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Panel on Commerce and Industry

Meeting on 16 March 2021

**Updated background brief on the Hong Kong Science Park and
Industrial Estates**

Purpose

This paper provides updated background information on the Hong Kong Science Park ("HKSP") and Industrial Estates ("IEs"); and brief accounts of the views and concerns expressed by members of the Panel on Commerce and Industry ("the Panel") on the subjects.

Background information on Hong Kong Science Park

2. Under the management of the Hong Kong Science and Technology Parks Corporation ("HKSTPC"),¹ HKSP is Hong Kong's flagship technology infrastructure, providing facilities, services and a dynamic environment that enable companies to nurture ideas, innovate and develop.

3. HKSP has been offering its facilities and support services through a clustering strategy since its establishment in 2002. The five technology clusters are biomedical technology, electronics, green technology, information and communications technology, and material and precision engineering. Following the completion of the Stage 1 of the Science Park Expansion

¹ HKSTPC, being a statutory body set up by the Government in 2001, is tasked with the objectives to establish or develop premises in support of technology-based companies and activities; to facilitate research and development and application of technologies; and to support the development, transfer and use of new or advanced technologies in Hong Kong. The Government, as the sole shareholder of HKSTPC, appoints a Board of Directors to oversee the work of HKSTPC. HKSTPC manages and operates HKSP, three IEs as well as the InnoCentre at Kowloon Tong.

Programme² in 2019, HKSP, sitting on a 22-hectare site, has 23 buildings with a total gross floor area ("GFA") of about 400 000 sq m.

Infrastructure

4. The Finance Committee ("FC") approved at its meeting on 13 July 2018 the injection of \$3 billion into HKSTPC for developing research-related facilities, among others.³ Since then, HKSTPC has expanded the Robotics Catalysing Centre in HKSP from about 400 sq m to about 2 000 sq m, and established the AI Plug (i.e. new artificial intelligence ("AI") laboratory), Biobank and Biomedical Informatics Platform.⁴

Phase 2 of the Science Park Expansion Programme

5. At the meeting on 29 October 2019, the Panel noted that HKSTPC would kick-start the Phase 2 of the Science Park Expansion Programme and had commissioned a consultant to conduct a master planning study to explore the feasibility of expansion within the existing HKSP site and the option to develop outside HKSP. The Financial Secretary further announced in the 2020-2021 Budget that the Government would earmark \$3 billion for the Phase 2 of the Science Park Expansion Programme.

InnoCell

6. The construction of the InnoCell adjacent to HKSP has completed in 2020.⁵ The InnoCell, which is expected to commence operation in early 2021, will provide about 500 residential units with flexible design and ancillary facilities such as shared work spaces for leasing to principals of

² The two buildings completed and commissioned under the Stage 1 of the Science Park Expansion Programme, apart from being leased to innovation and technology enterprises, are reserved for use by the two *InnoHK* research clusters (more details in paragraph 7), the Incubation Centre and the Robotics Catalysing Centre, etc.

³ On 13 July 2018, FC approved the injection of \$10 billion as equity to HKSTPC. Of the total injection, around \$3 billion will be used to make available research-related infrastructure and facilities to reinforce Hong Kong's research and development capabilities in healthcare technologies and artificial intelligence and robotics technologies. The remaining around \$7 billion will be used to strengthen HKSTPC's support to its tenants/incubatees (more details in paragraph 8).

⁴ The Biobank and Biomedical Informatics Platform provide services for collecting, processing, storage and sharing of bio-specimens, and cloud data management and storage for biomedical analytical needs respectively.

⁵ The estimated development cost for developing the InnoCell is \$800 million, which includes the government equity of \$560 million (70%) and commercial loan guaranteed by Government of \$240 million (30%). FC approved the financing arrangement on 2 February 2018.

tenants/incubatees in HKSP as well as their Mainland/overseas employees and visiting researchers at an affordable rent. HKSTPC has launched the Accommodation Support Scheme to provide accommodation subsidy of up to \$10,000 per month to eligible overseas or Mainland employees of the tenants/incubatees in HKSP for a duration of six to 12 months.

Establishment of InnoHK research clusters

7. At the meeting on 29 October 2019, the Panel noted that the Administration had received 65 proposals from world top-notch universities and research institutions for the two *InnoHK* research clusters to be established in HKSP, namely "*Health@InnoHK*" that focused on healthcare technologies and "*AIR@InnoHK*" that focused on AI/robotics technologies. The first batch of about 20 research and development ("R&D") laboratories will commence operation progressively in the first quarter of 2021.⁶ The Administration will also explore the setting up of the third research cluster to further promote global collaboration on R&D in Hong Kong.

Providing support to technology enterprises

8. FC approved at its meeting on 13 July 2018 the injection of \$7 billion into HKSTPC for enhancing support for its tenants and incubatees. Since then, HKSTPC has rolled out relevant funding support and enhanced initiatives, including the expansion of three existing incubation programmes; the provision of rent concession; the launch of the Science and Technology Entrepreneur Programme to help early-stage start-ups realize innovative ideas; and the launch of the ELITE pilot programme to finance, on a matching basis, technology enterprises with growth potential and proactive R&D investment in HKSP. HKSTPC also injected \$200 million to expand the Corporate Venture Fund⁷ with a view to supporting more technology enterprises.

Previous discussion on Hong Kong Science Park and related initiatives

9. The Administration briefed the Panel at the meeting on 17 March 2020 on the latest development of HKSP. The major views and concerns expressed by members are summarized in paragraphs 10 to 18 below.

⁶ On 13 July 2018, FC approved an injection of \$10 billion into the Innovation and Technology Fund for providing financial support on the capital expenditure, operation costs and R&D activities of the research centres/laboratories established by non-profit-making institutions and universities in the *InnoHK* research clusters.

⁷ HKSTPC established the Corporate Venture Fund in 2015 to co-invest, on a matching basis, with private funds in its tenants/incubatees. From its inception in 2015 to 31 March 2020, the Fund invested a total of \$79 million in 14 companies, attracting more than \$1.26 billion from co-investors.

Establishment of *InnoHK* research clusters

10. Members noted that the Administration had received a total of 65 proposals from world renowned universities and research institutes for the two *InnoHK* research clusters to be established in HKSP. They sought details of the progress of the establishment of the *InnoHK* research clusters and asked whether any of such institutions had withdrawn their applications due to the global outbreak of Coronavirus Disease-2019 ("COVID-19") and cross-border travel restrictions.

11. The Administration advised that it had been following up with the institutions concerned. As discussion was still in progress, it was not the time to announce the number and the list of laboratories that would be set up in the two *InnoHK* research clusters. Despite the ongoing COVID-19 outbreak, the overseas research institutions remained keen to establish their presence in the *InnoHK* research clusters.

12. Referring to the Administration's plan to examine the establishment of the third *InnoHK* research cluster, members sought information on the key considerations in taking forward the establishment of the third *InnoHK* research cluster and its research focus.

13. The Administration advised that it had positioned the *InnoHK* as a long-term initiative. It would review a number of factors such as the strengths of Hong Kong and the global technological development in considering the research focus of the third *InnoHK* research cluster.

Commercialization of research outcomes of the local universities

14. Members expressed concerns about the lack of adequate support from HKSTPC to help local universities realize and commercialize their R&D outcomes.

15. The Administration advised that to assist technology start-ups during their inception stages, HKSTPC collaborated with the industry through its investment matching network to enable technology companies in HKSP to connect with investors from around the world, thereby accessing more investment channels and funding sources. In 2018-2019 and the first nine months of 2019-2020, the technology enterprises in HKSP raised a total funding of some \$21.3 billion. The Administration added that around 110 of the 250 start-ups funded by the Technology Start-up Support Scheme for Universities had been admitted to HKSTPC's incubation programmes, as at end March 2020.

Measures to support innovation and technology start-ups under the epidemic

16. Members were concerned that companies in HKSP, in particular innovation and technology ("I&T") start-ups, were facing difficulties in raising funds, recruiting overseas and Mainland I&T talents, promoting businesses and opening up new markets amid measures restricting cross-border travels. They asked what measures, in addition to the rental waivers for tenants in HKSP and IEs, the Administration would take to help start-ups tide over the difficult times. They also enquired whether any of the I&T start-ups in HKSP had actually closed down due to the impact of the epidemic.

17. The Administration advised that before COVID-19 outbreak, there were already signs of a slowdown in the growth of private investment in I&T around the world. The Administration had continued to help start-ups raise funds through various investment matching platforms. At the same time, I&T companies were encouraged to collaborate with one another to speed up the development of innovative solutions which would in turn help them attract more private investments.

18. The Administration also advised that while more than 10 companies had left HKSP in 2019, over a hundred companies were admitted during the same period. In order to assist its I&T tenants in this difficult period, HKSTPC had strengthened its work in (a) providing online business skills training to the I&T start-ups; (b) connecting technology companies with world-class enterprises through the Global Acceleration Academy to transform technologies into practical solutions for commercial purposes; and (c) supporting the application of technology solutions developed by its I&T tenants. Besides, HKSTPC would provide more co-working spaces for leasing at an affordable rental to tide graduates of its incubation programmes over the transitional period when they were no longer entitled to the rental subsidy after graduating from the incubation programmes.

Background information on Industrial Estates

New admission criteria and leasing arrangement

19. In 2014, the Administration, in conjunction with HKSTPC, conducted a review on the utilization and long-term development direction of the three IEs.⁸ Pursuant to the recommendation of the said review that HKSTPC should use the land in the three IEs more efficiently to support science and I&T based industries, and in order to dovetail the re-industrialization policy, the Administration revised the IE policy to accommodate I&T industries, encourage

⁸ The three IEs are Tai Po IE, Yuen Long IE and Tseung Kwan O IE with area of 75 hectares, 67 hectares and 75 hectares respectively.

smart production, and attract high value-added technology industries.⁹ HKSTPC will focus its resources on selected industries that can bring the most benefits to Hong Kong and complement the development of its three over-arching technology platforms of Smart City, Healthy Aging and Robotics. According to the Administration, the new admission criteria for IEs will be flexible enough to cater for the fast-changing market trends in I&T sector and capable of accommodating the entire value chain covering R&D, prototyping, product design, production, testing and distribution, administration to marketing and branding, so that a "through-train" service can be provided.

20. Under the revised IE policy, instead of building their own factories, most tenants will be leasing specialized multi-storey industrial buildings built by HKSTPC.¹⁰ To tighten control and monitoring against under-utilization and abuse of facilities, HKSTPC will carry out on-site inspections, as well as requiring tenants to submit business updates every three years. The rental charges will be competitively priced, having regard to prevailing market conditions and other relevant factors, instead of linking to the historical land development costs.

Two pilot projects in Tseung Kwan O Industrial Estate

21. To promote smart production, attract high value-added technology industries and manufacturing processes, the Data Technology Hub ("DT Hub")¹¹ in the Tseung Kwan O IE has commenced operation in the fourth quarter of 2020. Meanwhile, HKSTPC is developing the Advanced Manufacturing Centre ("AMC")¹² in the Tseung Kwan O IE and it is expected to be completed in 2022.¹³

⁹ Examples include pharmaceutical, healthcare, biomedical and advanced machinery.

¹⁰ Except under exceptional circumstances, HKSTPC will not grant sites to single users to build their own factories.

¹¹ DT Hub (with a GFA of about 27 000 sq m) is a purpose-designed infrastructure for data technology and telecommunications services, providing general supporting facilities, including business centre, showcase arena and offices, etc.

¹² AMC (with a GFA of about 108 600 sq m) is a modern industrial building developed for smart manufacturing and highly automated production processes. It will focus on the development of selected high value-added manufacturing industries with extended activities such as R&D, logistics support, prototyping and design, etc.

¹³ The total estimated development cost of \$8,248 million (including \$6,633 million for AMC and \$1,615 million for DT Hub) includes the government equity of \$6,598 million (80%) and government loan of \$1,650 million (20%). FC approved the financing arrangement on 28 May 2016.

Microelectronics Centre

22. To meet the industry's demand for microelectronics manufacturing facilities, FC approved in May 2020 the relevant funding for converting an old factory in the Yuen Long IE into the Microelectronics Centre.¹⁴ The Centre (with a GFA of 36 180 sq m after conversion) will be equipped with dedicated facilities (e.g. clean rooms, dangerous goods storage and waste treatment) and provide shared ancillary facilities (e.g. conference rooms, shared work spaces, and shared laboratories for product quality and reliability testing analysis). The conversion is expected to be completed by 2023.

Efficient use of existing Industrial Estate sites

23. According to the Administration, the three IEs, with over 90% of the land being utilized, have only been developed to about 53% of the overall maximum plot ratio of 2.5, as at March 2017. HKSTPC has been encouraging factory operators of the IE sites to surrender unused plot ratio or premises which have not been fully utilized. Up to July 2018, HKSTPC has successfully repossessed 12 sites of about 12 hectares in total through enforcing relevant lease terms and providing other incentives.

24. Among the repossessed sites, HKSTPC completed refurbishing a four-storey factory (with GFA of about 7 800 sq m) in the Tai Po IE into the Precision Manufacturing Centre in 2017. HKSTPC will identify suitable premises in the Tai Po IE or Yuen Long IE to develop Good Manufacturing Practice grade facilities for use by the healthcare technology industries.

Planning for new industrial estates

25. The Chief Executive pointed out in the 2016 Policy Address that there would be an anticipated increase in the demand for sites for scientific research and new industrial use. According to an earlier study commissioned by HKSTPC, it is technically feasible to expand the Yuen Long IE on a nearby site of about 15 hectares. HKSTPC has taken this into its medium- to long-term development plan and commenced a study on the engineering and technical feasibility in February 2019 to explore the mode of development of the site so as to cater for the admission of high-tech industries.

26. The Administration has also reserved a site of about 56 hectares near the Liantang/Heung Yuen Wai Boundary Control Point for the long term development of IEs. HKSTPC commissioned a consultant in end 2018 to carry out a study on the development vision and will commence the engineering

¹⁴ The estimated development cost of the modification project is \$2 billion. FC approved the injection of \$2 billion into HKSTPC for developing the Microelectronics Centre on 15 May 2020.

and technical feasibility study in due course.

Previous discussions on Industrial Estates

27. The Panel discussed the Administration's proposal to develop the Microelectronics Centre at the meeting on 21 May 2019 and gave views on the latest development of IEs at the meeting on 17 March 2020. The major views and concerns expressed by members are summarized in paragraphs 28 to 37 below.

Work of the Hong Kong Science Park and the industrial estates in prevention and control of Coronavirus Disease-2019 in Hong Kong

28. At the meeting on 17 March 2020, members considered that Hong Kong should in the long run set up its own production lines of personal protective equipment ("PPE"). They urged the Administration to support home-based production of PPE by earmarking floor space in HKSP or IEs, providing dedicated facilities (e.g. clean rooms) and offering incentives to encourage local enterprises to take up the vacant space in HKSP and IEs for purposes associated with the prevention and control of COVID-19 in Hong Kong.

29. The Administration advised that the prevailing occupancy rate of the three IEs was more than 90% and some of the vacant sites were open areas. HKSTPC would continue to identify sites for development of production facilities to encourage smart production. To supplement the Administration's anti-epidemic work, HKSTPC had helped identifying suitable factories in the three IEs for manufacturers to establish surgical mask production facilities. HKSTPC would continue to liaise with existing operators in the three IEs to surrender, as far as possible, floor space as well as clean room facilities for production of masks.

Microelectronics Centre

30. At the meeting on 21 May 2019, noting that currently, there were not many microelectronics-related businesses located in the vicinity of Yuen Long IE, some members were concerned whether the proposed development of the Microelectronics Centre in the Yuen Long IE could help create synergistic effects and provide ancillary support to interested enterprises to establish microelectronics and related production lines.

31. Some members urged the Administration to keep abreast with the changing trends of the microelectronics industry so as to devise tailor-made support measures to assist the growth of the sectors. They also urged the Administration to leverage the proposed Microelectronics Centre to nurture, attract and retain talent for the microelectronics industry.

32. The Administration advised that the proposed Microelectronics Centre could host around 10 microelectronics-related enterprises depending on their scale and would create clustering effects. Prior consultation conducted by HKSTPC with the microelectronics industry had confirmed the keen interest of a number of microelectronics-related enterprises in setting up operations in the proposed Microelectronics Centre which would host not only enterprises engaged in integrated circuit ("IC") design or production, but also in related industries such as advanced materials.

33. Members enquired how the proposed Microelectronics Centre could leverage the strength of leading companies in Shenzhen in technologies such as the fifth generation mobile network technology, graphene, microchips and new energy vehicles to attract microelectronics-related enterprises to set up business in the Centre. The Administration advised that the Microelectronics Centre could cater for the industry's demand for small-scale pilot batch production. Hong Kong could also leverage its strong IC design capabilities which was needed by these industries, including those from the Mainland.

Advanced Manufacturing Centre

34. At the meeting on 17 March 2020, members enquired whether HKSTPC would accord priority to companies involved in the four major technology fields, namely biomedical technology, AI and robotics, smart city and financial technology ("fintech") for admission into AMC.

35. The Administration advised that HKSTPC was discussing with several technology enterprises which were interested in taking up the floor space in AMC. Electronics, medical appliances, smart city and robotics were the focused areas of AMC. While fintech might not be suitable for admission to AMC, which was purposely-built for smart manufacturing, HKSTPC would engage the industry to drive the development of fintech in Hong Kong.

Data centre development

36. At the meeting on 17 March 2020, members enquired about the progress of making available more land, both within and outside the existing IEs, for data centre development in view of the growing demand for data centre services.

37. The Administration advised that it had since 2012 launched a concessionary scheme to encourage the development of data centres by converting existing industrial buildings and redeveloping industrial lots. With technology advancements in modular data centres, more industrial buildings could become suitable for such use. Moreover, the Administration had commissioned a consultant to carry out a study on the long-term development of the data centre industry in Hong Kong. HKSTPC was also developing the

DT Hub in the Tseung Kwan O IE which would be completed in 2020. When conducting master planning study for individual sites reserved for future development of IEs, HKSTPC could consider allocating land/floor space for data centre development, among other land use options.

Council questions

38. Ms Elizabeth QUAT asked a written question at the Council meeting of 18 March 2020 regarding the progress of establishment of the *InnoHK* research clusters. She also enquired about the Administration's strategies to dovetail the *InnoHK* initiative with Hong Kong's re-industrialization.

39. Ir Dr LO Wai-kwok asked an oral question at the Council meeting of 17 June 2020 regarding the Administration's plan in enhancing the collaboration among HKSTPC, universities, research institutions and the industries.

40. Mr Kenneth LAU asked a written question at the Council meeting of 9 December 2020 on whether the Administration would consider afresh the suggestion of adding a Pak Shek Kok Station or a Science Park Station along the East Rail Line.

41. The questions and the Administration's replies are hyperlinked in the **Appendix**.

Latest position

42. The Administration will brief the Panel on 16 March 2021 on the latest development of HKSP and IEs.

Relevant papers

43. A list of relevant papers is in the **Appendix**.

List of relevant papers

Date of meeting	Meeting	Paper
21/5/2019	Panel on Commerce and Industry	<p>Administration's paper on "New measures to promote 're-industrialization' " (LC Paper No. CB(1)1046/18-19(03))</p> <p>Updated background brief on the re-industrialization policy and Industrial Estates prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1046/18-19(04))</p> <p>Minutes of meeting (LC Paper No. CB(1)1248/18-19)</p>
6/11/2019 (issue date)	Legislative Council Brief	<p>Legislative Council Brief on "Hong Kong Science and Technology Parks Corporation Ordinance (Amendment of Schedule 1) (No. 2) Notice 2019" issued by Innovation and Technology Bureau and Innovation and Technology Commission</p>
17/3/2020	Panel on Commerce and Industry	<p>Administration's paper on "Latest development of the Hong Kong Science Park and industrial estates" (LC Paper No. CB(1)449/19-20(03))</p> <p>Updated background brief on the Hong Kong Science Park and industrial estates prepared by the Legislative Council Secretariat (LC Paper No. CB(1)449/19-20(04))</p> <p>Administration's follow-up paper (LC Paper No. CB(1)866/19-20(01))</p> <p>Minutes of meeting (LC Paper No. CB(1)604/19-20)</p>

Date of meeting	Meeting	Paper
18/3/2020	Council	Question No. 19 on "Promoting development of innovation and technology" raised by Hon Elizabeth QUAT (Government press release)
24/4/2020, 8/5/2020 & 15/5/2020	Finance Committee	Administration's paper on the Re-industrialisation Funding Scheme and equity in the Hong Kong Science and Technology Parks Corporation for developing a Microelectronics Centre (FCR(2019-20)40) Administration's follow-up paper (LC Paper No. FC253/19-20(01)) Minutes of meetings (LC Paper No. FC305/19-20) (LC Paper No. FC278/19-20) (LC Paper No. FC77/20-21)
17/6/2020	Council	Question No. 4 on "Promoting the development of innovation and technology" raised by Ir Dr Hon LO Wai-kwok (Hansard) (page 8384 – 8394)
9/12/2020	Council	Question No. 12 on "Traffic congestion problems in New Territories East" raised by Hon Kenneth LAU (Government press release)