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Disclaimer

The following report aims to share insights into the FinTech ecosystem in Hong Kong. It is based on external information, our observations and opinions. It is not exhaustive and cannot be considered as such.

We do not receive financial incentives from the organisations, startups, companies or individuals listed in the report. The report has been prepared in good faith and with no intention to promote or diminish certain organisations, startups, companies or individuals in particular.

We see this report as a tool to raise awareness and help educate external observers about who and what makes up the FinTech ecosystem in Hong Kong.

We offer our sincerest apologies if any offence is taken, and we will review any feedback sent to hello@whub.io



Content

- O1A new era for FinTech p.5
- → 02
 FinTech in Asia p.10
- → 03 FinTech in Hong Kong p.28
- O4

 FinTech Key Sectors with local examples p.65
- → 05 FinTech Startups p.88
- → 06 FinTech Influencers p.99

- O7FinTech Associations and Events p.107
- → 08Corporate StartupCollaboration p.115
- O9Regulator andGovernment Support p.122
- → 10 References p.146







01

Anew era for FinTech

- 1.1 A natural evolution for the financial industry
- 1.2 Global FinTech Hub
- 1.3 Fostering a FinTech Ecosystem



A natural evolution for the financial industry

Hong Kong, from an International Financial Centre...

Hong Kong is one of the most powerful Financial centres in the world, ranking 3rd worldwide and 1st in Asia. In order to maintain this competitive advantage Hong Kong is developing itself as a FinTech Hub.

... to a growing FinTech Hub

FinTech is the combination of 2 words: Finance and Technology. The FinTech evolution is characterised by a fusion of technologies that is blurring the lines between the physical and digital world.

FinTech is becoming a new driving force and engine of growth for global financial markets and economies by virtue of its accelerating technological iteration, diverse participants, everincreasing consumer base, globalised market, real-time services, generally flat organisational structure and genuine technology-driven features. FinTech accelerates change and disruption due to technological innovation such as Blockchain, AI / Machine Learning, Big Data Analysis and Cloud Computing. With an average FinTech adoption rate that has doubled in the past 3 years from 16% to 33%, FinTech has achieved initial mass adoption in most countries.

Hong Kong is **one of the top IPO hubs in the world**, with a stock market capitalisation at around 11.5 times its GDP. Over the last







nine years, Hong Kong topped the world's Initial Public Offering (IPO) league table **five times**. It is also by far the leading offshore renminbi centre globally, managing 70% of global offshore renminbi payments. Out of the world's top 100 banks, 70 have operations in Hong Kong. And 70 of the world's 100 largest global money managers have a presence in Hong Kong. Hong Kong is the **largest hedge fund hub** in Asia and the second largest private equity centre in the region, after Mainland China. It is also a leading private wealth management centre and has one of the most open insurance centres in the world.

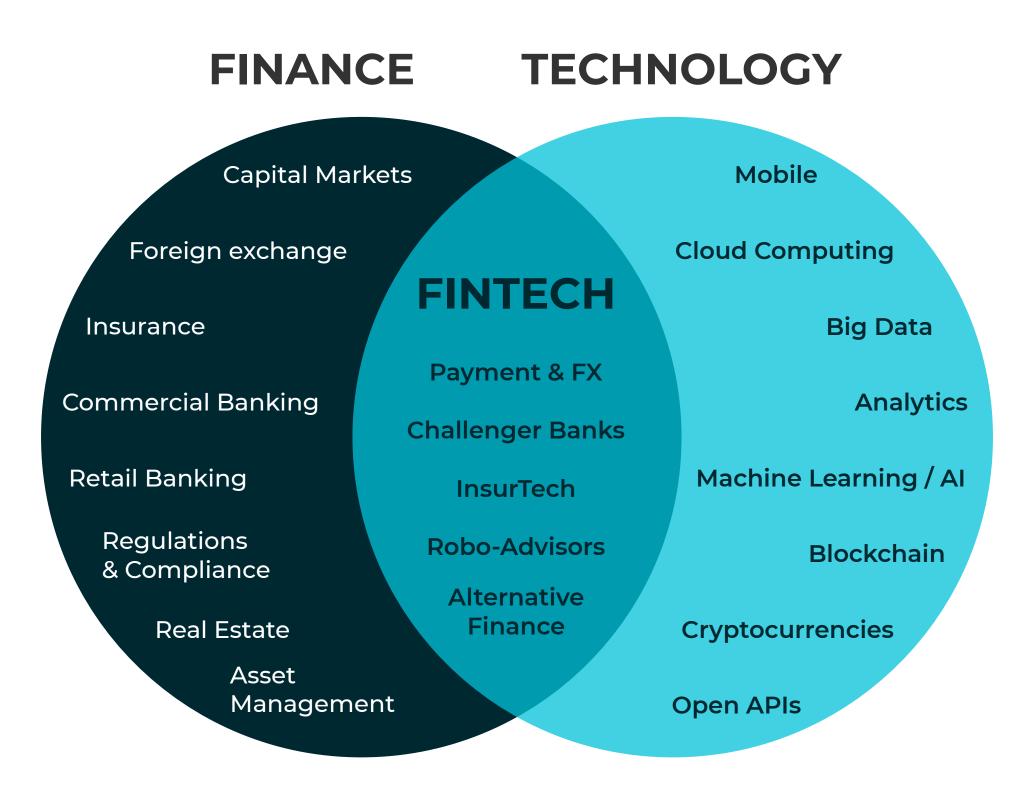
Hong Kong FinTech Ecosystem

Contrary to popular belief, Hong Kong's startup community is one of the fastest growing ecosystems in the world, with multiple records to its name. Currently **SenseTime, WeLab, Lalamove, Tink Labs, BitMEX, GoGoVan**, **Klook**, **TNG Wallet** and **AirWallex** are the 8 homegrown stars in Hong Kong confirmed as unicorns.

To only name few success case, Sensetime is one of the highest valued AI companies in the world; TNG Wallet, raised US\$115 Million in Series A funding, one of the world's largest Series A FinTech fundraising with now a valuation of over US\$1 Billion and filling for an IPO for 2019; block.one, a company deemed as the world's largest ICO; Li Ka-shing-backed FinTech unicorn WeLab, direct to consumer lending platform, has filed for initial public offering in the Hong Kong Stock Exchange the top fintech investment in 2017 of US\$220m. with presence across Hong Kong, mainland China and Indonesia, aims to reinvent traditional financial services by building game-changing technology – starting with the lending value chain.. Unicorn Cryptocurrency trading platform Bitmex has set an industry record of Bitcoin trading volume: more than 1 Million bitcoin in 24 hours.



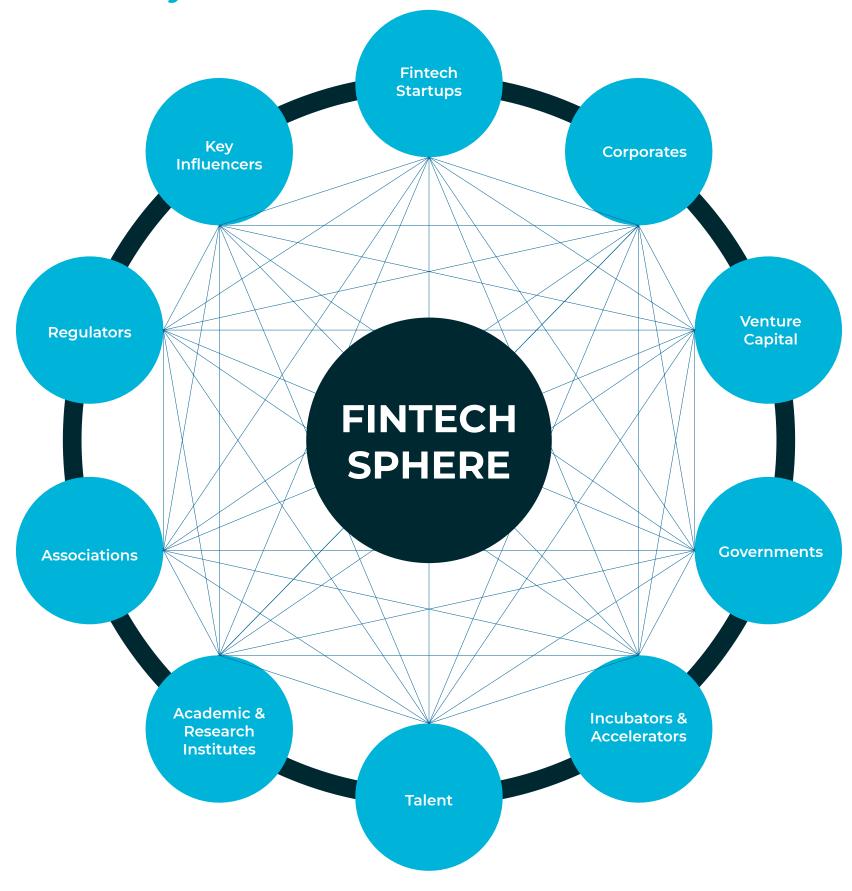
Global Fintech Map



Source: CBInsights & Cryptoslate 2018



Fostering a FinTech Ecosystem





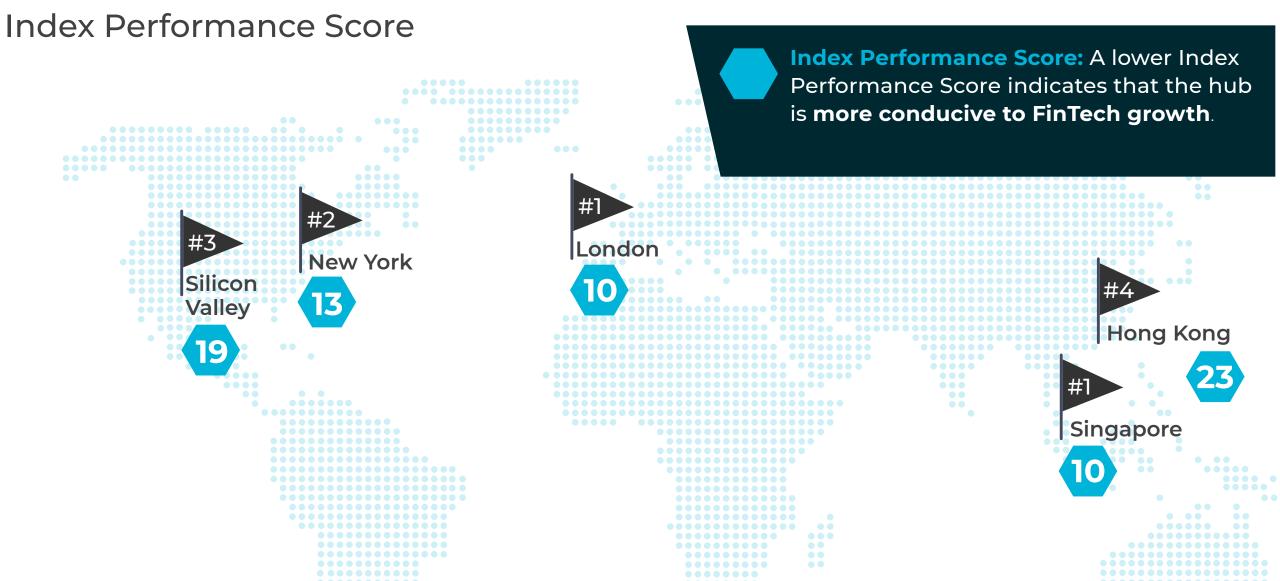
02

FinTech in Asia

- 2.1 Global FinTech Hub
- 2.2 Opportunities in Asia-Pacific
- 2.3 Opportunities in China
- 2.4 Opportunities in India



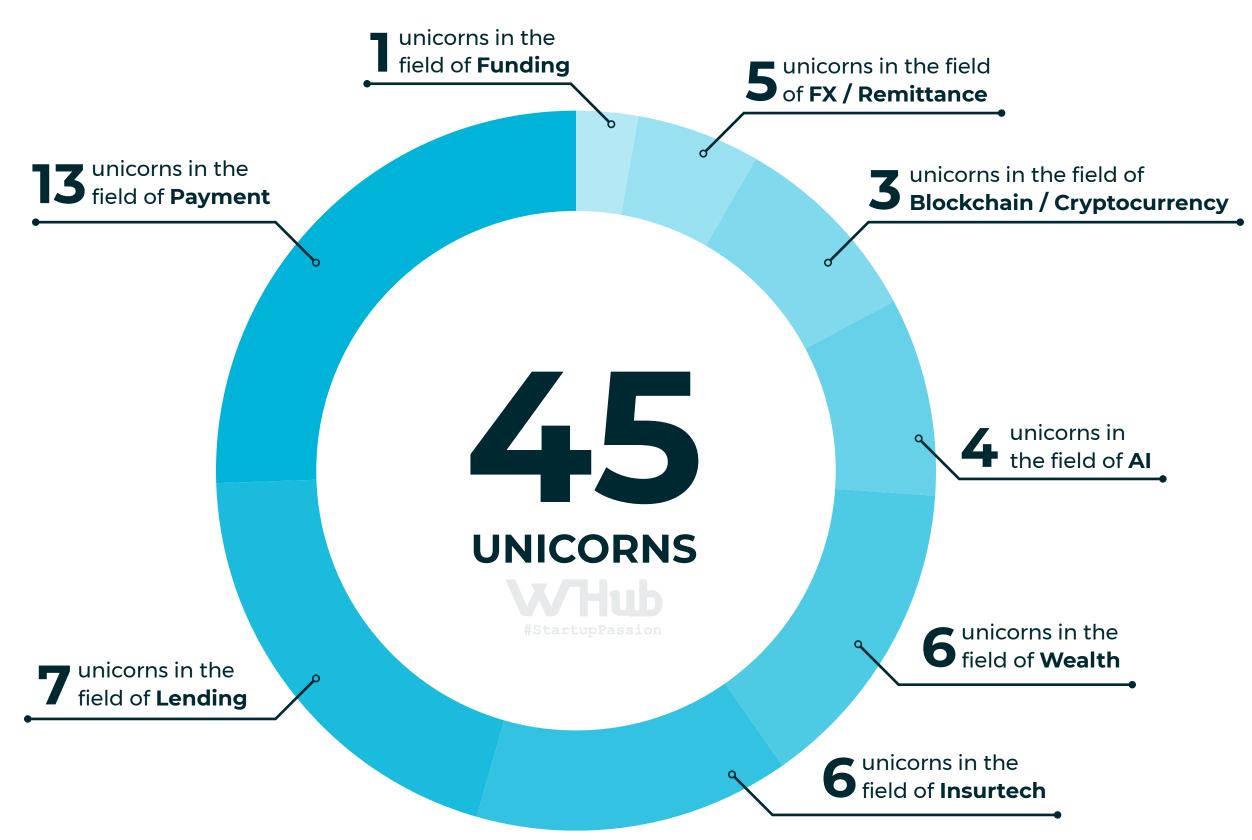
Global FinTech Hub overview



According to Deloitte's 2017 report "A tale of 44 cities", Hong Kong has the natural branding of Asia's largest financial centre. This provides an immediate attraction for FinTech and has driven its development in recent years. Hong Kong's position as Asia's super connector is particularly useful for B2B solutions. Where Hong Kong excels at with regulations, governmental support and proximity to expertise.



Worldwide FinTech Unicorns



Source CBInsights 2018

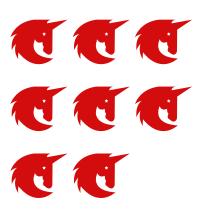


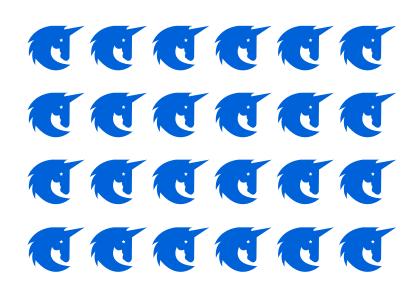
Global FinTech Unicorns that create impact

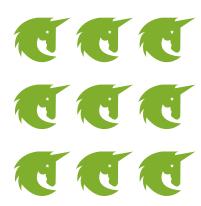
CHINA 8 Unicorns **UNITED STATES 24 Unicorns**

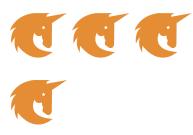
REST OF THE WORLD 9 Unicorns

HONG KONG
4 Unicorns











\$ 76.6 Billion Valuation \$ 11.9 Billion Raised

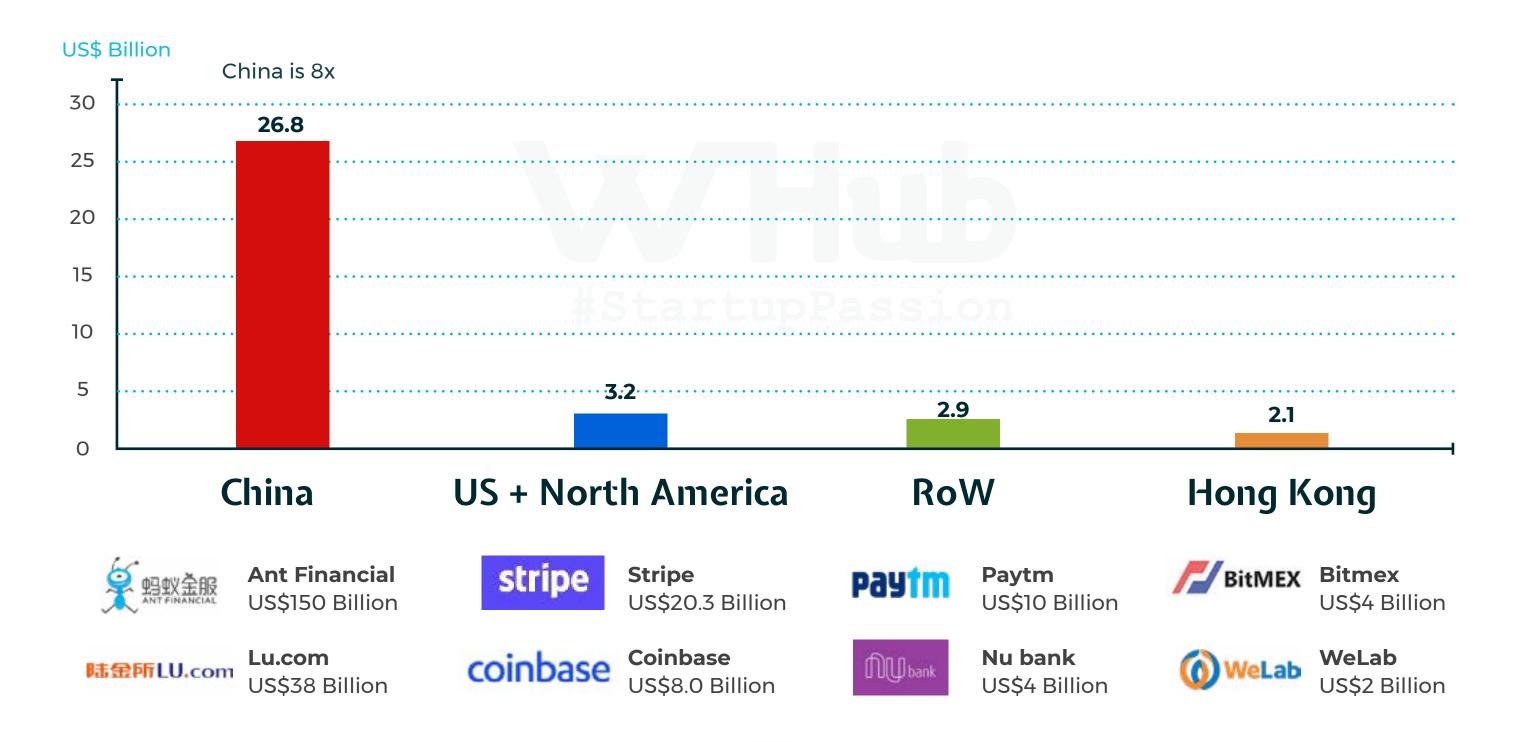






Average FinTech Unicorn Value by Region

When adjusted for removing the highest valued Unicorn (Ant Financial,150 billion USD), which is significantly higher, China's average Unicorns are still valued 3x higher.





Global FinTech Unicorns: Valuations

China

Company	Valuation US\$ Billion
Ant Financial	150.00
Lu.com	38.00
JD Finance	20.00
Lakala	1.60
TDW	1.50
cgtz.com	1.40
Tiger Brokers	1.10
Tongdun	1.00

US and North America

Company	Valuation US\$ Billion
Stripe	20.3
Coinbase	8.0
Robinhood	5.3
SoFi	4.5
Credit Karma	4.0

Oscar	3.2
Ui Path	3.0
Circle	3.0
Plaid	2.7
Confluent	2.5
Zenefits	2.1
Gusto	2.0
Avant	1.9
Affirm	1.8
DevotedHealth	1.8
Dataminr	1.6
Toast	1.4
Clover	1.2
Avidxchange	1.2
Brex	1.1
Tradeshift	1.0
Kabbage	1.0
Root	1.0
Symphony	1.0

RoW

Company	Valuation US\$ Billion
Paytm	10.00
Nu bank	4.00
N26	2.70
Klarna	2.50
Revolut	1.70
TransferWise	1.60
Monzo	1.27
Toss	1.20
PolicyBazaar	1.00

Hong Kong

Company	Valuation US\$ Billion
BitMEX	4.00
WeLab	2.00
TNG FinTech Group	1.50
AirWallex	1.00



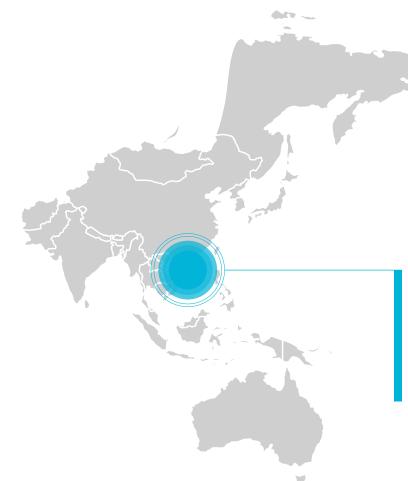
Opportunities in Asia-Pacific

US\$22.7B

Annual VC-backed global FinTech deals and financing, 2018.

Source: CB Insights 2018

A US\$14B investment in Ant Financial accounted for more than half of total FinTech funding in Asia-Pacific in 2018



In 2018, China and India dominated the top 10 deals with five and three deals, respectively

Source: KPMG 2018

Asia surpasses the US in earlystage FinTech deals.

Asia saw 64 early-stage deals worth \$270M in Q3'18, 5 more than the US. In the US, early-stage deals fell to a five-quarter low of 59 deals worth \$434M.

15 FINTECH UNICORNS

are from Asia according to CB Insights 2018















(Billion USD enterprises worldwide) (Up to 2018)























Opportunities in the APAC Financial Centres

Unparalleled Market Opportunities

1.7 Billion*

Unbanked
Adults not having access to the services of a bank or similar financial organisation.

*55% reside in Asia

Source: SCMP 2018

80%

Asian Customers would consider opening an account with a branchless bank

Source: 80%: McKinsey 2018

6.2 Million

High Net Worth Individuals

Source: HNWI: Capgemini 2017

3.5 Billion

Middle Class APAC by 2020 (estimated by 2030)

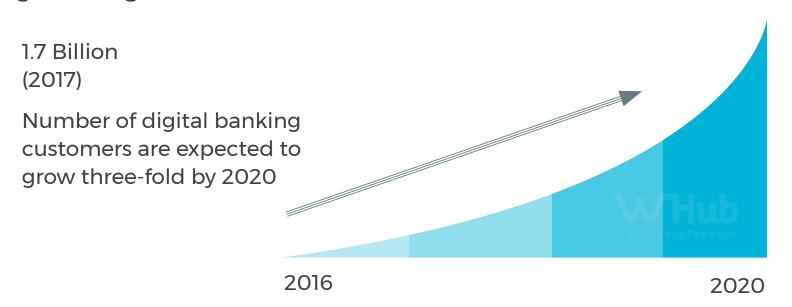
Source: World Middle Class; Brookings 2017

2.4 Trillion

SME Credit Gap

Source: World Bank Group 2017

Big market growth



New business models -Payment banks

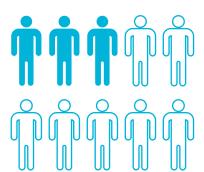
Opportunity: US\$5 Billion + (2017)



The Unbanked

"Unbanked" is an industry term for **adults who do not use banks** or banking institutions in any capacity. Unbanked persons generally pay for things in cash or else purchase money orders. Unbanked persons also typically do not have insurance, pensions or any other type of professional money-related services.

The unbanked - the largest opportunity



31%

OF THE GLOBAL ADULT POPULATION

(Statistics from Global Findex Database 2017)

- Around 1.7 Billion individuals without access to bank accounts or bank loans.
- Half of the unbanked population live in just seven countries: Bangladesh, China, India, Indonesia, Mexico, Nigeria, and Pakistan.

Accenture estimates that bringing the unbanked adults and businesses into the banking sector could generate **US\$380 Billion** in new revenue.

Example

TNG Wallet "A digital bank for the world's unbanked"

Hong Kong's digital wallet TNG hopes to set the mobile payment trend in the city by going the extra mile. The app enables foreign workers without bank accounts to make remittances globally at convenience stores in their neighboorhood.

The company is one of 13 holders of a 'stored value payment' license, which allows them to operate as operate an e-wallet and money-transfer business.

Example

Bitspark: The New, Blockchain-Powered Remittance System

Remittance is when a foreign worker sends money back to relatives in their home country. In countries with developing economies, remittance is sometimes the only way to support "unbanked" family members.

Remittance is considered to be very lucrative lucrative. According to the Pew Research Center, the global remittance industry reached \$574 Billion in 2016. Among the countries with the highest remittances are Mexico, China, India, and the Philippines, with upwards of \$10 Billion sent each year.

Bitspark has planned remittance services to over 100,000 locations around the world, without having to rely on a banking institution.

Bitspark has joined the BitShares Exchange, the fastest blockchain network in the world.



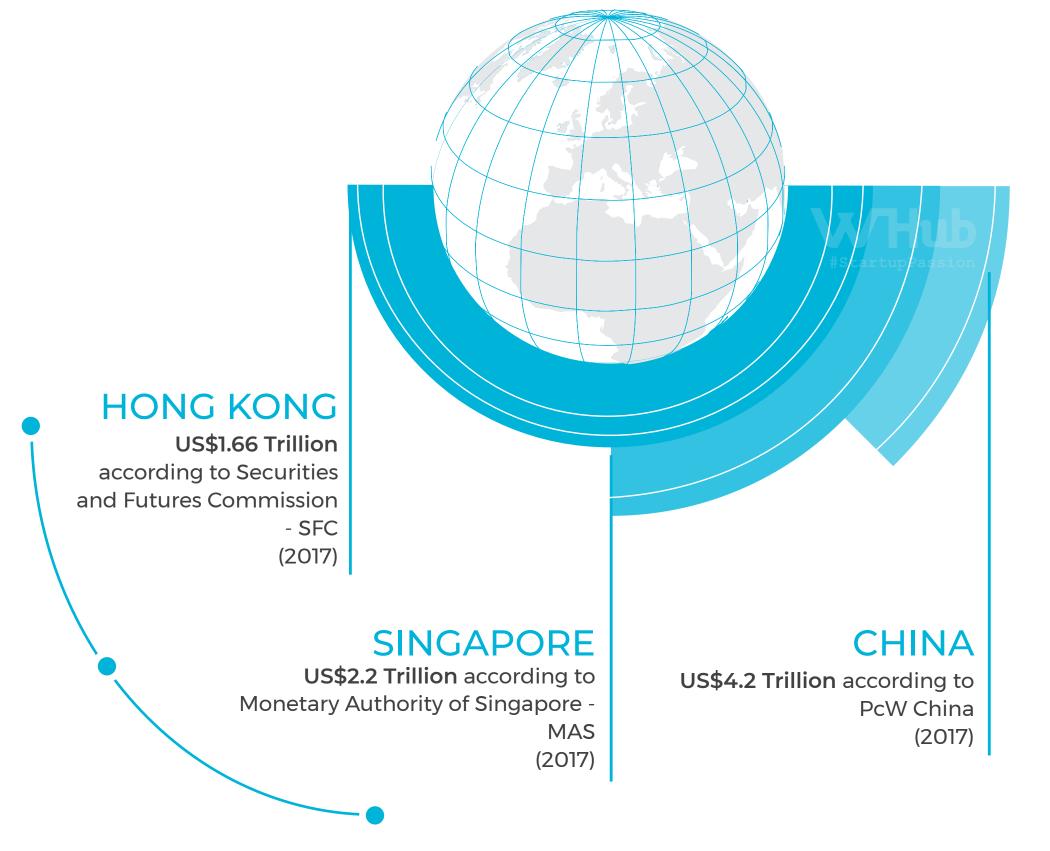
Asset Management in Asia

Asset Under Management (AUM) is the total market value of assets managed by a financial institution or an investment company on behalf of investors.

ASIA

US\$14 Trillion according to BCG (2017)

According to The Asian Banker, Asian AUM will sustain its upward trend to approximately \$15 Trillion by 2018





Investment in FinTech companies in Asia

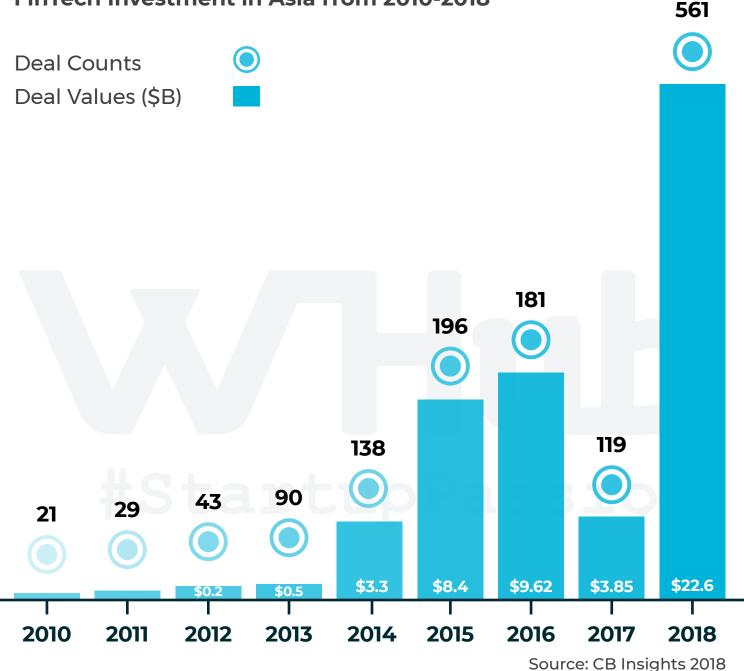
According to CB Insights, Asia achieved record number of FinTech deals and deal value in 2018. While FinTech investments in Asia was \$3.9 Billion in 2017, investments in FinTech companies in 2018 in Asia hit \$22.6 Billion across 561 deals, investments in China have been particularly significant.

Top 5 FinTech Deals in 2018 in Asia

Source: KPMG 2018

1 Ant Financial	Hangzhou	US\$14 Billion
2 Lu.com	Shanghai	US\$1.3 Billion
3 CaoGenTouZi	Hangzhou	US\$358 Million
4 Paytm	India	US\$356 Million
5 Wecash	Beijing	US\$160 Million

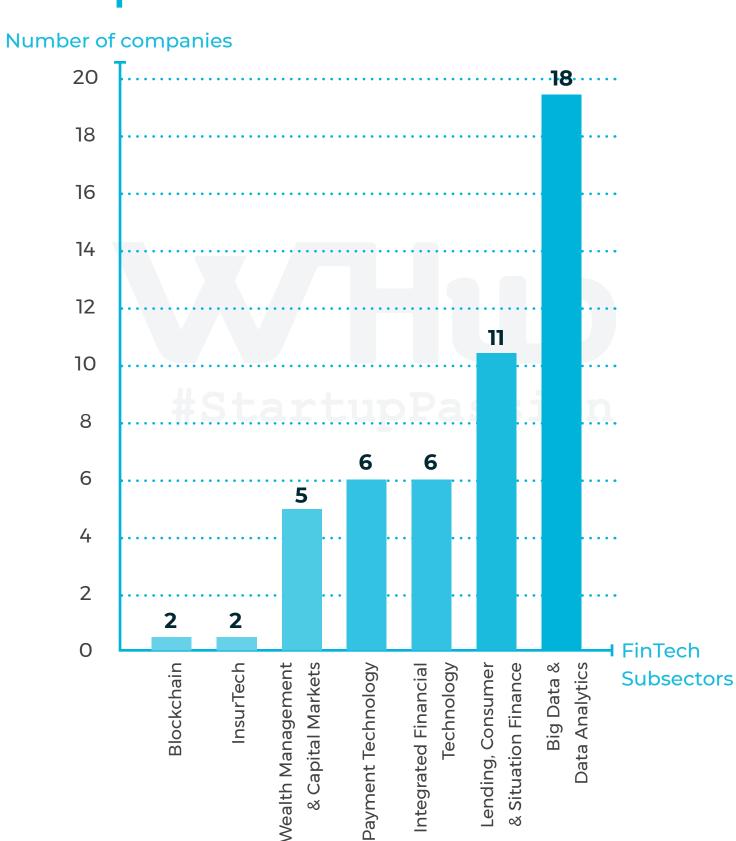




FinTech Investment in Asia from 2010-2018



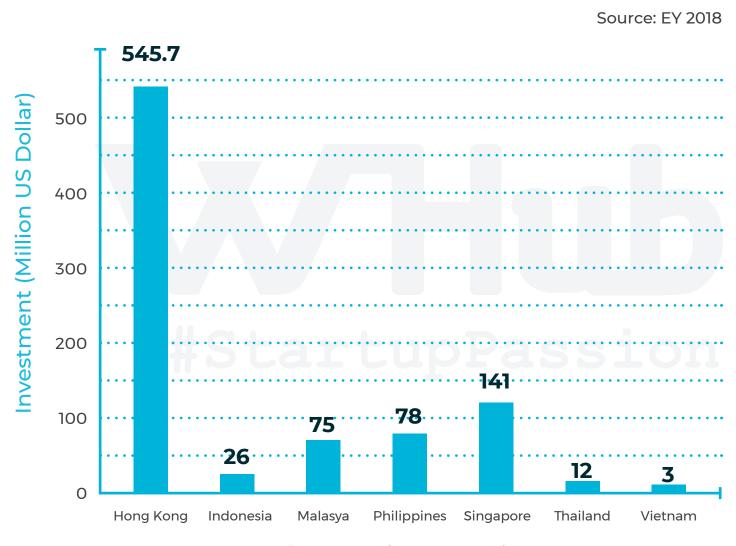
Breakdown of Leading 50 FinTech Companies in China



Investment in FinTechSoutheast Asia

Private investment Investment in Hong Kong FinTech firms more than doubled in 2017 compared to 2016. Amid a global surge in interest, Hong Kong-based FinTech investment jumped to US\$545.7 Million in 2017 from US\$215.5 Million in 2016 (and US\$107.5 Million in 2015), putting it well ahead of Singapore and Australia.

In 2017, global investment in FinTech companies reached an all-time high of US\$27.4 Billion, up 18% year-on-year.





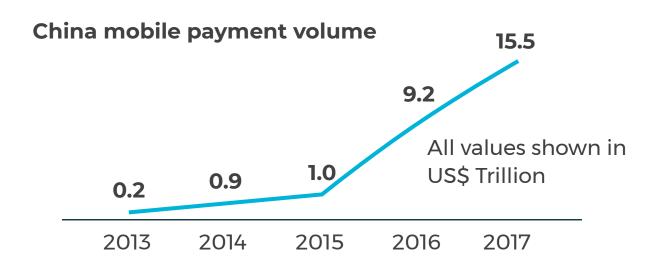
Opportunities in China

FinTech, especially digital payment solutions, have emerged to offer effective financial services to the underbanked. As governments are looking to boost financial inclusion and growth, the power of digital payments have become very relevant.

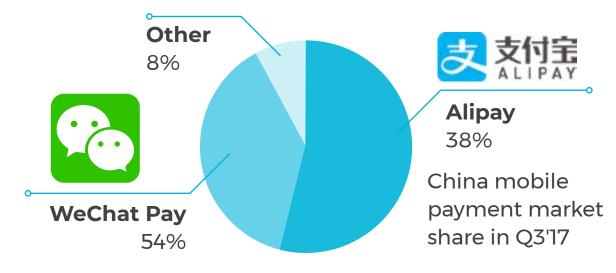
China has shifted from an export-based economy to a consumer-based economy. With the results in the 2017 down 8% in volume and 9% in revenue, the Chinese industry is increasingly settling into a period of recession.

On the other hand, China's retail sales of consumer goods **grew 10.2**% year-on-year to reach **36.63 Trillion yuan** (about US\$5.69 Trillion) in 2017.

Baidu, Alibaba and Tencent (BAT), the three Chinese tech giants right now, have made financial services accessible to everyone, transforming it into one of the "closest cashless economies" in the world. Individuals in China can bank, invest and borrow using only their mobile phone, summing up to US\$12.77 Trillion in transactions in the first ten months of 2017.



Alipay and WeChat Pay dominate market



Source: CBInsights 2018



Baidu Founded in 2000 by Internet pioneer Robin Li, specializes in Internet -related services and products powered by Al. Baidu is the default search engine used by the Chinese.



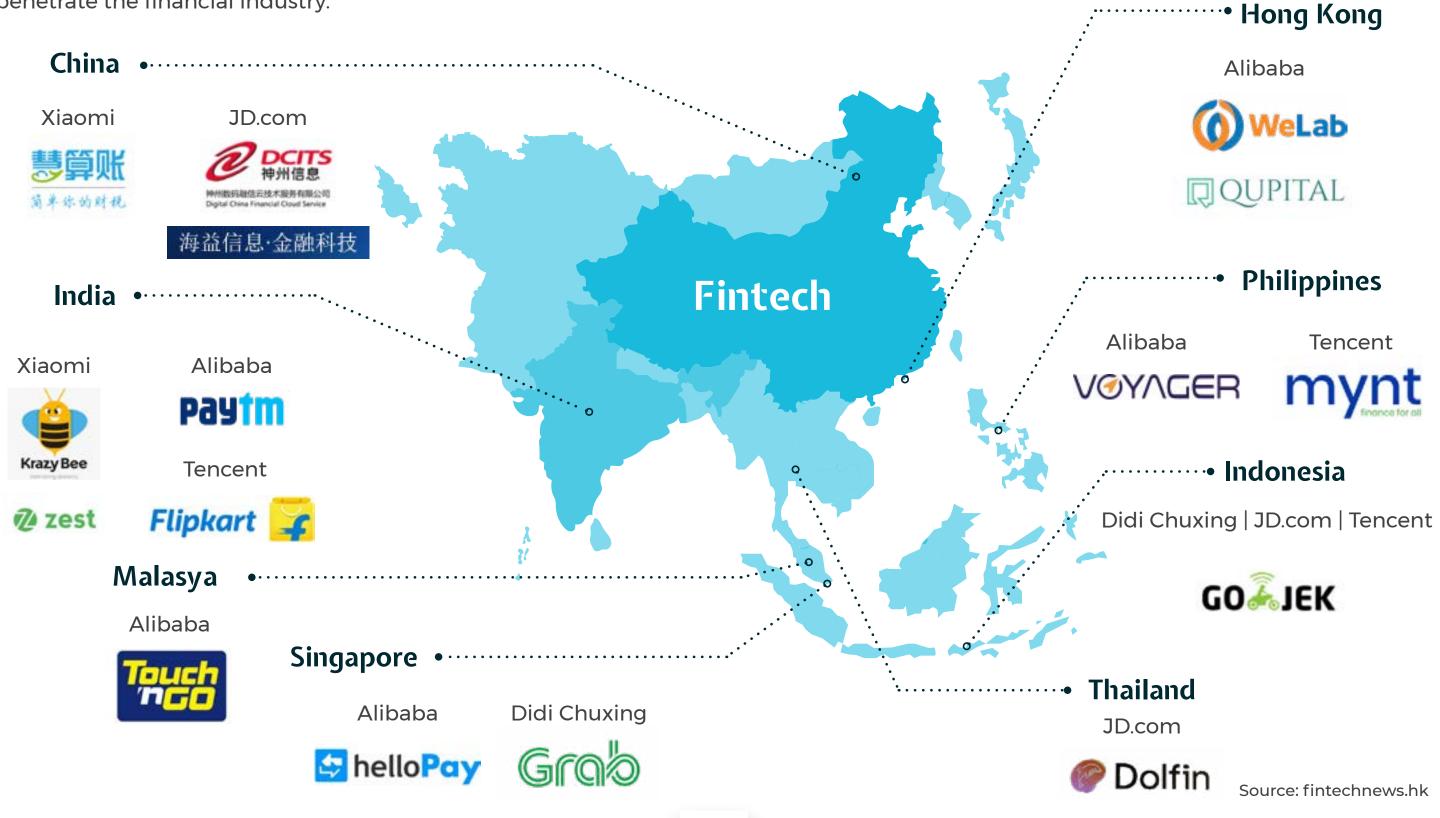
Alibaba Founded in 1999 by Jack Ma, Alibaba is one of the world's largest retailers specializing in e-commerce, retail, Internet, and Al technology. Jack Ma created Alipay in 2005, a third-party mobile and online payment platform that has around 520,000,000 users.

Tencent 腾讯

Tencent Founded in 1998, Tencent is a leading provider of Internet value added services in China. Some of Tencent's leading platforms include QQ instant messenger, WeChat/Wexin, and Tenpay.



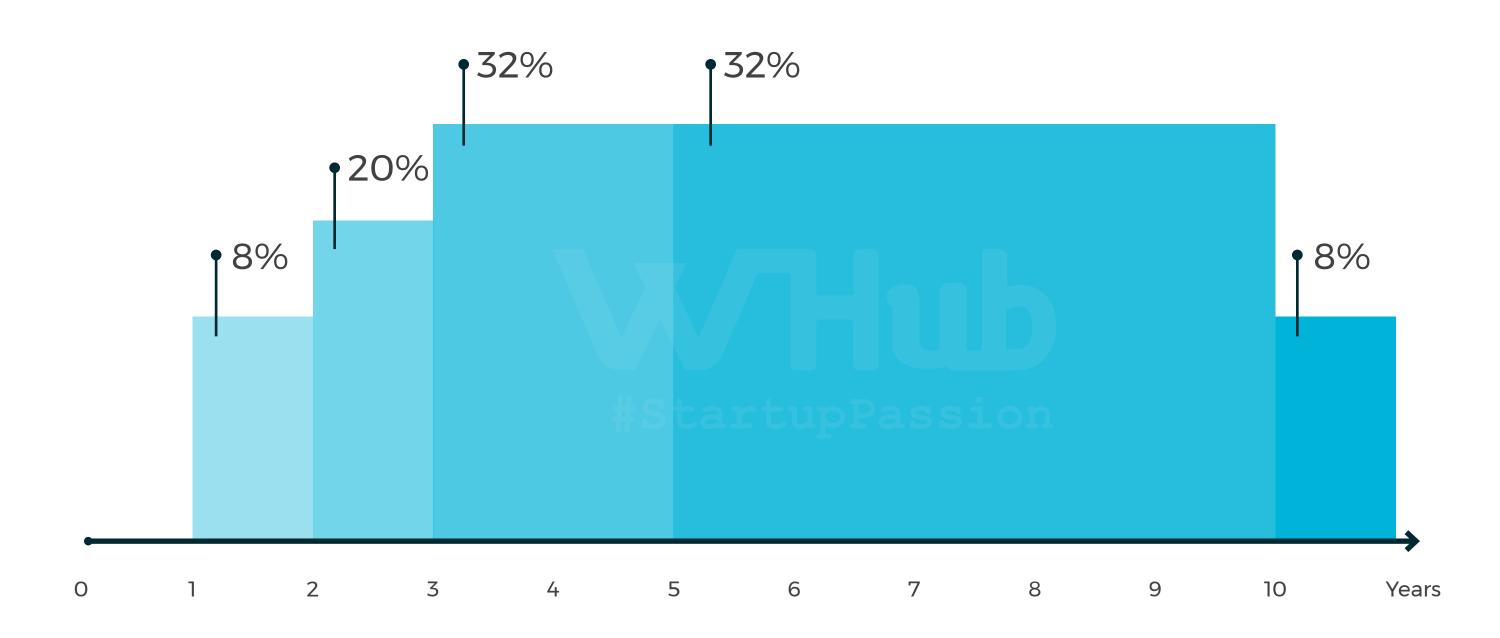
Several of the E-commerce Giants including Alibaba, Tencent and Baidu are extremely active in the Fintech market but can actually be classified as TechFin companies leveraging their technology to penetrate the financial industry.





Time of incorporation

The majority of the **China leading FinTech 50 companies** have a relatively short history and were incorporated within the past 10 years. The vibrancy of this younger generation of companies is a contributing factor to their innovation capabilities.





Alipay and WeChat Pay

Together these two companies have dominated the digital payments space in China, and have seen dramatic growth in digital payments over the past few years. AliPay is now available in more than 30 countries, while TenPay-a service attached to WeChat-is offered in only 15 countries.

Mobile payment transactions in China reached a record of US\$12.8 trillion from January to October 2018, which has made Mobile Payments no longer a trend but a ubiquitous characteristic of retail in China.

1998 2004 2009 2015

Tencent was founded. **Alipay** was first launched as an internet-based payment service using the e-commerce platform.

Alibaba further developed on mobile with the Alipay application.

Alipay had 450 Million monthly active users, who each spent US\$2,921 on average.

WeChat had US\$697 Million users, who spent \$568 on average.

2016 2018

Alipay processed 175 million transactions per day, 60%

of which were completed through a mobile phone.

Tencent provides digital payment options utilising its two major social apps:

QQ and Weixin (WeChat), which have a combined monthly active user rate of 846 million.

Alipay

- 900 million active users worldwide in 2018
- Penetration rate of 68% in 2018

Tencent continued to expand the user base of its payment business (QQ and Weixin) with monthly active users surpassing 800 million at the end of June 2018.

WeChat & QQ Wallet

- More than 1 billion active users on WeChat in 2018
- Penetration rate of 85% in 2018









Alipay payments (by value) have risen from less than RMB 0.5 Trillion (US\$70 Billion) in 2012 to an estimated RMB 11.5 Trillion (US\$1.7 Trillion) in 2016.

- a 23-fold increase in four years.

WeChat payments (by value) have risen from less than "RMB 100 Billion (US\$11.6 Billion) in 2012 to an estimated RMB 8.5 Trillion (US\$1.2 Trillion) in 2016.

- an 85-fold increase in four years.

Sources: Tearsheet 2017, China Daily 2016, FinTech News 2017, The China Report 2017, Global Consumer Insights Survey 2018 China Report, South China Morning Post 2018, Statista 2018, China Internet Watch 2018



Alipay and Tencent: The fight goes beyond China

Thailand Users can now use Alipay and WeChat Pay in Thailand. One of the most popular destinations for Chinese tourists, to pay for goods and services.

India Alibaba has made a significant investment in India's PayTM and Tencent into India's PayU, two of the largest digital payment providers in India.

WeChat launched its first international market in **South Africa**. Tencent has also recently launched a joint-venture initiative in Africa, allowing payments in South African Rand.



WeChat Pay launched in Hong Kong

- WeChat launched WeChat Pay in Hong Kong in January 2016.
- Allows WeChat users to connect their MasterCard or Visa credit cards with their accounts to allow them to pay for products and services without exiting the WeChat app.
- Currently supports payments for tickets, transportation services and travel products.
- Partners with local merchants to offer Hong Kong users exclusive promotions and campaigns over the messaging service.
- Shoppers will soon be able to use the Hong Kong version of WeChat Pay to make purchases at mainland merchants, the first Chinese company to let users settle bills on the mainland with HKD.



India

In the past years, FinTech has emerged as one of the rising sectors in India's Internet play with funding pouring in and global players like Google and WhatsApp looking to getting a piece of the pie.

Indian FinTech market will be growing at a CAGR of 22% over the next five years (NASSCOM), while KPMG estimates that industry could be worth as much as US\$73 Billion by 2020.

Key numbers



The World's **3rd largest and fastest** growing startup hub: 26,000 startups; 100,000 projected by 2025



2nd largest Internet User Base: 460 Million growing to 640 Million by 2020



)) 1.2 Billion mobile phones (350 Million smartphones, growing to 750 Million by 2020)



2nd highest mobile penetration of Internet 478 million behind China 665 million



Highest number of Facebook and WhatsApp users in the world, 270 Million and 200 Million respectively

FinTech Unicorns in India

FinTech start-ups, from Paytm to PolicyBazaar, are gaining popularity by offering quick, easy and cheaper access to financial services for the end users.

Policybazaar – US\$346.6 Million



Policybazaar is India's largest and leading insurance aggregator website. The platform specializes in making comparative analysis of the insurance products of various insurance policies based on price, quality and key benefits. Policybazaar has raised US\$346.6 Million in funding so far, according to Crunchbase, the latest being a US\$200 Million round led by Japan's SoftBank in May 2018.



Paytm - US\$2.1 Billion

Paytm, a subsidiary of One97 Communication, is India's largest mobile commerce platform with over 20 Million registered users. The company has raised US\$2.2 Billion in funding so far, according to Crunchbase.

Sources: The Times of India 2018, Statista 2018



03

FinTech in Hong Kong

- 3.1 From a Financial Hub to a FinTech Hub
- 3.2 Hong Kong in numbers
- 3.3 Hong Kong Unicorns
- 3.4 FinTech Survey Analysis
- 3.5 Asia's Largest Financial Centre
- 3.6 Gateway to China
- 3.7 World Class Finance Talent
- 3.8 Fostering innovation and helping startups to grow in HK and GBA





From a Financial Hub to a FinTech Hub

For many FinTech companies, having a presence in Hong Kong is important for penetrating the APAC market and carrying out key strategies of their businesses. The territory has an array of favourable conditions for the deployment of financial technologies: the relatively-loose regulatory environment, the strength of its financial sectors, strong talent pool, the network of connections to the Mainland China

market as well as the West, and its safeguard for intellectual property and data protection. Hong Kong has also positioned itself as the conduit between China's FinTech giants - Baidu, Alibaba, and Tencent - and the rest of the world.

All these factors have provided further underpinnings for the realisation of Hong Kong as a global FinTech hub.

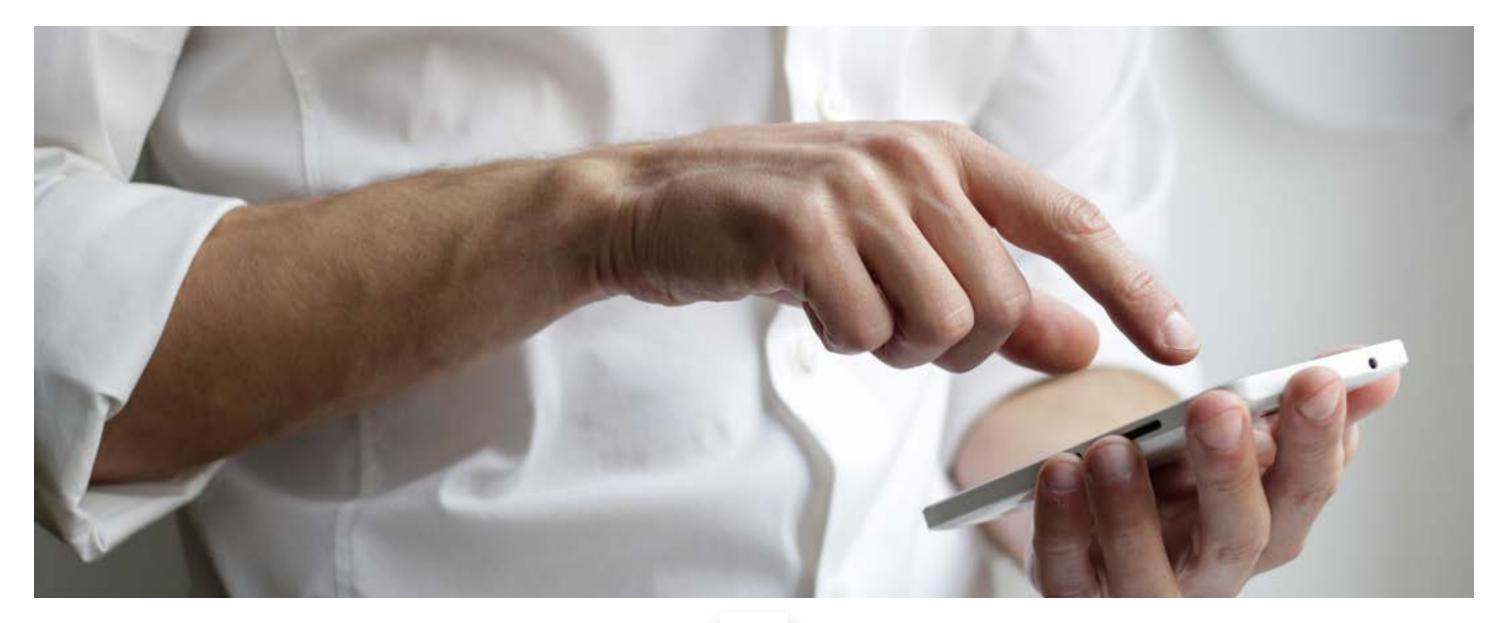


With over 3,000 startups, Hong Kong is the 5th fastest growing startup ecosystem in the world. The city has a diverse startup ecosystem counting about 13.9% of FinTech startups. Since 2010, Hong Kong FinTech startups have raised US\$940 Million, compared with US\$387 Million raised by Singapore- based startups and US\$714 Million for those in Australia.

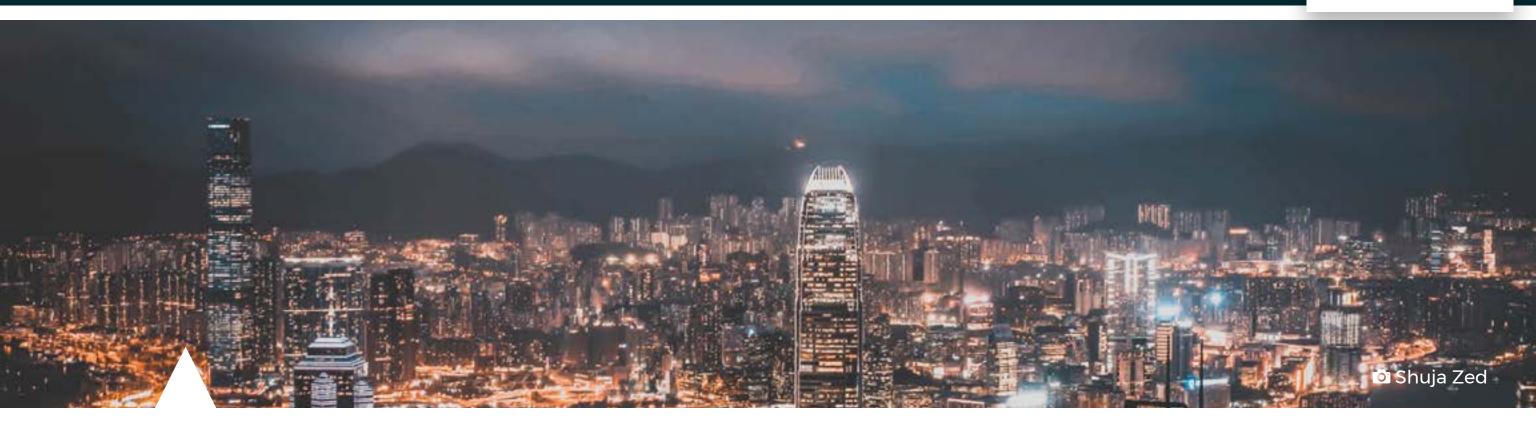
In 2017, WeLab, the mobile lending company, raised US\$220 Million. Founded only in 2013, the Hong Kong FinTech Unicorn, backed by Billionaire Li Ka-shing, is contemplating an is filing for IPO in the local market. What can be a better advert for Hong Kong FinTech.

In September 2017, TNG Wallet, e-payment platform, raised US\$115 Million in Series A funding, one of the world's largest Series A FinTech fundraising with now a valuation above US\$1 Billion as of end of 2018 and filling for an IPO for 2019.

FinTech startups' offerings are attractive to underserved consumers, and usage will only rise as FinTech awareness grows, consumer concerns fall and technology advances to reduce switching costs. Established firms will be required to offer similar propositions to remain competitive – which creates opportunities for collaboration between startups and incumbents.





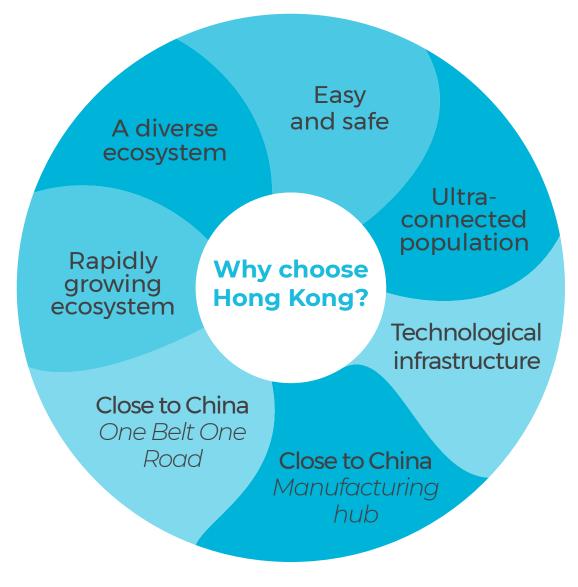


Why Hong Kong?

As one of the world's **leading international financial centres**, Hong Kong's service-oriented economy is characterised by its **low taxation**, almost **free port trade** and **well established international financial market**, built on a long history of trade and commerce.

Hong Kong is **ranked first as the most free economy** in the world. Starting a business is easy and safe.

Startups are defined by disruption and growth. Hong Kong is uniquely positioned to allow fast and high scalability. Products can be tested quickly due to its hyper-connected population. The proximity to the Pearl River being part of the Greater Bay Area provides easy access to manufacturing and supply facilities. Strategically located at the heart of Asia, Hong Kong is reachable by half of the world's population within five hours' flight time, opening the possibility for rapid expansion and international growth.



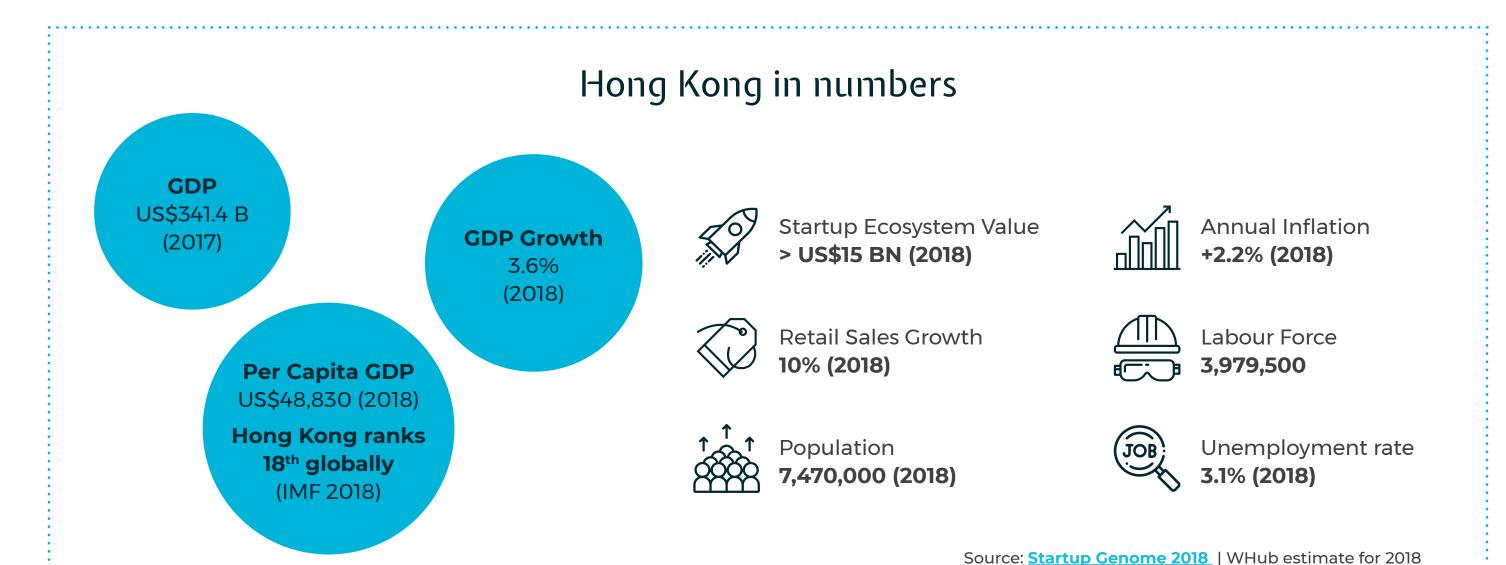


One Country, Two Systems

After 155 years of British rule, the sovereignty of Hong Kong was transferred back to China in 1997.

As with Macau, Hong Kong is a part of China, but operates as a Special Administrative Region (S.A.R.). Both regions

retain their own capitalist economies, while the rest of China uses the socialist system. Each of the three regions is able to have its own currency, legal, economic and political system, including foreign policies.





Ultra Connected Population

Social Network



Facebook 79%



Linkedin 16% 2017



Hong Kong people have a staggering 768 Facebook friends on average, which is nearly eight times the worldwide standard.

5.5M

Active Internet Users

78%

Population having active social media accounts

2017

96%

Smartphone users browse internet daily

2018

Internet

#1

2016

2018

Most connected place globally

#3

Fastest average peak connection speeds

2017

92.8%

Household broadband penetration rate

January 2018

51,502

WiFi hotspots installed by the government and the private sector

2018





Ultra Connected Population

Mobile

76.1%

Smartphone penetration

235.5%

Mobile penetration rate

55%

Android users

45%

IOS users

Smartphone users

97%

Access the internet with a smartphone

E-commerce

Ranked 16 out of 144 countries

UNCTAD B2C e-commerce index 2017

US\$4,115 Million

Revenue in e-commerce market 2018

88%

of consumers in HK made at least one purchase online in the last 3 months
According to Go-Globe

24 hours

An average HK consumer spends more than 24 hours a week on the internet

Market volume

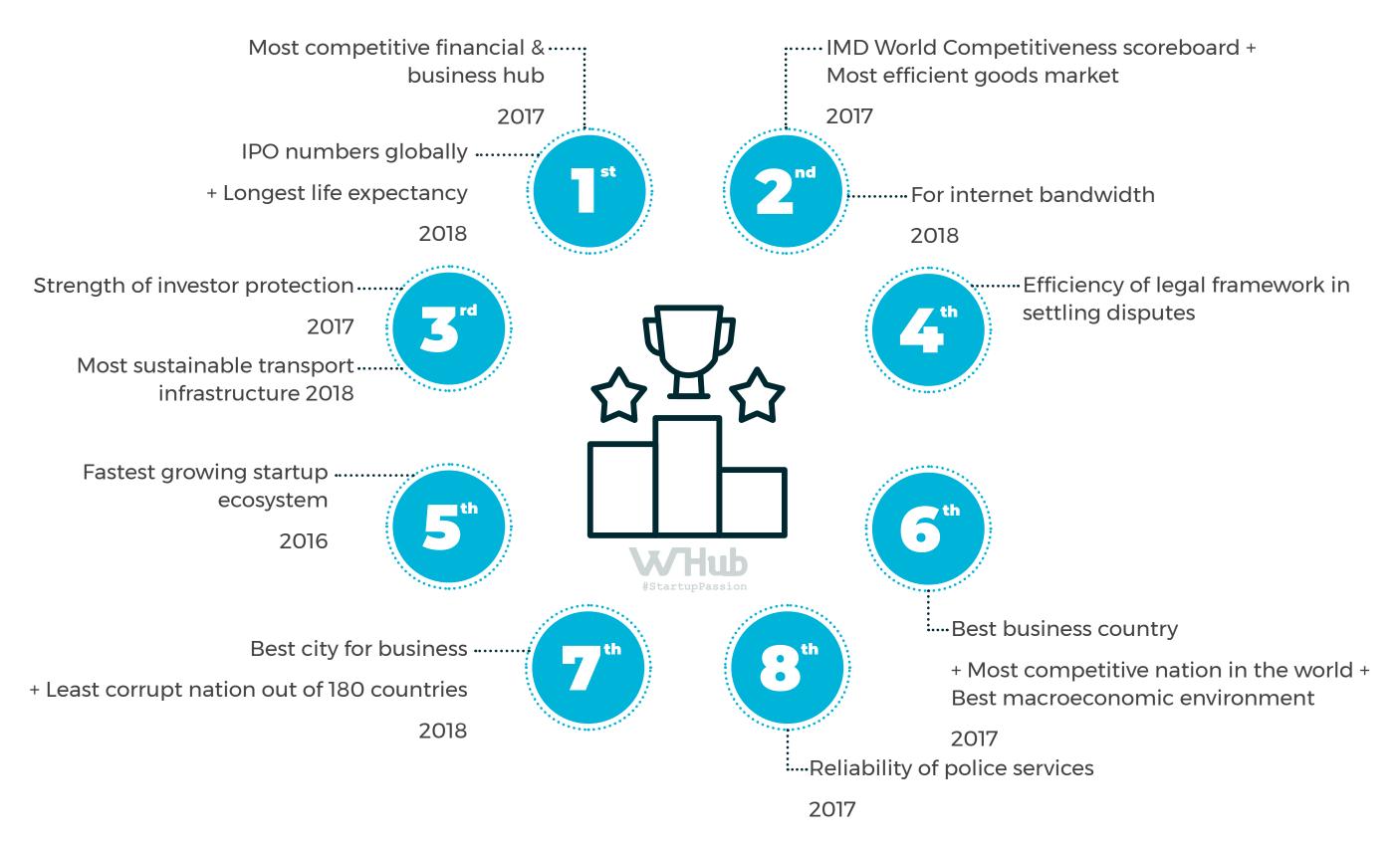
US\$584,002 Million

User penetration

59.8% in 2018



Easy & safe

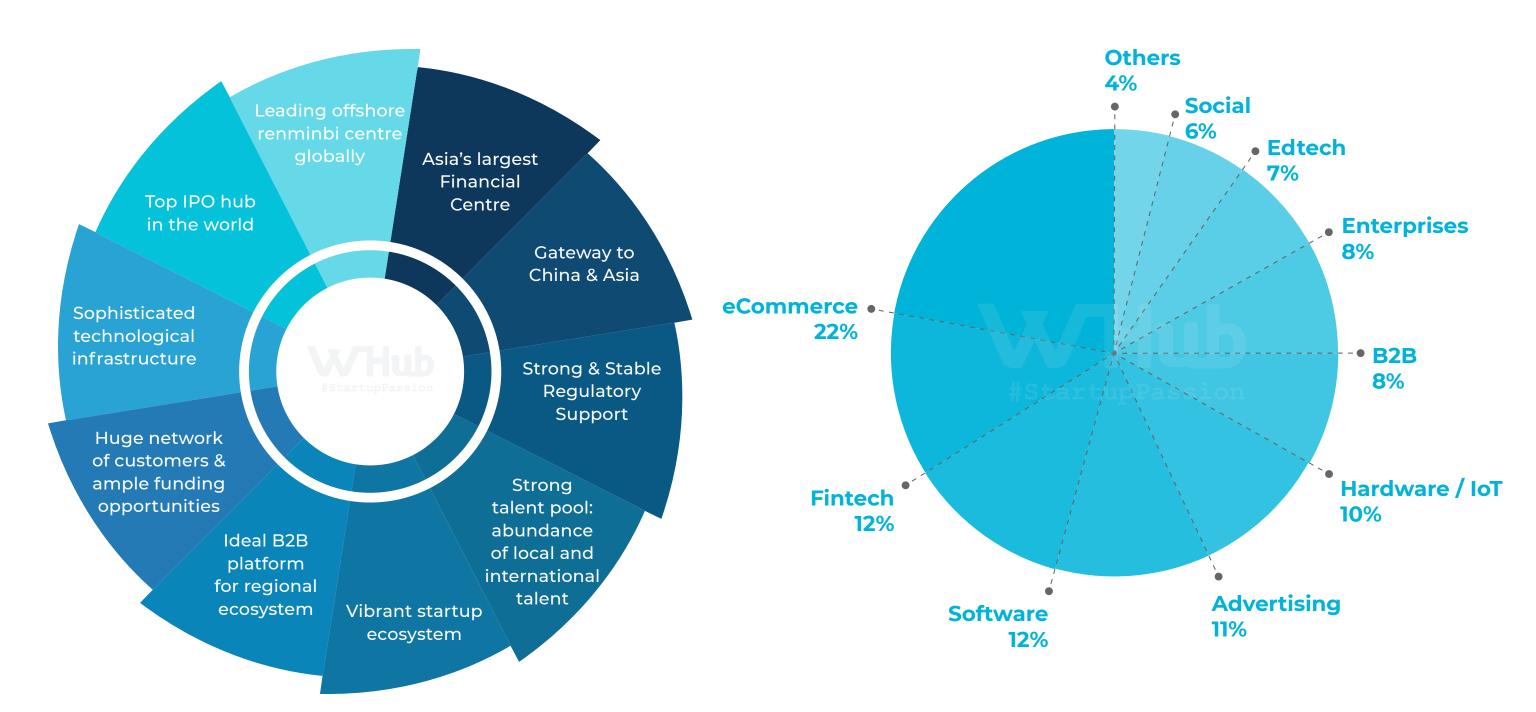




Hong Kong has the ideal ecosystem for FinTech enterprises to succeed

Diverse and Growing Ecosystem

3,000+ Startups in Hong Kong Distribution of Popular Startup Sectors



Source: WHub estimate for 2018



3,000+ startups2018

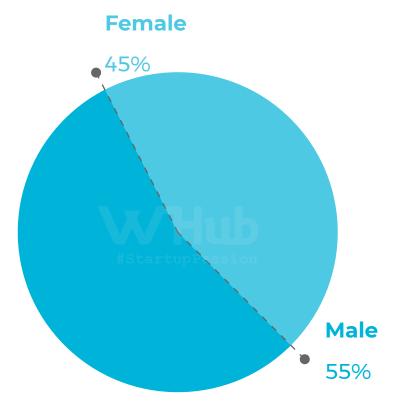
2,600+ startups 2017 2,500+ startups 2016 1,558+ startups 2015

998 startups 2014

Source: WHub estimate for 2018

Gender of Entrepreneurs

Source: He for She report 2018 by Wavestone



Origins of Founders

Source: InvestHK 2018

Hong Kong 65%

Overseas 35%

Age Group Most Likely to Start a New Business

25 - 34

35 - 44

Age Groups Least Likely to Start a New Business

18 - 24

55 - 64

Common Barriers for Young Entrepreneurs

Lack Funding Market Changes & Competition High Cost of Living 62.9% 43.4% 38.2%

Source: Global Entrepreneurship Monitor Hong Kong and Shenzhen Report

Joshua Rawson Harris



"In the new era of Smart Banking, the industry, the FinTech community and the HKMA must work together to transform the financial ecosystem of Hong Kong."

Norman Chan Chief Executive of the Hong Kong Monetary Authority





Hong Kong FinTech Unicorn: WeLab "Democratizing Finance"

Founded in 2013, WeLab offers seamless mobile lending experiences. WeLab analyses unstructured mobile big data within seconds to make credit decisions for individual borrowers. WeLab operates WeLend in Hong Kong, and Wolaidai in China.

WeLab has raised **US\$425 Million** in 4 rounds. US\$20 Million in January 2015, US\$160 Million in January 2016, US\$25 Million in September 2016 and US\$220 Million in November 2017.

The Series B1 round in Nov 2017 won the backing of was led by the Alibaba Entrepreneurs Fund, with the participation of World Bank's International Finance Corporation and Credit Suisse.

In Sep 2018, WeLab expanded into Indonesia through a joint venture with local conglomerate PT Astra International to broaden their customer reach.





Source: Startup Ecosystem Toolbox (2018)



Hong Kong FinTech Unicorn: BitMEX - The Next Generation of Bitcoin Trading Products

Short for Bitcoin Mercantile Exchange, BitMEX is a very powerful trading platform/digital currency exchange platform that offers investors access to various global markets using only Bitcoin and not fiat currency.

With a daily trading volume of over 35,000 BTC and over 540,000 accesses monthly, and a trading history of over **US\$34 Billion** worth of Bitcoin since its launch, BitMEX is easily one of the largest Bitcoin trading platforms. It has set an **industry record of Bitcoin trading volume: more than 1 Million bitcoin in 24hours.**

The platform is renowned for allowing its users to perform complex financial operations such as trading with leverage. Additionally, BitMEX offers a wide assortment of contracts such as Derivates, Futures, and Prediction contracts, and it is the only platform to offer a so-called "Perpetual P2P Swap."

In November 2018, BitMEX launched its venture BitMEX Ventures and announced its investment in FinFabrik in February 2019.





Source: Startup Ecosystem Toolbox (2018)



Hong Kong FinTech Unicorn:

Hong Kong TNG FinTech Group: Promoting Financial inclusion for the 2 Billion Unbanked Population Globally

The Hong Kong TNG Wallet is an **electronic wallet** launched in 2015 by the TNG FinTech Group.

It offers secure and convenient e-payment and financial services, including top-up and cash withdrawal services across 13 countries and territories through a network of more than 850 banks and over 183,000 cash pick-up points.

The TNG wallet is a founding member of the "Global E-Wallet Alliance", which currently covers Hong Kong and 12 Asian countries, facilitating frictionless global money transfer.

TNG Wallet secured the Stored Value Facilities License from the HKMA in 2016, and raised **US\$115M** in Series A in 2017, **one of the largest Series A rounds for a FinTech company in the world**. In 2018, TNG Wallet was one of the pioneering FinTech companies to adopt the Faster Payment System, and acquired Malaysian competitor, Tranglo, and Indonesian WalletKu. It is now one of the 8 unicorns in Hong Kong.

In March 2019, TNG announced a partnership with Visa to introduce prepaid solutions in Asian Market.







Hong Kong FinTech Unicorn:

Airwallex The new passport to global business

Founded in 2015 by Jack Zhang, Lucy Liu, Xijing Dai and Max Li, Airwallex has grown from an emerging start-up to a global challenger in the cross-border payment industry. Headquartered in Hong Kong since 2018, Airwallex is aimed at reducing complexity and cost for both banks and businesses by performing cross-border payments that combine payments and foreign exchange transfers into a single transaction.

Backed by high profile investors and industry icons such as Sequoia Capital, Tencent, Gobi China, DST, Mastercard, BCA, SquarePeg and Hillhouse Capital, Airwallex was able to **build a global digital payment network** across all corners of the globe.

Airwallex has **raised US\$202 Million in 4 rounds**. US\$3 Million in a Seed round in 2016, US\$19 Million in a Series A in 2017, US\$80 Million in Series B in 2018, and finally US\$100 Million in Series C in March 2019. The latest investment of US\$100 Million is the one that enabled Airwallex to be valued above US\$1 Billion and **enter the unicorn club**.









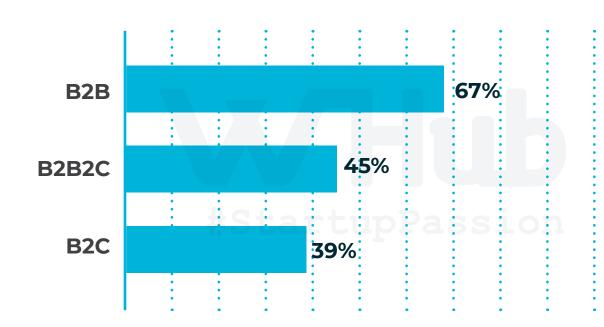
FinTech Survey Analysis

In order to further understand the characteristics and sentiments of local FinTech startups, WHub partnered with the FinTech Association of Hong Kong and conducted a survey to find out the nature, needs, aspirations and hurdles of the local FinTech ecosystem.

The startups who responded to our questionnaire are all regional, and the data was collected through social media outreach, newsletter call-outs, dedicated emails, phone surveys and in person. All the startups that have responded are FinTech or FinTech related companies.



Business Model

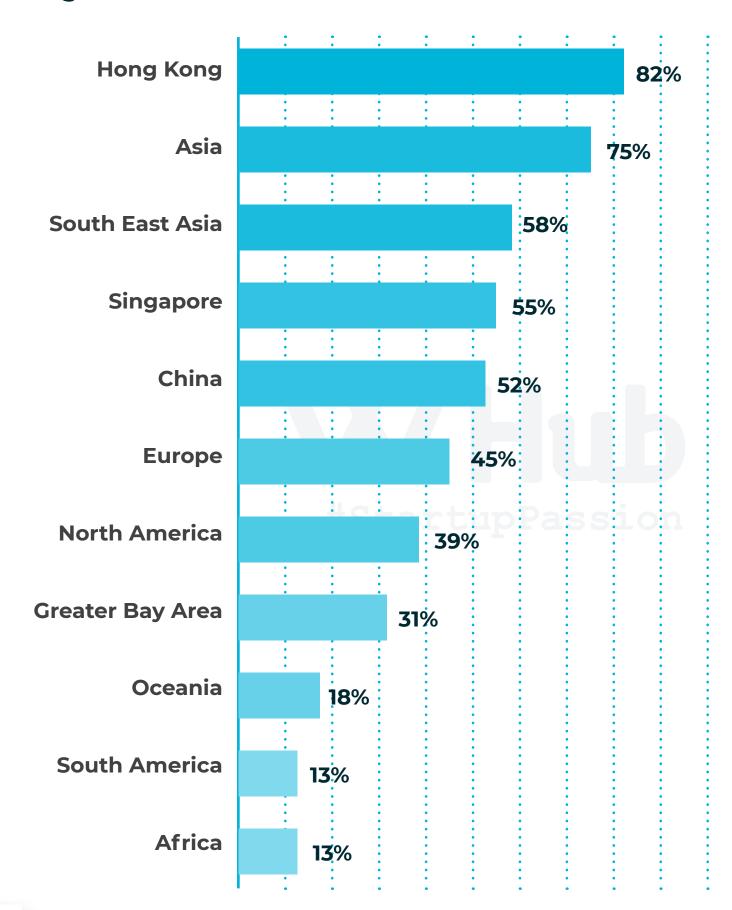


Business Model Through the survey, we were able to notice that most FinTech startups in Hong Kong are B2B (business to business) model.

Target Market 52% of the FinTech startups chose China as their target market.

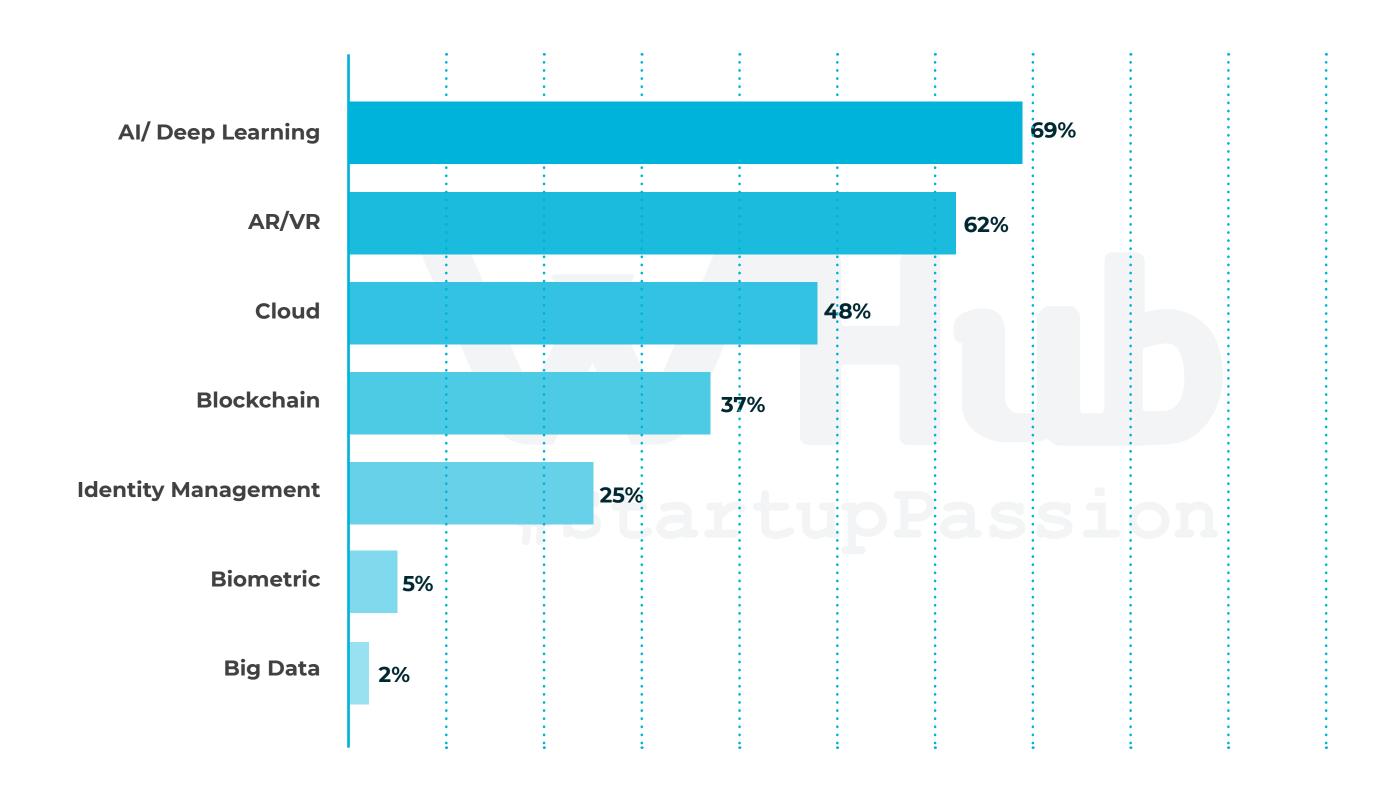
Median of Funds Raised by FinTech Startups in Hong Kong US\$1 Million.

Target Market





Technologies used by FinTech startups in Hong Kong



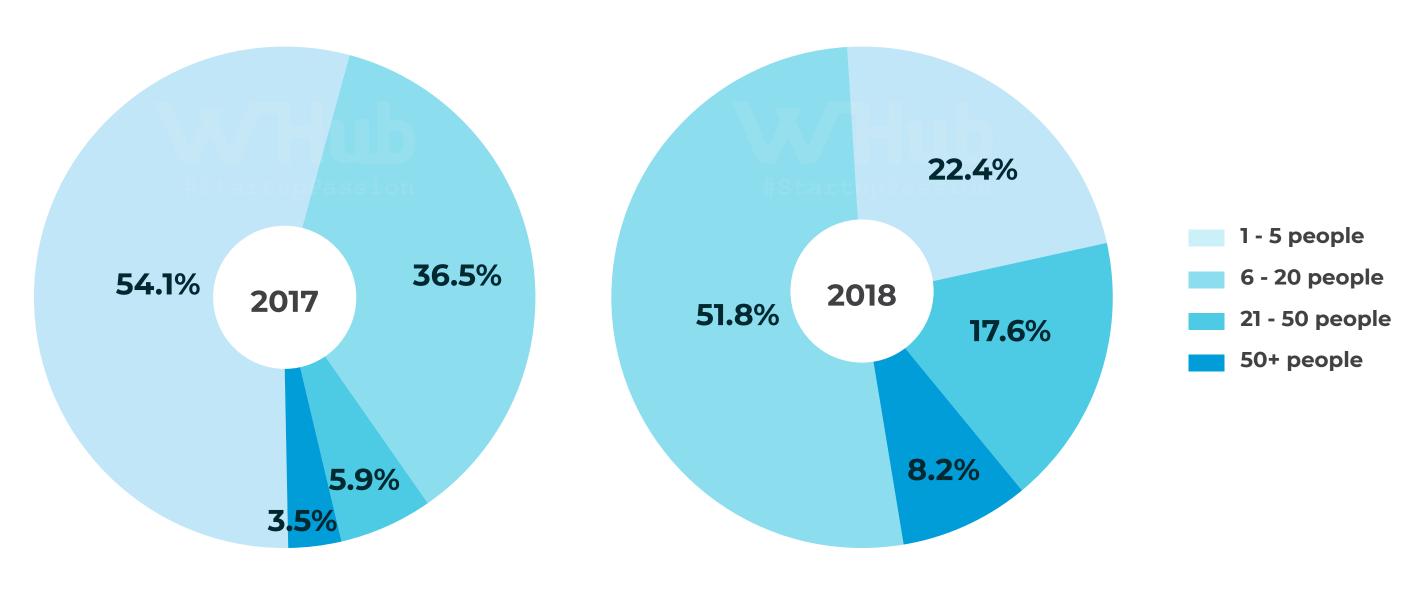


Team size 2017 - 2018

FinTech startup's team size in Hong Kong has increased drastically since 2017. Previously only 3.5% of the startups had a team of more than 50, but in 2018, that percentage of FinTech startups with a team of more than 50 people more than doubled to 8.2%.

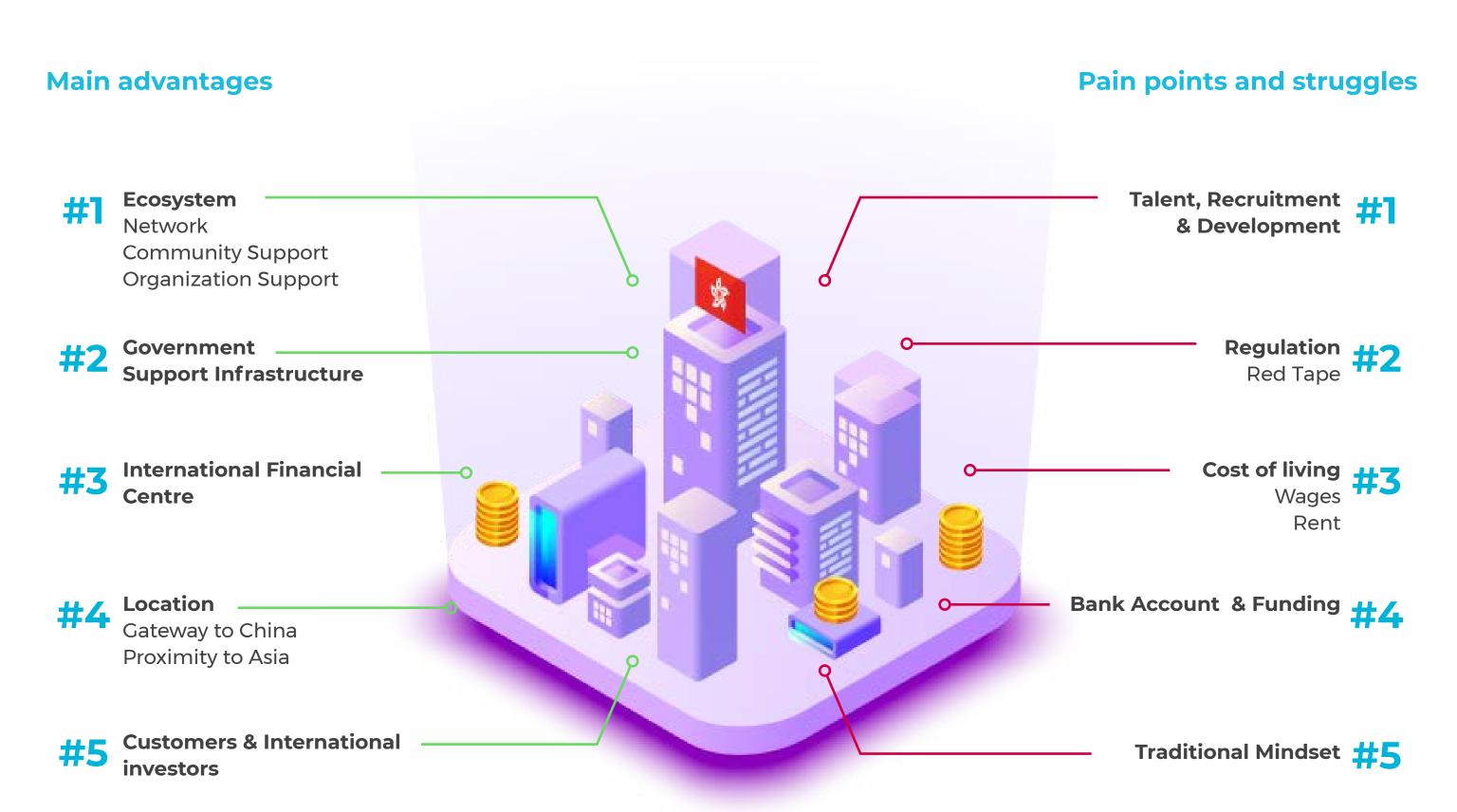
Moreover, there is a percentage increase in team sizes of 6-20 (from 36.5% to 51.8%) and 21-50 (5.9% to 17.6%), and a decrease in 1-5 (36.5% to 51.8%). Moreover, in the following 6 months, these FinTech startups plan to hire at least 8 people for their team.

FinTech startups Team Size





Running a FinTech company in Hong Kong





Hong Kong: Asia's Largest Financial Centre





Asia's largest Recipient of Foreign Direct Investments (2017) World's Freest Economy

IMD World Competitiveness Scoreboard

Global FinTech Investment (China & Hong Kong) by Accenture

EY FinTech Adoption Index in Asia (except China)

One of the highest smartphone penetration rates in Asia

City with the highest number of ultra-rich individuals



Largest stock market in Asia, fifth largest in the world (2018)



Sophisticated Technological Infrastructure in Hong Kong



Physical infrastructure (Global Competitiveness Report)

2016



No. 1

Smartphone penetration in Asia

FinTechnews.hk, 2018



Government ICT spending

2018 - 2019 (estimated) OGCIO, Gov. 2018

48/100

Top FinTech companies are operating in HK

2018 HKTDC, 2018



For innovation cluster (Shenzhen -HK) in Global Competitiveness Report

2018

No. 3

Fastest broadband download speed globally

Speedtest, 2017



No. 3

Fastest average peak connection speeds

2017



Strongest and stablest financial market



Most significant FinTech hub in the world

Deloitte 2017



Overall most competitive globally



★ No. 9

Globally for technological readiness



No. 11

Business sophistication



No. 17

Labour market



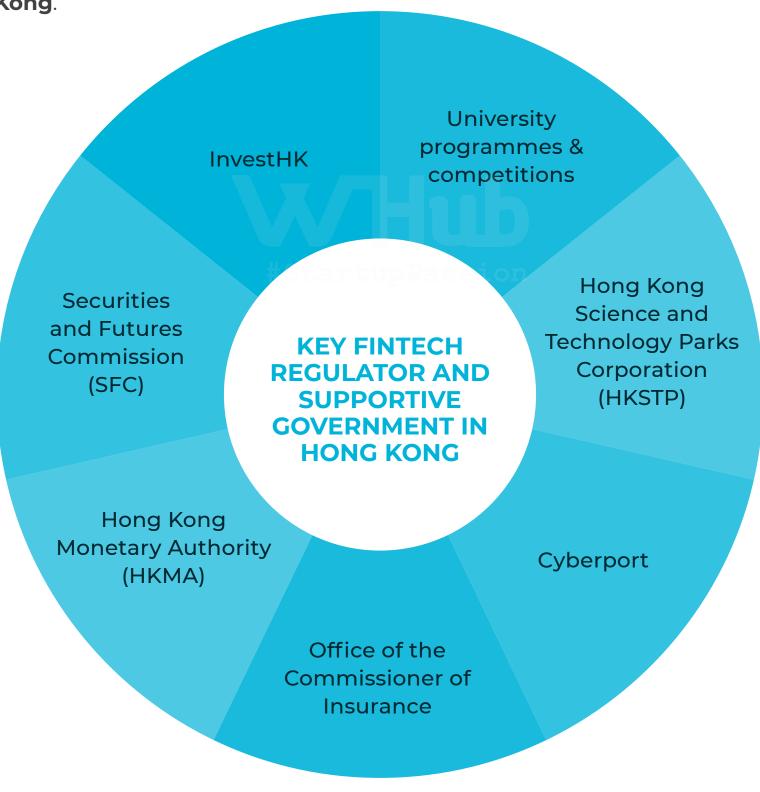
Technological infrastructure in the IMD world digital competitiveness yearbook

May 2017



Regulatory and Supportive Government

Chapter 09 focuses on **Regulatory and Government Support in Hong Kong**.



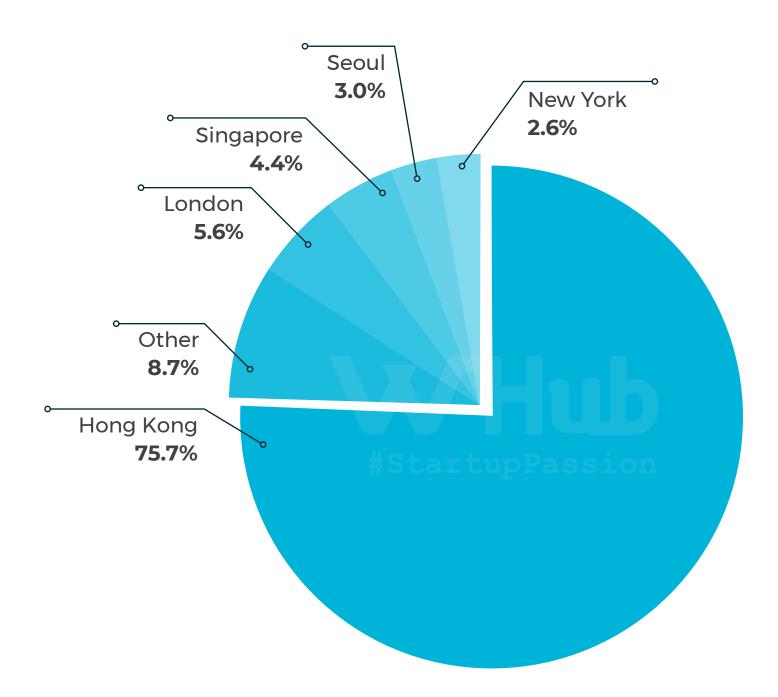


First Offshore Renminbi Centre

Hong Kong was the first offshore market to launch Renminbi business back in 2004. Since then, Hong Kong has become the global hub for Renminbi trade settlement, financing and asset management.

Renminbi activities in Hong Kong are supported by the Renminbi liquidity pool in Hong Kong, which is the largest outside Mainland China. At the end of October 2015, Renminbi customer deposits and certificates of deposit issued by banks in Hong Kong together amounted to around Renminbi 1 trillion yuan.

China's 13th Five-Year Plan for 2016-2020 has reaffirmed its commitment to opening wider to the world, accelerating the opening up of the capital market and developing Renminbi as a convertible and freely usable currency. However, Hong Kong still managed to account for a lion share of 76% in overall cross-border Renminbi global payments in 2017, mainly leveraging on its close economic ties with the Mainland.

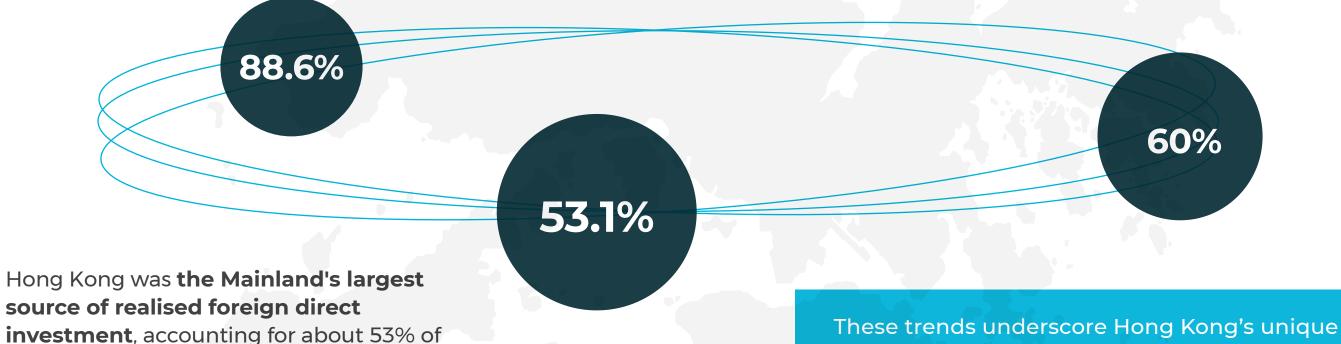




Key Intermediary Platform

In 2017, the value of goods re-exported through Hong Kong from and to the Mainland China was **HK\$3,397.2 Billion** (**US\$435.9 Billion**), accounting for 88.6% of Hong Kong's total re-export trade value.

Hong Kong is **THE LARGEST RECIPIENT OF OUTWARD DIRECT INVESTMENT from Mainland China**, being either the beneficiary or intermediary of almost 60% of such investment.



source of realised foreign direct investment, accounting for about 53% of the national total as at end-2017, with the cumulative value reaching HK\$7,886.7 Billion (US\$1,009.3 Billion).

roles as both the gateway for foreign companies to access the markets in Mainland China and the springboard for institutions to gain exposure to international markets.



Hong Kong: Gateway to China

Hong Kong is the preferred entry point to China for businesses. Hong Kong's "One Country, Two Systems" boasts a stable investment environment, protected by fair, transparent courts that enforce long-established rule of law.

Hong Kong is adjacent to China's fast-growing Pearl River Delta region and access to half of the world's population within five hours.

Several important Initiatives have been put forth in order to foster economic growth and provide a greater scope for Hong Kong companies to enter into the Mainland China market.

CEPA A China-Hong Kong free trade agreement, allows local companies' preferential access to the Chinese market.

The Belt and Road Initiative was put forth more than four years ago. It has witnessed the launching, expansion, faster-than- expected progress and fruitful outcomes since then.

The Guangdong Pilot Free Trade Zone (GDFTZ), was established to further expose Mainland China to the world through co-operation between Guangdong, Hong Kong and Macau with a focus on trade and foreign investment management.

Greater Bay Area Initiative (GBA) refers to the Chinese government's initiative to link the cities of Hong Kong, Macau, Guangzhou, Shenzhen, Zhuhai, Foshan, Zhongshan, Dongguan, Huizhou, Jiangmen and Zhaoqing into an integrated economic and business hub.



Adjacent to China's fast-growing
Pearl River Delta region and
access to half the world's
population within **five hours.**



China's Belt and Road Initiative

The Belt and Road Initiative also known as the **One Belt One Road** was put forth over four years ago by the Chinese Government involving development and investments in over 65 countries with a focus on infrastructure and economic development in Europe, Asia, Middle East, Latin America and Africa. The project has a global reach of 4.4 billion people, representing 63% of world's population and 40% of the global GDP. Over 100 countries and international organizations have joined this initiative.

What are the achievements so far?

Economic corridor development and Interconnected infrastructure network is taking place.

The Asian Infrastructure Investment Bank (AIIB) and Silk Road Fund have provided firm support and financial cooperation.

China Railway Express trains to Europe have been operating on the vast Eurasian continent.

What is the potential?

Hong Kong can take on three main roles for the One Belt One Road initiative:



Raising Funds: Hong Kong has a unique competitive advantage as a fund raising hub, as it is the largest centre of offshore Renminbi in the world.



Building Infrastructure: There are huge opportunities for Hong Kong firms as the city has several companies which have proven their efficiency (i.e. MTR Corp).



Global Expansion: Hong Kong can develop business links with countries participating in the project.

The GBA region will play a major role in furthering the objectives of China's Belt and Road Initiative through the enhanced flow of business synergies, talent, shared resources and other efficiencies and has been structured to lead the region's technological/innovation, manufacturing, logistics, trade and finance industries.







The GBA

A world-class city cluster: the free flow of goods, services, and people

The GBA initiative intends to ambitiously create an economic cluster that includes the 11 cities of the Guangdong-Hong Kong-Macau regions and will promote growth, innovation, and better relationships between countries and within regions.

The synergy is intended to combine Hong Kong's financial system together with China's human capital resources, technological ecosystem, efficient supply chains and large-scale consumer markets.

- 12% of the national economy (equivalent to US \$1.4 trillion) is generated by 5% of the country's population. According to Colliers research, the GBA economy is expected to reach US\$3.6 trillion by 2030.
- The GBA in scope will be comparable to the San Francisco Bay Area, Greater Tokyo Area and New York Metropolitan Area and will represent one of the largest urban areas both in size and population.
- Sectors that are seen as most likely to benefit from GBA: trade and logistics (68%), financial services (62%) and R&D in innovative technologies (60%).
- 80% of 614 business executives in Hong Kong support the integrated development of HK, Macau and Guangdong through the GBA.

Example In an SCMP interview, Chan Ka-keung, the former Secretary for Financial Services and the Treasury, provides the example of WeLab of how a Hong Kong startup has used the GBA market to grow in size and scale. WeLab started in 2013 as an online money lender in Hong Kong and then extended into the GBA and now offers financial services to over 30 million customers in Hong Kong and China.



FinTech Opportunities in the GBA - FinTech Cities in the Region



DONGGUAN *FinTech Aspirations*

- A number of high-tech industrial zones and incubation parks have been set up to help develop science and innovation
- The city has expressed its interest in promoting more financial and business services
- Dongguan has launched a CNY1.5bn (\$217m) fund looking to boost investment in several areas including FinTech



ZHUHAI

Special Economic Zone with FinTech Aspirations

Plans to work with Hong Kong/Macao technology parks and business incubators in order to launch technology projects



GUANZHOU Major Blockchain Center

- Attractive for FinTech companies and innovation.
- Guangzhou is currently the only green finance pilot zone in the four 'first- tier' cities in China
- Major Trade Manufacturing and Finance Hub
- Local authorities in Guangzhou plan to develop an Innovation Center by 2020. The government is also drafting a five year plan dedicated to IT, AI and Biotech and there are also plans for technology and science parks.
- Numerous Hi-Tech companies have set up operations in Guangzhou



HONG KONG Global and Regional FinTech Hub

- --- Leading Financial Hub
- Low Taxation Rates
- → Free Economy
- --- Strong Legal System
- --- Logistics Hub
- Technological R&D and Innovation Centers
- --- Fintech Hub
- Transparent regulations and strong arbitration arrangements
- --- Products can be tested quickly
- --- Proximity to GBA is optimal for manufacturing
- --- International Talent
- Access to Global Markets
- High Presence of International Banks in HK



SHENZHEN

Leader in the Retail Commercialization of FinTech

- → Special Economic Zone incentives to attract investors
- Technological Innovation and Development leading High-Tech center
- --- Hardware Hub
 - International Trade and Shipping
- --- Entrepreneurial Culture
- --- Lower cost of living than HK



FinTech in the GBA - Challenges

Oovernments' support and crossborder cooperation are seen as crucial because of different legal and administrative systems and different custom zones (for example differences in Salary taxes in HK is capped at 17%, and 45% in Mainland China).

Regulation of financial services in the GBA to provide more seamless banking experiences for corporates and individuals.

Cross Border Payments are still challenging - perhaps need to consider a Cross Border FinTech payment solution.

Protectionism and other measures might hinder cooperation.



According to a recent SCMP article, The GBA could serve as a great stepping stone for Hong Kong startups and companies to go global, "but it will only work if restrictions are eased further". In order to enjoy the vast market opportunities in the GBA, there are certain challenges that must be addressed

Need of infrastructure support - including medical and education world-class facilities - for the region to be able to both promote and attract talent and innovation.

Authorities are evaluating the tax incentives currently offered in the GBA in comparison to those offered by special economic zones in China in order to attract hi-tech talent.

Hong Kong-based banks, insurance firms and brokers would like to see a reduction in the amount of capital required to set up operations in China.



Ecosystem - Initiatives and Projects

China Based Initiatives

China's Central Government includes support for FinTech as part of its 13th National 5-year development plan and includes:

- regulatory technology.
- optimize the financial information technology governance system and enhance the level of information technology services.

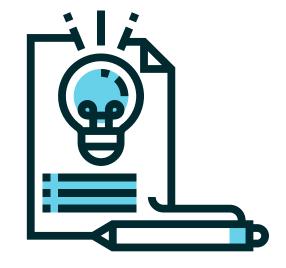
Internet + is Driving Fintech Adoption in China

- "Internet Plus" has been created by the Chinese Government as an initiative to transform, modernize and enable traditional industries to join the modern economy.
- Understanding Internet Plus is necessary in order to enter the Chinese Market.
- Internet Plus is a plan to integrate cloud computing, big data and IoT with more traditional economies and industries.

Hong Kong Based Initiatives

The Greater Bay Area Homeland Development Fund was initiated by Hong Kong's corporate community for continued technology development and innovation in the region.

With a capital volume of over HK\$100 Billion, it will provide a financial boost to technology companies operating in the GBA. This platform is also expected to include information about IP and patents. The development fund will also assist certain Hong Kong's industries to set up operations and scale in the GBA.





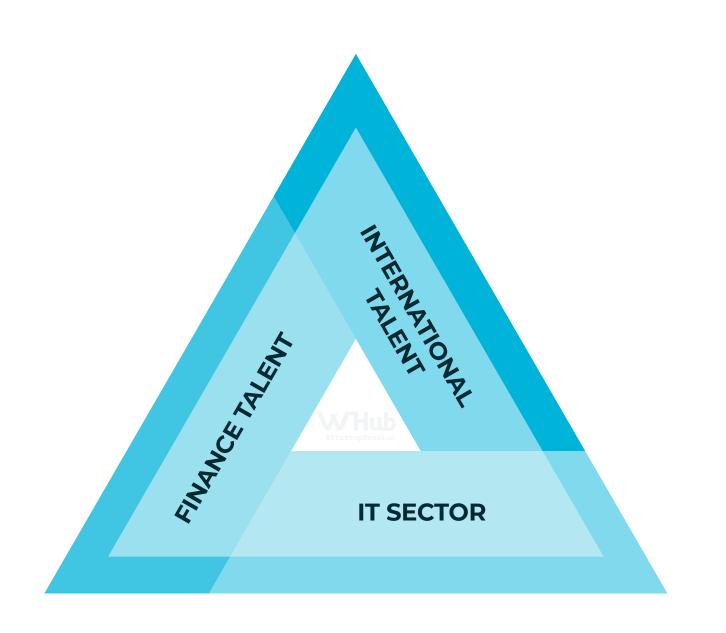
Some people already call Shenzhen the Silicon Valley of China. Imagine placing Silicon Valley next to New York City?".

Paul Chan Financial Secretary, HKSAR Government





World Class Finance Talent



Hong Kong is ranked as the **5th most appealing** place to work for foreigners.

Hong Kong is ranked 6th in attracting highskilled talent.

It is partly due to the effective and expeditious immigration policy, which will be explained afterwards.

223,221 people are employed by the Finance and Insurance sectors, accounting for 6% of total employment in Hong Kong.

Value added by the financial services sector amounted to \$365.9 Billion, or 17% of nominal GDP at basic prices.

Hong Kong FinTech workforce: 8,000 people

Of the 95,780 IT employees (including freelancers), 53,273 (55.6%) were working in the IT & Communications Services Organisations and 42,507 (44.4%) in the IT Users Organisations.

Source: Government of Hong Kong Special Administrative Region 2017, OGCIO, HK Gov. 2016, The Innovation and Technology Training Board, Manpower Survey Report Innovation and Technology Sector 2018



Developing FinTech Talent





HKU's Introduction to FinTech is Asia's **1 st FinTech MOOC** that launched on edX on May 15, 2018.

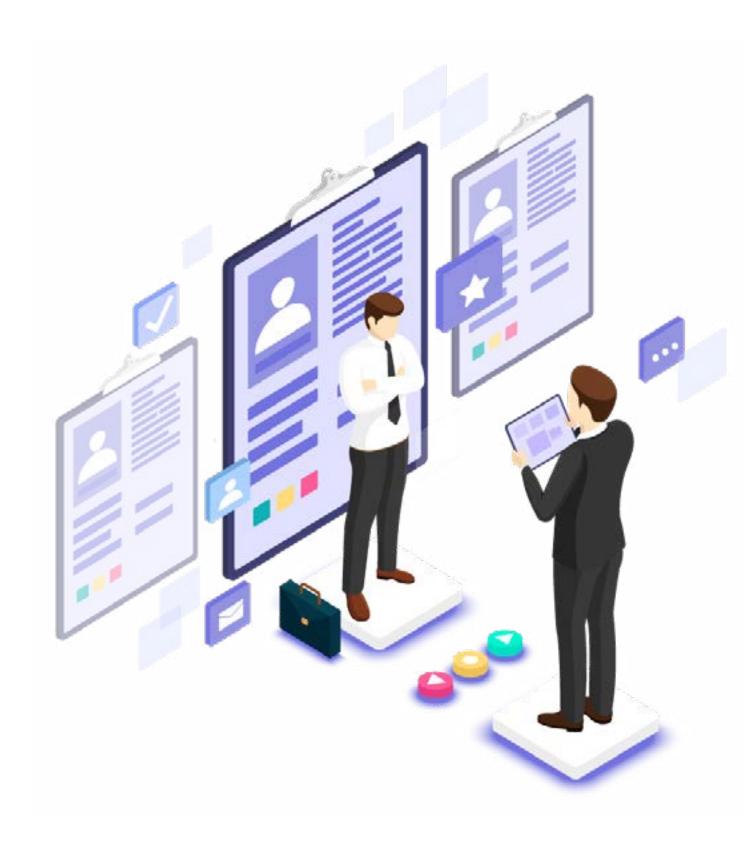
The course currently has over 37,500 people that are learning from every single country in the world. It is a 6-week online course created by HKU with the support of SuperCharger, the Centre for Finance, Technology and Education, UNSW Sydney, Microsoft, Standard Chartered Bank and other industry leaders.

The course includes modules from the major areas of FinTech by a team of renowned academics and practitioners in international business, finance, law and technology. It introduces key trends in FinTech - Digital Finance, RegTech, Cryptocurrencies, Blockchain, Al and Big Data - and evaluates how they impact economies, markets, companies, and individuals.

Course trailer



Sourcing talent



Talent List

In order to attract global talents to Hong Kong, the Hong Kong Government released its first Talent List of 11 professions in August, 2018 to support its development as a high value-added and diversified economy.

The Talent List highlights specific professions needed most for Hong Kong's economic development, among them are FinTech Experts, Innovation and Technology Experts, and Asset Management Professionals.

Technology Talent Scheme

In August 2018, the Innovation & Technology Commission launched the Technology Talent Scheme, with two initiatives - The Postdoctoral Hub Programme and the Reindustrialisation & Technology Training Programme. The scheme is developed with the intention of nurturing and bringing together additional tech talent on a pilot basis for 5 years.

Applications must possess a doctoral degree from either a local university or a well-recognized non-local institution. Successful applicants will be offered a monthly allowance of HK\$32,000 if they relocate to Hong Kong.

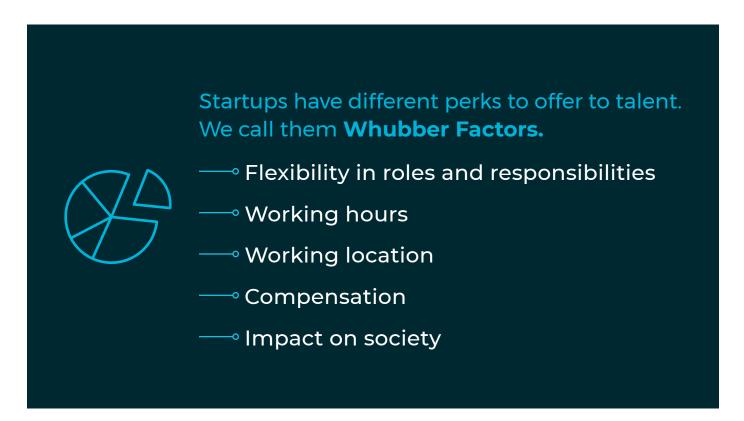


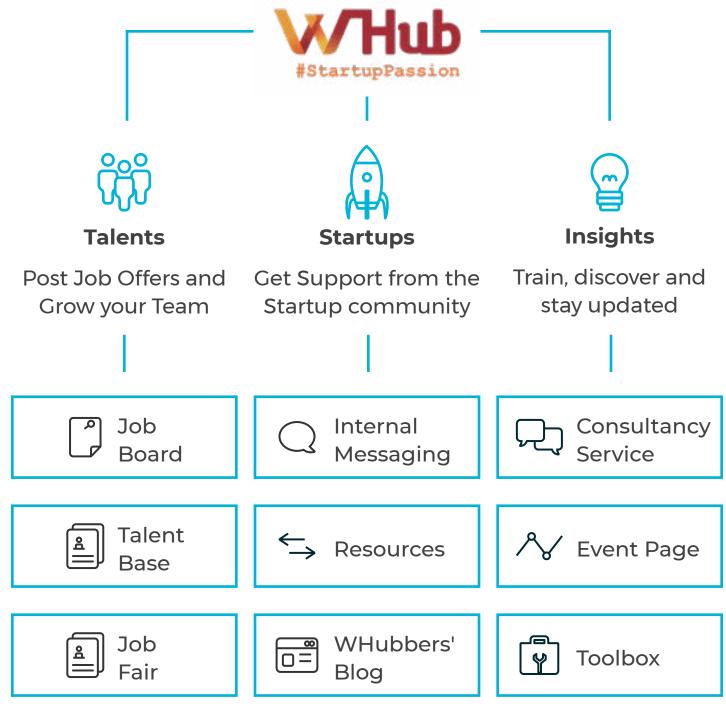
Fostering innovation and helping startups to grow in HK and GBA

WHub (whub.io), Hong Kong's biggest startup community and **power connector**, is a platform showcasing startups to accelerate their business through meaningful connections to the resources they need to grow.

"W" stands for "Why". Everything starts with "Why": The Mission, Passion and Sense of Purpose. WHub is based on 3 pillars to help foster and grow the ecosystem:

- Connect Key Players and the Community
- Empower Recruitment and Startup-Corporate Co-Innovation
- Educate through insights and events











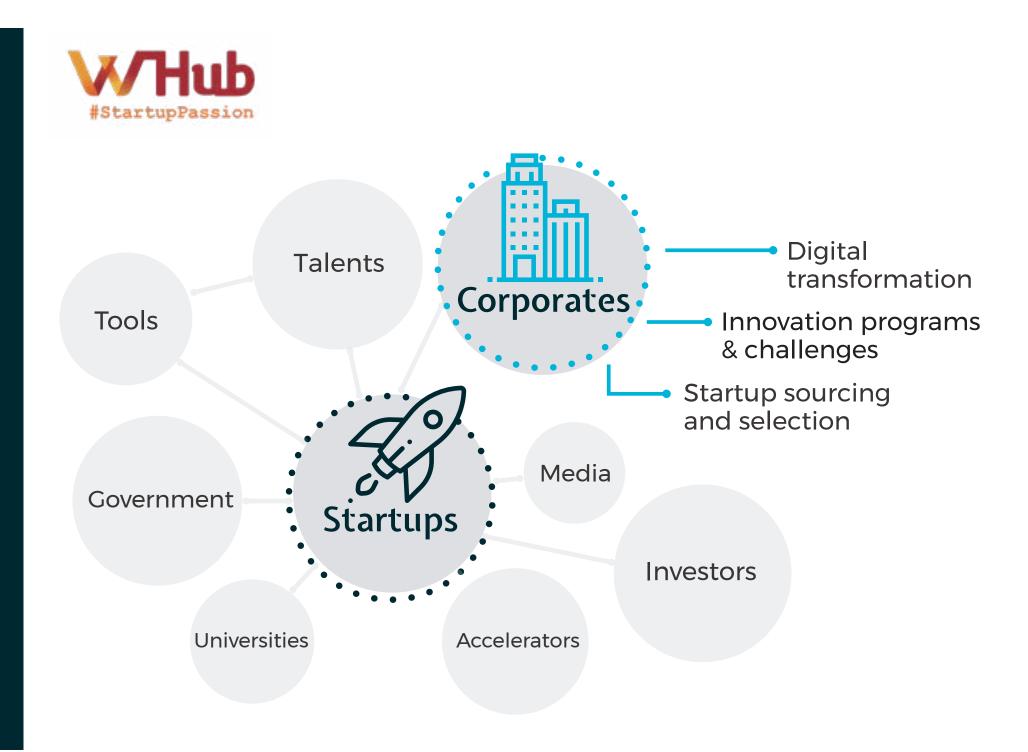
Join WHub's community as a Talent or a Startup!



Make the connections that really matter, empower your business!

Our services Hackathons

- Corporate Innovation Scouting
- → Pitch Competition
- Roadshow
- ~ Reports
- □ Incubation / Accelerations
- Conference
- Jobs
- Referral Services
- Government / Corporate Closed door event
- □ International Startup Exchange LaunchPad
- Speaking Engagement
- Innovation Tours (China, GBA, HK)
- Advertisement
- ⊸ Media Coverage & Blog
- --- Open Innovation Challenges









Join WHub's community as a Corporate or a Key Player!



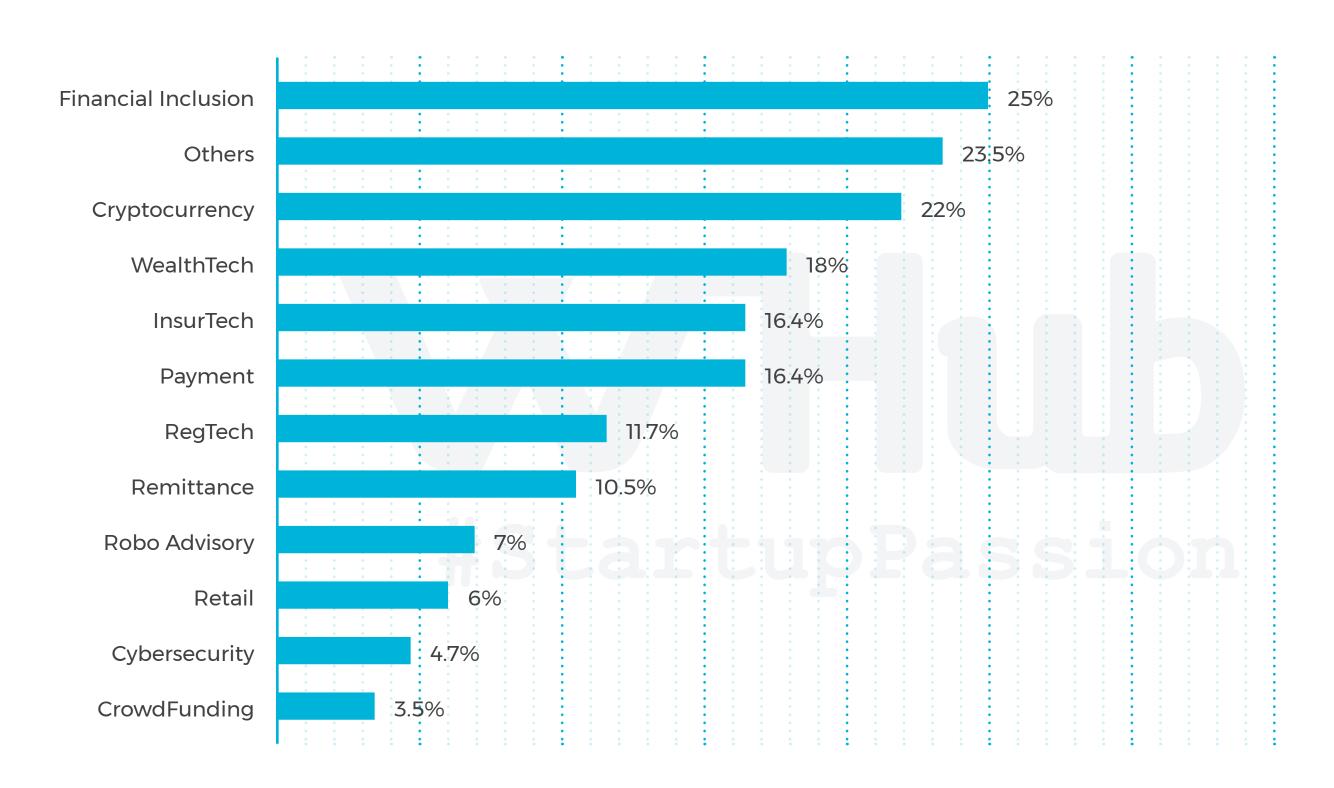
04

FinTech key sectors with local examples

- 4.1 Overview on FinTech key sectors
- 4.2 Big Data
- 4.3 Blockchain
- 4.4 Initial Coin Offerings (ICO) & Token Sales
- 4.5 Digital Payments/FX/Remittance
- 4.6 Crowdfunding
- 4.7 Digital Lending
- 4.8 InsurTech
- 4.9 RegTech
- 4.10 WealthTech



Overview on FinTech Key Sectors



Source: 2018-19 FinTech Census Questionnaire (WHub)

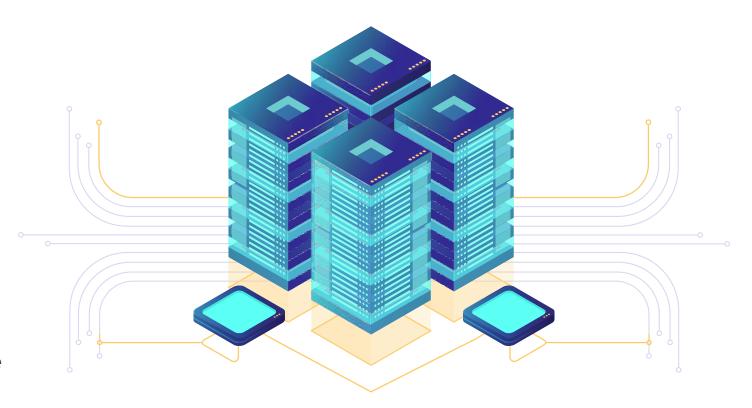


What is Big Data / Al?

Big Data refers to the large volume of structured and unstructured data, which can be analysed and transformed into insight to help companies make better decisions, deepen customer engagement, optimize operations and capture new sources of revenue. The concept of gathering large amounts of data for analysis gained momentum in the early 2000s.

Al and machine learning is a set of technologies that empower connected machines and computers to learn, evolve and improve upon their own learning by reiterating and consistently updating the data bank through recursive experiments and human intervention.

As the size of big data is continuously growing and new grounds are being broken in analyzing its implications as well, Al and machine learning have been developing exponentially. Artificial intelligence is becoming the technology investment priority for large firms.



Big Data Startups in Hong Kong



The Cloudminer is a natural resource analytics platform that allows users to undertake project identification, promotion and evaluation.



Oriente Using AI, machine learning, and data science, Oriente is building solutions that provide real-time credit scoring, digital and O2O lending as well as other financial services to underserved communities in emerging Southeast Asia.



AMP Credit Technologies offers patented loan origination and automated portfolio management processes and technologies to micro, small and medium-sized enterprises.



Miotech is an AI platform that turns data into insights, enabling financial institutions to make more informed decisions. The platform studies rich data across various sources around the world, helps businesses visualise relationships, discover connections, identify market trends, reveal hidden patterns, and presents a simple interface to the customer.



What is Blockchain?

Blockchain is a type of distributed ledger that allows digital assets being logged and shared within a permissioned network. Successful transaction in a blockchain will be shared to every participant in the network simultaneously. These digital assets will be stored in blocks in a linear chain, each block that contains digital asset is linked to the previous block, ensuring all data in the overall blockchain will not be tampered or altered.

The distributed ledger technology (DLT) has a wide range of potential applicability to many banking and payment services, like cross-border money transfer and cryptocurrencies.

Blockchain/ Cryptocurrency Startups in Hong Kong



ANX offers solutions to merge blockchain technologies with traditional payment networks.



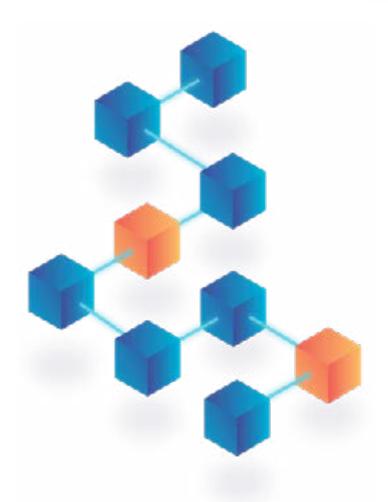
FinFabrik offers SaaS capital markets applications to facilitate equities and crypto assets trading.



trade.io is a financial institution based on blockchain technology, providing security and transparency by leveraging experience in the investment banking, trading & FinTech sectors, and combining them with the power and transparency of the distributed ledger to revolutionise asset trading and investment banking.



BitMEX is a P2P crypto-coin trading platform that gives retail investors access to the global markets using crypto-coin products.





Blockchain applications

Payment infrastructure

Using Cryptocurrency to send money around the world.

Distributed data storage

Consists of a peer-to-peer decentralised cloud storage solution.

Digital identity

Tracking and managing digital identities in both secure and efficient ways.

Smart contracts

Giving computers control over contracts to make the legal system more equitable.

Verifiable data

Anybody can check all of the transactions and hashes all the way back to the genesis block.

Digital vote

Voters can check that their vote has been successfully transmitted while remaining completely anonymous.



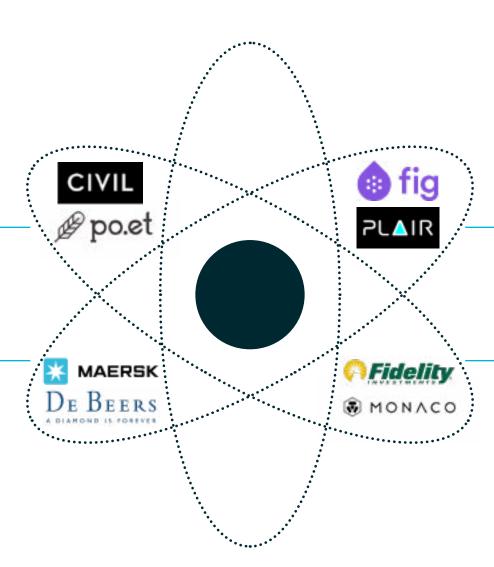
Blockchain use cases: Industry Verticals

A brief overview of industries where blockchain technologies enable promising use cases.

Journalism

Example: Free Speech, Verifiable Sources

Journalists can publish to these platforms, ensure copyright control, safety in regimes where free speech is repressed, and users can verify origin of content.



Provenance of Goods

Example: Supply Chain, Safety and CSR

Supply chain verification and tracking of goods; blockchain technology can quickly verify sources of fish in sushi, ensure conflict minerals are not used in finished goods, and trace the origin of foodborne illnesses to contain outbreaks.

Virtual Assets

Example: Gaming & E-sports, Tradeable ingame items

Use of ERC-721 standard creates the opportunity for unique items that can be bought and sold in virtual environments, with ownership verified on the blockchain.

Payment Processing

Example: Unlock Capital, Increase Throughout

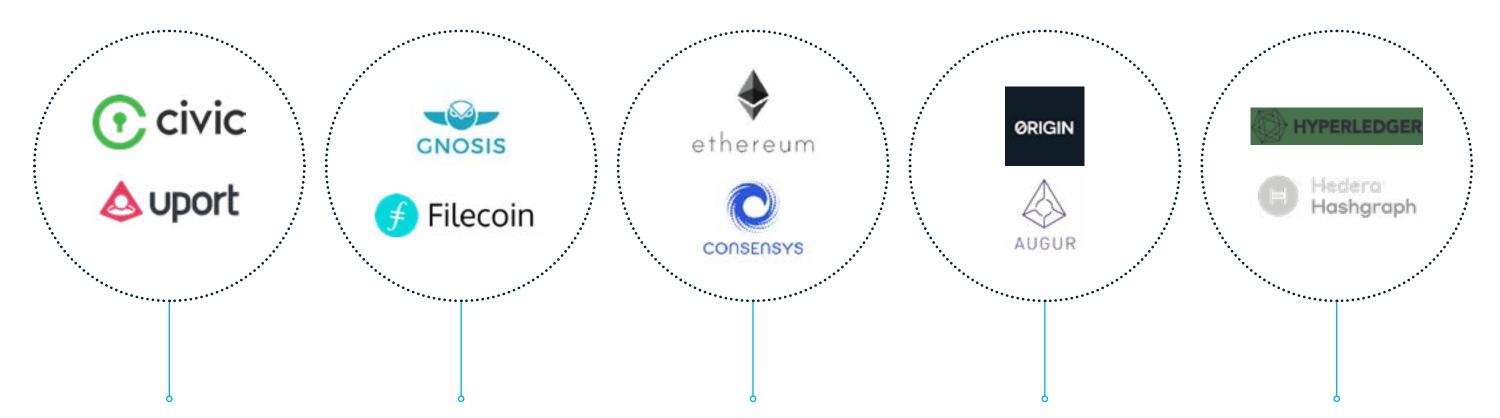
For items such as trade financing and payable reconciliation, blockchain can execute predetermined payment terms and even enable such activities as daily payments for employees or vendors.





Blockchain use cases: Platform Enablement

Foundational layers being built on the blockchain



Self-Sovereign Identity

Ownership of your identity on the blockchain for verifiable and transferable ownership of personal data.

Decentralized Computation & Storage

Shar computational resources across geographies with untrusted third parties.
Store files across multiple locations for redundancy and faster access.

Tokenization through Ethereum

Existing enterprises can create utility tokens and assets to provide fractional ownership of aspects within their network, incentive users through discounts or rewards and much more; for example, through ERC-20 tokens.

Peer-to-peer sharing without intermediaries

Removing the need for a trusted third party reduces the requirements that large centralizes parties - such as Uber and AirBnB - arbitrate transactions.

Permissioned Blockchains

Other non-public or semipublic blockchains can be used for enterprisegrade transaction recording: compare to public ledgers such as Ethereum.

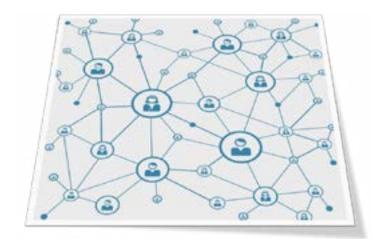




Benefits of Blockchain

It enables a variety of new use cases with benefits such as increased trust and enhanced security.





Trust

- The need for a robust system to govern trustless transactions is the premier reason to utilize blockchain technology.
- Two unknown parties can interact in a predetermined way (governed by a smart contract) and exchange only the data required to complete their transaction.
- On public blockchains, contract code can be audited and verified by any user.

Security

- Distributed blockchain systems are inherently secure.
- Redundancy of systems running the same code prevents against attack.

Decentralization

- Decentralized systems are more resilient against attacks such as DDoS.
- Application layers can operate without a central authority enabling data and value to remain with users of the network.
- Remove third party fees from transactions.

Immutability

— Once added to the blockchain, it is impossible for data to be corrupted or overwritten.





Risks and Limitations of Blockchain

Despite its benefits, Blockchain Technology is facing key challenges and risks to be addressed in order to achieve widespread adoption.



Cryptocurrencies

Today more than **200** crypto-exchanges offer their services and this number is constantly growing. Over the past 8 years about **31** crypto exchanges have been hacked and **more than 1 Billion dollars (\$1.3bn) stolen.**

— Some of the crypto exchanges learned from their mistakes and managed to recover, the others went bankrupt.

Smart contracts security

Vulnerabilities can sit in the **smart contract source code.** Smart contract development environments are highly volatile and new bugs can result in various security dangers for the blockchain platform.

— A current best practice is to perform smart contracts **security audits**.

Scalability and complexity

Current blockchains technical problems range from operation delays on a distributed ledger network to **slow transaction speed.** These are the main reasons for many players to avoid considering blockchain as a technology that can be applied in "large-scale application."

Standardization and regulation

Lack of **interoperability** prevents blockchain-related firms from interacting and collaborating with each other: there are over **6,500 active blockchain projects** on GitHub, with most of them based on **different protocols**, consensuses, privacy measures, as well as written in different coding languages. The mportance of **innovation-supporting regulation** is among the most complex issue around blockchain acceptance.

— The difficulty of regulating smart contracts, which do not necessarily fit into existing frameworks is a key challenge.





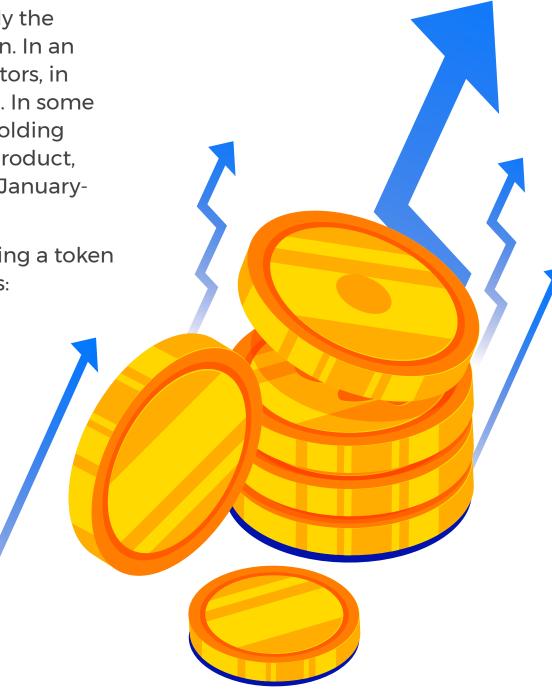
Initial Coin Offerings (ICO) & Token Sales

An **Initial Coin Offering (ICO)** is a type of funding using cryptocurrencies. Usually the process happens by crowdfunding but private ICOs are becoming more common. In an ICO, a quantity of cryptocurrency is sold in the form of tokens to backers or investors, in exchange for legal tender or other cryptocurrencies such as Bitcoin or Ethereum. In some cases, the tokens are required to use the system for its purposes. The company holding the ICO uses the investor funds as a means of furthering its goals, launching its product, or starting its digital currency. A record of US\$14 Billion was raised via ICOs from January-September 2018.

According to the **Best Practices for Token Sale** report issued by FTAHK, in crafting a token sale you should seek to make it comply with the following overarching principles:

- Legally compliant in all key relevant markets
- Strong business model to launch and sustain the token
- Secure
- Transparent by disclosing the material features and risks of the token and its sale
- Project-focused, in seeking to deliver outcome and provide solutions
- Fair to the participants and in the interests of a safe digital asset market.
- ---- Long term-oriented

To note: All ICOs issuing tokens as securities fall under the regulation of the SFC. The Hong Kong Stock Exchange has just proposed a framework for regulating virtual assets in October 2018.





Benefits & Risks of ICOs



ICOs or ITOs have raised over \$14Billion in the first 9 months of 2018, nearly tripling the \$5Billion raised in 2017. However, the amounts raised per month are in a downward trend in the last 6 months. For blockchain and cryptocurrency firms, ICOs became the defacto way to raise funds in 2017 of so owing to the investor interest in the space. But, with increasing scrutiny, having an ICO is no longer the go to option. Founders need to evaluate whether they really need an ICO to fund raise for their projects, both from a perspective of business as well as costs. With the need to ensure one is conforming to securities regulations and whether the token falls under these regulations, the founders need to engage legal advice and also have a strong funding structure and governance. This

means that there are more costs upfront. Secondly, as more enterprises look to have blockchain solutions, the more money that goes into projects by VCs with over \$5Billion invest into blockchain startups by VCs this year. In particular, founders in B2B space have started to realise that ICO funding is no longer the go to options.

With the failure of many blockchain projects, inline with rate of failure for most startup businesses, investors are becoming more prudent and with over 60% fall in market value of cryptocurrencies, some investors have burnt their fingers and are more reluctant to put their money in ICOs, unless they do thorough due diligence on the project and team.

General Manager - FinTech Association of Hong Kong, Musheer Ahmed

Applications of Initial ICOs in Hong Kong







Block.one developed an Ethereum-based EOS token, which supports thousands of transactions without charging users any fees. It has raised US\$4 Billion in an ICO in June 2018, marking the biggest ICO in history.

OpenANX is a real-world application of the blockchain that brings transparency and openness to cryptocurrency markets. It sets to launch a new decentralised exchange with ICO on the Ethereum blockchain.

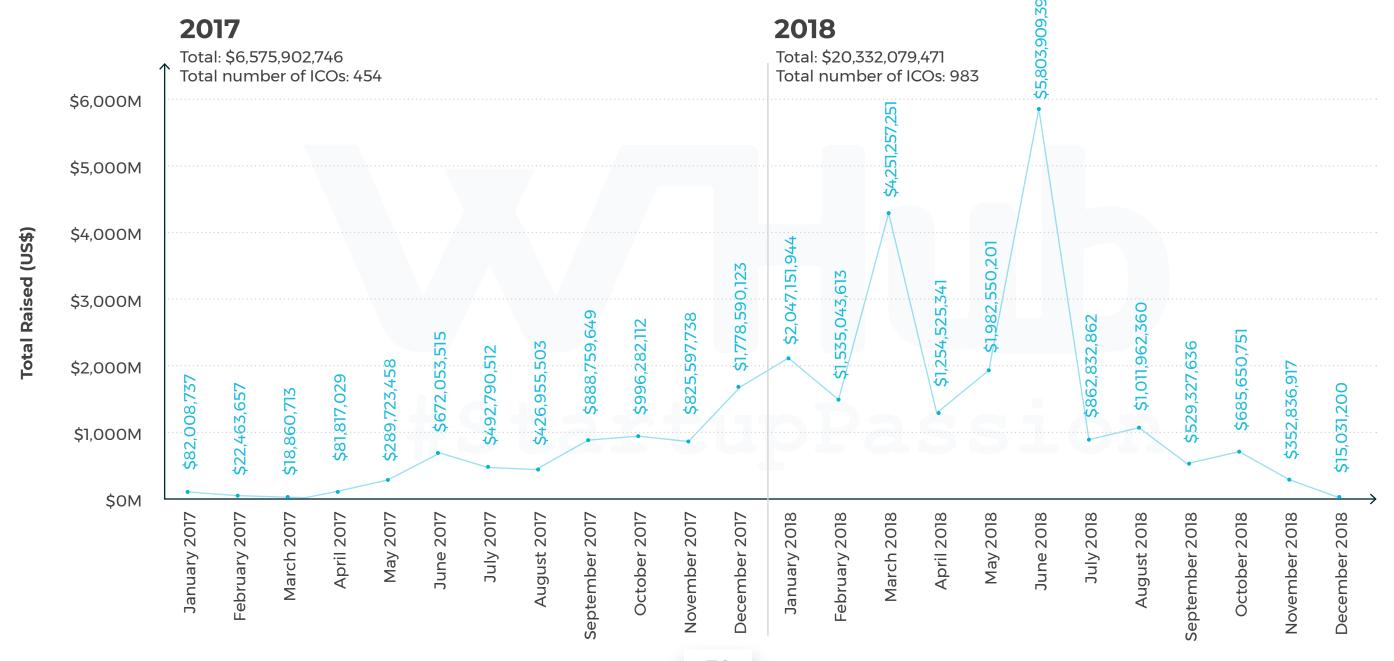
Zephyr is a rewards program for **Spark**'s pegged cryptocurrency network. When a customer signs up, sends or receives money, tops up or refers users they get rewarded with Zephyr. With every successful transaction, 25% of the profit will go back into buying Zephyr from the market. At the time of writing, Zephyr has raised US\$1.2 Million.



ICOs raised in 2017-2018 worldwide

Following last year's hype, ICOs have raised over US\$20 Billion so far in 2018, including over US\$4 Billion by EOS and US\$1.8 Billion by Telegram. This is more than double the amount raised in all of 2017, the ICOs can be either capped or uncapped on the amount of capital they want to raise. The ICO/Token Sales model is moving towards more private sales than public sales and there is increased scrutiny towards ICOs by Governments and regulators globally, with some countries, including China, banning ICOs. One of the

key factors for scrutiny is whether the token has security elements, meaning security laws may apply. Blockchain projects can be exciting and bringing in new ways to apply the tech, but there have been a number of fraudulent and failed ICOs in the last year. Hence, it is essential that a person engages in due diligence on the security nature of the ICO and eligibility of the subscriber for the issuance and the risks attached with investing in ICOs.





What is a Digital Payment / Foreign Exchange / Remittance?

Hong Kong is taking the role as a settlement hub for Chinainternational payments and securities transactions. As governments look to boost financial inclusion and growth, the power of digital payments is becoming quite relevant. It is also interesting to note that big China tech, regardless of their starting point, has ended up also providing financial services.

The foreign exchange market is the market in which participants are able to buy, sell, exchange and speculate on currencies. Foreign exchange markets are composed of banks, commercial companies, central banks, investment management firms, hedge funds, retail forex brokers, and investors.



Digital Payments / FX* / Remittance startups in Hong Kong

*FX, short of Foreign Exchange, is the conversion of one country's currency into another.







Spark is a remittance platform for money transfer businesses, enabling users to buy and sell Bitcoin and other cryptocurrencies.

Plain Exchange is a platform that helps individuals trade currencies with fellow travellers at market rate.

TNG is an e-wallet that supports real-time remittance, bill payment, mobile SIM top-up and transfer of funds across 12 countries.



Stored Value Facility (SVF)

The **Hong Kong Monetary Authority (HKMA)** brought in the Payment Systems and Stored Value Facilities Ordinance in November 2016, which requires all multi-purpose SVF issuers to obtain a licence to operate in Hong Kong. Unlicensed operators would be forced to exit the Hong Kong market after the one-year transition period. Hong Kong now has one of the most robust and up-to-date SVF regulations in the world. With HKMA's SVF Ordinance, consumers can conduct transactions with ease in a safe environment.

According to HKMA, there were 49.01 Million SVF accounts in Q1/2018, with a 4.9% increase from the previous quarter. The total value of SVF transactions was HK\$39.0 Billion for Q1/2018, increasing slightly by 0.9% from Q4/2017.

At the moment, HKMA has granted the new Stored Value Facilities (SVF) licenses as licensed SVF issuers to 13 companies & 3 banks:



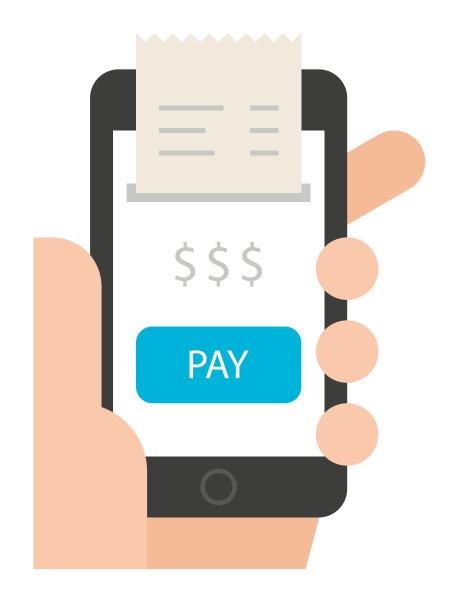








Other companies: 33 Financial Services Limited, Autotoll Limited, ePaylinks Technology Co., Limited, K & R International Limited, Optal Asia Limited, PayPal Hong Kong Limited, Transforex (Hong Kong), Investment Consulting Co., Limited, UniCard Solution Limited, Bank of Communications Co., Limited, Dah Sing Bank Limited, The Hongkong and Shanghai Banking Corporation Limited [HK].





Faster Payments System (FPS)

In order to address the increasing market needs for more efficient retail payment services, the HKMA launched FPS on 17 September 2018, and has recorded a total of 1.59 Million registrations in the past one and a half months. It is one of the 7 initiatives by the HKMA in preparation of the new era of smart banking.

The FPS and the QR code-related initiatives mark a significant milestone in Hong Kong's bid to boost its payments market and move forward in the FinTech arena. The FPS connects banks and SVF operators on a single platform and will enable the public to transfer funds anytime, anywhere, across different banks or SVFs, with funds available almost immediately.

The Faster Payments System (FPS)



Enhance payment convenience and efficiency for individuals and corporations.



Connect to the payments directly or indirectly with all options being safe and stable.



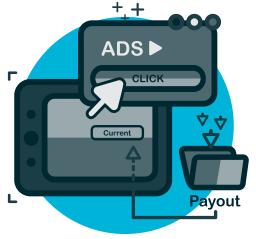
Promote healthy competition between banks and non-bank payment service providers.



Enhance the resilience of the Real Time Gross Settlement (RTGS) system by providing a non-similar facility for backing up the RTGS system.









What is Crowdfunding?

Crowdfunding is a means of raising funds for a project, allowing **many contributors to give a small amount of money**. In Hong Kong, equity crowdfunding is regulated by the SFC - Securities and Futures Commission.

Types of crowdfunding

--- Reward-based crowdfunding

Backers give a small amount of money in exchange for a reward.

Donation-based crowdfunding

Donors donate a small amount of money in exchange for gratitude and the feeling of supporting a cause they believe in.

Debt crowdfunding

Lenders make a loan with the expectation to make back their principal plus interest.

— Equity crowdfunding

Investors invest an amount of money in return for equity in the company.



Crowdfunding platforms in Hong Kong

ANGELHUB

Invest in the future

AngelHub is a Hong Kong's first SFC licensed startup investment platform for professional investors and global startups raising growth capital.



FringeBacker is an online crowdfunding platform, providing a range of options for online fundraising, from reward-based crowdfunding to P2P fundraising.



Next Chapter is a reward-based crowdfunding platform for female entrepreneurs and women-owned businesses.

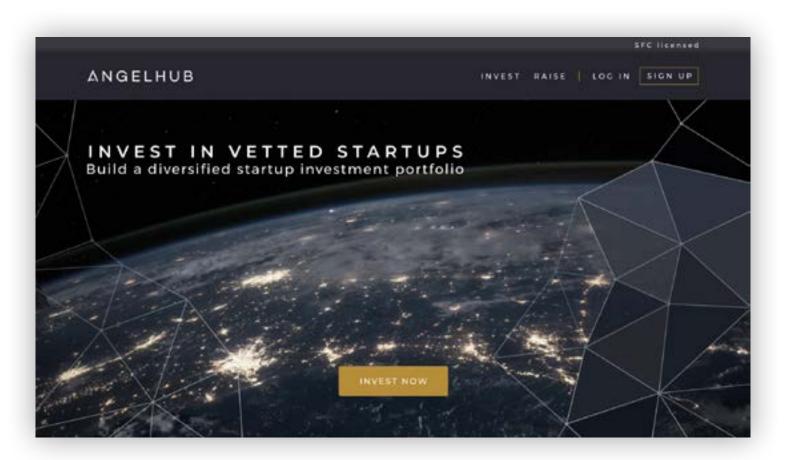


AngelHub Equity Crowdfunding Platform

Hong Kong's first regulated startup investment platform for professional investors to invest in vetted startups from around the world.

Benefits

- Bring the most promising startups to investors through our experience and network in Asia
- Digitized investment experience from pre-investment to exit
- Build a diversified portfolio with a minimum investment of USD10,000
- Join an exclusive Professional Investor network
- --- Invest in vetted startups that are scaling in Asia



angelhub.io



The founding team of WHub pre-launched AngelHub in October 2018 at the Hong Kong Stock Exchange (HKEX), by Karen Contet Farzam, CEO & Co-Founder, and Karena Belin, COO & Co-Founder, AngelHub.

Endorsed by **Tim Drapper**



What is Digital Lending?

Digital lending attempts to perform each step in the lending process through digital channels. It provides access to expansive data and sophisticated algorithms, allowing new digital lending companies to compete with traditional banks by offering new types of lending options.

Participants usually have access to digital platforms to facilitate funding. Borrowers include consumers and small businesses, while individuals and institutional investors provide capital. Digital lending companies match borrowers with lenders directly via online auctions.

Digital Lending in Hong Kong is subject to the Money Lender's License provided by the Companies Registry, the government of the HKSAR.



Lending startups in Hong Kong





MoneySQ.com is a crowdfunding platform that operates a collective investment scheme and accepts funding from professional investors.

WeLab is reinventing traditional financial services by creating seamless mobile lending experiences. With its risk management technology, WeLab effectively analyzes unstructured mobile big data within seconds to make credit decisions for individual Borrowers.



Qupital is an online invoice trading platform that helps businesses raise funding against their unpaid invoices in 24 hours or less.



What is InsurTech?

Hong Kong is one of the key insurance hubs in the region. A vibrant domestic insurance market with 161 insurers valued at around US\$48 Billion, equating to 15% of Hong Kong's GDP. Insurers include Prudential, Manulife, MetLife, AXA, AIA, Generali, SunLife, FWD, AEGIS, AEGON, RGA, Swiss Re and Peak Re. have their headquarters in Hong Kong.

According to the Global FinTech survey conducted by PwC HK, 9 out of 10 insurers fear of losing part of their business to FinTech companies. Insurers are closing existing gaps between customer centricity and digital channels. Some insurers have introduced wearable devices and mobile apps to track the fitness activity of policyholders. Currently less than one percent of Hong Kong's life insurance sales are made digitally.

InsurTech startups in Hong Kong

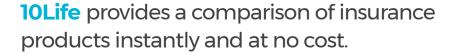


Wesurance provides advanced InsurTech solutions to users using a smartphone app and is the first mobile platform insurance product tailored to HK Foreign domestic helpers.



CoverGo is an award-winning, B2B, modular platform that enables insurers, brokers and bancassurance partners to digitize and distribute insurance products via open insurance APIs.







Coherent Asia builds insurance risk analytics and reporting software that can create risk committee quality reports in seconds.



OneDegree is the first digital insurer candidate in Hong Kong with a fully digitised insurance process end-to-end.





InsurTech emerges in Hong Kong



FWD, Pacific Century Group, headquartered in Hong Kong, established as a digital-first insurer across several Asian markets. FWD announced in January 2017 that it plans to invest HK\$500 Million (around US\$64 Million) in developing InsurTech solutions within the next five years.

FWD has partnered with HKT Payment Limited to integrate a Tap & Go Payment Service with the iFWD platform, allowing customers to arrange instant cash withdrawal services through the iFWD platform to their Tap & Go accounts.

AIA, having its regional base located in Hong Kong, has partnered with Discovery Health to launch the Vitality programme to help drive healthier customer behaviour. The insurer also partnered with KPMG Digital Village for its AIA Accelerator 4.0 in Hong Kong to incubate 25 startups to accelerate their HealthTech and wearable businesses.





Aviva partnered with Tencent and Hillhouse Capital for a Joint Venture in Hong Kong to turn its business into a digital insurer. The joint venture focuses on selling basic life insurance and investment products online.



What is RegTech?

RegTech is considered one of the hottest trends in the financial services industry due to its benefits of **helping institutions to meet know-your-customer** (KYC) requirements, Anti-Money Laundering (AML) and countering terrorist financing (CTF) data. It represents an opportunity to re-invent the compliance function. Earlier this year, the SFC announced its evaluation of 'see-through surveillance' of trades on the Hong Kong Stock Exchange. The SFC already has real-time access to trading data at a broker level.

- Since 2008, regulators have imposed more than US\$300 Billion in fines and penalties to firms that have failed to achieve compliance standards.
- RegTech investment more than tripled from US\$1.2 Billion in 2017 to US\$3.7 Billion in 2018 (KPMG).
- Global RegTech market could reach US\$6.45 Billion by 2020.
- Complex regulatory changes: Know your customer (KYC)/ Anti-money Laundering (AML), General Data Protection Regulation (GDPR), Markets in Financial Instruments Directive II (MiFID II).





RegTech startups in Hong Kong



Chekk is a data storage and sharing tool that allows users to manage their personal and professional brands, emails and social networks.



KYC-Chain is a platform that allows users to manage their digital identity security while businesses and financial institutions can manage customer data.



CUBE offers Al-driven solutions to identify, analyse and monitor global regulatory requirements to automate risk and compliance processes.

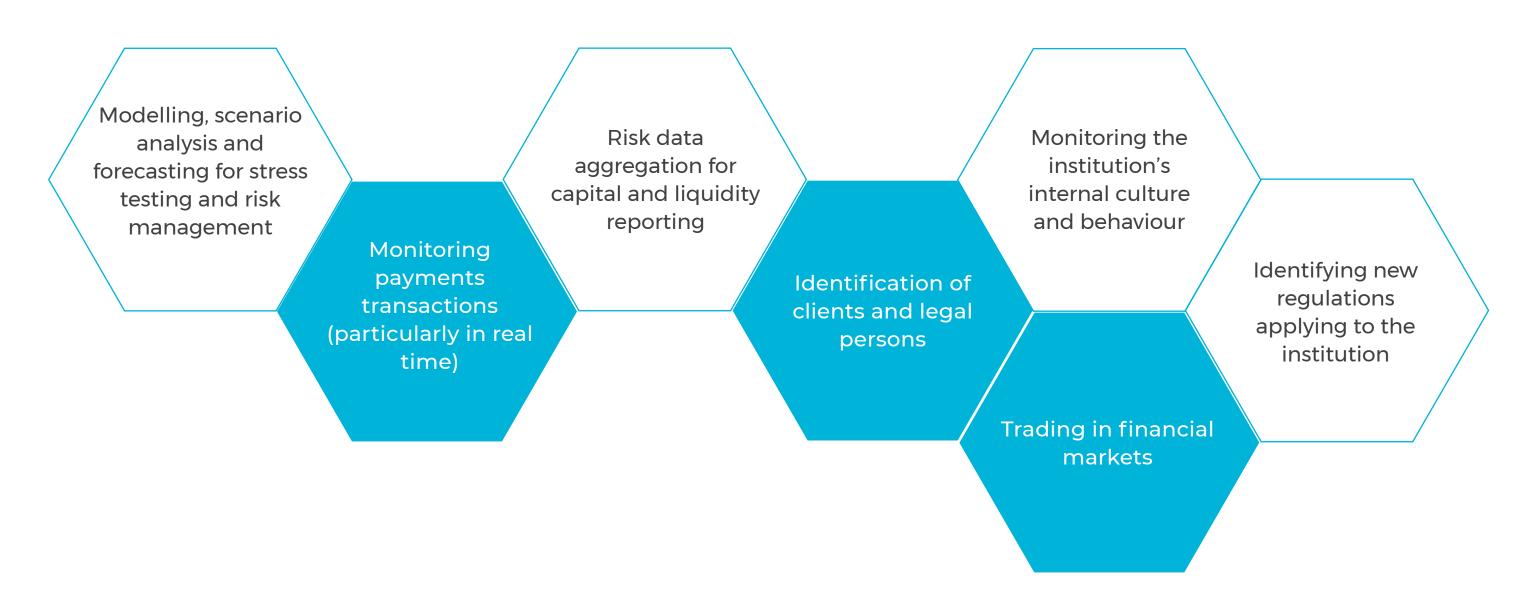


Know Your Customer focuses on compliance, and automates 90% of manual tasks involved in anti-money laundering compliance



Opportunities in RegTech

Hong Kong regulators should drive for digital solutions to regulatory compliance, to lighten their own regulatory burden as well as the regulatory cases they have to review. The Institute of International Finance has issued a report identifying **7 priority areas** for RegTech solutions:





What is WealthTech?

WealthTech enhances the **wealth management and retail investment process**. WealthTech companies offer developed, agile and automated wealth management services that evaluate risk tolerance and manage assets using algorithms.

Consumer-focused WealthTech companies have transparent fee structures and offer an intuitive user experience to help consumers better manage their assets.





FinEX Asia is a global fintech platform connecting professional and institutional Asian investors with high quality, low volatility asset classes, including US consumer loans. FinEX Asia launched Asia's first fintech asset management platform. Through this platform, professional and institutional investors can access a series of FinEX Asia funds that are carefully structured through advanced risk modelling capabilities, blockchain data security and real-time performance monitoring.







8 Securities develops a robo-advisory service and a mobile stock trading app to deliver better online and mobile investment services.

AIDYIA identifies patterns and predicts price movements in financial markets using artificial general intelligence.



05

FinTech Startups Funding

- 5.1 Overview
- 5.2 FinTech startup ecosystem map
- 5.3 Startups that have raised funds
- 5.4 Growing startups



Overview

As one of the world's leading financial centres, Hong Kong has established itself as a major FinTech hub.

The FinTech startup scene is surging as of recent years, and hosts **over 350 entrants**. There is an active accelerator and incubator scene with a focus on FinTech startups.

The government is providing various types of support for FinTech startups like the dedicated smart space in Cyberport, the **\$2 Billion Innovation & Technology Venture Fund** to bridge the funding gap between technology startups and HKMA's proof-of-concept project for trade finance.

Hong Kong FinTech Startup Scene

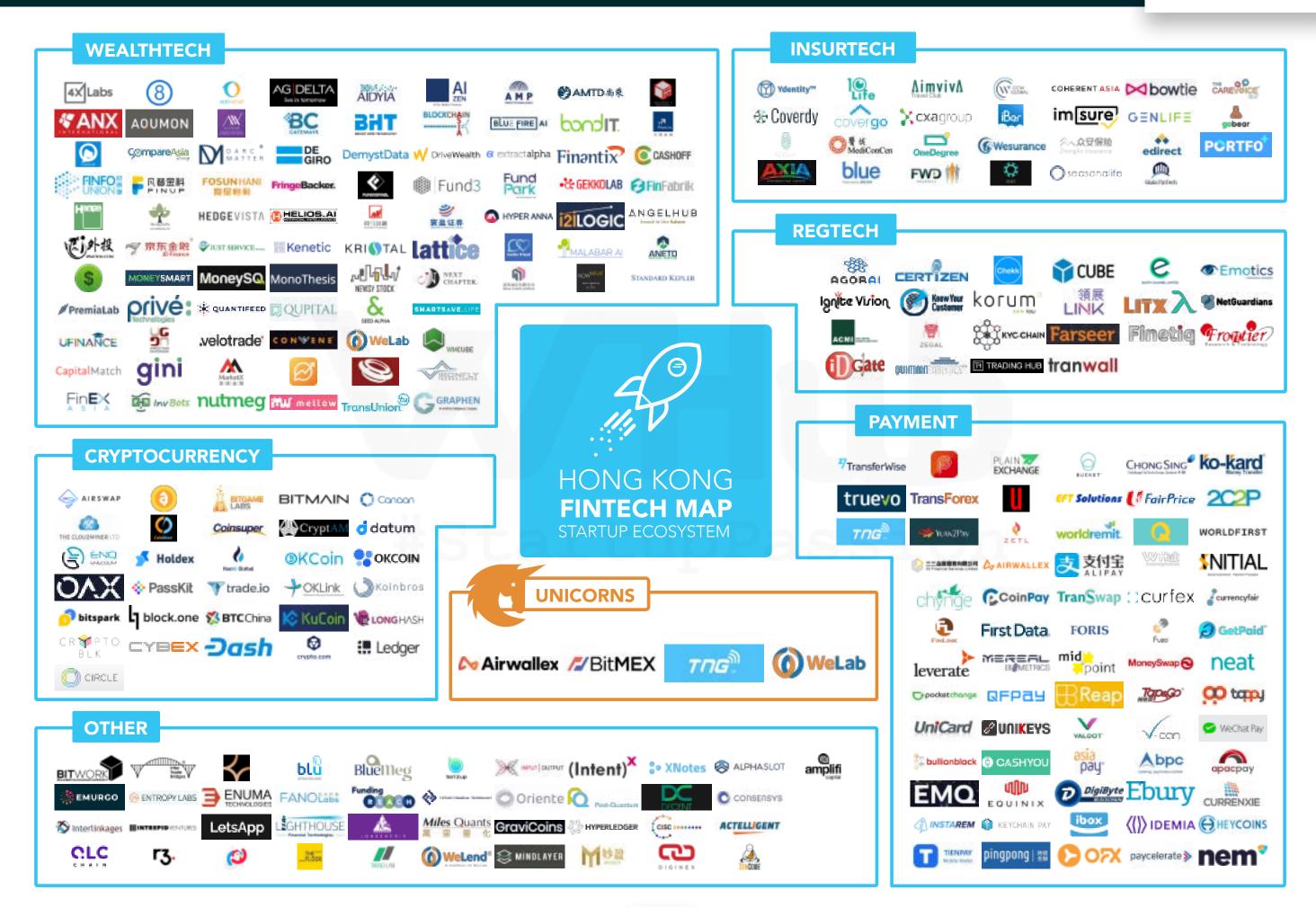
40+ Accelerator & Incubator programs in Hong Kong

US\$220
The top FinTech investment of 2017 by WeLab

4 Fintech WeLab WeLab TNG AirWallex









Startups that have raised funds



WeLab offers mobile lending experience, operates Wolaidai in China and WeLend in Hong Kong.

US\$400M in 3 rounds.

Nov 2017 **US\$220M** in Series B+ from Alibaba Hong Kong Entrepreneurs Fund, the World Bank's International Finance Corporation (IFC) and Credit Suisse

Jan 2016 **US\$160M** in Series B from Khazanah Nasional Berhad, ING Bank, and Guangdong Technology Financial Group.



TNG is an e-wallet that supports real-time remittance, bill payment, mobile SIM top-up and transfer of funds across 12 countries.

Sep 2017 **US\$115M** in a Series A round from New Margin Capital, Nogle Group and Infinity-KBR Group.



<u>CompareAsia</u> is a financial marketplace that operates online comparison platforms for financial, telco and utility products.

US\$96M in 3 rounds from 17 investors.

Jul 2017 **US\$50M** in a Series B round from World Bank's International Finance Corporation, Alibaba Entrepreneurs Fund, SBI Group, and other 5 investors.



8 Securities develops a robo-advisor service and a mobile stock trading app to deliver better online and mobile investing service.

US\$54M in 4 rounds.

Apr 2018 **US\$25M** from Japan's biggest investment bank, Nomura, via its company-gobbling Nomura Asset Management wing.

Apr 2014 **US\$9M** in Series B round from Velocity Capital and Leitmotiv Private Equity and other leading financial technology venture funds in both the US and China.





bowtie Bowtie, Hong Kong's First Virtual Insurer. Bowtie was granted Hong Kong's very first virtual insurance company license in December 2018.

Dec 2018 **US\$30M** in Series A funding, investors includes Sun Life - the global insurance giant, Hong Kong X Technology Fund, Tencent Founder Pony Ma and Sequoia China chief Neil Shen



Storiga created a quick-to-setup marketplace for SMEs with minimal financial borders and global transactional fees. Their key features and tools are based on using cryptocurrency and blockchain technology to resolve existing industry problems between buyers and sellers.

Feb 2018 **US\$25M**



InstaReM is a FinTech-based digital international money transfer startup. Headquarter in Singapore with activities in Hong Kong

Nov 2018

US\$38M in 3 rounds.

US\$20M In a Series C led by Beacon Venture Capital and MDI Ventures, alongside with Vertex Ventures, GSR Ventures, and Rocket Internet.

Jul 2017

Mar 2016

US\$13M In a Series B led GSR Ventures and Sillicon Valley Bank, alongside with other investors such as Vertex Ventures, and Global Founders Capital.

US\$5M In a Series A led Vertex Ventures. alongside with other investors such as Global Founders Capital and Fullerton Financial Holdings.



KuCoin is a fast growing cryptocurrency exchange platforms.

Nov 2018 **US\$20M** in a Series A led by IDG Capital, Matrix Partners and Neo Global Capital, industry leaders in technology and venture capital investments.





WeConvene is a web-based Corporate Access Events Management software. Based in New York with offices in Hong Kong, London, Manila & Sydney.

US\$15.7M in 3 rounds from 4 investors.

Mar 2017 **US\$12.5M** in a Series B round from CreditEase FinTech Investment Fund. Wonderful Sky Financial Group, and OSK Ventures International Berhad.



One Degree is a technology company offering fully digitised insurance platform and experience that span the entire insurance value chain. It collaborates with global leaders in insurance and health sectors to deliver new technology and user experience.

Sep 2018 **US\$12.7M** in a Series A. OneDegree, which is pre-revenue, did not disclose its investors.



Quantifeed provides a digital investment solution to financial institutions and their clients.

US\$14.5M in 3 rounds.

Jun 2018 **US\$10M** in a Series B led by Cathay Financial Holdings, Taiwan's largest financial holding company, with participation from Legg Mason Inc, a US-based global asset manager.

Jun 2016 US\$4.5M in a round from PGA Venture Partners.



TrendLab focus on developments in Big Data and AI to provide high-end technologies for FinTech industries across the Asia Pacific.

Jan 2018 **US\$12.5M** From angel investors





MoneySmart is a leading personal finance portal helping consumers compare loans, insurance and credit cards

US\$12.5M in 3 rounds.

June 2017 **US\$10M** In a Series B led by Kakaku.com, alongside with Golden Gate Ventures and SPH Media Fund

Oct 2015 **US\$2M** In a Series A led by SPH Media Fund alongside with Golden Gate Ventures, Convergence Ventures and OPT SEA

Oct 2015 **US\$0.5M** In a Seed Round led Golden Gate Ventures



The Floor is a global Fintech innovation center working with six of the world's largest financial institutions.

US\$7M in 2 rounds

Aug 2018 **US\$5M** In a Corporate Round led by Fosun Group and Fosun Hani.

Mar 2016 **US\$2M** In a Seed Round led by Pando Group.



EMQ is a financial technology startup that is building a financial network across Asia with a focus on remittance. With a footprint across Hong Kong, Taiwan, Indonesia, Vietnam and the Philippines, the company partners with financial institutions and other strategic partners in each country to enable and settle cross-border remittance via banks and various modes for top-up and cash pickup.

US\$6.5M in 2 rounds.

Oct 2018 **Undisclosed** Their latest undisclosed funding round was raised on Oct 8, 2018 from 500 Startups

Dec 2017 **US\$6.5M** in a Series A from "well-known Silicon Valley entrepreneurs and international venture capital (VC) firms" according to the CEO.



Zhong An is an Internet-based insurance company that sells all its products online along with handling claims.

Aug 2018 **Undisclosed Amount** in a Corporate round by SoftBank.





Qupital is an online invoice trading platform that helps businesses raise funding against their unpaid invoices in 24 hours or less.

March 2019 **US\$15M** in Series A led by CreditEase FinTech Investment Fund (CEFIF), with participation from Alibaba Entrepreneurs Fund and MindWorks Ventures.

May 2017 **US\$2M** in 1 round from 4 investors:
MindWorks Ventures, Alibaba Entrepreneurs
Fund, DRL Capital and Aria Group.

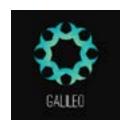


Neat is a mobile current account solution for individuals and companies in Asia.

US\$5M in 2 rounds.

Oct 2018 **US\$3M** led by China-based VC Linear
Capital with participation from Hong Kong's
Sagamore investments and existing backers
Dymon Asia Ventures and Portag3 Ventures.

Jul 2018 **US\$2M** in a Series A led by IDG Capital, Matrix Partners and Neo Global Capital, industry leaders in technology and venture capital investments.



<u>Galileo</u> is an insurtech platform that uses blockchain technology to connect participants in the insurance industry realtime.

Oct 2018 **US\$2M** in Series A, led by Greenlight Re Innovations, part of Greenlight Capital Re, Ltd. along with ScaleInvestors in Australia and private investors in Hong Kong.



Oriente is building solutions that provide real-time credit scoring, digital and O2O lending and other tailored financial services to millions in Southeast Asia's fastest-growing economies.

Nov 2018 **US\$105** in Series A. Investments from the founders and a group of family offices including members of the Berjaya Group, JG Summit Holdings, and Sinar Mas.





KRI TAL Kristal.Al is an Al-enabled Digital Asset Management Platform for investors.

US\$1M in 2 rounds.

Apr 2018 **US\$1.9M** seed round of funding led by IDG

Ventures India, with participation from leading angel investors including Shailesh

Rao and Amit Gupta.

Jul 2016 **US\$1.2M** seed round of funding led by

WorldPeak Holdings, with participation from

Shailesh Rao



iboxMPOS is a mobile payment service for acquiring banking cards that enables its users to run their businesses from anywhere.

Jan 2018 **US\$0.5M**

Jan 2017 **US\$0.6M** Series C by Da Vinci Capital

Feb 2016 US\$0.9M Series B by ESN Group and

Inventure Partners

Nov 2015 **US\$1.3M** in 1 round led by Almaz Capital Partners, with the participation from Inventure Partners and ESN Group



MioTech develops an artificial intelligencebased investment management platform.

Oct 2018 US\$0.85M

Jun 2018 **US\$2M**

Oct 2017 **US\$7M** in a Series A round from Horizons Ventures, Simon Loong Pui-chi and Zhenfund.



Velotrade is an online marketplace where SMEs get funding by selling their invoices to investors who earn safe above-market returns.

Undisclosed Amount of funding in 1 round.



CoverGo is an award-winning, B2B, modular platform that enables insurers, brokers and bancassurance partners to digitize and distribute insurance products via open insurance APIs.

May 2017

Undisclosed Amount of funding in 1 round from 4 investors.



Growing startups

Growing startups are quickly making a name for themselves. These are the startups that have recently been making headlines.



Neat

A startup that offers various fintech services in banking such as easily opening an account through their app in less than 10 minutes, and a Neat MasterCard to shop around the world while getting the best out of exchange rates for over 50 currencies. Founded in 2015, its investors include Portag3 Ventures and from June 2018, Dymon Asia Capital.



Know your customer

Founded in 2015, Know Your Customer is a software platform that automates 90% of manual tasks involved in anti-money laundering compliance and reduces onboarding times for corporate clients from 3 weeks to 1 day.



Qupital

Qupital is a digital trading marketplace founded in 2016 for buyers and sellers of corporate receivables that offers businesses an online alternative financing platform. Its investors include Alibaba Entrepreneurs Fund, Gobi Partners - Venture Capital, MindWorks Ventures and the Aria Group.



8 Securities

8 Securities, founded in 2012, is Asia's first robo advisor and free stock trading service that has a mission to revolutionize investment services with powerful technology and solutions to improve customer experiences. Investors include China Growth Capital, Leitmotiv Private Equity, Velocity Capital Private Equity and Route 66 Ventures.



Currenxie

Fintech company providing innovative currency and payment services to the SME sector. Currenxie was founded in 2014 to help the business community eliminate barriers to trade by offering efficient FX and cross-border payment solutions. We focus on technology, innovation and client service.





<u>FinFabrik</u>

FinFabrik creates financial technology with a purpose. Their mission is to empower people and businesses to access investment opportunities, take sound decisions and enjoy the experience of building wealth.

They raised an undisclosed amount led by BitMEX Ventures in February 2019.



CoverGo

CoverGo is an award-winning, B2B, modular platform that enables insurers, brokers and bancassurance partners to digitize and distribute insurance products via any digital channel faster than ever before. CoverGo has built hundreds of open insurance APIs to increase connectivity in the insurance space and automate all processes.



2C2P

2C2P is the leading SEA payment service provider that offers omni-channel payment solutions. It provides payment solutions tailored to the local needs of financial institutions, e and m-Commerce merchants and consumers in Asia, allowing merchants to accept local and international payments through credit and debit cards, bank channels (ATMs, iBanking and mBanking) and cash acceptance via payment counters.



Compare Asia Group is Asia's leading personal finance management platform that helps people save time and money thanks to free online comparison and management tools for insurance, credit cards, personal loans and other financial products. It has been funded with a total of \$96M from investors including International Finance Corporation (IFC), Goldman Sachs Investment Partners, Alibaba, SBI Group and H&Q Utrust since it was founded in 2013.



Hong Kong's First Virtual Insurer.

Bowtie was granted Hong Kong's very first virtual insurance company license in December 2018. Virtual Insurers need to meet the same high standards that customers and regulators expect of traditional insurers, but have technology rebuilt for the modern age to provide are refreshingly convenient experience. As a truly "made in Hong Kong" insurance brand, Bowtie is here to reinvent insurance.



06

FinTech Influencers

- 6.1 The importance of community builders
- 6.2 Community builders





The importance of community builders

Startups can't do it alone! Over the past four years a great number of community builders have been creating professional and social links within and to the ecosystem. Other than homegrown talent, our list also includes talent coming from other ecosystems around the world, such as Silicon Valley, Israel, China, Europe, and a lot more!

The continuous success of offline events, mentoring opportunities and online community platforms are providing value and making a lasting impact on entrepreneurs.

More connections
+ Quick access to quality feedback
+ Mentoring

Higher chance of success!





Ada Lam

 Division Head, Innovative Business and Ecosystem Partnership at HSBC



Alex Medana

¬ Co-Founder and CEO at FinFabrik

→ Board Member at FTAHK



Alex So

 Group Managing Partner and Investor at FastLane Group



Alex Kong

¬ Group CEO at TNG Wallet



Alister Musgrave

→ Country Manager & Founder at MoneyHero.com.hk



Amanda Tung

→ Founding Board of Director at FTAHK

 Senior Manager, Partnership and Business Development at Zhongan Technologies International Group Limited



Anson Bailey

 → Partner, Business Development at KPMG China

Head of Consumer & Retail
 ASPAC

 Head of Technology Hong Kong



Anthony Sar

→ Founder and CEO at FINNOVASIA

→ Founder and MD at Hong Kong FinTech Club



Benedicte N Nolens

¬ Global Regulatory Affairs and COO Asia at Circle

→ Board Member at FTAHK



Benjamin Quinlan

→ CEO and Managing Partner at Quinlan & Associate

─ Board of Director at FTAHK



Brit Blakeney Anghelakis

→ Executive Director at DBS Bank



Charles D'Haussy

→ Director Strategic Initiatives at ConsenSvs





Charles Lam → Senior Manager, FinTech & Blockchain at Cyberport Hong Kong



→ Executive Director at Alibaba Entrepreneurs Fund

Cindy Chow



Dave Chapman

- → Executive Director at BC Group
- → Executive Chairman at OSL
- → CEO at ANXONE



David Rosa → FinTech Entrepreneur at Neat



- President at Hong Kong **Blockchain Society**



Eric Thain

- General Manager at HK Express
- ¬ Co-chair and President at Artificial Intelligent Society of Hong Kong



Fabrice Fisher → Founder and CEO at Blu Ltd



Felix Lam

- → Founding Partner at 43 Ventures
- Executive Director at WYNG



Gram Milosevic

- ¬ CTO at AngelHub
- → Alchemist and CTO at WHub



Henri Arslanian

- → FinTech & Crypto Leader Asia at
- Chairman & Founding Member Board of Director at FTAHK



Iain Reed

- ¬ Vice Chairman Angel Committee at British Chamber
- → FinTech Entrepreneur at Angel and Mentor



Gerardo Salandra

- ¬ CEO at Rocketbots
- ¬ Chairman at the Artificial Intelligence Society of Hong Kong





Jayne Chan

→ Head of StartmeupHK at Invest

Hong Kong



Partner; Asia-Pacific FinTech & Payments Leader, EY

James Lloyd



John Levack

- → Managing Director at Electra Partners Asia Limited
- ¬ Vice Chairman at HKVCA



Juwan Lee

- Founder and CEO at
NexChange



Karen Contet Farzam

- Founder CEO at AngelHub.io
- → Founder Chief Hustler at WHub. io
- Founding Member Board of Director at FTAHK



Karena Belin

- CEO & Co-Founder at WHub
- ¬ Co-Founder & COO / CFO at AngelHub
- → WoW of AWA



Kristi Swartz

→ Managing Partner at Swartz, Binnersley and Associates



Lan Lyu

- → Advisory Board Member at Helix Cognitive Computing
- → Board member and data lead at Women in Tech
- → Co-Founder at HealthTech Network



Lawrence Li

- → Business Development Director at TNG FinTech Group
- → Member Board of Director at FTAHK



Leonhard Weese

→ President at The Bitcoin Association of Hong Kong



Lukas Petrikas

¬ Co-head of Innovation at HKEX



Maaike Steinebach

- → Founding Member Board of Director at FTAHK
- → Co-Founder at Women in Tech
- → CEO at Visa HK and Macau





Marc Entwistle

- → Senior Manager Asia Pacific Fintech at EY
- → Founding Member Board of Director at FTAHK



Marie-Anne Kong

 Partner, Asset and Wealth Management Industry Leader at PwC



Mary McHale

→ Business Development Director, Financial Services, Asia Pacific at Equinix



Matt Dooley

- → Founder & Managing Director at Connected Thinking Ltd
- → Founding Member Board of Director *at FTAHK*



Maxine Ryan

→ Co-Founder and COO at Bitspark Limited



Mark Cheng

→ CEO at Helix Accelerator



Medhy Souidi

 → Head of FinTech & StartupXchange at DBS Bank



Mo Harvey

→ Head of Financial Services & FinTech, Asia-Pacific at Entreprise Ireland



Nelson Chow

→ Chief Fintech Officer of the HKMA



Nicholas W. Yang

→ Secretary for Innovation and Technology of the Hong Kong Special Administrative Region



Nicole Denholder

→ Founder at Next Chapter Ventures



Peter Mok

→ Head, Incubation Programmes at HKSTP





Patrycja Slawinska

- → CEO at Lyoness Asia-Pacific
- LoyaltyTech, HealthTech, FinTech



Stephanie Lau

- → Hedge Funds at Family Offices and Private Equity Consultant, Bloomberg
- → Women in Tech



Simon Loong

- → Founder and CEO at WeLab
- → Member Board of Director at FTAHK



Syed Musheer Ahmed

- → Co-Founder at IndiaTech HK
- General Manager at FTAHK
- → Founding Member Board of Director at FTAHK



Tak Lo

- → Partner at Zeroth.ai
- → Committee Member at HK government Committee on Innovation, Technology and Re-industrialisation



Tytus Michalski

→ Managing Partner at Fresco Capital



Veronica Fung

- → Chief of Staff and Operations APAC at Societe Generale
- Member Board of Director at FTAHK



Yannick Even

→ Head of InsurTech Solutions at Swiss Re Asia







"A combination of regulatory and infrastructure change – from the new Faster Payment System (FSP) to the in-process Open API framework, from Virtual Bank authorizations to Digital Insurance fast-tracking – look set to position Hong Kong as a leading fintech hub in which to build regional and even global propositions. Given the promise (and challenges) of the Greater Bay Area integration, the emergence of cross-industry alliances and joint ventures, and the continued expansion of the Mainland Chinese "techfin" players (as well as the incumbent response), the Hong Kong fintech ecosystem is entering its most exciting phase of development yet."

James Lloyd EY



07

FinTech Associations and Events

- 7.1 FinTech Associations
- 7.2 FinTech Events



FinTech Association of Hong Kong (FTAHK)



The FinTech Association of Hong Kong (FTAHK) is an independent, not-for-profit, membership-based association representing Hong Kong's local and global FinTech community.

The Association is organised and led by the community, for the community, through a series of committees. These committees focus on key sectors including Blockchain, Artificial Intelligence, Big Data, Payments, RegTech and Financial Literacy, amongst others.

The association has grown to over 1,200 representative members of over 300 firms, which includes large banks & insurers, technology players and startups, consultants & law firms, universities, and students. The Association has also added new committees focused on Cybersecurity and HK - Macau - Guangdong - Greater Bay Area.



Launched in June 2017, FTAHK guides the further development of Hong Kong as a leading FinTech centre, industry and ecosystem with three main goals:



Advocate

Create a unified voice for the Hong Kong FinTech ecosystem.



Collaborate

Bring together the diverse parts of the community.



Educate

Learn from existing leaders and nurture the next generation of talent.





The Smart City Consortium aims to promote more effective resource management. It advises the government on formulating policies and standards related to Smart City development and promotes communication between the government, technology partners and commercial organisations.

More information



Hong Kong Internet Finance Association (HKIFA) is a non-profit organisation that aims to facilitate the communication between its enterprise members and Hong Kong government, and to innovate and promote the rapid development of FinTech industry in Hong Kong.

More information



Hong Kong Computer Society - FinTech Special Interest Group (FTSIG) promotes the FinTech service industry and provides advisory and feedback services to the government on policies and practices of FinTech in Hong Kong.

More information



The Hong Kong Venture Capital and Private Equity Association (HKVCA)

promotes and protects the interests of the venture capital industry in Hong Kong. It also provides a forum for networking and experience sharing for its members.





The Artificial Intelligence Society of Hong Kong (AISHK) is dedicated to the further development of AI technologies and adoption in Hong Kong. It partners with FTAHK to host events in order to integrate AI into the financial sector.

More information



Next Money runs FinTech conferences, creates branded FinTech content and connects FinTech leaders.

More information



Hong Kong Blockchain Society promotes and develops blockchain technology and collaborates with all stakeholders to build a vibrant blockchain community.

More information



FINNOVASIA is a FinTech community that hosts regional conferences to showcase FinTech businesses and to gather FinTech experts, investors and pioneers.

Finnovasia was an officially appointed organiser of the Hong Kong FinTech Week 2018 by InvestHK.

More information



The Bitcoin Association of Hong Kong

promotes Bitcoin and its technology in Hong Kong. It educates all stakeholders about the benefits and risks of Bitcoin and its technology.



Hong Kong FinTech Week

The Hong Kong FinTech Week 2018 was the world's first cross-border financial technology event, that took place in Hong Kong, and in Shenzhen, China's Silicon Valley. Held between 29 October - 2 November of 2018, it attracted more than 8,000 senior executives and featuring over 200 of the world's top FinTech founders, investors, regulators, and academics, who are shaping the future of financial services by driving a technological revolution in the industry across Asia and globally.

The one-week festival is held by FinTechHK, a FinTech branch of InvestHK. The Hong Kong FinTech Week showcased Hong Kong's vibrant FinTech ecosystem with a wide range of activities, including panel discussions, workshops, seminars and more.



Topics in focus - Key themes

Artificial Intelligence

Blockchain & DLT

FinTech in China Greater
Bay Area
Collaboration

Virtual Banks



FinHack - 36 Hour FinTech Hackathon

FinHACK is a 36-hour FinTech hackathon of product development. It encourages innovation and collaboration within the Hong Kong FinTech community and connects the brightest young minds of today with the growing field of FinTech. Participants form teams to co-create new solutions to address business challenges, and create minimum viable products to tackle many of the pain points the industry is facing.







The 2nd annual FinHACK, organized by WHub and Societe Generale, was held on July 6 - 8, 2018 at Tencent WeStart Hong Kong with a focus on RegTech, WealthTech and Digital Banking. The hackathon gathered 150 developers and entrepreneurs, converging 22 teams, and saw the development of a diverse range of innovative ideas.

HK\$25,000 FOR THE WINNING TEAM

A unique pedagogical experience

The network of innovators





Finovate events gather the FinTech community to showcase banking, financial and payment technology in a short-form, demonly format. The event also brings together experts from the field to talk about latest regional trends and macro issues affecting financial technology.

More information



FinTech O2O powered by Cyberport and NexChange, is a global platform that connects people in the FinTech sector, online to offline (O2O). FinTech O2O gathers experts for insightful discussions to explore FinTech issues and network to grow their companies. FinTech O2O events have been held in Hong Kong, New York, Seoul, London, Toronto and Shenzhen.

More information



Asian Financial Forum brings together the global financial and business community to discuss developments and trends in the markets of Asia.

Co-organised by the Government of the Hong Kong Special Administrative Region (HKSAR) and the Hong Kong Trade Development Council (HKTDC), the Asian Financial Forum 2018 welcomed more than 3,000 financial and business leaders from 46 countries.



"In the new era of Smart Banking, the industry, the FinTech community and the HKMA must work together to transform the financial ecosystem of Hong Kong."

Henri Arslanian

Chairman and Founding board member of the FinTech Association of Hong Kong





08

Corporate - Startup Collaboration

- 8.7 Financial collaboration
- 8.2 Incumbent-FinTech startup collaboration
- 8.3 Corporate Startup Engagement (CSE)
- 8.4 Accelerator



Financial collaboration

Financial institutions

- → Brand recognition
- → Large customer base
- → Wide range of product offerings
- → Comprehensive customer data
- → Robust infrastructure
- Advanced underwriting capabilities
- → Risk management experience
- → Access to capital
- Licensed to provide regulated finanical services

Shared

- → Scaled and innovative solutions
- Deeper and analytics-driven customer engagement
- → Enhanced risk mitigation
- → Improved product efficiency
- → More accessible products

FinTech companies

- → Culture of innovation
- → Nimbleness
- → Agility and speed to market
- → Disruptive mindset
- Lean set-up and an absence of legacy systems
- → Technological expertise
- → Customer data analytics
- → Specialized solutions
- → Modern IT systems



Incumbent-FinTech startup collaboration

FinTech startups and incumbents have complementary sets of competitive advantages and challenges, making collaboration and partnerships win-win situations.

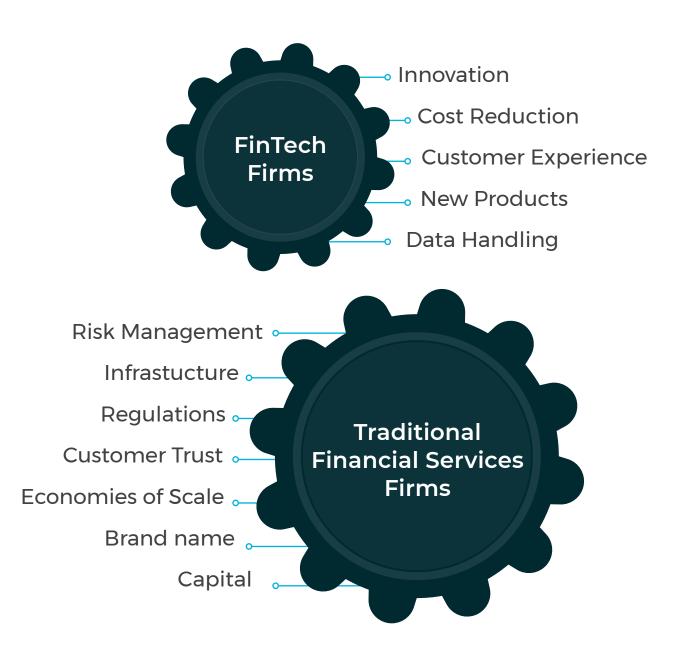
88% of global banks are increasingly concerned that they will lose revenue to FinTech businesses, especially in sectors such as payment, fund transfers, and personal finance.

Traditional financial arms are paying closer attention to the shifting trends. They are embracing changes by investing into new financial technology and working with startups to drive innovation.

82% of financial services firms intend to collaborate with FinTech companies in the coming three to five years.

(Statistics from the Global FinTech Report 2017 conducted by PwC)

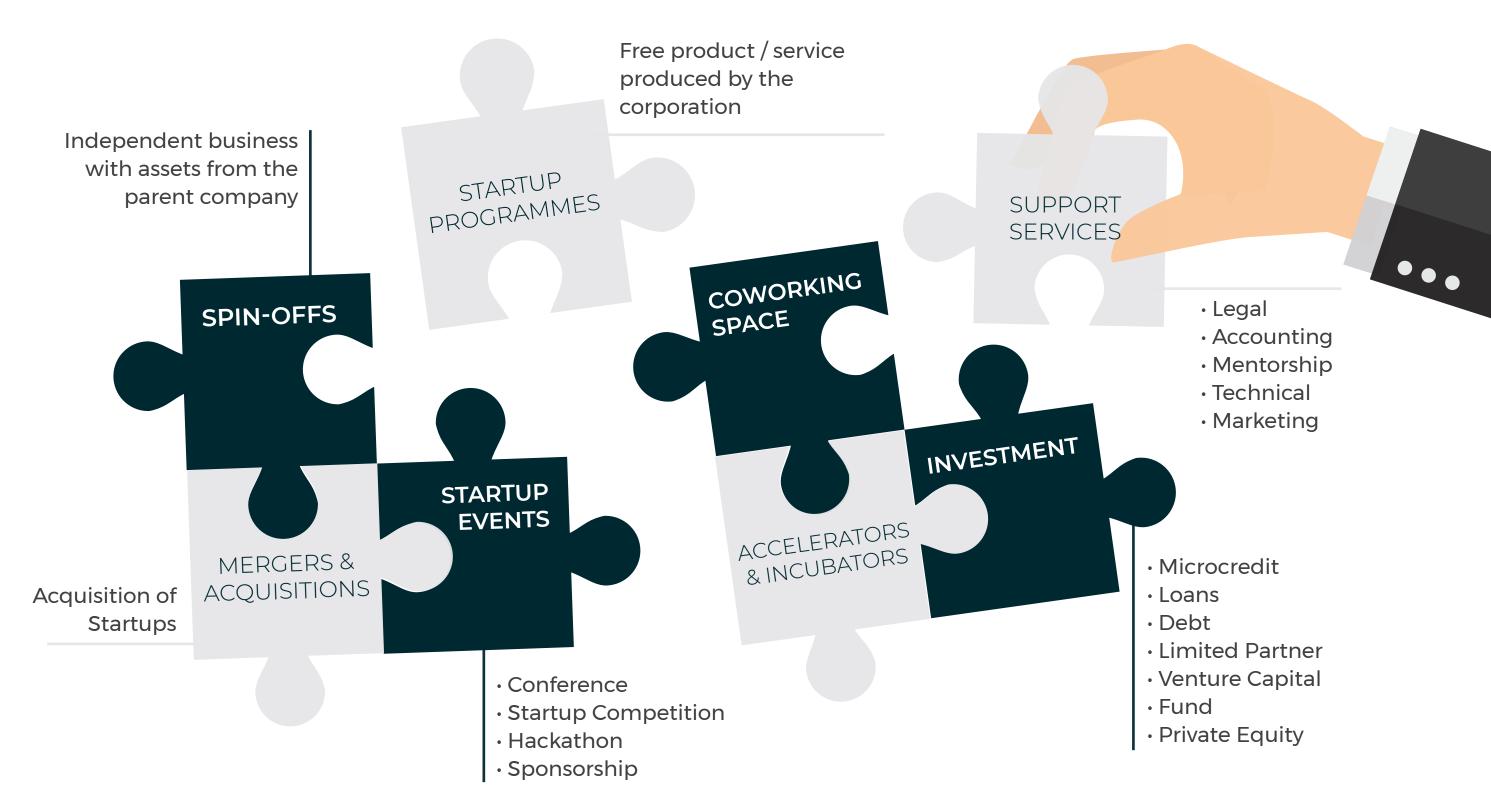
More than 75% of FinTech firms cite collaborating with incumbent firms as their primary business objective. The key reasons why FinTech firms partner with traditional financial service firms include enhanced visibility by partnering with an established brand name achieving economies of scale, achieving economies of scale, gaining customer trust and having better distribution infrastructure.



Source: Capgemini's World FinTech Report (2018)



Corporate Startup Engagement



Source: #500 Corporations: How do the World's Biggest
Companies Deal with the Startup Revolution?



Accelerators

FinTech Innovation Lab





The Accenture FinTech Innovation Lab Asia-Pacific, established in 2014 in Hong Kong, brings together leading regional and international financial institution partners to work with fintech start-ups from across the globe looking to grow their business in APAC. Applications for the 6th cohort are open from April 1st – May 10th.

- --- 12-week accelerator programme
- Seeking emerging B2B2C, B2B and enterprise technologies to work with the 2019 Financial Institution partners
- Global network with Labs also in New York and London 2018 Cohort

















Deloitte Blockchain Lab





Launched in 2017, The Asia Pacific Blockchain Lab, is based in Hong Kong.

Blockchain Lab implement and deploy Distributed Ledger Technology ("DLT") for corporate clients across the region. DLT is used in a number of ways, including digital identity, digital banking, cross-border payments, trade finance and loyalty and rewards solutions

Hong Kong was chosen for the regional Lab as it is a mature financial center and trading hub, with demand for eco-system enablement through DLT, in a supportive regulatory environment.

Blockchain consulting

The opening of the Lab builds on the recent success regarding digital innovation programs:

- Collaboration with the Hong Kong Monetary Authority and 5 leading banks driving the adoption of DLT within the trade finance ecosystem
- DLT implementation helping Insurance clients establish bancassurance* through high-speed partner on-boarding

More information

* The selling of life assurance and other insurance products and services by banking institutions.



R&D Labs

HSBC-ASTRI Research and Development Innovation Laboratory

Located at ASTRI's Hong Kong Science Park, the HSBC-ASTRI RDI Lab mobilises FinTech development via exploratory activities along with Artificial Intelligence, Behavioural Biometrics Authentication, Big Data Analytics, Blockchain, and Cybersecurity. HSBC contributes to the development of Cybersecurity Protection, Facial/Voice Recognition, Behavioural Biometrics through AI, and Big Data Analytics.





AMTD Innovation Lab Tour



AMTD Group has launched the Hong Kong's first university-industry collaborated FinTech centre, "AMTD FinTech School of PolyU Faculty of Business" together with The Hong Kong Polytechnic University. Also, AMTD Group has established "University of Waterloo-AMTD Innovation Lab" jointly with the University of Waterloo at AMTD Hong Kong headquarters. AMTD is promoting the long-term development of FinTech in Hong Kong, the Greater Bay Area and across the globe.



Ping An



保险·银行·投资

Ping An is an acceleration programme designed to empower Finance + Technology founders.

- ▶ 3 month acceleration programme
- ▶ Based in Futian, Shenzhen.
- ▶ Provides startup founders with education, tools and resources
- To validate, reinforce, scale and localize their businesses behind the strength of the Ping An brand.



Sprinter



Sprinter is a two year programme for FinTech startups with two tracks: the Entrepreneur track, and the Business Angel track.

Sole Sponsor : HSBC Organizer : HKSTP

Co-organizer: Hong Kong Business Angel Network

- ─• Entrepreneur track:
 - · Comprehensive training : business model, finance and law, pitching workshops
 - · Seven months Business Development and Fundraising Services: professional consultation, investment and business matching
- → Business Angel Track :
 - · Gain knowledge of angel investors or future angel investors
 - · Conferences, seminars and other activities
 - · Innovation and technology, market development and investment regulations



09

Regulatory and Government Support

- 9.1 Introduction
- 9.2 Key Organizations
- 9.3 Government Funding Schemes
- 9.4 Government Affiliated Groups
- 9.5 Government Affiliated FinTech Groups
- 9.6 Universities



Government and FinTech in Hong Kong

Governments around the world are gearing up for the FinTech era. According to the 2018 Policy Address, the HKSAR government aims to push Hong Kong's status as a financial center, FinTech will be targeted as a key sector to invest in. This is especially visible with the implementation of the 7 initiatives by Hong Kong Monetary Authority (HKMA), including the launch the Faster Payment System and Virtual banking licence which will be issued by early 2019.

The Hong Kong Applied Science and Technology Research Institute (ASTRI) identifies financial technology as a key R&D initiative for Hong Kong. ASTRI supports the development of FinTech in Cybersecurity, Blockchain and Big Data Analytics. ASTRI also works with the HKMA and the banking industry to promote the development of FinTech in Hong Kong and in April 2018, opened Wheelock Gallery, a co-working space in Admiralty, for startups to meet with investors.

To support financial innovation, Cyberport launched its designated incubation programme and a 4,300 sq.m dedicated FinTech space in 2016. InvestHK's dedicated FinTech team has organised signature events such as FinTech Week, the FinTech Finals 18 conference and a startup competition to showcase Hong Kong's unique FinTech advantages. They have also launched the first Fast Track program during FinTech Week 2018 to encourage foreign FinTech startups to scale to Hong Kong.





Key organisations



InvestHK is responsible for Foreign Direct Investment. It set up a dedicated FinTech team in Hong Kong with correspondents located in London and San Francisco. It aims at attracting worldwide top innovative FinTech enterprises, start-up entrepreneurs, investors and other stakeholders to expand and scale their business via Hong Kong to the mainland China, Asia and beyond.





Mandatory Provident Fund Scheme Authority (MPFA)

MPFA's role is to regulate and supervise the operations of mandatory provident fund (MPF) schemes and occupational retirement (ORSO) schemes. It educates the working population about saving for retirement, and leads improvements to provident fund schemes to make them more efficient and user-friendly.

More information



Hong Kong Science and Technology Parks Corporation (HKSTP)

Hong Kong Science and Technology Park aims to transform Hong Kong into a hub for innovation and technology development. HKSTP nurtures and helps science and technology companies by offering different types of resources, including incubator programmes and the Soft-landing Programme. HK\$50 Billion is being invested to support I&T development this financial year, with a focus on biotechnology, artificial intelligence, smart cities and FinTech. This is in addition to the HK\$10 Billion in government funding to support these industries last year. About 12,500 people work at the Science Park, where there are 652 companies.





Hong Kong FinTech

Invest HK FinTech Branch - InvestHK
FinTech has offices in London and San
Francisco.

More information



Office of the Commissioner of Insurance

FinTech Liaison Team - to facilitate the FinTech community's understanding of the current regulatory regime and act as a platform for exchanging ideas.

More information



Securities and Futures Commission (SFC)

FinTech Contact Point - to facilitate the FinTech community's understanding of the current regulatory regime, and to enable the SFC to stay abreast of the development of FinTech in Hong Kong.



Cyberport



Founded in 1999, Cyberport is a business park that serves as a **creative digital community** with close to **900 digital tech companies**. Over 180 FinTech startups and companies have grown under the auspices of Cyberport. The Hong Kong Government will inject \$200 Million into Cyberport to support the technology ecosystem and most recently, the Government announced that the 2019/2020 budet will include an additional HK\$5.5 Billon for the development of Cyberport 5



More information

Smart-Space FinTech

Cyberport launched a coworking space dedicated to FinTech startups and companies in December 2016. The Smart-Space FinTech is a 35,000 square foot co-working space with FinTech Service corners and training rooms.

Cyberport Incubation Programme

Cyberport Incubation Programme supports startups with resources to scale up, providing up to HK\$530,000 support over 24 months. It launched an "easy landing" programme to attract overseas and mainland startups to set up offices and R&D units in Hong Kong by offering financial assistance up to HK\$200,000 for each eligible startup to conduct market research and promotion, as well as participate in business missions, trade fairs, exhibitions etc.

Cyberport Creative Micro Fund (CCMF)

Sponsors high potential digital tech startup projects and business ideas with an HK\$100,000 grant. Participants use the grant over six months to produce proof of concepts and prototypes. The CCMF programme is open to individuals, teams and companies.

Cyberport Macro Fund (CMF)

Cyberport has allocated HK\$200 Million (around US\$25.6 Million) for the Cyberport Macro Fund to provide seed to Series A stage funding to Cyberport digital entrepreneurs. CMF will co-invest with private and public investors and invest up to HK\$20M for Cyberport's accumulative investment per investee.



The Securities and Futures Commission (SFC)

The Securities and Futures Commission (SFC) has established the **SFC FinTech Contact Point** to enhance communication with businesses related to the development and application of FinTech in Hong Kong. FinTech Contact Point helps FinTech stakeholders to better understand the framework and regulatory environment in Hong Kong.



FinTech sub-sectors and technologies that are of interest to the SFC



Financial product investment and distribution platforms



Automated trading systems



Financing platforms (Peer-to-peer lending and equity crowdfunding)



Compliance, risk, and regulatory technologies



Distributed ledger technology



Big data, data analytics and artificial intelligence



Cyber and data security technologies



The Securities and Futures Commission (SFC)

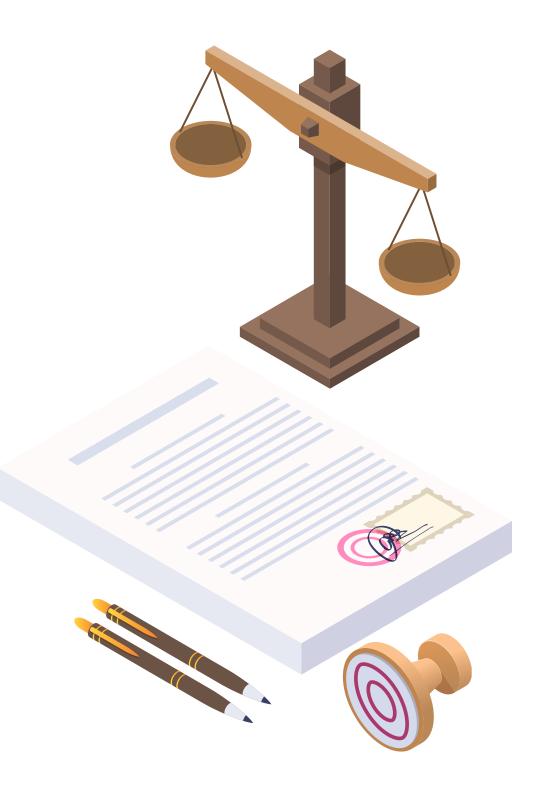
The New Regulatory Framework for Crypto Funds and Crypto Exchanges in Hong Kong

The SFC issued a **regulatory framework for portfolio managers looking at trading** virtual assets. This provides a clear framework for people looking at launching a cryptofund or expanding into virtual assets.

Since no crypto exchange in Hong Kong is licensed by the SFC, it is exploring whether it is appropriate to grant a license to and regulate any of the virtual asset trading **platforms ("Platform Operator" or "Crypto Exchange")**. It is an opt-in approach for its sandbox environment that is not mandatory. Trading platforms interested in being licensed may approach the SFC to demonstrate their commitment to adhering to the SFC's requirements.

During the initial stage, the SFC will determine whether the Platform Operators are appropriate for regulation purposes by working together with them. If the outcome is positive, it will consider, subject to licensing and conditions, granting a license to a qualified Platform Operator.

operate an online trading platform in Hong Kong and offer trading of **at least one or more virtual assets which fall under the definition of "securities"** on its platform. After this, they would fall within the jurisdiction of the SFC and require a license for Type 1 (dealing in securities) and Type 7 (providing automated trading services) regulated activities.





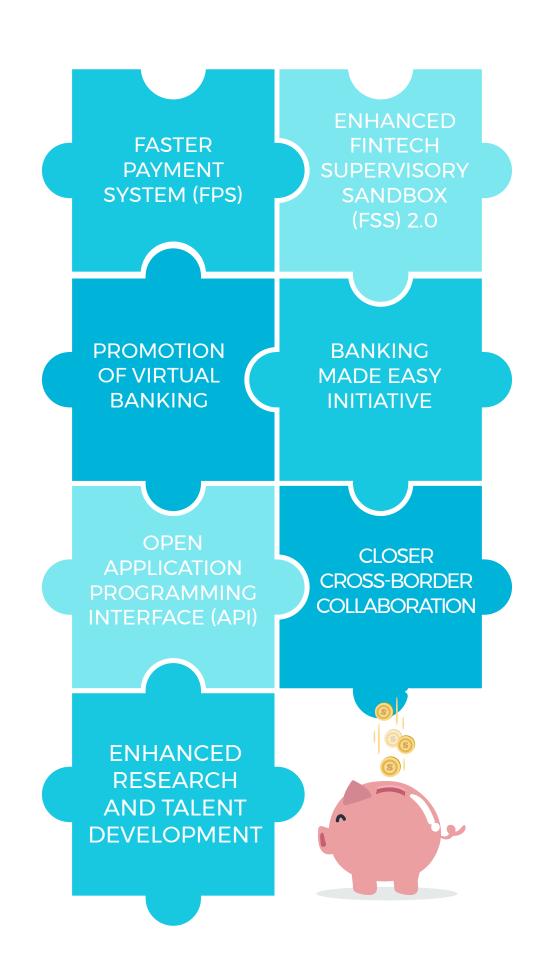
Hong Kong Monetary Authority (HKMA)

The HKMA maintains **monetary and banking stability in Hong Kong,** including the upholding of the stability and integrity of Hong Kong's financial system and the maintenance and development of Hong Kong's financial infrastructure.

The HKMA has been taking an active role to support the development of technological innovations. With the HKMA's 7 initiatives proposed in September 2017, the body aims to create a "New Era of Smart Banking". Several notable initiatives include the Faster Payment System (FPS), Enhanced FinTech Supervisory Sandbox (FSS) 2.0, Promotion of Virtual Banking and Open Application Programming Interface (API).

The HKMA established a FinTech Innovation Hub and a supervisory sandbox that permits banks to conduct **proof of concept trials** and services as the city attempts to boost the development of FinTech in the financial services sector. This is linked with the **SFC regulatory Sandbox and the Insurtech Sandbox.**

The HKMA collaborates with the banking sector, the SVF industry and the FinTech community to explore the application of new technologies to financial services and to facilitate the healthy development of the industry. HKMA established a FinTech Facilitation Office (FFO) to facilitate the healthy development of the FinTech ecosystem.





Virtual Banking

While being challenged by new entrants from the FinTech ecosystem, one of the ways in which we see that the banking sector across the world is adopting modern technology is via the launch of virtual banks.

A virtual bank is defined as a bank which delivers retail banking services primarily through the internet or other digital channels instead of physical branches. As such, the main difference between virtual and traditional banks is that virtual banks do not have physical brick-and-mortar branches.

A global and rising trend

- **Virtual banks** (or similar concepts such as internet banks), have been active in many parts of the world for quite a while.
- **Attention** has recently been gained from their fast customer acquisition, improved customer experience, reinventing traditional banking.
- Examples include N26 founded in 2013 in Germany, Ally Bank launched in the US in 2001 or WeBank launched as China's first online bank in 2015.
- Success factors
- Cheaper banking services
- --- Simpler business models
- ---- Advanced technology
- Superior customer experience

Virtual banks in Hong Kong

Hong Kong is bracing to become a virtual banking hub

- The Hong Kong Monetary Authority (**HKMA**) released license guidelines for virtual banks at the end of May 2018
- 29 final applications were received for the license by the application deadline of Aug. 31, 2018
- Objectives of the HKMA include
- Promotion of application of financial technology and **innovation** in Hong Kong,
- Offering of a new type of customer experience and financial inclusion

Broad **Guidelines** include providing value to Hong Kong for cyber resilience

An already diverse ecosystem

Entities having shown interest for the virtual banking license in Hong Kong can be classified in the following categories:

- Hong Kong FinTech Providers majority of applicants mainly:
- ── Payment solution
- Lending solution
- ---- Cross border settlement solution

As: YedPay!, WeCash, TNG Asia Limited, Geoswift, Chong Sing Holdings FinTech Group and Octopus Cards Limited

- Mainland China FinTech Providers
- Ant Financial; Ping An Technology
- Overseas FinTech and banking:
- ---- Airwallex; Standard Chartered





Regulatory Measures in Hong Kong: VB License

The Hong Kong Monetary Authority (HKMA) granted three banking licenses to three virtual banks today on 27 March 2019.

Livi VB

Bank of China (Hong Kong) | JD Digits | Jardines







SC Digital Solution

Standard Chartered | HKT | PCCW | Ctrip









Zhong An Virtual Finance

ZhongAn Online | Sinolink







Open API in banking: from Challenge to Opportunity

APIs or Application Programming Interfaces, are used to build applications that connect to other firms' IT systems and technology. Banks with APIs enable FinTech firms to build apps utilizing the bank's existing data infrastructure.

By working together and taking advantage of APIs, banks and FinTech can develop new products and services, leverage their complementary strengths, enhance customer experience, generate new revenue streams and build a sustainable service model for underserved markets.

New services and benefits

- There are 3 types of APIs
- Private APIs: used within the traditional banking organization
- Partner APIs: between a bank and specific third-party partners
- → **Open APIs** business data is made available to third parties that may not have a formal relationship with the bank.
- Benefits of Open API include
- Create new businesses
- Enhance user experience
- Encourage innovation:
- Increase speed of change
- Decoupling platforms:
- ---- Reduces cost of development
- --- Embrace the IoT future

A supportive regulation

- The key benefits of Open API can be reaped only if it is widely adopted in the banking sector.
- This is why some jurisdictions are taking steps to **encourage** or, in the case of the EU, even mandate through legislation financial institutions to subscribe to Open API.
- In **EU** the **PSD2** directive will disrupt the entire banking industry by completely changing the rules of the game in **2018 and 2019.**
- In HK the **HKMA** has released the Open API policy framework for the banking sector in **July 2018**.
- Open Banking will speed up the digitalization of financial services.

An opportunity for Banks and FinTech

- FinTechs together with Banks will provide innovative solutions to existing bank customers, and will propose modern financial products that are more relevant to the needs of the digital world and the lifestyle of the digital natives.
- The ability to access accounts, financial data, and payments, using any regulated third-party provider will give users previously unimagined financial freedom
- A global unified financial platform based on APIs could be formed around all regions globally, ensuring **fair access** to banking databases and financial infrastructures that have been **previously closed**, bringing in a paradigm shift in banking.







HKMA-ASTRI FinTech Innovation Hub

Launched in November 2016, the HKMA-ASTRI FinTech Innovation Hub was created by Thomson Reuters and ASTRI, and serves as a neutral ground for the FinTech industry, a place where various stakeholders can collaborate to innovate, develop new technology, cut costs and create new products.

Located at ASTRI's office in the Hong Kong Science Park, supported by the institute's technical teams and its hardware and software IT infrastructure.

With around **200 virtual workstations**, the Hub is equipped to emulate with system and resources to allow players in the banking and payment industry to conduct proof of concept trials of products and services through the use of new technologies. The FinTech Innovation Hub also **allows regulators to provide early inputs** to the trial works before the actual implementation. The Hub caters big and small institutions alike such that the industry as a whole would be able to adopt new technologies more speedily and in a more collaborative manner.

In February 2018, ASTRI entered into a partnership with **Red Hat**, a globally prominent provider of enterprise open source solutions, to guide members to redeploy their solution almost anywhere in a much shorter time. To help emulate, validate and analyze different financial services and products before market launch, Red Hat's enterprise-grade Kubernertes container application platform will be installed on 200 virtual workstations that are connected in a scalable segregated network.



FinTech Facilitation Office (FFO)

In a bid to get ahead of other Asian countries, the Hong Kong Monetary Authority (HKMA) set up a **FinTech Facilitation Office (FFO)** in March 2016. As part of its major functions, the FFO is tasked with initiating banking and payment industry research into the potential application of **novel FinTech solutions**, which could have a significant impact on banking and payment services. The aim of the FFO is to support the development of the FinTech industry and maintain Hong Kong's status as a leading international financial centre.

More information

The FFO serves as

- 1. A platform for exchanging ideas of innovative FinTech initiatives among key stakeholders and conducting outreach activities.
- 2. An interface between market participants and regulators within the HKMA to help improve the industry's understanding of the components of the regulatory landscape which are relevant to them.
- **3.** An initiator of industry research for potential application and risks of FinTech solutions.
- **4.** A facilitator to nurture talents to meet the growing needs of FinTech in Hong Kong.

In May 2016, the FFO launched its first major initiative, the Cybersecurity Fortification Initiative (CFI), to raise the level of cybersecurity for Hong Kong banks.

- Cyber Resilience Assessment Framework a common riskbased framework for authorized institutions to evaluate their cyber resilience.
- Professional Development Program a training and certification program to increase the supply of qualified professionals in cybersecurity.
- Cyber Intelligence Sharing Platform a platform to share cyber threat intelligence among banks to uplift cyber resilience.

Shenzhen-Hong Kong FinTech Award

Under the FFO, The HKMA and the Office of Financial Development Service of Shenzhen (OFDS) will jointly organize a FinTech award that recognize and reward FinTech products and solutions for Hong Kong and Shenzhen financial institutions. Cash prize comprises of more than \$10,000,000 HKD in total.

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HKMA

Central Bank Digital Currency (CBDC)

In collaboration with the three note-issuing banks, the Hong Kong Interbank Clearing Limited and R3, a consortium of financial institutions and other stakeholders, **HKMA commenced in March 2017 and is a research and a proof-of-concept work** on central bank digital currency (CBDC) to explore the potential of Distributed Ledger Technology (DLT).

The first phase of the research explores the feasibility of CBDC in performing domestic inter-bank payments, inter-corporate payment in the wholesale market and delivery versus payment (DvP) debt securities settlement.

On the other hand, "CBDC remains a subject which requires further study and more proof-of-concept work to ascertain its feasibility for payment applications" according to Joseph Chan, the Acting Secretary for Financial Services and the Treasury in May 2018, because government research shows that the benefits may be limited when compared to existing infrastructure.





FinTech Career Accelerator Scheme (FCAS)



Supported by 11 banks and 9 universities, the FCAS was launched by HKMA and ASTRI in December 2016, aiming to nurture talents to meet the growing needs of FinTech in Hong Kong by providing practical internships for undergraduate and postgraduate students in the FinTech industry. It provides research opportunities with Hong Kong universities, and a platform for events, community activities and internships.

FCAS 2.0 was launched on 31st January 2018 in partnership with ASTRI, Cyberport and HKSTP to enhance the FinTech pool in Hong Kong to meet the growing demands from the industry. FCAS 2.0 is part of that initiative and comprises the programs below, each targeted at young talents of various stages of their career development: entrepreneurship summer boot camp, Shenzhen Summer Internship Program, Gap Year Full-Time Placement Program, Full-Time Graduate program



FinTech Supervisory Sandbox

The HKMA launched the FinTech Supervisory Sandbox (FSS) in September 2016 to facilitate the pilot trials of FinTech and other technology initiatives of authorised institutions before they are launched on a fuller scale. Through the FSS, authorised institutions can try out their new FinTech products without the need to achieve full compliance with the HKMA's usual supervisory requirements. Authorised institutions will have the chance to conduct timely live tests and trial for newly developed technologies and applications before the official launch. The FSS allows partakers to collect reallife data and feedback from users in a **controlled environment** so that they can make any changes before their products are fully launched. As of the end of January 2019, there had been tests on **43 new technology products**, with **29 pilot trials completed and the products rolled out**.

Enhanced FinTech Supervisory Sandbox (FSS) 2.0 has new features including:

- (i) A FinTech Supervisory Chatroom to provide **speedy feedback** to banks and tech firms at an early stage of their FinTech projects.
- (ii) Tech firms may have direct access to the sandbox by seeking feedback from the Chatroom.
- (iii) Sandboxes of the HKMA, the Securities and Futures Commission (SFC) and the Insurance Authority are linked so that there is a **single** point of entry for pilot trials of cross-sector FinTech products.

Statistics on Usage of the FSS (As of the end of January 2019)

Technology involved	Number of pilot trials
Biometric authentication	7
Soft token	4
Chatbot	2
Distributed ledger technologies	5
Application programming interface (API)	5
Regtech (e.g. remote account opening)	5
Others (e.g. notification service via social media platforms)	15
Total	43



SFC

Regulatory Sandbox

SFC launched the SFC Regulatory Sandbox in September 2017 for qualified firms to conduct regulated activities utilising financial technologies in a confined regulatory environment.

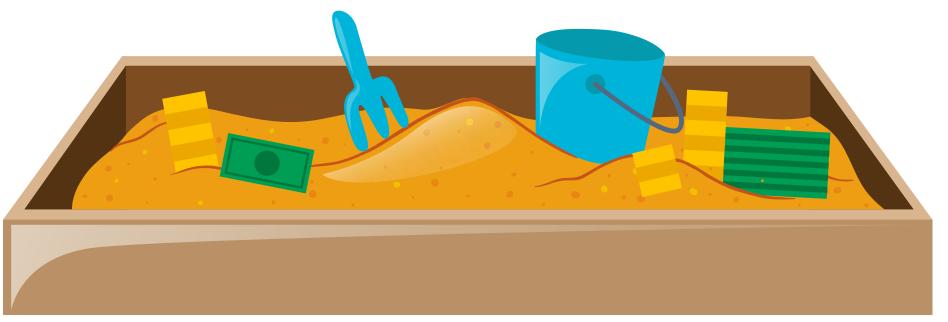
The SFC Regulatory Sandbox enables qualified firms to identify and address any risks or concerns associated with their regulated activities before their products are fully launched. The SFC Regulatory Sandbox is available for both licensed corporations and startup firms that intend to carry on regulated activities under the SFO.

In November 2018, The SFC has also set out a conceptual framework to explore a pathway for compliance for **virtual asset trading platform** operators and will explore whether virtual asset trading platforms are suitable for regulation in the SFC Regulatory Sandbox.

The Insurance Authority (IA) Insurtech Sandbox

The Insurance Authority (IA) launched an Insurtech Sandbox in September 2017 to facilitate pilot trails of innovative Insurtech initiatives.

The Sandbox is available for Insurtech and other technology initiatives intended to be launched in Hong Kong by authorized insurers. Through the Insurtech Sandbox, authorised insurers can run tests for their new Insurtech initiatives, collect real market data and feedback in a controlled environment before their products are fully launched.





Government Funding Schemes

Innovation & Technology Fund

Established in June 1999, the Innovation and Technology Fund aims to promote innovation and technology upgrading the manufacturing and service industries. The Hong Kong government's 2018 budget pledged to allocate **HK\$10 Billion to the development of financial services** over the next five years, including FinTech.

Under the Midstream Research Programme for Universities (MRP), a programme dedicated to encouraging universities to conduct more midstream research, standalone projects could get a maximum of HK\$5 Million per project, and collaboration projects could receive a maximum funding of HK\$10 Million per project.

Under the Technology Start-up Support Scheme for Universities of the Innovation and Technology Fund ("ITF"), with an annual funding of up to \$4 Million, each startup can be funded for no more than three years with a maximum annual funding of HK\$1.2 Million (around US\$153,000).







HKSTPC Corporate Venture Fund

Hong Kong Science and Technology Parks Corporation (HKSTPC) has set up an HK\$50 Million (around US\$6 Million) Corporate Venture Fund to support high-potential early-stage startups. HKSTPC co-invests up to HK\$8 Million(US\$1 Million) in each startup with private funds.

More information



Innovation and Technology Venture Fund (ITVF)

Proposed by the Hong Kong Special Administrative Region Government in the 2016 Policy Address, the ITVF aims to stimulate private investments in local I&T startups and to increase deal flow. With funding of HK\$2 Billion from the Government, ITVF will co-invest with private venture capital on a matching basis in startups in Hong Kong with a proposed investment ratio of 1:2.

Co-investment Partners of ITVF: Beyond Ventures, BVCF IV, Hendale Fund, Mindworks Ventures Fund 3 SPC, Construction-Radiant Tech Ventures, X Technology Fund

More information

Enterprise Support Scheme (ESS)

An initiative from ITF that provides funding to I&T companies, the government will match public funding with private investment on a project basis up to HK\$10 Million (around US\$1.2 Million).



Government affiliated groups

Innovation and Technology Fund

The Innovation and Technology Fund (ITF) aims to enhance the added value, productivity and competitiveness of Hong Kong's economic activities.

- The Enterprise Support Scheme (ESS) is an initiative from ITF that provides funding to I&T companies (See details in Chapter 8).
- Technology Start-up Support Scheme for Universities (TSSSU) is another initiative from ITF that provides funding to six local universities to support their teams in starting technology businesses. Funding of up to HK\$4 Million is provided to each university and a startup can receive up to HK\$1.2 Million per year.

Hong Kong Applied Science and Technology Research Institute (ASTRI)

Hong Kong Applied Science and Technology Research Institute Company Limited operates under the supervision of Innovation and Technology Commission (ITC) as a private limited company. ASTRI conducts applied research in FinTech, Smart City Technologies and Health Technology.

ASTRI collaborates with the Hong Kong Monetary Authority for the FinTech Career Accelerator Scheme to nurture talents for the FinTech sector. It also collaborates with HKMA for the FinTech Innovation Hub.

More information





Government affiliated FinTech Groups



HK Financial Services Development Council

Established in January 2013, FSDC engages the industry in formulating proposals to promote the further development of Hong Kong's financial services industry and maps out the strategic direction for development.





Insurance Authority

Insurance Authority regulates and supervises the insurance industry, promotes the stability of the insurance industry and protects policyholders.

More information



Innovation and Technology Commission

The Innovation and Technology Commission promotes and supports applied research and development, and technology transfer and application.

More information



Financial Services and the Treasury Bureau

The Financial Services and the Treasury
Bureau is one of the twelve policy bureaux
for the Hong Kong Special Administrative
Region. It is responsible for developing and
executing policies on finance and treasury.

More information



Hong Kong Productivity Council

Hong Kong Productivity Council provides a range of consultancy and technological development including services information technology and environmental technology to companies from different sectors.



Universities

The University of Hong Kong



Departments

- --- Technology Transfer Office
- --- HKU Knowledge Exchange





Programmes

- --- Technology Startup Support Scheme
- TechHKU
- --- HKU Dreamcatchers

HKU's Entrepreneurship series

- 2018 Dreamcatchers 100K Final Pitch
- 2018 Dreamcatchers MedTech Hackathon
- ---- Entrepreneurship Academy 2018

More information

The Chinese University of Hong Kong



Departments

- --- Centre for Entrepreneurship
- --- CUHK Center for Innovation and Technology

Programmes

- Hong Kong Social Enterprise Challenge
- --- Incubation Support
- ── Vice-Chancellor's Cup of Student Entrepreneurship
- CUHK Pre-Incubation Centre
- --- Bachelor of Engineering Programme in Financial Technology









Hong Kong University of Science and Technology



Departments

- --- HKUST Entrepreneurship Center
- The Base @HKUST

Programmes

- HKUST One Million Dollar Entrepreneurship Competition
- AEF Student Startup Grants
- --- Entrepreneurship Acceleration Fund
- --- HackUST

More information







City University of Hong Kong



Departments

- --- CityU Enterprises Limited
- --- Innovation Commons @ CityU

Programmes

- ── <u>CityU-HKSTP Incubator Scheme</u>
- --- Student Contest Support Fund
- --- CityUE Investment Fund
- Student Early Entrepreneurship Development Scheme
- --- Technology Start-up Support Scheme for Universities

More information







*Not FinTech exclusive



The Hong Kong Polytechnic University



Departments

- --- PolyU Institute for Entrepreneurship (IfE)
- --- Good Seed @PolyU

Programmes

- ── PolyU Micro Fund
- Tech Incubation Fund (TIF) Scheme @PolyU
- --- Tech Launchpad Fund Scheme
- --- IfE and J.C.DISI Good Seed Training and Funding Plan

More information







Hong Kong Baptist University



Departments

- --- Knowledge Transfer Office @ HKBU
- --- Business Entrepreneurship Support and Training Programme

More information





*Not FinTech exclusive



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