

創新及科技局

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**INNOVATION AND  
TECHNOLOGY BUREAU**

20/F, West Wing,  
Central Government Offices,  
2 Tim Mei Avenue  
Tamar, Hong Kong

**By Email**

17 June 2021

Miss Bowie LAM  
Council Business Division 1  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road  
Central Hong Kong

Dear Miss LAM,

**Finance Committee  
Meeting on 5 February 2021**

**Equity in the Hong Kong Science and Technology Parks Corporation for  
the Batch 1 Development of the Hong Kong-Shenzhen Innovation and  
Technology Park and the Initial Operating Cost of  
the Hong Kong-Shenzhen Innovation and Technology Park Limited**

Members at the meeting requested the Government to provide supplementary information. The relevant information is enclosed herewith for members' reference.

Yours sincerely,

(Peggy SIU)

*for Secretary for Innovation and Technology*

c.c. Secretary for Financial Services and the Treasury  
(Attn.: Ms Sarah WOO)  
Commissioner for Innovation and Technology  
(Attn.: Ms Jenny LEE)

**Finance Committee Meeting  
on 5 February 2021**

**Equity in the Hong Kong Science and Technology Parks Corporation for the  
Batch 1 Development of the Hong Kong-Shenzhen Innovation and Technology  
Park and the Initial Operating Cost of  
the Hong Kong-Shenzhen Innovation and Technology Park Limited  
Supplementary Information**

**Effective Monitoring**

At the meeting on 5 February 2021, the Finance Committee (“FC”) approved the injection of \$18,135 million (in money-of-the-day (“MOD”) prices) as equity from the Capital Investment Fund to the Hong Kong Science and Technology Parks Corporation (“HKSTPC”) to support its wholly-owned subsidiary company, the Hong Kong-Shenzhen Innovation and Technology Park Limited (“HSITPL”), to commence Batch 1 development of the Hong Kong-Shenzhen Innovation and Technology Park (“the Park”) (\$17,258 million) and the initial operating cost of HSITPL (\$877 million). HSITPL is pressing ahead with the relevant works projects at full steam, including the commencement of detailed design this year and construction works in the first quarter of 2022 with a view to completing the eight buildings in Batch 1 in phases from 2024 to 2027.

As a subsidiary company wholly-owned by HKSTPC, HSITPL will continuously make reference to the governance structure and modus operandi in HKSTPC to develop proper procedures and guidelines. The Board of Directors (“the Board”) of HSITPL, with a representative from the Government, will establish appropriate control mechanism to monitor the construction cost of Batch 1 development and the operating cost, with a view to ensuring the works to be carried out as scheduled and within budget. HSITPL’s management team shall submit annual report and audited statements of accounts to the Board every year for approval. HSITPL will also regularly report to the Innovation and Technology Bureau on the implementation progress of various facilities and measures. The Government will examine the relevant content carefully to ensure effective monitoring of the business and financial conditions of HSITPL. We will follow our usual practice and, together with HSITPL, brief the relevant Legislative Council (“LegCo”) Panel on the development progress and latest situation of the Park in a timely manner.

At the initial stage of HSITPL’s operation, project development will be the focus of its work. As such, the Board of HSITPL will model on the Government’s procedures and practices in making tendering arrangements for consultancies and works contracts to ensure that public funds are used in a fair and appropriate manner. Regarding the budget control, tendering and approval of consultancies and works

contracts, HSITPL has invited professionals in relevant sectors to engage in the tender assessments involved, so as to ensure that professional advice is sought in the process.

The reply to the follow-up issues raised by members are as follows:

**(a) The provision of \$877 million to HSITPL as the initial operating cost as well as the initial operational structure of HSITPL and the required qualities of the staff to be employed**

The initial operating cost of HSITPL covers areas such as staff remuneration, facility management, support services for tenants and business development from 2021-22 to 2026-27. Upon completion of the first batch of buildings under Batch 1 development for the admission of tenants, it is expected that rental income will be generated for HSITPL from 2025-26 onwards. After deducting the relevant income, \$877 million is required to support the initial operation of HSITPL. Details of the expenditure involved are listed below:

Expenditure item from 2021-22 to 2026-27	Percentage (approximate)
Staff remuneration	65%
Facility management	12%
Support services for tenants	4%
Other operating, business and administrative costs	19%

Staff to be employed by HSITPL shall reach the required level in respect of professional and academic qualifications as well as experience. The required qualities are different depending on the requirements of individual positions. At present, HSITPL has a total of 29 staff members, including one Chief Executive Officer and two Directors. The scope of work mainly covers four areas, namely project development (including planning and development, project management and architectural design etc.), operation (including facility management and planning etc.), business development (including customer development and business strategy etc.) and enterprise support (including corporate governance and company secretarial affairs, corporate communications, internal audit and risk management etc.).

The operational structure of HSITPL is planned in accordance with its stage of development. As it is anticipated that the relevant works will be at their peaks starting from 2022-23, the manpower for the project development division (mainly responsible for the project management, planning and design, as well as quality control of construction works, etc.) will increase correspondingly starting from that year. Besides, as the construction of the first batch of buildings under Batch 1 development will be completed in 2024-25, the manpower for operation, business development and enterprise support (such as attracting enterprises worldwide and tenancy management etc.) will therefore also increase accordingly. It is initially estimated that the number of employees of HSITPL will increase to 88 in 2026-27.

**(b) The advice given by the Architectural Services Department (“ArchSD”) in respect of the construction cost of the Park**

ArchSD has provided comments on HSITPL’s estimate for Batch 1 development and noted that HSITPL would, when carrying out the detailed design of the project, review the design parameters and the estimated construction cost. The comments made by ArchSD are internal documents of the Government and would not be disclosed.

Given that the entire Batch 1 development project is still in the technical feasibility study stage, HSITPL can only commence the ground investigation and the detailed design of the various projects after obtaining funding approval from the LegCo, and thus estimate was on the conservative side in order to cope with the actual needs. ArchSD had no comment in this regard, but suggested that HSITPL should, when the ground investigation results are available and in detailed design stage, review the scheme and design for cost effectiveness.

HSITPL will develop proper procedures and guidelines on the budget control, tendering and approval of consultancies and works contracts to ensure that the successful contracts are cost-saving ones. The Government will supervise and monitor the works progress and related matters through the Board of HSITPL and its Works Committee.

**(c) The estimated cost of the facilities and provisions of Batch 1 development of the Park**

- (i) Does the “basic public facilities within the Park” include reserve for the future development of other batches/phases; if yes, what is the expenditure involved?**

Some of the “basic public facilities within the Park” can be shared with the future developments of other batches or used by them through connection works. The estimated cost involved is tabulated as follows:

<b>Basic public facilities within the Park</b>	<b>Estimated cost (\$ million) (in MOD prices)</b>
(i) Common Utility Enclosure (CUE) (fresh/firefighting water pipes, automatic refuse collection pipes, power cable/telecommunication duct, cooling water supply and return mains, etc.)	287
(ii) District cooling system (DCS)	451



(iii) Information technology and telecommunication	241
(iv) Intelligent facilities (street furniture, traffic management system, automatic refuse collection system, automatic parking system, etc.)	214
<b>Total</b>	<b>1,193</b>

As for the actual arrangement, it will depend on the results of the detailed design. Therefore, the relevant expense of the basic public facilities that can be reserved for future batches is currently unavailable. For instance, the CUE can be used by the future batches, depending on the area and facilities to be provided by these batches. In addition, the budget of the DCS has included the provisions of mechanical and electrical plant and pipe laying works which can serve a higher cooling load than that of Batch 1 development. As for information technology and telecommunication, some of the facilities of the communication network, intranet, internet and wireless network as well as the central network and security management system can be used by the future batches. The traffic management system and automatic refuse collection system under intelligent facilities can also be used by future batches.

**(ii) The construction cost of the basement in the “construction of the first eight buildings” (estimated to reach \$2,158 million)**

The construction floor area (CFA) of the basement in Batch 1 development is 38 535 square metres (sq. m.) with a depth varying from around 7.5 m to 11.5 m. The basement will house carparks, mechanical and electrical facilities, DCS, automatic refuse collection system, CUE, multi-purpose hall, lecture and exhibition space, retail/restaurants, vehicular access, and loading/unloading spaces etc.

In preparing the estimates for the basement, HSITPL has taken into account the geological information of the Lok Ma Chau Loop (the Loop), the construction methodology and the sequence of works, such as the excavation works, diaphragm walls and support, waterproofing system and basement structure, etc. Besides, as it takes time to complete the site formation, the buildings and basement in Batch 1 development will have to be constructed in phases. HSITPL also needed to consider the extra project costs to be incurred for constructing the basement in phases and integrating the various constructed parts when preparing the estimates. Hence, the estimated cost is higher than that of constructing the basement in one go.

**(iii) The “large-sized facilities and modules” and transportation arrangement involved under the “temporary arrangement for construction”**

In order to reduce the construction costs and enhance efficiency of the works, adoption of innovative construction methods will be actively explored for the Batch 1 development of the Park, such as the “Modular Integrated Construction” method or the “Design for Manufacture and Assembly” method.

As the building modules will be fabricated off-site before delivery for assembly on site, HSITPL will study in detail on the transportation arrangement for the large-sized facilities and modules, and explore feasible ways to coordinate the transportation arrangement by leveraging the surrounding geographical conditions of the Loop. HSITPL will keep close liaison with the relevant works departments of the Government in coordinating the arrangement for transporting large-sized facilities and modules.

**(iv) Have alternative proposals other than the construction of temporary sewage treatment facilities been considered? What will happen to the temporary sewage treatment facilities upon completion of a permanent one?**

To tie in with the Loop development timetable, the Government has carried out part of the works in advance or concurrently as far as practicable so as to shorten the construction time. It is expected that it will take at least around five years at the earliest to complete the construction works of the entire sewage treatment works, which means that the works will not be completed until the second half of 2026. If the Batch 1 development is to be commissioned only after the completion of the sewage treatment works, its completion will be postponed for two to three years. As the economic contribution of Batch 1 development of the Park to Hong Kong can reach about \$5.5 billion per annum (including direct, indirect and induced impacts) and create about 4 800 local jobs, the Government hopes that Batch 1 development can be completed as soon as possible.

To dovetail with the progressive completion of the first batch of buildings in the Park from the end of 2024, HSITPL needs to consider various sewage treatment options. After study, the most feasible option suggested by the consultant is to install temporary sewage treatment facilities in vicinity of the first batch of buildings.

HSITPL will study and discuss with relevant government departments after the commissioning of the permanent sewage treatment works whether the temporary sewage treatment facilities can be converted into

grey water treatment plant to treat the grey water collected from baths, wash basins and laundry machines, etc., for flushing and irrigation uses. The feasibility of conversion into grey water treatment plant will depend on the study results.

**(d) The construction cost of Batch 1 development of the Park (including the first eight buildings and other supporting facilities) (per square foot (sq. ft.))**

After deducting the cost due to inflation, the construction cost of common facilities and temporary facilities, the cost of carrying out environmental mitigation measures, etc., the estimated construction cost of the eight buildings and other supporting facilities of Batch 1 development is \$11.028 billion (see table below) for providing a CFA of 169 355 sq. m. (about 1 822 900 sq. ft.).

<b>Construction of the first eight buildings</b>	<b>Estimated cost (\$ million) (in MOD prices)</b>
(i) Site investigation and foundation	984
(ii) Basement (carpark, multi-purpose hall, lecture and exhibition space, mechanical and electrical facilities, vehicular access, etc.)	2,158
(iii) Building	4,220
(iv) Building services (special facilities for wet laboratories such as exhaust duct and the provision of laboratory gas/deionised water/vacuum, etc.)	2,652
(v) External works (travellator, escalator/lift, covered walkway/footbridge, dangerous goods store, etc.)	609
(vi) Green building provisions	405
<b>Total</b>	<b>11,028</b>

Hence, after deducting the \$2.158 billion and \$609 million required respectively for the construction of the basement and external works, the construction cost of the first eight buildings of the Park is \$8.261 billion, i.e. around \$4,500 to \$5,000 per sq. ft..

**(e) The programmes offered by the eight University Grants Committee (UGC)-funded universities to talent in the six technology areas, including healthcare technologies, big data and artificial intelligence, robotics, new material, microelectronics, and financial technology.**

According to the information provided by the Education Bureau, the list of

full-time bachelor's degree and postdoctoral UGC-funded programmes related to healthcare technologies, big data and artificial intelligence, robotics, new material, microelectronics, and financial technology, categorised by university and level of study, offered in the 2020/21 academic year is at Appendix.

**(f) The ratio of local companies, overseas companies as well as Mainland companies, admitted to the Cyberport and the Hong Kong Science Park (“Science Park”).**

As at the end of March 2021, there were about 910 technology companies admitted to the Science Park, among which approximately 80% were local companies and the remaining 12% and 8% were from overseas and the Mainland respectively. There were 849 companies in the Cyberport, among which approximately 86% were local companies and the remaining 10% and 4% were from overseas and the Mainland respectively.

- End -

## Appendix

### **The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg) Programmes by University and Level of Study which appear to be related to “Healthcare Technologies, Big Data and Artificial Intelligence, Robotics, New Material, Mircoelectronics<sup>1</sup> and Financial technology” in the 2020/21 Academic Year**

### **The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg) Programmes by University and Level of Study which appear to be related to “Healthcare Technologies” in the 2020/21 Academic Year**

Level of Study	University	Programme Name
Ug	CityU	Bachelor of Engineering in Data and Systems Engineering
		Bachelor of Engineering in Manufacturing Systems Engineering
		Bachelor of Engineering in Systems Engineering and Management
		School of Data Science (options: BSc Data Science, BEng Data and Systems Engineering)
	CUHK	B.Eng. Systems Engineering & Engineering Management
	PolyU	BEng (Hons) Industrial & Systems Engineering
BEng (Hons) Transportation Systems Engineering		
RPg	CityU	PhD (Systems Engineering and Engineering Management)
	CUHK	M.Phil. in Systems Engin. & Engin. Mgt
		Ph.D. in Systems Engin. & Engin. Mgt
	PolyU	Doctor of Philosophy (Health Technology and Informatics)
		Doctor of Philosophy (Industrial and Systems Engineering)
		Master of Philosophy (Health Technology and Informatics)
		Master of Philosophy (Industrial and Systems Engineering)
		PhD - Health Technology & Informatics
		PhD - Industrial and Systems Engineering
	HKU	MPhil - Electrical and Electronic Engineering
		MPhil - Industrial and Manufacturing Systems Engineering
		PhD - Electrical and Electronic Engineering
		PhD - Industrial and Manufacturing Systems Engineering

Note: Programmes are selected if either one of following criteria is fulfilled:

- (a) programme name with keyword “Health Technology”; or
- (b) programme name with keyword “Electrical and Electronic Engineering” and level of study is Research Postgraduate; or
- (c) programme name with keyword “Systems Engin / Systems Engineering”.

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1 The list of programmes offered by UGC-funded universities do not have any programmes with “microelectronics” in their title. Nevertheless, in general relevant programmes of the Physics or Engineering disciplines may cover courses related to microelectronics.

**The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg) Programmes by University and Level of Study which appear to be related to “Big Data and Artificial Intelligence” in the 2020/21 Academic Year**

<b>Level of Study</b>	<b>University</b>	<b>Programme Name</b>
Ug	CityU	Bachelor of Engineering in Computer and Data Engineering
		Bachelor of Engineering in Data and Systems Engineering
		Bachelor of Science in Data Science
		Department of Electrical Engineering (options: BEng Computer and Data Engineering, BEng Electronic and Electrical Engineering, BEng Information Engineering)
		School of Data Science (options: BSc Data Science, BEng Data and Systems Engineering)
	HKBU	BBA - Economics & Data Analytics
		BSc - Business Computing and Data Analytics
	LU	Bachelor of Science (Hons) in Data Science
	CUHK	B.Eng. AI: Systems & Tech
		B.S.Sc. Data Science and Policy Studies
	PolyU	BBA (Hons) Global Supply Chain Management
		BEng (Hons) Air Transport Engineering
		BEng (Hons) Environmental Engineering & Sustainable Development
		BSc (Hons) Data Science & Analytics
	HKUST	BSc Data Science and Technology
	HKU	Bachelor of Arts and Sciences in Applied Artificial Intelligence
		Bachelor of Arts and Sciences in Social Data Science
RPg	CityU	PhD (Data Science)

Note: Programmes are selected if either one of following criteria is fulfilled:

- (a) programme name with keyword “Data”; or
- (b) programme name with keyword “AI / Artificial Intelligence”.

**The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg) Programmes by University and Level of Study which appear to be related to “Robotics” in the 2020/21 Academic Year**

<b>Level of Study</b>	<b>University</b>	<b>Programme Name</b>
Ug	CityU	Bachelor of Engineering in Computer and Data Engineering
		Bachelor of Engineering in Computer Engineering
		Department of Electrical Engineering (options: BEng Computer and Data Engineering, BEng Electronic and Electrical Engineering, BEng Information Engineering)
	CUHK	B.Eng. Computer Engineering
		B.Eng. Mechanical & Automation Engineering
	HKUST	BEng Computer Engineering
		BEng/BBA Computer Engineering and General Business Management
	HKU	Bachelor of Engineering in Computer Science
	RPg	CUHK
Ph.D. in Mechanical and Automation Engin.		
HKUST		MPhil Computer Science and Engineering
		MPhil Electronic and Computer Engineering
		PhD Computer Science and Engineering
	PhD Electronic and Computer Engineering	

Note: Programmes are selected if either one of following criteria is fulfilled:

- (a) programme name with keyword “Robot”; or
- (b) programme name with keyword “Engineering” and “Computer”; or
- (c) programme name with keyword “Automation”.



**The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg)  
Programmes by University and Level of Study  
which appear to be related to “New Material” in the 2020/21 Academic Year**

<b>Level of Study</b>	<b>University</b>	<b>Programme Name</b>
Ug	CityU	Bachelor of Engineering in Materials Engineering
		Bachelor of Engineering in Materials Science and Engineering
RPg	CityU	PhD (Chemistry)
		PhD (Materials Science and Engineering)
	HKBU	MPhil - Chemistry
		PhD - Chemistry
	CUHK	M.Phil. in Biochemistry
		M.Phil. in Chemistry
		M.Phil. in Materials Science and Engineering
		Ph.D. in Biochemistry
		Ph.D. in Chemistry
		Ph.D. in Materials Science and Engineering
	HKUST	MPhil Chemistry
		PhD Chemistry
	HKU	MPhil - Chemistry
		PhD - Chemistry

Note: Programmes are selected if either one of following criteria is fulfilled:

- (a) programme name with keyword “Material”; or
- (b) programme name with keyword “Chemistry” and level of study is Research Postgraduate.

**The List of UGC-funded Full-time Undergraduate (Ug) or Research Postgraduate (RPg) Programmes by University and Level of Study which appear to be related to “Financial Technology” in the 2020/21 Academic Year**

<b>Level of Study</b>	<b>University</b>	<b>Programme Name</b>
Ug	CityU	Bachelor of Business Administration in Banking and Financial Services
		Bachelor of Business Administration in Finance
		Bachelor of Science in Computational Finance
		Bachelor of Science in Computational Finance and Financial Technology
		Department of Economics and Finance (options: BBA Business Economics, BBA Finance)
	HKBU	BBA - Finance
	CUHK	B.B.A. Insurance, Financial and Actuarial Analysis
		B.Eng. Financial Technology
		B.Sc. Interdisciplinary Major Programme in Global Economics & Finance
		B.Sc. Quantitative Finance
		B.Sc. Quantitative Finance & Risk Management Science
	EdUHK	Bachelor of Education (Honours) (Business, Accounting and Financial Studies) (Five-year Full-time)
	PolyU	BBA (Hons) Accounting and Finance
		BBA (Hons) Financial Services
		BSc (Hons) Financial Technology
		BSc (Hons) Investment Science & Finance Analytics
	HKUST	BBA Finance
		BBA Dual Degree Program in Technology and Management
		BSc Economics and Finance
		BSc Quantitative Finance
	HKU	Bachelor of Arts and Sciences in Financial Technology
		Bachelor of Business Administration / Bachelor of Economics and Finance
		Bachelor of Finance in Asset Management and Private Banking
		Bachelor of Science in Quantitative Finance

<b>Level of Study</b>	<b>University</b>	<b>Programme Name</b>
RPg	CityU	PhD (Economics and Finance)
	HKBU	PhD - Finance & Decision Sciences
	PolyU	Doctor of Philosophy (Accounting and Finance)
		Master of Philosophy (Accounting and Finance)
		PhD - Accounting & Finance
	HKUST	MPhil Finance
		MPhil Technology Leadership and Entrepreneurship
		PhD Finance
	HKU	PhD - Finance

Note: Programmes are selected if either one of following criteria is fulfilled:

- (a) programme name with keyword “Financial / Finance”; or
- (b) programme name with keyword “Technology / Technologies” and field of education in “Business and administration”.