansion opportunities.

The City I&T Grand Challenge and Alibaba Entrepreneurs Fund's Jumpstarter IdeaPOP! are

successful examples of increasing young students' exposure to entrepreneurship. The City I&T Grand Challenge is a pitch competition launched by ITC and HKSTP, with online judging, a five-day semi-pitch and the Grand Pitch. Alibaba Entrepreneurs Fund's Jumpstarter IdeaPOP! is a pitch competition open to students in Hong Kong, allowing local startups to pitch to top investors, interact with industry leaders, and connect with the Alibaba Ecosystem that provides students with mentorship and training.

Breer, a sustainable beer brand startup that upcycles bread waste into craft beer, was named Champion of Environmental Sustainability in the 2021 City I&T Grand Challenge, and awarded the 2nd runner-up prize in 2021 Jumpstarter IdeaPOP!. Through these competitions, Breer was given exceptional networking opportunities and received entrepreneurial support such as valuable guidance on branding, business development and partnerships.

Reasons for students not considering a startup career



Source: Deloitte student survey analysis

Students' main reasons for not considering a startup are the lack of a solid business idea and insufficient funding and capital. This matches our stakeholder interviews, in which students lacked insights into market gaps and did not understand the funding sources available to them.

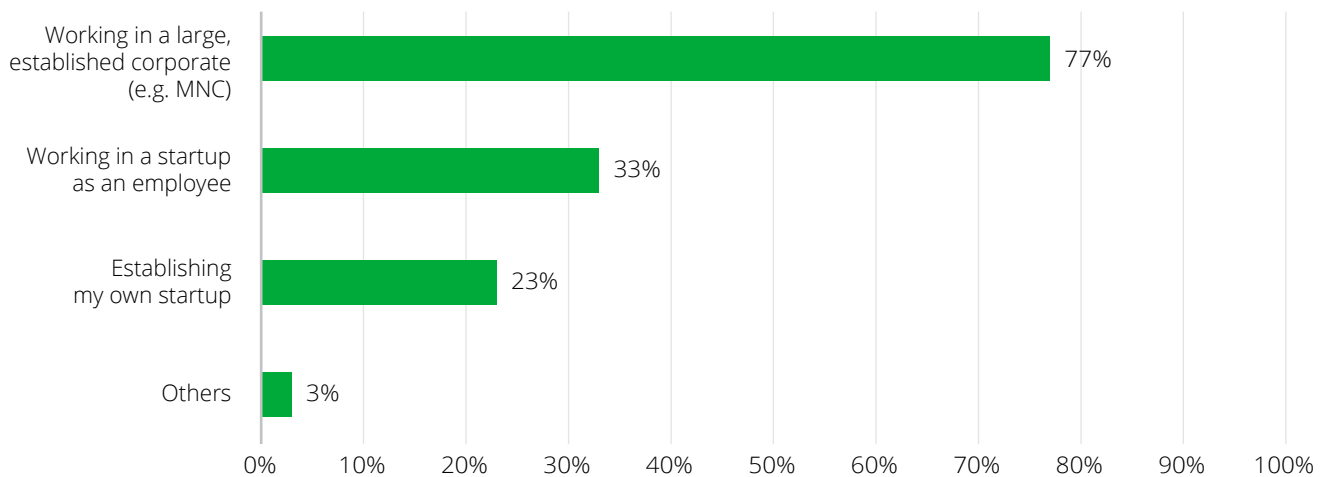
This highlights the potential effectiveness of incubators and accelerators targeted at university students and actively encouraging participation. They give students an opportunity to test the validity of their ideas with limited opportunity cost (versus being employed in a stable job). They also provide them with the capital required to turn ideas into products, and test these in the market to verify if their business ideas are feasible as full-time careers. Ultimately, the goal is not for every student to pursue a career at a startup, but to pave the way for those who have the interest and commitment to take this leap.

A majority (77%) of students desire to work at a large corporation on graduation, with merely 33% keen on joining a startup (as an employee) and 23% interested

in being a startup founder. This is likely due to the traditional mindset of Hong Kong citizens, who tend to prize jobs with stable career trajectories. Hong Kong needs a more risk-taking culture to foster innovation amid intensifying global competition for young talent, capital and startups, and should more prominently celebrate success stories and startup heroes to inspire the next generation.

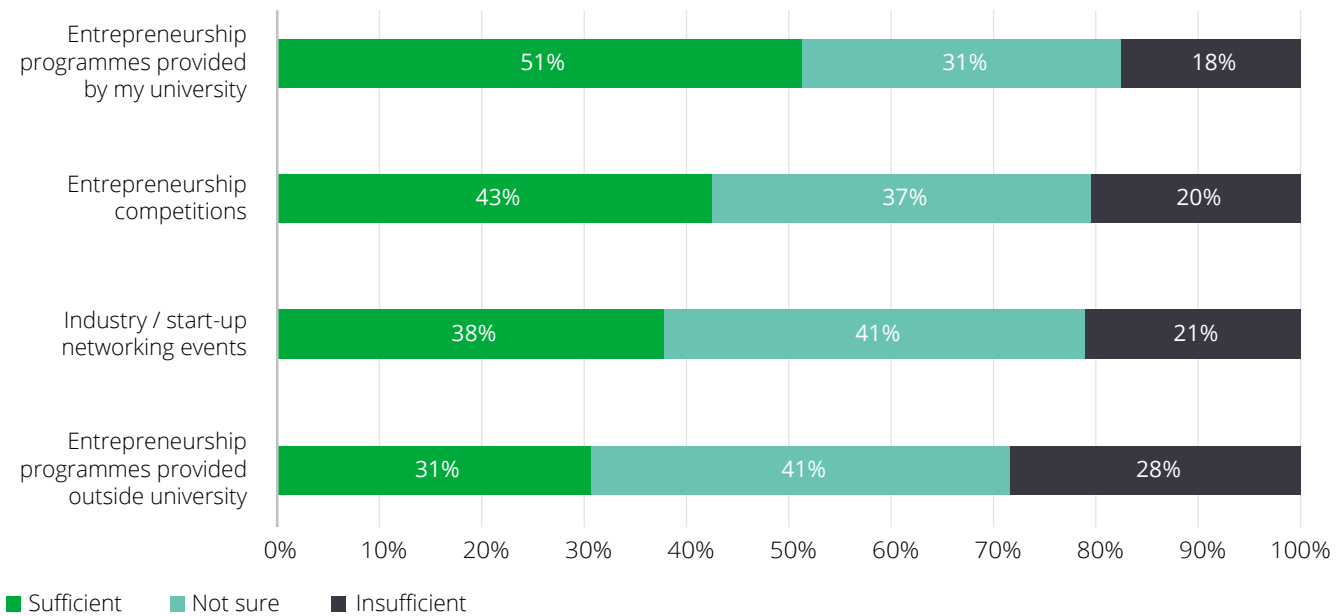
Ruby Lam, the Head (Career Centre), Dean of Students' Office at HKUST, points out that "Entrepreneurship has become increasingly popular among students these days. That said, many of them find it difficult to choose between working for an established company and working for a startup, as the general community often has a limited understanding of the career prospects and potential growth of becoming an entrepreneur. Through sharing more entrepreneurial success stories with the public, we hope to increase the awareness in the general community about the potential opportunities and growth for entrepreneurs and young companies."

Career aspiration among students after graduation



Source: Deloitte student survey analysis

Students on whether entrepreneurial support is sufficient



Source: Deloitte student survey analysis

Generally, students view the entrepreneurial support provided to them in Hong Kong as adequate, with over half agreeing their universities provide sufficient support by hosting entrepreneur programmes. Student entrepreneurs echoed these sentiments. Ricky Cheng, a HKUST entrepreneur who co-founded the startup HONMAR Biomedical, comments that through the support from the HKUST Entrepreneurship Centre, his business is able to connect with the alumni circle to access promising business activities as well as financial support for brand development and GBA expansion. In addition, the HKUST Technology Transfer Centre

provided comprehensive support in helping his startup commercialise patent products and services. Swapnil Mishra, another student entrepreneur from HKUST and founder of Planetears, remarks, "being a non-local student, I came to HKUST with a mind open to all possibilities... The HKUST Entrepreneurship Centre has been supportive and has been critical in scouting opportunities for us... I think the future for the Hong Kong startup ecosystem is one where startups will focus on solving societal issues and will be drivers of change if well supported by universities, incubators, and related institutions."

Ride on policy tailwinds: tapping into the GBA initiative

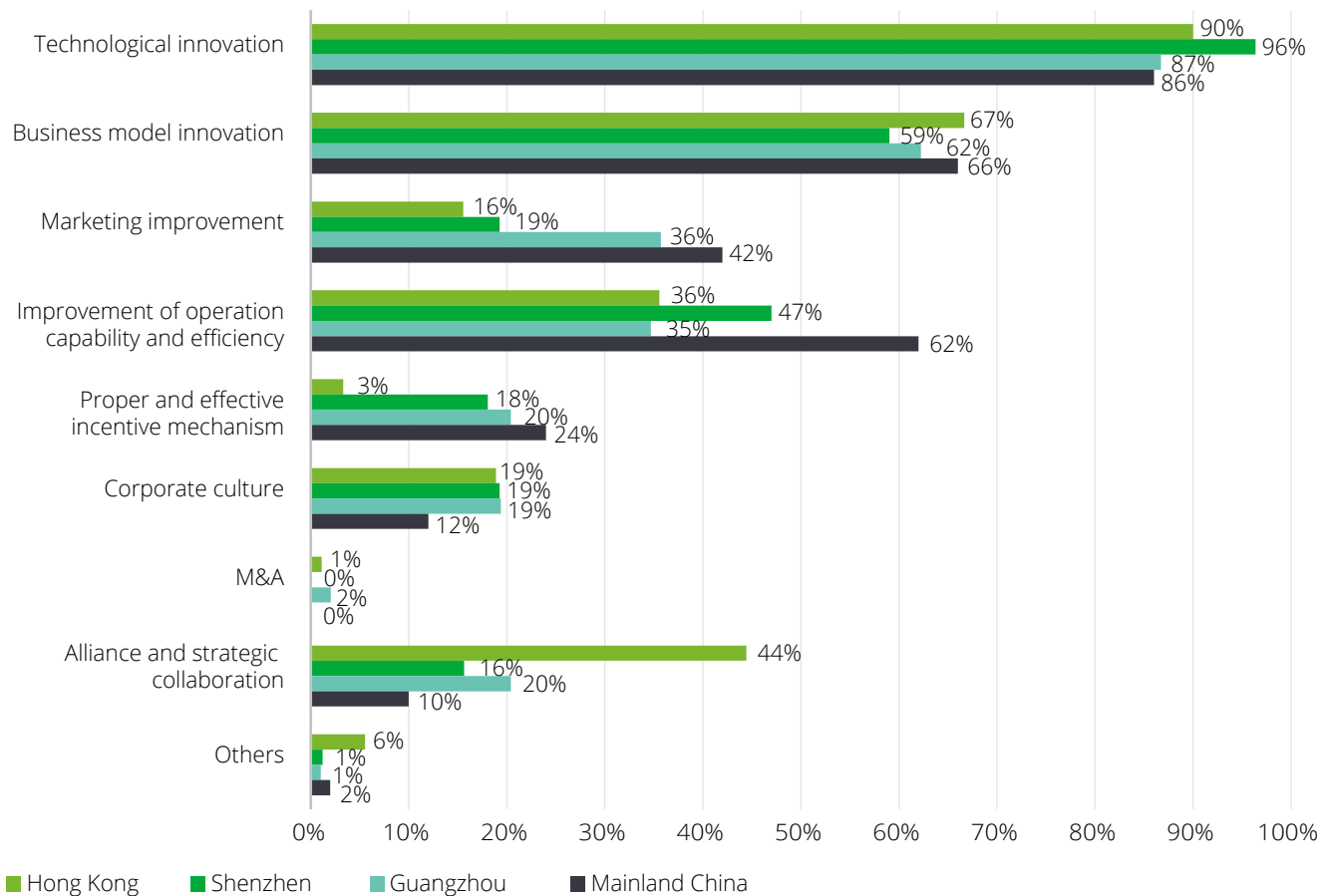
The Central Government has ambitious aspirations for Hong Kong, Macau and the nine Mainland cities of the Greater Bay Area to rise together as an innovation powerhouse comparable to Silicon Valley in the United States.

Plan, the Central Government encourages Hong Kong to elevate its status as an international aviation hub, develop into an international I&T hub, build towards becoming a regional intellectual property trading centre, and establish itself as a hub for artistic and cultural exchange between China and the rest of the world.⁴⁰

Hong Kong has a pivotal role in China's innovation and technology development. Under the 14th Five-Year

Comparing Hong Kong, GBA and other Chinese Mainland cities

Key drivers of companies' growth

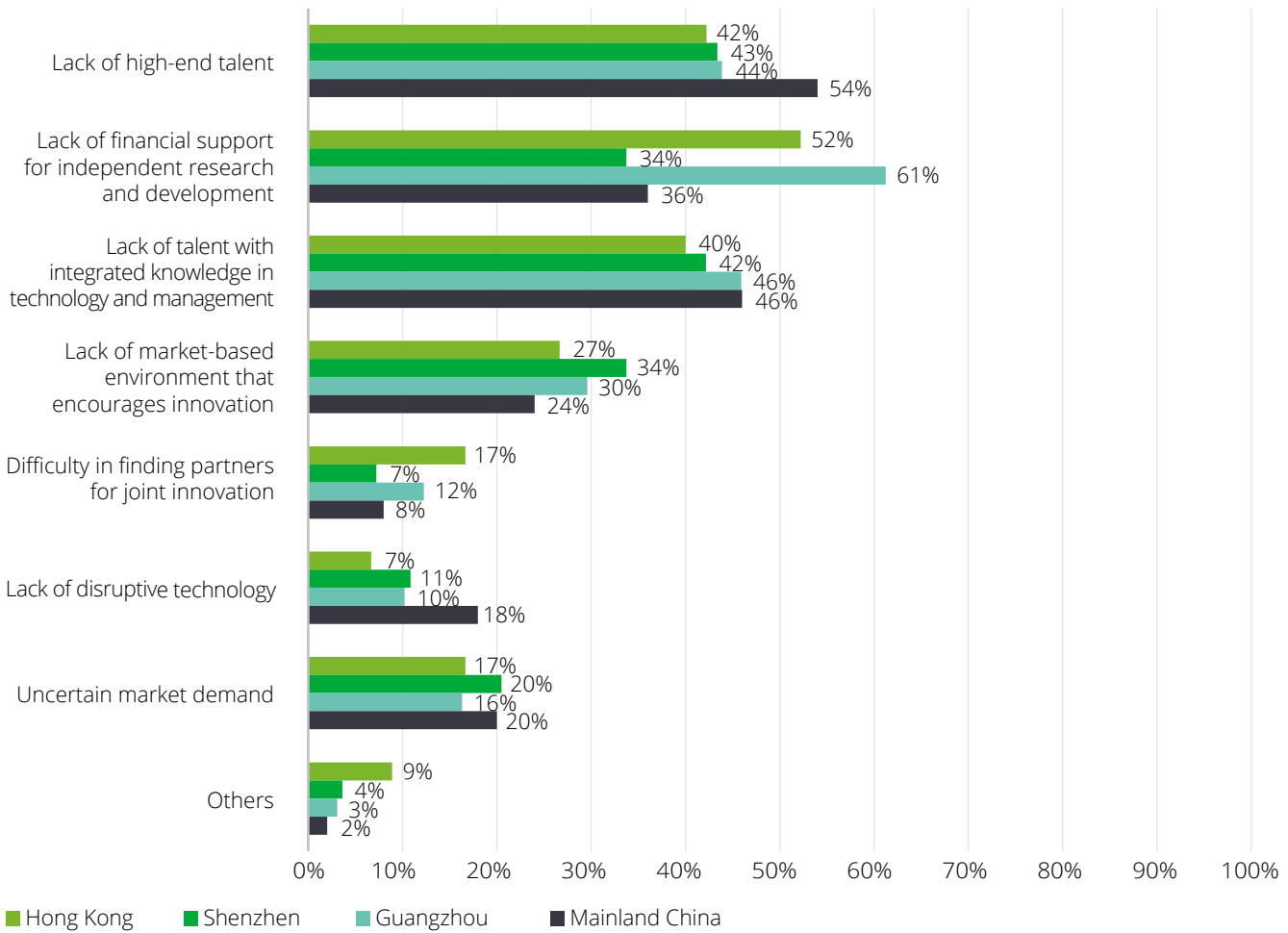


Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

Across every city, high-growth startups attribute their success to the ability to deploy technological innovations. This is true for almost all of the startups in Shenzhen (96%), and very large majorities in Hong Kong (90%) and Guangzhou (87%). Rapid changes in consumer

preferences and increasing volatility in the marketplace has made it crucial for startups to adopt agile business models. 67% of Hong Kong startups share this sentiment and agree that business model innovation as a key driver of their companies' growth.

Challenges hindering technological innovation



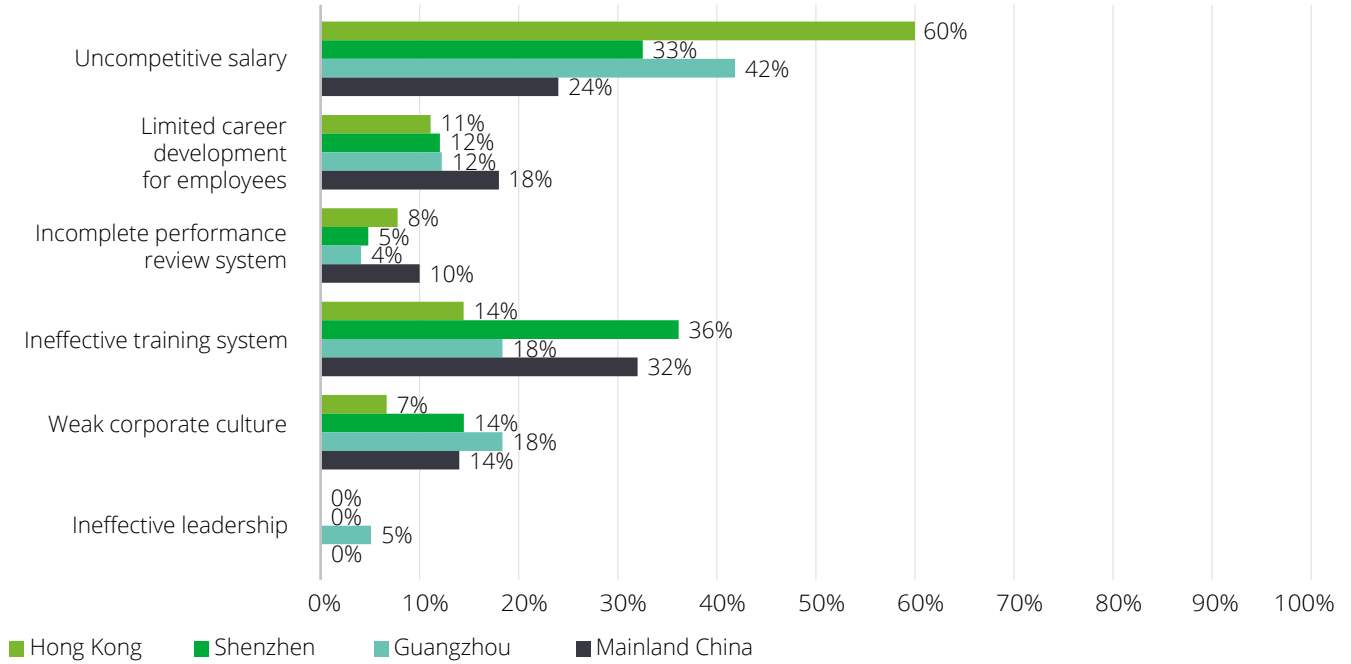
Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

More than half of Hong Kong startups surveyed (52%) find it challenging to secure funding to support R&D, citing the lack of financial support for independent R&D as a challenge hindering technological innovation. This could be because current government funding schemes in Hong Kong are typically concentrated in designated sectors or innovative companies in fields that fulfil HKSAR's strategic needs. The gap is further widened by a relative lack of funding support from private investors for R&D-driven companies. Private investors have historically favoured companies that produce applied technologies as these tend to result in a higher return over a shorter investment horizon. Startups are largely driven by R&D, making investors less likely to invest in them. Hence, it is

important for the Hong Kong Government to expand the eligibility of its funding programmes to encapsulate more startups and stimulate funding from private investors. It could, for example, share the risk with private investors by providing guarantees or co-investing in joint funds.

42% of Hong Kong startups felt there is a shortage of quality talent. Difficulty in securing quality talent is a sentiment shared by 43% of Shenzhen and 44% Guangzhou startups. A few of the Hong Kong entrepreneurs surveyed revealed that their companies' expansion plans have been impacted by a shortage of mid-level engineers and technicians.

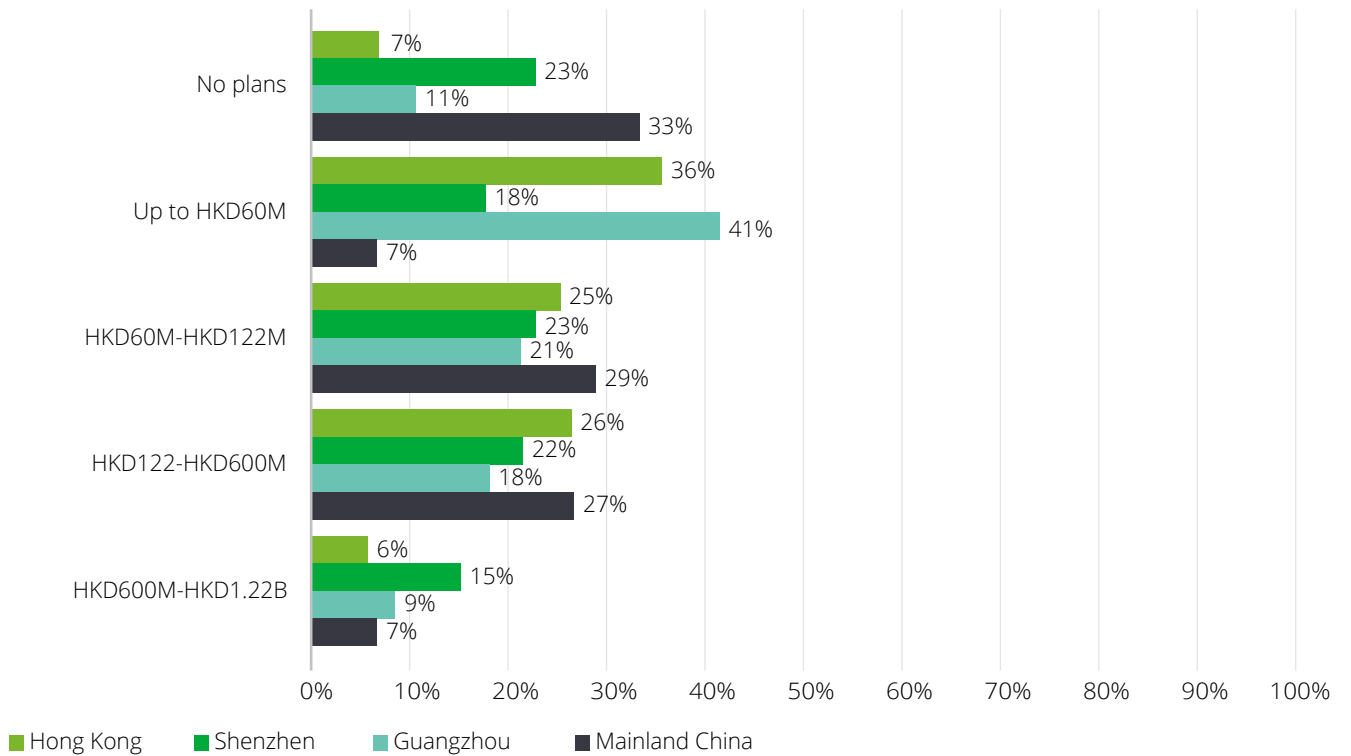
Talent attraction and retention



Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

A majority (60%) of Hong Kong entrepreneurs feel their inability to offer a competitive salary is the main hindrance to attracting and retaining high quality talent, versus just 33% in Shenzhen and 42% in Guangzhou.

Financing plans for the next two years

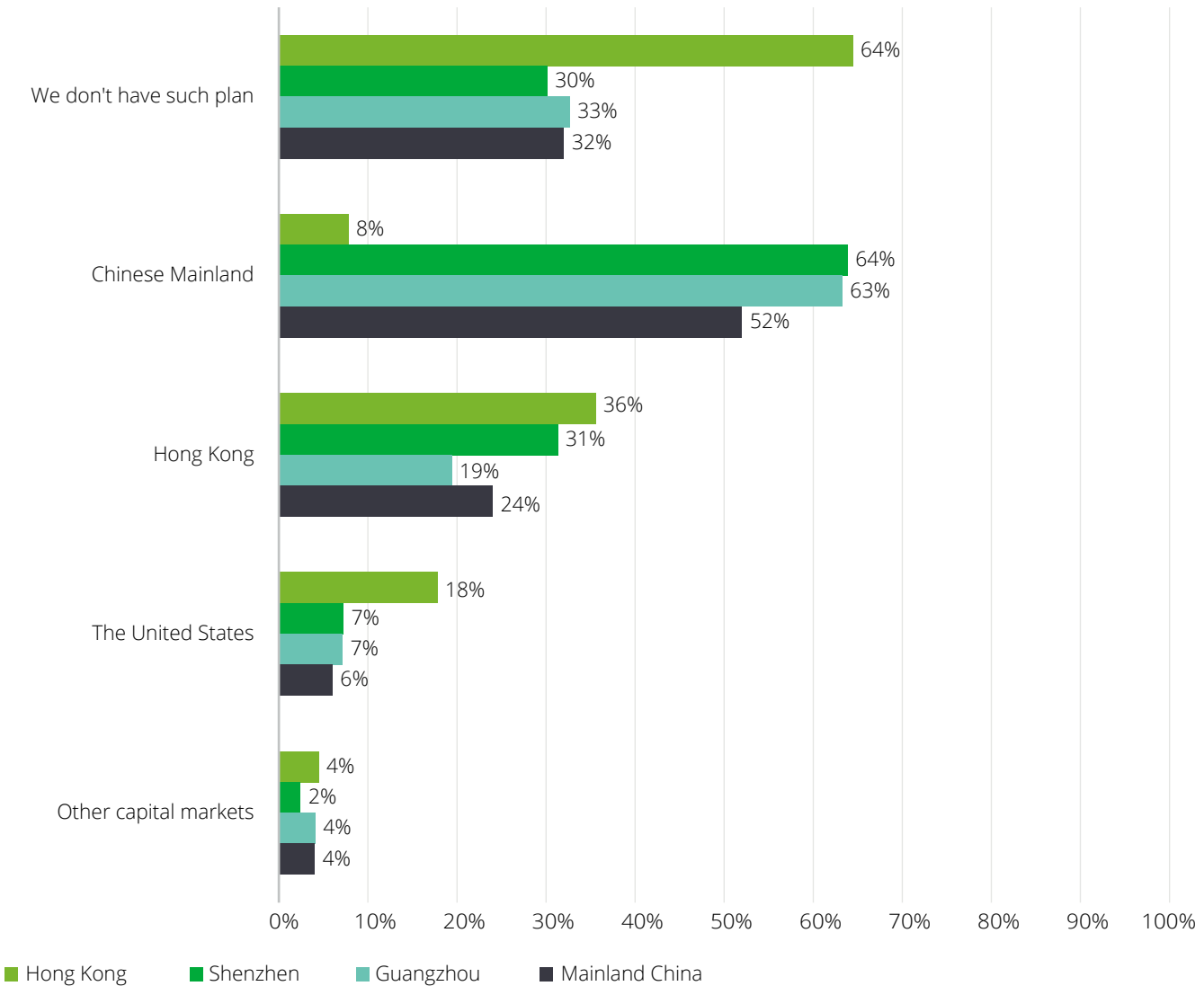


Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

A majority of Hong Kong startups plan to raise funds in the next two years. About 61% will be seeking less than HKD122 million, and 26% of them targeting HKD122 million to HKD600 million. Fewer than 10% intend to raise between HKD600 million and HKD1.22 billion. Overall,

Shenzhen and Guangzhou entrepreneurs have more ambitious financing plans than Hong Kong entrepreneurs do. Among all cities, Shenzhen startups are seeking larger financing given the city's vigorous innovation momentum.

Initial Public Offering (IPO) plans for the next two years and target market

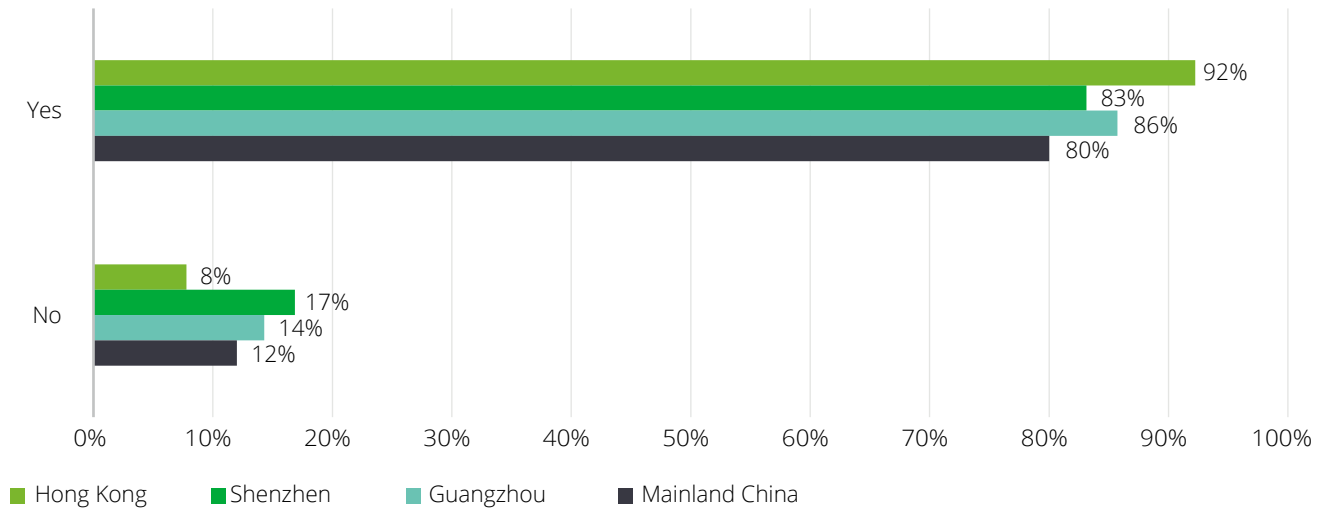


Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

More than 60% of Hong Kong entrepreneurs do not plan to list their companies in an IPO in the next two years. In contrast, most Shenzhen (70%) and Guangzhou (67%) entrepreneurs plan to list. A majority of Hong Kong startups with IPO plans aim to list in Hong Kong or the United States, whereas entrepreneurs from Shenzhen

and Guangzhou are leaning towards listings on Chinese Mainland stock exchanges. Startups in Shenzhen and Guangzhou are at a mature stage, given their larger appetite for IPOs, and tend to be more localised, whereas Hong Kong startups are more globally oriented.

Future expansion plans

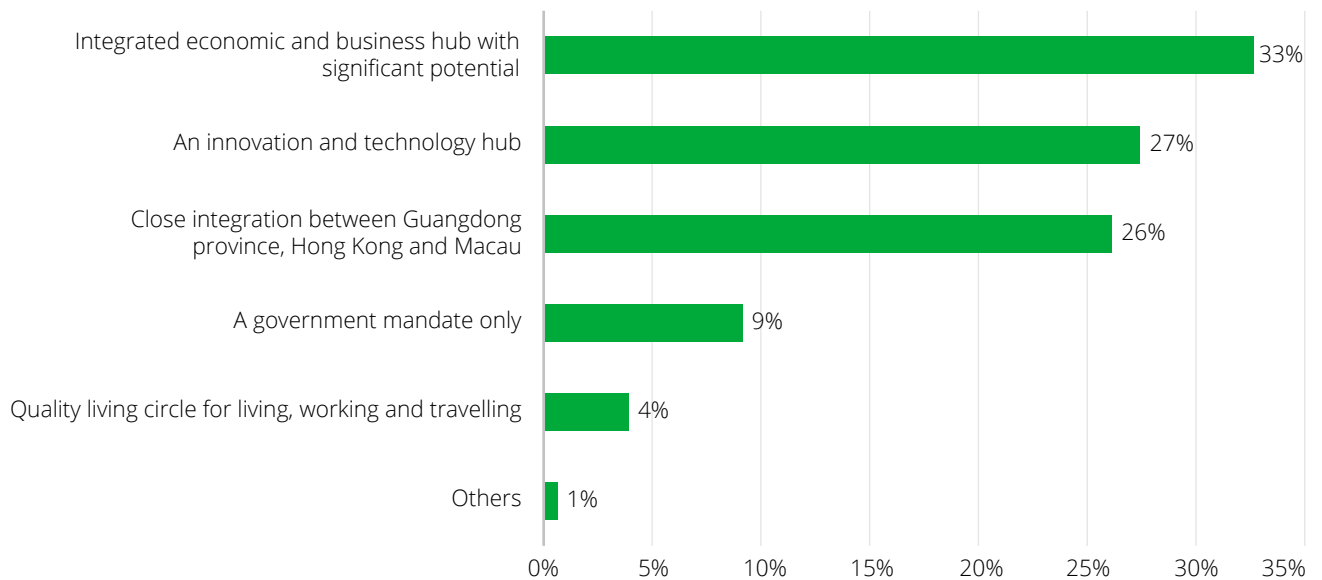


Source: Deloitte entrepreneur survey
 Note: Mainland China refers to Beijing, Guangzhou, Shenzhen, and Wuhan

A large majority (more than 80%) of entrepreneurs across all three cities have plans to set up their headquarters or a branch in other regions, demonstrating an appetite to expand their geographical reach.

GBA seen as “integrated economic and business hub with significant potential”

Perceptions of the Greater Bay Area



Source: Deloitte entrepreneur survey

33% of entrepreneurs think “an integrated economic and business hub with significant potential” best describes the GBA, followed by “an innovation and technology hub” (27%) and “close integration between Guangdong, Hong Kong and Macau” (26%).

This is attributable to the tremendous efforts made to strengthen Hong Kong’s ties with the GBA, including a series of initiatives and programmes covering cross-border transport infrastructure, clearance facilitation, and collaboration on scientific research, talent exchange and medical services.

Initiatives to promote Hong Kong’s integration with the GBA (non-exhaustive)

Dimension	Launch date	Programme	Objective
Research collaboration	Apr. 2019	Guangdong-Hong Kong Technology Cooperation Funding Scheme	Promote I&T exchange and collaboration
	Apr. 2019	Mainland-Hong Kong Joint Funding Scheme	
	Nov. 2018	The affiliated institution of Chinese Academy of Sciences in Hong Kong	
	Jul. 2018	Tax deduction for qualified companies conducting R&D in GBA	
Flow of talent	Nov. 2020	The Greater Bay Area Youth Employment Scheme	Support youth in Hong Kong to start their own businesses and explore different career opportunities in the GBA
	Mar. 2019	Funding scheme for Youth Entrepreneurship in the GBA	
	Mar. 2019	Funding scheme for Experiential Programmes at Innovation and Entrepreneurial Bases in the GBA	
Flow of capital	Sep. 2021	Wealth Management Connect	Allow residents to make cross-boundary investments in wealth management products distributed by banks

Source: Deloitte entrepreneur survey

A launch pad for Hong Kong's startups to tap into bigger markets

Hong Kong’s diverse population makes it an ideal testing ground for local startups. However, its small population of just over 7.4 million people can constrain growth. Startups therefore need to expand into larger markets to accelerate their growth. The GBA has a population

of 86 million and GDP of USD1,669 billion as of 2020,⁴¹ contributing 11% of China’s GDP.⁴² It is recognised as one the most prosperous, dynamic regions in China. The GBA offers Hong Kong startups a larger customer base, additional agile and smart manufacturing facilities, and a wider pool of talent. It will also serve as a launch pad for startups to expand into Mainland Chinese markets.



After years of exploration, HKX has successfully helped scientists, doctoral researchers, and students in universities turn their ideas, inventions, and breakthroughs into commercially viable products. Moving forward, efforts should be put into helping the R&D community to improve their products, expand their market coverage, and scale their businesses by connecting them to supply chain expertise in the GBA cities.

Prof. Guanhua Chen
Co-founder, HKX



Case study

SmartMore – Pioneering smart manufacturing in Hong Kong

Established in 2019, SmartMore is a rising AI startup that empowers manufacturing companies with comprehensive, smart solutions based on computer vision technology. The company was founded by a tenured computer science and engineering professor at The Chinese University of Hong Kong and two of his PhD students.

SmartMore started its business in the Greater Bay Area and has benefited from the combined effect of the region's AI industrial chain. Currently, it has R&D centres in Hong Kong and Shenzhen, leveraging the talent advantages of each place and driving synergistic R&D.

“ As a local high technology company, SmartMore has faith in the Hong Kong economy's re-industrialisation, and aspires to represent Hong Kong in promoting and spreading its technology breakthroughs to the rest of the world. Together, we can build a new “Hong Kong smart manufacturing” brand.

Prof. Jiaya, Jia
Founder and Chairman of SmartMore

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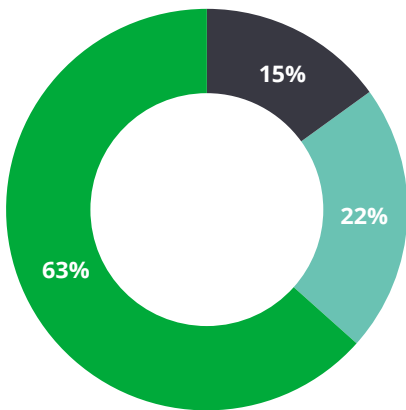
According to the survey, about 33% of entrepreneurs have already established a presence in the GBA, mostly in Shenzhen (65%), Guangzhou (39%) or Dongguan (29%). The top three business functions they have established in Mainland GBA cities are sales & distribution (25%), production (25%), and R&D (20%). For sales & distribution and R&D, Shenzhen and Guangzhou are the most popular cities. For production, Dongguan and Shenzhen are most favoured.

Despite about 50% of startups having concerns about the different regulatory systems in Hong Kong and the

Mainland GBA cities, as revealed in our survey results, most entrepreneurs are relatively positive about the GBA's fast-growing business opportunities.

About 63% of them expressed a strong interest in expanding to GBA cities over the next three years. The survey also highlighted the three major advantages of the GBA that entrepreneurs value most: opportunities to access a larger market (65%), reach strong talent pools (40%), and gain exposure to and partnership opportunities with large corporations (30%).

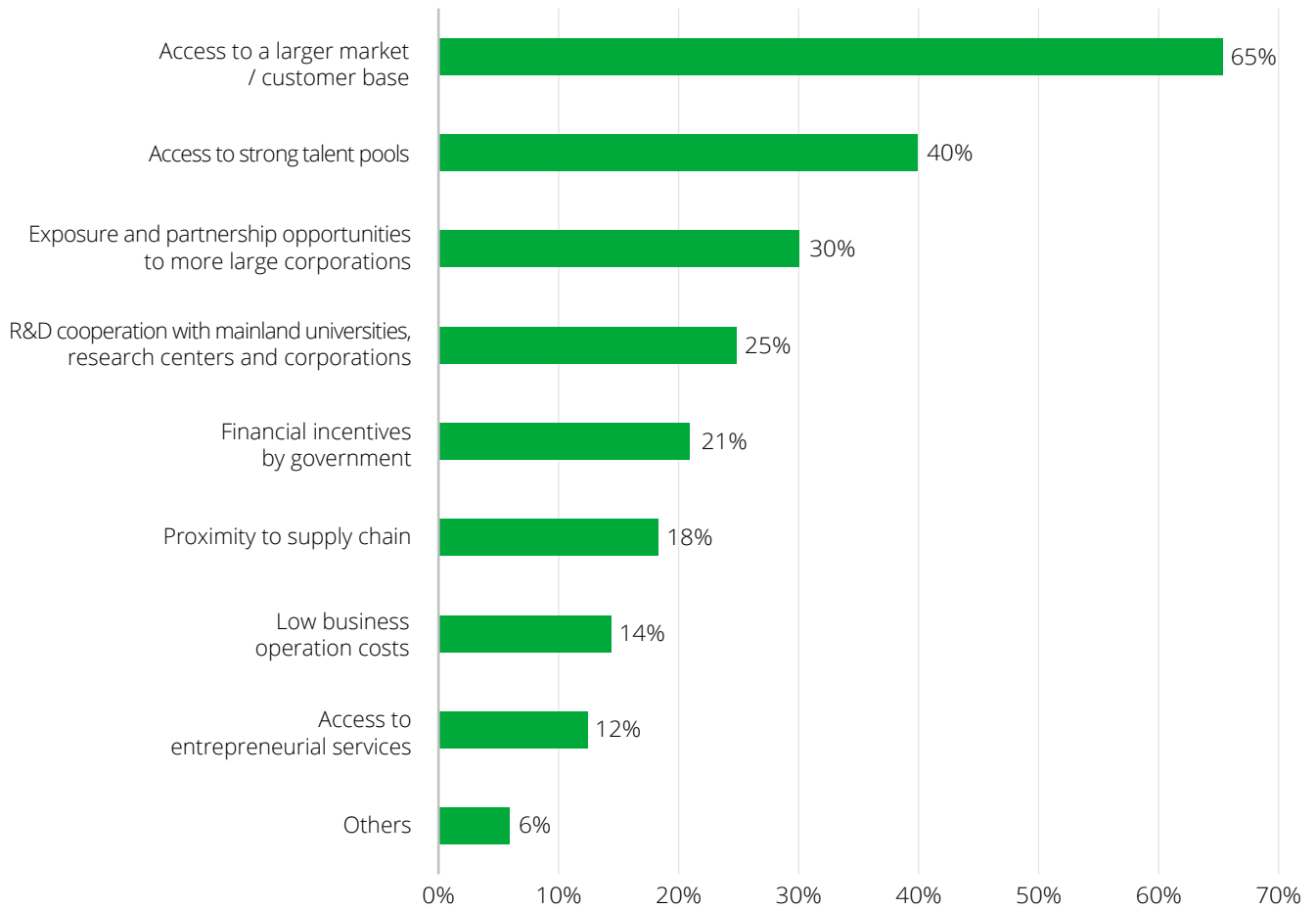
Entrepreneurs who plan to expand their businesses to the GBA in the next 3 years



■ Strongly agree / agree ■ Neither agree nor disagree ■ Strongly disagree / disagree

Source: Deloitte entrepreneur survey

Entrepreneurs' views on the main advantages of the GBA



Source: Deloitte entrepreneur survey

A critical platform to commercialise Hong Kong's world-class innovations

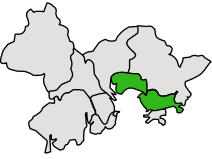
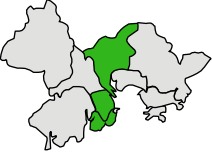
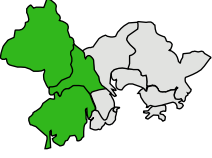
The Hong Kong government has made a major shift in I&T policies by strengthening its cooperation with the GBA. Hong Kong's partnership with Shenzhen as the "dual engine" is a top priority in the next stage of Hong Kong's I&T development.

As unveiled in the latest Policy Address, the Northern Metropolis plan includes a dedicated zone that will closely interact with the innovation and technology industry in Shenzhen. A total of 240 hectares has been designated in the Lok Ma Chau Loop to develop the I&T sector, in addition to 87 hectares in the Hong Kong-Shenzhen Innovation and Technology Park now under

construction. This enlarged zone, San Tin Technopole, will pool the resources of large scale research centres, universities, innovation and technology companies from Mainland cities, venture capital and professional services institutions. It will also foster strong collaboration and networks among key stakeholders.

Universities are also collaborating with institutions in the GBA to spur innovation. The "research laboratories downstairs and startups upstairs" model of HKUST's Shenzhen-Hong Kong Collaborative Innovation Research Institute in the Lok Ma Chau Loop aims to bridge the gap between scientific research and industrial transformation.

Collaboration between academia, research institutions and industry in the GBA⁴³

	GBA Cities	Leading industries	Research institutions	Universities
	<ul style="list-style-type: none"> Shenzhen Dongguan 	<ul style="list-style-type: none"> Information technology Electronics 	<ul style="list-style-type: none"> Hong Kong Applied Science and Technology Research Institute Nano and Advanced Materials Institute 	<ul style="list-style-type: none"> The University of Hong Kong The Hong Kong University of Science and Technology The Chinese University of Hong Kong The Hong Kong Polytechnic University City University of Hong Kong Hong Kong Baptist University
	<ul style="list-style-type: none"> Guangzhou Zhongshan Zhuhai 	<ul style="list-style-type: none"> Logistics and auto manufacturing Electronics and AI Life science and healthcare 	<ul style="list-style-type: none"> Automotive Platforms and Application Systems R&D Centre Logistics and Supply Chain MultiTech R&D Centre Hong Kong Applied Science and Technology Research Institute Nano and Advanced Materials Institute 	
	<ul style="list-style-type: none"> Foshan Zhaoqing Jiangmen 	<ul style="list-style-type: none"> Auto manufacturing Smart manufacturing, robotics 	<ul style="list-style-type: none"> Automotive Platforms and Application Systems R&D Centre Hong Kong Research Institute of Textiles and Apparel 	

Source: Our Hong Kong Foundation

Leveraging I&T value chain in the GBA through synergistic interactions

Hong Kong is strong in basic research and has extensive global sales & distribution capabilities. Its government has been promoting re-industrialisation and the development of advanced manufacturing activities which are less land- or labour-intensive, and more technologically involved, such as AI and big data. This can be a new engine for Hong Kong to boost its economic growth, while ensuring it remains relevant in China's overall I&T development.

There are several manufacturing bases in Hong Kong's re-industrialisation plan, including the Advanced Manufacturing Centre, the Precision Manufacturing Centre and the Microelectronics Centre. The Advanced

Manufacturing Centre is scheduled to be completed in 2022. It will be a multi-storey industrial building catering to companies with highly automated production and operation processes. The building will be fully equipped with manufacturing facilities to support the commercialisation and production of highly customised, technologically innovative solutions. In addition, it will provide tenants with shared services including logistics, warehousing, prototyping, low-volume assembly and clean room-enabled space.

These manufacturing bases in Hong Kong can be a perfect testing base where pilot production or prototype creation can be conducted within Mainland cities before proceeding to mass production in facilities at adjacent cities.

Case study

Ecoinno – the GBA as an integrated innovation ecosystem

Established in 2011, Ecoinno is a next-generation green material solutions company based in HKSTP. It focuses on developing multiple categories of products from 100% cellulose-based Green Composite Material™, complemented by Ecoinno's proprietary processing facilities.

Ecoinno has an operating presence in Hong Kong and the Mainland GBA cities to fully leverage the strengths of the GBA ecosystem in a synergistic manner and drive innovation. It established a materials R&D centre in Hong Kong in 2020 and a R&D Mega Hub in the Mainland in 2021.

“ Hong Kong has given us a solid base to research, test and successfully achieve what we set out to do. The GBA provides us with the capacity to take it to the next level, build and expand on the hard work and effort that flourished in HK. Going forward I expect both regions will continue to innovate hand-in-hand to achieve sustainability for various industries and our ecosystem.

George Chen
Chairperson and CEO of Ecoinno

”

The way forward: recommendations for Hong Kong's innovation ecosystem



Employ a comprehensive strategy to bolster integration with the Mainland GBA cities, with a focus on harmonising different institutional systems

- The GBA is a crucial enabler for the scaling up of Hong Kong's I&T sector. Given the immense upside potential from tapping into this highly populated area, local entrepreneurs are anticipating the introduction of a more detailed and actionable GBA initiative. However, the different institutional systems between Hong Kong and Mainland cities in the GBA remain a key challenge faced by 50% of entrepreneurs. It is therefore paramount that the Hong Kong Government not only expedites cross-border exchanges of talent, capital, goods and information, but also harmonises regulations such as tax rules and procedures to further boost integration between Hong Kong and the Mainland cities in the GBA.
- Cross-border connectivity and support should also be strengthened to better integrate Hong Kong startups within the GBA network, particularly in legal advisory and professional services for startups seeking expansion into China. Additional marketing should be done to increase visibility and promote cross-border business support that is available to Hong Kong startups who wish to expand into GBA.



Accelerate I&T adoption through 360-degree public procurement

- To build public confidence in digital solutions developed by startups, the Hong Kong Government should enhance its public procurement strategy of innovative solutions. It can consider taking on the strategies of other developed countries to facilitate more startup participation. For example, Singapore recently introduced the concept of dynamic contracts, which allow suppliers to offer new products and services to government instead of waiting for their contracts to expire before making timely revisions. This agile approach enables the Government to adopt digital solutions as they are introduced to the market, in addition to supporting SMEs who are constantly innovating new solutions. Another innovative solution in Singapore is the use of spiral contracting, wherein companies are contracted in stages as a project progresses, with each step dependent on the success of the previous one.
- The Government should also increase the visibility of the measures it has implemented to increase startup participation in public procurement to ensure recent efforts are recognised by industry players.



Establish an independent research industry consortium to forge long-term collaboration between academia, R&D centres and industry

- A concerted effort from government, universities, R&D institutions, and industry players is required to bridge the gap from research to commercialisation. This can centre on a research-industry consortium that brings together researchers and industry players in Hong Kong, Mainland GBA cities and globally to cultivate a multi-disciplinary research environment and promote technology transfer.
- To ensure sustainable commitment and success, clear governance and guidelines on the joint research model, commercialisation path and IP strategy must be defined at the onset. For example, Imec, a leading global R&D hub focusing on nanoelectronics and digital technologies, offers various industrial partnership models (e.g. multi-partner open innovation and bilateral collaboration between the consortium and a partner on proprietary research) supported by various IP models (e.g. shared IP and sole ownership).



Enhance co-investment schemes by increasing risk appetite or introducing alternative models

- As Hong Kong's innovation ecosystem continues to grow, it has seen a corresponding increase in public and private funding support. Private venture capital investors in Hong Kong tend to invest in startups that can provide a quick investment turnaround. The Hong Kong government should enhance its co-investment programmes to more aggressively inject funding into high-risk, high-impact and scalable startups. One idea is to update ITVF's co-investment ratio from 2:1 to near 1:1. This will increase the appetite of private investors to invest into high growth startups in Hong Kong. A few countries, such as Singapore (via SEEDS Capital), have taken on this risk profile to boost private investment. The government can also actively seek new co-investment partners to increase the number of deals brought forward for potential investment. This could involve expanding the type of co-investment partners to include mature startups. Ultimately, ITVF funds should be used promptly to ensure Hong Kong startups with high growth potential are supported sufficiently today.



Strengthen policies to attract and retain global talent and build a sustainable pipeline of local talent

- The competition for global I&T talent is intense. The Government can enhance talent policies to make Hong Kong competitive.
 - It can consider expediting the hiring of foreign I&T talent and retaining foreign serial entrepreneurs through dedicated visa channels, especially for I&T talent that Hong Kong needs most, such as data scientists, cloud and IT security capabilities. For example, Canada recently launched the Global Talent Stream programme, which allows Canadian employers to obtain work permits in just 10 days for foreign workers who can fill talent gaps. By cutting the time taken to process permits, corporations can secure talent at a faster rate.
 - The Government could also consider fast-track permanent residency for top global I&T talent or serial entrepreneurs. Currently, applicants are only eligible to apply to be a permanent resident after they have lived in Hong Kong for seven years. In contrast, applicants in Singapore are only required to work for six months to apply to become permanent residents. The Hong Kong government could consider offering a fast-track to permanent residency for I&T talent.
 - To help cushion the high cost of living in Hong Kong, the Government could introduce policies that would reduce innovation cost, for example by offering affordable offices or tax incentives.
 - The Government could also find ways to entice talent to work in Hong Kong after the end of outbound employee programmes, such as the Greater Bay Area Youth Employment Scheme in which Hong Kong graduates are offered the chance to work in a Mainland city of the GBA for 18 months, to ensure more talent returns to Hong Kong after these programmes. It could enforce a bond period, whereby talent is required to work in Hong Kong for a specific period after their tenure at a programme ends.
- The Government could also consider establishing a dedicated body to facilitate the implementation of STEM education and introduce state-of-the-art technologies in schools, such as immersive VR or simulation technologies. These are key aspects of the metaverse, which will allow students to have real-world experience of interacting and experimenting with virtual objects. There is much to be learnt from other developed countries that have successfully integrated STEM education into their core curriculums. Singapore is one such example. To equip its students with leading-edge STEM related skills, it set up STEM Inc., a standalone unit to facilitate the adoption of STEM education into the Applied Learning Programme (ALP) in secondary schools, which is part of the main school timetable. STEM Inc. does this by recruiting industry veterans to co-design and co-teach the STEP ALP curriculum with educators. After an initial period of guidance, teachers gain the skills necessary to run the programme themselves with STEM Inc. supporting them only by updating the curriculum to match the industry's latest needs. Schools are also matched with an industry partner to give students further exposure.⁴⁴ Hong Kong should consider this centralised approach, which depends on collaboration between schools, veterans and industry players.
- It is also critical to reframe the public's thinking so that they view entrepreneurship as a desirable career choice. For example, unicorns or startups that thrive can serve as inspiring success stories for younger generations. More effort could be made to increase students' exposure to entrepreneurship, such as by introducing entrepreneurship as a viable path in career education, matching students with mentors or providing internships at startups.

References

1. Value added and employment in respect of the Selected Industries, Hong Kong Census and Statistics Department
https://www.censtatd.gov.hk/en/web_table.html?id=220
2. InvestHK's 2021 Startup Survey (November 1 2021)
<https://www.startmeup.hk/wp-content/uploads/2021/10/InvestHKs-2021-Startup-Survey.pdf>
3. The Chief Executive's 2021 Policy Address, HKSAR Government
<https://www.policyaddress.gov.hk/2021/eng/policy.html>
4. Innovation and Technology Venture Fund invites new round of applications from venture capital funds (October 29 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202110/29/P2021102900218.htm>
5. The Chief Executive's 2021 Policy Address Supplement - Chapter V - Unlimited Business Opportunities
https://www.policyaddress.gov.hk/2021/eng/pdf/supplement_5.pdf
6. HKSAR Government welcomes National 14th Five-Year Plan and will proactively integrate Hong Kong into national development (11 March 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202103/11/P2021031100464.htm?module=inline&pgtype=article>
7. New initiatives set to boost fintech (November 4 2021), HKSAR Government Press Release
https://www.news.gov.hk/eng/2021/11/20211104/20211104_161538_408.html
8. The Chief Executive's 2020 Policy Address, HKSAR Government
<https://www.policyaddress.gov.hk/2020/eng/index.html>
9. The 2021-2022 Budget Speech, HKSAR Government
https://www.budget.gov.hk/2021/eng/pdf/e_budget_speech_2021-22.pdf
10. Promoting research and development activities (April 29 2020), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202004/29/P2020042900463.htm>
11. Biotech listings in Hong Kong poised to surge in 2021 as city chases New York for fundraising crown in the nascent sector (September 2 2021), South China Morning Post
<https://www.scmp.com/business/china-business/article/3147359/biotech-listings-hong-kong-poised-surge-2021-city-chases>
12. Hong Kong Smart City Blueprint
<https://www.smartcity.gov.hk/>
13. Public Procurement for Innovation, OECD
<https://www.oecd.org/gov/public-procurement/innovation/>
14. Efficiency Office, HKSAR Government
<https://www.effo.gov.hk/en/index.html>
15. Participation of small and medium enterprises and start-ups in government procurements (October 28 2020), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202010/28/P2020102800299.htm>
16. Increased ICT spending in FY2021 to accelerate Government digitalisation (Jun 23 2021), Singapore Government Technology Agency
<https://www.tech.gov.sg/media/media-releases/2021-06-23-increased-ict-spending-in-fy2021-to-accelerate-government-digitalisation>
17. Ratio of R&D expenditure to GDP in Hong Kong (2010-2019), Hong Kong Census and Statistics Department
<https://www.info.gov.hk/gia/general/201711/01/P2017110100538.htm>
18. Expenditure on research and development (R&D) by performing sector, Hong Kong Census and Statistics Department
https://www.censtatd.gov.hk/en/web_table.html?id=207
19. R&D expenditure as a percentage of GDP (2019), OECD
https://stats.oecd.org/Index.aspx?DataSetCode=MSTI_PUB
20. China spending on research and development to rise 7% per year in push for major tech breakthroughs (March 4 2021), CNBC
<https://www.cnbc.com/2021/03/05/china-to-boost-research-and-development-spend-in-push-for-tech-breakthroughs.html>
21. Researchers by region (2019 data), Global Innovation Index 2021, World Intellectual Property Organization (WIPO)
https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2021.pdf

22. Patents by region (2019). Global Innovation Index 2021, World Intellectual Property Organization (WIPO)
https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2021.pdf
23. Patent granted under new system (June 5, 2021), HKSAR Government Press Release
https://www.news.gov.hk/eng/2021/06/20210605/20210605_100940_031.html
24. Hong Kong grants first-ever standard patent by original grant (June 5, 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202106/05/P2021060400741.htm>
25. QS World University Rankings, QS World University Rankings
<https://www.topuniversities.com/qs-worlduniversity-rankings>
26. Biotechnology, Medical & Healthcare Industry in Hong Kong (November 4 2021), HKTDC Research
<https://research.hktdc.com/en/article/MzEzOTQ1MjMz>
27. HK Tech 300, City University of Hong Kong
<https://www.cityu.edu.hk/hktech300/about-hk-tech-300>
28. Knowledge Transfer Annual Report 2016/17, HKUST
<https://www.ugc.edu.hk/doc/eng/ugc/activity/kt/HKUST16.pdf>
29. Legislative Council Panel on Manpower: Key Findings of Manpower Projection to 2027, HKSAR Government
<https://www.legco.gov.hk/yr18-19/english/panels/mp/papers/mp20190521cb2-1444-8-e.pdf>
30. Government expenditure on education as a percentage of GDP (2018), The World Bank
<https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS>
31. Education spending as a percentage of government expenditure (2018), The World Bank
<https://data.worldbank.org/indicator/SE.XPD.TOTL.GB.ZS>
32. Knowing More About IT Programme open for application (September 1 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202109/01/P2021083100486.htm>
33. Number of visa application approved under the TechTAS, Hong Kong Immigration Department
https://www.immd.gov.hk/opendata/eng/law-and-security/visas/statistics_applications_approved_TechTAS.csv
34. Science, tech a policy priority, HKSAR Government Press Release (October 28 2021)
https://www.news.gov.hk/eng/2021/10/20211028/20211028_205450_944.html
35. Global competition for talent (June 2020), Legislative Council Secretariat Research Office
<https://www.legco.gov.hk/research-publications/english/1920rb02-global-competition-for-talent-20200601-e.pdf>
36. Greater Bay Area Youth Employment Scheme, InvestHK
<https://www.investhk.gov.hk/en/resource-centre/greater-bay-area-youth-employment-scheme.html>
37. Approved projects and amount of ITF by technology sectors (2020), Innovation and Technology Commission
<https://www.itf.gov.hk/en/itf-statistics/index-6.html>
38. Budget Speech by the Financial Secretary (February 24 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202102/24/P2021022400193.htm>
39. HKSTP and PolyU Sign MoU to Advance GBA Entrepreneurship and Nurture Next Generation I&T Talent and Innovators (26 August 2021)
https://www.polyu.edu.hk/media/media-releases/2021/0826_hkstp-and-polyu-sign-mou-to-advance-gba-entrepreneurship/
40. HKSAR Government welcomes National 14th Five-Year Plan and will proactively integrate Hong Kong into national development (11 March 2021), HKSAR Government Press Release
<https://www.info.gov.hk/gia/general/202103/11/P2021031100464.htm?module=inline&pgtype=article>
41. GBA Overview, Greater Bay Area Development Office
<https://www.bayarea.gov.hk/en/about/overview.html>
42. China's GDP (2020), The World Bank
<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN>
43. Unleash the Potential in Science and Technology Innovation: Develop Hong Kong into an International R&D Powerhouse, Our Hong Kong Foundation
https://ourhkfoundation.org.hk/sites/default/files/media/pdf/I&T_Advocacy_2019_ENG_1202.pdf
44. Nurturing of local talent (June 2020), Research Office Legislative Council Secretariat
<https://www.legco.gov.hk/research-publications/english/1920rb03-nurturing-of-local-talent-20200601-e.pdf>

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We would like to thank the following for sharing their insight and experience:

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