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Panel on Information Technology and Broadcasting

Meeting on 8 January 2018

Updated background brief on smart city development

Purpose

  This paper provides updated background information on smart city development and summarizes the latest views and concerns expressed by Members on the subject.

Background

2. In the 2017 Policy Address, the Chief Executive reaffirms the Administration's commitment "to developing Hong Kong into a smart city by using innovation and technology to enhance city management and improve people's livelihood". The Administration's objectives of smart city development are to:

   (a) address urban challenges to enhance city management and improve quality of living, sustainability, efficiency and safety of Hong Kong through making use of innovation and technology;

   (b) enhance city attractiveness to global business and talents; and

   (c) inspire continuous city innovation and sustainable economic development.

Consultancy study on smart city development

3.	In September 2016, the Office of the Government Chief Information Officer ("OGCIO") commissioned PricewaterhouseCoopers Advisory Services Limited to conduct a nine-month "Consultancy Study on Smart City Blueprint for Hong Kong" ("consultancy study") to assist in the formulation of the overall development framework of the Hong Kong Smart City Blueprint ("the Blueprint"). The study made short-, medium- and long-term recommendations in six major areas, namely: "smart mobility", "smart living", "smart environment", "smart people", "smart government" and "smart economy". These recommendations are set out in the Administration's letter dated 9 August 2017 and circulated to members of the Panel on Information Technology and Broadcasting ("the Panel") on 10 August 2017 vide LC Paper No. CB(4)1511/16-17(01).

4.	The consultant submitted the study report to the Administration in late June 2017, and the Administration briefed the Panel on the consultant's report on 10 July 2017. On the basis of the consultants' recommendations and in line with the situation in Hong Kong, the Administration published the Blueprint in mid-December 2017 which maps out the smart city development plans for Hong Kong in the next five years and beyond[1].

Key infrastructure projects for smart city development

5.	The Chief Executive has announced in the Policy Address 2017 that the Administration would invest $700 million to take forward three key infrastructure projects for smart city development to:

(a)	provide an electronic identity ("eID") for all Hong Kong residents so that everybody can use a single digital identity and authentication to conduct government and commercial transactions online;

(b)	launch a pilot Multi-functional Smart Lampposts scheme at selected urban locations to support the building of a smart city with city-wide coverage of data and network; and

(c)	reform the development technology of e-Government systems and build a big data analytics platform to support the adoption of cloud services and new information technology by government departments.

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[1]	The Blueprint can be accessed from the following link in the Administration's website: https://www.smartcity.gov.hk/doc/HongKongSmartCityBlueprint(EN).pdf.

6.　　The Administration informed the Panel that the provision of eID would be implemented in 2020, while the multi-functional smart lampposts would be in operation starting from 2019 and the e-Government systems reform would be completed by 2020.

Smart City Office

7.　　The Administration is in the process of seeking approval from the Finance Committee/Establishment Subcommittee on staffing proposals for, among other matters, setting up of a Smart City Office to coordinate different bureaux and departments to take forward various smart city development measures.　　Individual smart city projects would be implemented by project teams formed by the relevant departments.

Pilot projects

8.　　The Administration informed the Panel at the meeting held on 10 July 2017 that the consultant supported the implementation of the following pilot projects:

(a)　　Implementing Smart City solutions in New Development Areas ("NDA"): The consultant recommends the Government to consider, in a holistic manner, implementing in NDAs various technologies and smart city solutions, such as urban drainage system, rainwater harvesting, grey water reuse, smart water network management, walkability, electric vehicles charging infrastructure, free public Wi-Fi, smart integrated poles, and underground integrated facilities.　　Locations recommended by the consultant include the Anderson Road quarry consultation project and the Lok Ma Chau Loop;

(b)　　Smart Region Living Lab: The Hong Kong Science and Technology Parks Corporation, in collaboration with the Chinese University of Hong Kong, plans to set up a living lab to support the pilot application of innovative solutions. Recommended testing items include a social culture platform, autonomous vehicles, smart building and facility management, a cashless society, etc.　　Development of the fifth generation ("5G") communications technology may also be considered for incorporation in the pilot; and

(c) <u>Cultural and Heritage Tourism in Central District</u>: The Hong Kong Tourism Board has launched the "Old Town Central" campaign which focuses on promoting various revitalized tourist attractions and providing visitors with different routes for self-guided walk under different themes, such as historical architecture, arts and culture, modern living, dining and entertainment, etc. The consultant recommends using information and communications technology ("ICT") to further enhance tourists' experiences, such as providing interactive videos or photos, electronic coupons or discount offers at selected tourist spots, digital walking routes guide and on-line information on accessibility, etc.

Previous discussions

<u>Panel on Information Technology and Broadcasting</u>

9.   At the Panel meeting held on 10 July 2017, the Administration updated the Panel on the progress of formulating a smart city Blueprint Hong Kong. On 17 October 2017, the Administration briefed the Panel on, among other matters, the initiatives relating to the development of smart city as announced in the Policy Address 2017. The major concerns and comments made by Panel members are summarized in the ensuing paragraphs.

<u>Smart city development plan</u>

Smart mobility

10.   Panel members noted that the "Smart Mobility" initiatives sought to enhance people's mobility through efficient and targeted capital deployment models and infrastructure investments. One of the potential projects recommended by the consultant concerns maximizing the use of car assets through promoting car-pooling and car-sharing. Some members expressed concerns whether the implementation of car-pooling and car-sharing would imply legalizing the practice of unauthorized carriage of passengers for profit by private cars. The Administration informed members that there were many ways to implement car-pooling; any such practice to be adopted would have to be consistent with the prevailing legislation.

Smart living

11.   Some members asked how the Administration would step up development of digital payment services.   The Administration explained that digital payment services in Hong Kong were mainly provided through credit cards as compared with the use of debit cards in other areas; debit card services were not popular in Hong Kong.   So far, the Hong Kong Monetary Authority ("HKMA") had only issued 16 Stored Value Facility licences that support different digital payment options.

Smart government

12.   Some members queried whether the Administration would impose statutory requirements for the relevant authorities and organizations to make available sufficient traffic data for public use.   Other members asked how the Administration would address the legal and technology issues related to the protection of privacy when capturing personal information for big data analytics purposes.   Members also expressed concerns on the pace of development of 5G telecommunications service and the introduction of Building Information Modelling ("BIM") technology, and asked how the proposed smart poles could support the work of the Administration in promoting "smart government".

13.   The Administration informed the Panel that it preferred to explore open data initiatives that did not involve legislative changes.   In the course of collecting personal data, there should be community consensus on the types of personal information that were allowed to be gathered and how such information was to be used.   In most situations, collection of data (such as traffic, temperature, and air quality information, etc.) would not involve privacy issue.   Where images were captured by cameras, personal characteristics and attributes could be removed with de-identification technologies.   Plans relating to the deployment of 5G mobile communications technology and adoption of BIM are included in the Blueprint.

14.   As regards the installation of small poles, the Administration informed members that sensors and communications equipment that supported high speed 5G communications technology could be installed in smart poles to, for example, gather real time traffic and other data.   These could improve the responsiveness of emergency services, such as guiding ambulance to select the quickest route to a location.   Existing telephone booths and lampposts might be possible locations for smart poles.

Key infrastructure and pilot projects

15.   Members queried whether there were measures that could be implemented while the Blueprint was being developed.   The Administration informed the Panel that certain projects were being implemented in connection with the smart city programme, including the setting of policy and data standards for the Common Spatial Data Infrastructure, Wi-Fi connected city initiative and improvements of the "data.gov.hk" portal.

Smart lampposts

16.   Some members asked how the Administration would select locations for installing smart lampposts and whether tourists information would be disseminated through them.   The Administration informed the Panel that smart lampposts would be installed in Tsim Sha Tsui; Central/Admiralty; Wanchai/Causeway Bay; and Kwun Tong, taking into account factors such as pedestrian flow, their popularity among tourists, and the feasibility of installing relevant equipment.   The Administration would draw reference from overseas experiences when considering whether and how smart lampposts might be used to promoting smart tourism.

Electronic identity

17.   Members commented that the Administration should speed up eID development for benefit of local and overseas investors.   Some members enquired about the scope of application of eID, including whether eID cover electronic filing and registration of court documents.

18.   The Administration informed the Panel that the proposed eID platform would be cloud-based, through which people in Hong Kong might use a single digital identity as authentication to conduct government and commercial transactions online.   The Administration was discussing with HKMA and the Securities and Futures Commission on how eID could help fulfil online trading requirements such as Know-your-customer Utility requirement.

Public-Private Participation

19.   The consultant considered collaboration between the public and private sectors a key factor of smart city.   Some members asked how the Administration would take on-board the consultant's recommendations involving the private sector in the provision of public services, and how the

Administration would promote the public-private participation ("PPP") model in smart city development without being criticized as colluding with the private sector.

20. The Administration replied that that $500 million had been earmarked to assist government departments in using technology to enhance the quality of public services. This would facilitate government departments to collaborate with private companies in improving public services. There were open and transparent collaboration models such as those adopted in Austria, where small and medium enterprises formed a consortium to give recommendations to the government on the companies that were suitable to participate in PPP projects.

Smart City Steering Committee

21. The consultant recommended that a Smart City Steering Committee ("SCSC") should be established for setting strategic directions for the smart city implementation, determining the priority policy areas and smart city programmes, and defining and monitoring key performance indicators. Some members asked if the Administration would take forward this recommendation, and queried whether the scope was too wide. The Administration responded that smart city initiatives were cross bureaux/departments in nature and required high level steer. The Administration was developing the terms of reference and preparing for the setting up of SCSC.

Latest position

22. The Administration will brief the Panel on 8 January 2018 on the latest work progress of smart city development.

Relevant papers

23. A list of the relevant papers is set out in the **Appendix**.

Council Business Division 4
Legislative Council Secretariat
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List of relevant papers

Issued by	Meeting date/ Issue date	Paper
The Administration	18 January 2017	The Chief Executive's 2017 Policy Address Policy Address
Panel on Information Technology and Broadcasting	10 July 2017	Administration's paper on smart city development LC Paper No. CB(4)1344/16-17(02) Minutes of meeting LC Paper No. CB(4)1537/16-17
	17 October 2017	The Chief Executive's 2017 Policy Address – Policy Initiatives of Innovation and Technology Bureau LC Paper No. CB(4)25/17-18(02)
Innovation and Technology Bureau	9 August 2017	Administration's letter on the short, medium and long-term measures by each of the six areas as presented in the Report of Consultancy Study on Smart City Blueprint for Hong Kong LC Paper No. CB(4)1511/16-17(01)
Establishment Subcommittee	20 December 2017	HEAD 135 – GOVERNMENT SECRETARIAT: INNOVATION AND TECHNOLOGY BUREAU EC(2017-18)13