

香港特別行政區政府

創新及科技局

香港添馬添美道二號  
政府總部西翼二十樓



INNOVATION AND  
TECHNOLOGY BUREAU

THE GOVERNMENT OF THE HONG KONG  
SPECIAL ADMINISTRATIVE REGION

20/F., West Wing, Central Government Offices,  
2 Tim Mei Avenue, Tamar, Hong Kong

電話 Tel: 2810 2489  
圖文傳真 Fax: 2530 0837

By email

9 August 2017

Mr Daniel SIN,  
Chief Council Secretary,  
Panel on Information Technology and Broadcasting,  
Legislative Council Complex,  
1 Legislative Council Road,  
Central, Hong Kong

Dear Mr SIN,

**Information requested at the meeting of  
the Panel on Information Technology and Broadcasting on 10 July 2017**

At the meeting of the Panel on Information Technology and Broadcasting on 10 July 2017, Members requested for 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. The required information is set out at **Annex**.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Ricky Chong'.

(Ricky Chong)

for Secretary for Innovation and Technology

Encl.

**Proposed Development Plans in the  
Report of Consultancy Study on Smart City Blueprint for Hong Kong**

Based on the Boyd Cohen model, the consultant developed detailed recommendations on Smart City Development Plans for Hong Kong covering six areas, namely “Smart Mobility”, “Smart Living”, “Smart Environment”, “Smart People”, “Smart Government” and “Smart Economy”. The short, medium and long term recommendations are as follows.

Smart Mobility

1. *Developing a strategic road map for intelligent transport systems (ITS)*

Short Term :	Develop various ITS initiatives; collect traffic data; provide real-time traffic information
Medium Term :	Implement the planned ITS initiatives
Long Term :	Use technologies to facilitate law enforcement of traffic violations

2. *Providing multi-functionalities by sensors at public transport interchanges (PTI)*

Short Term :	Conduct Smart PTI on a pilot basis; plan better transfer facilities
Medium Term :	Implement Smart PTI city-wide

3. *Developing an all-in-one transport mobile application*

Short Term :	Enhance Transport Department’s mobile application to compare the travel time of different transportation modes
Medium Term :	Develop an integrated platform that streamlines Transport Department’s mobile applications

4. *Using Internet-of-Things (“IoT”) to improve car park searching and traffic management*

Short Term :	Encourage private car park operators to release real-time vacancy information; introduce new generation parking meters; explore using technologies to enable traffic signals to interact with real-time demand of pedestrian and vehicles
--------------	---

Medium Term : Review smart parking meters programme; implement intelligent signalised junctions at selected locations
---

5. *Upgrading the Hong Kong International Airport into a smart airport through automation, personalisation and self-service*

Short Term :	Implement the next generation passenger check-in kiosk, baggage check-in services, smart luggage tag, etc.
Medium Term :	Explore the use of driverless vehicles; incorporate smart airport services and infrastructure into the Three-runway System
Long Term :	Evaluate technologies needed for enhancing services under the Three-runway System

6. *Enhancing the safety of vehicles by integrating technologies*

Short Term :	Conduct tests on vehicles with integrated internet access
Medium Term :	Assess other technologies and services such as forward collision warnings and car park searching

7. *Reducing road congestion through Electronic Road Pricing (“ERP”)*

Short Term :	Conduct feasibility study for implementing the ERP Pilot Scheme in Central and its adjacent areas
Medium Term :	Design and implement the ERP Pilot Scheme in Central and its adjacent areas
Long Term :	Expand the ERP Scheme to other designated charging areas in Hong Kong

8. *Enhancing bus services*

Medium Term :	Explore allowing real-time data sharing in franchised bus fleets
---------------	--

9. *Gearing up for the testing of autonomous vehicles (“AVs”)*

Medium Term :	Undertake AV pilot project and associated intelligent traffic systems at selected locations
Long Term :	Gear up in various aspects for the use of AVs on selected public roads

10. Maximising the use of car assets through promoting car pooling

Short Term :	Promote car pooling and car sharing
Medium Term :	Facilitate city-wide car pooling programme

11. Encouraging the use of bicycles in new towns and new development areas (“NDAs”)

Short Term :	Continue to improve biking facilities
--------------	---------------------------------------

12. Easing payment and traffic data collection through installing in-vehicle unit

Short Term :	Install in-vehicle units in government vehicles and some public transport vehicles
Medium Term :	Implement incentive scheme for installation of in-vehicle units in all vehicles
Long Term :	Install in-vehicle units in all vehicles if public consensus can be reached

13. Providing environmentally friendly passenger ferries

Medium Term :	Source vessels using cleaner fuel
Long Term :	Introduce the use of vessels with cleaner fuel

14. Adoption of smart technologies in traffic enforcement

Short Term :	Conduct pilot project on curbside loading/ unloading bay monitoring system
Medium Term :	Implement curbside loading/ unloading bay monitoring and traffic offence enforcement system

Smart Living

15. Offering more options of digital payment

Short Term :	Define policies for requiring service providers to accept digital payments; innovate converged payment device
Medium Term :	Explore scaling up the adoption of converged payment devices and include more new payment channels into the converged devices

Long Term : Move towards a cashless society
---

*16. Promoting digital profile/ persona*

Short Term : Promote citizen adoption of digital persona for acquiring services; explore the use of blockchain
Medium Term : Expand adoption of the integrated account management mechanism for identity validation

*17. Promoting gerontechnology and using wearable technology to track health*

Short Term : Encourage usage of wearables to provide data for healthcare services; adopt telehealth in elderly centres and care centres
Medium Term : Explore development of a patient portal for accessing the Electronic Health Record Sharing System
Long Term : Explore use of analytics to improve disease detection and prognosis

*18. Developing smart hospitals*

Short Term : Develop an enhanced clinical care model, improve efficiency and quality of care delivery
Medium Term : Design appropriate and feasible smart hospital features
Long Term : Retrofit most public hospitals with smart hospital features

*19. Facilitating smartness at workplace*

Short Term : Consider technology options that support flexible working arrangements
---

Smart Environment

*20. Promoting green and intelligent buildings*

Short Term : Promote monitoring of household energy consumption; facilitate construction and maintenance through the use of Building Information Modelling (“BIM”)
--

21. *Managing electrical grid with smart technology*

Short Term :	Study pilot schemes to determine how to pursue smart grid technology
Medium Term :	Design and undertake pilot smart grid technology projects
Long Term :	Review smart grid technology projects

22. *Increasing the efficiency of waste management*

Short Term :	Assess the implementation of additional waste facilities; support the municipal solid waste charging scheme
Medium Term :	Enhance recycling infrastructure; consider the implementation of an integrated waste management
Long Term :	Refine and expand waste-to-energy processes

23. *Enhancing pollution management by using remote sensors*

Short Term :	Consider incorporating sensors for water pollution detection; assess construction materials recycling/ reuse programmes
Medium Term :	Explore feasibility of remote technologies to detect pollution
Long Term :	Implement the use of sensors to detect pollution on a city-wide basis

24. *Improving energy efficiency in commercial settings by LED lighting*

Short Term :	Encourage the use of LED lighting and retrofitting of existing lights in commercial settings
--------------	--

Smart People

25. *Enhancing Hong Kong's capability in data science*

Short Term :	Promote technology curricula that include IoT, sensor networks and data science
Medium Term :	Assess the possibility in developing curricula focusing on data science, artificial intelligence and machine learning
Long Term :	Strengthen partnerships with private sector and public institutions to cultivate job and internship opportunities

26. *Providing convenient access to public services through a city One-Stop Shop*

Short Term :	Explore the feasibility of including private sector services in the GovHK service platform
Medium Term :	Pilot use of automated analytics tools to respond to citizens' queries
Long Term :	Evaluate the service provider engagement model

27. *Using different Internet-based tools and social media to gauge the views of the public*

Short Term :	Promote a stakeholder engagement platform and integrate with popular social media
Long Term :	Continuously assess and adopt best practices for stakeholder engagement platform

28. *Fostering entrepreneurial and innovative spirit through education*

Short Term :	Evaluate school curricula and policy in science, technology, engineering and mathematics (“STEM”) and data science
Medium Term :	Implement continuous learning programmes in STEM and innovation

29. *Increasing confidence of the community in embracing new smart city practices*

Short Term :	Run awareness programmes for public/ private sector and citizens on challenges and opportunities brought about from innovation
--------------	--

Smart Government

30. *Preparing for the deployment of 5G mobile communication technology*

Short Term :	Ensure investments are 5G compatible; allow 5G technology to be tested at certain venues
--------------	--

31. *Enabling a more efficient building life cycle through the use of BIM*

Short Term :	Encourage adoption of BIM for private construction projects; develop Electronic Submission Hub (“ESH”) to collect and approve plans for private developments
--------------	--

Medium Term :	Launch the ESH
Long Term :	Upon the implementation of the ESH, consider mandatory submission by large scale private development projects

32. *Installing multifunctional smart poles in the community*

Short Term :	Develop smart poles pilot; assess using telephone booths to integrate sensors and other technologies
Medium Term :	Review smart poles pilot; expand smart telephone booth project to other locations across the city
Long Term :	Deploy smart poles city-wide

33. *Setting up a virtual 3D simulated platform*

Short Term :	Create 3D digital map of Hong Kong
Medium Term :	Integrate with the Common Spatial Data Infrastructure
Long Term :	Integrate department information and utilise the virtual 3D platform to perform visualisation and analysis

34. *Using common utility tunnels, combining electricity, water supply pipes and sewer pipes in appropriate locations*

Short Term :	Assess the feasibility of deploying utilidors in the planned NDAs
Medium Term :	Deploy utilidors in the planned NDAs where feasible
Long Term :	Assess the feasibility of deploying utilidors in the developed areas

35. *Offering more citizen-centric e-services*

Short Term :	Develop new application architecture framework and implement a central platform to provide next generation e-government services
Medium Term :	Implement a central platform for shared used by Government bureaux/ departments

36. *Enhancing the Government's data analytics capability*

Short Term :	Implement a centralised big data infrastructure; set up the central big data office
--------------	---



Medium Term : Kick-start big data analytics use cases to enhance the quality of public services and improve people’s livelihood
---

*Smart Economy*

37. *Developing financial technology*

Short Term : Encourage using Fintech Supervisory Sandbox to test products; explore feasibility of blockchain; assess the feasibility of a cashless economy and using digital currencies
Medium Term : Encourage development of blockchain and cybersecurity within Fintech

38. *Revitalising Hong Kong’s manufacturing with “re-industrialisation”*

Short Term : Formulate policy to promote “re-industrialisation” for Hong Kong
Medium Term : Promote utilisation of sites for the purpose of innovation and technology use
Long Term : Review and refine policies related to “re-industrialisation”

39. *Enhancing the eco-systems for start-ups to attract investments by foreign companies*

Short Term : Develop policies to lower barriers to access funds for start-ups; encourage companies to provide co-working space; consider tax incentives for research and development (“R&D”); enhance Quality Migrant Admission Scheme
Medium Term : Partnerships between overseas universities to establish R&D centres in Hong Kong; support the Partner State Key Laboratories and Hong Kong Branches of Chinese National Engineering Research Centres in Hong Kong
Long Term : Continue to develop services for innovation centres across city

40. *Establishing a research and development platform at the “Hong Kong – Shenzhen Innovation and Technology Park” in Lok Ma Chau Loop*

Long Term : Develop the “Hong Kong – Shenzhen Innovation and Technology Park” as a key technology research base in the region
---

*41. Promoting smart tourism*

Short Term :	Enhance the attractiveness of cultural and heritage tourism in Central District; assess the effectiveness of smart technologies
Medium Term :	Identify other tourism projects; leverage data collected to analyse tourist behaviour and preferences

*42. Promoting sharing economy*

Short Term :	Assess policies and initiatives to promote sharing economy
--------------	--