



Three Major Breakthroughs from “HK-SZ Tech Park”

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At the start of a new year, the Hong Kong Special Administrative Region (“HKSAR”) Government and Shenzhen Municipal People’s Government signed the Memorandum of Understanding (“MoU”), agreeing to jointly develop the Hong Kong/Shenzhen Innovation & Technology Park (“HK-SZ Tech Park”) at the Lok Ma Chau Loop, which lies to the south of Shenzhen River and near Lok Ma Chau Control Point. Innovation and technology (“I&T”) will be the main focus of HK-SZ Tech Park, and will become a key base for cooperation in scientific research, and equipped with relevant higher education, cultural and creative and other complementary facilities. It is by far the largest I&T zone in Hong Kong as well as an important platform for technological collaboration between the two cities. Breakthroughs in three dimensions are expected from HK-SZ Tech Park:

1. New Breakthrough in Hong Kong / Shenzhen Cooperation

It is well known that Hong Kong/Shenzhen cooperation has undergone two stages of development since the economic reform and opening-up: The first stage was cooperation in processing trade. At the beginning of 1980s, manufacturing activities in Hong Kong were relocated to Shenzhen, which served as a production base amid the low cost competition globally. It formed the “front shop and back factory” mode of operation between both sides. The second stage was cooperation in modern service industries, where the relocation of production services from Hong Kong to Shenzhen together with the introduction of Individual Visit Scheme expedited the flow of people and capital between the two cities. The integration of Hong Kong and Shenzhen thus gradually took shape. The launch of HK-SZ Tech Park is a new breakthrough in the cooperation between two sides, reaching a new milestone for the cooperation in I&T. As it is not only the most important platform for technological collaboration, but it also has the potential to be developed into a world-class I&T zone, which would help boost the I&T upgrading in both cities. Specifically:

First, HK-SZ Tech Park sits in the heart of border areas between the two cities, giving it an unparalleled geographic advantage. According to the Planning and Engineering Study on Development of Lok Ma Chau Loop, the Park area amounts to 87 hectares, which is around four times the size of Hong Kong Science Park. It is therefore a piece of precious land. It provides greater

and more direct spaces for Hong Kong to achieve full connectivity with the technology industry in Shenzhen, enabling more research and development results to turn into business opportunities. More importantly, the Park has two major connecting areas: One is the adjoining area of the Loop on Hong Kong side with 182 hectares of land, designated as Area B in the development plan. This area is two times bigger than the Loop (Area A) and is reserved for further development. Another one is the Shenzhen Innovation and Technology Park located in the adjacent area of the Loop on Shenzhen side (Area C) with a total area of 167 hectares. Both cities agreed to seek stronger policy support from the Central Government to work on the “Shenzhen/Hong Kong Technology and Innovation Cooperation Zone”, which will create cluster and synergy effects. The three areas encompass a total area of 426 hectares, a similar size to the Hsinchu Science Park in Taiwan. It will render sufficient spaces to be developed into a global I&T hub.

Second, HK-SZ Tech Park can better leverage on the strengths of the two cities. For Shenzhen, its strength is the tremendous success in the commercialisation of research and development (“R&D”) results. Currently, it has evolved into a leading I&T centre in the world. In 2015, the strategic emerging industries such as next-generation information technology, biotechnology, internet, new energy, new materials, environmentally friendly technologies, cultural and creative, etc., reached the scale of RMB 2.3 trillion, provided 40% of value added in total GDP and accounted for over 50% of GDP growth. Sectors including: 4G technology, DNA sequencing, metamaterials, new energy vehicles, 3D display, unmanned aircraft, have already held the leading positions in the world. I&T enterprises such as Huawei, Tencent, BYD, DJI, BGI, have also gained international acclamation. With all these, Shenzhen is now widely regarded as the “Dream Factory” for global entrepreneurs and the city with most resemblance to Silicon Valley. However, Shenzhen lacks local research institutions, and its weakness is in basic scientific research. Hong Kong has an advantage in areas such as basic scientific research, international savvy innovators and technological services, in which Hong Kong would very well complement with Shenzhen. In accordance with the MoU, Hong Kong and Shenzhen will build a key base for cooperation in scientific research, and relevant higher education, cultural and creative and other complementary facilities. It will attract top enterprises, scientific research institutions and universities from the Mainland and overseas to establish presence in the Park. And, with the strengths of two cities, it will foster full integration in innovation, industries, and capital, attaining the 1+1>2 effects.

Third, HK-SZ Tech Park will have a variety of institutional innovation. One is the innovation in the mode of operation. The Shenzhen side confirmed that the ownership of land in the Lok Ma Chau Loop belongs to Hong Kong. Hong Kong will be responsible for funding and infrastructure building by phases, and Shenzhen will jointly develop the Park. A joint task force was set up to offer views on the development and operation of the Park. The Park will be operated according to three

principles including: It will be subject to the law and land administration system of Hong Kong; the development projects will be intended for the public good, but not profit making; the management of the Park will be based on the spirit of mutual agreement, complementarity and mutual benefits. Another innovation is on border control. In order to attract more entrepreneurs and innovators, the HKSAR Government will better facilitate the entry of designated persons to the Park. Since then, with the permission from both Governments, Mainland residents or company staff can enter the Park for research work, making immigration clearance more convenient. In the future, the HKSAR Government will build a road in the Lok Ma Chau Control Point connecting with the Park. And, a bridge crossing the Shenzhen River is also under consideration. These will facilitate the movement of Mainland talents to work in the Park.

2. New Breakthrough in I&T Industry

Boosting economic growth via the I&T industry is already a global trend, and Hong Kong is no exception. Over the years, I&T has been selected as one of the six industries where Hong Kong enjoys clear advantages. Its development has witnessed competences as well as inadequacies. Its competences are in basic scientific research and technology infrastructure, and its inadequacies are in the application and commercialisation of R&D results which prevent the I&T industry from making significant breakthroughs. Without doubts, Hong Kong has an edge in the upstream segment of the I&T industry - basic scientific research, which has been elevated to world-class standard. Recently, Hong Kong scientists received outstanding recognition in the 2016 State Natural Science Awards (“SNSAs”), winning six second-class awards. The awardees came from the research teams in six universities including HKUST, CUHK, HKU, HKBU, PolyU and CityU. For instance, colorectal cancer (“CRC”) is the commonest cancer in Hong Kong, the team led by Professor Joseph Sung, the Vice-Chancellor of CUHK, spent 15 years in research and achieved breakthroughs in identifying novel biomarkers for non-invasive diagnosis of CRC. Their research “Integrative Research on Molecular Pathogenesis, Diagnostic Biomarkers and Prevention for Colorectal Cancer“ was one of the winning research in SNSAs. Also, Professor Dennis Lo Yuk-ming, Associate Dean of the Faculty of Medicine and Chairman of the Department of Chemical Pathology at CUHK, received the Future Science Prize – Life Science Prize, which was seen as the Chinese version of Nobel Prize, for his contribution to DNA test. These evidenced that research capability of Hong Kong local universities have considerable strengths with growing recognition.

Technology infrastructure is also a competence of Hong Kong. According to International Institute for Management Development (“IMD”) “World Competitiveness Yearbook”, Hong Kong ranked top in technology infrastructure for five consecutive years. “Global Information Technology Report 2015” by the World Economic Forum also revealed that Hong Kong had the highest coverage

of mobile network with strong competitive edge in areas like developing internet of things, big data, cloud computing, information and risk management, and cyber security. Another international research indicated that Hong Kong ranked 5th in the startup ecosystem globally. At the end of last year, there were about 1,900 startups in Hong Kong, up sharply by 78% compared to 2014. It showed more people in Hong Kong were engaging in the startup industry. In the meantime, research intuitions from the Europe and the United States were having greater interest in Hong Kong. The Karolinska Institutet from Sweden has set up its first overseas research centre in Hong Kong. And, the Massachusetts Institute of Technology has also set up its first overseas Innovation Node in Hong Kong

However, due to the constrains on land, cost and environment protection, the midstream and downstream segments of the applied I&T industry remained in the doldrums. Thus far, Hong Kong has yet developed any world renowned I&T enterprises like Apple, Google, Facebook, Huawei and Tencent. Statistics from the Government showed that value added generated from the I&T industry was only HK\$16.92 billion, accounting for just 0.7% of GDP. And, the shares in GDP have been kept unchanged for many years. Moreover, per capita value added from the I&T industry was merely 66% of the four pillar industries and around 80% of all industries. Hence, the current labour productivity of the I&T industry was not high, lagging behind the benchmark of high value added industry.

Given the two major missions of increasing capacity and enhancing productivity, the most pressing task for the I&T industry is to speed up the midstream and applied research, in order to drive the commercialisation of R&D results. In this regard, HK-SZ Tech Park brings in opportunities for Hong Kong to catch up, since the Park will offer more land resources and allow Hong Kong to access the world-class manufacturing base in the Pearl River Delta through the thriving I&T industry in Shenzhen. It will help drive the commercialisation of R&D results. Based on the arrangements, a subsidiary to be established by the Hong Kong Science and Technology Parks Corporation will be responsible for building the superstructure and operation of the Park. It aims to draw top I&T enterprises from the Mainland and overseas to set up research centres and big data centres in the Park. It will also attract multi-national I&T enterprises to set up the research headquarters for China region in the Park. A number of small and medium I&T enterprises will be incubated. These will create a cluster of I&T enterprises in the high-end services sector. Once the Park's innovation ecosystem is built, more talents will be attracted, forming a virtuous circle. The I&T industry will thus have a greater opportunity to make a bigger breakthrough.

3. Contribution to the Innovation Strategy of the Country

Implementation of the innovation development strategy is one of the most important tasks

under the 13th five-year plan, which covered a number of new initiatives. They include “Scientific Innovation 2030”, high-tech equipment innovation and development of strategic emerging industries. Not long ago, the Central Government promulgated the “13th Five-year Development Plan on National Strategic Emerging Industries”. Its goal was to raise the GDP shares of strategic emerging industries to 15% by 2020, and form a new pillar industry with five sectors including next-generation information technology, high-end production, biotechnology, green and low-carbon industries and digital creativity, which together will worth over RMB 10 trillion. It will also bring new opportunities and set out a higher benchmark for Hong Kong.

Hong Kong should seize this historic opportunity in innovation development pushed forward by the nation. More importantly, Hong Kong shall complement the nation’s innovation development strategy, establishing a platform for I&T research. As early as year 2011 in an official visit to Hong Kong, Premier Li Keqiang announced 36 measures to support Hong Kong. These measures included strengthening the cooperation in the technology industry between the Mainland and Hong Kong, so the technology resources in Hong Kong could be further integrated into the nation’s I&T system. The Central Government would also support Hong Kong in setting up the Hong Kong Branch of Chinese National Engineering Research Centres (“CNERCs”) and the Hong Kong National High-tech Industrialisation Base in appropriate forms. Up to now, Hong Kong and the Mainland have jointly established 16 Partner State Key Laboratories and 6 Hong Kong branches of CNERCs. Research collaborations across multiple disciplines are in the pipeline.

The 13th five-year plan reaffirmed the support for research collaborations between the Mainland and Hong Kong, providing Hong Kong a good opportunity. The launch of HK-SZ Tech Park precisely enables Hong Kong to tap the opportunity under the 13th five-year plan. On the one hand, the Park can be developed into a world-class I&T research platform, providing offshore support for the strategic emerging industries in the Mainland. According to the opinions by Professor Tsui Lap Chee, the President of the Academy of Sciences of Hong Kong, research conducted in the Park at the initial stage can focus on biomedical, robotics, FinTech and smart cities. These are coincided with the five new key sectors highlighted by the Mainland. Thus, the research work of the Park can leverage on the development of these sectors.

On the other hand, HK-SZ Tech Park can capitalise on the advantages of financial, trade and professional services in Hong Kong to develop a high-end modern technology service industry. The Park can support the Mainland technology enterprises to go global by serving as a base for overseas acquisitions, asset operation, bringing in technology and improving cooperate governance. It fits the needs of these enterprises for developing standardisation, diversification, and internationalisation. With the implementation of Innovation-driven Development Strategy, there will be more offshore technology enterprises using the Park as the bridgehead to enter into the Mainland market. The

Park has the possibility to become a hub for managing global technology enterprises and providing services to Mainland technology enterprises. It will help Hong Kong to better facilitate and participate in the nation's Innovation-driven Development Strategy.

4. Room for further development

Overall, HK-SZ Tech Park is vested with the imperative mission to develop the I&T industry in Hong Kong, deepen the Hong Kong and Shenzhen partnership in I&T and take part in the nation's Innovation-driven Development Strategy. Hong Kong is likely to make significant breakthroughs in above three missions. Nonetheless, it should also be noted that the current development of the I&T industry in Hong Kong is not satisfactory as caused by many factors, which would inevitably affect the HK-SZ Tech Park. From the policy perspective, fiscal support for the technology sector has long been very limited, even though the situation has improved. Too much emphasis is put on supporting specific projects, whereas the co-operation among the Government, industry, academia and research sector should be strengthened. From the market perspective, there is still a shortfall in land supply. High land prices and labor costs lead the I&T industry to mostly limit to capital intensive services, making it harder to develop mega domestic production base.

More importantly, Hong Kong is yet to create an atmosphere of I&T in academia and society. Many people regard the prospects of engaging in I&T industry are not comparable to financial, medical and legal professions. The number of enrollment in science and engineering programmes by local students keep decreasing. It gives rise to a succession problem among the I&T talents in Hong Kong and deters overseas I&T enterprises from coming to Hong Kong. As a result, the drop in competitiveness persists. The Global Competitiveness Report by the World Economic Forum showed that Hong Kong maintained its 7th place in the Global Competitiveness Index, but ranking in innovation was only 27th, which was clearly on the low side and continued on a downward trend. The situation is worrying.

Therefore, Hong Kong will need to put more efforts in changing mindset and provide continuous input into the midstream and applied research. Meanwhile, Hong Kong should make use of the nation's 13th five-year plan and HK-SZ Tech Park to speed up transformation of the knowledge-based economy with innovation and creativity as the focal point, in order to lay a solid foundation for the domestic innovation and creative industries. Besides, the Park should be developed and managed through innovative and structured means such as inviting in-depth participation by Shenzhen in planning and management, attracting top cadre of talents around the world to work in the Park, and inducing Mainland and international large corporations and prestigious research institutions as partners. These will set a clear direction, ensure smooth operation, and effectively make a ground-breaking achievement for the development of the I&T industry in Hong Kong.

主要經濟指標 (Key Economic Indicators)

一. 本地生產總值 GDP	2014	2015	2016/Q2	2016/Q3
總量 (億元) GDP(\$100 Million)	21,946	22,464	5,868	6,352
升幅 (%) Change(%)	2.6	2.4	1.7	1.9
二. 對外貿易 External Trade	2014	2015	2016/11	2016/1-11
外貿總值 (億元) Total trade(\$100 Million)				
港產品出口 Domestic exports	553	469	38	432
轉口 Re-exports	36,175	35,584	3,371	32,532
總出口 Total exports	36,728	36,053	3,409	32,964
進口 Total imports	42,190	40,464	3,750	36,918
貿易差額 Trade balance	-5,463	-4,411	-341	-3,954
年增長率 (%) YOY Growth(%)				
港產品出口 Domestic exports	1.7	-15.2	3.4	-9
轉口 Re-exports	3.2	-1.6	8.2	-1.4
總出口 Total exports	3.2	-1.8	8.1	-1.5
進口 Imports	3.9	-4.1	7.6	-1.9
三. 消費物價 Consumer Price			2016/12	2016/1-12
綜合消費物價升幅 (%) Change in Composite CPI(%)	4.4	3	1.2	2.4
四. 樓宇買賣 Sale & Purchase of Building Units				
合約宗數 (宗) No. of agreements	81,489	76,159	6,967	73,004
年升幅 (%) Change(%)	15.6	-6.5	31.6	-4.1
五. 勞動就業 Employment			2016/9-2016/11	2016/10-2016/12
失業人數 (萬人) Unemployed(ten thousands)	14.95	12.2	13.1	12.2
失業率 (%) Unemployment rate(%)	3.2	3.3	3.3	3.3
就業不足率 (%) Underemployment rate(%)	1.5	1.4	1.4	1.4
六. 零售市場 Retail Market			2016/11	2016/1-11
零售額升幅 (%) Change in value of total sales(%)	-0.2	-3.7	-5.5	-8.6
零售量升幅 (%) Change in volume of total sales(%)	0.6	-0.3	-5.6	-7.6
七. 訪港遊客 Visitors			2016/12	2016/1-12
總人數 (萬人次) arrivals (ten thousands)	6,084	5,931	534.0	5665.0
年升幅 (%) Change(%)	12	-2.5	5.4	-4.5
八. 金融市場 Financial Market			2016/10	2016/11
港幣匯價 (US\$100=HK\$)				
H.K. Dollar Exchange Rate (US\$100 = HK\$)	775.6	775.1	775.6	775.7
貨幣供應量升幅 (%) change in Money Supply(%)				
M1	13	15.4	10	11.7
M2	9.5	5.5	8.9	9.2
M3	9.6	5.5	8.9	9.2
存款升幅 (%) Change in deposits(%)				
總存款 Total deposits	9.7	6.7	9.8	10.2
港元存款 In HK\$	9.3	10.7	8.4	9.3
外幣存款 In foreign currency	10.1	3.1	11.2	11.2
放款升幅 (%) in loans & advances(%)				
總放款 Total loans & advances	12.7	3.5	4.5	5.4
當地放款 use in HK	12.1	3.5	6.3	7.8
海外放款 use outside HK	14.2	3.6	0.3	-0.2
貿易有關放款 Trade financing	-1.4	-16.3	-5.1	-3.3
最優惠貸款利率 (%) Best lending rate (%)	5.0000	5.0000	5.0000	5.0000
恆生指數 Hang Seng index	23,605	21,914	22,935	22,790