莫乃光
CHARLES MOK

立法會議員 (資訊科技界)
Legislative Councillor (IT)

Submission by Hon Charles Mok for Public Consultation on
"Report of Consultancy Study on Smart City Blueprint for Hong Kong"

Smarter Hong Kong:

Smart for Whom? City for Whom?

Overall Comments

- From the technical point of view, the Report has proposed a comprehensive and meticulously prepared strategy with well-defined action plans of 'what can be done' using innovation and technology. The Report has adequately addressed various technical and policy trends around the world and how Hong Kong can leverage on international experience.

- It is therefore encouraging to see the Report examined Hong Kong's future plans for Smart City and provided an all-rounded 'manual' to be delivered for further action.

- However, one crucial point missing in the Report is that smart cities are for people, and the citizen's role cannot be determined by algorithms. To allow the smart city to truly flourish in Hong Kong, active citizenship must not be overlooked. Critical thought, ongoing debate and mechanisms for the expression of dissent have to be enhanced.

- Echoing a point on page 19, "Engage the public and businesses and co-create smart solutions with stakeholders to better meet the needs and fulfill the aspirations of the people", we need to move beyond smart cities which are defined predominantly by economic or technical terms.

- In addition to the objectives listed in Part 2.2 Smart City Objectives of the Report, the following should also be the integral principles guiding the development of Smart City in Hong Kong.
    - Openness and neutrality
    - Transparency and accountability
    - Privacy and security
    - Respect of human and digital rights, as well as freedom of citizens
    - Equality and social justice
    - Empowerment of active citizenship
    - Improvement of governance
    - Supporting local startups and small-and-medium businesses

- Referencing to the *'City as a Platform Manifesto'* signed by 40 major cities across the world in late September 2017, it would be useful to highlight the importance of point 6, 7 and 8 below:
    1. Enable services that improve the quality of life in cities, benefiting residents, the environment and helping to bridge the digital divide.
    2. Bring together both public and private stakeholders in digital ecosystems.
    3. Support sharing economy principles and the circular economy agenda.
    4. Provide ways for local start-ups and businesses to innovate and thrive.
    5. Enforce the privacy and security of confidential data.
    6. **Inform political decisions and offer mechanisms for residents to make their voices heard.**
    7. **Involve the local government in their governance and curation and are built and managed by the most competent and merited organisations.**
    8. **Based on open standards, industry best practices and open APIs to facilitate a vendor neutral approach, with industry-agreed architecture models.**
    9. Support a common approach to federation of data or services between cities, making it possible for cities of all sizes to take part in the growing data economy.
    10. Support the principles of UN Sustainable Development Goal 11: Making cities and human settlements inclusive, safe, resilient and sustainable.

- While it is appreciated that the Report tackled issues largely within the ambit of formulating technological solutions, the needs and aspirations of citizens in Hong Kong’s particular context should be placed at high priority through engagement.

- Specifically, on the point regarding digital divide and inclusiveness (*’Provide support to reduce the digital divide and ensure inclusiveness of smart city development‘*, section 2.4.3. Smart City Strategies, page 20), interaction between marginalised groups of the society with ‘smart city applications’

Smart Mobility

Comments:

1. Intelligent Transport Systems

- To facilitate the availability of city-wide real-time traffic data, real-time schedule and wait times across multiple travel modes, the government must address the “transit data as private property” mindset currently held by private transport operators providing franchised services.

- It is recommended the government provides incentive and makes mandatory requirements for operators to meet data sharing standards with prescribed machine-readable format, in order to facilitate the development of ITS, stimulate innovation of 3rd party developers and benefit commuters with more informed transit decisions. Such data can also enhance the transparency about operations of public transport services and facilitate public monitoring.

- As described in section 3.1.2, the challenge to mandate private companies to share data is paramount. The government should update its statutory framework surrounding franchises by setting out levels of ‘achievement’ for operators, milestones to be met within reasonable and specified timeline, where the government can match or compensate partially the costs of maintaining and making available of such data.

- MTRC as partially government-owned public transport operator, should take the initiative to demonstrate willingness in building an environment conducive to open real-time transit data API towards railway services real time schedule, arrival time, waiting time, station/line incidents, fare schedule, etc.

- It is therefore important that data-sharing should be promoted as corporate social responsibility and not merely compliance issue. The Smart Bus project proposed on page 31 would have much less benefits to wider public if all gathered data is restricted by bus companies as 'private properties' rather than being viewed as raw materials to create public good.

2. All-in-One Transport Mobile Application

- While it is commendable that the Transport Department has been consistently offering new functionalities and improving the service in its online journey planning interactive map and mobile applications, user-friendliness of these 3 applications remains to be improved.

- Following point 1 above, the priority for providing real-time traffic information should be made to open availability to all rather than restricting citizens' choice to only the Transport Department's official applications. Private app developing companies can play major role in improving the services provided by transport applications by offering more choices and flexibility.

- In Portland city, more than dozens of transit planning apps flourish in the market due to its early involvement in opening up real-time traffic data. Hong Kong should move towards this direction and stimulate innovation and support startups/SMEs, and at the same time the government should ensure quality and availability of transport data to be used by developers.

3. Smart Parking, Intelligent Signalised Junctions and Pedestrian Lights

- For the smart parking pilot study, it is agreed that real-time availability and guidance to reach the parking lot can bring tremendous benefit to drivers and lessen traffic congestion in rush hours at roads with high volume traffic flow.

- The difficulty lies in the provision of suitable infrastructure and resources for ongoing maintenance, to ensuring support of electricity and connectivity.

- The current trial program of new-generation smart roadside parking meters should allow the use of mobile payment methods for off-site top-up, such as via smartphone apps and e-wallets.

- For the smart junctions and pedestrian lights proposed as pilot project, monitoring the presence and volume of pedestrians by installing detection sensors or video analysis could pose privacy concerns. The purpose and scope of data collection should be carefully defined and properly displayed to prevent excessive collection and retention of data as well as security breach.

4. Connected Vehicles / Use of Autonomic Vehicles

- It is recommended more financial incentives and testing area, and also temporary licenses to be offered by the government to encourage R&D in localising V2X technologies for application in Hong Kong's context. As the technology could take years to mature, Hong Kong should position itself as a testing ground like the Singapore government, and attract investors to invest in startups with potential in this area.

5. Electronic Road Pricing

- It is encouraging that the government expedites the planning and implementation of trial schemes as suggested in previous consultation exercise for Central area. Roadmap and strategy for future potential expansion of trial schemes should take into consideration of different stakeholders including business vehicle users to garner their support.

- Mobile payment methods for automatic charging and value-added services should be considered alongside in-vehicle devices, smart license plate and wearables.

6. Promotion of Car Pooling and Sharing

- As mentioned in page 31, Singapore's approach in permitting the recovery of cost for car-pooling should be studied alongside the possibility of enhancing current hired-car permit mechanisms to facilitate ride-sourcing service operators and their driver partners to obtain necessary license subject to requirements comparable to taxi drivers. Requirements such as background check, medical check, road and safety training, merit/ demerit point system can create a level-playing field among taxi industry and its counterparts in the private-hire car business.

- The government has previously manifested that premium taxi scheme would address the Hong Kong citizens' enhanced expectation towards quality taxi service. This new franchised taxi service does not preclude the necessity of reviewing the Hire Car Permit, and the Road Traffic Ordinance (Cap 374) which was enacted before the internet-enabled transport modes become commonplace.

- Setting out monitoring and penalty for ride-sourcing service operators who fail to comply with regulations and infringe safety or privacy requirements, can ensure taxi industry operate on similar regulatory environment with platform/online intermediaries, to ensure the safety of passengers.

7. Bike Facilities and Personal Mobility Devices

- Personal Mobility Devices such as e-scooter and e-bike require license yet the use is currently illegal. Yet these low-speed devices could potentially offer citizens last-mile connection from public transport to their homes. The potential of PMDs in complementing short-haul public transport modes and enlarging the service area of mass transit system is studied in other countries.

- In Singapore, PMDs are allowed on public paths such as footpaths, cycling paths and shared paths if they meet certain requirements. Under the Road Traffic Act, those who are found riding PMDs and other "non-compliant vehicles" on the roads can be fined $2,000, and face a jail term of up to three months for the first offence.The offence carries a $300 fine if it is the first offence. All power-assisted bicycles must meet criteria such as a maximum speed limit of 25km/h and a weight limit of 20kg. New enforcement team is set up to take enforcement action against illegal use of PMDs.

- It is recommended that the government to conduct studies into the feasibility of introducing similar statutory requirements to the sales and conduct of using PMDs, and define areas and roads which PMDs could be permitted, and the limitation on speed and weight. Safety training requirements and licenses can also be considered.

- Subject to the safety requirements and results of the trials, permitted areas can be gradually expanded to roads and paths in more districts and areas, such as Science Park, Cyberport, new towns or future NDAs.

- To cope with increasing citizen interest in using bike and PMDs for short-distance commuting, design and development of cycling tracks and the expansion of the existing cycling network should be expedited.

8. Electric Vehicles adoption and charging facilities

- On page 25 section 3.1.2, the Report correctly pointed out that the adoption of Electric Vehicles is not widespread. After the FRT policy changed on 1 April 2017, new electric vehicle sales in Hong Kong are grounded to a halt, with consumers purchasing more internal combustion engine (ICE) vehicles instead of EVs. It is recommended that the government to establish programmes that encourage consumers to switch old, polluting vehicles and encourage consumers to purchase zero-emission vehicles.

- EV charging infrastructure investments have been affected due to uncertainty of businesses. And this has become a negative factor for EV adoption as charging facilities are in high demand. The government should also work with various property developers, property management companies to facilitate installation of more charging facilities to reduce waiting time.

- The government should study the feasibility of road-side EV charging facilities that are common in Europe, and incentivise the adoption of newer technologies for faster charging time.

- The government should also set long-term EV goals and roadmap towards replacing internal combustion engine vehicles, including more incentives for business vehicles, franchised bus companies and minibus operators to switch their fleet to zero-emission vehicles.

Smart Living

Comments:

1. Digital Payments and eID

- According to a white paper released by Google Hong Kong in September 2017, only 42 percent of the respondents consider themselves genuinely digital, and most consumers in the city just focus on the service aspect of digital products, without raising their digital literacy to a higher level.

- More and more e-wallet services have emerged since the Hong Kong Monetary Authority (HKMA) began to grant stored value facility (SVF) licenses to e-wallet providers. Yet most if not all of these digital wallets are not accepted for paying e-government services online or in-person. To facilitate the overall adoption of mobile payment and to bring more convenience to citizens, it is recommended that the government should devise a strategy to broaden the use of mobile payment for public services both online and offline.

- The streamlining of new generation HKID card after 2018 with the proposed Digital Persona and existing digital certificate to increase adoption and broaden the area of usage both online and offline should be further studied to create more seamless user experience for citizens. In particular, a one-stop, mobile friendly government e-service portal allowing citizens to conduct its transactions with the B/Ds without the need of repeated verification, can increase efficiency of business operations.

2. Smart Community Healthcare / Smart Hospital Services

- As aging population create heavy burden on the human resources on the elderly homes, day-care centers and outreach services in community, the government should offer more funding and knowledge transfer to smaller operators and NGOs to adopt technologies for assisted living, safety of elderly, health management and support the caretakers in institutions with very limited resources.

- Programme similar to Technology Voucher Pilot Scheme for SMEs can incentivise the procurement and adoption of Gerontech, and for upskilling of industry workers to use latest innovation in improving their efficiency and lessen their workload.

- With the steering of cross-bureau project team, the government should foster collaboration between NGOs, elderly homes, medical services operators, Hospital Authority etc. to develop end-to-end smart community healthcare and hospital services which enhance the sharing of expertise, understanding of the needs of elderly and to discover unmet needs using technologies.

Smart People

Comments:

1. Cultivate Data Science Expertise / Technology Education

- The government should foster partnership between the IT businesses and universities to establish skills enhancement and upgrade support, and also help the industry trains more specialists with in-demand skills such as app development, data analytics and information security etc.

- Similar to the Singapore GovTech’s programme to groom digital leaders for government digital transformation, the government should consider establishing a Technology Associate Programme to build a pipeline of IT talents, to recruit more local and overseas tech talents in the government and train them into software engineers and data analysts to enlarge the manpower pool.

- And similar to the Singapore's scheme, it is recommended to establish InnoTech Studies Fund of $1 billion over five years to grant Hong Kong permanent resident who are aged 25 an one-off subsidy of $5000 to take part in ICT related courses in trending areas.

- The government should create a Data Science Matching Fund to nurture more data specialists by launching more data analytical courses and establishing a qualification standard.

2. Education and Skill Retooling

- Advancing technology has rendered many skills obsolete. To maintain the competitiveness of Hong Kong, the government should implement measures to assist in the skills upgrade of our workforce.

- The SkillsFuture scheme in Singapore can be a reference model for Hong Kong which the scheme offers a wide range of ICT Massive Open Online Courses, covering data analysis, information security, internet infrastructure and more.

- It is recommended to reform the Continuing Education Fund to allow for Massive Open Online Courses and also it should expand to cover more ICT-related courses to match latest industry demand for digital-savvy workers.

Smart Government

Comments:

1. 5G and broadband connectivity

- The income from auctioning the mobile network spectrum over the past five years amounts to $7.6 billion. It is recommended the government to consider making more proactive use of the income and tap into those resources to create a Next Generation Telecom

Infrastructure Investment Fund to conduct trial projects for the deployment of new telecommunication infrastructures and projects to improve broadband connectivity in rural area.

- Expedite the re-allocation and release of spectrum bands essential for providing 5G telecommunication services.

2. Smart Poles

- Departments should also establish clearer procedures and guidelines to facilitate the installation of telecommunication devices on traditional poles and improve communication, as there has been slow progress and difficulty to obtain approval from different departments such as EMSD.

- A strategy to upgrade existing poles infrastructures and stimulate research and development in local innovation and technology industries should be adopted.

3. e-Government Services

- It is agreed with the Report's proposed approach of improving e-Government services especially the user-friendliness, user experience and the support of agile development.

- The government's TechConnect programme led by the Innovation and Technology Bureau should foster the collaboration with research institutes, universities, tech companies and startups to help improve the government digital services.

- Reference should be made to the Government Digital Service in the United Kingdom, United States, Australia etc, where the agencies set Digital Service Standards which are regularly updated, and develop common framework to assist service delivery, such as making use of common components to help teams build services more efficiently, like GOV.UK Pay and GOV.UK Notify.

- More emphasis should be put on the following: understanding on the user needs; conducting ongoing user research; using agile methods with frequent updates; using open standards and common platforms; identifying performance indicators; and paying attention to security and privacy issues.

- It is therefore recommended that government B/Ds offering e-Government Services should conduct ongoing user research to understand user needs to improve digital services, especially on how to make end-to-end service experience more seamless and convenient to use.

Smart Economy

Comments:

1. FinTech

- The Hong Kong Monetary Authority has announced on 29 September 2017 that it will introduce a series of new initiatives that prepare Hong Kong to move into a new era of Smart Banking, such as Faster Payment System (FPS), Enhanced Fintech Supervisory Sandbox 2.0, promotion of virtual banking, Banking Made Easy initiative, Open API, closer cross-border collaboration and enhanced research and talent development.

- There is a demand for equity crowdfunding to support new business and expansion of startups, and this trend has seen exponential growth in other parts of the world, however, the regulations existing in Hong Kong has not been updated to cope with its development. The government should conduct studies into the feasibility of reviewing laws to cater for equity crowdfunding and related restrictions/requirements of due diligence by the platforms.

- A study has previously pointed out that governments of over 60 per cent of regions across the world will increase investments on and application of blockchain technology in the coming three years, to enable participants to create, store and disseminate information in a highly efficient and reliable manner. By breaking through the existing technology boundaries, blockchain technology can significantly enhance the efficiency of public services, thereby saving public expenditure, and will change the paper-based mode of operation currently adopted by governments.

- Many regions in the world have started exploring the application of blockchain technology in various industries (the financial service industry in particular), such as fund transfer, payment service, exchange and clearing, and information authentication system. On the other hand, the application of blockchain technology is not yet subject to regulation under the existing legislation.

- On the proposed 'Pilot programmes to explore the use of Distributed Ledger Technology (blockchain)', recommendations are as follows:

  (1) assess the potential of blockchain technology in enhancing the efficiency of public services, such as handling tax returns, land registration, voting and issuance of various types of identification documents; formulate strategies to identify priority applications, and roadmap towards more extensive application of such technology;
  (2) review the regulation of the payment and currency exchange activities of digital currencies using blockchain technology;
  (3) measures to promote the application of such technology in the government and commercial organisations; and
  (4) allocate more scientific research funding for blockchain and DLT technologies and strengthen the training of information technology talents with the relevant knowledge;

2. Sharing Economy

- Currently premises that offer accommodation for a fee for any period less than 28 days must be licensed, according to Hong Kong's Hotel and Guesthouse Accommodation Ordinance.

- Yet there has been a surge of listings of short-term rental properties in recent years and this has raised concerns over safety and legality of the practice.

- To cater for surging tourist demands ahead of Olympics in 2020, Japan’s Upper House passed a legislative bill in June 2017, allowing private homes rent out space to paying guests, while limiting total stays to 180 nights a year. The law requires providers of such accommodation to register with local government and allows local authorities to impose their own restrictions.

- The government should consider studying the regulatory regime recently adopted in Japan and Taiwan to regulate short-term rental properties, address the concerns about safety and community views of homeowners, residents, building owners, as well as how to ensure the online platforms are behaving in a just way, and distinguish commercial operations from individuals renting a spare room.

3. Open data

- Hong Kong currently ranks at #24 according to the 2016 Global Open Data Index, and according to its assessment, 5 areas received zero scores: Administrative Boundaries, Company Register, Locations, Government Spending, Land Ownership

- Though the OGCIO has been consistently making effort to improve the open data portal and expand the offering of datasets, there has been much concerns about the quality of data, restrictions imposed in the Terms and Conditions for reuse, and lack of communication with users of data and developers.

- The guidelines and open data principles proposed should put more emphasis on the provision of data about governance and government operation to shed light on government transparency, help citizens understand and discuss public affairs. There is no mentioning to facilitate policy research by encouraging the sharing of data collected in the process of various government-commissioned consultancy studies which are publicly-funded.

- Questions of how to foster a culture of data-sharing among Hong Kong's private sector and build the technical capacity among NGOs and public institutions to better collect, manage and share data, should be the top challenges that need to be solved.

- On page 167 the example of franchised bus companies' operational data, it is agreed that to improve Hong Kong's competitiveness, mandating the release of data through legislation and franchise licensing criteria, as well as providing financial incentive for operators meeting targets.

- It is commendable that the establishment of governance structure and central coordination party to oversee open data policy and its implementation at B/Ds. It is recommended that data related training be provided to government employees to improve their understanding and appreciation for how open data can assist their work. The governance structure should also have the mandate to bring together B/Ds and the open data community to continuously communicate areas of improvement required, and even conduct trial programmes and hackathons to tackle specific policy areas and issues.

- Potential list for opening up more datasets:

  The attached lists are compiled after consulting civil society groups Open Data Hong Kong and Liber Research Community.

Charles Mok

29 September 2017