

For discussion  
on 16 March 2021

**Legislative Council  
Panel on Commerce and Industry**

**Latest Development of the Hong Kong Science Park and Industrial Estates**

**PURPOSE**

This paper briefs Members on the latest development of the Hong Kong Science Park (“Science Park”) and the Industrial Estates (“IEs”).

**LATEST DEVELOPMENT OF THE SCIENCE PARK AND IEs**

2. Established in 2001, the Hong Kong Science and Technology Parks Corporation (“HKSTPC”) is a statutory body wholly-owned by the Government. It provides one-stop infrastructural facilities and support services to the development of the innovation and technology (“I&T”) sector in Hong Kong, endeavouring to create a vibrant I&T ecosystem. The HKSTPC manages and operates the Science Park, the three IEs in Tai Po, Yuen Long and Tseung Kwan O, as well as the InnoCentre in Kowloon Tong.

3. As the institution that manages Hong Kong’s flagship technology infrastructure, the HKSTPC has been promoting the local I&T development through developing new and upgrading existing infrastructural facilities, introducing measures to support technology enterprises, as well as attracting and nurturing I&T talents. Under this multi-pronged approach, the development of the I&T ecosystem of the Science Park has been progressing steadily. As at the end of January 2021, the overall occupancy rate of the Science Park was about 86%<sup>1</sup>, with a total number of around 900 local, Mainland and overseas technology enterprises operating therein, among which local and non-local enterprises accounted for 79% and 21% respectively. Apart from large enterprises, a number of small and medium enterprises (about 610 in total) are operating in the Science Park. The Science Park focuses on the development of five technology clusters. As at the end of January 2021, the percentage of technology enterprises in the Science Park belonging to the five technology clusters is provided as follows:

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<sup>1</sup> Excluding the areas with reserved purposes (such as under renovation/alteration works, etc.) that are unavailable for lease.

Technology Cluster	Percentage
Information and communications technology	36%
Electronics	22%
Biomedical technology	18%
Material and precision engineering	15%
Green technology	9%

At present, about 13 000 people are working in these enterprises, of which around 9 000 are involved in research and development (“R&D”).

4. As regards the nurturing of start-ups, over 770 technology enterprises have graduated from the HKSTPC’s incubation programmes so far, and about 80% of them are still in operation. There are also two unicorn companies<sup>2</sup> in the HKSTPC’s I&T ecosystem. In addition, the HKSTPC has been proactively assisting technology enterprises in connecting with investors to raise capital. From 2017-18 to 2019-20, the technology enterprises in the Science Park raised a total amount of around \$29.7 billion of capital for business development. The latest development of the Science Park and IEs are highlighted in the ensuing paragraphs.

### ***Developing and Upgrading I&T Infrastructure***

#### **Stage 1 of the Science Park Expansion Programme**

5. The HKSTPC completed Stage 1 of the Science Park Expansion Programme (“SPX1”) in April 2019 to provide additional R&D space for I&T enterprises and research institutes. The two new buildings under SPX1 are in operation with various facilities including the Robotics Catalysing Centre (“RCC”), the AI Plug (which is an artificial intelligence (“AI”) laboratory), and the Incu-Bio co-working space, etc. With a view to developing Hong Kong as the hub for global research collaboration, some areas of the two new buildings have been leased to the R&D centres under the *InnoHK* research clusters, namely the “*Health@InnoHK*” focusing on healthcare technologies and the “*AIR@InnoHK*” focusing on AI and robotics technologies. The first batch of about 20 R&D centres in the *InnoHK* research clusters are commencing operation progressively.

#### **“InnoCell”**

6. The construction of the “InnoCell” adjacent to the Science Park was completed at the end of 2020. It provides about 500 residential units with flexible design and ancillary facilities such as shared working spaces for leasing to principals of tenants and incubatees in the Science Park, their employees and visiting researchers from places outside Hong Kong, and other personnel (for example, employees and

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<sup>2</sup> The two unicorn companies are SenseTime and Lalamove.

researchers from their collaborating enterprises), etc., at an affordable price. The HKSTPC will offer rental concessions to eligible small and medium technology enterprises and start-ups. Leasing activities and trial run of the “InnoCell” will commence in April 2021.

### Developing Research-related Facilities

7. The Government announced in the 2018-19 Budget that \$10 billion would be allocated to the HKSTPC, of which \$3 billion would be used for developing research-related facilities. Upon the funding approval by the Finance Committee (“FC”) of the Legislative Council in July 2018, the HKSTPC has been actively taking forward the related work with good progress. For example, the HKSTPC officially commissioned the Biobank and Biomedical Informatics Platform in December 2020. The first phase of the Biobank offers an area of approximately 320 square metres (“sq. m.”) for the storage service of bio-specimens whereas the Biomedical Informatics Platform offers cloud storage service of biomedical data as well as computing and analytical services using sandbox, strengthening the support for the development of biomedical technologies. Besides, the HKSTPC is expanding the Biomedical Technology Support Centre by increasing its total area from about 1 200 sq. m. at present to about 2 040 sq. m., and the expansion is expected to be completed within this year.

### The Data Technology Hub and Infrastructural Support for “Re-industrialisation”

8. The Data Technology Hub in the Tseung Kwan O Industrial Estate (“TKOIE”) commenced operation at the end of last year, providing a gross floor area (“GFA”) of about 27 000 sq. m. At present, 16 enterprises have moved in or signed tenancy agreements. A number of enterprises have also expressed interest and are discussing with the HKSTPC admission matters. In addition, the HKSTPC is developing an Advanced Manufacturing Centre in the TKOIE, providing a GFA of about 108 600 sq. m. The project is expected to be completed in 2022. The HKSTPC is inviting proposals for leasing and following up with interested enterprises actively.

9. The HKSTPC is also developing the Microelectronics Centre (“MEC”) in the Yuen Long Industrial Estate (“YLIE”), providing a GFA of about 36 180 sq. m. with dedicated facilities for the microelectronics manufacturers, such as clean rooms, dangerous goods storage and waste treatment, etc. The HKSTPC has commissioned a consultant for the design of the MEC, which has recommended that the building structure of the MEC should meet a higher class of anti-vibration standard to fulfil the requirement of the microelectronics industry. As the old factory in YLIE would need to undergo large-scale and complex structural strengthening works to satisfy the relevant requirements, the consultant recommended that it would be more cost-effective to demolish the old factory and construct a new building. Meanwhile, as the geological investigation has revealed that there is marble with cavities beneath the site, extra time is required for the piling foundation works. The HKSTPC will strive to

control the cost involved and expedite the progress of the works. The MEC is expected to be completed by 2023<sup>3</sup>.

### ***Initiatives to Support Technology Enterprises***

#### **Subsidising Technology Enterprises**

10. The Government announced in the 2018-19 Budget that \$10 billion would be allocated to the HKSTPC, of which \$7 billion would be used for enhancing support provided by the HKSTPC to its tenants and incubatees. Upon the funding approval by the FC in July 2018, the HKSTPC has progressively rolled out the relevant funding support and enhanced initiatives with good progress. For example, the HKSTPC launched the ELITE pilot programme in the second half of 2019 to finance technology enterprises which have growth potential and plan to expand R&D activities in the Science Park on a matching basis. During the three-year participation period in the programme, each enterprise may receive matching fund of up to \$20 million for its R&D expenditures and rental subsidies equivalent to \$1.5 million. The programme aims to attract technology enterprises with growth potential to set up operation in the Science Park and encourage them to deploy resources for R&D. Currently, 21 enterprises have been approved to participate in the pilot programme. Drawing on the experience from the pilot programme, the HKSTPC will officially launch the programme in the second quarter of 2021.

11. To support technology enterprises affected by the epidemic and economic downturn, the Government has provided a full rental waiver, with the amount capped at 1 000 sq. m. of rental space, to tenants in the Science Park, IEs and InnoCentre for the period between 1 April and 30 September 2020 under the Anti-epidemic Fund, involving a funding amount of about \$240 million. The HKSTPC has also provided its tenants with 50% and 75% rental concessions for the period from 1 October 2019 to 31 March 2020, and 1 October 2020 to 31 March 2021 respectively, involving an estimated amount of about \$262 million in total. The HKSTPC estimates that three rounds of initiatives will benefit a total of about 1 100 companies. In addition, the HKSTPC has provided three rounds of additional financial subsidies<sup>4</sup> to some 400 eligible incubatees during the period, involving an estimated amount of about \$34 million in total. Concerning these two initiatives to support technology enterprises, the HKSTPC has borne an additional expenditure of around \$300 million.

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<sup>3</sup> The FC approved an allocation of \$2 billion in May 2020 as the equity for the development of the MEC. The HKSTPC shall exercise prudent cost control in the modification project. Should the project cost eventually exceed \$2 billion, the HKSTPC has to bridge the funding gap using its resources.

<sup>4</sup> The amounts of financial subsidies provided by the HKSTPC to each eligible incubatee are \$37,500 (from 1 October 2019 to 31 March 2020), \$75,000 (from 1 April to 30 September 2020), and \$37,500 (from 1 October 2020 to 31 March 2021) respectively.

## Supporting Start-ups

12. The HKSTPC has been providing comprehensive support to incubatees through three incubation programmes, namely “Incu-App”, “Incu-Tech” and “Incu-Bio”. Upon receipt of the relevant funding allocation from the Government, the HKSTPC expanded its incubation programmes in October 2018 by raising the funding ceilings for each company from \$60,000, \$180,000 and \$240,000 to a maximum of \$860,000, \$1.29 million and \$4 million respectively. The scope of funding includes rental subsidy, grant, and targeted funding for technology and business development. As at the end of January 2021, a total of about 470 incubatees have benefitted from the expanded incubation programmes. Apart from the three incubation programmes mentioned above, the HKSTPC collaborated with relevant technology enterprises to launch three co-incubation programmes with dedicated themes in AI, semiconductor chips, as well as fifth generation (i.e. 5G) and communications technology in the second half of 2020 respectively, so as to provide industry training and support for the participating start-ups. To date, a total of 66 start-ups have joined the co-incubation programmes.

13. For business starters in the early stage, the HKSTPC launched the Science and Technology Entrepreneur Programme in January 2019 to provide pre-incubation support, including \$100,000 seed funding, for entrepreneurial technology talents. As at January 2021, 196 applications have been approved. Regarding connections with universities, the HKSTPC and the University of Hong Kong (“HKU”) jointly set up the HKSTPC Western District Hub in 2020 to help those start-ups formed by HKU research teams or entrepreneurs affiliated to the HKU to establish linkage with the industry through leveraging the HKSTPC’s start-up incubation experience and investment/business networks, and provide incubation services, with a view to promoting technology transfer and commercialisation of R&D results. The HKSTPC is discussing with other local universities similar collaboration.

14. To encourage more angel investors and venture capital (“VC”) funds to further invest in the local I&T ecosystem, the HKSTPC established a \$50 million Corporate Venture Fund (“CVF”) in July 2015 to co-invest with angel investors or VC funds, in start-ups, which are currently located in the Science Park or have participated in its incubation programmes, on a matching basis. In April 2019, the HKSTPC injected \$200 million<sup>5</sup> to expand the CVF, with a view to supporting more technology start-ups. Besides, as mentioned in the 2021-22 Budget, the Financial Secretary approved the HKSTPC’s further injection of \$350 million into the CVF and the expansion of the CVF’s scope from start-ups at the seed to Series A stage to cover those at Series B and beyond, with the ceiling of the CVF’s aggregate amount of investment in each enterprise increasing from \$8 million to \$40 million. At present, the fund size of the CVF has reached \$600 million. Since inception, the CVF has completed investments in 18 technology enterprises with a total investment of about

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<sup>5</sup> \$150 million of this injection came from the \$10 billion funding approved by the FC in July 2018, while the remaining \$50 million was borne by the HKSTPC with its internal resources.

\$164.6 million, attracting around \$1.63 billion from co-investors in various rounds of investment.

### ***Attracting and Nurturing I&T Talents***

15. With a view to grooming more R&D talents and encouraging young people to join the I&T industry, the HKSTPC has been collaborating with different tertiary institutions and organisations to promote various programmes in talent training, work placement and internship to deepen students' and graduates' understanding of the I&T sector and assist I&T enterprises in recruiting technology talents, so as to promote the I&T development in Hong Kong. In October 2020, the HKSTPC set up the HKSTP InnoAcademy with an aim to assist technology talents in upskilling themselves to meet the demands from the industry and attract more talents to join the I&T sector through a series of training and support initiatives. The InnoAcademy also launched the first Technology Leaders of Tomorrow Programme in the same month by providing eight students participating in the programme with internship places lasting for a total of 26 months at the HKSTPC and companies operating in the Science Park, so as to groom young talents with high potential to become the future I&T leaders of the city.

### ***Supporting the Anti-epidemic Efforts***

16. The Coronavirus Disease 2019 (COVID-19) has posed severe and unprecedented challenges to Hong Kong. Over the past year, the HKSTPC has been working closely with the Government in combating the epidemic. In early 2020, a factory of 8 000 square feet in the Precision Manufacturing Centre at the Tai Po IE ("TPIE") was surrendered to the HKSTPC and converted for mask production. In order to strengthen the local capacity in supplying personal protective equipment in the future, the HKSTPC is converting an old factory in the TPIE for the production of medical or anti-epidemic products. The expenditure of the relevant conversion works is \$410 million, which is borne by the HKSTPC with its internal resources. The HKSTPC expects that, upon completion of the first stage of conversion works, the first batch of manufacturers will be able to move in gradually from mid-2021 onwards, thereby enhancing the local supply chain of anti-epidemic equipment.

17. During the epidemic, many technology enterprises in the Science Park have been developing anti-epidemic technology solutions proactively, unleashing the potential of the local I&T industry in turning crises into opportunities. A number of technology products and application solutions developed by the enterprises in the HKSTP have been adopted by the Government and different sectors of the community, including hospitals, schools, public transport, public organisations and the business sector in combating the pandemic, such as electronic wristbands for home quarantine, air purifiers, antibacterial coatings, temperature detection robots, meal delivery robots and wearable devices for monitoring real-time physical health indicators (e.g. body temperature, heart rate and the blood oxygen level).

## WAY FORWARD

### *Phase 2 of the Science Park Expansion Programme (“SPX2”)*

18. In recent years, there has been a continuous enhancement of the overall I&T ecosystem in Hong Kong. According to the Annual Startup Survey conducted by Invest Hong Kong, there were a total of 3 360 start-ups in 2020, representing an increase of about 51% and 215% compared with 2 229 in 2017 and 1 065 in 2014 respectively. Meanwhile, the Hong Kong Innovation Activities Statistics 2019 published by the Census and Statistics Department at the end of 2020 reported that the gross domestic expenditure on R&D of Hong Kong in 2019 amounted to about \$26.33 billion, representing an increase of 8% compared with the corresponding figure in 2018, despite the various challenges in 2019. As such, there is a growing demand for local R&D space and facilities from technology enterprises and research institutes.

19. Healthcare technology is one of the research areas of I&T at which Hong Kong enjoys clear advantages. Local universities possess strong R&D capabilities in healthcare technology, and the research and publications produced by local researchers are also recognised by the world. Besides, with the development of the digital economy, big data and Internet of Things, there have been rapid advances in AI and robotics technologies in recent years. A wet laboratory (“wet-lab”) is indispensable for many healthcare technology enterprises to conduct R&D activities while specific requirements on the R&D space such as ceiling height and floor loading capacity are necessary for AI and robotics technologies.

20. There are a total of 23 well-equipped buildings in the Science Park, providing a GFA of 400 000 sq. m., among which almost 90% of some 59 000 sq. m. of leasable wet-lab space have been leased whereas the shared laboratories with high ceiling and high floor loading capacity used for robotics tests (i.e. the RCC with a floor space of over 2 000 sq. m.) are almost fully occupied. In order to sustain the healthy ecosystem of the Science Park, additional usable space is needed to sustain its vitality by the rotation of tenants and admission of new enterprises. The HKSTPC is therefore undertaking a works project to convert Building 6W to wet-lab. The estimated cost of the relevant conversion works is \$600 million, to be absorbed by the HKSTPC’s internal resources. It is estimated that about 9 300 sq. m. of leasable wet-lab space will be provided upon completion of the works within this year.

21. According to the survey conducted between June and October 2020 by the consultant engaged by the HKSTPC targeting overseas, Mainland and local technology enterprises (including tenants in the Science Park and other non-tenant technology enterprises), technology enterprises indicated demand for additional R&D space in the Science Park even after the operation of the converted Building 6W.

Among the respondent technology enterprises, an aggregate laboratory space<sup>6</sup> of nearly 27 000 sq. m. was required. The HKSTPC, therefore, considers that it is necessary to kick-start SPX2 so that more R&D spaces can be provided to support the development of technology enterprises in a continuous manner in the coming few years. By taking forward SPX2, we consider that not only development opportunities can be provided to local technology enterprises and I&T talents, more non-local technology enterprises and R&D institutes will also be attracted to establish operations in Hong Kong, thereby further enhancing the local I&T ecosystem.

22. The HKSTPC has completed the technical feasibility study for SPX2. According to the study result, it is recommended that the space within the Science Park should be better utilised for the development of SPX2 with a view to creating more R&D space to meet the needs of technology enterprises in the next few years. SPX2 involves the construction of two annex buildings and laboratories at some podiums, together with offices and other ancillary facilities supporting R&D activities, such as retail shops and cafeteria, with a GFA of approximately 28 000 sq. m. The overall development plan is at Annex.

23. The HKSTPC is conducting a detailed study in respect of SPX2 and will carry out the works in batches so as to minimise the potential nuisance associated with the major construction works on users of the Science Park. It is estimated that the first batch of works will involve a GFA of approximately 12 500 sq. m., mainly for laboratories. In response to the keen demand for laboratories from technology enterprises and research institutes, the design will target to meet the needs of R&D activities in the areas of healthcare technologies, AI and robotics technologies by equipping the wet-labs with gas supply, fire protection and vibration-free facilities and the engineering laboratories with high ceiling and high floor loading capacity. The HKSTPC expects that the first batch of works will be completed in phases from 2022 to 2024. The estimated cost of the relevant works is \$959 million. The HKSTPC is actively examining its financial position with a view to supporting the first batch of works with its internal resources.

24. The initial estimate is that the second batch of works will involve a GFA of about 15 500 sq. m. The HKSTPC will finalise the detailed design in due course taking into account the demand at the time, the estimated cost of works, the global economic environment, and its financial position, etc.

25. The HKSTPC has commissioned a consultant to conduct a traffic impact assessment in respect of SPX2 (including both the first and second batches of works). It was revealed from the consultancy report that the traffic impact on the surrounding areas of the Science Park would be minimal because the additional floor area under the expansion programme only accounted for 7% of the existing floor area of the Science

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<sup>6</sup> Apart from laboratory space, some of the respondent technology enterprises expressed their needs for other R&D space (such as offices and other ancillary facilities). The HKSTPC will continue to keep in view the medium to long-term demands for R&D space of the industries, and explore suitable sites for expansion inside and outside the Science Park.



Park. After examining the traffic impact, the consultant recommended three improvement measures to ensure smooth traffic, i.e. (a) development of an additional public transport interchange within the Science Park; (b) improvement works to be carried out at the junction of Science Park Road; and (c) change to signal control at the roundabout of Chak Cheung Street/Science Park Road. These improvement measures will be carried out by the HKSTPC in tandem with the first batch of works.

## **ADVICE SOUGHT**

26. Members are invited to note the latest development of the Science Park and the IEs.

**Innovation and Technology Bureau  
Innovation and Technology Commission  
March 2021**

# Phase 2 of the Science Park Expansion Programme

## Annex

