

**For discussion  
on 20 March 2023**

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

**Upgrade of “iAM Smart” Platform to Realise  
“Single Portal for Online Government Services”**

**PURPOSE**

This paper briefs Members on the proposal of upgrading “iAM Smart” platform to realise the goal of “single portal for online government services”, and seeks Members’ support for submission of the funding proposal to the Finance Committee (“FC”).

**BACKGROUND**

2. “iAM Smart” provides Hong Kong residents with a single digital identity, allowing members of the public to log in to various government and commercial online services with a reliable identity verification function, conduct online transactions and perform digital signing with legal backing in a simple and secure manner. Since the launch of the “iAM Smart” platform in December 2020, its development has been progressing well, with nearly 260 online services provided by the Government and public and private organisations adopted “iAM Smart” currently, over 1.8 million Hong Kong residents registered for “iAM Smart”, and over 33 million accesses to different online services through “iAM Smart”.

3. The Chief Executive announced in his 2022 Policy Address the initiative to expedite the building of a smart government, including turning all government services online in two years (i.e. by 2024) and providing one-stop digital services by fully adopting “iAM Smart” within three years (i.e. by 2025), so as to realise the goal of “single portal for online government services”. Moreover, key performance indicators for the promotion of “iAM Smart” are also set out in the 2022 Policy Address, aiming to increase the annual usage of “iAM Smart” (total transactions)

from 5 million in 2021 to 17.5 million in 2025.

## **PROPOSAL**

4. The Office of the Government Chief Information Officer (“OGCIO”) proposes a comprehensive upgrade of the “iAM Smart” to achieve the goals set out in the Policy Address. By upgrading the “iAM Smart” platform, we will adopt a more systematic organisation and categorisation approach to integrate the existing e-government services that are more commonly used and simplify the access procedures, so as to provide one-stop e-government services to enhance user experience and achieve the goal of “single portal for online government services”.

5. We will review the entire workflow for the “iAM Smart” service, including account registration, usage, mobile app interface design and service catalogue arrangement, etc., with a view to pursuing enhancements in all aspects and improving the overall user experience. We will also collaborate with the Efficiency Office to organise a series of user experience and interface design workshops so as to make the “iAM Smart” services better meet the needs of the public. In addition, we will enhance the capacity, performance and security of “iAM Smart” in response to the anticipated increase of service demand. The upgraded “iAM Smart” platform will also allow Bureaux and Departments (“B/Ds”) to develop more services that are convenient and beneficial to the public through better sharing of data within the Government.

6. The original system design of “iAM Smart” focused on its digital identity authentication function for online services. To make available new capabilities, we need to completely upgrade the “iAM Smart” platform in every aspect, from system infrastructure, functionalities, integration with B/Ds’ systems, to mobile app design and functions, etc. The work involved in the system upgrade are described in paragraphs 7 to 18 below.

### *Upgrade system design and functions*

7. We will update the design and functions of the “iAM Smart” mobile app, enabling citizens to gain access to a series of information related to daily lives without the need to register for an “iAM Smart” user account. Such information includes travelling information (including the latest weather and traffic condition), food safety and hygiene information, government announcements, policies and measures in relation to people’s

livelihoods and commonly-used service catalogues, etc. Through the provision of these pieces of information and relevant links to online services, we aspire to attract more citizens to download and familiarise themselves with the “iAM Smart” mobile app, with a view to better incentivising them to register for an “iAM Smart” user account so as to enjoy a wider array of online services.

*Improve user experience and streamline workflow*

8. We will set up dedicated pages to bring together a series of commonly-used government service applications, enquiries and information for providing more unified services, and facilitate citizens to search and access the required government services more conveniently. We plan to organise the service categorisation from a citizen-centric perspective, based on specific themes closely related to daily lives (e.g. education, transport, tourism and immigration) and the needs among different age groups (e.g. the youth and the elderly), in order to allow citizens to search and gain access to the required services more easily. Take education as an example, we hope that through the education service cluster, citizens can process various education-related services provided by different B/Ds or organisations, such as submitting admission application to the Education Bureau, and checking of the financial assistance application status from the Working Family and Student Financial Assistance Agency, etc.

9. In addition, we propose to provide a “one-tap login” function, allowing citizens to directly use their “iAM Smart” accounts to access some commonly-used government services, instead of just logging into the portals provided by the B/Ds, so as to facilitate citizens to browse their personal account information or submit information through “e-ME” instantly.

10. OGCIO is currently developing a “Consented Data Exchange Gateway” (“CDEG”) to allow citizens to opt for a one-off authorisation through “iAM Smart” to retrieve their personal data collected by different B/Ds for performing automatic form-filling by means of “e-ME” functions when submitting applications for other government services, so as to obviate the need to input or submit the same information repeatedly. Through CDEG, citizens are also able to glance through their personal dealings with different government services via the “iAM Smart” mobile app in a convenient and effective manner.

11. We will also streamline the overall workflow of “iAM Smart”, without asking users for individual consent on each and every occasion, aiming to bring citizens a better user experience. During simplifying the authorisation process, we will consult the Privacy Commissioner for Personal Data (“PCPD”) to ensure that the protection of citizens’ personal data complies with the requirements of the Personal Data (Privacy) Ordinance (“PDPO”).

*Provide “step-up” identity authentication service*

12. To meet the needs of some organisations for using “iAM Smart” to perform an additional real-time identity authentication for critical or high-value transactions, “iAM Smart” will implement an additional facial recognition authentication function. With user consent, the facial template of the user which has been matched successfully with the record in the Immigration Department will be stored for enabling the verification with the selfie taken by mobile phone before conducting critical or high-value transactions with a view to further strengthening the user identity authentication. This additional authentication function enables organisations to streamline business workflow, promoting the development of online services and opening up new opportunities. For example, some online applications and virtual bank account opening service that require stronger identity authentication will be able to conduct completely online.

*Facilitate citizens to register “iAM Smart”*

13. “iAM Smart” is a digital infrastructure project that brings benefits and convenience to the public, while expanding the user base is the key to increase the value and usage of “iAM Smart”. In addition to the enhanced functions of the “iAM Smart” app as mentioned above, we will strengthen its services which will allow citizens to access some of its basic services without the need to register for an account, so as to attract more citizens to experience the convenience brought by “iAM Smart” in daily lives. At the same time, we propose to optimise the registration process and increase significantly the number of self-registration kiosks, which will enable citizens to register “iAM Smart” accounts more conveniently.

14. We also plan to simplify the self-registration process. Currently, it is required to scan the Hong Kong Identity Card (“HKID Card”) from three different angles to verify its authenticity for “iAM Smart” account registration via the mobile app. Without compromising the accuracy of the identity verification, we will reduce the requirements of taking multiple photos of the HKID Card as far as possible.

15. Apart from the existing 40 self-registration kiosks set up across the territory and nearly 120 registration counters located at Post Offices, additional 60 new self-registration kiosks will be set up to further facilitate citizens to register “iAM Smart”. In order to further expand the user-base across different sectors, we will target citizens of different age groups for promoting and publicising “iAM Smart”. For example, through the promotion programmes on digital technologies for the elderly, we will promote “iAM Smart” to the elderly, assist them in registering for “iAM Smart” and help them understand how to access different online services through “iAM Smart”. Similarly, we will deploy mobile registration teams to different locations such as schools and community centres, etc., to assist citizens of different sectors in registering for “iAM Smart”. In addition, we will collaborate with district bodies and organisations to strengthen the promotion of “iAM Smart” at the district level, including reaching out to the community with district bodies to address the needs of different social groups for promoting and helping these people in account registration.

*Strengthen technical support for online service providers*

16. OGCIO will set up a one-stop integrated service portal for online service providers adopting “iAM Smart” to centrally process applications and enquiries from different industry sectors of the “iAM Smart” Sandbox Programme, thereby assisting more effectively online service providers in implementing their services. Through this cross-sectorial portal, online service providers in Hong Kong as well as the Greater Bay Area can readily obtain technical support, technical documents, training materials and the latest information related to “iAM Smart”, which will help the industries expedite the development process of adopting “iAM Smart” in their services. We will continue to promote the “iAM Smart” Sandbox Programme to more sectors (including the transport and logistics industries), so as to attract different sectors to make use of “iAM Smart” for developing more user-friendly and innovative applications.

*Collaborate with the Mainland*

17. OGCIO and relevant government departments of the Guangdong Province are jointly exploring the use of “iAM Smart” as a means of real-name identity authentication for Hong Kong residents to register for the account on the “Unified Identity Authentication Platform of Guangdong Province” so as to connect with the government services of the Guangdong Province. We will actively explore with the Guangdong Province to adopt suitable technical solutions to protect the privacy and security of personal data. We will also consult PCPD, conduct security risk assessments and

audits as well as privacy impact assessments to ensure that the arrangements fully comply with the requirements of the PDPO.

*Strengthen the capacity, performance and security of “iAM Smart”*

18. Apart from implementing the above-mentioned upgrade work for “iAM Smart”, we must also strengthen the defense against new cyber threats such as phishing, deepfake technology, mobile device vulnerability intrusion, etc. As a critical personal digital identity infrastructure, “iAM Smart” has to keep abreast of the times through enhancing the overall system performance and security. We will introduce log analytics and monitoring technologies enabled by artificial intelligence to assist the daily operation management of the “iAM Smart” platform. Abnormality detection and system management will be conducted in a highly automated and efficient manner to proactively identify actual or potential system issues and to facilitate prompt and proper actions. At the same time, system capacity will be expanded to cope with increasing service demands.

### **Project Implementation Tasks**

19. The realisation of “single portal for online government services” involves not only the overall design and functional upgrade of the “iAM Smart” system, but also the enhancements of online services provided by individual B/Ds that reinforce the integration with “iAM Smart”. The implementation work, therefore, is extremely challenging. We anticipate that rounds of ongoing and in-depth discussions on service integration among different B/Ds will be required. At the same time, we will collaborate with the Efficiency Office to coordinate and discuss with B/Ds on the user interface design for “iAM Smart” services, with a view to providing a better user experience. Furthermore, a series of security risk assessments and audits, as well as privacy impact assessments, will be conducted on the changes imposed throughout the process of upgrading “iAM Smart” and streamlining workflows, so as to ensure that the information security of the system and the personal data of the citizens will be adequately protected while enhancing the overall user experience.

20. The overall design and related activities for functional upgrade of “iAM Smart” system will be completed progressively within 2024. Other work such as improvement in registration process, setup of additional self-registration kiosks, upgrades of system capacity, performance and security, and enhancement in technical support to online

service providers, etc. will be completed in phases by the end of 2025. We will offer support to B/Ds so as to drive their full adoption of “iAM Smart”, including provision of technical standards and guidelines, strengthening departmental collaboration and technical support, etc., and will ensure that the existing online services can be enhanced and integrated into the upgraded “iAM Smart” platform in a timely manner. We expect that the enhanced online government services will be rolled out in phases from 2024 onwards, and the goal of “single portal for online government services” will be realised by the end of 2025. Prior to this, government online services which have been planned to adopt “iAM Smart” will continue to be rolled out progressively as scheduled. The services to be launched in 2023 are listed in Annex.

### Financial Implications

21. The non-recurrent cost is \$193.4 million, with breakdown as follows:

<b>Item</b>	<b>(in \$ million)</b>
(a) Hardware	8.1
(b) Software	7.7
(c) System Implementation and Support Services	129.2
(d) Contract Staff	28.7
(e) Site Preparation	2.1
<b>Total:</b>	<b>175.8</b>
(f) Contingency (10%)	17.6
<b>Grand Total:</b>	<b>193.4</b>

22. The estimated \$8.1 million under item (a) in paragraph 21 above will be used for the procurement of computer hardware, including hardware security modules, self-registration kiosks, and mobile devices and computers required for testing new systems and functions, etc.

23. The estimated \$7.7 million under item (b) in paragraph 21 above will be used for the procurement of computer software, including log analytics software, mobile device management software, client software for hardware security modules and platform service software, etc.

24. The estimated \$129.2 million under item (c) in paragraph 21 above will be used for the acquisition of system implementation and support services from service providers. The cost also includes system analysis and design, development, testing and installation services, etc.

25. The estimated \$28.7 million under item (d) in paragraph 21 above will be used for hiring contract IT staff with relevant technical skills and experience to assist in project implementation.

26. The estimated \$2.1 million under item (e) in paragraph 21 above will be used for site preparation, including the installation of electricity, cable conduit and kiosk facilities, etc. at the self-registration kiosk sites.

27. After the full rollout of the upgraded “iAM Smart”, the annual estimated additional recurrent cost is about \$20 million. We will review the relevant expenditure in detail afterwards.

## **Way Forward**

28. Subject to Members’ support of the proposal, we plan to seek FC’s funding approval for implementing the project in mid-2023, with a view to commencing the tendering process in the second half of this year. The upgraded features of “iAM Smart” are expected to be rolled out by phases from 2024 to 2025.

**Innovation, Technology and Industry Bureau**  
**Office of the Government Chief Information Officer**  
**March 2023**



Annex

**Government Online Services Expected to  
Adopt “iAM Smart” in 2023**

	<b>Government bureaux / departments and related organisations</b>	<b>Government online services</b>
1	Buildings Department	Pilot Project of Common Digital Platform for Site Supervision (CDPSS)
2		Self-Certification System
3	Commerce and Economic Development Bureau	Trade Single Window
4	Companies Registry	Next Generation of Integrated Companies Registry Information System
5	Correctional Services Department	Official Visit e-Booking Service
6		Social Visit e-Booking Service
7	Customs and Excise Department	Dealers in Precious Metals and Stones Registration System (DRS)
8	Department of Health	Digitalised Platform on Chinese Medicines
9	Development Bureau	e-Tendering System of the HKSAR Government
10	Education Bureau	Electronic Distribution of Grant/Subsidized Schools Provident Fund Statements
11	Environmental Protection Department	C · Easy - Application Form
12		C · Easy - Login
13	Fire Services Department	FSD Public Training Portal
14	Food and Environmental Hygiene Department	Food Trader Portal
15		Licensing (such as food business licence)
16		Online Payment System for Cemeteries and Crematoria Services (Public Niches)
17	Hong Kong Police Force	eTraffic Ticket Platform
18		HKPF Single Sign On
19		Licensing E-Service of Hong Kong Police Force
20		Online Application for HKPF Vacancies, Recruitment Programmes and Events

	<b>Government bureaux / departments and related organisations</b>	<b>Government online services</b>
21	Immigration Department	Online Application for a Statement of Travel Records
22		Online application for Immigration Arrangements for Non-local Graduates (IANG)
23		Online Application for Records of Member of the Crew of a Ship
24		Online Registration of Births
25		Online Registration of Deaths
26		Online Request for a Certified Copy of Document - Section 10 of the Registration of Persons Ordinance, Chapter 177, Laws of Hong Kong
27		Online Request for a Copy / Certified Copy of a Document
28		Online Submission of Revised Schedule of Accommodation and Domestic Duties (ID 407G)
29	Judiciary	e-Appointment System
30	Labour Department	Online Registration for Courses in Occupational Safety & Health (OSH) Centre and Public Talks on Occupational Health
31	Leisure and Cultural Services Department	SmartPLAY <sup>1</sup>
32		URBTIX
33	Rating and Valuation Department	Application for Rates Concession
34		Notice of New Letting or Renewal Agreement (FORM e-CR109)
35		Notice of Objection to a Correction to the Valuation List and/or Government Rent Roll (FORM e-R23C)
36		Notice of Objection to a Deletion from the Valuation List and/or Government Rent Roll (FORM e-R23B)
37		Notice of Objection to an Interim Valuation (FORM e-R23A)

<sup>1</sup> For replacement of the existing “Leisure Link” internet booking services

	<b>Government bureaux / departments and related organisations</b>	<b>Government online services</b>
38		Notice of Tenancy (Form e-AR2)
39		Proposal for Alteration of Valuation List or Government Rent Roll (Form e-R20A)
40		Requisition for Particulars of Tenements (Form e-R1A(D/N/P/M/AD))
41		Requisition for Particulars of Tenements (FORM e-R1C)
42		Requisition for Particulars of Tenements (FORM e-R1K)
43	Registration and Electoral Office	Online Voter Information Enquiry System
44		Voter Registration and Change of Registration Particulars
45	The Treasury	e-Portal for Pensioners
46	Trade and Industry Department	Kimberley Process Certificate
47	Transport Department	E-Application for Quota-free Scheme for Hong Kong Private Cars travelling to Guangdong via the Hong Kong-Zhuhai-Macao Bridge (HZMB)
48		E-Application Service for Closed Road Permit for Mainland & Macao Regular Quota
49		E-Application Service for Lantau Closed Road Permit
50		E-Licensing Portal
51		Online Application for International Driving Permit