**For discussion
on 8 July 2024**

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

Progress on the Enhancement of "iAM Smart"

PURPOSE

This paper briefs Members on the progress on the enhancement of "iAM Smart".

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 end-2020, users can now access to more than 380 online services provided by the Government and public and private organisations through "iAM Smart". Over 2.7 million Hong Kong residents have registered for "iAM Smart", with a daily average of over 100 000 logins to use "iAM Smart".

3.   The Office of the Government Chief Information Officer ("OGCIO") obtained the funding approval of around $200 million from the Finance Committee of the Legislative Council in May 2023 to drive the comprehensive upgrade of the "iAM Smart" platform. The target is to provide better service integration, enhance user experience and develop more services that are convenient and beneficial to the public and businesses in phases from 2024, as well as to drive the full adoption of "iAM Smart" by all government online services by 2025 so as to realise the goal of "single portal for online government services". The latest progress of the enhancement is introduced as follows. Please see **Annex** for the rollout schedule of the new features.

Progress on Enhancing "iAM Smart" Platform

New Home Page Design and Functionalities

4.　　　To better cope with user demands, we engaged consultancy service in June 2023 to redesign the user interface for the "iAM Smart" services. Apart from referencing relevant platforms and mobile apps of the Mainland as well as various countries and regions, we also adopted a "Design Thinking" approach to conduct the "User Experience Design".　We invited citizens of different age groups, education levels and professions to participate in a number of user experience workshops, so as to understand their habits when using mobile apps and their opinions towards "iAM Smart". To provide citizens with a better user experience, we also co-designed the functions and workflows as well as the user interface with them.

5.　　　In response to the participants' recommendations, the newly designed "iAM Smart" one-stop e-service platform will consolidate a wide range of commonly used government service applications, enquiries and information.　We started by updating the design of the home page for the "iAM Smart" mobile app in October 2023, enabling citizens to browse various sorts of practical daily-life information, such as local real-time weather, traffic conditions, real-time cross-harbour tunnel tolls, waiting time for accident and emergency services in hospitals, locations of automated external defibrillator, Scameter, etc., by just launching the "iAM Smart" mobile app without the need to register for a user account.　Since launching the new home page, we have recorded a monthly average of nearly 4 million accesses to browse the relevant information via "iAM Smart".

6.　　　We plan to launch the next phase of the enhanced design for the mobile app user interface in the fourth quarter of 2024.　By then, users will be able to organise the service categorisation according to a variety of themes (e.g. education, labour and employment, health and medical, immigration and emigration, and personal documents) or the needs of different age groups (e.g. teenagers and the elderly).　Also, they will be able to set up service thematic pages with personalised settings, such as enabling a simplified mode and adjustable text size for the elderly or those in need.　The design with optimised user experience and personalised settings can facilitate citizens to search and use the services they need more easily, so as to achieve the citizen-centric objective.

<u>Simplified Registration Process and Step-up Authentication Service</u>

7.   To further facilitate citizens to register for or upgrade to an "iAM Smart+" account with digital signing function, we will provide a new simplified online self-registration function in July 2024, allowing citizens to retrieve six pieces of card face data[1] ("card face data") stored in the new smart identity card chip through the "iAM Smart" mobile app by utilising the Near Field Communication ("NFC") feature of their mobile phones. After completing the simple process, they will be able to register for (or upgrade to) "iAM Smart+" instantly, without the need to visit a self-registration kiosk or the Post Office in person. The new simplified self-registration process is as follows:

> (a)   Take a photograph of the front side of the applicant's Hong Kong identity card;
> (b)   Tap the card to retrieve the specific card face data stored in the chip of the new smart identity card by using the NFC feature of the mobile phone;
> (c)   Capture a selfie with liveness detection technologies through actions such as "blinking" or "turning head", etc., to perform facial recognition; and
> (d)   Set a password and provide an email address.

8.   The new "iAM Smart+" registration process mentioned above makes use of multiple layers of data verification and security encryption technologies to retrieve the card face data. The system will verify the identity of the applicant instantly by using the records kept by the Immigration Department in a safe and accurate manner, thus significantly streamlining the existing user registration process. We have consulted the relevant departments (including Department of Justice and Office of the Privacy Commissioner for Personal Data) regarding the new registration process to ensure that the entire workflow fully complies with relevant legislations, information security requirements and data privacy protection requirements.

9.   In addition to simplifying the registration process, we are planning to further apply the technology of retrieving the card face data by using the NFC feature in "iAM Smart" account management and stepping-up the multiple identity authentication function. When conducting critical transactions with online services, the system will verify the user identity accurately by using the records kept by the Immigration Department, thereby enhancing the security of the online services and transactions.

---

[1] The card face data which can be retrieved using the NFC feature of a personal mobile device include Hong Kong identity card number, English name, Chinese name (if applicable), sex, date of birth, and date of issue.

Linking up Government Services

10.   After launching the new user interface in the fourth quarter of 2024, "iAM Smart" will link up with commonly used services provided by different bureaux / departments ("B/Ds"), as well as streamline the overall operating workflow and optimise user experience by using the "Consented Data Exchange Gateway" ("CDEG"), which connects with the data stored by different B/Ds.   Citizens can directly access different commonly used government services, including application for Senior Citizen Card and water supply, etc., through the "iAM Smart" app with "one-tap login".   We will also upgrade the "e-ME" function to facilitate citizens to perform automatic form-filling with personal information previously provided to different B/Ds when applying for other government services by means of CDEG.   This will obviate the need to input or submit the same information repeatedly and streamline the data verification process by corresponding B/Ds.   The "one-tap login" and upgraded "e-ME" functions will be launched in the fourth quarter of 2024.

Enhancing Personalised Services

11.   "iAM Smart" will also introduce a Personal Assistant page in the fourth quarter of 2024, allowing citizens to browse their relevant personal information across various government services within the Personal Assistant page in a convenient and effective manner[2].   In addition, to facilitate citizens to settle their government bills, we plan to introduce a bill payment function in the first quarter of 2025.   Citizens will then be able to complete the entire payment process conveniently by connecting to the banks' e-payment applications via "iAM Smart" and paying government bills directly with "Faster Payment System" ("FPS").

12.   Apart from that, "iAM Smart" is going to launch the "iAM Smart Personal Code" function, which will enable users to display their identities and partial personal data in the form of a QR code.   For example, in the scenarios of property management or event attendance tracking, the premises staff can record or verify the pre-registered information by simply scanning the user's "iAM Smart Personal Code", without the need to check the user's identity documents and other personal data, thus strengthening privacy protection.

---

[2] For example, personal tax position, government bills, places allocation results for secondary and primary schools, results for electronic submission of student grant application, statuses of Police online licensing application service, etc.

13.   We also plan to introduce the digital personal document function in the fourth quarter of 2024, enabling users to make use of the "iAM Smart" mobile app to store their digital personal documents issued by different B/Ds for subsequent presentation when necessary, or as a supplement to the physical documents. The "iAM Smart" mobile app will also provide a corresponding function to verify the authenticity and validity of the digital personal documents. In order to bring more convenience to citizens, we will continue to explore with various B/Ds on the feasibility of introducing different digital personal documents [3], which will cover considerations including meeting the relevant service demands and regulatory requirements.

Strengthening System Capacity, Performance and Security

14.   As an important digital identity infrastructure, "iAM Smart" must continuously enhance its overall system efficiency and security to address the ever-evolving cybersecurity threats. In October 2023, the "iAM Smart" platform successfully obtained the ISO/IEC 27001:2022 and ISO/IEC 27701:2019 international standard certifications, which proves that "iAM Smart" services have reached international standards in information security and personal data protection.

15.   We are now developing log analysis and monitoring technologies by leveraging artificial intelligence to assist in the operational management of the "iAM Smart" platform. We will also adopt a highly automated and efficient approach to conduct anomaly detection and system management, proactively identifying and getting alerts on potential system issues for swift response. Furthermore, we will regularly engage independent third-party consultants to conduct audits to ensure the "iAM Smart" system's ongoing compliance with the international standards' certification requirements and specified standards as well as to prevent information security risks. We will also introduce the red team to examine the system's ability to defend against attacks and fix security vulnerabilities at the earliest possible time.

16.   With the increasing number of users and services of "iAM Smart", we are currently upgrading the "iAM Smart" system infrastructure by utilising cloud technology solutions to enhance the system's auto-scaling and elastic capacity scaling capabilities for handling ad hoc surge in service demand and utilising resources more efficiently.

---

[3] For example, Senior Citizen Cards, Common Recruitment Examination results, "Basic Law and National Security Law" Test results, certificate of imprisonment, fishing licence, letter of authorization for opening / maintaining savings account, etc.

Reinforcing Our Support to Business Sectors

17.   We have been actively encouraging public and private organisations to adopt "iAM Smart". At present, over 70 online services provided by public and private organisations have adopted "iAM Smart"[4]. The application scenarios facilitated by "iAM Smart" encompass remote account opening, online insurance enrolment, account login, activation of account real-name registration and online digital signing of documents, etc. In order to attract and encourage different sectors to adopt "iAM Smart" for developing more applications which are innovative and convenient to the public, OGCIO and the Cyberport have been co-organising seminars from time to time to introduce the latest development and use cases of "iAM Smart" to the relevant sectors, and also running the "iAM Smart" Sandbox Programme for the participation of different associations and industries, enabling them to conduct proof-of-concept testing on their online services with the adoption of "iAM Smart". We have been providing comprehensive support to those organisations participating in the Sandbox Programme, including free technical training and hotline support, and publishing the list of information and communications technology solution providers with relevant experience on both the OGCIO and "iAM Smart" Sandbox Programme websites, to facilitate enterprises to engage suitable professionals in the market for assistance. We have also published experience-sharing videos from organisations that have adopted "iAM Smart" and information about various government subsidy schemes in the "iAM Smart" Sandbox Programme website, with an aim to facilitating different enterprises to develop more online services using "iAM Smart" that are convenient and beneficial to the public and businesses. Besides, we are studying with the Cyberport to launch a competition on the theme of "iAM Smart" and Web 3.0 this year. The objective is to encourage public and private organisations to partner with innovation and technology companies or individuals/organisations with relevant experience to explore innovative "iAM Smart" application solutions and facilitate digital transformation across various industries.

Publicity and Promotion

18.   OGCIO has been actively promoting "iAM Smart" to the public through different channels such as thematic websites, television channels, digital media, social media platforms, etc., introducing commonly used or newly launched services and features of "iAM Smart" to showcase its

---

[4] Including banks, financial institutions, insurance companies, securities firms, telecommunications companies, real estate firms, public utilities, credit reference agencies and medical facilities, etc.

convenience. To strengthen the promotion and expand the user-base across different sectors, we have been collaborating with different B/Ds, district bodies and industry associations to deploy mobile registration teams in government venues, schools and housing estates, etc. based on the needs of different social groups, to promote and assist citizens in registering for "iAM Smart". Moreover, we are planning to establish a thematic page for "iAM Smart" on the social media platform to further boost the promotion efforts. We will timely publish posts to introduce the services and information of "iAM Smart" and increase public engagement through various events, so as to encourage more citizens to register for and use "iAM Smart".

19.　　　We are also actively expanding the coverage of self-registration kiosks, including major transportation hubs and public venues where people converge, etc., with the target of increasing the number of self-registration kiosks to approximately 100 by 2025, in order to facilitate more citizens to register for "iAM Smart". Moreover, we will increase the number of self-registration kiosks in the government service centers in various mainland cities of the Greater Bay Area, so as to facilitate Hong Kong citizens who reside or work in the Greater Bay Area to register for "iAM Smart". In 2024, we have already installed 15 self-registration kiosks, including those in Guangzhou city, and Qianhai and Futien Hetao in Shenzhen city.

Cross-boundary Public Services

20.　　　To further facilitate Hong Kong residents to access Cross-boundary Public Services ("CBPS"), OGCIO and the Government Services and Data Management Bureau of Guangdong Province have established the connection of "iAM Smart" and the Unified Identity Authentication Platform of Guangdong Province in November last year. "iAM Smart" users can now bind their "iAM Smart" accounts when registering on the Unified Identity Authentication Platform of Guangdong Province, thereby enabling them to directly log in to the Guangdong Government Service Network and the "Yue Sheng Shi" mobile app through "iAM Smart" to use various Guangdong Province's government services in a convenient and efficient manner. A dedicated page for CBPS has also been set up in the "iAM Smart" thematic website, introducing how to log in and use cross-boundary services with "iAM Smart". We have also invited key opinion leaders and micro influencers to post videos on Mainland's social media platforms to introduce the convenience of using "iAM Smart", reaching over 3 million viewers.

21.　　　To better integrate Hong Kong into the development of the Greater Bay Area and in response to the increasing demand of Hong Kong residents

for the government services in the Guangdong Province, we will continue to deepen the current integration of the "iAM Smart" platform with the Unified Identity Authentication Platform of Guangdong Province, so as to enable "iAM Smart" users to access more government service platforms within the Guangdong Province. Currently, we are actively discussing with the Guangdong provincial government on the arrangement of connecting "iAM Smart" with the "Sui Hao Ban" and "iShenzhen" platforms. We will continue to work with the Guangdong Province closely to explore in due course the technical feasibility and related arrangements for Hong Kong residents to access "Cross-provincial Government Services" in other provinces and cities in the Mainland through the Unified Identity Authentication Platform of the Guangdong Province.

Advice Sought

22.   Members are invited to note the content of this paper.

Innovation, Technology and Industry Bureau
Office of the Government Chief Information Officer
June 2024

Tentative Rollout Schedule of Optimised Services and New Features

Estimated Rollout Date	Optimised Services / New Features
The third quarter of 2024	• Simplified online self-registration function • "iAM Smart Personal Code" • Gradually arrange for the system infrastructure upgrade • Arrange to introduce red team exercises
The fourth quarter of 2024	• New mobile app user interface • "One-tap login" • Upgraded "e-ME" • Personal Assistant page • Digital personal document • Multiple identity authentication
The first half year of 2025	• Government bill payment function • Upgraded log analysis and monitoring system
The second half year of 2025	• Number of self-registration kiosks to be increased to approximately 100 (installing progressively since 2024)