Innovation & Technology

Overview

With opportunities brought by the National 14th Five-Year Plan and the Guangdong-Hong Kong-Macao Greater Bay Area (GBA), Hong Kong can capitalise on its advantages in research and development (R&D) capabilities, technology infrastructure, legal system and intellectual property to act as a strategic bridge for innovative companies looking to access the Mainland market, thereby developing into an international innovation and technology (I&T) centre.

The Hong Kong Special Administrative Region Government (HKSAR Government) promulgated the Hong Kong Innovation and Technology Development Blueprint (the Blueprint) in December 2022 to establish a clear development path and formulate systematic strategic planning for Hong Kong's I&T development over the next five to 10 years, charting Hong Kong in moving full steam towards the vision of an international I&T centre. The Government has formulated the Blueprint from the perspective of top-level planning and design, and will take forward the Blueprint under four broad development directions, namely "to enhance the I&T ecosystem and promote 'new industrialisation' in Hong Kong"; "to enlarge the I&T talent pool to create strong impetus for growth"; "to promote digital economy development and develop Hong Kong into a smart city"; and "to proactively integrate into the overall development of the country and consolidate our role as a bridge connecting the Mainland and the world".

I&T stakeholders

- **Hong Kong Science and Technology Parks Corporation (HKSTPC)** provides infrastructural and one-stop support services to over 1,600 technology companies.
- **Cyberport** is Hong Kong's digital technology flagship and incubator for entrepreneurship with over 2,100 members.
- **Hong Kong-Shenzhen Innovation and Technology Park (HSITP)** is being developed in the Lok Ma Chau Loop (the Loop) to provide about 1 million square metres gross floor area under phase 1 development. The first three buildings will be completed in phases starting from end-2024.
- Six research centres established by the Government, namely the **Automotive Platforms and Application Systems R&D Centre**, **Hong Kong Applied Science and Technology Research Institute**, **Hong Kong Microelectronics Research and Development Institute, Hong Kong Research Institute of Textiles and Apparel**, **Logistics and Supply Chain MultiTech R&D Centre**, and **Nano and Advanced Materials Institute**, drive applied R&D in selected focus areas and foster commercialisation of R&D outcomes and technology transfer.
- The **Hong Kong Academy of Sciences** and the **Hong Kong Young Academy of Sciences** advise the Government on research and technology-related policies.
- The **Massachusetts Institute of Technology** set up its first overseas Innovation Node in Hong Kong in 2016.

- The **Fraunhofer Institute for Production Technology of Germany** and the Hong Kong Productivity Council jointly set up the Invention Centre Hong Kong in 2018 to support Hong Kong enterprises in adopting innovative industrial technologies, promoting new industrialisation.
- **Hong Kong-Mainland collaboration**: There are currently 16 State Key Laboratories in Hong Kong and six Hong Kong Branches of Chinese National Engineering Research Centres.
- The **Ministry of Science and Technology (MOST)** and the HKSAR Government launched the Mainland-Hong Kong Joint Funding Scheme in April 2019 to support and encourage R&D collaboration in Hong Kong and the Mainland, and signed the "Arrangement between the Mainland and Hong Kong on Expediting the Development of Hong Kong into an International Innovation and Technology Centre" in March 2023.
- The **Chinese Academy of Sciences (CAS)** and the HKSAR Government signed the "Memorandum of Understanding on Establishing Affiliated Institution by the CAS in Hong Kong" in November 2018. The **Hong Kong Institute of Science & Innovation, CAS Limited** was set up in Hong Kong in April 2019 to promote the development of scientific research, technological innovation and education.
- The **Ministry of Industry and Information Technology (MIIT)** and the HKSAR Government signed the "Co-operation Agreement on the Development of New Quality Productive Forces and the Promotion of New Industrialisation" in September 2024.
- **The China Association for Science and Technology** and the HKSAR Government signed the Co-operation Framework Agreement on Supporting Hong Kong in Becoming an International Hub for High-calibre Talents and Jointly Serving High-level Self-reliance in Science and Technology in December 2024.

Digital policy

- Hong Kong is a leading digital economy, consistently achieving top rankings in digital readiness and internet access capabilities. The **Digital Economy Development Committee** put forward 12 core recommendations to the Government in early 2024 with a view to promoting digital economy development on five major fronts.
- The **Policy Statement on Facilitating Data Flow and Safeguarding Data Security in Hong Kong** was published in end-2023, outlining the Government's data governance philosophy and setting out 18 specific action items in five categories to lay a foundation for the furtherance of high-quality development of I&T, digital economy and smart city in Hong Kong.
- The **Digital Policy Office** (DPO) was officially established in July 2024. The DPO will take the lead in promoting the data-driven, people-centric and outcome-based digital policies within the Government and across various sectors, as well as putting in place more digital government initiatives that are convenient for people and business sectors.
- Hong Kong collaborates with the Guangdong Provincial Government to promote the **"Cross-boundary Public Services"** initiative, under which Hong Kong residents can log into the Guangdong Government Service Network with "iAM Smart", while Guangdong and Hong Kong residents can use the self-help kiosks instead of seeking government services in person.
- The **"Digital Corporate Identity"** Platform will be launched progressively starting from end-2026 to enable authentication of identity and verification of signature of enterprises using electronic

government services or conducting online business transactions in a secure, convenient and efficient manner.

➢ The Hong Kong Productivity Council's **Biz Expands Easy** launched in September 2022 one-stop online platform helps enterprises develop and/or upgrade digital support facilities by consolidating information of relevant government funding schemes to facilitate their research of funding schemes to support business development. A facilitation measure on **"Standard Contract for the Cross-boundary Flow of Personal Information Within the Guangdong-Hong Kong-Macao Greater Bay Area (Mainland, Hong Kong)"** was rolled out in end-2023 with a view to facilitating and streamlining the arrangements on cross-boundary flow of personal information from the Mainland cities in the GBA to Hong Kong.

➢ A thematic web page on data governance was launched in December 2024 covering the Principles of Data Governance and the relevant strategy, guidelines, and technical standards, etc. concerning data governance to introduce the Government's data governance policies in a one-stop manner.

I&T infrastructure

➢ The planning of the **Northern Metropolis**, particularly the San Tin Technopole, will align with the development positioning of the **Hetao Shenzhen-Hong Kong Science and Technology Innovation Co-operation Zone**, and fully integrate with the strategy on enhancing Hong Kong's I&T competitiveness to pave way for the future development of the Hetao Co-operation Zone in a forward-looking manner.

➢ Move full steam ahead with the construction of the **HSITP** in the Lok Ma Chau Loop.

➢ Hong Kong and Shenzhen are taking forward the joint development of the Hetao Shenzhen-Hong Kong Science and Technology Innovation Co-operation Zone (Co-operation Zone), comprising of the HSITP and the Shenzhen Innovation & Technology Zone, to establish the "one zone, two parks" initiative under the auspices of "one country, two systems".

➢ Explore the development of cavern data centres for effective use of land resources and utilisation of the edge of cavern space to support I&T development.

➢ The **Hong Kong Science Park (Shenzhen Branch)** commenced operation in June 2023 to enable enterprises interested in conducting business in the GBA to establish a presence in the Shenzhen Park of the Co-operation Zone.

➢ The light weight workshops and co-working spaces in the **Microelectronics Centre** were completed in end-2024 for gradual move-in of the newly established Hong Kong Microelectronics Research and Development Institute and other tenants, in a bid to promote the development of microelectronics.

➢ The first phase of Cyberport's **Artificial Intelligence (AI) supercomputing centre** (AISC) commenced operations in December 2024 to support the local demand for supercomputing power from R&D and relevant sectors.

➢ A three-year AI Subsidy Scheme of $3 billion to provide subsidies to local universities, R&D institutes and enterprises to leverage the AISC's computing power.

➢ The **expansion works of the Hong Kong Science Park and Cyberport** will be completed in phases from 2025 onwards, providing 100,000 square metres of additional floor area.

➢ Hong Kong has **12 submarine cable systems** and operates **nine satellites** for external communications. Several submarine cable systems will be ready in the coming years, enhancing the city's connectivity with other parts of the world.

Promoting R&D

➢ Facilitate **effective cross-boundary flow of innovative elements**: On funding, universities and research institutions in Hong Kong can apply for Mainland science and technology funding for use in Hong Kong. This policy allowing cross-boundary remittance of research funding injects further impetus into Hong Kong's research sector. Up to June 2024, the MOST, the National Natural Science Foundation of China, the Department of Science and Technology of Guangdong Province, the Science and Technology Bureau of Guangzhou Municipality, the Science, Technology and Innovation Bureau of Shenzhen Municipality and other Mainland provinces and cities have approved about RMB 1.03 billion for universities and research institutes in Hong Kong to conduct R&D or set up laboratories. In addition, upon meeting specific requirements, branches established by Hong Kong's universities and scientific research institutions in the Mainland would be allowed to lodge applications for exporting human genetic resources to Hong Kong for research purpose independently under a trial scheme.

➢ Two **InnoHK research clusters** have been set up, namely Health@InnoHK focusing on healthcare technologies, and AIR@InnoHK, focusing on AI and robotics technologies. The Government has also set up a research centre under AIR@InnoHK to participate in the Chang'E-8 mission, contributing to national aerospace development. It has started preparatory work to establish the third InnoHK research cluster focus on advanced manufacturing, materials, energy and sustainable development.

➢ Set aside $10 billion to further promote development of life and health technology. To enhance support for the transformation of R&D outcomes as well as R&D activities related to life and health technology, $6 billion out of the above provision will be used to provide subsidies for local universities to collaborate with Mainland and overseas organisations to set up **life and health technology research institutes**. $2 billion will be allocated to support the InnoHK research clusters to establish presence in the Loop. $200 million will be allocated to provide assistance to start-ups engaging in life and health technology in the form of incubation and acceleration programmes, etc.

➢ Launched the $10 billion **Research, Academic and Industry Sectors One-plus Scheme (RAISe+ Scheme)** in October 2023 to encourage collaboration among industry, academic and research sectors to further promote the "from 1 to N" transformation of R&D outcomes and industry development. The RAISe+ Scheme will fund, on a matching basis, at least 100 university research teams with potential to become successful start-ups.

➢ A **Frontier Technology Research Support Scheme** will be launched to assist funded universities, on a matching basis, in procuring facilities and conducting research projects led by leading local and international researchers on various frontier technology fields.

➢ Provide subsidies of no more than $16 million to the Technology Transfer Office of each of the eight University Grants Committee (UGC)-funded universities from 2024-25 onwards.

➢ The **Hong Kong Microelectronics Research and Development Institute** was established in September 2024 with an aim to spearhead and facilitate R&D on third-

generation semiconductors among universities, R&D centres and the industry, promote microelectronics development in Hong Kong, and develop it as one of the leading institutions for supporting microelectronics development in the Asia-Pacific region.

➢ Established the **Hong Kong Generative Artificial Intelligence Research and Development Center (HKGAI)** under InnoHK, and its developed "generative artificial intelligence document processing copilot application" is currently undergoing pilot use within the Government.

Promoting New Industrialisation

➢ The **New Industrialisation Development Office**, led by the **Commissioner for Industry (Innovation and Technology)**, adopts an industry-oriented approach to promote new industrialisation in Hong Kong, supports strategic enterprises to develop their businesses in Hong Kong, assists the traditional manufacturing sector upgrade and transform with the use of I&T, and provides supports for start-ups.

➢ Since 2023, the HKSAR Government has liaised with **over 130 representative and potential-filled I&T enterprises** to set up or expand business in Hong Kong, so as to continually construct and consolidate relevant industry chains and drive new industrialisation.

➢ Introduce enhancement measures in January 2024 to the **New Industrialisation Funding Scheme (NIFS)** to encourage local manufacturers to switch to smart manufacturing. Under the NIFS, each eligible enterprise may receive a maximum funding of $15 million on a matching basis for a smart production line project established in Hong Kong. A total of three projects under each enterprise can be funded at any one time, i.e. an enterprise can receive a maximum funding of $45 million in total.

➢ Launch a $10 billion **New Industrialisation Acceleration Scheme (NIAS)** in September 2024. Enterprises engaging in life and health technology, AI and data science, advanced manufacturing and new energy technology will each be provided with funding support of up to $200 million on a matching basis of one (Government): two (enterprise).

➢ The Government will formulate a medium- to long-term plan for new industrialisation and establish the Hong Kong New Industrialisation Development Alliance to promote closer collaboration among the Government, industry, academia, R&D research and investment sectors.

➢ Set up a $10 billion **I&T Industry-Oriented Fund** to form a fund-of-funds to channel more market capital to invest in specified emerging and future industries of strategic importance, including life and health technology, AI and robotics, semi-conductors and smart devices, advanced materials and new energy, with a view to building up the I&T ecosystem in a systematic manner.

Nurturing and pooling talents

➢ **The Global STEM Professorship Scheme** attracts more world renowned scholars to engage in I&T-related teaching and research activities in Hong Kong.

➢ The **Research Talent Hub** provides funding support to each eligible company or organisation to engage up to four research talents in general to conduct R&D work. Since April 2023, subsidies have been increased by about 10%, and research talents with a doctoral degree will also be provided with a living allowance.

- The **Technology Talent Admission Scheme (TechTAS)** provides a fast-track arrangement for admitting technology talent from the Mainland and overseas to work on R&D in 14 technology areas in Hong Kong.

- The **STEM Internship Scheme** provides allowance to undergraduates and postgraduates taking STEM (science, technology, engineering and mathematics)-related programmes in designated local universities to enroll in short-term I&T-related internships, and has been expanded to cover internship opportunities offered by government-funded R&D centres and the Hong Kong Productivity Council to STEM students of local and non-local universities (including the GBA campuses established by designated local universities).

- The **Innovation and Technology Scholarship** subsidises university students to take part in overseas/Mainland attachment programmes, local internships, mentorship programmes, etc.

- The **IT Innovation Lab in Secondary Schools Programme** and **"Knowing More About IT" Programme** provide funding support to publicly funded secondary and primary schools respectively to nurture IT knowledge among students and cultivate their interest in IT by organising IT-related extra-curricular activities.

- The **New Industrialisation and Technology Training Programme** provides funding support to local enterprises on a 2(Government):1(enterprise) matching basis to train their staff in advanced technologies, especially those related to new industrialisation.

- Collaborating with the OASES to **attract leading I&T talents around the world**, and providing special facilitation measures to bring their business or R&D outcomes to Hong Kong.

- **More accommodation facilities will be built for I&T talents,** including a potential new accommodation facility near the Hong Kong Science Park, and provision of the first accommodation facility at the HSITP in 2024.

- Permit flexible planning to provide **additional accommodation for I&T talents at San Tin Technopole**.

<u>Supporting technology start-ups</u>

- **Close to 4,700 start-ups** in Hong Kong in 2024 (up 10% from 2023) and **about 17,650 start-up jobs** (up 7% from 2023) according to the 2024 start-up survey by InvestHK.

- $2 billion **Innovation and Technology Venture Fund** (ITVF) set up by the Government to co-invest on a matching basis with selected private venture capital funds in I&T start-ups in Hong Kong. As at end-December 2024, the ITVF has invested about $339 million in 41 local I&T start-ups and attracted over $3.1 billion in private investment. Furthermore, the application as fund managers for the ITVF Enhanced Scheme was launched in December 2024 with a view to redeploying at most $1.5 billion to set up funds jointly with the market, on a matching basis to invest in start-ups of strategic industries.

- Set up a $5 billion **Strategic Tech Fund** to invest in enterprises with good development potential to enrich the I&T ecosystem in Hong Kong.

- **Cyberport Incubation Programme** and **Cyberport Macro Fund** (CMF) provide support services and initial venture capital funding for start-ups to accelerate their progress.

- Cyberport has launched a dedicated **incubation programme for smart living start-ups** in 2023, under which a maximum grant of $500,000, professional support and counselling will be provided.

- ➤ The **Corporate Venture Fund** under the **HKSTPC** invested nearly $450 million in 35 technology start-ups, attracting about $12.7 billion private investment.
- ➤ The HKSTPC will consolidate its existing Acceleration Programme and inject an additional amount of $110 million to launch the **Co-acceleration Programme** in collaboration with co-operation partners to pool the efforts of the I&T industry to nurture I&T start-ups with high potential as regional or global enterprises.
- ➤ The HKSTPC implements "**Incubation Programme**", "**Incu-Bio Programme**" and a pre-incubation programme "**IDEATION**" to support I&T companies at different stages of development.
- ➤ The **InnoCell** adjacent to the Hong Kong Science Park provides about 500 residential units with ancillary facilities to foster the development of the I&T ecosystem in Hong Kong.
- ➤ The **Technology Start-up Support Scheme for Universities** provides an annual subsidy amount of $16 million to each participating university to support their teams in starting technology businesses and commercialising their research and development results. Half of the subsidy is provided to start-ups of universities with private investments on a matching basis of one to one.
- ➤ The **Public Sector Trial Scheme** provides funding support to assist eligible local technology companies and organisations in realising and commercialising their R&D outcomes and encourages public sector organisations to utilise more local R&D outcomes.
- ➤ The **E&M InnoPortal** lists the service wishes of various government departments, public organisations and the E&M trades, and invites the I&T sector, including start-ups and universities to propose relevant I&T solutions for matching.
- ➤ The **Smart Government Innovation Lab** promotes pro-innovation government procurement policy and expedite government's adoption of innovative IT products and solutions.
- ➤ **Asia No.1** and **World No.3** in the Emerging Startup Ecosystems category (Startup Genome: Global Startup Ecosystem Report 2024).

Smart city
- ➤ More than 130 initiatives set out in the **Hong Kong Smart City Blueprint 2.0** have been completed or are ongoing which bring benefits and convenience to members of the public in their daily lives.
- ➤ **"iAM Smart" platform** offers about 460 commonly used public and commercial online services; smart lampposts; Next Generation GovCloud; Big Data Analytics Platform and Shared Blockchain Platform.
- ➤ The **5G coverage** in Hong Kong has reached more than 90% of the population, covering all the major business districts, shopping centres and local Mass Transit Railway stations.
- ➤ To encourage the telecommunications industry to more actively invest in infrastructure and provide better communication services to companies and the public, a tax deduction will be offered on spectrum utilisation fees to be paid by successful bidders of radio spectrum.
- ➤ From 2024, over **100 digital government initiatives** will be rolled out to promote digital government and smart city.
- ➤ All government services have been fully digitalised and electronic payment options are provided for all government fees.
- ➤ Provide one-stop digital services by fully adopting "iAM Smart" by 2025 to realise **a single portal for online government services.**

- Providing funding support, through the $1 billion Smart Traffic Fund, to local institutions and enterprises for conducting research and application of technology to enhance commuting convenience and efficiency of road network or space, and improve driving safety.
- **The Geospatial Lab**, established in May 2021, helps raise public interest in spatial data, and explores together with the community value and application of spatial data in support of smart city development.
- The Government will continue to **open up data** and encourage public and private organisations to follow suit for innovative industry applications.
- **Wi-Fi Connected City** programme continues to promote the common brand "Wi-Fi.HK" and encourage more public and private organisations to participate in the programme. There are currently around 42,000 "Wi-Fi.HK" hotspots in Hong Kong.
- **Asia-Pacific No.3 and World No.7** for digital competitiveness (International Institute for Management Development (IMD): World Digital Competitiveness Ranking 2024).
- **Asia-Pacific No.1 and World No.2** lowest taxed data centre market (Cushman & Wakefield: 2024 Global Data Center Market Comparison).
- **Asia-Pacific No.3 and World No.15** hub for development of new technology (Smart Centres Index by UK-based Z/Yen released in November 2024).
- **Asia-Pacific No.2 and World No.3** for digital intelligence (Digital Intelligence Index 2020 complied by US-based The Fletcher School at Tufts University and Mastercard).
- **South East Asia & Oceania No.5 and World No.18** for innovation performance (World Intellectual Property Organization: Global Innovation Index 2024).
- Among **World's Top 20** smart city (IMD: Smart City Index 2024).

<u>Fintech</u>
- Hong Kong is home to more than **1,100 fintech companies.**
- Policy Statement on Responsible Application of Artificial Intelligence in Financial Market announced in October 2024.
- Major fintech infrastructure includes the **Faster Payment System** (FPS) with registrations reaching 16.22 million as of February 2025; the average daily turnover reached 1.92 million real-time transactions (worth HK$15.3 billion).
- **Granted licences for eight digital banks**, **four virtual insurers, seven virtual asset trading platforms** and **16 stored value facilities**. An **Open Application Programming Interface (API) Framework** for the banking sector was implemented in a four-phase approaches, while the Open API Framework for the insurance sector was launched in September 2023. **Interbank Account Data Sharing (IADS) pilot programme** was launched to allow customers to securely and efficiently share their bank account data with other banks subject to customer consent. Jointly launched by the Hong Kong Monetary Authority (HKMA) and the HKSTPC, the **IADS Developer Platform**, a one-stop platform that provides testing account data and simulated APIs, facilitates the banking industry and technology firms to jointly develop data-driven products and services using the testing platform.
- **Regulatory sandboxes** available in the HKMA, the Securities and Futures Commission and the Insurance Authority.

- **InvestHK's dedicated fintech team** provides one-stop service for overseas and Mainland fintech companies to set up in Hong Kong; and organises a series of Fintech events over the year, including the annual flagship **Hong Kong FinTech Week**.

- **Commercial Data Interchange (CDI)** is a consent-based financial data infrastructure for enterprises to share operational data, enabling banks to make accurate assessments on the operating condition of enterprises and provide SMEs with a better chance of securing loans. Since its official launch, CDI has facilitated more than 42,000 loan applications and reviews, with an estimated credit approval amount exceeding HK$35.4 billion as of end-December 2024.

- The HKMA is strengthening its research work to increase Hong Kong's readiness in issuing **Central Bank Digital Currencies (CBDCs)**, including advancing the **Multiple CBDC Bridge (mBridge)** to improve cross-border payments, progressing further in the study on the prospect of **issuing an e-HKD**, and commencing the exploration of CBDC to support **tokenisation market development** in Hong Kong. Regarding the e-CNY, the HKMA and People's Bank of China have expanded the cross-boundary pilot scope of the e-CNY in Hong Kong. Hong Kong residents can set up e-CNY personal wallets in Hong Kong using their Hong Kong mobile phone numbers and top up the wallets through the FPS.

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