For discussion on
8 June 2015

<div align="center">

Legislative Council Panel
on Information Technology and Broadcasting

Progress Update on E-Government Development

</div>

Purpose

  This paper updates Members on the latest progress on e-Government development, and our plans and measures to support Bureaux/Departments (B/Ds) achieve their policy objectives and initiatives through wider and better adoption of information technology (IT)[1].

Background

2. The Government endeavours to use IT to deliver efficient and effective public services. New e-Government services are constantly introduced to bring convenience and better quality of life to the public. In general, Hong Kong's e-Government services compare well globally. For instance, Hong Kong ranked third worldwide in Digital Governance in Municipalities Worldwide 2013-14[2]. Many Government applications and solutions also won renowned international and regional awards. For example, Data.One portal has won the Outstanding e-Government Prize (Open City) at the World e-Governments Organization of Cities and Local Governments (WeGO) Awards 2014; and GovHK portal has won the Best in Class Award (Government) in the Interactive Media Awards 2014 as well as Standard of Excellence (Government) Award in Web Marketing Association's WebAward 2014.

---

[1] In this paper, information technology (IT) is used as an extended synonym for information and communications technology (ICT).
[2] Published by the E-Governance Institute of National Centre for Public Performance of Rutgers, the State University of New Jersey at Newark. The ranking evaluated various aspects of government websites in large municipalities, including usability, content, the type of online services being offered, etc.

Achievements in the Past Year

3.   In the past year, we have made good progress on e-Government development.   Some of the major achievements are set out below.

IT Infrastructure

4.   The new E-Government Infrastructure Services (EGIS) was fully developed in March 2015 offering Platform-as-a-Service solution to B/Ds. Using cloud technologies, the new EGIS has greater service capacity and can host 100 additional e-Government services, on top of 118 originally. As at April 2015, there are already 160 e-Government services running under EGIS, including brand new services such as Electronic Grant Management System (Food and Health Bureau), new data.gov.hk portal (Office of the Government Chief Information Officer (OGCIO)), and Online Voter Information Enquiry System (Registration and Electoral Office).

Cloud-based Application Services

5.   Leveraging on the Government Cloud Platform (GovCloud), we continue with the further development and provision of common e-Government services in a flexible way to meet the rising public expectations and citizens' demand for quality e-Government services, as well as improve internal efficiency.

6.   For electronic procurement, all B/Ds are using the e-Procurement System for the purchase of IT products and services through standing offer agreements.   Moreover, the OGCIO and six other B/Ds are conducting all their purchases at low values (less than $1.43 million) using the system.   Our target is to have 30 B/Ds using the system to conduct low value purchases in 2017-18.   For human resources management, the Government Human Resources Management System is under pilot use by four early adopter B/Ds.   We are in parallel devising the strategy for wider rollout to allow more B/Ds to use the system for their human resources management functions and strategic manpower planning.   On electronic information management, further to the smooth

rollout of Electronic Recordkeeping System (ERKS) in the Government Records Service and the Communications and Technology Branch of the Commerce and Economic Development Bureau in 2014, we are extending the implementation of ERKS to six more B/Ds.   Upon successful rollout of next stage of ERKS implementation in 2016-17, we will conduct a review and devise the strategy for the wider rollout of ERKS across the Government.

7.   Apart from common e-Government services, B/Ds deploy their departmental strategic systems on the GovCloud taking advantage of such benefits as fast deployment, full flexibility, stringent security and high resilience.   For example, the Development Bureau developed and deployed the Site Tracking Information System on GovCloud for maintaining a repository of identified sites, tracking the site production progress, and providing timely alerts to take necessary actions. Moreover, the Working Family and Student Financial Assistance Agency is developing the Low-Income Working Family Allowance Management System on GovCloud for processing applications under the allowance scheme, effecting payments, preparing statistical analysis and reports, and conducting case review.

E-Government Services to the Public

Release of Public Sector Information in Digital Formats

8.   The Government will release all free online government information in digital formats from this year onwards, with a view to tapping the creativity and ingenuity of the community to develop innovative applications using Public Sector Information (PSI).   This helps bring convenience to the public and open up new business opportunities.

9.   In support of this initiative, we launched the revamped PSI portal, "Data.Gov.HK", on 18 March 2015.   The revamped portal has greater capacity and flexibility with new and useful functions, for instance, the dataset catalogue search function has been enhanced.   In addition, users can chart or map datasets directly on the portal for advance viewing

and preliminary analysis before downloading the whole datasets. Some datasets are deployed as common services in the format of Application Programming Interface to facilitate re-use. The new portal also features apps using PSI datasets for public information. At present, more than 4 000 datasets in 18 broad categories are available on the portal, covering practically every facet of life.

Mobile Version of the MyGovHK Portal

10. Since launch of the personalised platform of the Government's one-stop portal, MyGovHK, in December 2010, the number of active accounts has continued to grow and exceeded 250 000 in February 2015. To enhance user experience and meet public demand for mobile services, we launched the mobile version of MyGovHK in September 2014. The mobile version is user-friendly and conforms to the Web Content Accessibility Guidelines Version 2.0 promulgated by the World Wide Web Consortium (W3C).

Mobile e-Government Services

11. With the advancement of mobile technology, the number of smartphone users in Hong Kong has been increasing. As at January 2015, Hong Kong's mobile penetration rate stood at 240%. According to a survey conducted by Census and Statistics Department in 2014, about 77% of Hong Kong people are using smart devices. As using e-services through mobile channels is increasingly popular, the Government has been actively introducing a wide array of mobile applications (apps) to provide public services on the go. As at April 2015, there are 112 Government mobile apps covering a diverse range of subjects, including traffic, leisure, health, education, news, etc. The Government has also launched 72 government mobile websites. To enhance support for B/Ds in developing user-friendly mobile apps to cater for users' needs, OGCIO has set up a Mobile App Facilitation Unit and has implemented measures to assist B/Ds in developing, promoting and enhancing the efficient provision of mobile apps, including functionality of mobile apps. These measures include organising thematic seminars, promulgating a new practice guide on security, personal data privacy and accessibility,

providing practical application templates for common mobile apps features, developing platform apps to enable users to receive a wide array of government information on single platforms, and promoting government mobile apps.

12.   Various B/Ds have adopted the application templates in building their new mobile apps, reducing development cost and time. Public awareness and usage of government mobile apps have increased, as attested by the steady rise in download rates.

Utilisation of E-Government Services and Web Accessibility

13.   To enable the delivery of public services through IT, we aim to provide citizens with the services they need in an efficient and convenient manner. To this end, our key performance indicator is to measure the usage and availability of our e-Government services offered to the public.

14.   In the past year, B/Ds continued to roll out more e-Government services for the use by the public and there are at present over 700 e-Government services. Fourteen additional e-Government services were introduced in 2014. According to the recent e-Service Utilisation Survey, the overall utilisation in 2014 has increased by around 30% as compared to 2013 in terms of the total number of informational searches and electronic transactions. The **Annex** shows the utilisation figures of the most popular e-Government services.

15.   All Government websites are accessible since 1999 to facilitate persons with disabilities to access online information and services. We have introduced more stringent accessibility requirements since 2012, mandating all Government websites to meet Level AA standard of the Web Content Accessibility Guidelines Version 2.0 promulgated by the W3C. As at May 2015, 454 of 465 Government websites (98%) have reached these more stringent standards. The remaining 11 websites are being revamped and they will achieve these standards after completion of the revamp.

Smart City Management

16.   Internet of Things (IoT) is undeniably one of the most disruptive technologies and a go-to solution in the coming decade. Hong Kong is an early adopter of IoT technologies. Connected sensors, the basis of IoT, are a popular trend. IoT combines with Big Data analytics, cloud and mobile computing to form a smarter living for citizens. Through the use of sensors and Big Data analytics for municipal management and risk detection, the Government gains insights into potential maintenance issues of city facilities and takes proactive actions for better decisions to protect public safety, avoid service interruption, and enhance quality of living. A few examples are provided in the ensuing paragraphs.

17.   The Drainage Services Department uses intelligent ultrasonic sensors to detect water levels in manholes of selected storm-water drains and sewers, and log the data continuously onto its computer system. The collected data will be analysed for prioritising maintenance and cleaning works. This will minimise the risks of flooding and overflowing of sewage. The Civil Engineering and Development Department has used various types of sensors for landslide monitoring and protected the public from possible hazards from landslides.

18.   The Government has deployed sensors and IoT applications at busy roads and collected real-time transport data with a view to managing traffic flow and traffic lights in a dynamic and intelligent fashion. The sensors can also detect the speed of vehicles installed with Autotoll tag, and estimate the traffic condition and travelling time at major roads for drivers to better plan their routes.

19.   The Customs and Excise Department has deployed the E-Lock System as an efficient, secure and traceable customs clearance process between Hong Kong and the Mainland. E-Lock is applied on the container and can be monitored through the Global Positioning System (GPS) all through its way. It minimises repeated customs examination across the borders and reduces clearance time from two to three hours to five minutes.

E-Government Development in B/Ds

20.   Many B/Ds also made good progress on e-Government development in the past year.   A few examples are set out below.

Census and Statistics Department

21.   The Census and Statistics Department is implementing an integrated computer system to support the large-scale 2016 Population By-Census (16BC).

22.   To provide better services to the public and to improve the efficiency of the by-census operation, the data collection of the 16BC will go paperless by adopting mobile computing technology.   During the 34-day data collection period tentatively in July and August 2016, about 300 000 households can submit e-Questionnaires via the Internet through personal computers or mobile devices.   If they do not opt for self-enumeration, enumerators will collect the required data by face-to-face interviews using tablet computers.   Data quality will be greatly enhanced by means of on-the-spot data validation checks through the mobile apps.   With the integrated computer system, message/information can be efficiently disseminated to the enumerators; fieldwork progress of individual enumerators will be captured automatically; and subsequent processing work will be streamlined.   To ensure information security, the collected data will be uploaded to the computer system via encrypted communication and any transient data in the tablet computers will be protected by encryption.

23.   Development of the first phase of the 16BC computer system is near completion.   A pilot survey will soon be conducted to test the operations of the 16BC.

Education Bureau

24.   Implementation of the infrastructure enhancement for Education Information System (EdIS) is in good progress.   The existing EdIS comprises seven major application systems to support a range of core

functions and operations of the Education Bureau, covering primary and secondary school places allocation, as well as students, teachers and schools related information management and services. The new EdIS will overcome the constraints of the existing mainframe platform by migrating into an integrated and upgraded IT infrastructure. The upgraded system will be more scalable and flexible to cater for new business requirements, as well as better equipped for implementing new services with electronic means to improve service quality for schools, teachers, students and parents. The project is now at the System Development phase and planned to be launched for service in September 2016.

Food and Health Bureau

25.   The full development of the territory-wide Electronic Health Record Sharing System (eHRSS) is a 10-year, two-stage programme which straddles from 2009-10 to 2018-19. The new system will provide an essential infrastructure for access and sharing of participating patients' health data by authorised healthcare providers in the public and private sectors. The objective is to enhance continuity of care, promote public/private sector collaboration and improve quality of healthcare delivery. Development of Stage 1 eHRSS has been essentially completed. Subject to passage of the eHRSS Bill by the Legislative Council by mid-2015, the Food and Health Bureau aims to commission Stage 1 of the eHRSS before the end of 2015.

Immigration Department

26.   Following the launch in the departure hall of Lok Ma Chau Spur Line Control Point in September 2013 of the first e-Channel with voice navigation function in the world for visually impaired persons, such service was extended to the arrival hall of Lok Ma Chau Spur Line Control Point, as well as the arrival and departure halls of Macau Ferry Terminal by stages in 2014. The Immigration Department (ImmD) further extended the service to Shenzhen Bay Control Point in April 2015. With the integration of audio equipment in e-Channel, the voice navigation function will guide visually impaired persons to complete each

clearance step. Braille maps are provided at these control points for visually impaired persons to locate the voice navigated e-Channel by following the tactile guide path. Meanwhile, Braille tags are also affixed next to the activation button, the card insertion slot and the fingerprint scanner to facilitate visually impaired persons in completing the self-service immigration clearance. With the approval of funding by the Finance Committee in May 2015, ImmD will also start the implementation of the next generation Smart Identity Card System (SMARTICS-2).

Leisure and Cultural Services Department

27.   The Leisure and Cultural Services Department (LCSD) strives to leverage IT to enhance its library services with its latest initiative of providing services through the mobile channel. A new mobile app "My Library" was launched in September 2014 to cope with the growing demand of smartphone users on fast and convenient services. Popular functions, such as reserving and renewing library materials, locating the nearest libraries by the GPS, and enabling personalised alert service to remind users of borrowed items about to be due and pickup of reserved items, are provided. The app is popular with over 91 000 download counts up to March 2015 and over 360 000 use counts in the month of March 2015.

28.   Several websites and mobile apps launched by the LCSD received awards in 2015.

Conclusion

29.   We will continue our effort in the delivery of efficient and convenient public services through IT adoption.

Office of the Government Chief Information Officer
Commerce and Economic Development Bureau
June 2015

Utilisation Figures of the Most Popular E-Government Services in the period from 1 January to 31 December 2014
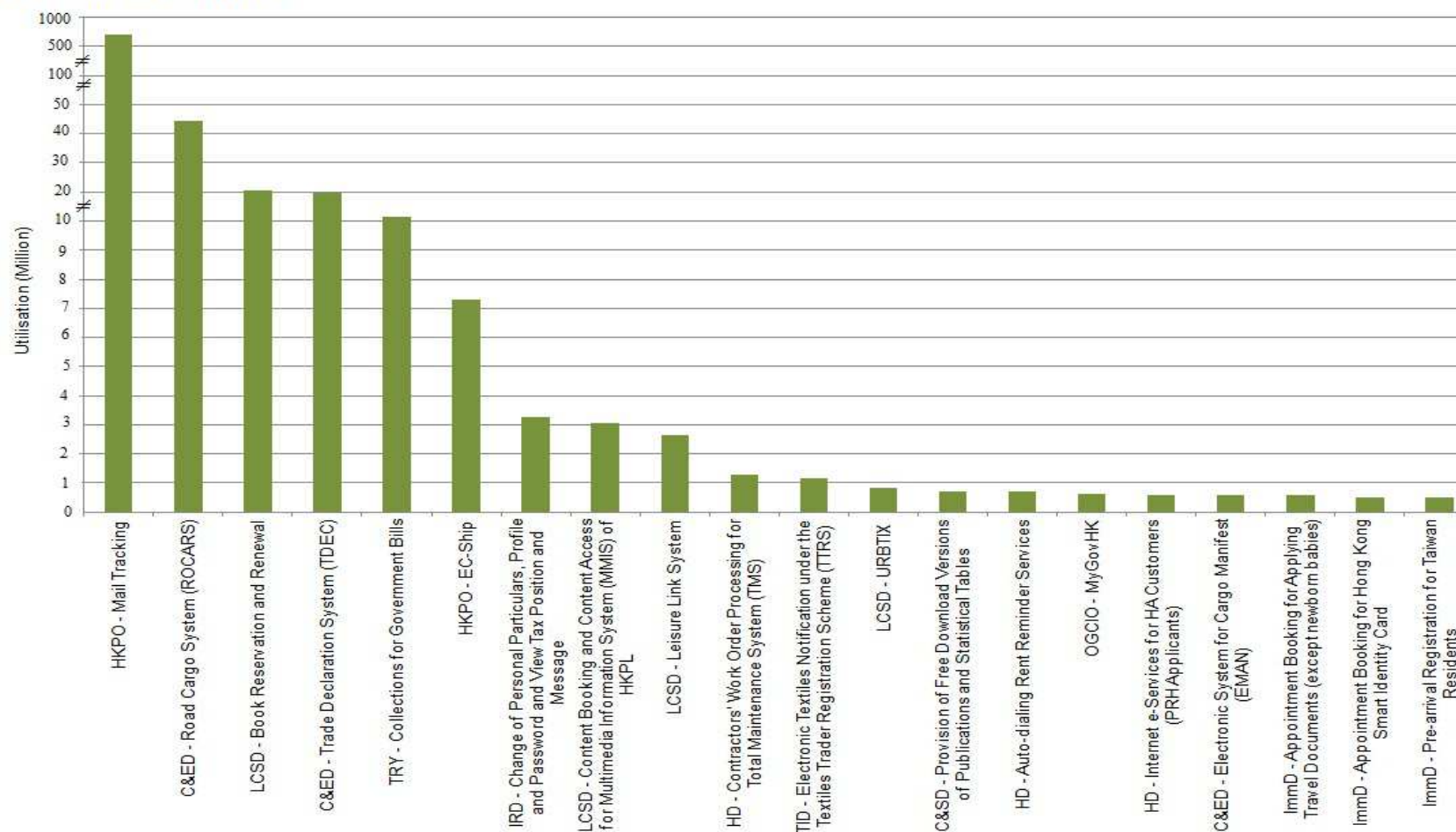
1) Informational E-Services
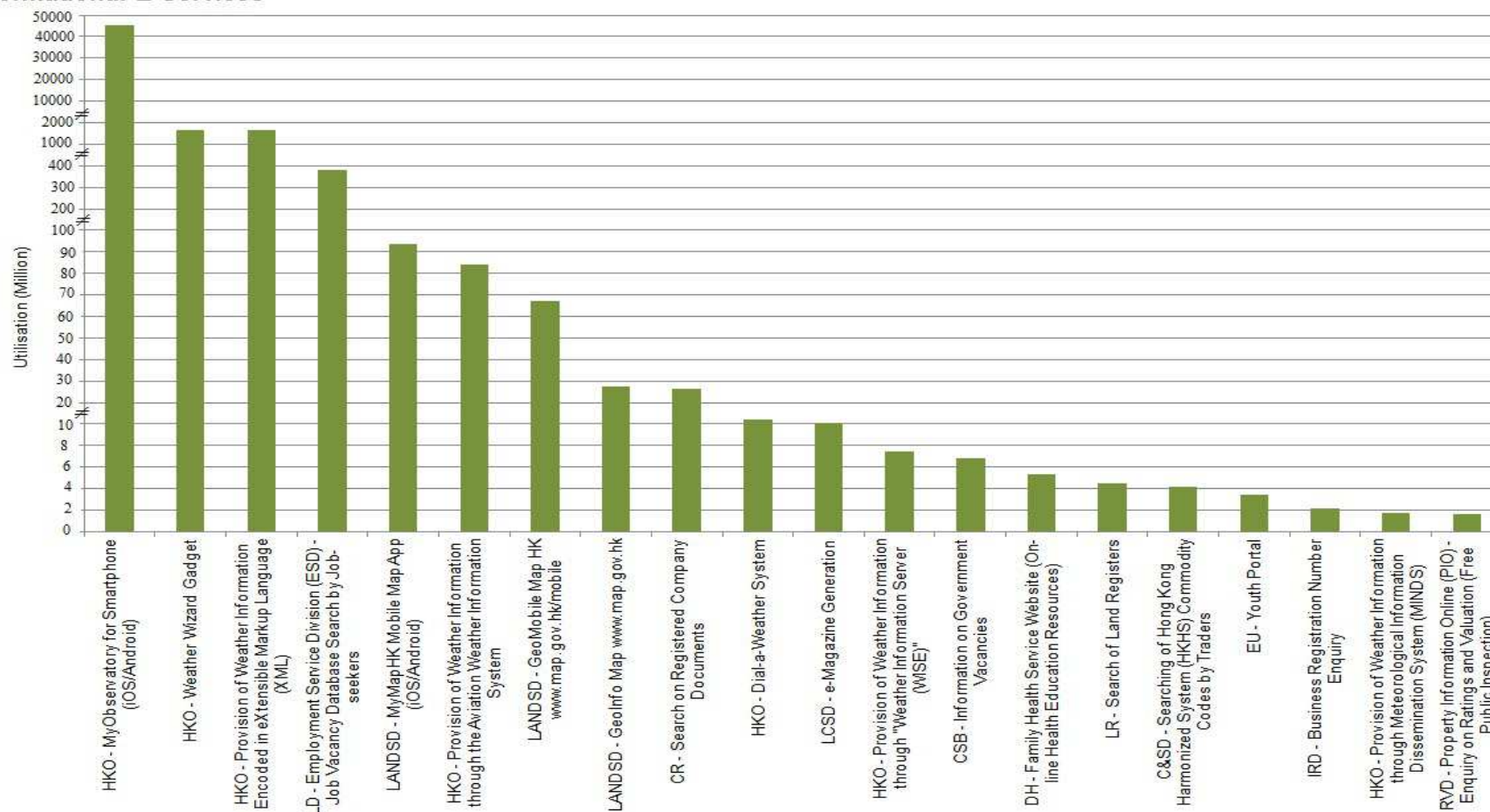
Note: "Informational" type of service means its purpose is dissemination of information, which can be static or generated based on selection criteria, e.g. on-line telephone directory.

Utilisation Figures of the Most Popular E-Government Services in the period from 1 January to 31 December 2014

2) Transactional E-Services

Note: "Transactional" type of service will involve interactive sessions with users, e.g. on-line booking of facilities and filing of returns.