



### **Vision**

Sustain Hong Kong's position as Asia's leading digital city.

### **Mission**

- Deliver efficient, secure and citizen-oriented e-Government Services.
- Nurture and develop Information and Communications Technology (ICT) talents and professionalism in Hong Kong.
- Develop a vibrant ICT industry, promoting high-tier data centres, cloud computing services, big data and cyber security awareness.
- Develop Hong Kong into a world-class smart city.
- Promote a digitally inclusive, knowledge-based society.

### **Organisation Structure**

Headed by the Government Chief Information Officer, the Office of the Government Chief Information Officer (OGCIO) is responsible for formulating information technology (IT) strategies, programmes and measures, in addition to providing IT services and support within the Government.

OGCIO has some 600 civil service staff and is responsible for the career development of around 1,900 government IT professionals working in different government bureaux and departments (including OGCIO).

These government IT professionals are responsible for assuring the quality of government IT activities, particularly in developing and aligning IT strategy with business and policy objectives and in designing and delivering IT-enabled business change projects that enable timely delivery of policy goals. In addition, around 3,800 contract IT staff are engaged to supplement the government IT workforce.

### **Functions of OGCIO**

#### **(i) Facilitating a digital economy**

We facilitate the development of a digital economy through –

- Legal Framework for the Conduct of Secure Electronic Transactions in Hong Kong – The Electronic Transactions Ordinance (Cap. 553) (“ETO”) accords electronic records and electronic signatures the same legal status as that of their paper-based counterparts in the conduct of electronic transactions.



- Internet Domain Name Administration Regime – The Hong Kong Internet Registration Corporation Limited (HKIRC) is a non-profit making company and designated to manage and administer the “.hk” country-code top level domains for Hong Kong.



- Fostering IT Learning Atmosphere among the School Community – OGCIO launched the IT Innovation Lab in Secondary Schools Programme in the 2020/21 school year for three school years to provide funding support up to \$1 million to each publicly funded secondary school for organising IT-related extra-curricular activities and procuring necessary IT equipment and related professional services to support the activities, which aims to cultivate young people’s interest in IT, enhance their innovative thinking and foster an IT learning atmosphere, thereby promoting local popular science education and expanding the supply of I&T talent to meet the needs of a technology-driven society. We are extending the programme to primary schools by implementing a three year “Knowing More About IT” Programme from the 2021/22 school year. Subsidy of up to \$400,000 will be provided to each publicly funded primary school for organising extra-curricular activities to enhance primary school students’ interests, knowledge in and application of information technology and prepare them for integration into the knowledge-based economy and participation in the development of a digital society in the future.

- Smart City Development – The Government published the Smart City Blueprint for Hong Kong (the Blueprint) in December 2017, providing a clear and concrete direction for the smart city development in Hong Kong. Subsequently, the Blueprint 2.0 was released in December 2020, putting forth over 130 initiatives which enhance and expand existing city management measures and services. It has also included new chapters on “Use of I&T in Combating COVID-19” and “Smart Village Pilots”. The Blueprint 2.0 is available at the dedicated smart city portal ([www.smartcity.gov.hk](http://www.smartcity.gov.hk)).

“Smart Village Pilots” would explore the use of I&T in addressing the daily life issues faced by residents living in rural and more remote areas. OGCIO has already been providing free Wi-Fi service at more than 20 village premises (e.g. village offices), and will progressively extend the service to more than 100 village premises to facilitate the provision of other smart village pilot initiatives.

- Development of digital infrastructure in supporting the Smart City Blueprint, namely “iAM Smart”, Pilot Multi-functional Smart Lampposts Scheme and Next Generation GovCloud and Big Data Analytics Platform.
  - “iAM Smart” – OGCIO launched the “iAM Smart” Platform in December 2020 for provision of one-stop personalised digital services. As of end-July 2021, over 700,000 users have registered for “iAM Smart” and they could access about 140 digital services from the Government and private organisations conveniently with a single digital identity.
  - Pilot Multi-functional Smart Lampposts Scheme – We plan to implement a pilot scheme of installing some 400 smart lampposts in four selected districts in the territory with higher pedestrian flow. The smart lampposts with smart devices will provide convenient data services and collect various real-time city data, enhance city and traffic management, and complement the infrastructure development for the fifth generation (5G) mobile communications services in Hong Kong. In June 2019, some 50 smart lampposts in the first phase have been put into operation in Kwun Tong / Kai Tak Development Area. In view of the privacy concerns of some people in the community, OGCIO has set up an expert committee to review the personal privacy protection and related information security technology issues relating to the operation of multi-functional smart lampposts. The committee completed the review in March 2020 and unanimously agreed that the Government should continue to take forward the pilot scheme. We are enhancing the applications and implementation arrangements of the pilot scheme in accordance with the committee’s recommendations, including launching a multi-functional smart lampposts virtual exhibition from March 2021 to enhance general public’s understanding on the operation of smart lampposts and the benefits it would bring about to the public. We are also conducting a trial on using Light Detection and Ranging (LiDAR) technology to replace cameras for detecting vehicle speed and identifying some types of vehicles in traffic.
  - Next Generation GovCloud and Big Data Analytics Platform – OGCIO is modernising the existing government cloud infrastructures and will adopt a new application architecture. Through implementing this new platform, bureaux and departments can expedite the development and delivery of digital government services, including the big data analytics and artificial intelligence applications. The Next Generation GovCloud Platform and Big Data Analytics Platform started operating in September 2020.



**(ii) Developing Hong Kong as a hub for innovation and technology**

We support ICT start-ups, nurture talents and facilitate ICT industry development through –

- Smart Government Innovation Lab – OGCIO set up a Smart Government Innovation Lab in April 2019 to promote pro-innovation government procurement policy and expedite bureaux and departments' adoption of innovative IT products and solutions, thereby improving public services and creating more business opportunities for local start-ups and SMEs.



- Collaboration with the Mainland – OGCIO takes active steps to facilitate exchange and collaboration between the ICT industries of Hong Kong and the Mainland. We have been leading local ICT delegations to visit the Mainland to explore collaboration and business opportunities, taking advantage of Mainland's implementation of the strategic "Internet+" and "Belt and Road" initiatives. We regularly take part in major ICT exhibitions in the Mainland providing opportunities for local ICT companies, especially SMEs, to showcase their innovative products and services and to tap into the Mainland market.

The Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area was announced in February 2019. The focus areas in Innovation and Technology which OGCIO will involve include developing an international Innovation and Technology Hub and expediting Infrastructural Connectivity, building smart city clusters and a Greater Bay Area big data centre, promoting the use on mutual recognition of electronic signature certificates and enhancing the level of cyber security protection, etc.

We collaborate closely with Guangdong Province with the establishment of the Hong Kong/Guangdong Expert Group on Co-operation in Informatisation. We have put in place the mutual recognition scheme of electronic signature certificates between Hong Kong and Guangdong which helps enhance security and reliability of cross-boundary e-commerce between the two places. In 2016, Hong Kong joined the Cloud Computing Working Group of the National Information Technology Standardisation Committee to participate in formulation of the "Cloud Service Purchase Guideline". The guideline was approved and officially published on 30 August 2019 and was effective from 1 March 2020.

- Hong Kong ICT Awards – OGCIO has been collaborating with the local ICT industry in organising the Awards since 2006 to recognise outstanding achievements and to showcase Hong Kong's ICT innovation and successes. In its 2020 edition, the Hong Kong ICT Awards has received more than 1,600 entries under eight categories of the Awards. Please visit the thematic website ([www.hkictawards.hk](http://www.hkictawards.hk)) for details. A new round of the Awards commenced in April 2021.



- Data Centres – OGCIO champions initiatives and measures to develop Hong Kong as a prime location for high-tier data centres in the region. The Data Centre Facilitation Unit established under OGCIO provides information and one-stop support to assist enterprises interested in setting up data centres in Hong Kong, including conversion of existing industrial buildings and industrial lots for data centre use, and works with government departments on measures to facilitate the setting up of data centres taking into account their unique mode of operation.



- Wi-Fi Connected City – OGCIO has been promoting free public Wi-Fi services which are offered by public and private organisations under the common Wi-Fi brand "Wi-Fi.HK" since 2014. There are currently over 41,000 hotspots under the "Wi-Fi.HK" brand.

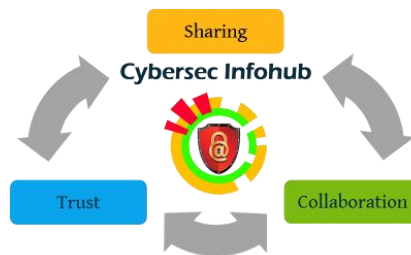


- Cyber Security – Through various means such as Cyber Security Information Portal ([www.cybersecurity.hk](http://www.cybersecurity.hk)), social media, seminars and school visits, OGCIO collaborates with key partners including the Hong Kong Computer

Emergency Response Team Coordination Centre (HKCERT), Hong Kong Police Force, Hong Kong Internet Registration Corporation Limited (HKIRC) and professional bodies to provide businesses (in particular SMEs), organisations, students and general users with the latest information on cyber threats, professional advice on preventive and recovery measures, and technical assistance (e.g. web scanning) to mitigate security risks.



In addition, OGCIO partners with HKIRC to run a public-private partnership programme underpinned by a collaborative platform (www.cybersechub.hk) and professional exchange activities to promote cross-sector sharing of cyber security information, best practices and experiences. The programme raises the community's awareness of cyber security, strengthens alert capability, promotes collaboration and ultimately helps the community as a whole meet the challenges of cyber attacks.



### (iii) Development of the next generation of e-government services

We facilitate service transformation in both the public and private sectors through –

- GovHK – GovHK (www.gov.hk) provides a one-stop portal of government information and e-services and an account-based platform – MyGovHK to provide single access to an array of personalised e-government services. The GovHK Chatbot (Bonny) was launched in the GovHK portal in December 2019. It makes use of Artificial Intelligence technology to interact with users by text to assist them in searching for government forms and related e-government services.



- Open Data – OGCIO launched the revamped Public Sector Information (PSI) portal (data.gov.hk) in December 2017 to release government open data free of charge in digital machine readable format, with a view to tapping creativity and wisdom of the community in developing more innovative applications with open data, thereby bringing about convenience to the citizens and business opportunities to the industry. The portal currently provides over 4,640 unique datasets under 19 public data categories and 1,800 Application Programming Interfaces. The portal has also introduced city dashboards at the end of 2019 for the public to understand the city-related data more easily.

- IT Strategy – OGCIO formulates government-wide IT strategy and actively facilitates government bureaux and departments to plan and execute their IT-enabled change initiatives in a more agile, cost-effective and joined-up manner by adopting cloud computing and other emerging technologies. These initiatives include:

- Electronic Information Management – The government-wide electronic information management strategy embraces content management, records management and knowledge management. OGCIO, in collaboration with Government Records Service and Efficiency Office, also plans for the full implementation of electronic recordkeeping system in the Government by the end of 2025 to enhance efficiency in preserving and managing government records.

- Electronic Procurement – OGCIO is rolling out its cloud-enabled electronic procurement service to government bureaux and departments to enhance procurement efficiency. Suppliers also reap the benefits of shorter transaction turnaround time and greater business opportunity.

- Government Human Resources Management Services (GovHRMS) – Providing common IT services to facilitate human resources management activities of staff members as well as strategic manpower planning and human resources management decision making in Government. OGCIO monitors the development and implementation of the GovHRMS.

- Government Data Centre Service Arrangements – OGCIO is building a government data centre complex that consolidates some of the existing government data centres, leading to better economy of scale, cost effectiveness as well as greener management in the overall government data centre operations.

- Government Electronic Communications Infrastructure – OGCIO establishes and maintains an advanced and secure electronic communications infrastructure for effective and efficient communications and collaboration in government operations and delivery of public services.



- Information Security – OGCIO implements and regularly reviews the “Government IT Security Policy and Guidelines” to ensure that they are in pace with technology advancement and international best practices. The latest version of the guidelines was published in March 2021 on government websites for public reference. OGCIO also enforces compliance by government bureaux and departments with the security requirements. GovCERT.HK (www.govcert.gov.hk) run by OGCIO is dedicated to coordinating and managing information security incident response for government bureaux and departments. It also collaborates with other CERTs locally and globally to assist public/private sectors and individuals in protecting their information and digital assets.

**(iv) Application of Information Technology to Combat COVID-19**

In combating COVID-19, we have been actively assisting relevant government bureaux and departments in their application of IT on implementing various anti-epidemic measures with a view to curbing the spread of diseases in the community, assisting the public to cope with the new normal and at the same time supporting economic recovery on the basis of vaccine bubble –

- Support to Compulsory Quarantine – Through the use of the “StayHomeSafe” mobile app adopting geo-fencing technologies, together with Bluetooth Low Energy electronic wristbands worn by confinees, OGCIO has since February 2020 been assisting in the monitoring of confinees’ compliance with the quarantine requirement of staying in their designated dwelling places during the quarantine period, while ensuring proper protection of confinees’ privacy. So far, over 540,000 electronic wristbands have been distributed for use by confinees.



- Interactive Map Dashboard on the Latest Situation of COVID-19 in Hong Kong – Through application of open data and geographical IT, the Government launched the Interactive Map Dashboard on the Latest Situation of COVID-19 in Hong Kong (Interactive Map) in February 2020 to enable the public to keep abreast of the latest situation of the epidemic and other related information effectively. In addition, datasets under the Interactive Map are also opened up in machine-readable format via PSI Portal for free public use. The Interactive Map has so far recorded over 54.4 million views.

- Community Testing Centres – To enable citizens to make bookings for the testing services in an efficient and secure manner, OGCIO established an online booking system and registration system for the Community Testing Centres established by the Government in various districts. The online registration system is designed to simplify the on-site registration procedures and thus reduce the chance of mass gathering. As regards the registration system, it is designed to handle citizens’ personal data and sample testing process separately, so that laboratories responsible for testing samples could not access any personal data and citizens’ personal privacy is thus protected.

- COVID-19 Vaccination Programme – OGCIO established an online booking system facilitating the Government to launch the COVID-19 Vaccination Programme in February 2021, enabling citizens to make bookings in respect of the time and venue for receiving vaccination. SMS reminders will also be sent to the persons with appointment bookings. Real-time updates on the vaccination centres’ booking status are also made available on the thematic webpage to keep the public informed of the booking places available in each vaccination centre. The system also supports the setting of vaccine quotas for each vaccination centre, and provides booking statistics to assist in the overall vaccine logistics arrangement under the programme.



- COVID-19 Electronic Vaccination and Testing Record System – The system was launched for citizens to conveniently download the electronic vaccination and testing records after verifying their identity through “iAM Smart”. A QR code with digital signature technology is embedded in the record to ensure that the information is tamper-proof and enable effective verification of the authenticity of the electronic record for facilitating the citizens to enter into certain designated local premises under the vaccine bubble initiative.



- “LeaveHomeSafe” exposure notification mobile app – OGCIO launched the “LeaveHomeSafe” mobile app in November 2020 to provide members of the public with a convenient digital tool for recording their whereabouts. The mobile app will send exposure notification and issue relevant health advice to a user if the user is later identified to have visited the same venue that a confirmed patient has visited at about the same time, to enhance their vigilance so as to minimise the risk of further transmission of the virus. In an unfortunate event of infection, the user’s visit records stored in the app can assist the Centre for Health Protection in epidemiological investigations. To facilitate the public’s entry to certain designated premises under the vaccine bubble initiative, OGCIO launched the “LeaveHomeSafe 2.0” in June 2021 to enable the public to store their vaccination records and QR codes in the app to facilitate easy retrieval if needed.

The “LeaveHomeSafe” mobile app does not require registration of any personal information of the user and does not have a tracking function. Like visit records, the electronic vaccination records stored in the app will only be saved in the user’s mobile phone and will not be uploaded to the Government or any other systems, thus protecting the user’s personal privacy. Since its launch, the number of downloads of the app exceeds 4.8 million. About 90,000 public and private venues across the territory have participated in the scheme to display the “LeaveHomeSafe” venue QR codes.



- “Return2HK” Scheme – OGCIO set up an online booking system in November 2020 for Hong Kong residents who meet the specified conditions under the scheme to apply for quarantine exemption quotas for returning to Hong Kong from the Mainland or Macau via different ports to ensure a smooth and orderly quarantine process at the ports.
- Health Code System – OGCIO and DH have jointly developed the “Hong Kong Health Code System” with the use of blockchain technology to enable secure conversion of the applicant’s valid nucleic acid testing result in the format of a “Health Code” for health declaration purpose on entry. Under the “Return2HK” Scheme, the function for converting the “Yue Kang Code” of Guangdong Province and the “Macao Health Code” of Macao to the electronic Health Declaration Form platform of Hong Kong has already been used. At present, the number of successful applications for code conversion has exceeded 140,000.

## (v) *Fostering a digital inclusive society*

We seek to narrow the digital divide through –

- Web/Mobile App Accessibility Campaign – To facilitate access to online information and services by everyone including persons with disabilities, OGCIO has been implementing a Web/Mobile App Accessibility Campaign since 2011 through a multi-pronged strategy ranging from Government leadership, fostering awareness, promulgating guidelines and tips, nurturing expertise and organising recognition scheme to encourage adoption of accessibility design. Since 2018, HKIRC has become the organiser of the Web Accessibility Recognition Scheme.
- Encouraging ICT Adoption among Elderly – OGCIO has been conducting the ICT Outreach Programme for the Elderly since 2014 to help institutionalised and hidden elderly, and elderly receiving day care services and home care services experience how ICT can spice up their lives. An Enriched ICT Training Programme for the Elderly was introduced in 2019 for elderly persons with basic ICT knowledge to learn about the adoption of digital technology in their daily living and serve as trainers to help more elderly people acquire technology knowledge. A web-based learning portal was launched in the same year to help the elderly acquire digital skills, so that they can benefit from the advancement in digital technology in their daily living. Outreach activities and advanced digital training classes, by means of remote learning, have been launched to facilitate the elderly's continuous learning of digital technologies during the fight against the epidemic. We launched a new round of the ICT Outreach Programme for the Elderly in March 2021 and commissioned six elderly services organisations to organise relevant activities across the territory for encouraging and teaching the elderly to use digital technology in order to help them broaden their social circles and stay connected with the community.

## Facts and Figures

To keep Hong Kong at the forefront of ICT development, OGCIO has implemented various measures to create the right environment, infrastructure, skills and culture for developing and adopting ICT, as reflected in –

- Hong Kong has a robust telecommunications network, with eight submarine cable landing stations connecting to eleven regional and trans-Pacific submarine cable systems;
- Hong Kong's mean download speed over fixed broadband at 240.83 Mbps is among the fastest in the world (April 2021);
- Many participants from Mainland China, Taiwan, Korea, Japan, Singapore and other Asian countries join the Internet exchange service with direct connection with Hong Kong. Hong Kong's household broadband penetration rate reached 95.1 per cent, among the highest in Asia (February 2021);
- Hong Kong's mobile subscription rate reached 286.6 per cent, one of the highest in the world (January 2021);
- The penetration of public Wi-Fi is among the highest in the world with 71,815 wireless hotspots installed by the Government and the private sector (April 2021);
- Hong Kong was ranked 2<sup>nd</sup> in Asia in the Cushman & Wakefield's Data Centre Competitive Index 2019;
- Over 19 hectares of land in Industrial Estates have been granted for data centre development and the Tseung Kwan O Industrial Estate is currently housing a total of 11 high-tier data centres; and
- About three hectares of land in Tseung Kwan O was set aside for establishing high-tier data centres. The land was sold in October 2013 and December 2018 through open tenders. The high-tier data centre on the first site of about one hectare was put into operation in October 2017.

