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Panel on Information Technology and Broadcasting

Meeting on 13 June 2016

Background brief on the development of Smart City

Purpose

This paper provides background information on the Government's proposed development of a Smart City and summarizes the latest views and concerns expressed by Members on the subject.

Background

2. At the joint meeting of the Panel on Information Technology and Broadcasting ("ITB Panel") and the Panel on Commerce and Industry ("CI Panel") held on 14 December 2015, the Secretary for Innovation and Technology briefed members on the Government's objective to develop Smart City to make people's life more convenient, healthy and environmentally-friendly. In examining the Smart City initiatives, the Innovation and Technology Bureau ("I&TB"), together with the relevant policy bureaux, departments and the private sectors, would focus on the requisite information technology infrastructure in developing Smart City in Hong Kong, and provide support in digital technology.

3. At the Policy Address 2016, the Chief Executive of Hong Kong affirmed that I&TB will, in collaboration with research institutions and public and private organizations, study the development of a Smart City. The study would cover provision of free Wi-Fi services at bus stops and shopping arcades, opening up of more public data to facilitate development of user-friendly mobile applications ("apps") for the public, and development of intelligent homes. I&TB will formulate a digital framework and standards for the development of a Smart City.

4. In the Budget Speech of 2016-2017, the Financial Secretary ("FS") mentioned that, having regard to Hong Kong's practical circumstances, comparative advantages and the direction of urban development, Hong Kong could widely apply and commercialize research and development ("R&D") results in building a Smart City to boost economic development and enhance the quality of life.

5. To illustrate the Administration's efforts in the development of Smart City, FS outlined the following approaches and initiatives:

- (a) application of an award-winning locally-developed optical sensing technology in the implementation of the Water Intelligent Network to monitor the conditions of the water supply networks continuously so that the risks of water main bursts and leakages could be reduced and freshwater resources would be used more efficiently;
- (b) release of 5 000 datasets in digital formats free of charge through the Public Sector Information portal (*data.gov.hk*) to facilitate the industry in developing mobile apps. The Government would also refine the existing geographic information systems and explore ways to align and integrate the spatial data in Hong Kong to foster information and technology application and development;
- (c) installation of traffic detectors along certain strategic routes to provide more real-time traffic information and enhance transport efficiency;
- (d) installation of more and better charging facilities and promotion of the use of electric vehicles, especially in the public transport sector;
- (e) further increase of the number of Wi-Fi.HK hotspots to over 30 000 to bring greater convenience to the public and tourists; and
- (f) introduction and enhancement of various funding schemes to encourage more private enterprises to invest in R&D and applied technology, and to translate outstanding local R&D achievement into products and services with commercial value.

Previous discussions

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6. At the joint meeting of the ITB Panel and the CI Panel held on 14 December 2015, members commented that the policy and operational responsibilities of different aspects of Smart City fell on several policy bureaux and departments and suggested that I&TB should play a central co-ordinating role in the implementation of Smart City to speed up the process. Some members also commented that the Government should put more efforts in the application of information technologies in public services to facilitate the development of Smart City, such as building a smart transport system.

7. The Administration advised that while I&TB had been working with relevant departments to resolve administrative and procedural difficulties affecting the development of Smart City, certain functions of Smart City could also be delivered through private-public-partnership. The Administration could play a facilitator role in, for example, encouraging data owners to make available information for other companies to develop apps using the data.

8. The Administration indicated that proper infrastructures that made use of big data and environmental sustainability were some of the key elements of Smart City. As a first step, the Administration would need to define the standards, the scope and performance benchmarks of Smart City through case studies of a few overseas cities with similar demographic characteristics, traffic pattern and environmental conditions.

9. At the policy briefing of the ITB Panel on 2 February 2016, members noted that the Administration intended to engage a consultant to formulate a framework and standards suitable for Hong Kong and to lay the foundation for Smart City development. Some members enquired in detail about how the Administration would engage the public and major stakeholders in developing Smart City, how the newly established I&TB would foster inter-departmental co-operation and promote the use of technologies within the Government, and whether the proposed consultancy would overlap with another consultancy study being carried out by the Energizing Kowloon East Office to implement Smart City in Kowloon East.

10. The Administration advised that it would study the development of Smart City in collaboration with research institutions, public and private organizations. References and standards from smart cities in other parts of the world would be examined in formulating the framework for Hong

Kong. The Administration noted that it was important to set standards for the application of technologies (also see paragraph 17 below). As a start, the Government could collaborate with the private sector to build aggregated data based on available data to facilitate big data analytics to avoid infringing data privacy.

11. As regards Smart City development in Hong Kong, the Administration advised that apart from the pioneer project in Kowloon East, other areas such as Hung Shui Kiu might also offer opportunities for such development. The Administration would also explore opportunities to introduce Smart City features in existing built up areas through improvement to existing infrastructures and lessons could also be learnt from other advanced cities.

12. As regards encouraging bureaux and departments to harness the strength of new technologies to improve public services, the Administration advised that the \$500 million Innovation and Technology Fund for Better Living as mentioned in the Policy Address and FS's Budget Speech, would be a starting point in making available resources to encourage cross-departmental joint efforts in making use of innovative ideas and technologies to improve people's daily lives.

Council meeting

13. At the Council meeting on 4 May 2016, some Members raised questions on whether the consultancy study on the development of Smart City would cover the application of smart technologies in managing traffic and promoting reading culture respectively.

14. The Administration advised that the Transport Department would conduct a study on the dissemination of real-time data to be collected through the Electronic Road Pricing Pilot Scheme in Central and its Adjacent Areas, the new generation of parking meter system and the "stop-and-go" e-payment facilities at seven government tolled tunnels and roads by using contactless smart cards. The aim of the study was to facilitate travel planning by the public through dissemination of such data.

15. On promoting reading culture, the Administration advised that the Hong Kong Public Libraries of the Leisure and Cultural Services Department ("LCSD") was committed to leveraging on the use of new technology and information technology in enhancing the public library services in a bid to commensurate with Hong Kong's development as a smart city and world-class metropolis. These included, for example, the "Library at Your Finger Tips" which consisted of both the "My Library" and "Multimedia Information" mobile apps and a dedicated online

"Electronic Resources Webpage" launched by LCSD in 2014. All these e-services allowed the public to enjoy library services and digital resources anytime and anywhere, and meet their needs for knowledge, information, self-learning and continuous education as well as the constructive use of leisure time.

Finance Committee meeting

16. At the special Finance Committee meeting to examine the Estimates of Expenditure 2016-2017 on 7 April 2016, Members enquired, for Smart City development, about the timetable, manpower and expenditure on the consultancy study to formulate a digital framework and technical standards suitable for Hong Kong, details of co-ordination with bureaux and departments in integrating the elements of Smart City in the planning of new development areas, and whether the needs of persons with disabilities were considered so as to bring convenience to their lives.

17. The Administration advised that the Office of the Government Chief Information Officer ("OGCIO") would engage a consultant through open tender in 2016-2017 to formulate a digital framework and technical standards suitable for Hong Kong as the foundation for Smart City development. In doing so, the Administration would consult stakeholders, including related government departments, the academia, research institutions and the private sectors. The consultancy study would make reference to relevant papers on Smart City development, including the Research Report on Smart City by the Central Policy Unit. The expenditure incurred on the study would be dependent upon tender results. The manpower required in OGCIO included one Senior Systems Manager, one Systems Manager and one Analyst/Programmer. In formulating Smart City proposals, the Administration would look into smart apps and facilities that could address the needs of different target groups, including persons with disabilities, with an aim to bring comfort, convenience and safety to the general public.

Latest position

18. The Administration will brief the Panel on 13 June 2016 on the implementation of the pilot smart city digital initiatives.

Relevant papers

19. A list of the relevant papers with their hyperlinks is at:

<http://www.legco.gov.hk/yr15-16/english/panels/itb/minutes/ciitb20151214.pdf>
<http://www.legco.gov.hk/yr15-16/english/panels/itb/papers/ciitb20151214cb4-315-1-e.pdf>
<http://www.info.gov.hk/gia/general/201601/13/P201601130385.htm>
<http://www.budget.gov.hk/2016/eng/budget10.html>
<http://www.legco.gov.hk/yr15-16/english/panels/itb/minutes/itb20160202.pdf>
<http://www.info.gov.hk/gia/general/201605/04/P201605040576.htm>
<http://www.info.gov.hk/gia/general/201605/04/P201605040288.htm>
http://www.legco.gov.hk/yr15-16/english/fc/fc/w_q/itb-e.pdf
<http://www.legco.gov.hk/research-publications/english/essentials-1415ise08-what-is-a-smart-city.htm>

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