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Helping Business since 1861

15 February 2017

Mr Dantes TANG
Senior Systems Manager (Smart City) 4
Office of the Government Chief Information Officer
15/F, Wanchai Tower
12 Harbour Road
Wan Chai, Hong Kong

Dear Mr Tang,

Hong Kong Smart City Blue Print Consultancy Study

The Hong Kong General Chamber of Commerce supports the Government's initiative to embrace and adopt technology more widely as an accelerator to develop Hong Kong into a smart city.

We believe that a livable city leverages people-centric and technology-focused solutions, with an aim of increasing efficiency of the city's operation and management, improving quality of life for its citizens and strengthening its economic competitiveness. We welcome the Government's commitment to build Hong Kong into a smart city, and we would like to present our views and recommendations on how to facilitate the "Six Dimensions" of smart city development identified by the Government. Particularly, we put our emphasis on Smart Government and Smart Citizen, as they are of fundamental importance for the development of an innovative and sustainable smart city in all aspects. We also propose some feasible initiatives to drive Smart Living, Smart Economy, Smart Mobility and Smart Environment for Hong Kong, which are elaborated in the enclosed paper, and I hope you find it useful.

Thank you.

Yours sincerely

Shirley Yuen
CEO

Encl.

Hong Kong Smart City Blue Print Consultancy Study

1. The Hong Kong General Chamber of Commerce supports the Government's initiative to embrace and adopt technology more widely as an accelerator to develop Hong Kong into a smart city. Since there is no universally accepted definition of the term "smart city" and the concept has been diversely applied in many world cities, it is not sensible to put forward an eclectic mix of notions broadly for a small but dynamic business centre like Hong Kong. Instead, we should configure Hong Kong's own smart city framework based on our strengths, and choose existing solutions or develop new initiatives to cope with the bottleneck of sustaining our economy. **Given Hong Kong's characteristics of having a high population density and bustling business activities within a small territory, the notion that a smart city should mean a "livable city" would be most applicable to us.**

2. **We believe that a livable city leverages people-centric and technology-focused solutions, with an aim of increasing efficiency of the city's operation and management, improving quality of life for its citizens and strengthening its economic competitiveness.** Although Hong Kong has not been at the forefront of smart city adoption, the Government is on the right track of scaling up the momentum. We would like to present our views and recommendations on how to facilitate the "Six Dimensions" of smart city development identified by the Government. Particularly, **we put our emphasis on *Smart Government* and *Smart Citizen*, as they are of fundamental importance for the development of an innovative and sustainable smart city in all aspects**, and we also propose some feasible initiatives to drive *Smart Living*, *Smart Economy*, *Smart Mobility* and *Smart Environment* for Hong Kong.

Smart Government

3. As different government bureaus and departments will be involved in implementing smart city initiatives, this may represent, to some extent, challenges for the Government to develop, coordinate and implement policies and for private enterprises to easily develop new ideas and implement new initiatives. For example, the installation of new telecommunications infrastructure requires liaison with and permits from several different government agencies, including the Lands Department, Highways Department and Environmental Protection Department. As each of these departments may have its own requirements, policy objectives and operational considerations, the entire process would be quite time consuming. In order to achieve the intended results of the smart city blue print in an effective and efficient manner, **there is a need for the establishment of a high-level designated authority to champion the smart city agenda and ensure integrated policy planning to achieve the objectives of the six smart dimensions. For those smart city perspectives requiring collaborations among departments, e.g. adoption of new Smart Mobility and Smart Environment technologies, interdepartmental committees should be set up to take the lead in driving the implementation of initiatives**. Having one overarching authority supported by working committees to override the bureaucracy would ensure that new policies could be developed and implemented, and vital infrastructure could be installed in a timely manner.

4. A Smart Government should allow greater flexibility of adopting innovative solutions and breaking away from bureaucratic rigidity, and encourage a variety of innovative urban designs while not jeopardizing statutory controls. To achieve this, **the**

Government should identify and prioritize those technological solutions that could bring in quick wins to demonstrate social and economic benefits. For example, efficient transport is crucial for a city to function properly and the impact is apparent to the general public. If such effective solutions as smart apps and smart traffic lights system (to be mentioned later) do not require a positive consent from the community, the Government should act quickly to catch up with other smart cities. **The Government should also review and amend outdated and untimely regulations impeding the adoption of emerging solutions that have been successfully implemented elsewhere**.

5. The success of smart city initiatives depends very much on the availability of easily accessible open source data since they all involve huge amounts of data collection, storage and analytics. **The Government should provide enough encouragement and incentives, and formulate the required legislative framework to facilitate the sharing of data necessary for the implementation of smart city initiatives by stakeholders.** There needs to be a clear understanding of and distinction between privacy of data (which identifies and associates information with an individual or single commercial entity) and use of anonymously aggregated data which can be of great value (and on which all smart city initiatives depend) without jeopardizing the data privacy aspects.

6. To fully utilize mass information, a common and user-friendly platform is needed to share data contributed by the Government, industry players and other stakeholders. We appreciate that the Government has established a one-stop portal (www.data.gov.hk) to host and facilitate the sharing of data. However, these data are usually presented in formats which are not straightforward for third parties to use. The Government should offer data through the dedicated portal with open application programming interfaces ("APIs") to enable the public and business startups to access back-end data for developing applications more easily.

Smart Citizen

7. Without smart people, there is no smart city, as any long-term smart city developments are built upon the investments in talents and technologies, as well as the needs and aspirations of citizens. Singapore launched its Masterplan for IT education in 1997 to lay out a comprehensive strategy for creating an IT-based teaching and learning environment in every school, and recently developed a vision of a data-driven education strategy to make education more immersive and more personally impactful. Many prominent academic institutions around the globe, including the Massachusetts Institute of Technology, have begun to take a bigger role in smart city education by offering courses to help students and professionals get a better grip on smart city solutions. **The HKSAR Government should work with local tertiary institutions to conduct research studies on various smart initiatives, and develop adaptive education programmes and courses to nurture smart city innovators and entrepreneurs**.

8. Education means not only nurturing professionals to develop and maintain a smart city's infrastructures, but also promoting and teaching the general public the knowledge of using them. However, the usual top-down and policy-driven approach, i.e. developing information technology courses and implementing e-learning in schools, and providing funding support to nurture new technologies, may not be able to bring in the most effective results, as the general public is more concerned of their everyday lives and

neighborhoods – housing, employment, transportation and environmental quality than the omnibus smart city concepts. To empower a more productive relationship between a smart city and its citizens, the Government should "**Create a Smart City with Citizens**". While some of the conventional engagement measures such as public consultation, propaganda and education should continue, the participation of citizens must be proactively integrated into the strategic development and implementation process. E-participation, for example, should go beyond supplying citizens with information, but also giving them an opportunity to co-create solutions via interactive and transparent platforms.

9. In particular to those proposals involving heavy investment and/or irreversible consequences such as major infrastructure projects, the Government should conduct a thorough cost-benefit analysis and engage stakeholders to gain social acceptance before proceeding to implementation. Such participatory mechanisms help identify the community's issues and aspirations, generate a sense of ownership by allowing citizens to take part in the design, implementation, monitoring and evaluation of public policy, resolve conflict of interests within the community, facilitate people to understand how to get the best from their environment, and build up consensus. **The Government should play a proactive role in consolidating valuable inputs, addressing hurdles and resolving conflicts among stakeholders**, so as to drive the overall policy framework to realize the vision agreed upon by stakeholders.

Smart Living

10. Utilizing technology is indispensable to the development of a smart city. In particular, information, communications and technology ("ICT"), i.e. wifi infrastructure, Internet of Things ("IoT"), centralised digital systems and the use of big data, will enable a better linkage among multiple initiatives. A smart electricity grid is a good example that demonstrates the essential role of ICT in ensuring a reliable energy supply for the smooth running of a smart city. A growth in the coverage of and applications on wireless and cross-platform technologies will bring improvement to people's living environment, quality of life, sustainability, efficiency and safety of the living city. Examples of smart living initiatives are:

    - To extend the wi-fi hotspots for wider public coverage;
    - To make wider use of smart metering and control solutions to help citizens improve their energy efficiency;
    - To facilitate better community care in our ageing society with remote monitoring and notifications to families and friends for seniors who live independently in the community; and
    - To encourage cost-effective coverage of e-health facilities and nursing care services.

Smart Economy

11. **Smart economy emphasizes the development of new modes of operation, which can foster closer linkage between domestic and global economies.** Although Hong Kong had transformed itself from an industrial economic module to a service economy long time ago, and is promoting the development of financial technologies ("Fintech"), the continued diversification of industries in our economy should be encouraged. In fact, smart economy provides a platform which facilitates the transformation of industries to

more sustainable ones. Some of such facilitating measures are:

- To provide funding or technical assistance (i.e. big data analytics and cloud computing) for businesses to employ smart business solutions, especially for SMEs;
- To promote wider data digitization so as to enable free flow of business/economy related information; and
- To promote the development of e-commerce and Fintech.

Smart Mobility

12. **The enhancement of the efficiency and service quality of urban transport is essential in the pursuit of smart mobility.** In view of this, clean and non-motorized transport options and a public transport/walkability regime should be encouraged through the application of ICT traffic management technologies. Moreover, as many advanced vehicle technologies and solutions have already been adopted in other places, Hong Kong should keep pace with these global smart trends. Some potential policy initiatives are:

    - To develop smart traffic light systems to improve traffic flow;
    - To open data for apps development and data analytics to inform users of traffic flow, traffic congestion, availability of parking facilities and queuing time, to help users locate vehicles after parking, and to remind users for payments and fees for public services;
    - To boost the popularity of electrical vehicles by installing more public and private charging facilities;
    - To give more incentives and supports to developers, smart mobility service providers and users for trial running innovative transport solutions in new development areas, i.e. bike sharing and car sharing; and
    - To create open platforms for studying and testing autonomous diving and vehicle platooning technologies.

Smart Environment

13. We need a livable city agenda covering energy efficiency, waste management, improved air and water quality, abundant recreational facilities and open space, green buildings and sustainability. To demonstrate the environmental and social benefits of a smart city, **the Government should speed up various smart initiatives to construct a livable and people-oriented community**. Examples of such smart environmental initiatives are:

    - To develop greener, cheaper and cleaner high-rise construction with the aid of intelligent engineering and innovative technologies;
    - To construct smart buildings with smart energy management systems; and
    - To install renewable energy facilities and demand response systems where feasible.

Conclusion

14. If Hong Kong is to remain attractive as a place to live and work, it should be doing its utmost to harness technology as a means to fulfill such aspirations. We understand that this consultancy study is to map out short, medium and longer term measures up to 2030

for developing Hong Kong into a smart city. The business sector is looking forward to working further with the Government to lay down a solid foundation with specific strategies, development plans and concrete actions to enhance our living and working environment through public-private collaboration.

HKGCC Secretariat
February 2017