

For discussion
on 17 May 2016

Legislative Council
Panel on Commerce and Industry

**Implementation of Pilot Projects according to
the Revised Industrial Estate Policy**

PURPOSE

This paper seeks Members' support for the plan to develop two pilot projects (an Advanced Manufacturing Centre and a Data Technology Hub) in Tseung Kwan O Industrial Estate ("TKOIE") according to the Revised Industrial Estate ("IE") Policy and the proposed financing arrangements.

BACKGROUND

Current Situation of the IEs

2. Currently, there are three IEs in Hong Kong. They are Tai Po IE ("TPIE"), Yuen Long IE ("YLIE") and TKOIE with area of 75 hectares ("ha")¹, 67 ha and 75 ha respectively. They are managed by the Hong Kong Science and Technology Parks Corporation ("HKSTPC").

3. According to the original IE policy, land in the IEs was mainly granted to eligible applicants to design and build factories according to their own needs. This policy was formulated more than 40 years ago with the objective to accommodate land-extensive industries which could not be accommodated in ordinary multi-storey industrial buildings. The land was granted on long leases up to 2047 at a premium based on the development cost at the time of forming the sites and adjusted periodically taking into account inflation and prevailing market conditions. Currently, all sites in the TPIE have been granted except for two developed sites with a total area of 2.5 ha that had recently been repossessed by the HKSTPC. In the YLIE, there are two vacant sites with a total area of about 1 ha and HKSTPC has also repossessed a

¹ 1 hectare (ha) = 10 000 m².

developed site of 0.56 ha in March 2016. In the TKOIE, about 9.86 ha of land is still vacant. In terms of percentage, only 3% (2.5 ha), 2.3% (1.56 ha) and 13% (9.86 ha) respectively of the site area at the TPIE, YLIE and TKOIE are immediately available for development or redevelopment.

4. Despite the high occupancy rate, the average plot ratio of the developed buildings within IEs is only around 53% of the overall maximum plot ratio of 2.5. Most of the sites in the three IEs have potential for further development. In this connection, HKSTPC has been negotiating with factory operators, requesting them to surrender the unused plot ratio and encouraging them to surrender premises which have not been fully utilised. Through such measures, HKSTPC can make better use of the existing IE sites.

Revised IE Policy

5. In 2014, we have, in conjunction with the HKSTPC, reviewed the utilisation and long-term development direction of Hong Kong Science Park and IEs (“the Review”). The Review recommended, among other things, that HKSTPC should use the land in the three IEs more efficiently to support science, innovation and technology (“I&T”) based industries which would bring wider benefits to Hong Kong.

6. We have therefore revised the IE policy to accommodate I&T industries. In future, HKSTPC would mainly build and manage specialised multi-storey industrial buildings for rental to multiple I&T industrial partners. Except under exceptional circumstances, HKSTPC will not grant the sites to single users to build their own factories. The rental charges (or land premium in the case of land granted on long lease in exceptional cases) would be competitively priced, having regard to prevailing market conditions and other relevant factors, instead of linking to the historical land development costs. This Panel was consulted on 21 April 2015 and members were supportive of the new policy and noted HKSTPC’s plan to develop three to four pilot projects on the vacant sites or sites surrendered by the grantees in the three existing IEs in the next few years.

7. The Chief Executive has pointed out in the 2016 Policy Address that “re-industrialisation” is a potential new area of economic growth in Hong Kong. The Financial Secretary also announced in the 2016-17 Budget that HKSTPC would undertake pilot projects to promote

smart production and advanced manufacturing at TKOIE at an estimated cost of \$8.2 billion.

JUSTIFICATIONS

Policy Perspective

(i) Promoting Re-industrialisation and Migrating to Smart Production

8. To grasp the opportunities brought about by fast development in information and communications technology (“ICT”) and Internet of Things (“IoT”) technologies, we hope to attract high value-added industries that are suitable to be based in Hong Kong, promoting “re-industrialisation” to migrate from traditional labour-intensive industry to smart production. This will substantially increase labour productivity, lower production costs and increase our competitiveness in the global market as well as create more high quality and diversified employment opportunities.

9. Given Hong Kong’s traditional manufacturing knowhow and quality standards, we have potential in moving towards high-end, highly-customised and high-growth technology areas such as robotics, medical and health-related industries, environmental solutions, as well as the new generation of consumer products embedded with IoT technologies. We would need modern industrial premises suitable for smart production, with innovative design, flexible and highly-automated production and distribution of products and embedded services. Having consulted key stakeholders of the industrial sector, including the Federation of Hong Kong Industries, Hong Kong Productivity Council and other industry associations, there is strong support for HKSTPC to modernise the IEs through development of these purpose-built premises.

(ii) Complementary Development of ICT Industry

10. The ICT industry has become a major sector in its own right in many economies. It is also an indispensable enabler supporting other industries. It is an international trend to integrate mobile internet, cloud computing and big data with manufacturing and promote the development of e-commerce, industrial networks and internet banking. The Government has set out the vision and objectives for the ICT industry in the Digital 21 Strategy which recognises, among other things, the importance and potential of developing Hong Kong as a digital

economy. Given our various advantages, Hong Kong is a prime location for setting up high-end data centres in Asia Pacific region.

11. TKOIE is an ideal location for the ICT industry as it is equipped with an unparalleled 150 MVA electricity substation and robust international telecommunication connectivity. It also has the highest concentration of data centres in Hong Kong². We consider that developing a new building according to the Revised IE Policy could leverage the strengths of the existing data centre cluster and good telecommunication infrastructure in TKOIE to enhance the role of Hong Kong as a Data Technology Hub (“DT Hub”) in the region. In addition, a thriving and competitive ICT industry would greatly complement the development of advanced manufacturing and “re-industrialisation” in Hong Kong.

12. In June 2015, HKSTPC considered its overall road map in implementing the Revised IE Policy and decided, as a pilot, to develop the following projects on two vacant sites in TKOIE –

- (a) A multi-storey Advanced Manufacturing Centre (“AMC”) with gross floor area (“GFA”) of about 108 588 m² on a 2.71 ha site; and
- (b) A DT Hub with GFA of about 27 015 m² on a 0.54 ha site.

13. To take forward these pilot projects, HKSTPC has engaged consultants³ to carry out Economic Impact Analysis and Technical Feasibility Studies. Comments from relevant bureaux/departments have been taken into account in the reports by consultants. The findings are summarised below.

² There are 11 data centres in TKOIE serving the financial, cloud and hosting sectors including HSBC’s Regional Data Centre, Hong Kong Exchange and Clearing Limited’s Trading and Clearing Data Centre as well as NTT Com Asia Limited’s Financial Data Centre, etc.. China Mobile International has just opened its Global Network Centre in TKOIE which is the first base station outside Mainland China to house its latest telecommunication exchange, data centre and cable landing station for its whole global system. China Unicom is also constructing its first Global Solution and Management Centre outside Mainland China for the provision of total telecom services and managed data centre services.

³ ICF Consulting Services Hong Kong Ltd was responsible for the Economic Impact Analysis while Leigh and Orange Limited was responsible for the Technical Feasibility Studies.

14. For the AMC, the consultants have concluded the following –
- (a) Demand for space in the AMC will be mainly from design-led companies engaged in production of high value added items, where the protection of intellectual property, reliability and quality, and products labelled “Made in Hong Kong” are particularly critical. These enterprises include Science Park tenants, manufacturing firms already based in Hong Kong that want to expand, Hong Kong firms based in the Mainland who wish to undertake some of their high-value activities and research and development (“R&D”) locally, as well as foreign firms wishing to be based in Hong Kong.
 - (b) Our current forecast is that the companies located at the AMC will employ around 2 500 I&T-related personnel (full-time equivalent) and create a value added of about \$927 million⁴ to the economy per year⁵. Over the six-year construction period, the project would likely generate a total employment of about 3 300 man-years equivalent and a value added of \$1,680 million to the economy. Given the proximity of TKOIE to a number of residential developments, it is expected that residents in Tseung Kwan O, particularly those with I&T experience or qualifications, will be an important source of talents for the AMC project.
 - (c) Other benefits for the AMC include the realisation of innovation and new technologies created at the Science Park and elsewhere in Hong Kong; providing more high added-value job opportunities for Science, Technology, Engineering and Mathematics graduates and technicians; enhancing Hong Kong as manufacturing base for advanced manufacturing complementing its role in innovation; enhancing collaboration with local universities for science and technology research and commercialisation; facilitating local cluster development and creating a knowledge sharing platform; creating demand for local supplies of engineering components and machining services; and nurturing young designers and entrepreneurs.

⁴ The figure of value added is a preliminary and conservative estimate based on known technologies/products in the current industry at this juncture. The indirect and induced added values have not been included owing to the lack of historical economic data to verify the multiplying effect of the manufacturing activities therein.

⁵ All value added figures in paragraphs 14 and 15 are at 2014 prices.

15. For the DT Hub, the consultants have concluded the following –

- (a) Demand for space in the DT Hub will come from a series of information technology (“IT”)-related enterprises, including data centres, cloud service providers, IT outsources/system integrators, financial services companies, data centre suppliers and service providers. In particular, the DT Hub will attract start-ups and IT companies supporting smart manufacturing in the adjacent AMC.
- (b) Our current forecast is that the companies located at the DT Hub will employ around 900 ICT-related and supporting personnel (full-time equivalent) and create a value added of about \$573 million⁴ to the economy per year. Over the five-year construction period, the project would likely generate a total employment of about 800 man-years equivalent and a value added of \$414 million to the economy. It is also expected that a proportion of the newly created ICT-related and supporting jobs will be taken up by the residents in Tseung Kwan O.
- (c) Other benefits of the DT Hub include the increase of the attractiveness and competitiveness of TKOIE; performance optimisation for both data centres and its supporting service providers; support for the sustainable growth of the financial and financial technology industries through enhancement of the performance and reliability of data centres and associated supporting services; providing a catalyst for the development of the ICT industry and technopreneurship; generation of more employment and the creation of a better environment to cultivate talent in the ICT industry; support for scientific research and commercialisation; promoting synergy among different stakeholders; and developing Hong Kong into a leading digital city.

16. The above recommendations are proposed by the consultants based on the market information and technology trends available today. Given that there will be a lead time of around four to five years before the completion of the buildings, HKSTPC will keep under review the development and demand of the I&T industries with a view to determining the actual industries to be admitted and the relevant criteria nearer the time.

DEVELOPMENT PLAN

AMC – Proposed Scope and Programme

17. We recommend developing the AMC on a 2.71 ha site abutting Chun Kwong Street, Chun Cheong Street and Chun Yat Street in TKOIE as shown at **Annex A**. The AMC will focus on selected high value-added manufacturing with extended activities including R&D, logistics support, prototyping and design, etc.

18. At present, the maximum allowable plot ratio of this site is 2.5. To maximise the development potential, an application to seek permission to increase the maximum allowable plot ratio to 4.0 for the site while maintaining the overall plot ratio of the TKOIE at 2.5 is being processed. Two industrial buildings of 13 and 9 storeys and a low 4-storey carpark building with a total GFA of about 108 588 m² (or a total construction floor area (“CFA”) of about 141 164 m²) will be developed in two phases. The building design will be flexible to cater for advanced automated production which might require high headroom as well as high precision assembly in a clean room environment. The ceiling height and floor loading will be designed accordingly. In addition, communal facilities for the specific thematic platform, such as chemical waste treatment and compressed air system, will be provided. Car parking spaces will be provided in the carpark building, and lorry parking, loading and unloading facilities will also be provided in the setback area. A traffic study concluded that there will be minimal impact on the traffic in the vicinity, as the planned development of the AMC will not result in any increase in the overall allowable development density of the IE. If funding is available for project commencement in 2016/17, the project is expected to be completed by 2021/22, with the estimated cost at \$6,633 million, which is equivalent to about \$46,986/m² of CFA at money-of-the-day (“MOD”) prices.

DT Hub – Proposed Scope and Programme

19. We recommend developing the DT Hub on the 0.54 ha Estate Centre site⁶ in TKOIE, located at the corner of Chun Yat Street and Chun Cheong Street as shown at **Annex A**. This project aims to accommodate uses ancillary or complementary to the data transfer operations and global telecommunications at the data centres and

⁶ HKSTPC has not developed the Estate Centre as originally planned. The site is currently partly leased to an IE grantee on monthly lease for temporary storage.

switching centres at TKOIE and Hong Kong. Special features will be designed to cater for data centre support, multi-media processing, submarine cable landing related needs as well as R&D activities in these fields.

20. Consistent with the planning intention for the site, the DT Hub will consist of a 13-storey tower over a 3-storey podium and a carpark basement, with a total GFA of about 27 015 m² (or a total CFA of about 36 100 m²). The basement will provide parking spaces and spaces to accommodate building services installations and associated plant room. The proposed building comprises purpose-designed infrastructure for data technology and telecommunication services. We will also take the opportunity to provide general supporting facilities to grantees of TKOIE, including business centre, showcase arena and offices, etc. A traffic study confirmed that there will be no noticeable adverse effect on the traffic in the vicinity. If funding is available for project commencement in 2016/17, the project is expected to be completed in 2020, with the estimated cost at \$1,615 million, which is equivalent to about \$44,736/m² of CFA at MOD prices.

Proposed Financing Arrangements

21. With a view to facilitating HKSTPC to proceed with these projects as early as practicable, we consider it appropriate to provide financial support in the form of equity injection (\$6,598 million, about 80% of the development cost) and a Government loan (\$1,650 million, about 20% of the development cost).

22. In recommending the above financing structure, we have taken into account HKSTPC's financial position, projected income and expenditure in the coming years, and planned capital works projects and new initiatives in the coming years, including stage one of Science Park Expansion Programme. HKSTPC's cashflow projection is at **Annex B**.

23. The Government loan is estimated to be drawn down in 2019/20. As in the case of the Government loans for Science Park Phase 2 and Phase 3 development, interest will be charged on the basis of average best lending rate of note-issuing banks taking into account differential between the former and the 12-month HIBOR, which reflects the costs of borrowing by the Government⁷. The Government loan will be repaid by 15 equal instalments starting from two years after drawdown, i.e. from

⁷ 1.282% per annum as of September 2015.

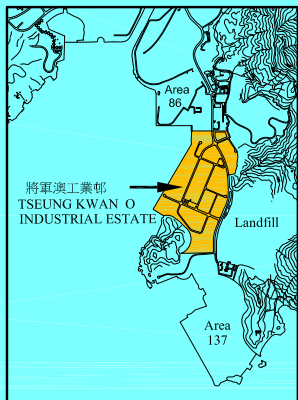
2021/22 onwards. In case HKSTPC encounters unexpected cashflow problems in repaying the loan, HKSTPC may amend the repayment schedule or extend the loan repayment period, both of which will require the prior approval of the Financial Secretary. The indicative terms and conditions of the proposed Government loan for the projects are summarised in **Annex C**.

24. The project has no recurrent financial implications for the Government. Given that the final project cost may be different from the estimated development cost of \$8,248 million due to various factors such as change in economic conditions, fluctuation of labour cost and cost of construction materials during the construction period, HKSTPC will be required to exercise due care to control the overall project cost. With a view to containing the Government's financial exposure, the amount of equity injection and loan from the Government will be capped at \$8,248 million. Should the project cost eventually exceed the amount, the Government will provide no further funding support and HKSTPC is expected to resort to its own means to identify project cost savings or seek extra funding means if necessary.

ADVICE SOUGHT

25. Members are invited to support the development plan and proposed financing arrangements (as set out in paragraphs 21 to 24 above) for the pilot projects in TKOIE. Subject to Members' agreement, we will seek approval from the Finance Committee.

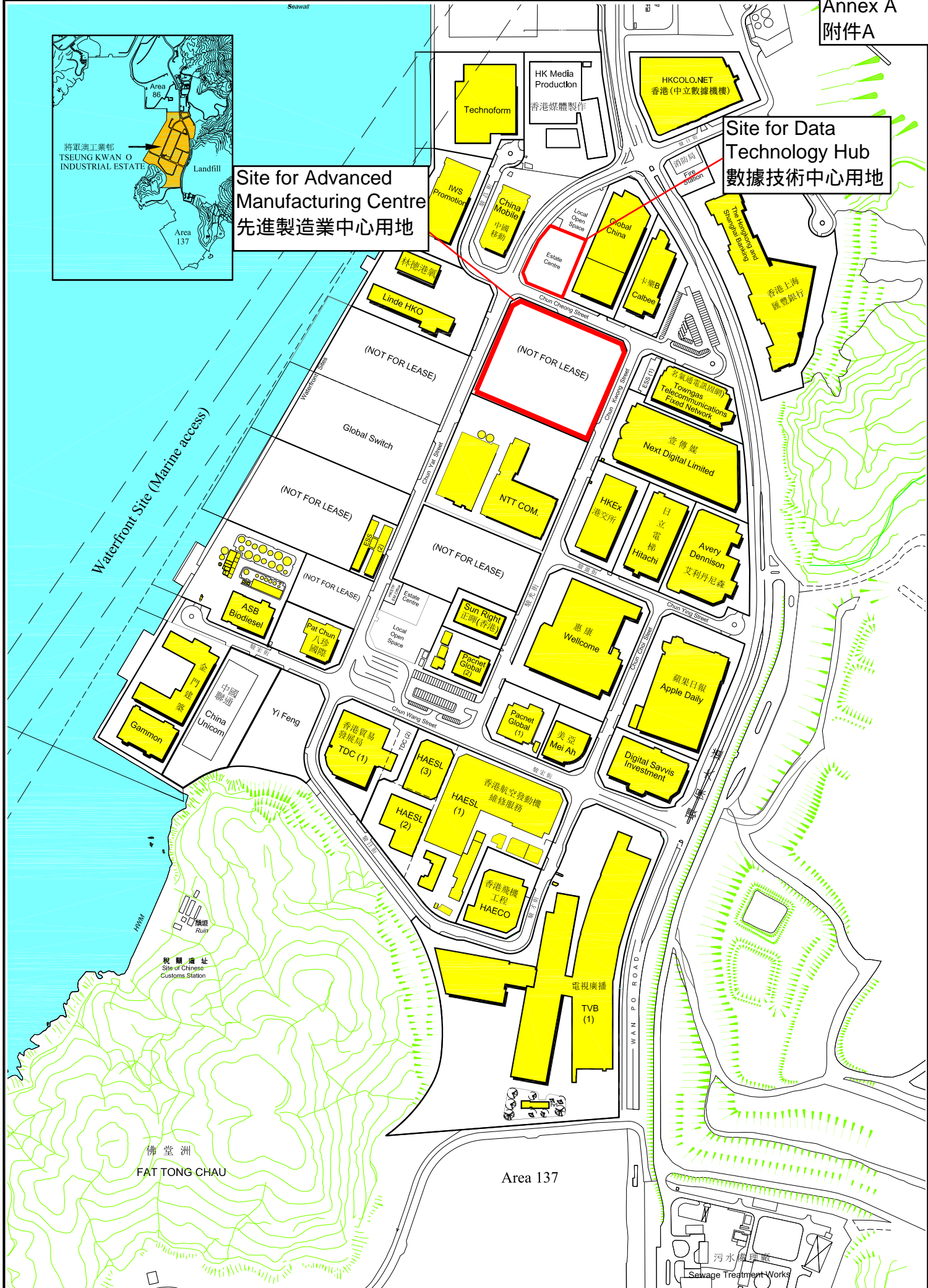
Innovation and Technology Bureau
Innovation and Technology Commission
May 2016



Site for Advanced
Manufacturing Centre
先進製造業中心用地

Site for Data
Technology Hub
數據技術中心用地

Waterfront Site (Marine access)



稅關遺址
Site of Chinese
Customs Station

佛堂洲
FAT TONG CHAU

Area 137

污水處理廠
Sewage Treatment Works

Cash Flow Projection of the Hong Kong Science and Technology Parks Corporation (in \$ million)

	<u>2016/17</u>	<u>2017/18</u>	<u>2018/19</u>	<u>2019/20</u>	<u>2020/21</u>	<u>2021/22</u>	<u>2022/23</u>	<u>2023/24</u>	<u>2024/25</u>	<u>2025/26</u>	<u>2026/27</u>	<u>2027/28</u>	<u>2028/29</u>	<u>2029/30</u>
Opening cash balance	670	10,458	7,767	3,808	2,513	944	287	626	1,105	679	810	995	1,207	809
Net cash flow of HKSTPC before the two IE Projects & SPX1 financing	1,019	(668)	188	(692)	198	276	528	670	(135)	416	466	490	483	536
Net cash available for funding the two IE Projects & SPX1 construction	1,689	9,790	7,955	3,116	2,712	1,220	815	1,296	970	1,095	1,275	1,484	1,690	1,344
Development cost (IE Projects) (Note 1)	(355)	(1,126)	(2,149)	(2,277)	(1,596)	(745)								
Development cost (SPX1)	(352)	(897)	(1,998)	(1,047)	(134)									
Government equity injection (IE Projects)	6,598													
Government equity injection (SPX1)	2,878													
Government loan (IE Projects)				1,650										
Commercial loan guaranteed by the Government (SPX1)				1,107										
Repayment of commercial loan (principal/interest)				(36)	(38)	(40)	(41)	(43)	(143)	(137)	(132)	(129)	(733)	
Repayment of Government loan						(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)
Ending cash balance	10,458	7,767	3,808	2,513	944	287	626	1,105	679	810	995	1,207	809	1,196

Note 1: Total development cost will be \$8,248 million. This will comprise Government Equity of \$6,598 million and Government Loan of \$1,650 million.

Details of Government's financial support in various forms:

<u>2016/17</u>	<u>2017/18</u>	<u>2018/19</u>	<u>2019/20</u>	<u>2020/21</u>	<u>Total</u>
6,598	-	-	1,650	-	8,248

**Proposed terms and conditions of the Government Loan to
Hong Kong Science and Technology Parks Corporation
for the Pilot Projects under the Revised Industrial Estate Programme**

Amount: \$1,650 million

Lender: The Government of the HKSAR

Purpose: To finance the development costs of the two pilot projects (an Advanced Manufacturing Centre and a Data Technology Hub) in Tseung Kwan O Industrial Estate

Drawdown: Tentative drawdown schedule is as follows^{Note} –

<u>Financial Year</u>	<u>Drawdown Amount</u>
2019/20	\$1,650 million
Total	\$1,650 million

Loan Term: 17 years

Interest: Charged on the basis of average best lending rate of note-issuing banks taking into account differential between the former and the 12-month HIBOR

Repayment:

- Repayment in 15 equal repayment instalments annually (subject to adjustment due to change in prevailing interest rate)
- First repayment instalment to be made two years after drawdown, i.e. from 2021/22 onwards
- Subsequent repayment instalments to be made annually up to 2035/36

Remarks: In case HKSTPC encounters unexpected cashflow problem in repaying the loan, it may amend the repayment schedule or extend the loan repayment period, both requiring the prior approval of the Financial Secretary.

^{Note} The drawdown schedule is set on the basis that the Government equity injection would be completed within 2016/17.