For information on
17 July 2015

**Legislative Council Panel
on Information Technology and Broadcasting**

**Facilitating a Digital Economy**

**Purpose**

This paper updates Members on the progress of initiatives to facilitate a digital economy.

**Hong Kong's Information and Communications Technology (ICT) Environment**

2.      Hong Kong's world-class ICT infrastructure and open environment are conducive to the development of a digital economy.   As of 2013 the ICT sector, with some 17 000 business establishments, generated business receipts and income amounting to HK$1,694 billion, representing 6.6% of our GDP.   Hong Kong has consistently performed well in international ICT rankings.   We continue to rank first globally in 2015 on "technological infrastructure"[1].   We are the safest place in Asia for setting up data centres.   Our average peak Internet connection speed of 92.6 Mbps is the second fastest worldwide, and our average connection speed at 16.7 Mbps is the third in the world[2].   Internet penetration in Hong Kong is high, with household broadband and mobile penetration at 83.4%[3] and 233.3% respectively.

3.      The Government works closely with the ICT industry and the academia to facilitate the development of a vibrant digital economy and reinforce Hong Kong's position as a regional ICT hub.   In the past year, we continued to focus on providing infrastructural and institutional support with a view to facilitating SMEs to make the best use of ICT to develop

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[1] According to World Competitiveness Year Book by International Institute for Management Development.   Hong Kong has been ranked first in technological infrastructure in the same study for five consecutive years since 2011.

[2] According to the "State of the Internet" report for the 1st Quarter, 2015 published by Akamai.

[3] With high-speed 4G services gaining popularity in recent years, some households in Hong Kong use mobile to access the Internet in lieu of fixed broadband.   As a result of this "fixed-mobile substitution" effect, there is a slight downward trend on broadband penetration since its peak rate at 86.8% in March 2012.

and expand their businesses; we forged ahead with nurturing talents and fostering start-ups; and encouraged collaboration through various means. The major initiatives are highlighted in the ensuing paragraphs.

**Infrastructural and Institutional support for SMEs**

4.      According to the "Report on Survey on Information Technology Usage and Penetration in the Business Sector for 2013" published by the Census and Statistics Department in March 2014, about 93.9% of the Medium-sized Establishments used personal computers while the parallel figure for Small-sized Establishments was 72.2%. We expect this percentage to have increased in 2015.

*Promotion of Cloud Computing*

5.      ICT enables SMEs to enhance operational efficiency, create business opportunities and improve services.  In particular, the advent of cloud computing allows SMEs to adopt ICT solutions commensurate with their scales of operation at low start-up costs.  With minimal requirements for technical know-how and manpower resources for maintenance and upgrade of ICT systems, cloud computing is especially suitable for SMEs. To facilitate the adoption of cloud computing, we have set up an InfoCloud portal, www.infocloud.gov.hk, to provide information, user guides and best practices on cloud computing.  We also launched an SME Cloud Promotion Campaign in December 2014 to provide free training on cloud computing and organised promotional activities to encourage SMEs to adopt cloud computing to enhance their business operations.  The campaign was satisfactorily completed in May 2015, with over 3 500 SME practitioners participating in the training courses.  The training materials, together with other reference information on cloud computing, are available at the Campaign website for use by a wider audience.

*Sector-specific Programme*

6.      Government has implemented a Sector-specific Programme (SSP) and an IT Training Programme (ITTP), providing funding support to 25 projects in 17 sectors since their launch in 2004.  As at June 2015, 24 of them have been completed, bringing benefit to over 38 000 SME practitioners.   The latest project, namely "Security Cloud Human Resources Management System", which is a cloud computing application to facilitate SMEs in the security sector to perform paperless recruitment and other human resources management functions, commenced

development in September 2014 and will complete in mid-2016. We will launch a new round of SSP in July 2015 to provide funding support for the development of trade-specific applications and solutions to encourage and facilitate SMEs to adopt ICT.


**e-Commerce Development**

7.      e-Commerce is developing rapidly in recent years. Hong Kong's robust ICT infrastructure, sound legal framework, convenient e-payment services and our strength as a regional logistics hub are conducive to e-commerce development. With such enabling factors, Hong Kong offers a favourable environment for e-commerce to flourish. The Government will continue to encourage and facilitate businesses to take advantage of the opportunities of doing business online and engaging in e-commerce. In April 2015, we collaborated with Alibaba and organised the "Hong Kong e-Commerce Business Competition" for SMEs to showcase their outstanding e-commerce strategies, operations and experiences. A forum on "B-to-B Export e-Commerce Business Tips" was also organised to share business tips on e-commerce.

8.      To facilitate the further development of e-commerce in Hong Kong, an Expert Group on e-Commerce has been established under the Working Group on Manufacturing Industries, Innovative Technology, and Cultural and Creative Industries of the Economic Development Commission. The Expert Group comprises members from the e-commerce sector, local businesses as well as relevant Government and public bodies to study the development potential of e-commerce in Hong Kong in a focused and comprehensive manner with a view to making specific recommendations on supportive policies and measures.


**Data Centre Development**

9.      Data centres constitute an essential part of ICT infrastructure in a knowledge-based economy. The Government continues to support the development of data centres, especially high-tier ones, in Hong Kong as the backbone to business operations. Over the years, the Hong Kong Science and Technology Parks Corporation has provided some 19 hectares of land in Industrial Estates for data centre development. The Tseung Kwan O Industrial Estate now houses a cluster of 11 high-tier data centres. We have also earmarked three hectares of land in Tseung Kwan O outside the Industrial Estate for high-tier data centre development. The first one-

hectare site was sold through public tender in October 2013. We are now working with relevant Government departments to make available the second one-hectare site for data centre use in 2016.

10. We launched two incentive measures in June 2012 to encourage the conversion of eligible industrial buildings for data centre use and development of high-tier data centres in industrial lots. Responses from the industry have been encouraging. We have received 16 applications (14 for conversion and 2 for development). Twelve applications have already been approved and an ineligible one has been withdrawn by the applicant, while the remaining three are being processed. The two incentive measures will expire by March 2016. We are reviewing the effectiveness of and continued need for these measures.

## Nurturing talents and fostering start-ups

*Cultivating IT Talents in Schools*

11. With the widespread use of ICT in practically all business and social sectors, the local ICT workforce is growing in tandem, by 5.5% from around 78 700 in 2012 to 83 000 in 2014[4]. The Government continues to foster closer academia-industry collaboration to create an environment where a well-qualified ICT workforce can flourish and meet the needs of a digital economy. We continue to implement measures to facilitate the development of ICT manpower, such as providing timely and comprehensive information about IT study, career and profession to our stakeholders through career talks and exhibitions and IT Student Corner in the homepage of the Office of the Government Chief Information Officer (OGCIO); promoting a positive image and contributions of the ICT profession towards Hong Kong's social and economic development; and showcasing students' innovative ideas in the use of ICT through the annual Hong Kong ICT Awards and the International IT Fest, etc.

12. In the 2014-15 Budget, the Financial Secretary proposed to incorporate enrichment programmes in secondary schools which are outstanding in IT education to cultivate young IT professionals and even entrepreneurs to meet the development needs of a digital society. A total of $75 million has been allocated to implement on a pilot basis a two-pronged Enriched IT Programme in Secondary Schools to be launched in the 2015/16 school year for eight years until 2022/23. The Programme

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[4] Report on 2014 Manpower Survey of the Information Technology Sector by Vocational Training Council

comprises **Enriched IT Classes** in selected secondary schools and **Enriched IT Activities** to be organised by secondary schools.

13.     A Steering Committee comprising representatives of ICT faculties of tertiary institutions and renowned ICT corporations was set up to steer the implementation of the programme.     In February 2015, a Request for Proposals (RFP) was issued to invite all government-funded secondary schools adopting local curriculum to submit proposals to run Enriched IT Classes.     A total of 25 proposals were received and eight schools, at **Annex**, have been selected by the Selection Panel as partner schools to start running IT class at Secondary 2 in the 2015/16 school year.     Two of the eight schools, namely Shun Tak Fraternal Association Yung Yau College and Pui Ching Middle School, will also run IT class at Secondary 4 in the 2015/16 school year.

14.     As for Enriched IT Activities, we will issue Request for Proposals in the latter half of 2015 to invite interested secondary schools to organise some 30 IT activities in the 2015/16 school year to foster a pro-IT atmosphere and stimulate interest in IT in the school community. Interested secondary schools may partner with tertiary institutions, industry bodies or commercial organisations to run IT activities for students.

*Cyberport's Support for Startups*

15.     Apart from nurturing ICT talents in schools, the Government also aims to foster the development of technology startups by providing support for aspiring entrepreneurs.     In this regard, Cyberport implements a variety of support programmes.     Under the Cyberport Creative Micro Fund, seed funding is provided for the development of innovative ideas into prototypes. Cyberport also runs an incubation programme providing fledgling startups with comprehensive financial, technical and business advisory supports. To help more mature startups secure a firm footing in the market, Cyberport launched the Cyberport Accelerator Support Programme last year to provide financial assistance for its incubatees and alumni to participate in local and overseas accelerator programmes, which offer guidance on overseas expansion and fundraising.     Details of Cyberport's efforts in nurturing technology startups were covered in our report submitted for discussion at this panel on 11 May 2015 (LC Paper No. CB(4)888/14-15(03)).

*More Support for Technology Startups*

16.     In recent years, the local technology startup scene is flourishing.

There is no lack of successful startups who have won renowned local and international awards, or thrive in local and overseas markets. OGCIO implements a multi-pronged approach to support the development of tech startups in Hong Kong.

17.     To provide support for fledgling startups, OGCIO launched an interactive and multi-faceted portal known as iStartup@HK in March 2014. It provides a comprehensive range of practical information on incubation programmes, co-working space, as well as various loan and funding schemes.   The portal also provides templates of various business and legal documents, including the Incorporation Form from the Companies Registry, and examples of successful applications for funding and awards. Moreover, the portal also features a comprehensive event calendar of all major startup events and provides updates on the startup community. Apart from providing information for startups, the portal also serves as an online networking platform for startups to promote their companies and products, giving them an additional channel for reaching out to investors and other business partners.   As at June 2015, the portal has over 390 registered users, of which around 100 startups have uploaded their companies' profiles.   The average number of page visits has reached 12 300 per month.

18.     To further enhance support, we offer online-to-offline opportunities for tech startups to showcase their products at large-scale exhibitions, such as International ICT Expo and Entrepreneur Day organised by the Hong Kong Trade Development Council and the Digital Life Carnival (which is part of International IT Fest 2015), to promote their products to investors and the general public.   The startup community responded well to these showcasing opportunities.   Given the positive feedback, we will continue to explore more online-to-offline events for startups.

**Collaboration**

*Collaboration with the Mainland*

19.     The Government continues to work closely with the Mainland to facilitate cross-boundary e-commerce, promote technology collaboration and exchange, and open up more Mainland business opportunities for the local ICT industry.

20.     With regard to facilitating cross-boundary e-commerce, Hong Kong and Guangdong jointly established the standing arrangement for the

mutual recognition of electronic signature certificates issued by the two places in August 2012. Certification authorities (CA) in the two places, with approval by their respective regulatory regimes, can issue electronic signature certificates with mutual recognition status for use in cross-boundary transactions, thereby facilitating secure e-commerce between Hong Kong and Guangdong. A number of CAs in both places have been approved to issue electronic signature certificates with mutual recognition status. They are consolidated in a Trust List which sets out the details and gives effect to the mutual recognition status of such certificates. The Trust List has been promulgated simultaneously in Guangdong and Hong Kong on 10 July 2015.

21.     On technology collaboration, the Government continues to work with Guangdong to drive the development and adoption of cloud computing. In July 2012, OGCIO and the Economic and Information Commission of Guangdong Province (GDEI) jointly established the "Hong Kong/Guangdong Expert Committee on Cloud Computing Services and Standards", with a view to promoting the adoption and development of cloud computing, as well as nurturing cloud computing talents of the two places. In December 2014, the Expert Committee published the Hong Kong/Guangdong Practice Guide for Procuring Cloud Services. The Practice Guide aims at assisting organisations, especially SMEs, in both Hong Kong and Guangdong to appreciate the benefits brought about by cloud computing, and understand how to assess and handle issues arising from the adoption of cloud computing in business operations. We will continue to promote the adoption of cloud computing standards and best practices, and facilitate sharing and exchange among cloud experts of both places.

22.     We actively participate in or jointly organise with Mainland counterparts conferences and forums in smart city, Internet of Things, e-commerce, cloud computing and other emerging technologies. We will join hands with GDEI to organise a forum for ICT practitioners of the two places to share knowledge and experience on smart city initiatives and cross-boundary e-commerce on 30 July 2015.

23.     We regularly participate in major Mainland ICT events to facilitate the local ICT industry to access the Mainland market. In May 2015, OGCIO led a delegation to participate in the 19th International Soft China in Beijing and set up a Hong Kong Pavilion for exhibitors from Hong Kong to showcase their innovative ICT products and services and to explore business opportunities in the Mainland. Through our facilitation, Cyberport has established strategic partnership with renowned ICT

corporations in the Mainland to provide training to local ICT talents and to promote Hong Kong's mobile apps to the Mainland market.

*Collaboration with the Industry*

24.    To match SMEs' requirements of ICT solutions with service offerings of local ICT companies, OGCIO organised a series of events under the brand name of 「中小企和 IT 人有個約會」, which features short one-on-one exchange sessions between small-scale IT companies and SMEs to discuss how ICT solutions can address SMEs' business needs. These sessions provided opportunities for local ICT companies to seek business collaboration with potential clients.    Further to our report last year, two sessions were organised for the catering sector and the manufacturing and logistics sectors in December 2014 and April 2015 respectively, with a total attendance of 118 participants from 41 SMEs and 35 ICT companies.    Participants found these exchange sessions useful.    We will organise such exchange sessions regularly through a sector-specific approach to promote wider adoption of ICT and innovative solutions among SMEs.    The upcoming sector-specific session will be held in August 2015.

25.    In April this year, we collaborated with five local trade chambers and associations to organise a "Trade Chamber Series" in this year's International IT Fest to share insights on how to make use of latest technologies such as retailing technologies, cloud computing, digital media marketing, Internet of Things, enterprise resources planning (ERP) solutions, etc. to enhance SMEs' operational efficiency and create business opportunities.

*Collaboration with Technology Partners*

26.    In April 2015, OGCIO collaborated with technology partners (including Cyberport, Science Park, Hong Kong Productivity Council and Hong Kong Trade Development Council) and the local ICT industry in staging Hong Kong's third International IT Fest (IT Fest).    With 52 events including a number of high profile and renowned international ICT events as well as events for the community and students, the IT Fest has successfully show-cased Hong Kong's vibrant development and achievements as a leading ICT hub in the region.

27.    IT Fest 2015 registered a total participation of more than 132 000. Feedback from the industry about IT Fest 2015 was positive and the local ICT industry had actively participated in the 16-day IT Fest.    This year's

IT Fest had been a useful platform for the local ICT industry and overseas experts to share experience, exchange insights and foster collaboration. Riding on the success of this year, we are planning for next year's IT Fest to be held in April 2016.


**Advice Sought**

28.     Members are invited to note the progress made in various industry facilitation initiatives.




**Office of the Government Chief Information Officer**
**Commerce and Economic Development Bureau**
**July 2015**

## Partner Schools for the Enriched IT Class Programme

| Partner School | School Type |
|---|---|
| Shun Tak Fraternal Association Yung Yau College | Aided |
| Pui Ching Middle School | Aided |
| St. Paul's Convent School | DSS |
| Tin Ka Ping Secondary School | Aided |
| Christian Alliance SW Chan Memorial College | Aided |
| The Y.W.C.A. Hioe Tjo Yoeng College | Aided |
| Cheung Sha Wan Catholic Secondary School | Aided |
| Pak Kau College | DSS |