Specific Feedback to

2014 Digital 21 Strategy -

Public Consultation

Submitted by

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Specific Feedback to the Consultation Paper

Our key recommendation:

I. Proper Governance Body
    For a large multiple-year ICT driven initiative related to many industries, Hong Kong will require a better governance body to look after "Smarter Hong Kong, Smarter Living", while OGCIO can look after the execution of the initiative, establishment of a strategic level bureau to look after long term development of innovation industries in Hong Kong is essential.

II. Proper Benchmarking
    Substantial investment will be required to implement the 2014 Digital 21 Strategy, proper benchmarking structure should be put into place to measure the anticipated outcomes for such investment and also track the progress of Smart City development in Hong Kong. We recommend evaluation and then adoption of a proper benchmarking framework such as the Global Livable Cities Index for the government's consideration. A proper benchmarking is also a core component of proper governance.

III. Collaborative R&D effort
    In our opinion, Hong Kong is clearly behind in Smart City R&D effort in term of both investment and involvement. The government needs a mind change in term of role of R&D in the future of Hong Kong, and consider the values of Smart City innovation can bring to Hong Kong as a whole, and should put serious R&D investment behind "Smarter Hong Kong, Smarter Living" for just for short term, but for longer term development of Hong Kong.

    In addition, collaboration among government, academic and industries for R&D is weak in Hong Kong. While we see collaborative innovation around Smart City, in particular the idea using the city as a living laboratory is happening in NYC, London, Singapore and Mumbai, we do not see focused Smart City research in any of the universities in Hong Kong. If Hong Kong is serious of Smart City development, the government has to intervene and play a major role in driving the collaborative R&D effort for Smart City in Hong Kong.

IV. Review on Information Security and Freedom

    A comprehensive review on information security and freedom is necessary. Covering government, financial, telecommunication and other sectors, the review should include risk of our key infrastructure, protection on the Internet and personal data privacy, computer-related crime and electronic transactions ordinances, intellectual property, and awareness of SMEs.

V. Support to SMEs

Among the businesses in Hong Kong, SMEs is the sector which will require the most support from the government in term of adopting ICT. Training, funding and cloud services have values for SMEs. However, we believe that the most effective way to attract SMEs to adopt ICT is to allow them participating government procurement by designing special policy and services enabled by ICT for SMEs in Hong Kong. The government can refer to the approach taken by NSW government as a starting point and design a proper scheme to lower the barrier of entry for SMEs participate in government procurement.

This annex provides feedback to the vision of "Smarter Hong Kong, Smarter Living", and six strategic trusts to achieve the vision and all 19 action areas under respective strategic trusts described in the consultation paper. We present our feedback in table format following the structure of the consultation paper to make it easy for readers to understand our opinions for the content presented in the consultation paper.

The Consultation Paper	Our Feedback
Chapter 1: A Sound Foundation Key Ideas: • Hong Kong's forerunner in using ICT by international ranking • Hong Kong has an excellent and affordable ICT infrastructure	We agree that Hong Kong is still a forerunner in using ICT and we have advantages in infrastructure which Hong Kong has been carried on from its successes in the past. At the same time, we believe that Hong Kong is at risk of lagging behind due to many factors including complacency. We worry that Hong Kong has lost some of its advantages to its neighbouring cities in the recent years. If Hong Kong does not act quickly, with proper strategy, and follow through execution, Hong Kong will lose in the race, to Asian cities like Singapore, Seoul and Shanghai. In particular, Hong Kong's R&D expenditure is so much lower than Singapore and Korea, which is a strong indicator that Hong Kong has not been paying attention on innovation driven economy in the recent years.

Chapter 2: Smarter Hong Kong, Smarter Living	We agree that "Smarter Hong Kong, Smarter Living" is a good vision for make Hong Kong a better Smart City as well as a proper theme for the fourth phase of Hong Kong's Digital 21 Strategy since its start and subsequent review in 2001, 2004 and 2008 respectively.
Key ideas: • The vision of "Smarter Hong Kong, Smarter Living" • Latest technologies including cloud computing, big data analytics, internet of things and wireless and multi-platform	We believe that Smarter Living is a good theme, if complement with proper contents, will create new rooms of urban innovations from economic, social and technological perspectives. We will provide more insights on our views on Smart Living in later part of this paper. We agree that cloud computing, big data analytics, internet of things and wireless and multi-platform are the latest and evolving technologies that will have huge potential for applications. However, it is critical to go down to the next level of details, in finding how these technologies that can be applied, enhanced and further innovated in the context of urban living, not just bring better living experiences to Hong Kong people, but generate economic values, so that Hong Kong can grow and sustain its leadership as a Asian Global City.

Chapter 3: Empowering Everyone	Empowering Everyone is the first of the four strategic trusts to materialize the vision of "Smarter Hong Kong, Smarter Living". We agree very much that the inclusive approach to develop Hong Kong further because of few reasons:

Key ideas
 	
• Free and User-Friendly Digital Identity (ID)
• City-wide Wi-Fi for the public and visitors
• Broadband and Wi-Fi access for schools to drive e-Learning
• Programming in every Child's education
• ICT as a tool to support underprivileged groups
	1. Hong Kong has to take care interests of different stakeholders if it wants to maintain its status quote as a global city
	2. Hong Kong is facing tremendous social tension due to
	   a. the economic gap between the "rich" and the "poor"
	   b. the political gaps between the "pro-government" and the "pro-democracy"
	   c. the social gap between the "new hongkonger" and the "old hongkonger"
	3. Hong Kong, like many other cities is facing worsening challenges of ageing population , if Hong Kong does not address this challenge to allow ICT play a role in taking care of ageing population, Hong Kong will face manage more issues in term of shortage of workforce, higher healthcare cost and social issues between the "young" and the "old" by 2041, at which one third of the Hong Kong population will be above 65 years old.
	
	Under the strategic trust, there are five action areas stated in the consultation paper:
	
	a) Free and User-Friendly Digital Identity (ID)
	b) City-wide Wi-Fi for the Public and Visitors
	c) Broadband and Wi-Fi Access for Schools to Drive e-Learning
	d) Programming in every Child's Education
	e) ICT as a Tool to Support Underprivileged Groups
	
	We agree on these five action areas with additional input on the following:
	
	• These five action areas seem to be very ICT infrastructure focused, additional consideration is also required for ICT applications. To us, Smart City is not just about the hardware of the city but more importantly the software of the city. We will elaborate this in later part of this paper.
	• In Free and User Friendly Digital Identity area, it is mentioned in the consultation paper that the provision of free digital certificates to all Hong Kong citizen would be an action under consideration. Learning from Hong Kong's own experience in using digital certificates in the past, in particular its current low take-up rate, our concern is that digital certificate is not known to be very user friendly, its applications incur many user-end effort such as installation of the digital certificates. The situation will be gotten very complicated as many of us are using multiple digital devices. Therefore, we strongly suggest a careful study and evaluation of different options available for offer the free and user-friendly digital identity to every Hong Kong citizens. In our opinion, user friendly technology to enable seamless services consumption with proper security measures is itself a key technology challenge which will require major R&D effort. Instead of quickly adopting one technology option over the other, Hong Kong should consider to be a test ground for different technology options collaborating with industry solution provider and academic researchers prior to massive deployment.
	• In ICT as a Tool to Support Underprivileged Groups area, we urge the bureau to pay extra attention to the trend of ageing population, and study the needs of Hong Kong and Hong Kong people, to understand the specific challenges that Hong Kong will be facing, then develop a separate and target action area to address this ageing population challenges. We believe that there is a possibility to Hong Kong can become a leader in Asia Pacific silver economy that is estimated to be US$3 trillion by the year 2017.

Chapter 4: Igniting Business Innovation Key ideas: - Establishing Innovative Platforms - Public Sector Information as Default - SME Cloud Services	Igniting Business Innovation is the second strategic trust that consists of three action areas: f) Establishing Innovative Platforms g) Public Sector Information as Default h) SME Cloud Services The Establishing Innovative Platforms area aims to address the fact that Hong Kong has been lagging behind in R&D comparing its neighbouring economies. However, if Hong Kong SAR government simply leaves the R&D responsibility mostly to the higher education sector, to transferring highly valuable assets from academic research to commercial sector, as illustrated in the consultation paper, the chance that Hong Kong can play a catch up in the game of innovation will be slim. We see Hong Kong's urgent need to focus into the innovation driven economy. To make it happen, the Hong Kong SAR government has to rethink its overall strategy and approach. In particular, the establishment of separate policy focused bureau directly looking after technology, innovation and future development is a critical and initial part of the overall strategy. Korea is very successful in last the decade in grow its economy and influence to the word through innovation driven by world class electronic appliances and k-pop. To drive innovation driven economy, formal Ministry of Education, Science and Technology was divided and restructured, while Ministry of Education keeps its focus on Education matters, the Ministry of Science, ICT and Future Planning is created to look after its creative economy. In our opinion, Hong Kong needs to establish a new and dedicated government bureau to look after innovation and technology matters. In term of R&D investment, Hong Kong is also behind its peer in the region, Singapore government had allocated SGD135M for National Innovation Challenge Land and Livable City from 2014 to 2018. Public Sector Information (PSI) as Default action area, in our understanding from the consultation paper, is Hong Kong's initiative to Open Data led by open up of public sector data. We strongly agree that Open Data is an important underlying data infrastructure required for development of innovative urban solutions using ICT such as apps. In term of government's effort make data available to the public through PSI, Hong Kong still has in long way to go as comparing the number of data set available in data.one.gov.hk and the leading Asia leaders in Open Data. For example, there are 84,509 datasets and 241 APIs available in data.go.ko SME Cloud Services is a good idea but how SMEs in Hong Kong can be actually benefited from cloud services will require a lot of in-depth studies. In our opinion, other than better ICT infrastructure and common ICT applications available to the mass, SMEs in Hong Kong did not gain special benefits from the development of ICT comparing to large business corporations. In the world of Cloud services, there is no geographical boundary of services offering and competition, ability to deliver unique features and values appropriate to local SMEs will be a key success factors for the envisioned SME Cloud Services. In our opinion, the government should offer better support to allow SMEs to participate in government procurement through e-Services or Cloud Services. Australia NSW government had designed a special procurement framework for SMEs, to lower the barrier to entry for SMEs participate in government procurement which is usually require formal and heavy documentation and long process cycle. In their scheme, they also design supported helpdesk to allow SMEs to use government procurement website. This is in fact very practical approach and actions which will benefit SMEs and also offer SMEs the incentive to adopt ICT in their day to day operations. In later part of this paper, we will illustrate our ideas in getting SMEs to better participated in innovation driven economy based on our concepts iCity:iHong Kong.

Chapter 5: Supporting a Thriving ICT Industry	Supporting a Thriving ICT Industry is the third strategic trust and the core one for Hong Kong ICT practitioners, which contains of five action areas:
Key ideas • Supporting the Startup Ecosystem • ICT Talent Development • Centre of Excellence for Multi-platform Apps • Centre of Excellence for Creative Media • Data Centre and Cloud Computing Hub • Closer Collaboration with the Mainland	i) Supporting the Startup Ecosystem j) ICT Talent Development k) Centre of Excellence for Multi-platform Apps l) Centre of Excellence for Creative Media m) Data Centre and Cloud Computing Hub n) Closer Collaboration with the Mainland As members of Hong Kong ICT professionals, we agree that all these action areas will help the development of ICT sector, and allow it to continue to contribute to the development of Hong Kong. Moreover, speaking from worldwide phenomenon of economy driven continuous breakthrough of ICT and our own experiences, from personal computer, to internet, to e-commerce, to mobile computing, and to social media, ICT innovations and successful ICT corporations has change the way many aspects of our living. We believe ICT is not just enablers for change but also the driver for the change. Therefore, Hong Kong, in particular, Hong Kong ICT sector should not constraint our goal only to thriving the industry, but aiming at a higher goal, that is to leap forward Hong Kong ICT and other related innovation driven industries as we building a Smarter Hong Kong, we will present our ideas later part of this paper. China is known to the world today, invest massively into its urbanization effort, most of China cities has some sort of Smart Cities initiative. If Hong Kong is able to manage the "Smarter Hong Kong, Smarter Living" initiative well to deliver great outcomes, many cities from China will be benefited from the Hong Kong experiences, and the innovations and solutions developed by Hong Kong ICT practitioners will have the largest Smart Cities market there in China.

| Chapter 6: Transforming and Integrating Public Services

Key ideas:

- Multi-platform Government Services
- Integrated Two-way e-Services
- Paperless Solutions and Collaborative Platforms
- Smarter City Infrastructure | Transforming and Integrating Public Services is strategic trust focusing on ICT development in Public Sector with four action areas:

o) Multi-platform Government Services
p) Integrated Two-way e-Services
q) Paperless Solutions and Collaborative Platforms
r) Smarter City Infrastructure

Multi-platform Government Services action area, according to the consultation paper, will take the "multi-platform by default" approach, to make government services available across different e-Channels. In our opinion, the Hong Kong public sectors have been doing an excellent job in providing government services via mobile apps. Many of these apps are very user friendly and able to support multiple channels, combining features of apps, multi-media and even game concepts. Among all platforms, we advocate that Hong Kong to emphasize on mobile apps, to extend our leads in mobile public services, create a strong culture of using apps in our population, and embed other content, daily living knowledge and even Hong Kong culture into our apps, to innovate a new way of living. We believe this should be the biggest substances behind "Smarter Hong Kong, Smarter Living", we will elaborate this idea in later part of the paper.

Integrated Two-way e-Services action area highlighted the importance of collaboration among government department to achieve personalized e-services in the joined-up approach. In our opinion, taking a whole-of-government approach to deliver joined-up services is another critical success factor for "Smarter Hong Kong, Smarter Living". Having a proper governance structure to look after the joined-up approach is not a nice to have but necessary step that the Hong Kong SAR government has to take action. Again, we believe that having a new and dedicated government bureau for innovation and technology development will be a way to make this happen.

Paperless Solutions and Collaborative Platforms has been the direction followed by Public Sector ICT development over the years, and there had been many good success stories.

Based on the details in consultation paper, Paperless Solutions and Collaborative Platforms will focus on document exchange, and Smart City Infrastructure will focus on interconnectivity of sensors in urban environment.

In our opinion, Multiple-platform Government Services, Paperless Solutions Collaborative Platforms, Smart City Infrastructure, Public Service Infrastructure (PSI) are closely related to each other from architecture perspective. In this important to have dedicated team of ICT architects with different specialties to look after the Smart City Architecture for Hong Kong from different perspective.

This team of architects will need to look after devise a holistic architecture for Smarter Hong Kong, it has consider the architecture decisions at different levels including sensors, network, media content, data, information, business process, application, analytics, service channel and end user experience.

It is important to be aware that new concepts like Metro Operating System, a kind of city level operating system for devices are evolving to bring the interoperability of ICT system and components working together. These are in fact the latest and hottest research topics related to Smart Cities.

New York, London, Mumbai and Singapore and many more cities has started their journeys to use their cities as living laboratories for innovation. In our opinion, Urban Science will become an important academic discipline that will bring many new concepts and innovations to the world. Hong Kong should take "Smarter Hong Kong, Smarter Living" to a new level, have higher goal in mind to create an initiative for collaboration among our people, industries, universities and government, to make Hong Kong a better city for living. |