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Panel on Information Technology and Broadcasting

Meeting on 9 July 2018

Updated background brief on e-Government Development

Purpose

This paper gives an account of the latest development of the e-Government programmes and a summary of views and concerns expressed by Members in previous discussions.

Background

2. The Administration's policy objective on e-Government development is to "use information technology to provide citizen-centric services that promote an accessible, accountable and efficient government".

3. In the 2017 Policy Address, the Chief Executive announced several key infrastructure projects for smart city development, some of which were relevant to the development of e-Government services. These include provision of electronic identity ("eID") for Hong Kong residents, and the implementation of the Next Generation Government Cloud Infrastructure ("GovCloud") equipped with a new Application Architecture. Meanwhile, the Administration has adopted measures and initiatives to enhance e-Government services, and to support government bureaux/departments ("B/Ds") in achieving their policy objectives through wider and better adoption of information technology ("IT"). These measures are presented in the ensuing paragraphs.

E-Government information and services for the public

Opening up public sector information

4. Opening up public sector information ("PSI") for free public use is a global trend. At present, the Government's "data.gov.hk" portal disseminates close to 7 000 datasets in 18 categories, covering climate and weather, transport, finance, population, etc. These datasets are provided by B/Ds as well as public and private organizations. To facilitate the public to select the required information, the "data.gov.hk" portal began to provide various Application Programming Interfaces since the end of 2016.

Diversified e-Government services

5. The Administration encourages B/Ds to implement diversified e-Government services, including government mobile apps and e-forms, and continues to enhance the "GovHK" portal, so that the public can use e-Government services in a safer and more convenient manner. In November 2016, the Office of the Government Chief Information Officer ("OGCIO") launched the newly designed "GovHK" portal, which was well received by the public. The new version has adopted a "common look and feel" and design standards, as well as responsive design, so that the public can browse the contents of the portal smoothly regardless of the devices they use, such as desktop computers, tablet computers and smartphones, etc. In addition, to facilitate browsing by persons with disabilities, all government websites have already complied with the Web Content Accessibility Guidelines Version 2.0 Level AA accessibility requirements promulgated by the World Wide Web Consortium.

6. To facilitate the public to use public services anytime and anywhere, the Administration has been supporting B/Ds to develop user-friendly mobile apps to address users' needs. OGCIO updated the "Practice Guide for Developing Mobile Apps" in 2016, requiring B/Ds to, when considering the development of mobile apps, set objectives of the app, understand the needs of target user groups, and evaluate the potential benefits that the app may bring to the Government and the public.

7. To provide more convenient services to the public, the Administration is committed to digitizing the process of online submission of government forms. Except for government forms which are not amenable to electronic submission

due to legal requirements or procedural constraints, more than 1 300 government forms can be submitted electronically. The Administration has pledged to continue working with relevant B/Ds to digitise the remaining government forms which are amenable to electronic submission. In addition, the Administration also requires B/Ds to consider re-engineering their business processes when they develop new e-Government services or upgrading existing services, in order to allow the public to fill in application forms and submit information electronically.

8. At present, the public can use different electronic and mobile payment services (such as e-cheque, Internet banking, credit cards and PPS) to pay government bills and fees. Departments are exploring the use of mobile payment technology which supports smartphone e-wallet.

Boosting operational efficiency through the adoption of new technologies

Big Data

9. Big data has become the core of technology and business innovation and a major pillar in smart city development. OGCI has been promoting big data analytics to B/Ds and exploring its application within the Administration to facilitate policy formulation, boost operational efficiency, enhance public services and strengthen cyber security.

10. The Administration has been implementing a big data analytics platform to facilitate B/Ds in data sharing and collaborative development of big data applications. The Development Bureau, collaborating with relevant B/Ds, has prompted the establishment of a Common Spatial Data Infrastructure ("CSDI") to provide B/Ds, as well as public and private organizations, with spatial data that can be shared, in order to support various smart city applications and align with information infrastructure under the smart city blueprint. The Development Bureau has engaged a consultant to conduct a study with the aim of formulating the general development strategy and implementation arrangements for CSDI.

Artificial intelligence and cloud platform

11. With the rapid development of artificial intelligence ("AI"), the Administration also makes use of this technology to improve the quality of public services, and to streamline the decision making process and boost operational efficiency. To keep abreast of the contemporary technology development, OGCI has established various infrastructures which facilitate

B/Ds in delivering e-Government services in an agile, convenient, cost-effective, secure and environmentally friendly manner. These include the implementation of GovCloud which enables B/Ds to cope with the ever-increasing demand for IT resources. B/Ds are required to accord priority to adopting government cloud services having regard to their respective information security and project needs when developing new systems or revamping existing systems. At present, a number of e-Government services are running on GovCloud and the e-Government Infrastructure Services platform, including the Electronic Health Record Sharing System launched by the Food and Health Bureau, which collects patients' online registrations; and the Dutiable Commodities System of the Customs and Excise Department. OGCIO has also implemented a number of common services on the cloud platform, including electronic procurement, human resources management and electronic record keeping for use by B/Ds.

Previous discussions

Panel on Information Technology and Broadcasting

12. At the meeting of the Panel on Information Technology and Broadcasting ("the Panel") held on 8 May 2017, the Administration updated the Panel on e-Government services. The major concerns and comments made by Panel members are summarized in the ensuing paragraphs.

Online submission of government forms

13. Members expressed concerns about the role OGCIO played vis-à-vis respective departments in digitizing the process of online submission of government forms. They also queried when all government forms could be submitted online. The Administration replied that there were altogether 1 800 types of government forms which were amenable to electronic submission and about 14 million of these forms were received each year. Currently, 1 300 types of form could be submitted electronically. The Administration informed the Panel that it would continue to make more electronic forms available for public use. However, some forms might not be digitized because they might either need to be submitted in person or it might not be cost effective due to low transaction volume.

Use of big data analytics by departments

14. Members enquired how big data analytics could be used by departments in improving services. The Administration said that it would introduce a platform to facilitate the adoption of big data analytics by departments; OGCIO was collaborating with different departments, such as the Hong Kong

Observatory and the Transport Department, to apply big data analytics to examine how weather or rainfall would affect the traffic situation. Members suggested that the Administration should consider applying big data analytics to develop contingency measures that should be introduced in the event of suspension of train services along MTR routes.

Opening up of public sector information

15. Members queried when the Administration would be able to disseminate all available datasets in the "data.gov.hk" portal. They commented that the 7 000 datasets of PSI that had been disseminated through the Government's "data.gov.hk" were not "user-friendly" and some were in a format that the relevant data could not readily be extracted for other research purposes or for further analyses. Members suggested that the Administration should examine how the situation should be improved. The Administration responded that while it had not taken stock of how many datasets of PSI that could be open up, it would encourage various sectors to develop innovative applications using the open datasets.

16. Following up on an incident where a government contractor's computer was hacked and certain government information was reported to have leaked, Panel members enquired about the measures the Administration would introduce to ensure security and protection of government information in future. In response, the Administration said that it had conducted penetration tests on government's computer systems to ensure security and protection of government information.

Online submission of government forms

17. Members commented that there should be certain common fields (such as age, address, family status) among the 1 300 government forms that had been digitized. They suggested that the Administration should create a common database that collected these data and which could be shared and used by relevant departments. This would save time and efforts of users when completing and submitting different forms online.

18. The Administration explained that when collecting data from members of the public, the Administration needed to state the purposes for collecting personal information and how the information was to be used. Explicit consent had been sought from individuals for collection and use of such information.

Electronic and mobile payment services

19. Members noted that many people were reluctant to use electronic and mobile payment services to settle government bills and fees because they were worried about the security and privacy of personal information that would be transmitted electronically. The Administration would have to assure the public that using electronic and mobile payment services were secure. The Administration responded that the electronic and mobile payment services were operated by third party service providers. It said it would explore whether the use of e-Cert and eID in these payment services would enhance data security.

Format of electronic documents issued by the Administration

20. Members asked if the Administration had issued guidelines requiring departments to distribute computer searchable documents when delivering softcopies. The Administration replied that it had issued guidelines to B/Ds that documents made available for public access should be in a machine-readable format that was recognizable by screen-readers used by visually-impaired people. Such documents would be computer-searchable.

Implementation of e-Government services

21. Members commented that the progress in the implementation of e-Government services was slow. They considered that OGCIIO was rather passive and often relied on the respective B/Ds to adopt OGCIIO's advice and the recommended technology solutions in improving departmental operations. However, by the time the B/Ds implemented the solutions, the technology might have been outdated. The Administration responded that OGCIIO had been encouraging B/Ds to take forward IT development. OGCIIO would provide a central platform that facilitated the share use of resources, as well as providing training and promoting sharing of knowledge, skills, experience and best practice so as to expedite adoption of new technologies to improve public services.

22. At the meeting held on 12 March 2018, the Administration sought the Panel's support for three key infrastructure projects for smart city development, i.e. eID, multi-functional smart lampposts, and e-Government reform. Members generally supported the funding proposals.

Finance Committee

23. At its meeting on 11 May 2018, the Finance Committee has approved the creation of two new commitments under the Capital Works Reserve Fund Head 710 – Computerization for implementing the following two key smart city

infrastructure projects:

- (a) a commitment of \$112,000,000 for implementing a one-stop online system for the provision of eID; and
- (b) a commitment of \$533,303,000 for implementing the next generation government cloud infrastructure and big data analytics platform to support agile delivery of e-Government services.

Latest position

24. The Administration will update the Panel on 9 July 2018 on the latest progress of e-Government services.

Relevant papers

25. A list of the relevant papers is in **Appendix**.

Council Business Division 4
Legislative Council Secretariat
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Appendix

List of relevant papers

Issued by	Meeting date/ Issue date	Paper
Panel on Information Technology and Broadcasting	8 May 2017	Administration's paper on e-Government Services (LC Paper No. CB(4)950/16-17(04)) Updated background brief (LC Paper No. CB(4)950/16-17(05)) Minutes of meeting (LC Paper No. CB(4)1350/16-17)
	12 March 2018	Administration's paper on the key infrastructure projects for smart city development (LC Paper No. CB(4)701/17-18(03)) Minutes of meeting (LC Paper No. CB(4)1197/17-18)
Finance Committee	11 May 2018	Administration's paper on Capital Works Reserve Fund Head 710 - Computerization (FCR(2018-19)9)