For discussion on
10 May 2019

<div align="center">

Legislative Council
Panel on Information Technology and Broadcasting

Electronic Identity

</div>

Purpose

This paper updates Members on the latest developments of the "Electronic Identity" (eID) project.

Background

2.	The 2017 Policy Address announced the development of three key smart city infrastructure projects, including the provision of an eID for all Hong Kong residents free of charge starting from mid-2020, enabling them to use a single digital identity and authentication to conduct online government and commercial transactions, and to foster the development of innovative online services.	eID will also support digital signing with legal backing under the Electronic Transactions Ordinance (Cap. 553) for handling statutory documents and procedures.

3.	In May 2018, the Finance Committee of the Legislative Council approved a commitment of $112 million to develop the eID system.	In August 2018, the Office of the Government Chief Information Officer (OGCIO) initiated an open tendering exercise for the design, development and maintenance of the eID system and awarded the service contracts in end-February 2019.	The contractors are now designing and developing the system, which is expected to come into operation in mid-2020.

eID System Development and Testing

4.	Information security and privacy protection of personal data are

essential contractual requirements for the development and maintenance of the eID system. Such requirements include security requirements in data storage, network communication, user account management and application system, as well as the security measures to safeguard personal data in accordance with the provisions of the Personal Data (Privacy) Ordinance (Cap. 486) (PD(P)O). The OGCIO rigorously monitors the system design, development and testing processes to ensure that the contractors adhere to the security requirements as stipulated in the contracts. The contractors will only use test data (i.e. no personal data) in a development and testing setting for eID system development and maintenance, and therefore will not have access to personal data of any resident.

5. The development and operation of the eID system will adopt the information security management system (ISO/IEC 27001) and measures set out by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC), which include the establishment and stringent enforcement of data access rights for all personnel to prevent any unauthorised access to personal data. In addition, any organisation adopting eID is required to comply with the information security and related technical requirements set out in the terms of use of eID, and can do so only by making use of the application programming interfaces (APIs) provided by the OGCIO and after verification of server certificates. The organisation will not connect to the eID system through any personnel or any other means.

6. The OGCIO will ensure that the core data (including users' personal data) in the eID system will be encrypted using prevailing internationally recognised standard (Advanced Encryption Standard) and stored in government data centre facilities. In conformance 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.

7. In October 2018, the OGCIO briefed the Office of the Privacy Commissioner for Personal Data on the design and operation of the eID system, and will seek its professional advice on various issues during system development. The OGCIO will engage independent third parties at different

stages like system design, system development and testing, system operation, etc. to conduct privacy impact assessments, privacy compliance audits, and information security risk assessments and audits, which include source code review and penetration tests, to ensure that the eID system complies with the provisions of the PD(P)O as well as the government information technology security policy and guidelines.

eID Registration and Usage

8.　　　　eID itself will not store any personal data.　Personal data provided during eID user registration will only be used for account management and identity verification for the eID system.　The OGCIO will adopt the latest information technologies to simplify the registration process.　Residents can register for eID using a mobile app installed on their personal mobile devices. During eID registration, residents are only required to take a photo of the HKID card, confirm the data captured from the HKID card and take a selfie photo (as illustrated in the diagram below[1]).　The eID system will use the data of the Immigration Department to verify the identity of the applicant.

(a) take a photo of the HKID card　　(b) confirm the data captured from the HKID card　　(c) take a selfie photo

---

[1] The actual screen layout of the eID mobile app will be confirmed during the system design stage.

Upon successful verification, eID will be bound immediately to the personal mobile device of the applicant.   Users can make use of the biometric functions (including facial recognition, fingerprint identification, iris recognition, voiceprint recognition, etc.) provided by their personal mobile devices to authenticate their identities and login online services.   The OGCIO will adopt prevailing internationally recognised security technologies and standards such as Fast IDentity Online and public key infrastructure to authenticate the identity of users.

9.   To use eID for digital signing, eID users are required to register a full-version eID at designated self-service registration kiosks or service counters.   The eID system will retrieve the data stored in the chip of the HKID card and verify the user identity again in order to complete the full-version eID registration.   The designated self-service registration kiosks and service counters will be located in post offices, sports centres, libraries, etc. in various districts.   The OGCIO will also dispatch mobile registration teams to places with high patronage (like malls, university campuses, etc.) to assist the registration of full-version eID.   Self-service registration kiosks and service counters will come into operation when eID is launched in mid-2020.

10.   Personal data collected during eID user registration will only be used by the eID system for account management and identity verification.   Any government department or public organisation that needs to use personal data of an eID user (such as for form pre-filling) must obtain his prior consent in accordance with the PD(P)O.

eID Applications

e-Government Services

11.   The OGCIO is actively promoting the adoption of eID by government bureaux/departments in their existing or planned e-government services.   We expect that upon its launch in mid-2020, eID will be adopted by 26 e-government services (see **Annex**).   Most e-government services (over 110) will accept user login using eID by mid-2021.   The remaining 20 or so

e-government services will adopt eID progressively by 2023 when the major upgrade of the relevant systems is completed. By then, all e-government services will adopt eID as their only or primary login means.

12. The OGCIO will introduce a new service "e-ME" on GovHK portal, providing an option for residents with eID to set up e-ME accounts with personal data (like name, gender, HKID card number, date of birth, residential address, contact telephone number, etc.) for future form-filling, thus obviating the need for filling in the same data for different applications. The data will be encrypted and stored in government data centre facilities. It will be up to eID holders to decide whether such data can be provided for use by other government departments or private organisations.

13. The OGCIO will make reference to the digitalisation experience of the governments in other countries/places and consider expanding the mode and scope of eID applications in public services.

Public and Private Organisations

14. The OGCIO is exploring with different public organisations on the adoption of eID in their services. For example, the Hospital Authority is considering the use of eID in outpatient appointment booking and payment services; eID can also be used as an option for member registration for and logging in the future Centralized Platform for Mandatory Provident Fund. The OGCIO is also working with the Hong Kong Monetary Authority to examine how eID can assist financial institutions (including banks, stored value facility licensees, securities firms, etc.) in performing risk assessment and know-your-customer procedures, or providing online financial services.

15. The OGCIO will provide interested organisations with the technical information on eID related APIs in the third quarter of 2019, with a view to enabling them to consider and plan for enhancement of their information systems for adopting eID in future. The OGCIO will also make available testing environment before the end of 2019 and invite interested organisations to participate in the testing of eID adoption in their online services on a pilot basis. Public and private organisations can make use of the eID user

authentication function to help simplify and enhance their online service workflow and to develop more innovative and convenient online services. This in particular can save the cost and time of small and medium-sized enterprises that would have been required to develop their own online user authentication systems.

Publicity and Promotion

16.   At the International ICT Expo held in April 2019, the OGCIO showcased to the public for the first time the eID registration process and the use of eID as a single digital identity and authentication to conduct online government and commercial transactions. The OGCIO will also produce promotional videos, and widely promote eID to the public via different channels starting from the fourth quarter of 2019.

Advice Sought

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

Office of the Government Chief Information Officer
Innovation and Technology Bureau
May 2019

e-Government Services Adopting eID from Mid-2020

	Government Bureau/ Department	**e-Government Service**
1	Census and Statistics Department	2021 Population Census - Pilot Survey
2	Food and Health Bureau	eHRSS - Patient Portal
3	Highways Department	Road Works - Excavation Permit Management System
4	Hong Kong Observatory	Suggestion Form on Weather Forecasting and Warning Services
5	Housing Department	e-Submission Service for Sale of Home Ownership Scheme Flats, White Form Secondary Market Scheme and Sale of Green Form Subsidised Home Ownership Scheme Flats
6		e-Services for Public Rental Housing Application
7		e-Services for Public Rental Housing Tenants
8		iHousing
9	Inland Revenue Department	eTAX
10	Labour Department	Registration for Employment Services by Job Seekers
11	Office of the Government Chief Information Officer	MyGovHK and Change of Address Service
12		Registration of Outbound Travel Information
13	Post Office	EC-Ship
14		Hongkong Post Circular Service
15		My Speedpost
16		ShopThruPost

	Government Bureau/ Department	e-Government Service
17		Stamp OnNet
18	Rating and Valuation Department	eRVD Bill Service
19	Transport Department	Online Application for Renewal of Full Driving Licence
20		Appointment Booking Service for Vehicle Licence Renewal, Full Driving Licence Renewal and Application for International Driving Permit
21		Online Services for Personalised Vehicle Registration Marks
22		Online Services for Traditional Vehicle Registration Marks
23		Online Checking of Driving Licence Status
24	Working Family and Student Financial Assistance Agency (Student Finance Office)	Loan Repayment - Electronic Demand Notes and Notification/Reminder Service
25		Online Counter Appointment Booking System
26		SFO E-Link - My Applications