

**For information on
14 December 2015**

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

The work of the Innovation and Technology Bureau

The Innovation and Technology Bureau (“ITB”) was established on 20 November 2015, and is responsible for formulating holistic innovation and technology (“I&T”) policies, thereby fostering the development of I&T and related industries in Hong Kong. This paper introduces the major work of ITB.

Background

2. To promote sustained and diversified social and economic development, the Government of the Hong Kong Special Administrative Region (“HKSAR”) is determined to develop the local I&T industries, driving the upgrading and transformation of our overall economic structure, thereby raising Hong Kong’s competitiveness and improving the people’s quality of life. Hong Kong possesses advantages in a number of areas, including strategic location in the Asia-Pacific region, proximity to the huge Mainland market, intellectual property protection regime of international standards, sound legal system and independent judiciary, and comprehensive information technology infrastructure and financial system, etc. These advantages make Hong Kong well-positioned to develop high value-added and high-tech I&T industries.

3. There are two departments under ITB, namely the Innovation and Technology Commission (“ITC”) and the Office of the Government Chief Information Officer (“OGCIO”). The ITC is responsible for

implementing the Government's funding schemes and measures, and providing infrastructural and other support to the I&T sector, so as to promote the development of I&T in Hong Kong. The OGCIO is responsible for implementing measures to ensure that the Government uses information technology to improve public services, supporting the development of community-wide information technology infrastructure, as well as promoting and facilitating the wider use of information technology in the business sector and the community as a whole.

Direction and Work Priorities

4. During the deliberations on the establishment of ITB by the Legislative Council ("LegCo"), different stakeholders, including the industry, academia, research institutions as well as LegCo, etc., had all expressed strong support for strengthening Hong Kong's development of I&T, and provided a lot of valuable views and suggestions on the future directions. The views covered a number of aspects, including the provision of sufficient land for scientific research and high value-added manufacturing industries, promoting "re-industrialisation", promoting the development of local I&T industry, nurturing local technology talents and increasing employment opportunities, promoting research and development ("R&D") and the commercialisation of R&D results, setting performance indicators for the development of I&T, promoting the adoption of I&T in assisting to address social issues, and coordinating among stakeholders, etc.

5. Taking into account the views expressed, we believe there are four important key factors for successfully developing I&T in Hong Kong –

- (i) the development of I&T involves group collaboration, and the Government cannot successfully drive the work on its own. All stakeholders, including the Government, industry, academia and research sector, must provide support, interact and cooperate fully. The Government assumes the role of facilitator in providing excellent hardware and software

support, so as to allow stakeholders to develop and apply I&T together in a favourable environment;

- (ii) making reference to technologically advanced regions in the Mainland and overseas, massive investment by the public and private sectors in R&D is indispensable. Currently, the investment made by the Government of the HKSAR accounts for over half of the total R&D spending. We hope the private sector would increase investment in R&D to exceed the level of investment made by the Government. Besides, the key in making R&D investment is to focus on projects with development potential, which are long-term investments. The society should take the long-term view and not expect the projects to bear fruits in the short-term;
- (iii) the size of the local market in Hong Kong is limited. To promote “industrialisation” or “commercialisation” of local R&D results, we must encourage the industry to expand in the Mainland and overseas markets, and strengthen technological collaboration with the Mainland and overseas in all aspects; and
- (iv) I&T talents are the most important factor of success. On the one hand, we hope to nurture and attract a large number of technology institutions, talents and experts to converge in Hong Kong, create cluster effect, which allows for the integration of knowledge and talents, attracting local young people to join the force in I&T. On the other hand, we also hope to create an overall innovative and entrepreneurial spirit in society, encouraging, in particular, young people and small and medium enterprises to proactively engage in the development of I&T and fulfill their potentials.

6. Having considered Hong Kong’s unique advantages, and the I&T development internationally and in the Mainland, we have set the following nine directions and work priorities –

(I) Promoting R&D collaboration

7. The ITB will make focused efforts in promoting the collaboration between Hong Kong and the world's top-notch science and research institutes. In fact, Hong Kong's innovative capabilities, potential and room for development are already recognised by advanced institutions worldwide. For example, early this year the Karolinska Institutet of Sweden announced that it would set up in Hong Kong the Karolinska Institutet China-Hong Kong Regenerative Medicine Centre, its first overseas R&D centre, with a focus on life science and regenerative medicine. The Massachusetts Institute of Technology of the United States also announced in early November this year the launch of the first overseas "Innovation Node" in Hong Kong next year, to pool students, scholars and entrepreneurs from the United States and Hong Kong together. Besides, the R&D institutions and personnel in Hong Kong can participate in the State Key Laboratories Scheme and Chinese National Engineering Research Centres through the Partner State Key Laboratories in Hong Kong and Hong Kong branches of the Chinese National Engineering Research Centres. We will continue to actively promote collaboration with partner organisations in the Mainland and overseas, in order to expand the scale and scope of R&D activities, and share costs and risks of R&D.

(II) Promoting "re-industrialisation"

8. Innovative application and technological development are the driving forces for industrial upgrading and restructuring. Seizing the opportunities brought about by Internet of Things and smart production, ITB will work towards developing high value-added industries that are suitable to be based in Hong Kong, promoting "re-industrialisation" and bringing Hong Kong's industrial development to new heights, so as to create more quality and diversified employment opportunities.

9. For example, the advent of Internet of Things, Cloud Computing and Big Data Analysis, integrating with technologies such as remote health monitoring and wearable devices, would facilitate the spawning of different enterprises on manufacturing home care products

or the provision of related services. Rapid development of e-commerce in the retail sector, coupled with electronic logistics and 3D-printing technology and other new materials, also encourage new industries and create new employment specialising in small quantities of personalised products.

(III) Promoting investment on technology start-ups

10. The ITB will actively study and introduce measures to encourage private organisations, venture capital funds and angel investors to invest in I&T, including studying the feasibility of co-investment in technology start-ups by Government and private funds. We will also continue to provide financial support to technology start-ups through different schemes such as the Research and Development Cash Rebate Scheme, Enterprise Support Scheme, Corporate Venture Fund set up by the Hong Kong Science and Technology Parks Corporation (“HKSTPC”), etc.

11. Currently, the ratio of annual public and private sector investment in R&D in Hong Kong is around 6:4, whereas the corresponding ratios for foreign developed economies are between 4:6 to 3:7. We would consider implementing suitable measures to attract more private investments in I&T, which can be leverage to increase the effect of public funds.

(IV) Studying the Smart City initiative

12. The ITB will collaborate with relevant Government policy bureaux and departments, as well as the public and private sectors to participate in studies of Smart City initiatives, focusing on the examination of the requisite information technology infrastructure in developing Smart City in Hong Kong and providing support in digital technology. The Government’s objective is to make people’s life more convenient, healthy and environmentally-friendly through the development of Smart City.

(V) Building Hong Kong into a connected Wi-Fi city

13. A connected city can make dynamic use of public sector information and data, unfolding the huge potential hidden therein. Taking advantage of the advanced information and communications technology infrastructure in Hong Kong, ITB will seek to build Hong Kong into a connected Wi-Fi city. We will also adopt new technologies to facilitate application of data in a more open manner.

(VI) Promoting the adoption of innovation and technology in addressing social issues

14. The ITB will, together with the relevant policy bureaux and departments, study and promote the adoption of I&T in assisting to address social issues, e.g. serving the elderly and underprivileged groups (including persons with disabilities) through the use of technologies, addressing the needs of an ageing population and promoting healthy ageing. Through the Innovation and Technology Fund (“ITF”), the Government will continue to support R&D centres in applying their R&D outcomes in public sector organisations, so as to help towards coping with social and economic issues.

(VII) Promoting the use of local technology products and services

15. In the past two years, the information technology services procured by the Government under the Standing Offer Agreement for Quality Professional Services all came from local technology companies. On the condition of not violating the Agreement on Government Procurement of the World Trade Organization, ITB will seek to promote the procurement of local I&T products and services, provide references for recommendation for quality products and services, and put forth suggestions for improvement, in order to help suppliers promote their business and expand business opportunities.

(VIII) Augmenting the pool of innovation and technology talents

16. Talents are the most crucial success factor in developing I&T. Currently, there are a number of schemes under ITF that encourage young people to undertake innovative and entrepreneurial activities. The incubation programmes under HKSTPC and Cyberport also provide support to technology start-ups. In addition, OGCIO will enhance the enrichment programmes and various activities in the school sector, thereby helping students lay the foundation for building knowledge on information technology. Through attracting top-notch international science and R&D institutions to set up operations in Hong Kong, we will inspire young people to join the force in innovation and entrepreneurship, thereby supplying high-calibre talents for the industry.

(IX) Encouraging the collaboration among institutions

17. The ITB will proactively strengthen the ties with various stakeholders in the Government, industry, academic and research sectors, including the relevant Government policy bureaux and departments, R&D Centres, universities, HKSTPC, Cyberport, Hong Kong Productivity Council, etc. We will revisit the work priorities and interactions of the various institutions, so as to ensure that the institutions can make good use of their resources, complement each other and create synergy, with a view to developing the I&T industry of Hong Kong in unison.

Key Performance Indicators

18. All of the above nine work priorities are very important and are not listed in order of importance. Each area of work has already gradually commenced. As regards the views that the Government needs to set performance indicators to assess policy effectiveness, we agree that formulating Key Performance Indicators (“KPIs”) is an important task. However, during the process of setting these indicators, we need to reach consensus with stakeholders, so as to ensure that the indicators are effective and acceptable to parties concerned. The development of I&T

is an ever-evolving process, and KPIs are only part of the means to measure our work over this long-term and continuous evolution. The indicators, after being set, would also need to be regularly reviewed and revised in light of the actual situation at that time. We are discussing issues on KPIs with stakeholders. We are confident that the abovementioned nine work priorities will gradually yield results, and lay a solid foundation for the development of I&T in Hong Kong.

Conclusion

19. The National 13th Five-Year Plan advocates innovation as the new economic driver, encouraging the development of technological innovation, innovation in service industries, smart production, high-end industries and information technology, etc., and promoting mass entrepreneurship and innovation. The ITB will seize the opportunities and development potential brought about by the National 13th Five-Year Plan, and the support tendered by the Mainland to Hong Kong in developing I&T, making Hong Kong a “super-connector” in the arena of I&T. We will forge close ties with top local, Mainland and global R&D institutions, promote the development of I&T, create more business opportunities for the industry, and improve people’s life.

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