For discussion on
10 June 2008

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

## Progress Report on the 2008 Digital 21 Strategy

**Purpose**

This paper updates Members on the latest progress on the implementation of initiatives under the 2008 Digital 21 Strategy, highlighting the major milestones and the benefits that the initiatives have brought to citizens. To take forward the Strategy, we propose to develop Statements of Desired Outcome (SDOs) for each of the five action areas under the Strategy. Members' views are sought on the draft SDOs in paragraph 62.

**Background**

2.      The Office of the Government Chief Information Officer (OGCIO) provides regular updates to Members on the implementation of the Digital 21 Strategy.   We last briefed Members on the progress of implementing the Strategy in July 2007.   The 2008 Strategy was officially released in December 2007.

3.      We have made good progress on the five action areas under the latest Digital 21 Strategy.   This paper highlights the major progress and reports the changes in a number of key indicators of Hong Kong's development in information and communications strategy (ICT)[1].

## Action Area 1: Facilitating a Digital Economy

*Continued ICT investment*

4.      The Government continues to invest substantially in information technology (IT) in all areas.   In 2006-07, Government spending on IT amounted to HK$3.9 billion. The latest revised estimate for Government IT

---

[1] ICT refers to all technologies and applications that involve information processing and/or exchange over communication networks, including the internet.   The paper also adopts the term information technology (IT) which is generally used interchangeably with ICT by the industry, in the naming of specific programmes or projects.

spending in 2007-08 is HK$4.7 billion[2].   Development of the e-government programme is reported under the action area "enabling the next generation of public services".

5.         The Innovation and Technology Fund (ITF)[3] continues to provide support for innovative projects in both the public and private sectors.   In 2007, the ITF provided a total of HK$501.6 million to 178 projects, of which half of the funding was provided to ICT-related projects.   Examples of ITF funded ICT projects in 2007 include developing technologies for digital TV set-top box, power saving light-emitting diode (LED)-based street lamp, power management integrated circuits for portable consumer electronics such as PDAs and mobile phones, and technologies for interactive TV which facilitate the delivery of interactive contents over the Internet.   In 2008, the ITF will continue to fund ICT projects which will contribute to the innovation and technology upgrading and development of our economy.

*Fostering cross-boundary cooperation in technology and innovation*

6.         Under Supplement IV to Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), Hong Kong service suppliers are allowed to set up wholly-owned enterprises in the Mainland to provide software implementation services and data processing services with effect from 1 January 2008.   Under the work of the Hong Kong/Guangdong Expert Group on Co-operation in Informatisation, OGCIO and the Department of Information Industry of the Guangdong Province signed the "Arrangement on Strengthening Hong Kong/Guangdong Co-operation in Informatisation" on 2 August 2007 to take forward 12 major co-operation areas.

7.         More details about the progress in HK/Mainland cooperation are reported under the action area "developing Hong Kong as a hub for technological cooperation and trade".

*Leading focused discussions among different sectors of the community to help Hong Kong move towards an inclusive, knowledge-based society*

8.         The Government will establish a Task Force on Digital Inclusion, comprising representatives from relevant government departments as well as industry and community stakeholders, to provide a platform for focused

---

[2]  These expenditure figures include IT spending in the Housing Authority, Hospital Authority, subvented schools and all Government bureaux and departments.
[3]  Established in 1999, the ITF administered by the Innovation and Technology Commission (ITC) aims to finance projects that contribute to innovation or technology upgrading and development in industry, including the ICT sector.

discussions and to develop consensus on priorities and actions. This will ensure a holistic approach in tackling the digital divide issue having regard to the different needs of the community. We plan to invite membership and to hold the first meeting of the Task Force shortly.

9.       Other progress in promoting digital inclusion is reported under the action area "building an inclusive, knowledge-based society".


**Action Area 2: Promoting Advanced Technology and Innovation**

*Preparing a draft implementation framework for introducing mobile television services for second public consultation in 2007-08*

10.       Taken into account international practices and the feedback collected in the first consultation exercise in 2007, the Commerce and Economic Development Bureau and the Office of the Telecommunications Authority (OFTA) prepared the draft implementation framework for the introduction of mobile television services for a second public consultation. The second consultation was completed on 28 April 2008. The Government will take account of public's views received in finalising the implementation framework of mobile television services to be announced within 2008. OFTA  intends to auction the relevant frequency spectrum for mobile television and other auxiliary multimedia services in early 2009.

*Facilitating a smooth transition from analogue to digital terrestrial television broadcasting with a view to switching off analogue broadcasting by 2012*

11.       The two domestic free television programme service licensees, namely Asia Television Limited and Television Broadcasts Limited, officially launched digital terrestrial television (DTT) services on 31 December 2007. The DTT network coverage reached 50% upon the official launch and would be extended to 75% by early August 2008.

12.       The phased construction of DTT network will continue, with more fill-in stations to be built from 2009 to 2011. The ultimate DTT coverage will be at least on a par with that of the existing analogue television broadcasting.

13.       DTT provides another digital platform for media convergence. It brings free-to-air high-definition (HD) television programme services to Hong Kong and is also expected to spur the growth of interactive services such as datacasting. ICT manufacturers and the consumer electronics industry will benefit from the demand for consumer electronic products capable of receiving

DTT services. As at 30 April 2008, the two broadcasters provide altogether four simulcast channels and nine new digital channels.

***Strengthening Cyberport and Science Park as hubs for innovation and technology***

14. Cyberport provides state-of-the-art infrastructure, supporting facilities and a favourable campus environment to develop a strategic cluster of high quality IT and related enterprises as well as academic, research and industry support organisations.

15. As at April 2008, 37 cooperation agreements between Cyberport and local organizations as well as organizations in the Mainland, Australia, Canada, Finland, US and Vietnam were in force to enhance technological cooperation. As at April 2008, Cyberport had 26 SME tenants and 42 incubatees in IT and related sectors. Among these incubatees, six have either attracted capital injection from investors or acquired by listed companies or obtained licence agreement for their operation, and 13 have graduated upon successful completion of a programme of business development. The incubatees have received a total of 32 awards/honours, including Hong Kong ICT Awards and major awards in Sweden and Canada, and have created 21 original intellectual property rights.

16. The Science Park's equipped laboratories and services, with shared access to the latest information, technologies, analysis tools and certification services, enable companies of all sizes from different parts of the world to come to the Science Park with their ideas, designs or products, plug into any facility, and commence R&D or testing. To expand the reach of this technology hub, the Hong Kong Science & Technology Parks Corporation (HKSTPC) has signed a number of collaboration agreements and Memoranda of Understanding with regional government institutions, R&D centres, trade organisations, leading companies and universities to create new synergies.

17. The HKSTPC also nurtures technology-based and design start-up companies through its incubation programme which provides low-cost accommodation as well as management, marketing, financial and technical assistance in the critical initial two to four years of these start-ups. HKSTPC has implemented a Small Technology/Design Enterprise Programme since 2006 to provide graduates of the incubation programmes with support services and office premises to enable them to become full-fledged enterprise tenants eventually.

18.     In 2007/08, incubatees at the Hong Kong Science Park received a total of 17 technical and management awards and filed 43 patents and trademarks.   They received a total of $15.5 million funding from the Small Entrepreneur Research Assistance Programme,  and  $67.4  million  in angel/Venture Capital funding.

19.     By 2007/08, HKSTPC has established 17 instances of collaboration with governments, enterprises and universities from the Mainland, Europe and United States. Most recently HKSTPC has expanded the technology and business collaboration between Hong Kong and Europe through its work with the Øresund Science Region which spans Sweden and Denmark.   It also helps to create synergy between its tenants and incubatees and its strategic partners by arranging over 100 networking opportunities and programmes annually. HKSTPC also provides talent development support by running the Talent Pool Platform and annually places over 150 students in the Science Park and InnoCentre to facilitate the growth of industry.

20.     HKSTPC will take the lead to establish a Solar Energy R&D Centre at the Hong Kong Science Park to assist the development of solar energy and related technologies in Hong Kong and the Pearl River Delta region.   DuPont will join the centre as the first anchor tenant by locating its global thin film photovoltaic business/R&D Centre in the Science Park.   At the same time, the Shenzhen Municipal Government will collaborate with Hong Kong to provide land and other facilities to support the downstream development and manufacturing of solar energy products.

***Promoting applied R&D, technology transfer and commercialization of R&D deliverables through the R&D Centres***

21.     Since the inception of the R&D Centres till 30 April 2008, 109 R&D projects involving funding support of $521 million have been approved, of which 70% of the projects have been carried out by the R&D Centre for Logistics and Supply Chain Management Enabling Technologies and the R&D Centre for ICT.   Approved projects cover ICT areas with substantial market potential such as high definition television, LED technology, and RFID tags and readers, etc.

22.     The R&D Centres will continue to collaborate with the industry and academia with a view to meeting market demand and assisting in technology upgrading in the Greater Pearl River Delta region.

*Positioning Hong Kong as a regional test-bed and launching pad of innovative technologies*

23.      Under the TD-SCDMA project managed by the Hong Kong Wireless Technology Industry Association, 10 TD-SCDMA applications were developed in 2007.   The applications are being showcased in the Mainland and one of the applications has been deployed in the TD-SCDMA trial starting from April 2008. The TD-SCDMA project facilitates the local industry in developing TD-SCDMA-based mobile content, application solutions and tools through building the necessary technology and support infrastructure for application development and testing and providing relevant training in TD-SCDMA.

24.      The Wireless Communications Test Laboratory of the Science Park has collaborated with the Applied Science and Technology Research Institute (ASTRI) and Tsinghua University to develop the Digital TV testing methodologies.    In November 2007, the Hong Kong Science Park established the Hong Kong Digital Terrestrial Television (DTV) Local Testing Group in collaboration with ASTRI and the industry to take advantage of its advanced technology support infrastructure to bring the most updated DTV testing technology to Hong Kong.

25.      The Intellectual Property Servicing Centre at the Science Park offers a wide range of intellectual property services, including hardening, licensing, integration and verification services.   The design services offered to IC design start-ups and SMEs reduce the R&D cost and risk.   The centre achieved ISO 27001 (Standard for information security management system) certification in February 2008 and is the first location in China to obtain such certification. The sound legal framework provided by the Centre for semiconductor intellectual property development and deployment has attracted some of the world's leading semiconductor vendors to partner with the Centre.    The Centre plays a key role in linking up industrial partners to provide networking platform for IC design start-up companies. The Centre offers the world first Multi-Project Wafer (MPW) IP trial service in March 2008.   Users can use IP in MPW form at a 1/16 of the market price at prototyping stage plus a shortening of cycle time by more than three times.

*Facilitating convergence among telecommunications, broadcasting and IT leading to emergence of new products and services*

26.      Distinctions between fixed and mobile networks and services are increasingly blurred in the age of media convergence.   To ensure our regulatory environment remains conducive to innovative technologies and services, it is necessary to create a new unified licensing regime to facilitate

timely deployment of new and innovative telecommunications services in Hong Kong for the benefit of the public. After public consultation, the Administration has decided to create a new form of unified carrier licence (UCL) to serve as a single licencing vehicle to facilitate the introduction of new and innovative converged services. The necessary legislative amendment has been tabled in the Legislative Council with a view to completing the negative vetting process within the current legislative session. The UCL will allow incumbent operators and new market entrants to provide fixed, mobile and/or converged services under a streamlined and flexible single licence. Subject to enactment of the necessary legislation, the UCL will be introduced on 1 August 2008.

*Building international profile of outstanding ICT achievements*

27.      To recognise outstanding achievement and to showcase Hong Kong's ICT success locally and abroad, OGCIO has consolidated various ICT awards into a mega annual event – the Hong Kong ICT Awards. The Hong Kong ICT awards have received very encouraging support and response from the industry and the community since its first establishment in 2006. OGCIO also facilitated some award winners to participate in international ICT awards. For example, three winners of the ICT Awards 2007 were also grand award winners of the Asia Pacific ICT Awards in the same year. OGCIO also sponsored some award winners to showcase their achievements in the International ICT Expo in April 2008.


**Action Area 3: Developing Hong Kong as a Hub for Technological Cooperation and Trade**

*Facilitating the ICT industry to develop competency standards under the Qualifications Framework*

28.      Under the Qualifications Framework (QF), the ICT Industry Training Advisory Committee (ITAC) has completed the drafting of the Specification of Competency Standards (SCS) for the Software Products and Software Services branch of the ICT industry. After a four-month industry-wide consultation, the SCS was refined and subsequently endorsed by the ITAC in November 2007. The SCS is now put onto the QF website for adoption by training providers in curriculum design and for use by other interested parties.

29.      The ICT ITAC has just started to draft the SCS in respect of the Information and Communications Service branch of the ICT industry. The project is expected to take 22 months starting from April 2008, and is expected to be completed by early 2010.

30.	Efforts will be made to promote the adoption of SCS for vocational education and training, both in the academic sector and the industry. It is expected that some SCS-based programmes will be offered by educational or training institutes in the coming year.

*Implementing the Unsolicited Electronic Messages Ordinance*

31.	The Unsolicited Electronic Messages Ordinance, enacted in May 2007, has come into full operation since 22 December 2007 to regulate the sending of all forms of commercial electronic messages (CEMs) that have a Hong Kong link. Three do-not-call registers (for fax, short messages and pre-recorded telephone messages) have been established. Senders are prohibited from sending CEMs to registered electronic addresses. So far, the do-not-registers have been operating smoothly and in an orderly manner with around 754 000 numbers registered. OFTA will continue to take appropriate enforcement actions and monitor the spamming problem in Hong Kong.

*Hong Kong/Mainland Cooperation*

32.	There is ongoing liaison and cooperation between Hong Kong and the Mainland on matters relating to innovation and technology through various channels such as the Mainland/Hong Kong Science and Technology Cooperation Committee, the Guangdong/Hong Kong Technology Cooperation Funding Scheme, and the Shenzhen-Hong Kong Innovation Circle.

33.	Through the Shenzhen/Hong Kong Innovation Circle, we have taken forward various cooperative measures, including jointly funding collaborative R&D projects, organizing technology exchange activities such as seminars and forums, setting up a "Shenzhen-Hong Kong Innovation Circle Pavilion" at the China Hi-Tech Fair in October last year, establishing the Shenzhen-Hong Kong Productivity Foundation as well as encouraging closer cooperation between the science and technology parks of both sides. We have also stepped up technological cooperation in various areas, including control of infectious diseases, pharmaceutical R&D and food tests.

34.	Meanwhile, the governments of Shenzhen and Hong Kong are also actively promoting large-scale technology collaborative projects. As mentioned in paragraph 20 above, the two sides have successfully invited Dupont to set up its global thin film photovoltaic business headquarters and R&D centre in Hong Kong, as well as a related manufacturing base in Shenzhen.

*Strengthening regional cooperation in dealing with incidents relating to Internet service outage and raising public awareness and education on business continuity planning, incident management and response*

35.     In order to improve the preparedness of Hong Kong to cope with Internet service interruption in future, we have undertaken a multi-pronged approach, including –

(i)     Inter-Government Cooperation

OFTA has made arrangements with its counterpart in Singapore, the Info-communications Development Authority, on information exchange relating to failure of major submarine cable systems that link up Hong Kong and Singapore.

(ii)    New Regional Internet Resolution (RIR) Site in Hong Kong

In the past, the authoritative root name servers associated with domain names ending with ".com" or ".net" were situated in overseas countries.   In case where the communications links to these authoritative root name servers were disconnected, users could not access the relevant servers to get the associated Internet Protocol address for proper data routing.   As a result, local websites which deployed overseas domain names ending with ".com" or ".net" and the like became inaccessible. To overcome this shortfall, the Hong Kong Internet Exchange, which is managed by the Chinese University of Hong Kong, has collaborated with Verisign, Inc. and established a new RIR Site in Hong Kong in February 2008. With this, end customers including the business community and SMEs will no longer have to rely solely on overseas authoritative root name servers to access websites with ".com" and ".net" domain names. The establishment of the RIR Site in Hong Kong has improved the resilience of our Internet services and should further enhance our position as the telecommunications and Internet hub in the region.

(iii)   Enhanced Capacity of External Telecommunications Facilities

The total activated capacity of external telecommunications facilities increased from 698 Gbps in December 2006 to 1,323 Gbps in December 2007, an increase of almost 90%. The capacity of submarine cable and land cable over the Mainland of China increased by 464 Gbps and 161 Gbps respectively (which represent an increase

of 99.7% and 70.2% respectively). The availability of additional overland cable capacity means that more cable capacity is now available on land for diversion of traffic in case we encounter major disruption to the submarine cable systems.

(iv) Cooperation among Operators in the Region

In order to reduce the threat of potential service outage due to disruption of the submarine cable systems, the telecommunications operators in the region have joined hands to further improve the reliability of the regional submarine cable infrastructure as follows –

- a number of Asia-Pacific economies have proposed new submarine cable systems with route diversity to bypass the earthquake zone in the Luzon Strait. One new cable system is due to land in Hong Kong this summer; and

- a total of 14 telecommunications companies in the Asia-Pacific region, including one telecommunications operator in Hong Kong, have signed a memorandum of agreement to pursue cooperation initiative that will pool all available resources at their disposal in the event of major cable failures.

(v) Raising public awareness and education on business continuity planning, incident management and response
The Government issued through its one-stop information security portal
(http://www.infosec.gov.hk/english/promotion/files/sme_guide_2007 _eng.pdf) the "Information Security Guide for Small Businesses" (Third Edition) in September 2007, which includes a new section on disaster recovery and business continuity planning for reference by SMEs.

36.     We have also initiated the institutional review of Computer Emergency Response Centre (CERC) services in Hong Kong in 2008.   The objective of the review is to propose a long-term arrangement for the provision of CERC services in Hong Kong, making reference to practices of other economies. The review is scheduled for completion in 2008 and implementation of the new arrangement will start in 2009/2010.

*Engaging in regular discussions and exchanges with the ICT industry through the ICT Industry Partnership Forum*

37.        Two meetings of the ICT Industry Partnership Forum were organised in December 2007 and April 2008 respectively.   At these forums, we briefed and consulted the industry on various issues, including Web 2.0, the new Standing Offer Agreements for Quality Professional Services, 2008 Digital 21 Strategy, and the proposed District Cyber Centres (DCCs).   Stakeholders have provided valuable comments on these subjects.   We will take their views into consideration when formulating the relevant programmes/policies.   We will continue to conduct such forums in the coming year.

**Action Area 4: Enabling the Next Generation of Public Services**

38.        Since the latest progress on the implementation of the e-government programme has just been reported to Members on 13 May 2008, we have only included in this paper the progress of major e-government initiatives which have a public interface.   Members can refer to the progress update on the e-government programme (LC Paper No. CB(1)1456/07-08(03)) for information on progress of other e-government initiatives.

*Transforming public service delivery through continuous enhancement of GovHK*

39.        In 2007-08, we completed a significant overhaul of the delivery of E-government services.   GovHK was officially launched in August 2007, following a soft-launch a year earlier and the decommissioning of the old Government Information Centre (GIC, www.info.gov.hk) in May 2007.   We migrated the Government services on ESD*life* onto our own infrastructure in January 2008.   GovHK has also incorporated a commercial search engine that is more effective and efficient than the one provided in GIC.

40.        GovHK saw daily visit figures rise from around 4 000 to around 24 000 between September 2006 and April 2008, while the average number of page views per visit also rose from 4.6 to 16.8.   GovHK enables users to subscribe for Really Simple Syndication (RSS[4]) feeds on website updates and

---

[4]    RSS is a way of notifying the user about content changes on websites.   Subscribing to RSS feeds allows the user to keep track of updates from multiple websites without having to go from one site to another.   GovHK provides a list of RSS feeds from various bureaux and departments and related organisations, covering news, government initiatives, services, etc.

news. During the period from July 2007 to April 2008, the average daily access to RSS feeds and press releases was about 34 000.

41.     The customer satisfaction survey conducted after GovHK's official launch found that 87% of the respondents liked GovHK and opined that information and services they required can be easily located, and 95% of the respondents would like to use GovHK in the future. Similar surveys conducted for GIC in 2002 found that 42% of the respondents rated GIC as having excellent design.

42.     There is continued increase in the use of electronic transactions. Both the number of transactions and the volume of payment transactions on GovHK have increased. There was about 30% increase in the number of transactions and about 24% increase in the total payment transactions volume in February 2008 as compared with February 2007 when the services were still provided by ESD*life*.

43.     The objective of the GovHK Programme is to transform the government-centric model of service delivery, where bureaux and departments operate within individual silos, to a citizen-centric approach that puts emphasis on meeting the needs of the users through cross-departmental collaboration and service integration. The ultimate goal is to improve quality of public services, enhance operational efficiency of the Government, and increase the overall utilization of government information and services delivered via the Internet.

44.     In 2008-09, we plan to launch more feature articles, more thematic content such as Business Facilitation and E-procurement as well as more online services in Taxes & Duties cluster and Immigration Services cluster. We will continue to conduct suitable promotion and publicity activities to encourage take-up.

*Developing a common platform for dissemination of geospatial information on GovHK*

45.     We are lining up relevant bureaux and departments to develop a platform on GovHK for hosting useful geospatial information such as walks and trails, mobile network coverage in country parks, location of government offices, schools, libraries, leisure, cultural and sports facilities, hospitals, etc. Our initial plan is to launch the first batch of geospatial information on GovHK in the third quarter of 2009.

*Setting up the Transport Information System*

46.      To meet rising expectations of motorists and public transport users for quality services and to ensure that our transport infrastructure is put to the most efficient use, the Government is developing a Transport Information System (TIS).   TIS will provide two key services, namely an Intelligent Road Network, a Geographical Information System platform providing up-to-date information on the road network, turning movements at road junctions and stopping restrictions; and a Public Transport Information Service, a web-based information service for public transport users and motorists to search for optimal routes.   Implementation of the TIS is scheduled for completion in 2008. The private sector will be encouraged to make use of such information for the development of car navigation and fleet management systems.   Road users will be able to gain access to the latest traffic conditions provided by TIS on the Internet.

*Developing an Electronic Health Record System*

47.      The development of a territory-wide electronic health record (eHR) system is fundamental to enhancing continuity of care as well as better integration of different healthcare services for the benefits of patients.   This will be achieved by providing family doctors with access to lifelong health records of individual patients for holistic care and facilitating referral and follow-up of cases between different levels of care through the eHR system. Cooperation and partnership between the private and public healthcare sectors can be enhanced, hence giving more choices for patients.

48.      To achieve the above, the Secretary for Food and Health has appointed a Steering Committee on eHR Sharing (the Steering Committee)[5] to take forward the initiative to develop a territory-wide eHR sharing infrastructure. The Steering Committee is tasked to develop a roadmap and work programme for the development of eHR and has set up working groups comprising experts in the relevant field to examine issues relating to eHR development especially privacy, security, information standards and institutional arrangements.   It is the current plan of the Steering Committee to formulate its initial recommendations in 2008.

---

[5]   The Steering Committee is chaired by the Permanent Secretary for Food and Health (Health) and comprises members from the healthcare professions in both the public and private sectors.

**Action Area 5: Building an Inclusive, Knowledge-based Society**

*Installing wireless hotspots at major government premises with high public patronage*

49.     With the support of the Panel, the Finance Committee approved last year a commitment of $217.6 million to provide Wi-Fi facilities at about 350 Government premises with high public patronage for free use by the public. These premises include all public libraries, public enquiry service centres, job centres, key cultural and recreational centres, community halls/centres, large parks and those government offices that are frequently visited by the public. We awarded a service contract for programme implementation in early December 2007.   As at March 2008, we have provided Wi-Fi facilities for free use by the public at over 30 government premises.   There are about 970 user connections on average per day.   We will progressively roll out the service to some 120 premises by end June 2008, and eventually some 350 premises by mid 2009.   For more detailed information, Members may wish to refer to the progress report on the provision of Wi-Fi facilities at Government premises which will also be discussed at the Panel meeting on 10 June 2008.

*Publishing the third IT in Education Strategy*

50.     The third IT in Education Strategy was endorsed by the LegCo Education Panel and the related capital expenditure of HK$240 million was approved by the Finance Committee on 31 January and 22 February 2008 respectively. Besides, annual recurrent funding provided to schools amounts to around HK$280 million.   Various measures under the strategy are being launched, such as provision of a depository of curriculum-based teaching modules with appropriate digital resources; continuing to sharpen teachers' IT pedagogical skills; assisting schools to draw up and implement school-based IT in education development plan; enabling schools to maintain effective IT facilities; strengthening technical support to schools and teachers; raising information literacy of parents and assisting them in guiding children to use IT at home; continuing the computer recycling scheme to address the digital divide; and further enhancing students' information literacy.   Some HK$200 million was disbursed to public sector schools in the first quarter of 2008 for implementation of their school-based IT in education development plan.

51.     It is expected that the implementation of the various measures under the third IT in Education Strategy will be in full swing in the coming two to three years.

*Measuring digital inclusiveness on a regular basis to gauge the effectiveness of our initiatives*

52.     A Study on measuring the digital inclusiveness in Hong Kong, in particular for the disadvantaged groups, is being arranged.   In May 2008, we have issued invitation to local tertiary institutes to submit proposals, with a view to completing the Study by end 2008/early 2009.

53.     The Study aims to review and refine the model of the Comprehensive Digital Inclusion Index, first built in 2005, which identified six disadvantaged groups and their Comprehensive Digital Inclusion Index (CDII).   Starting from 2008, the Study will be conducted on a regular basis to update the CDII so as to reflect the latest digital inclusion situation in Hong Kong and to gauge the effectiveness of our initiatives.   The findings and recommendations of the Study will become inputs to facilitate the Task Force on Digital Inclusion in formulating strategies and initiatives to further address the digital inclusion issues in Hong Kong.

*Working with the ICT industry to devise suitable programmes to increase ICT take-up among SMEs*

54.     In 2006/07, we have sponsored five projects under the Sector Specific Programme (SSP).   The two projects on the trade sector and the watches and clocks sector organised by the respective trade associations have made available practical solutions to drive the adoption of e-business among their SMEs.   The organisers will measure and evaluate the outcomes of these projects in the second half of 2008.   The other three projects under the 2006/07 SSP (beauty service, medical and health, and social service) are in their developmental stage, and they are scheduled for completion by 2009.

55.     A sponsorship of $2.1 million was provided for a pilot project for the supply chain sector under the 2007/08 SSP.   The new project aims at developing a platform for consumers to authenticate their products through electronic means.

56.     The Government will continue to explore new opportunities and provide sponsorships for industry/professional bodies to organise worthwhile projects that aim at driving the adoption of e-business in the private sector.

*Launching a pilot scheme to establish cyber centres in selected districts*

57.     As announced by the Financial Secretary in his Budget Speech of 2008-09, OGCIO will launch a pilot scheme to establish cyber centres in

selected districts.   The objective of setting up DCCs is to enable young people from poor families and other needy members of the community to access and use information technology and online services, with a view to narrowing the digital divide and helping them integrate into the information society.   The initiative also aims to foster collaboration amongst the Government, the private sector and community organisations in building Hong Kong into a digitally inclusive, knowledge-based society.

58.      The business community will be invited to participate in the scheme by providing technical as well as software and hardware support.   The Government will work in partnership with community organisations in managing the centres.   We consulted potential stakeholders of the ICT industry, professional bodies and community organisations in late April 2008 to collect their views and inputs on key planning parameters and considerations on the DCCs initiative.   We plan to issue invitation for implementation proposals in June 2008.

**Tracking of Key Indicators of ICT Development**

59.      The 2008 Digital 21 Strategy lists a number of key indicators of Hong Kong's ICT development changes of which will be measured over time.   The changes in these key indicators since the promulgation of the Strategy are reported at **Annex A**.

**Way forward**

60.      The 2008 Digital 21 Strategy is a living document and there is a continuing need to manage the Digital 21 programme, refining the action plans to keep them up-to-date and to ensure that they meet the evolving needs of the community.   To supplement the high-level overall vision and descriptions of the action areas, we consider it useful to develop more concrete descriptions of the desired outcomes in each of the action areas so as to give a more concrete picture of how success would be defined. These descriptions could then be used in the selection of meaningful quantifiable success measures, in the communication of progress towards our goals, in identifying gaps in the Digital 21 programme and in prioritizing resource allocation.   The initial draft SDOs are at **Annex B**.   Following Members' input on these draft SDOs, we will refine the draft and solicit input from other stakeholders with the aim of finalizing statements and defining meaningful measurables during the autumn. While the Government plays an important enabling and facilitating role, to achieve the desired outcomes would require the active participation of the entire community, including the ICT industry, academia and the general public.

61.	In the meantime, we will continue to implement the initiatives included in the Digital 21 Strategy published last December. Over time, we will use the SDOs to guide the evolution of the programme taking account of changes in the environment, results achieved and any gaps or changes in priorities for resource allocation that are identified.

**Advice Sought**

62.	Members are invited to provide their views on the desirability of adopting SDOs for the five action areas and on the initial drafts included in **Annex B**.

**Office of the Government Chief Information Officer**
**Commerce and Economic Development Bureau**
**May 2008**

**Key Indicators under 2008 Digital 21 Strategy**

| Key Indicator | Figure available in Dec 2007 | Figure available in May 2008 |
|---|---|---|
| Mobile phone penetration rate | 143.4% (Sep 2007) | 154% (Feb 2008) |
| Household PC and broadband penetration rates (Note 1) | | |
| ■ Household PC penetration rate (Note 2) | 74.2% (Jul to Sep 2007) | |
| ■ Household broadband penetration rate | 75.4% (Sep 2007) | 76.7% (Feb 2008) |
| Percentage of citizens aged 15 or above who have conducted e-business on the Internet (Note 2) | 98.2% (Jul to Sep 2007) | |
| PC and Internet penetration rates for businesses of different sizes (Note 3) | (May to Aug 2007) | |
| ■ Large establishments | 99.1% | |
| ■ Medium establishments | 88.3% | |
| ■ Small establishments | 59.8% | |
| ■ Total | 63.8% | |
| Percentage of establishments which have undertaken transactions through electronic means (Note 3) | 59.3% (May to Aug 2007) | |
| Number of wireless hotspots installed by the Government and the private sector | 5,288 (Nov 2007) | 6,800 (Apr 2008) |
| Equipped external telecommunications capacity | 1,612,189 (Jun 2007) | 1,845,704 (Dec 2007) |
| Government ICT spending (Note 4) | $5.4 billion (2007/08 estimate) | $4.68 billion (2007/08 revised estimate) |

| Key Indicator | Figure available in Dec 2007 | Figure available in May 2008 |
|---|---|---|
| ICT investment in the business sector (Note 5) | $26.7 billion (2005) | |
| R&D expenditure (Note 6) | $10.9 billion (0.79% of GDP) (2005) | $11.9 billion (0.81% of GDP) (2006) |
| Number of e-government services | About 1,200 (2007) | More than 1,240 (Apr 2008) |
| Percentage of government forms available through the Internet | About 95% (mid 2007) | About 98% (Apr 2008) |
| Percentage of government services amenable to electronic mode of service delivery that have an e-option | About 87% (Dec 2007) | About 87% (Apr 2008) |
| Percentage of citizens aged 10 or above who have used online government services (Note 2) | 37.6% (Jul to Sep 2007) | |
| Level of satisfaction of citizens who have used online government services | (2006) | (2007) |
| ■ Very good | 3.2% | 4.2% |
| ■ Good | 53.9% | 61.2% |
| ■ Average | 40.9% | 32.7% |
| ■ Poor | 1.9% | 1.7% |
| ■ Very poor | 0.1% | 0.2% |
| Number of visitors to GovHK (Note 7) | Around 22,000 daily visits (Dec 2007) | Around 24,000 daily visits (Apr 2008) |
| Number of online e-government transactions (Note 8) | About 3.6 million (Apr to Dec 2007) | |
| Size of ICT workforce (Note 5) | 75,345 (2005) | |

| Key Indicator | Figure available in Dec 2007 | Figure available in May 2008 |
|---|---|---|
| Digital inclusion index for different disadvantaged groups (Note 9) | (2005) | |
| ■ Elderly | 0.27 | |
| ■ Persons with disabilities and/or chronic illness | 0.35 | |
| ■ Female homemakers (aged 35-59 with level of education at/below primary six) | 0.37 | |
| ■ Single parents | 0.45 | |
| ■ New arrivals | 0.61 | |
| ■ Children of low-income families | 0.63 | |

**Notes**

1. The figure "Household PC penetration rate" is extracted from the thematic household survey on information technology usage and penetration conducted by the Census and Statistics Department (C&SD) for the period from Jul to Sep 2007 while the figure "Household broadband penetration rate" is extracted from the Key Telecommunications Statistics published by the Office of the Telecommunications Authority on its website for Sep 2007. The differences in sources and timings of the figures may explain why the "Household broadband penetration rate" is higher than the "Household PC penetration rate".

2. These figures are extracted from "Thematic Household Survey Report No. 32 - Information Technology Usage and Penetration" published by C&SD in Dec 2007.   Updated figures will be available in Dec 2008.

3. These figures are extracted from "Report on 2007 Annual Survey on Information Technology Usage and Penetration in the Business Sector" published by C&SD in Dec 2007.  Updated figures will be available in Dec 2008.

4. The 2007/08 actual spending and 2008/09 estimate will be available in Jul 2008.

5.	This figure is extracted from "Hong Kong as an Information Society" published by C&SD in Dec 2007.   Updated figures will be available in Dec 2008.

6.	The latest figure is extracted from "Hong Kong Monthly Digest of Statistics Feature Article - Statistics on Research and Development of Hong Kong, 2002-2006" published by C&SD in May 2008.

7.	The current Web Statistics System only tells the number of visits instead of the number of visitors.   A visitor may have many visits; and each visit is a session of activities on a website.   If a visitor is idle longer than the idle-time limit (30 min. for the current Web Statistics System), the system assumes the visit was voluntarily terminated.   If the visitor continues to browse the website after 30 minutes, a new visit is counted.

8.	Updated figure will be available in mid 2009.

9.	Another study will be conducted to measure the digital inclusiveness by means of a CDII.   It is expected that the study will be completed by end 2008 / early 2009.

**The Initial Draft Statements of Desired Outcomes
of the Five Action Areas under 2008 Digital 21 Strategy**

**Facilitating a Digital Economy:**

*Hong Kong has the standards, infrastructure, legal framework and talent that are needed to facilitate a digital economy, and to enable our core industries to sustain their competitive position. Individuals and businesses are aware of the opportunities brought by a digital economy and have confidence in their ability and skills to take full advantage of the opportunities.*

**Promoting advanced technology and innovation:**

*Hong Kong is a leading Asia Pacific location for research and innovation – both in technology and in developing creative business models. We attract talent and investment locally, regionally and globally and maximise the benefits of collaboration with mainland research and development efforts. Open competition gives market participants the incentive to invest in advanced information and communications technology (ICT) to meet market needs.*

**Developing Hong Kong as a Hub for Technological Cooperation and Trade**:

*Business establishments located in Hong Kong play a significant role in the local, global and Mainland markets for ICT and digital content services. Innovative ICT-enabled business models are used to compete globally in many other areas. Collaboration with international and Mainland entities is a major factor in successfully serving a variety of export markets as well as Mainland and local customers.*

**Enabling the Next Generation of Public Services**:

*The Government provides people with the services they need, in an efficient, convenient manner, which is as pleasurable and straightforward as dealing with the most customer-friendly organizations in the commercial and voluntary sectors[1]. Government policy priorities such as healthcare reform are enabled by appropriate and world-leading use of ICT. The internal efficiency of Government approaches that of the most efficient commercial organizations. Transparency and public engagement are enhanced through leveraging ICT.*

---

[1] This draft statement draws on the Policy Address commitment about "people-based" public services planning.

**Building an Inclusive, Knowledge-based Society**:

*Residents, businesses, and voluntary organisations in Hong Kong are all able to create, access, utilise and share information and knowledge, so that they can achieve their full potential in promoting their sustainable development and improving their quality of life.[2] There is a culture of healthy and ethical use of ICT, promoted and protected by knowledgeable users and by the justice system.*

---

[2] This draft statement draws on the Common Vision of an Information Society adopted by the United Nations.