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Panel on Information Technology and Broadcasting

Meeting on 8 June 2020

Updated background brief on smart city development

Purpose

This paper provides updated background information on smart city development. It also summarizes the views and concerns expressed by Members in previous discussions on the subject.

Background

2. In the 2017 Policy Address, the Chief Executive ("CE") reaffirmed 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.

Smart City Blueprint for Hong Kong

3. The Administration released the Smart City Blueprint for Hong Kong ("the Blueprint")¹ on 15 December 2017, which outlines the vision and mission of building Hong Kong into a world-class smart city. The Blueprint, which was developed with reference to the recommendations of a consultancy report completed in June 2017,² sets out a clear and concrete direction for smart city development in Hong Kong and maps out development plans in the next five years.

4. The vision of the Blueprint is to "embrace innovation and technology to build a world-famed Smart Hong Kong characterized by a strong economy and high quality of living". The smart city development plans cover six major areas, namely "Smart Mobility", "Smart Living", "Smart Environment", "Smart People", "Smart Government" and "Smart Economy". The key initiatives in each of the six major areas are listed at **Appendix I**.

5. The Administration is conducting a review with a view to releasing Smart City Blueprint for Hong Kong 2.0 ("Blueprint 2.0") in 2020. Blueprint 2.0 will report on the latest progress of individual initiatives and set out new proposals in further promoting smart city development. The Administration will release Blueprint 2.0 via the dedicated smart city portal (www.smartcity.gov.hk).

Key infrastructure projects for smart city development

6. CE announced in the 2017 Policy Address that the Administration would take forward the following three key smart city infrastructure projects:

¹ Smart City Blueprint for Hong Kong ("the Blueprint") can be downloaded at the dedicated smart city portal (www.smartcity.gov.hk).

² In September 2016, the Office of the Government Chief Information Officer commissioned PricewaterhouseCoopers Advisory Services Limited to conduct a nine-month "Consultancy Study on Smart City Blueprint for Hong Kong" to assist in the formulation of the overall development framework of 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 on 10 August 2017 vide [LC Paper No. CB\(4\)1511/16-17\(01\)](#).

- (a) provision of an electronic identity ("eID") (now officially named as "iAM Smart") for all Hong Kong residents: this project allows each Hong Kong resident to use a single digital identity and authentication to conduct government and commercial transactions online;
- (b) installation of multi-functional smart lampposts³ at selected urban locations: this pilot project supports the building of a smart city with city-wide coverage of data and network; and
- (c) implementation of the next generation government cloud ("GovCloud") infrastructure: the GovCloud will be equipped with a new application architecture and a big data analytics platform to support the adoption of new cloud and system development technologies by government bureaux and departments ("B/Ds").

7. On 11 May 2018, Finance Committee ("FC") approved the creation of a commitment of \$112.0 million for implementing a one-stop online system for the provision of eID, and a commitment of \$533.3 million for implementing the GovCloud infrastructure and big data analytics platform. Both projects are funded under Capital Works Reserve Fund Head 710 - Computerisation. According to the Administration, both systems were expected to be launched by 2020. As regards the implementation of the pilot scheme of smart lampposts, the relevant expenditure would be paid under the block vote under Head 706 - Highways.

Wi-Fi Connected City Programme

8. In May 2016, FC approved a funding commitment of \$500 million for implementing the Wi-Fi Connected City Programme, which seeks to expand the coverage of "Wi-Fi.HK" hotspots progressively. The programme also enlists the participation of more public and private organizations to provide the public and visitors with free Wi-Fi services in various districts across the territory. As at end-September 2019, the number of "Wi-Fi.HK" hotspots had exceeded 30 000. The Office of the

³ The original plan of the multi-functional smart lampposts pilot scheme is to install some 400 multi-functional smart lampposts equipped with smart devices in four selected urban locations (namely Central/Admiralty, Causeway Bay/Wan Chai, Tsim Sha Tsui and Kwun Tong/Kai Tak Development Area) in phases to collect real-time city data such as air quality, traffic flow, etc. and support fifth generation (5G) mobile network development. The Pilot Scheme started in 2019 and 50 smart lampposts were installed along Sheung Yuet Road in Kowloon Bay, Shing Kai Road in Kai Tak and in the Kwun Tong town centre by end-June 2019.

Government Chief Information Officer ("OGCIO") has extended the high-speed Wi-Fi access points to 10 popular tourist spots, and will continue to expand the coverage and enhance the service of the "Wi-Fi.HK" brand.

Previous discussions

9. The Administration briefed the Panel on Information Technology and Broadcasting ("the Panel") on the major components of the Blueprint at the meeting on 8 January 2018 and, at the meeting held on 12 March 2018, sought the Panel's support for the funding proposals for three key infrastructure projects for smart city development as proposed in the 2017 Policy Address (paragraph 6). Panel members supported the funding proposals. Relevant issues were discussed at the FC meeting on 11 May 2018. During the 2018-2019 session, the Panel continued to discuss with the Administration on the development of smart city in Hong Kong, including the implementation of eID, multi-functional smart lampposts and free Wi-Fi hotspots in public telephone kiosks. The major views and concerns expressed by Members are summarized in the ensuing paragraphs.

Smart City Blueprint and infrastructure

10. Members expressed concern that some of the Administration's initiatives on smart city development might take a long time to implement. By the time the projects were completed and in operation, the respective technologies adopted might already be outdated. Members also expressed concern that Hong Kong might lag behind its regional neighbours in smart city development. On the second concern, the Administration maintained that CE's Steering Committee on Innovation and Technology, which comprised key directors of Bureaux, was determined to implement the Blueprint. Hong Kong's progress in the smart city development vis-à-vis other major cities would be reflected in the performance indicators published by the International Organization for Standardization (ISO37122).

11. Given the community-wide support for early implementation of smart city initiatives to improve people's daily lives, Members suggested that the Administration should conduct an extensive public consultation exercise when mapping out Blueprint 2.0, so as to better gauge public opinion and prioritize the initiatives in the light of public needs. The Administration advised that it would engage the public in an open and transparent manner to garner wider community support for smart city development.

Smart mobility

12. Members suggested that the Administration should encourage private car park operators and other organizations to share real-time parking vacancy information with the public, and to integrate such data into the Hong Kong eRouting application⁴. Some Members suggested that the Administration should integrate the Hong Kong eTransport application⁴ with other public transport information systems such as tram, MTR or bus in order to better achieve the objectives of "Smart Mobility" under the Blueprint. The Administration responded that it was already cooperating with the private sector and public transport operators on sharing operational data. As transport operation data were commercial assets, the Administration could only encourage companies to share their data with the Government.

Smart Government

13. Making reference to the Hangzhou Citizen Center, Members asked if the Administration would implement similar one-stop service for the public and enterprises to access various government services. The Administration responded that it would build digital infrastructure to encourage wider use of eID in public e-services and to facilitate online transactions with the Government and the commercial sector using eID.

14. Some Members pointed out that, according to a recent media report, the Hong Kong Police Force ("Police Force") had been using an Australia facial recognition technology for at least three years. The technology allowed the Police Force to identify suspects in the course of criminal investigations. They asked what role the Innovation and Technology Bureau ("I&TB") played in the procurement of information technology ("IT") equipment and systems by B/Ds including the Police Force.

15. The Administration explained that B/Ds would, according to their needs, develop and implement various IT systems to enhance operational efficiency and productivity. I&TB would give technical advice and support B/Ds on the trial or adoption of IT products and services as necessary. There was no need for B/Ds, including the Police Force, to consult I&TB's views prior to their procurement of systems.

⁴ To facilitate motorists' choice of the most suitable means of commuting (e.g. walking, driving or taking public transport), in July 2018, the Transport Department integrated its three mobile applications, namely "Hong Kong eTransport", "Hong Kong eRouting" and "eTraffic News", into an all-in-one mobile application "HKeMobility", allowing members of the public to search for routes, journey times, transport fares and other information relating to different means of travel more conveniently.

Smart Government Innovation Lab

16. Members asked the Administration to engage the innovation and technology ("I&T") sector to help government departments adopt IT to improve public services, thereby creating more business opportunities for local start-ups.

17. The Administration advised that OGCIO would set up a dedicated webpage setting out the problems facing different public services and inviting interested parties to submit technology solutions and product suggestions. Trials and technology testing for proposals that fulfilled the needs of departments would be arranged in collaboration with relevant departments. Meanwhile, OGCIO would organize technology forums for industry players to share their technology solutions. The first technology forums would be held in June 2019 and would be organized on a quarterly basis in future. The Smart Government Innovation Lab ("Smart Lab") was expected to create more business opportunities for local start-ups and small and medium enterprises ("SMEs").

Pro-innovation Government procurement policy

18. Members noted that the Administration had introduced a pro-innovation government procurement policy starting from April 2019. They asked the Administration to step up publicity efforts by arranging more briefing and exchange sessions with the industry, and to disseminate procurement information so as to facilitate the participation of the industry in government procurement.

19. The Administration advised that the Smart Lab set up in April 2019 would help facilitate the procurement and use of I&T products and solutions from local start-ups and SMEs by government departments. In parallel, the Government adopted in April 2019 a pro-innovation procurement policy under which technical aspects would be given heavier weighting in tender assessment vis-à-vis the price.

Smart economy

20. In discussing how smart lampposts and other smart city facilities could help promote Hong Kong's tourism, Members commented that the Administration should formulate an overarching strategic plan to use smart city technologies to enrich tourists' experience in Hong Kong rather than provide piecemeal measures on isolated tourist spots.

Smart living

21. Noting that the Administration had plans to introduce a Faster Payment System⁵ by 2018, Members expressed concern about the risks involved, particularly in the use of QR code. The Administration advised that the Hong Kong Monetary Authority was working with the financial sector to develop a common QR code payment standard, under which stored value facility operators would be required to monitor and evaluate the risks and security of these payment systems.

Next generation government cloud infrastructure and big data analytics platform

22. Members noted that the big data analytics platform would run on the GovCloud to facilitate B/Ds take forward more big data analytics projects. Members sought details on the implementation progress of GovCloud, including whether B/Ds were willing to adopt GovCloud, how I&TB would assist B/Ds in using the new platform and its target to require all B/Ds to make use of GovCloud.

23. The Administration advised that B/Ds were encouraged to use GovCloud when developing new systems or revamping existing systems wherever possible. Apart from implementing the secure and reliable "private cloud", OGCIO would also make use of "public cloud" services which were more flexible, elastic, scalable and more secure. The new platform could help B/Ds reduce the development and maintenance costs of IT systems. The 260 e-Government services and application systems under various B/Ds currently running on the existing central cloud platforms would be progressively migrated to the new platform when it came into operation in the third quarter of 2020.

Multi-functional smart lampposts

24. Noting that the Administration would replace and install 52 smart lampposts in selected road sections, Members asked whether the data to be collected by these smart lampposts could be used by the Police Force for law enforcement purposes. The Administration advised that it would consult the Office of the Privacy Commissioner for Personal Data on whether the data to be collected by smart lampposts could be used for supporting law enforcement activities.

⁵ Faster Payment System ("FPS") is a platform which connects banks and stored value facility operators. Users may transfer money and carry out transactions by phone or by email using a QR code through FPS.

25. Members were concerned that a number of smart lampposts had been damaged as some people were suspicious that the facilities were being used to capture information about individuals. Members asked how the Administration would further elucidate the relevant policies and measures so as to garner public support on smart city development.

26. The Administration advised that smart lampposts were important infrastructure facilities in supporting smart city development in Hong Kong as they could accommodate sensors to collect city data such as air quality data, and base stations to support the fifth generation mobile communications (5G) network services. The Administration was aware of the concerns about protection of personal information and privacy issues arising from the operation of smart lampposts, and had suspended all applications that might have privacy implications until a consensus in the community was reached. Besides, a Smart Lampposts Technical Advisory Ad Hoc Committee comprising non-government members had been set up to provide third-party advice on the operation of smart lampposts to further safeguard personal privacy. The Administration assured Members that it would continue to communicate with the public in an open and down-to-earth manner regarding the installation of smart lampposts.

"iAM Smart" platform

Participation by the private sector

27. Members pointed out that the IT industry was concerned about the opportunities for local companies to participate in the development of major IT infrastructure projects. They queried when and how the Administration would engage private organizations to participate in the development of Application Programming Interfaces ("APIs") related to the use of eID, and whether fees would be charged for their use by private organizations.

28. The Administration advised that APIs and relevant technical information would be provided to interested public organizations and private companies for their adoption in their online services as appropriate. Whilst the Administration expected that more private organizations would make use of eID, any organization adopting eID would be required to comply with the information security and related technical requirements as set out in the terms of use of eID. As the development of APIs involved significant public resources, the Administration would consider whether fees would be charged for the use of APIs by private organizations.

Registering and using electronic identity

29. Members expressed concern that, by mid-2020 when the eID system was in operation, many people might still not have received their new smart identity cards ("ID cards") with holders' biometric information that was needed for using the eID system. Some other Members expressed concern about whether residents could register their eIDs with older mobile phones or computers.

30. The Administration clarified that each eID was a digital identity and either new or existing smart ID cards could be used with eID for registration and usage of online services. Members of the public could still access online services using conventional methods even if they were not able to obtain an eID. The public could register their eIDs using tablets and other mobile devices. The Administration would try to make the eID registration and operation platforms compatible with different models of mobile devices in use as far as possible.

Protection of personal data

31. Some Members expressed concern about the security risk of the eID system. They asked how the Administration would ensure that personal data would not be leaked through the eID system to other organizations or other jurisdictions outside Hong Kong.

32. The Administration advised that prevailing internationally recognized security technologies and standards would be adopted in the eID system for authentication of users' identity. Users' data would be encrypted and stored in government data centre facilities to protect the security of users' data. The Administration further explained that independent third parties, normally selected from audit firms with relevant experience in information security compliance audits, would be engaged to conduct privacy impact and information security risk assessments and audits to protect personal privacy and ensure system security.

Wi-Fi Connected City Programme

33. Some Members queried about the quality of the free Wi-Fi service provided by the Administration under the "Wi-Fi Connected City" programme. They asked whether free Wi-Fi hotspots could be provided with higher connection speed and in larger quantity.

34. The Administration informed the Panel that after the service enhancement works conducted in 2018, the signage locations, technical standard and the infrastructure of the public Wi-Fi service at government

venues had improved. The connection speed was substantially increased from an average of 3 to 4Mbps to over 20Mbps. Besides, a majority of respondents were satisfied with the quality of the Wi-Fi service under the programme, according to a recent independent user experience survey. The Administration said that it was regularly monitoring the service usage at existing venues and would conduct user experience surveys. As the earlier replacement of copper wires by fibre links had made it convenient to increase the data transmission speed of Wi-Fi hotspots, the Administration would consider increasing the Wi-Fi connection speed subject to service demand.

35. Members noted that due to a drop in public demand, the Administration decided to exclude about 50% of the kiosk payphones from the universal service obligation ("USO"), and most of these payphones would be removed. Among the kiosk payphones which the Administration had decided to remove from USO, 394 of them had free Wi-Fi hotspots. In response to members' enquiry on whether free Wi-Fi service would be provided uninterrupted when the telephone kiosks which housed Wi-Fi hotspots were removed, the Administration advised that the Government and telecommunications operators had been installing new Wi-Fi hotspots at suitable premises under the "Wi-Fi Connected City" programme as an ongoing effort. Its implementation progress would not be affected by the removal of public telephone kiosks. Some merits of the Wi-Fi service at government venues over the service offered by telecommunications operators at telephone kiosks included its higher connection speed and the absence of a connection time limit on users. The Administration was confident that suitably distributed free Wi-Fi service would be maintained despite the removal of the telephone kiosks concerned.

Questions raised at Council meetings

36. Members had raised questions relating to the smart city development at various Council meetings. Details of the questions and the Administration's replies are given in the hyperlinks in **Appendix II**.

Latest position

37. The Administration will brief the Panel on 8 June 2020 on the progress of smart city development.

Relevant papers

38. A list of relevant papers is set out in **Appendix II**.

Council Business Division 1
Legislative Council Secretariat
4 June 2020

Key initiatives of smart city development plans in the Smart City Blueprint for Hong Kong

Smart mobility

- (a) Integrate existing e-transport applications into an all-in-one mobile application by 2018 to facilitate journey planning;
- (b) Release real-time information of franchised buses through mobile devices by 2018 and information display panels at government public transport interchanges and covered bus stops by 2020;
- (c) Complete the installation of traffic detectors on all strategic roads to provide real-time traffic information by 2020;
- (d) Install new on-street parking meters to support multiple payment systems starting from 2019-2020 with provision of real-time parking vacancy information;
- (e) In light of the results of the feasibility study, engage the public to develop a detailed Electronic Road Pricing Pilot Scheme in Central and its adjacent areas and its implementation strategy in 2019;
- (f) Facilitate trials of autonomous vehicles in the West Kowloon Cultural District and other areas as appropriate;
- (g) Pilot the use of technology to deter improper use of roadside loading and unloading bays and illegal parking in Kowloon East from 2018;
- (h) Establish "bicycle-friendly" new towns and new development areas;
- (i) Continue to take forward "Walk in HK" by providing a pedestrian-friendly environment; and

- (j) Explore the provision of a convenient and smooth travel experience by using facial biometrics technology including at check-in, boarding pass checkpoint and boarding.

Smart living

- (a) Introduce a Faster Payment System by 2018 which supports users to transfer money anytime and anywhere by phone number or email address;
- (b) Facilitate the development of a QR code payment standard to promote the wider use of mobile retail payments and bring greater convenience to customers and merchants;
- (c) Launch the \$1 billion "Innovation and Technology Fund for Application in Elderly and Rehabilitation Care" in 2018 to subsidise elderly and rehabilitation service units to try and procure technology products;
- (d) Set up a Big Data Analytics Platform by the Hospital Authority for facilitating healthcare-related research in 2019, and start adopting a smart hospital approach for piloting by 2020; and
- (e) Provide all residents, by 2020, a free electronic identity ("eID") which is a single digital identity for authentication when conducting government and commercial transactions online.

Smart environment

- (a) Phase down coal-fired electricity generation gradually and replace with natural gas and non-fossil fuel sources;
- (b) Apply renewable energy on a wider and larger scale based on mature and commercially available technologies with the public sector taking the lead;
- (c) Install light-emitting diode ("LED") lamps in public lighting systems progressively starting from 2017/2018 and encourage retrofitting LED lighting for existing government buildings;
- (d) Promote retro-commissioning and building-based smart/innovation and technology ("I&T") technologies;

- (e) Use remote sensing devices to monitor air quality, cleanliness of streets and public places, and usage of litter and recycling bins; and
- (f) Continue to include requirements in the sale of new lots in Kowloon East, including green building design, provision of smart water meter system, charging facilities for electric vehicles and real-time information on vacant parking spaces.

Smart people

- (a) Organise intensive training programmes on science, technology, engineering and mathematics ("STEM") education for curriculum leaders of primary and secondary schools from the 2017/2018 to 2019/2020 school years;
- (b) Encourage industries to hire STEM graduates for research and development ("R&D") through the Postdoctoral Hub Programme and the enhanced Internship Programme;
- (c) Attract and retain more I&T professionals, especially in biotechnology, data science, artificial intelligence, robotics, financial technology and cyber security. Launch a fast-track pilot I&T talent admission scheme in 2018; and
- (d) Provide support to young entrepreneurs and start-ups to build a stronger I&T culture.

Smart government

- (a) Fifth generation ("5G") mobile networks can offer ultra-high speed and high capacity services, support device-to-device ultra-reliable/low-latency communications, and enable massive machine-to-machine communications for better implementation of the Internet of Things. Hong Kong is all geared up for the commercial launch of 5G services and applications in 2020;
- (b) Open up more public and private sector data in digital forms to facilitate research and innovation;

- (c) Adopt eID common login by 2020 and enhance the e-services user experience with the help of artificial intelligence, chatbot and big data analytics;
- (d) Implement the multi-functional smart lampposts pilot scheme starting from 2019 to facilitate collection of real-time city data to enhance city management and other public services;
- (e) Build a new big data analytics platform by 2020 which will enable real-time data transmission and sharing among government departments;
- (f) Revamp the government cloud infrastructure platform by 2020 to enable digital government services delivery; and
- (g) Adopt Building Information Modelling for major government capital works projects starting from 2018 and develop Common Spatial Data Infrastructure by 2023.

Smart economy

- (a) Facilitate the introduction of virtual banking as another model of service delivery;
- (b) Provide tourist facilitation services through smart technologies by 2018 at the Hong Kong International Airport, the West Kowloon Station of the Guangzhou-Shenzhen-Hong Kong Express Rail Link and the Hong Kong Boundary Crossing Facilities of the Hong Kong-Zhuhai-Macao Bridge;
- (c) Provide enhanced tax deduction for qualifying expenditure incurred by enterprises on R&D in 2018/2019 to incentivise companies to increase investment in technological R&D;
- (d) Review the Government's procurement arrangements by 2018 to include I&T as well as design thinking as tender requirements to encourage local technological innovation and underscore the user-centric approach; and
- (e) Review existing legislation and regulations so as to amend outdated provisions which impede I&T development.

(Source: [LC Paper No. CB\(4\)429/17-18\(03\)](#))

List of relevant papers

Committee	Meeting date	Paper
Panel on Information Technology and Broadcasting	8 January 2018	<p>Administration's paper on the Smart City Blueprint for Hong Kong LC Paper No. CB(4)429/17-18(03)</p> <p>Updated background brief on the smart city development LC Paper No. CB(4)429/17-18(04)</p> <p>Minutes of meeting LC Paper No. CB(4)699/17-18</p>
Panel on Information Technology and Broadcasting	12 March 2018	<p>Administration's paper on the key infrastructure projects for smart city development LC Paper No. CB(4)701/17-18(03)</p> <p>Administration's response to issues raised at the meeting on 12 March 2018 LC Paper No. CB(4)1051/17-18(01)</p> <p>Minutes of meeting LC Paper No. CB(4)1197/17-18</p>

Committee	Meeting date	Paper
Finance Committee	11 May 2018	<p>CAPITAL WORKS RESERVE FUND HEAD 710 – COMPUTERISATION Office of the Government Chief Information Officer New Subhead "Electronic Identity (eID)" New Subhead "Digital Transformation for Agile Delivery of e-Government Services" FCR(2018-19)9</p> <p>Minutes of meeting LC Paper No. FC9/18-19</p>
Panel on Information Technology and Broadcasting	16 April 2019	<p>Administration's paper on Update on Smart City Development LC Paper No. CB(1)876/18-19(03)</p> <p>Updated background brief on smart city development LC Paper No. CB(1)876/18-19(04)</p> <p>Minutes of meeting LC Paper No. CB(1)1269/18-19</p>
Panel on Information Technology and Broadcasting	10 May 2019	<p>Administration's paper on electronic identity LC Paper No. CB(1)1020/18-19(03)</p> <p>Updated background brief on electronic identity project LC Paper No. CB(1)1020/18-19(04)</p> <p>Minutes of meeting LC Paper No. CB(1)1290/18-19</p>

Committee	Meeting date	Paper
Panel on Information Technology and Broadcasting	29 October 2019	Administration's paper on 2019 Policy Address - Policy initiatives of Innovation and Technology Bureau LC Paper No. CB(1)42/19-20(01) Minutes of meeting LC Paper No. CB(1)242/19-20
Panel on Information Technology and Broadcasting	9 December 2019	Administration's paper on Public Payphone Review and Free Wi-Fi Hotspots in Public Telephone Kiosks LC Paper No. CB(1)214/19-20(05) Background brief on public payphone review and free Wi-Fi hotspots in public telephone kiosks LC Paper No. CB(1)214/19-20(06) Minutes of meeting LC Paper No. CB(1)361/19-20
Council	10 January 2018	Question No. 6 raised by Dr Hon LO Wai-kwok Development of smart city
Council	28 March 2018	Question No. 15 raised by Hon CHAN Chun-ying Developing Hong Kong into a smart city
Council	25 April 2018	Question No. 15 raised by Hon Jeremy TAM Smart City Blueprint for Hong Kong
Council	25 April 2018	Question No. 21 raised by Hon Charles Peter MOK Converting on-street facilities into infrastructural facilities needed for building a smart city

Committee	Meeting date	Paper
Council	30 May 2018	Question No. 10 raised by Dr Hon Pierre CHAN Provision of free Wi-Fi services in public hospitals
Council	27 February 2019	Question No. 11 raised by Hon WU Chi-wai Making use of next generation government cloud infrastructure
Council	13 November 2019	Question No. 5 raised by Hon Charles Peter MOK Application of artificial intelligence and protection of personal data privacy
Council	22 April 2020	Question No. 20 raised by Hon Elizabeth QUAT Steering Committee on Innovation and Technology