

For Focus Group Discussion
- Professional Services, Information
& Technology and Tourism

Paper Ref.: 2006ES/9

**Economic Summit on
“China’s 11th Five-Year Plan and the Development of Hong Kong”**

Innovation, Technology and Information Services

(Translation)

Preamble

This paper provides an initial analysis of the 11th Five-Year Plan and the opportunities and challenges concerning the development of Hong Kong from the perspective of the Government and public sector, with a view to stimulating discussions among various sectors in the community on this front and facilitating the Economic Summit to formulate a concrete and practicable “action agenda” in the coming months.

Background

2. Since early 1980s, the Hong Kong industries have relocated most of their production lines northwards. According to a research study “Made in Pearl River Delta” conducted by the Federation of Hong Kong Industries, there are more than 60,000 Hong Kong-invested enterprises in the Pearl River Delta (PRD) region. Taking advantage of the low production cost in the Mainland, the majority of them are engaging in original equipment manufacturing (OEM) while their trading and business headquarters are mainly based in Hong Kong. In general, their offices in Hong Kong provide support to the production lines in the Mainland, including product design and development, production planning, sales and marketing and quality control.

3. In the present knowledge-based economy, with the changes in global markets and competition from other regions, innovation and technology are the crucial factors in promoting sustainable economic development and industry upgrading. Not only can innovation and technology bring us new products and services, create new business opportunities and expedite the development of the local pillar industries, they also spawn emerging industries as a new driving force to economic growth and help maintain Hong Kong's competitive advantages in the global arena.

4. Excellent communication and information dissemination systems are indispensable for the development of an international finance, trading and shipping centre. Being a regional telecommunication hub and information centre, Hong Kong possesses sophisticated and competitive communication infrastructures, freedom of communication as guaranteed by the Basic Law and free flow of information. Businesses here can acquire the latest news and information anytime. The Hong Kong Special Administrative Region Government (HKSARG) is committed to promoting the development of information technology (IT) and telecommunications so as to create a better business environment and to maintain and reinforce our role as an international finance, trading and shipping centre. In 2000, the local IT and related services contributed HK\$7.59 billion to our economic growth, but the corresponding figure went down to HK\$6.22 billion in 2001, or 18% decrease. According to the statistics of the Census and Statistics Department, the economic value of the industry has returned to an upward trend in recent years. Between 2002 and 2004, the industry made economic contributions of HK\$6.91 billion, HK\$7.12 billion and HK\$7.59 billion respectively, close to the level of 2000.

5. Hong Kong's achievements in IT have also received international recognition: the Economist Intelligence Unit ranked Hong Kong 10th in the world and 2nd in the Asia Pacific region in its e-readiness Index in 2006; the Digital Opportunity Index 2006 of the International Telecommunication Union ranked Hong Kong 5th in the world and 3rd in the Asia Pacific region; and the 2005-06 Networked Readiness Index of the World Economic Forum ranked Hong Kong 11th in the world.

6. Since the 1990s, the software and information services industry¹ of the Mainland has been growing rapidly. The sales of software and information services grew from RMB10.7 billion in 1994 to RMB110 billion in 2002, representing an average annual growth rate of about 32.4% which is higher than the average growth rate of the national Gross Domestic Product (GDP) during the same period.

7. Although Hong Kong's overall research and development (R&D) capabilities, particularly in basic research, is not comparable with those of other advanced countries and economies, our achievements in some technology areas and research projects have reached world-class levels. Meanwhile, local enterprises have kept on developing, introducing and applying advanced technologies to enhance their competitiveness. For instance, the finance and trading sectors have been using information technology widely to improve the transaction system; and the logistics and shipping sectors have been adopting advanced logistics and supply chain management enabling technologies to enhance efficiency. These efforts are essential for strengthening Hong Kong's position as an international finance, trading and shipping centre. In view of the emphasis of the national 11th Five-Year Plan on innovation and technology and Hong Kong's advantages of extensive international connection, robust intellectual property (IP) protection regime and profound market experiences, Hong Kong is well-placed to proactively promote innovation and technology development, thereby enhancing the competitiveness of the relevant local industries and contributing to the development of the Mainland.

11th Five-Year Plan and the situation in the Mainland

8. The Ministry of Science and Technology (MOST) has recently promulgated the "Outline Plan on National Long-term and Medium-term Science and Technology Development" (國家中長期科學和技術發展規劃綱要) to set out the future roadmap for the national development of science and technology. It upholds the principle of "autonomous innovation, multi-foci development, industrial-oriented support and forward looking" (自主創新、重點跨越、支撐發展、引領未來), which mainly refers to:

¹ In the Mainland, the definition of "information industry" is broad enough to cover a variety of industries including electronics, communications, computer products, integrated circuit, components and parts, information services etc. Software industry is generally included in information services according to the Mainland framework of national statistics.

- promoting originality, introducing advanced technologies, and acquiring more autonomous IP rights in key areas;
- focusing on key areas with sound foundation and advantage that are relevant to national economy, welfare and security;
- basing on genuine and practical needs; and
- creating new market needs and cultivating new industries.

9. The national 11th Five-Year Plan places emphasis on implementing the Outline Plan, expediting the building up of the national innovation system, promoting closer integration of technology and the economy, and upgrading overall hi-tech capability and technology level of the industries. In view of the overall social development and strategic needs, the future development foci include energy and environmental protection, equipment manufacturing and information industry, biotechnology, aerospace and marine technologies, and foundation science and advanced technology researches. The 11th Five-Year Plan and the Outline Plan have identified a number of major projects in various areas (e.g. chips, integrated circuit fabrication and wireless mobile communications) and set out various measures including setting up a market-oriented technological innovation system with enterprises as the major participant supported by industry, universities and R&D institutes; perfecting the policies to facilitate technology transfer and industrialization of advanced technology, and increasing investment in technology and infrastructure; stepping up IP protection; and breeding a pool of technology talents.

10. Many provinces and municipalities like Guangdong, Beijing and Shanghai have formulated their own policies to facilitate technological innovation through the provision of R&D infrastructure and resource input. In particular, Guangdong Province has pledged in its 11th Five-Year Plan to speed up the course of acquiring independent innovation capacity. It will proactively develop high value-added and hi-tech industries such as automobile, equipment manufacturing, electronic information and new materials, thereby creating new innovative industries and enhancing regional cooperation to upgrade the level of Guangdong-Hong Kong collaboration. Building a city with autonomous innovation capability has become a goal for many cities within the province. In early 2006, the Shenzhen Municipal Government proposed to build a “Shenzhen-Hong Kong Innovation Circle” (深港創新圈). It is proposed that Shenzhen and Hong Kong should consolidate their technological resources and

complement each other's strengths, with a view to developing the two cities into a region with ample innovation resources and dynamic innovation activities and promoting the overall economic development and competitiveness of both places.

11. On IT and related services, the 11th Five-Year Plan highlights the following:

- to perfect the information infrastructure and to actively push ahead the “Convergence of Three Networks”. These include constructing and perfecting the broadband communication network; speeding up the development of users’ access to the broadband network and steadily taking forward the construction of the new generation mobile communication network; constructing the digital TV network that supports cable, terrestrial and satellite transmissions; building up the next generation internet and expediting commercialized application; and formulating and improving network standards and promoting interoperability and resource sharing;
- to develop information services actively. These include improving basic service, developing value-added service, exploring new service and promoting universal service for the post and telecommunications; re-structuring the telecommunications industry and developing the internet industry; actively developing e-commerce; building up the infrastructure, the legal environment, the creditability and the security certification system, as well as setting up a safe and convenient online payment service platform for e-commerce; and
- to encourage the development of digital content industry in the education, culture, publication, broadcasting, film and television sectors, and to enrich the resources of Chinese digital content and promote the development of animation industry.

Opportunities and Challenges

12. The PRD region is one of the most efficient manufacturing bases in the world, accounting for one-third of Mainland’s total export. Hong Kong industries, with manufacturing base in the PRD region, are renowned for efficiency and flexibility. They have built up a significant market

share and good reputation in the world market. Meanwhile, PRD's pillar industries, including textiles and clothing, communication devices, computers and other digital devices and automobile manufacturing, are experiencing rapid growth and taking leading role in the Mainland industries. With the implementation of the Mainland/Hong Kong Closer Economic Partnership Arrangement (CEPA) and Hong Kong's strengthened foundation in R&D, the economic development of the neighbouring regions has brought enormous opportunities to Hong Kong, particularly for those enterprises engaging in the manufacturing of high value-added and hi-tech products.

13. Hong Kong possesses many advantages that are conducive to the development of innovation and technology. These include pools of R&D talents, robust IP protection regime, sound financing environment, free information flow and close connection with overseas universities and research institutes. Hong Kong can take an active role in the promotion of national technological development by providing services in R&D and technology transfer, technological information exchange and IP exchange, and enhancing collaboration with other regions, thereby expediting industrial development in Hong Kong and the Mainland, in particular the PRD region.

14. Hong Kong enterprises and Hong Kong-invested enterprises operating in the Mainland are facing a number of challenges. Many low-tech, labour-intensive enterprises are currently relying on low-cost production and imported technologies. They are engaging in high inputs but low value-added productions (高投入, 低增值) and have yet to develop their own brands. In the face of the changes brought by globalization and the severe competition from other low-cost regions, one of the possible means for enterprises to excel in the global market is to enhance product competitiveness by strengthening their R&D efforts, using design effectively and moving up the value chain from OEM to original design manufacturing (ODM).

15. Moreover, the Guangdong Provincial Government has recently promulgated policies for transforming industry, enhancing environmental standards and controlling pollution. For such purposes, they are relocating low-end and high pollution enterprises to remote areas, such as rural hilly areas and eastern and western parts of the province. Affected Hong Kong-invested enterprises will have to face problems such as shortage in talents and technology and insufficient infrastructure. Under

such circumstances, enterprises are in urgent need to respond to these challenges through developing new technologies to minimize pollution, adopting innovation and technology effectively for industry upgrading and transformation, and progressing to higher value-added activities.

16. In the course of exploring ways for Hong Kong to seize the opportunities and meet the challenges, one of the critical elements is to realize the national emphasis on the change of growth mode which pinpoints the need and importance of innovation and technology and industry upgrading. Against this background, we set out below several key issues for members' reference:

- given the existing advantages of our technological infrastructure and innovation system, how can Hong Kong meet the challenges brought by the Mainland in enhancing its autonomous innovation capacity? Relevant issues include:
 - whether it is necessary to adopt measures to encourage enterprises to put in more resources on R&D?
 - how can the recently established R&D Centres help Hong Kong and Mainland enterprises undergo industry upgrading?
 - how to capitalize Hong Kong's advantages and leverage on the development in our neighbouring regions, such as the Guangdong Province and the Pan-PRD region, so as to promote the local R&D industry?
 - how to take on board Mainland's growing concern on quality improvement to promote optimization and upgrading of the local industries?
- how can Hong Kong play a more active role in the Mainland in promoting innovative design and sophisticated brand management which are also crucial elements for industry upgrading?

17. Regarding IT and related services, Hong Kong shares the same origin and language with the Mainland, which is an advantage over developed countries such as the United Kingdom and the United States. When compared with the Mainland, Hong Kong's advantages include its international outlook, competitive infrastructure, and a corporate governance and project management system and a quality management regime that are in line with international standards. Hong Kong could

capitalize on these edges to meet the emerging opportunities and challenges and maintain its uniqueness.

18. As the Mainland economy continues to enjoy vigorous growth, with the liberalizing market and expanding foreign trade, there is an increasing demand by Mainland enterprises for different kinds of services, especially IT and related services. Moreover, the Mainland has been actively promoting the development of digital content and animation industries in recent years. With our strengths in the provision of information services, Hong Kong is well-placed to support the development of these industries in the Mainland. As Mainland enterprises are gradually implementing the “Go Global” (走出去) policy, Hong Kong can act as a launching pad for them to expand overseas.

19. Meanwhile, we also have to face the challenges arising from the implementation of the 11th Five-Year Plan. Generally speaking, human capital is relatively more costly in Hong Kong as compared with the Mainland. With the development of the Mainland in recent years, the quality of human resource has been improving. The comparative advantages of our IT professionals in global visions, technical skills and English proficiency are under threat. Hong Kong’s IT sector could pitch its performance at a higher technical and servicing level etc, so as to create a win-win situation by complementing the IT and related services in the Mainland.

Responses /Actions taken by the Government and Other Sectors

Innovation and Technology

20. The HKSARG is committed to creating a conducive environment for innovation and technology development, mainly through strengthening technological infrastructure and providing funding support for applied R&D. After a comprehensive review, the HKSARG has recently implemented a new strategy to further promote the development of innovation and technology. It is also noteworthy that enterprises are now attaching greater importance on developing new technologies and designs, whereas R&D institutes are actively enhancing technology cooperation with their counterparts in the Mainland.

Technological Infrastructure and Funding Support

21. The HKSARG set up the Innovation and Technology Fund (ITF) in 1999 to support projects that help develop innovative ideas and technology and industry upgrading. Over the past six years, the ITF has provided about \$2.5 billion to support more than 800 projects carried out by universities, research institutes and enterprises.

22. The HKSARG has also strengthened technological infrastructure to support the development of technology enterprises and research activities. In 2000, the Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI) was set up to perform industry-related high quality R&D for transfer to industry for commercialization. The ASTRI aims to elevate the technology level of our industry and stimulate the growth of technology-based industry in Hong Kong. In addition, Phase One of the Hong Kong Science Park and the Cyberport were completed and opened in 2002, offering quality facilities and comprehensive support to technology companies. Phase One of the Science Park has about 84,000m² lettable area, with shared technical support facilities such as the Integrated Circuit Design and Development Support Centre, Product Analysis Laboratory and Intellectual Property Services Centre. With these facilities, the initial operating cost of the technology companies in the Science Park can be lowered and the time for launching R&D projects can be shortened. At present, over 100 overseas, Mainland and local technology companies have moved into Phase One of the Science Park (including three Mainland companies) and the occupancy rate reaches 90%. To cater for the increasing demand, construction of Phase Two of the Science Park is underway. Around 78,000m² lettable area will be provided and the construction is expected to be completed in 2007-08. The Cyberport, offering approximately 94,000m² lettable area, is equipped with advanced facilities including the Digital Media Centre and the Hong Kong Wireless Development Centre as well as server hosting service. The Cyberport currently has about 60 tenants (including three Mainland companies).

23. To assist technology start-ups in business development, the HKSARG has set up the Small Entrepreneur Research Assistance Programme (SERAP) to provide seed money for small technology entrepreneurs to carry out R&D on innovative technology products, processes and services. SERAP has supported more than 200 companies with a total funding of about \$200 million. Furthermore, the incubation

programme launched by the Hong Kong Science and Technology Parks Corporation (HKSTPC) aims to nurture technology start-ups by providing low-cost office accommodation as well as administrative management, marketing, financial and technical assistance. Over 200 companies have participated in the programme.

24. Apart from R&D on technology, design is also crucial to the upgrading of products and services. In 2004, the HKSARG allocated \$250 million to launch the DesignSmart Initiative to promote wider use of design in industries. The Initiative has provided \$51 million to support design/business collaboration, focus studies and promotion of design excellence. Moreover, the InnoCentre was just set up in early 2006 as a design cluster to provide one-stop design service to industries and offer incubation programme to design start-ups. More than 10 incubatees and tenants have already moved into the InnoCentre.

New Strategy of Innovation and Technology Development

25. In order to promote the sustainable development of innovation and technology and effective use of resources, the HKSARG issued a consultation paper in mid-2004 on the proposal of implementing the new strategy of innovation and technology development. The new strategy emphasizes on five elements, namely identification of technology focus areas for priority development, demand and market driven, industry participation, leverage on the Mainland, and better coordination among different elements of the innovation and technology programme. The consultation paper listed out 13 technology areas which could be considered for focused development for extensive consultation. During the three-month public consultation period, the Innovation and Technology Commission (ITC) received over 160 written submissions from the R&D sector, industries and the public. They generally supported the proposed new strategy, including the selection of technology areas that Hong Kong has competitive edges and has the potential to meet the market needs for priority development. Having regard to the opinions from various sectors, the HKSARG decided to set up five new R&D centres hosted by local universities and research institutions that possess considerable research capabilities and foundation. The five R&D centres are:

- the R&D Centre for Automotive Parts and Accessory Systems hosted by the Hong Kong Productivity Council (HKPC);

- the R&D Centre for Logistics and Supply Chain Management Enabling Technologies jointly hosted by the University of Hong Kong, the Chinese University of Hong Kong and the Hong Kong University of Science and Technology;
- the R&D Centre for Nanotechnology and Advanced Materials hosted by the Hong Kong University of Science and Technology;
- the R&D Centre for Information and Communications Technologies hosted by the ASTRI; and
- the R&D Centre for Textiles and Clothing hosted by the Hong Kong Polytechnic University.

26. Each R&D Centre operates independently and provides support and solutions that meet the specific requirements of the respective industries. A board of directors and a technology committee are appointed in each Centre. Comprising Government representatives as well as academic and industry leaders in the relevant technology areas, the boards of directors are responsible for setting the overall development direction of the Centres. The technology committees comprise representatives from academia and industry in the relevant technology areas, and they are responsible for assessing and monitoring the progress of R&D projects. This management structure can strengthen cooperation between the Government and the industries, ensuring that R&D projects are supported by the industries.

27. The five new R&D Centres commenced operation in April 2006. Together with the Hong Kong Jockey Club Institute of Chinese Medicine established in 2001, they provide one-stop services to industries, including undertaking industry-oriented applied R&D, promoting technology transfer and commercialization, providing technology and market information and establishing an exchange platform of IP and technology. The ITF has reserved about \$2 billion to support the operation and the research funding of the Centres.

28. The R&D Centres are open to enterprises and research institutions which are welcome to participate in the Centres' projects by contributing IP, capital and talents. Participating institutions can make use of the R&D deliverables according to the proportion of resources they contribute. By making use of the Centre's research talents and facilities, enterprises can also commission the Centres to undertake specific R&D

projects. Enterprises are also welcomed to join the Centres as ordinary members to gain access to the latest technology information, take part in the Centres' activities and keep themselves abreast with the latest R&D deliverables.

29. Apart from local research talents, the R&D Centres also engage notable research institutions and technology companies from the Mainland, Europe and the United States. Through diversified modes of cooperation, the Centres can facilitate technology exchange and introduce advanced knowledge and technologies into Hong Kong and the PRD. The Centres aim to serve as a regional platform of applied R&D, technology transfer and commercialization, offering services to enterprises in the Greater PRD. The Department of Science and Technology of Guangdong Province and several municipal governments in the PRD region have shown great support to the Centres' work. In May and June this year, ITC organized seminars in four PRD cities to promote the services offered by the Centres and the collaboration opportunities for the enterprises.

Technology Cooperation between Hong Kong and the Mainland

30. Strengthening cooperation with the Mainland is one of the vital elements of the new strategy. In this regard, the HKSARG has established collaboration mechanisms with the MOST, Pan-PRD region and Guangdong Province:

- Ministry of Science and Technology – MOST and the Commerce, Industry and Technology Bureau of the HKSARG set up the Mainland/Hong Kong Science and Technology Cooperation Committee in 2004 to formulate and coordinate technology collaboration programme between the Mainland and Hong Kong. In addition to MOST, Mainland members of the Committee include other departments responsible for technology development such as the Ministry of Education and the Chinese Academy of Sciences. At its first two meetings held in Beijing and Hong Kong, the Committee has agreed to enhance cooperation in four technology areas, namely radio frequency identification (RFID) technologies, automotive parts and accessory systems, integrated circuit design and Chinese medicine, and four working groups have been set up to devise cooperation measures. To enhance exchange and

co-operation between Hong Kong and the Mainland, the Committee has also agreed to organize a large-scale exhibition in Hong Kong during the National Science and Technology Week to be held in May next year to showcase the latest technology achievements;

- Cooperation with Pan-PRD region – Representatives from the Departments of Science and Technology of the nine Pan-PRD provinces, ITC of HKSAR and the Science and Technology Commission of Macao have formed the Pan-PRD Joint Conference on Regional Cooperation in Science and Technology to foster collaboration in innovation and technology in the Pan-PRD region. In July 2005, the nine Mainland provinces, HKSAR and Macao SAR completed the “Planning Study on Pan-PRD Regional Co-operation in Science and Technology for 2006-2010”. The Planning Study was endorsed at the 4th Joint Conference held in Hong Kong on 30 September 2005. With the aim to facilitate the nine provinces and the two SARs to complement each other’s strengths to achieve a win-win situation, the Planning Study put forward a number of recommendations including establishing technology collaboration platforms, promoting nurture of talents and technology exchanges, and conducting joint research on technologies that the Pan-PRD has competitive edges in the international market. The Pan-PRD provinces/SARs are working together to formulate working plans to take forward the recommendations. Hong Kong will be responsible for two projects, namely nanotechnology and advanced materials, and logistics and supply chain management enabling technologies, which are also the technology focus areas under our new strategy of innovation and technology development; and
- Guangdong-Hong Kong collaboration – The Guangdong Provincial Government and the HKSARG established the Guangdong/Hong Kong Expert Group on Cooperation in Innovation and Technology in 2003 with the objectives to encourage cooperation in innovation and technology between the two places and enhance the productivity and competitiveness of industries. Starting from 2004, the

Expert Group launches the Guangdong/Hong Kong Technology Cooperation Funding Scheme (TCFS) every year to support applied R&D projects in technology areas of mutual interest. Over the past two years, the governments of Guangdong Province and HKSAR have supported nearly 200 R&D projects with total funding of about \$660 million. A new round of TCFS has been launched this year and the two sides have earmarked \$800 million to support R&D projects under six technology areas. It is expected that the assessment will be completed at the end of 2006.

Inputs from Industries and Co-operation between Research Institutions

31. In addition to Government's efforts, the business sector has been laying more and more emphasis on innovation and technology in recent years. According to surveys conducted by the Census and Statistics Department, 43% of the responding enterprises had carried out innovation activities in 2004, representing a drastic increase when compared with 16% in 2001. The R&D expenditure by the business sector only accounted for 29% of the total R&D expenditure in Hong Kong in 2001, and the figure rose to 48% in 2004. The total R&D expenditure in Hong Kong also rose from \$7.1 billion in 2001 to \$9.5 billion in 2004, while the number of researchers (in full-time equivalent) increased from 11,000 in 2001 to 19,000 in 2004. Although Hong Kong's total R&D expenditure as a percentage to GDP grew from 0.56% in 2001 to 0.74% in 2004, it was still relatively low when compared with those of the nearby regions such as the Mainland (1.23%), Taiwan (2.54%), South Korea (2.85%) and Singapore (2.25%). Besides, the R&D expenditure by the business sector accounted for less than 50% of the total R&D expenditure, which was still much lower than the level of about 60-70% in other regions. Against such background, many organizations have put forth the need to further encourage the business sector to increase investment in R&D.

32. On the other hand, local research institutions and tertiary institutions are proactively building up closer partnership with the relevant organizations in the Mainland. For example, the HKSTPC, ASTRI and HKPC have separately signed agreements or memoranda with the industrial parks, R&D bases or research institutions in Beijing, Shanghai, Guangdong and Shenzhen to join hands in carrying out R&D on various areas including integrated circuit design, automobile electronics, digital entertainment, information technology, mobile communication and environmental

conservation.

Information Services

33. The HKSARG will keep up its efforts to promote the development of the IT and telecommunications sectors. It will also provide support on various fronts to help the local IT sector to expand into the Mainland market, strengthen Hong Kong's role as China's service centre, and promote Hong Kong as the two-way platform for Mainland enterprises to "bring in foreign investment" (引進來) and "go global" (走出去).

34. On IT, the HKSARG supports the development of a secure and reliable IT infrastructure and a set of common standards. We also seek to develop an information infrastructure with an open common interface, such as developing a common Chinese language interface, facilitating mutual recognition of electronic certification authorities, and developing the next generation internet.

35. The HKSARG is also committed to promoting e-commerce. We have, since 1997, phased in various electronic services for the submission of major trade documents. This is part of our efforts to encourage the business sector to optimize the use of IT to enhance their competitiveness. All major trade documents (including cargo manifests in the air, rail, ocean and river modes of transport, import and export declarations, dutiable commodities permits, certificates of origin and production notifications) are now lodged to the Government electronically. As at end 2005, about 20 million trade documents were submitted and processed through electronic means.

36. On communications, Hong Kong's telecommunications market is fully liberalized by being completely open to competition. The HKSARG will keep up efforts to promote effective competition and put in place regulatory and policy framework as and when required to encourage the industry to invest in a competitive, advanced and high bandwidth telecommunications infrastructure. Hong Kong telecommunications services providers possess considerable experience in the international market and sharp market sense. If they are allowed to operate in the Mainland (especially in the adjacent Pan-PRD region), this will not only create new markets for the industry, but also bring innovative and diverse product choices to the Mainland telecommunications services market.

37. The IT and related services sector has been making good use of the liberalization measures under CEPA. To date, four enterprises and ten individuals from the sector have obtained the computer information system integration qualification and relevant project manager qualification in the Mainland respectively, while another 19 Hong Kong people have obtained Mainland professional qualifications in computing technology and software.

38. Members from various professional institutions and trade associations of the local IT sector have set up the “Hong Kong/Guangdong Software Industry Cooperation Hong Kong-side Working Group” under the “Hong Kong/Guangdong Expert Group on Cooperation in Informatisation”. The Working Group aims to promote joint efforts of both places to explore the software outsourcing market and increase software export. The HKPC and the Hong Kong Information Technology Federation have launched an “IT Solution Directory”, with the integration of the directory with the “Guangzhou Software Enterprise Resources Network”, to form an information sharing and cooperation platform for the IT industries in the Pan-PRD region. This facilitates sharing of software resources, technology exchange, trade cooperation and promote software export. In addition, digital entertainment is one of the key cooperation areas under the Hong Kong/Guangdong Expert Group on Cooperation in Informatisation. The industries of both sides will jointly promote the cooperation and development of digital entertainment in the two places. The Hong Kong Cyberport Management Company Limited and the Shenzhen High-tech Industrial Park have already signed a strategic partnership agreement, with main collaboration areas on the exchange of information, business, and professional talent.

Way Forward

39. With the objective to further promote the development of innovation, technology and information services in Hong Kong so as to complement the 11th Five-year Plan and help strengthen Hong Kong’s position as an international finance, trading and shipping centre, the HKSARG has the following initial recommendations. Members are invited to offer comments on the recommendations and suggest other measures for further consideration.

Innovation and Technology

- To improve the Guangdong-Hong Kong Technology Cooperation Funding Scheme (TCFS) – The projects funded by the TCFS in the past two years are scheduled for completion starting from the end of this year. Guangdong and Hong Kong will review whether these projects achieve the expected results and, taking into account the experience gained, will explore how to improve the mode of operation and vetting procedures of the TCFS, so as to strengthen the cooperation of R&D institutions and enterprises in both places. At the same time, Guangdong and Hong Kong can explore the feasibility of extending the TCFS to the Pan-PRD region to foster technology cooperation and exchange between various provinces/SARs in the region;
- To establish technological innovation platforms for Guangdong and Hong Kong – In order to provide more effective support for the development of new technologies in both places, Guangdong and Hong Kong can explore the possibility of establishing technological innovative platforms, which could be based on the current R&D institutions and facilities as well as those under construction, and consolidating and coordinating the existing technological resources. The platforms can conduct R&D, provide technology exchange service, facilitate technological information exchange, attract and nurture talents and promote technology collaboration among local and foreign organizations. Since the Hong Kong R&D Centres are performing similar functions, as a first step, both sides can consider making them the R&D platforms for Guangdong and Hong Kong to enhance the technology levels in the region;
- To establish closer cooperation with Shenzhen – Given the geographical proximity, Hong Kong and Shenzhen have developed close economic relationship and there are frequent exchanges between people in the two places. There is much room for innovation and technology cooperation between the two places. Shenzhen and Hong Kong can set up a regular liaison mechanism to explore how to enhance technological

cooperation. During the discussions on concrete measures to establish the “Shenzhen-Hong Kong Innovation Circle” (深港創新圈), the two governments can explore the possibility of strengthening the exchange of talents, information and resources; promoting cooperation of R&D institutions in both places; sharing resources and fortifying IP protection;

- To increase participation in Mainland’s technology development plans and the formulation of national standards – The MOST and the Ministry of Information Industry are implementing various key technology development plans including the National Hi-Tech Research and Development Programme (863 Programme), the National Basic Research Programme (973 Programme), the National Key Laboratories Programme, and formulating National Standards for RFID, AVS, WAPI, etc. There are already collaborations in some of these areas between the Mainland and Hong Kong. Based on the current collaborations, consideration can be given to appealing to the relevant Mainland authorities for stepping up the cooperation in these programmes, such as inviting experts from Hong Kong to join the management structure of the 863 Programme and the 973 Programme; allowing Hong Kong universities and R&D institutes to launch projects under the name of “National Key Laboratory”; and appointing Hong Kong experts to participate in the formulation of national standards; and
- To further promote cooperation of R&D institutions and professional organizations in the Mainland and Hong Kong – given the mutual interest in many technology areas (e.g. information and communications, Chinese medicine, logistics, automotives and new materials), there is great potential for cooperation between Hong Kong and the Mainland. Hong Kong can work with Mainland provinces and cities, such as Beijing, Shanghai, Guangdong and Shenzhen, to organize more promotional activities including thematic seminars, exhibitions and forums to provide opportunities for exchange and communication for the R&D institutions and professional organizations from both sides, and to encourage them to embark on extensive cooperation.

Information Services

- Suggest appealing to the Mainland to allow Hong Kong enterprises to engage in more informatisation development projects in the Mainland and to use Hong Kong as an international exhibition and transaction platform for showcasing and promoting IT products and services of Mainland enterprises to the world. The IT and related services sector could also grasp the opportunities under the existing platforms, including CEPA, the Pan-PRD Regional Cooperation Framework Agreement and the Hong Kong/Guangdong Cooperation Joint Conference, to actively participate in informatisation projects in the Mainland;
- The IT and related services sector could work with the research institutes and universities to seek to participate in national planning in relation to the development of the information and digital content industries, and formulation of IT standards. This will help them keep abreast of the focus of the relevant R&D activities in respect of IT and digital media technology as well as the market trend in the Mainland. In addition, electronic trading service providers could provide more value-added services, in particular developing more effective and efficient options for traders to deal with trade documents of the two places, so as to promote e-commerce between the two places;
- Suggest strengthening cooperation in the provision of telecommunications services, including basic and valued-added services, in the Pan-PRD region. If the local industry can provide these services by wholly-owned enterprises in the Mainland ahead of its overseas counterparts, this will not only speed up the expansion of the telecommunications markets and benefit the operators and consumers of the two places, but also help the Mainland telecommunications industry gain further experience on the operation of the free market. This can enhance their competitiveness and prepare for full implementation of their WTO commitments and opening up of the domestic market in future; and

- Suggest industries should upgrade themselves, build up their brand names, develop service in line with the needs of the Mainland and the specific markets, and pitch their performance at a higher technical and servicing level, with a view to staying competitive when faced with the low-cost services of the Mainland.

Issues for Discussion

- Whether the above analysis on Hong Kong's competitiveness in terms of innovation, technology and information services in the global arena is sufficiently thorough and in-depth? Are there any aspects that need to be supplemented?
- Whether the above analysis on the opportunities and challenges concerning innovation, technology and information services in the national 11th Five-Year Plan is sufficiently thorough and in-depth? Are there any aspects that need to be supplemented?
- Whether the above analysis on the opportunities and challenges concerning innovation, technology and information services in the Guangdong 11th Five-Year Plan or regional development is sufficiently thorough and in-depth? Are there any aspects that need to be supplemented?
- Whether the responses and actions taken by the Government and the public sector to further strengthen and develop innovation, technology and information services as mentioned above can aptly address the present situation? Are there any strategies that need to be adjusted?
- Whether the recommendations and issues for further consideration as set out above in relation to the development and enhancement of innovation, technology and information services are appropriate?

Commerce, Industry and Technology Bureau
September 2006