

**For discussion on
8 June 2020**

**Legislative Council
Panel on Information Technology and Broadcasting**

**Launching of “iAM Smart” Platform and
other Digital Government Service Initiatives**

Purpose

This paper updates Members on the preparatory work for launching the “iAM Smart” platform and other initiatives to promote digital government services.

Background

2. The Government is committed to developing Hong Kong into a smart city. Over the years, the Government has been making use of innovation and technology (I&T) to enhance operational efficiency and improve public services, particularly in promoting digital government and expanding online services. For example, the Office of the Government Chief Information Officer (OGCIO) established the one-stop portal GovHK Portal and launched the personalised service platform MyGovHK (www.gov.hk/mygovhk) in 2007 and 2010 respectively to provide services and information tailored to the public’s needs. OGCIO also facilitates and assists other government bureaux/departments (B/Ds) in developing more secure and convenient digital government services and improving user experience, thereby driving the digital transformation of public services such as electronic payments for Government bills, e-channels of the Immigration Department, chatbot to facilitate searching and use of government forms, establishment of the Public Service Information (PSI) portal for promoting open data and development of city dashboards. By the end of 2019, more than 850 e-services are provided, with an overall utilisation of over 100 billion times.

3. The 2017 Policy Address announced three smart city key infrastructure projects, including the provision of an electronic identity (now renamed as “iAM Smart”) for all Hong Kong residents free of charge, allowing them to use a single digital identity for authentication and conducting online transactions. The estimated cost for related system development is \$112 million.

“iAM Smart” Platform

Preparatory Work

4. The development of the “iAM Smart” system is nearing completion. We will launch the one-stop personalised digital government services platform “iAM Smart” in the fourth quarter of 2020. Apart from accessing the necessary services and website information through the platform, residents could use “iAM Smart” to perform digital signing in accordance with the Electronic Transactions Ordinance (Cap. 553) for handling statutory documents and procedures.

5. We expect that when the “iAM Smart” platform is launched, 23 commonly used online government services will be accessible through the platform (including application for or use of electronic services for public rental housing tenants, eTAX, renewal of full driving licence, registration of outbound travel information, and registration for employment services by job seekers, etc.). It is expected that by mid-2021, residents can access about 110 online government services through the platform. Their service categories are at **Annex 1**. By then, we will also make use of “iAM Smart” to revamp GovHK, so that the public can browse different kinds of government online information and use online services through different devices (including desktop computers, tablets and mobile phones) or self-service kiosks in various districts.

6. The “iAM Smart” platform can also support other new services. For example, we plan to introduce an “e-ME” service when the platform is launched, providing an option for residents to store commonly used personal data, thus obviating the need for filling in the same data for different application forms. Data provided by residents will be stored with encryption to protect data security and personal privacy. Furthermore, residents may choose to receive personalised notifications such as outbound travel information, payment of eRVD bills, renewal of vehicle licences, etc.

“iAM Smart” Registration and Usage

7. We expect that residents will mainly use the “iAM Smart” mobile app to browse or search for government online services. OGCIO will provide two versions of “iAM Smart”, namely “iAM Smart Lite” and “iAM Smart”. The former will provide general identity authentication and majority of the functions (such as e-ME and personalised notifications), while the latter will provide the additional function of digital signing. Residents may download the mobile app and register for “iAM Smart Lite” or “iAM Smart” according to their needs through the following channels:

- (a) remote registration of “iAM Smart Lite” using personal mobile phone by taking photo of the HKID card (HKIC) and a selfie. The whole process can be completed online using mobile phone;
- (b) in-person registration of “iAM Smart” at self-service kiosk in specified government premises and public locations. The “iAM Smart” system will retrieve the data stored in the HKIC¹ and a selfie is required; or
- (c) in-person registration of “iAM Smart” via registration service counters or mobile registration teams. Staff will check and verify the HKIC of the applicant and no photo-taking of the HKIC or selfie would be required during the registration process.

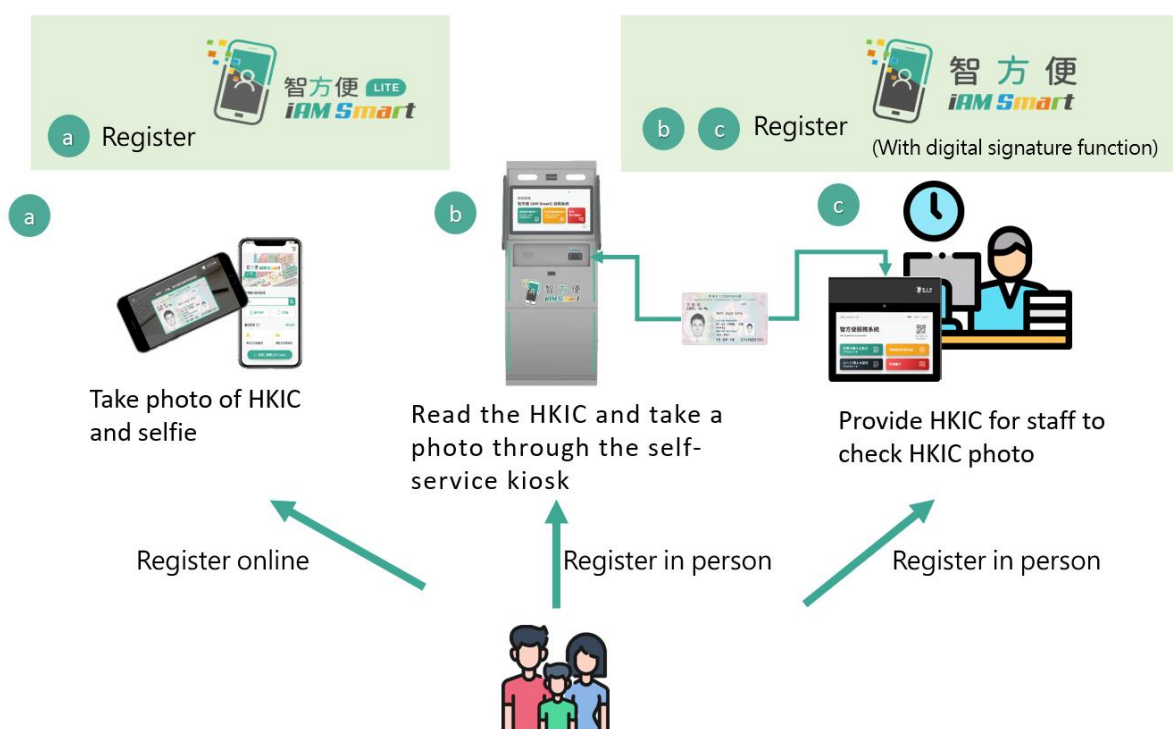


Figure 1: Registration Channels of “iAM Smart”

8. The system will verify the applicant’s identity against the records of the Immigration Department. If the information is valid, the registrant can activate their “iAM Smart” account to use the platform immediately. To provide convenient registration services, apart from self-service kiosks and registration service counters in various districts, OGCIO will deploy mobile registration teams to venues with high patronage, such as shopping malls and

¹ For registration via channels (b) and (c), the following data stored in the Card Face Data compartment of the card chip of HKIC will be retrieved: HKIC number, English name, Chinese name, gender (available only in the New Smart HKIC), date of birth and date of issue.

government premises, to assist those in need (such as the elderly) to register. The tentative locations of self-service kiosks, mobile registration teams and registration service counters are at **Annex 2**.

9. Should users lose their smartphones, they can call the 24-hour service hotline to immediately suspend their “iAM Smart” account. If re-registration of “iAM Smart” on another smartphone is needed, the same registration procedure as described above will apply. In addition, users of “iAM Smart Lite” who need to perform digital signing may approach “iAM Smart” self-service kiosks, mobile registration teams and registration service counters listed in **Annex 2** for the relevant upgrading procedures.

10. We will start the promotion and publicity of “iAM Smart” in the third quarter of 2020 through different channels such as television and social media to announce details of the “iAM Smart” registration methods and other relevant information, including personal privacy protection and information security measures.

Information Security and Privacy Protection

11. In the course of developing the “iAM Smart” platform, OGCIIO has been adhering strictly to government policies and guidelines on information technology security as well as the Personal Data (Privacy) Ordinance, in areas such as data security, network and communication security, user access management, application system security, and security measures to protect personal data. OGCIIO has also sought advice from the Privacy Commissioner for Personal Data and engaged independent third parties to conduct privacy impact assessment and information security risk assessment and audit for implementation of the relevant information security and privacy protection requirements. Contractors will only use test data during system development and maintenance, and can only work in a system development and testing environment without access to personal data of any resident. OGCIIO will also establish its access control and monitoring mechanism for OGCIIO staff who need to access personal data.

12. In terms of system management, OGCIIO will ensure that the core data (including users’ personal data) in the “iAM Smart” system are encrypted using prevailing internationally recognised Advanced Encryption Standard and stored in government data centre facilities. To conform with industry encryption standards, Transport Layer Security will also be adopted to encrypt data to ensure data security and integrity during transmission over the internet.

13. The photos of HKIC provided and selfies taken by residents during registration for “iAM Smart Lite” or “iAM Smart” via mobile phone or self-service kiosk will be deleted immediately after verification of user’s identity. Other personal information provided during registration will only be used for “iAM Smart” account management. User data will be encrypted and stored in government data centre facilities. In addition, OGCI will pursue the information security and privacy management certification in accordance with international standards ISO27001 and ISO27701.

Promotion of “iAM Smart” to Public and Private Organisations

14. With the rapid development of internet economy and smart city over the past few years, we expect that “iAM Smart”, together with other digital facilities such as 5G communications, can bring about breakthrough for the digital transformation of the whole society, in particular for commercial organisations which are closely related to the public’s daily life and work. Therefore, apart from promoting digital government services, we will actively facilitate public and private organisations, including local I&T companies as well as small-and-medium-sized information technology enterprises, to adopt “iAM Smart” platform in their online services. At this stage, public bodies planning to adopt “iAM Smart” include the Mandatory Provident Fund Schemes Authority and the Hospital Authority. In September 2019, OGCI uploaded the relevant information on the application programming interfaces (APIs) for “iAM Smart” to the website of OGCI for interested enterprises to get an understanding of the “iAM Smart” system and its technical setup as early as possible, so as to facilitate their planning for the adoption of “iAM Smart” in their online services.

15. In addition, OGCI in collaboration with Cyberport introduced a pilot sandbox programme for “iAM Smart” in March 2020 to enable private organisations to conduct simulated tests on API functions to better prepare for the adoption of “iAM Smart” in future. The pilot sandbox programme is open for companies in the financial sector at present. We will review the pilot sandbox programme in the fourth quarter of 2020, and decide how and when to extend it to other sectors.

Other Initiatives for Driving Digital Government Services

Electronic Payments

16. At present, the Government provides various types of online payment services to facilitate payment of government bills and fees by the public with

credit card, PPS, e-cheque and e-wallet, including Apple Pay and Google Pay. From November 2019 onwards, the Government accepts payments of taxes, rates and government rent, and water charges through the Faster Payment System (FPS) of the Hong Kong Monetary Authority (HKMA). Members of the public can scan the QR codes on the bills via different mobile banking apps and e-wallets to make payment easily and conveniently. The Government continues to plan accepting FPS payment at service counters of the Companies Registry, the Immigration Department, the Official Receiver's Office and the Transport Department, and the services are expected to be rolled out progressively starting from the end of 2020. The Government is also exploring with HKMA to enable members of the public to settle payments (e.g. application fees for government venues or facilities) with FPS via the online services and mobile apps provided by the Government. In addition, HKMA plans to enhance the functions of the FPS in December this year to support the use of the HKIC number as the payment identification code to further broaden the application of FPS, such as supporting employers to pay salaries and for the Government to handle cash handouts.

Artificial Intelligence and Big Data Analytics

17. The Government has implemented chatbot services using artificial intelligence technologies to enhance user experience of e-services. OGCIO launched a chatbot on the GovHK Portal (i.e. "Bonny"), in December 2019 to facilitate searching of more than 3 300 government forms and relevant e-services by the public. The Efficiency Office also started to pilot the use of chatbot in December 2019 to handle 1823 public enquiries.

18. In addition, OGCIO is providing support to assist B/Ds in implementing big data analytics projects, making strategic decisions and providing services with a data-driven approach, with a view to enhancing the government's operational efficiency and improving city management. Some examples on this front include developing a social media analytics platform to assist departments in analysing information on social media to better understand the social sentiment for reference in policy formulation; analysing maintenance records and public complaints related to public toilets in order to strengthen public toilet management and maintenance measures; analysing the usage and the search history of GovHK portal to understand user needs for further enhancing the portal and user experience to enable easy access by the public in obtaining the information and services they need.

Blockchain

19. Blockchain development provides momentum for different industries to explore and pilot new applications in areas such as finance, supply chain, registration, etc. OGCI has been conducting a pilot application project on blockchain technology since end 2018 to explore applicability, benefits and limitations in improving digital government services. The evaluation result will be shared with other B/Ds as a reference for planning their digital government services. OGCI is working with the Intellectual Property Department, Environmental Protection Department and Department of Health to implement 3 pilot applications on the transfer of trademarks, optimisation of the procedures for preparing environmental impact assessment reports, improvement of the traceability and management for pharmaceutical products, which are expected to be completed in 2020.

Information Security and Privacy Protection

20. Information security is an essential part in implementing digital government services. When implementing digital government services, we will take into account the security risks under different scenarios based on project characteristics (such as the environment and location of the equipment to be installed or the nature of the data involved) in designing, developing and operating the systems, and seek advice from the Office of the Privacy Commissioner for Personal Data. The Government will engage independent third parties at different project implementation stages to conduct privacy impact assessments, privacy compliance audits, and information security risk assessments and audits (including source code security review and penetration tests) to ensure the security of the system and data and proper protection of the privacy of the public.

Advice Sought

21. Members are invited to note the content of this paper, and to give their views and suggestions.

Innovation and Technology Bureau
Office of the Government Chief Information Officer
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**Digital Government Services Expected
to Adopt “iAM Smart” by mid-2021**

- (1) **Licence applications and renewals** (6 items, for example electronic submission under the Licensing Regime for Trust or Company Service Providers, application for Liquor / Club Liquor Licence and other licensing services (such as food business licence) etc.)
- (2) **General applications and registrations** (13 items, for example EMSD (Regulatory Services) Web-Based Registration Services, e-Platform for Lifts and Escalators Ordinance, application for registration as Food Importer/Distributor, application for HKSAR Passport and Voter Registration and Change of Registration Particulars etc.)
- (3) **Public transport** (11 items, for example E-Application for Hong Kong-Zhuhai-Macao Bridge (HZMB) Macao Port Park-and-Ride Scheme, online application for a Certificate of Particulars of Motor Vehicle), online application for Renewal of Full Driving Licence and Renewal of Vehicle Licence and online booking for Driving Tests and checking of Driving Licence Status etc.)
- (4) **Permits and other business applications** (12 items, for example application for exemption from duty on Hydrocarbon Oil, Dutiable Commodities Ordinance, Currency and Bearer Negotiable Instruments Declaration System (CDS), Road Cargo System (ROCARS), Government Electronic Trading Services (including Certificate of Origin (CO), Dutiable Commodities Permit (DCP), Cargo Manifest (excluding road mode) (EMAN) and Import and Export Declaration (TDEC), downloading of tender documents and e-Procurement Programme etc.)
- (5) **Education** (9 items, for example application for Quality Education Fund, application for registration of a school, Electronic Advance Application System for Post-secondary Programmes (E-APP) and electronic submission for Mainland University Study Subsidy Scheme etc.)

- (6) **Employment applications and services** (9 items, for example Online Application System - Application Form for Employment with the Government (G.F. 340), On-line Application System - Application Form for Employment as an Administrative Officer / Executive Officer II / Assistant Labour Officer II / Assistant Trade Officer II / Transport Officer II (CSB606), booking of Youth Employment Start (YES) Service and Facilities, registration for job seekers with disabilities and Youth Employment and Training Programme (YETP) Trainees' Application etc.)
- (7) **Medical and health services** (19 items, for example Cervical Screening Programme, Colorectal Cancer Screening Programme, Elderly Health Care Voucher (EHV) Scheme, Internet Service for the System for Managing the Assessment of Student Health (wSMASH), Outreach Dental Care Programme for the Elderly (ODCP), Vaccination Subsidy Scheme, eHealth - Patient Portal, Electronic Health Record Sharing System (eHRSS) and Primary Care Directory - Primary Care Provider Platform etc.)
- (8) **Subsidies applications** (4 items, for example SFO E-Link - My Applications, My Bills and My Counter Appointment etc.)
- (9) **Public housing** (4 items, for example E-form Filling for Public Rental Housing Application, e-Services for Public Rental Housing Tenants and online application for Subsidised Sale Flats Schemes)
- (10) **Public enquiries** (6 items, for example B/Ds' public enquiries and suggestion forms etc.)
- (11) **Postal services** (5 items, for example EC-Ship, Hongkong Post Circular Service, My Speedpost and ShopThruPost etc.)
- (12) **Other public services** (16 items, for example Information Services Department's Government Photo Store and Bookstore, Hong Kong Map Service 2.0, Water Supplies Department Electronic Services, eTAX and eRVD Bill Service etc.)

Tentative Locations of Self-service Kiosks, Mobile Registration Teams and Registration Service Counters

Self-service Kiosks (37 locations)	
<i>Leisure and Cultural Services Department - Sports Centres (13 locations)</i>	<ul style="list-style-type: none">• Harbour Road Sports Centre• Ho Man Tin Sports Centre• Hong Kong Park Sports Centre• Kowloon Park Sports Centre• Po Kong Village Road Sports Centre• Po On Road Sports Centre• Siu Lun Sports Centre• Tsuen Wan Sports Centre• Tung Chung Man Tung Road Sports Centre• Yau Oi Sports Centre• Yeung Uk Road Sports Centre• Yuen Chau Kok Sports Centre• Yuen Long Sports Centre
<i>Leisure and Cultural Services Department – Public Library (2 locations)</i>	<ul style="list-style-type: none">• Hong Kong Central Library• Lam Tin Public Library
<i>Inland Revenue Department (1 location)</i>	<ul style="list-style-type: none">• IRD’s Office at 1/F Revenue Tower
<i>LINK Shopping Centres (7 locations)</i>	<ul style="list-style-type: none">• Cheung Fat Plaza• Fu Shin Shopping Centre• Lei Yue Mun Plaza• Lok Fu Place• Oi Tung Shopping Centre• Po Tak Shopping Centre

	<ul style="list-style-type: none"> • Siu Sai Wan Plaza
<i>MTR stations</i> (12 locations)	<ul style="list-style-type: none"> • East Tsim Sha Tsui • HKU • Hung Hom • Kowloon Tong • Kwai Hing • Lei Tung • Nam Cheong • Prince Edward • Tai Po Market • Tai Wai • Tin Shui Wai • Tseung Kwan O
<i>Other Organisations</i> (2 locations)	<ul style="list-style-type: none"> • Cyberport • Hong Kong Science Park
Mobile Registration Teams (11 to 12 locations at the same time)	
<i>Immigration Department</i> (9 locations)	<ul style="list-style-type: none"> • East Kowloon Smart Identity Card Replacement Centre • Hong Kong Island Smart Identity Card Replacement Centre • Sha Tin Smart Identity Card Replacement Centre • Sheung Shui Smart Identity Card Replacement Centre • Tseung Kwan O Smart Identity Card Replacement Centre • Tsuen Wan Smart Identity Card Replacement Centre • Tuen Mun Smart Identity Card Replacement Centre • West Kowloon Smart Identity Card Replacement Centre • Yuen Long Smart Identity Card Replacement Centre

<p><i>Other locations with high patronage</i> (2 to 3 locations at the same time)</p>	<p>Roving locations, such as shopping malls, Government premises, etc.</p>
<p>Registration Service Counters (over 100 locations)</p>	
<p>Hongkong Post (over 100 locations)</p>	<p>Post Offices in all districts of Hong Kong</p>
<p>Commercial organisations with customer counter services (such as banks)</p>	<p>In the process of discussion with commercial organisations</p>