

香港特別行政區政府

創新及科技局

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INNOVATION AND
TECHNOLOGY BUREAU

THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

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

By email

7 November 2018

Ms Anita SIT
Clerk to Finance Committee
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

Dear Ms SIT,

**Finance Committee
Follow-up Action for the Meeting on 13 July 2018**

At the Finance Committee meeting held on 13 July 2018, the Administration was requested to provide supplementary information regarding FCR(2018-19)38. The Innovation and Technology Bureau's response is enclosed herewith for reference.

Yours sincerely,

(Ricky CHONG)

for Secretary for Innovation and Technology

c.c. Commissioner for Innovation and Technology (Attn.: Ms Zorina WAN)
Secretary for Financial Services and the Treasury (Attn.: Ms Candy NIP)

Finance Committee
Follow-up Action for the Meeting on 13 July 2018

The Administration's Response -

FCR(2018-19)38

(a) Information on projects with outstanding performance among the 2 478 projects funded under the Innovation and Technology Support Programme.

Through the Innovation and Technology Support Programme (“ITSP”), the Innovation and Technology Commission actively promotes and supports applied research and development (“R&D”) projects which contribute to the upgrading of technology levels of local industries. In recent years, a number of ITSP-funded projects have achieved outstanding outcomes in the commercialisation of R&D results. For example -

- (i) an R&D team of the Chinese University of Hong Kong (“CUHK”) has successfully developed non-invasive prenatal testing based on foetal DNA in maternal plasma, which is a significant achievement in the international arena of clinical chemistry research. The technology has been widely adopted by more than 90 countries so far, benefitting millions of pregnant women around the world;
- (ii) a research team of CUHK has successfully developed highly accurate facial recognition technology using deep learning-based artificial intelligence (“AI”). The technology has laid down the foundation for the establishment of Hong Kong’s first “unicorn” technology start-up with a valuation of over US\$1 billion;
- (iii) the Logistics and Supply Chain MultiTech R&D Centre has collaborated with the Hong Kong Customs and Excise

Department to implement the Single E-lock Scheme, which reduces customs clearance time through the seamless clearance service based on Internet of Things and e-lock-based technology. The Scheme has been adopted in over 30 control points in the Pearl River Delta region and has extensively facilitated transshipment traffic to the Guangdong Province;

- (iv) the Hong Kong Applied Science and Technology Research Institute has successfully developed an intelligent surface inspection technology platform applicable to the production line. The system analyses different features of a product's surface, such as defects on the touch panel glass, through robotic vision to improve production efficiency and quality. A total of five related patents have been generated upon completion of the project. The "Cover Glass and Touch Panel Glass Automatic Defects Inspection System" also won the "2016 Hong Kong Awards for Industries - Equipment and Machinery Design"; and
- (v) the Nano and Advanced Materials Institute has, in collaboration with several enterprises, successfully developed different types of nanofiber materials in recent years. Among which, the Smart Mask, equipped with highly breathable, bacteria-killing and suspended particulates PM2.5-filtering functions, was awarded the "Gold Medal with Jury's Commendations" at the 2017 International Exhibition of Inventions of Geneva. High-performance mask products manufactured in Hong Kong have already been launched in the market.

- (b) Case(s) where tenancies were terminated or not renewed due to the Hong Kong Science Park tenants' failure to fulfil the tenancy terms relating to the proportion of scientific researchers recruitment or business nature, as well as the percentage.**

The Hong Kong Science and Technology Parks Corporation ("HKSTPC") endeavours to develop the local innovation and technology ecosystem and promote R&D activities. To ensure the proper use of resources, technology companies admitted to the Hong Kong Science Park ("HKSP") must fulfil certain R&D criteria. HKSTPC will conduct annual business review on each tenant through site visit and interview. In 2017-18, there were 10 cases not granted lease renewal (accounting for 6.6% of the total tenants renewal cases) due to failure in meeting HKSP's admission criteria.

- (c) the six core facilities under "Research Facilities for Healthcare Technologies and Artificial Intelligence and Robotics Technologies" –**
- (i) the estimated cost of each facility;**
 - (ii) the principle(s) based on which the Administration estimated the cost of each facility; and**
 - (iii) the equipment required for each facility.**

To promote healthcare technology and AI/robotics technologies researches, HKSTPC will make use of around \$2.7 billion of the allocated funding to develop a host of research-related facilities. Given the specialised nature of the facilities, HKSTPC is discussing with experts in relevant fields and prospective facilities operators to study the scale of the related facilities, their business/operation mode, cost estimates for individual projects, as well as the associated development and operation costs to be borne by both parties etc. A cost breakdown is yet to be available as the relevant facilities are still in planning stage.

In estimating the costs of the concerned facilities, HKSTPC has made reference to the costs incurred by universities or research institutions in overseas, Mainland China and Hong Kong in developing the same or similar facilities and has conducted site visits, as well as consulted experts in relevant fields, organisations, facilities and service providers. HKSTPC has also taken into account its past experiences in building works projects, for example, estimating the cost of robotics catalysing centre and robo standard testing laboratory etc. based on the development cost of existing robotics facility in HKSP.

HKSTPC is preparing the requirement for specific equipment in relevant research-related facilities. For instance, freezer for cell banking in the bio bank; facilities for testing the performance (e.g. location/direction accuracy and repeatability) of industrial robots and electromagnetic compatibility testing equipment in robo standard testing laboratory; and robot parts processing and rapid prototype equipment in robotics catalysing centre etc.

Innovation and Technology Bureau
Innovation and Technology Commission
November 2018