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Replies to initial written questions raised by Legislative Council Members in examining the Estimates of Expenditure 2022-23

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CONTROLLING OFFICER'S REPLY

(Question Serial No. 0145)

Head:	(135) Government Secretariat: Innovation and Technology Bureau
Subhead (No. & title):	()
Programme:	(2) Innovation and Technology
Controlling Officer:	Permanent Secretary for Innovation and Technology (Ms Annie CHOI)
Director of Bureau:	Secretary for Innovation and Technology

Question:

Last year, the Innovation and Technology Bureau launched the Global STEM Professorship Scheme (the Scheme) under which an estimated amount of HK$2 billion will be provided as funding for universities to recruit internationally renowned innovation and technology scholars and their teams to engage in teaching or research activities in Hong Kong. Please inform this Committee of the following:

1) It is estimated that up to 100 professorships can be awarded in 5 years under the Scheme. How many scholars or their teams have agreed to work in Hong Kong so far?

2) In view of the severe COVID-19 epidemic situation in Hong Kong since January this year, please state whether there were applications requesting for the deferral of work or refusal to work in Hong Kong? If yes, how many cases and people were involved?

3) How many awarded scholars or teams have come to work in Hong Kong? Given the local epidemic situation, has the Government provided assistance to relevant internationally renowned scholars and their teams? If yes, what are the details and the additional expenditure involved?

Asked by: Hon CHAN Hok-fung (LegCo internal reference no.: 5)

Reply:

Our consolidated reply to the questions is set out below-

The Government launched the Global STEM Professorship Scheme (the Scheme) in June 2021 to support local universities in recruiting internationally renowned or promising STEM scholars. The Assessment Panel of the Scheme met in July and December respectively last year to examine nominations of universities. Over 60 overseas scholars have received

support in the first two tranches of the Scheme. The Assessment Panel has invited universities to submit their nominations for the third tranche. It is expected that the nominations will be examined in the second quarter of this year.

Universities are responsible for discussing the recruitment matters with the awarded scholars and will provide them with the necessary support. Generally speaking, awarded scholars will take some time to make arrangements for their relocation to Hong Kong. For instance, they need to notify their current universities or institutions of their resignations in advance and formulate research plans in Hong Kong with their teams. Some scholars may relocate to Hong Kong with their families and need to make plans for their children's education. In this connection, awarded scholars do not tend to report duty immediately after the approval of their nominations. Even though some of the scholars have commenced their teaching and research work in Hong Kong, the volatile global pandemic situation has inevitably lengthened the negotiation between the universities and scholars, and some of them need to postpone their arrival in Hong Kong due to the pandemic.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0415)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): (000) Operational expenses

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

As stated in the Budget, the Government will accelerate the progress of digital economy by setting up a "Digital Economy Development Committee" (DEDC), with members comprising experts and scholars, industry elites, and relevant government officials. In this regard, will the Government inform this Committee of:

(1) the government department tasked to coordinate the DEDC, and the estimated staff establishment, annual emoluments and operational expenses required;

(2) the specific functions and objectives of the DEDC?

Asked by: Hon CHAN Siu-hung (LegCo internal reference no.: 8)

Reply:

Our consolidated reply to the questions is as follows:

The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" with an objective to accelerate the development of digital economy in Hong Kong and promote digital transformation across different industries. The committee members comprise industry practitioners, experts and scholars, and relevant government officials. Other details will be announced in due course.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0416)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): (000) Operational expenses

Programme: (3) Efficiency Office

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in the Estimates that during 2022-23 the Efficiency Office (EffO) of the Innovation and Technology Bureau will continue to promote the adoption of innovation and technology (I&T) by bureaux and departments to improve government services. In this connection, please inform this Committee of the following:

(1) What were the government bureaux and departments to which the EffO promoted the adoption of I&T in the past 2 years? What were the I&T items and expenditures involved respectively?

(2) How effective was the adoption of these I&T items in terms of saving public money and enhancing efficiency in government operations?

(3) What are the key areas of work of the EffO in 2022-23? Which fields will be the foci of the EffO in promoting the application of I&T?

Asked by: Hon CHAN Siu-hung (LegCo internal reference no.: 9)

Reply:

(1) The Government is committed to promoting the wider adoption of technology by government bureaux/departments (B/Ds) to enhance operational efficiency and continuously improve public services. In the past 2 years, the Efficiency Office (EffO) has worked with the 45 B/Ds participating in the "Be the Smart Regulator" and the "Streamlining of Government Services" Programmes in proposing nearly 400 business facilitation and streamlining measures, covering almost 750 licences and services, among which 70% of the measures involve the adoption of innovation and technology (I&T), with a view to providing more electronic services for the business sector and the general public. These include the provision of online application

services through "iAM Smart", the establishment of various electronic payment channels, the use of case management tools to facilitate application processing and the provision of end-to-end electronic services for licenses, etc. We have also implemented a series of support measures, such as organising I&T Trade Shows and I&T Solution Day. Through the Hong Kong Science and Technology Parks Corporation, Cyberport and other platforms, we identified and showcased the latest I&T solutions for departments, and arranged more than 80 business matching sessions for interested departments to help them further explore or test the application of the solutions for their services. We took forward the work concerned using existing manpower and resources.

(2) B/Ds make use of I&T to enhance public services, mainly with a view to providing more options to make government services more business-friendly and convenient to the public. Generally speaking, B/Ds will flexibly redeploy the savings achieved to improve their existing services or to cope with new service demand.

(3) The EffO will continue to drive the provision of more electronic services by different departments. The target is that by mid-2022, unless there are legal or operational constraints, electronic licensing will be implemented for all licence applications, and applications for other government services can be submitted electronically, thereby providing more options to make government services more business-friendly and convenient to the public. Meanwhile, we will continue to assist government departments to identify feasible solutions to implement more end-to-end electronic services through wider adoption of technology, and to assist departments in reviewing and enhancing related processes for further improving the convenience, efficiency and transparency of public services.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0364)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Paragraph 50 of the Budget states that the Government will set up a "Digital Economy Development Committee" (DEDC) in order to accelerate the progress of a digital economy, with members comprising experts and scholars, industry elites, and relevant government officials. In this connection, please advise this Committee on the following:

1. Will the DEDC be led by the Chief Executive, a Secretary of Department or a Director of Bureau, or someone with knowledge in innovation and technology (I&T) and business experience appointed by the Government? What will be the composition of the DEDC, the size of its membership, and the number of members from various professions? Will representatives from local organisations in different areas of the I&T industry be invited to join the DEDC?

2. What are the specific details about the operation of the DEDC, including its objectives (such as the formulation of a blueprint for long-term technological development, setting up of a top-down centralised system to enhance cross-departmental collaboration), tenure of its members, how often it will meet, the number of reports to be submitted during the tenure of its members, the earliest date the first report will be published, as well as the manpower and expenditure involved in running the secretariat?

3. Will representatives from relevant departments in the Guangdong Province be invited to join the DEDC or will they be invited to sit in on meetings and join the DEDC's discussion on a need basis? Will the DEDC meet and exchange views with relevant authorities and organisations in the Mainland on a regular basis?

4. The State Council unveiled in December 2021 a plan to facilitate the development of the digital economy in the 14th Five-Year Plan period. The plan, which sets out the overall requirements, development objectives, major tasks, key projects and protection measures regarding national digital economy development, is an important action

agenda in the 14th Five-Year Plan period. Will the Government include the plan in the DEDC's discussion or even use it as a basic direction for its discussion in future?

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 1)

Reply:

Our consolidated reply to the questions is as follows:

The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" with an objective to accelerate the development of digital economy in Hong Kong and promote digital transformation across different industries. The committee members comprise industry practitioners, experts and scholars, and relevant government officials. Other details will be announced in due course.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0366)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in paragraph 62 of the Budget that the amount of annual subsidy currently received by 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres under the Innovation and Technology Fund will be doubled to $440 million, so that they can have more resources to conduct research and development (R&D) activities, nurture local talent as well as attract more local and overseas innovation and technology (I&T) talents, and further their co-operation and exchanges with institutions in the Mainland. The Chief Executive (CE) stated in the 2017 Policy Address that the Government had set a goal to double the gross domestic expenditure on R&D (GERD) to $45 billion a year, i.e. to increase the ratio of such expenditure to the Gross Domestic Product (GDP) (R&D expenditure ratio) from 0.73% to 1.5%, by the end of the current Government's term of office. Although the amount of R&D subsidy will be doubled to over $400 million in the coming financial year, and that the amount of subsidy for each university will be increased by the Financial Secretary (FS) to $16 million to further promote the realisation of R&D results, it is still far from meeting the goal of reaching an annual GERD of $45 billion as set by the CE. In this connection, please advise on the following:

1. the respective amounts of subsidy, technology areas involved, and R&D projects of the 22 recipients in 2021-22; the allocations of the subsidy expected to be increased in 2022-23 among the 22 Laboratories and Research Centres;

2. the respective GERD and their ratios to the GDP in 2020-21, 2021-22 and 2022-23;

3. whether the Government admits that the current-term Government will be unable to achieve the goal of reaching the annual GERD of $45 billion; the Government's response to its failure in this regard and the major reasons for that;

4. whether the goal for R&D expenditure set by the CE has been taken into account in formulating the annual Budget by the FS since 2017; whether reference has been made to the level of R&D expenditure in the Mainland, especially to those of the cities in the

Greater Bay Area (GBA), many of which have far exceeded that of Hong Kong; and the reasons why substantial increase of R&D expenditure has not been made in this year's Budget; and

5. the ways for the Government to sustain and enhance Hong Kong's competitiveness in the GBA and achieve the goal of developeing the city into an international I&T hub, given that its R&D expenditure is lower than those of several GBA cities.

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 3)

Reply:

Promoting research and development (R&D) is an indispensable part of innovation and technology (I&T) development. The current-term Government proactively promotes local I&T development in the eight major areas set forth by the Chief Executive. Various policies and initiatives, including those on promoting R&D, have made good progress, making the overall I&T ecosystem in Hong Kong increasingly vibrant. Hong Kong's I&T development has been internationally acclaimed. For example, Hong Kong ranked first in Asia and second worldwide in the World Digital Competitiveness Ranking 2021 and first worldwide in terms of "Technology".

The reply to items 1 to 5 of the question is respectively as follows:

1. The maximum funding for each State Key Laboratory (SKL) and Hong Kong Branch of Chinese National Engineering Research Centre (CNERC) in Hong Kong under the Innovation and Technology Fund (ITF) in 2021-22 is $10 million, which covers the actual expenditures in manpower, equipment, consumables and services incurred for the purpose of conducting R&D work. The funding concerned is not provided to each R&D project individually. Since the funding is provided on an annual reimbursement basis, the funded institutions will submit funding applications only after the end of each financial year. Since funding is provided on a reimbursement basis, the subvented organisations would submit their applications after the end of each financial year. Therefore, the actual funding amounts are subject to confirmation upon approval of the applications concerned. In 2020-21, each of the SKLs and CNERCs received funding of $9.38 million to $10 million. (See https://www.itc.gov.hk/ch/doc/collaboration/funding_amount_of_SKLs_and_CNERCs(HK)_chi.pdf.) At present, the major technological areas studied by the 16 SKLs and 6 Hong Kong Branches of CNERCs include biomedicine, precision manufacturing, electronics, environment, chemistry, as well as agriculture and railway, etc. (see Annex for details). We also report their research results to the Legislative Council from time to time.

   The total (maximum) amount of annual subsidy currently received by the 16 SKLs and the 6 Hong Kong Branches of CNERCs is $220 million, which will be doubled to $440 million as announced in the 2022-23 Budget, so that they can have more resources to conduct R&D activities, nurture local talent as well as attract more local and non-local I&T talents, and further their co-operation and exchanges with institutions in the Mainland. We are now liaising with the relevant

universities/institutions with respect to the guidelines on the additional provisions (such as the allocation, purpose, and usage requirements), so as to formulate the details involved.

2. to 4. Despite the impact on Hong Kong from various challenges in recent years, such as the social unrest and the COVID-19 pandemic, the gross domestic expenditure on R&D (GERD) increased from around $19.7 billion in 2016 to around $26.5 billion in 2020. While the ratio of the GERD to Gross Domestic Product had hovered at around 0.74% over the past decade or so, it increased to 0.99% in 2020. The GERD figures for 2021 and 2022 are currently not available yet as the Census and Statistics Department commences its statistical work after the completion of each year, and therefore, the figures for 2021 will only be available in end-2022.

The Government has been actively promoting R&D in areas such as infrastructure, capital and talent, and introduced initiatives to support R&D work by universities and public research institutes. For instance, to develop Hong Kong into a global research collaboration hub, the flagship project "*InnoHK* research clusters" have already attracted over 30 world-renowned universities and research institutes to collaborate with local universities and research institutes in setting up 28 research laboratories in the Hong Kong Science Park. In addition, local universities have established close collaborative relationships with research institutions in the Mainland over the years through various research programmes, many of which have borne fruits. In recent years, the Central Government and some provincial and municipal governments have opened up quite a number of R&D projects and funding schemes to researchers in Hong Kong.

The Government amended the Inland Revenue Ordinance in 2018 to provide enhanced tax deduction for qualifying R&D expenditure incurred by enterprises on or after 1 April 2018. The deduction is 300% for the first $2 million of the aggregate amount of the relevant expenditure, and 200% for the remaining amount. There is no cap on the amount of the relevant tax deduction. The claims for tax deduction on R&D expenditure for the year of assessment 2019/20 amounted to about $3.21 billion, representing nearly a double as compared with $1.67 billion in the year of assessment 2017/18 (prior to the implementation of the measure).

To further promote R&D, it is announced in the Budget 2022-23 that $10 billion will be earmarked to provide more comprehensive support for life and health sciences in Hong Kong in the long run, including hardware, research talent, clinical trials and data application, with the aim of enhancing the capacity and capability in life and health sciences. For instance, the "InnoLife Healthtech Hub" will be set up in the Hong Kong-Shenzhen Innovation and Technology Park. In addition, as mentioned in (1) above, starting from 2022-23, we will double the amount of funding for 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres in Hong Kong, and enhance the Technology Start-up Support Scheme for Universities to double the annual subsidy for each specified university to $16 million. The increased subsidy will be provided to start ups of universities with private investments on a matching basis of one to one. Each start up may receive an annual subsidy of up to $1.5 million for a maximum of 3 years to further realise their R&D outcomes.

The Government expects that the effect of these measures will be realised gradually, contributing to a further increase in the GERD and a vibrant I&T ecosystem.

5. While direct comparison between Hong Kong and other cities is hardly possible due to differences in modes of economic and social development, Hong Kong's I&T ecosystem in general, as mentioned in (2) to (4) above, has become increasingly vibrant. Meanwhile, Hong Kong has strong R&D capabilities and advantages as an international and market-oriented economy, while other cities in the Greater Bay Area (GBA) can provide a sizeable market as well as capabilities in commercialising R&D results and advanced manufacturing. With the ability of pooling innovation resources from the Mainland and across the globe, Hong Kong can complement other cities in the GBA with our strengths and vice versa.

Since the promulgation of the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area and the National 14th Five-Year Plan, the Government has been making efforts to facilitate the work of developing an international I&T hub, with remarkable progress made in areas such as allowing cross-boundary remittance of R&D funding directly from the Mainland to Hong Kong, relaxing the limitation on exporting Mainland human genetic resources to Hong Kong, and launching the Mainland-Hong Kong Joint Funding Scheme.

In the future, the Government will continue to take forward a series of initiatives to facilitate effective flow of innovative elements, including talent, capital, goods and information etc., thereby promoting collaboration in scientific research and better leveraging the complementary advantages among different cities in the GBA. In addition to the work mentioned above, we will also develop I&T infrastructure such as the San Tin Technopole which includes the Hong Kong-Shenzhen Innovation and Technology Park. Moreover, the GBA InnoAcademy and GBA InnoExpress set up by the Hong Kong Science and Technology Parks Corporation (HKSTPC) at its branch in Shenzhen will commence operation this year. The HKSTPC will also work with the local universities which have campuses in the GBA to establish incubator networks in those campuses. Government policy bureaux/departments and related organisations will actively collaborate with the relevant Mainland authorities and strive to build Hong Kong into an international I&T hub.

- End -

Annex

State Key Laboratories (SKL) and Hong Kong Branches of Chinese National Engineering Research Centres (HKCNERCs)

Key Technological Areas of Research

Hosting Organisation	State Key Laboratories / HKCNERCs (Hosting Organisation)	Year of Approval	Key Technological Areas of Research
State Key Laboratories			
The University of Hong Kong	SKL of Emerging Infectious Diseases (Prof GUAN Yi and Prof YUEN Kwok-yung)	2005	Infectious diseases and the underpinnings of their causes; translational medicine and control technologies
The University of Hong Kong	SKL of Brain and Cognitive Sciences (Prof Tatia LEE Mei-chun)	2005	The neurounderpinnings of brain processing and functions
The Chinese University of Hong Kong	SKL of Translational Oncology (Prof Dennis LO)	2006	The molecular genetics, signalling pathways, clinical diagnostics and therapeutic solutions of cancers
City University of Hong Kong	SKL of Terahertz and Millimeter Waves (Prof CHAN Chi-hou)	2008	Millimeter and terahertz waves antenna and circuit, imaging science and technologies
The Chinese University of Hong Kong	SKL of Agrobiotechnology (Prof Hon-Ming LAM)	2008	Agrobiotechnology
City University of Hong Kong	SKL of Ultra-precision Machining Technology (Prof Benny CHEUNG)	2009	Ultra-precision machining technologies, precision metrology, advanced optics manufacturing and precision manufacturing

Hosting Organisation	State Key Laboratories / HKCNERCs (Hosting Organisation)	Year of Approval	Key Technological Areas of Research
The Hong Kong Polytechnic University	SKL of Molecular Neuroscience (Prof Nancy IP Yuk-yu)	2009	Basic science research of brain neuroscience, nervous system disorders and development of intervention measures
City University of Hong Kong	SKL of Marine Pollution (Prof Kenneth Mei Yee LEUNG)	2009	Detection, assessment, forecast and control of marine pollution; and ecological remediation
The Chinese University of Hong Kong	SKL of Research on Bioactivities and Clinical Applications of Medicinal Plants (Pro LEUNG Ping-chung)	2009	Modernisation of traditional Chinese medicines and the application of biotechnologies on medicinal plants
The University of Hong Kong	SKL of Liver Research (Prof Irene O.L. NG)	2010	Causes, prevention, diagnoses and therapeutic solutions of liver diseases.
The University of Hong Kong	SKL of Synthetic Chemistry (Prof CHE Chi-ming)	2010	Design, formation and application of new compounds
The Hong Kong Polytechnic University	SKL of Chemical Biology and Drug Discovery (Prof WONG Kwok-yin)	2010	Research on organic synthesis, catalysis, chemical biology and development of drugs
Hong Kong Baptist University	SKL of Environmental and Biological Analysis (Prof CAI Zongwei)	2013	Effects of persistent organic pollutants on the environment, food safety and public health

Hosting Organisation	State Key Laboratories / HKCNERCs (Hosting Organisation)	Year of Approval	Key Technological Areas of Research
The University of Hong Kong	SKL of Pharmaceutical Biotechnology (Prof XU Aimin)	2013	Basic, clincal and translational research on chronic diseases such as obesity, diabetes and cardiovascular complications; novel biomarker discovery and precision medicine; screening and development of macromolecules such as protein and antibody; antibody engineering and application of targeted therapy drugs
The Chinese University of Hong Kong	SKL of Digestive Disease (Prof YU Jun)	2013	Basic, translational and clinical research on gastrointestinal cancer and digestive system disease
The Hong Kong Polytechnic University	SKL of Advanced Displays and Optoelectronics Technologies (Prof Man WONG)	2013	Basic and applied research on displays technology
HKCNERC			
Hong Kong Applied Science and Technology Research Institute	Hong Kong Branch of the National ASIC System Engineering Research Center (Dr Denis Shing Fai YIP)	2012	Advanced semiconductor technologies, including mixed-signal chip, artificial intelligence system, 3rd generation semiconductor, research and development of module and technology transfer.

Hosting Organisation	State Key Laboratories / HKCNERCs (Hosting Organisation)	Year of Approval	Key Technological Areas of Research
The Hong Kong Polytechnic University	Hong Kong Branch of National Engineering Research Center for Steel Construction(Pro K F CHUNG)	2015	Innovative engineering technology research on advanced steel construction and its applications
The Hong Kong Polytechnic University	Hong Kong Branch of National Rail Transit Electrification and Automation Engineering Technology Research Center (Prof Yi Qing NI)	2015	Innovation and translational research on rail technologies
City University of Hong Kong	Hong Kong Branch of National Precious Metals Material Engineering Research Center (Prof LU Jian)	2015	Innovative research on advanced precious metal materials and their processing technology and applications
The Hong Kong University of Science and Technology	Hong Kong Branch of National Engineering Research Center for Tissue Restoration & Reconstruction (Prof SUN Jianwei)	2015	Development of high efficiency luminescent materials and their biomedical applications
The Hong Kong University of Science and Technology	Hong Kong Branch of Chinese National Engineering Research Center for Control & Treatment of Heavy Metal Pollution (Prof CHEN Guang Hao)	2015	Optimal use of water resources, resources recovery from wastewater and industrialization of energy-saving sewage treatment technology

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0372)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding enriching our local talent pool, new measures are proposed in the Budget for a number of sectors. They include the Pilot Scheme on Training Subsidy for FinTech Practitioners for the financial sector, increasing allocation to $400 million a year for enhancing training for medical professionals, injecting $100 million into the Cantonese Opera Development Fund, and allocating $1 billion to the Construction Industry Council for supporting manpower training. However, the Financial Secretary has neither proposed new talent development measures for innovation and technology (I&T), nor allocated more resources on top of the existing measures. He only says that more relevant measures will be rolled out to facilitate the entry of talent into Hong Kong in due course. In this connection:

1. What are the reasons for not proposing new measures for I&T in the Budget?

2. Whether there is a comprehensive review of the performance and effectiveness of the implementation of the existing measures in relation to talent development for I&T? If yes, what are the results? Has consideration been given to integrating some of the measures for implementation?

3. Whether there is an assessment of the current demand and supply of talent in different I&T areas in Hong Kong. Which areas are experiencing shortage of I&T talents and what is the actual demand-supply gap in I&T talent? What measures are in place to address the problem?

4. What are the anticipated changes in the demand and supply of I&T talent in the next 3 years? In response to such changes, what measures will be taken? What are the details and expenditures of these measures?

5. To support Hong Kong to develop into an international I&T hub, which areas need to enhance the training of I&T talent for Hong Kong in the long run and the number involved? What are the specific measures to further promote STEM education in more

primary and secondary schools and to attract more university students to enrol I&T-related programmes?

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 9)

Reply:

The Report on Manpower Projection to 2027 released by the Government in end-2019 has indicated that Hong Kong has a keen demand for innovation and technology (I&T) talents, which surpasses that of other industries. With rapid technological advancement, the projection of long-term I&T manpower demand and supply needs to be constantly updated in view of circumstances in social, national and international development. With the popularisation of I&T, various industries also need to recruit a large number of I&T talents in different fields. The Government has been adopting a multi-pronged approach to enlarging the I&T talent pool through attracting, nurturing and retaining talents with a series of initiatives. Our consolidated reply in consultation with the Education Bureau (EDB) is as follows:

1. and 2.

The Government has kept reviewing the effectiveness of various measures to enlarging the I&T talent pool from time to time to enhance the measures and roll out new initiatives timely. Various enhancement and new initiatives have been rolled out in recent years, including:-

- the "IT Innovation Lab in Secondary Schools" Programme and "Knowing More About IT" Programme were launched in 2020 and 2021 respectively to provide funding support for secondary and primary schools for organising information technology-related extra-curricular activities. Up to now, these two programmes have received applications from more than 460 schools with total approved funding exceeding $150 million;

- the STEM Internship Scheme launched in 2020 has been regularised from 2021, benefitting over 4 700 university students with a total funding of about $110 million so far;

- the eligibility for the Research Talent Hub was extended in 2021 to include holders of a bachelor's or master's degree in a science, technology, engineering and mathematics (STEM)-related discipline awarded by a well-recognised non-local institution[1]. More than 6 200 research talents have been employed under this scheme in the past 5 years and the total funding is about $2.8 billion;

- the Innovation and Technology Scholarship subsidises outstanding university students to take part in overseas exchange, local internships, mentorship programmes, etc., annually, with a view to nurturing future leaders in the I&T sector. It has benefited 275 universities students as at end-2021;

- the Global STEM Professorship Scheme, introduced in 2021, supports universities in recruiting internationally renowned I&T scholars and their teams to conduct research and teaching activities in Hong Kong. This scheme has supported over 60 outstanding

scholars in the first two rounds and the scholars and their teams are gradually arriving in Hong Kong;

- the Reindustrialisation and Technology Training Programme (RTTP) was launched in August 2018 to subsidise staff of local companies to receive training in advanced technologies on a matching basis. So far, the RTTP has subsidised over 8 600 trainees to participate in over 11 400 training sessions with total funding exceeding $83 million;

- the Technology Talent Admission Scheme launched in 2018 handles applications that involve the admission of non-local talent to undertake research and development work in Hong Kong expeditiously, covering 13 technology areas[2]. Up to end-February 2022, 614 quotas were approved by the Innovation and Technology Commission and 283 visas or entry permits have been issued for them by the Immigration Department; and

- the first Talent List of Hong Kong was drawn up in 2018, with a view to attracting high quality talent in an effective and focused manner to support Hong Kong's development into a high value-added and diversified economy. Upon the review in 2021, the list sets out more explicitly the scope of some professions to include experts of Medical and Healthcare Sciences, Microelectronics, Integrated Circuit Design, Arts Technology, etc.

It is equally important to continually improve the ancillary facilities for I&T talent working and living in Hong Kong. The InnoCell in the Hong Kong Science Park, completed at the end of 2020, provides around 500 residential units as living and collaborative space to promote interactions and exchanges among I&T talent. As at end February 2022, its occupancy rate is about 74%. When developing flagship I&T infrastructure (e.g. the Hong Kong-Shenzhen Innovation and Technology Park which will become part of the San Tin Technopole), we will also provide a comprehensive range of ancillary facilities including various types of accommodations.

3. and 4.

Looking forward, this year's Budget has earmarked $10 billion to further promote the development of life and health technology, including hardware, research talents, clinical trials and data application, with the aim of enabling institutions, including universities, to enhance their capacity and capability in this area. Furthermore, the "InnoLife Healthtech Hub" under planning will also pool together top-notch research teams from all over the world for research collaboration. Meanwhile, the Government will double the maximum annual funding support under the Innovation and Technology Fund for the 16 State Key Laboratories in Hong Kong and 6 Hong Kong Branches of Chinese National Engineering Research Centres up to $440 million in total, so that they can have more resources to carry out various tasks, which include nurturing local talents, attracting more local and non-local I&T talents to come to Hong Kong, and further their co-operation and exchanges with institutions in the Mainland.

5.

On STEM education, the EDB has been committed to promoting STEM education in primary and secondary schools in recent years. It proactively encourages schools to enhance the hands-on and minds-on activities both inside and outside the classroom with a cross curricular

approach through Science, Technology and Mathematics Education Key Learning Areas and the primary General Studies, with a view to enhancing students' integration and application of STEM-related knowledge and skills to solve daily life problems and nurturing their creativity, problem-solving skills and innovativeness. STEM education is targeted at all students (STEM for ALL).

The EDB has been implementing a number of proposals, including setting up the Standing Committee on STEM Education, updating the curriculum, strengthening training for teachers, providing resources and support, in order to further promote STEM education. The EDB will continue to enhance the training programmes for STEM co-ordinators and teachers; it will also enhance the curriculum guides to further strengthen coding education by introducing innovative technology (such as artificial intelligence) and learning elements related to its application, and to enhance the media and information literacy of students. Since the 2019/20 school year, the EDB has allocated $900 million annually to provide public sector schools and Direct Subsidy Scheme schools with a recurrent Life-wide Learning Grant for supporting schools to arrange more life-wide learning activities, including STEM-related activities. In addition, the Quality Education Fund (QEF) has also included STEM education as one of the priority themes. It has also set up the Dedicated Funding Programme for Publicly-funded Schools since the 2018/19 school year for schools to apply for funding to launch school-based curriculum development and/or support measures for students, including the development of school-based STEM education.

In respect of the University Grants Committee (UGC)-funded universities, universities have been actively implementing the work on STEM education in recent years, including increasing relevant programmes and student places. In the planning exercise for the 2022/23 to 2024/25 triennium (the 2022-25 triennium) conducted last year, universities have actively responded to societal trends, proposing to launch more than 10 undergraduate programmes related to STEM as well as offering innovative interdisciplinary programmes. Technological elements will be integrated into programmes in other areas, such as financial technology, arts technology, educational technology and digital humanities, to nurture STEM talents with interdisciplinary knowledge. With the gradual implementation of the above development, the total number of first-year student places for the relevant undergraduate programmes will be further increased from over 5 100 currently to more than 5 300 in the 2022-25 triennium.

Besides, the UGC has implemented the Targeted Taught Postgraduate Programmes Fellowships Scheme on a pilot basis for five cohorts since the 2020/21 academic year. A total of 500 fellowships were provided for the first cohort and 1 000 for each cohort thereafter, awarding fellowships to local students who pursue the targeted taught postgraduate programmes in the eight UGC-funded universities. The main objectives of the scheme are to attract more meritorious local students to pursue further studies in priority areas conducive to the development of Hong Kong, and to encourage universities to establish more innovative and multi-disciplinary programmes that are beneficial to the society. Many of these priority areas are STEM-related, such as engineering, financial technology and data science. In view of the encouraging response to the first two cohorts of the fellowship scheme, the UGC will continue to work closely with the universities for implementing the third to the fifth cohorts of the fellowship scheme, and to advise on the way forward in a timely manner.

Through the Study Subsidy Scheme for Designated Professions/Sectors (SSSDP) launched by the EDB, the Government encourages the self-financing post-secondary education sector to offer programmes in selected disciplines, including computer science and financial technology, to nurture talent in support of specific industries with keen manpower demand. In the 2022/23 academic year, there will be 5 computer science-related and 4 financial technology-related self-financing undergraduate programmes as well as 1 computer science-related self-financing sub-degree programme under the SSSDP, which will provide 195, 195 and 40 subsidised first-year intake places respectively.

Furthermore, the Vocational Training Council (VTC) is also committed to promoting and supporting STEM education. The VTC established VTC STEM Education Centres in May 2017, in which teaching and learning of STEM subjects are strengthened through R&D of various kinds of technology application with advanced education facilities. Making use of virtual reality (VR) and augmented reality (AR) technologies, the centres provide VTC students with simulated workplace training. These technologies are also applied in teaching and learning of different programmes such as building services engineering, aircraft maintenance, automotive engineering and aboriculture, with a view to enhancing the effectiveness of teaching and learning, as well as nurturing specialists equipped with highly effective and practical skills. Besides, the centres co-operate with the industries to develop experiential journey for students to experience specific working environment of different professions with the use of VR, e.g. the work experience activity at high overhead line towers developed with CLP Power Hong Kong Limited. Meanwhile, the centres also organise different STEM workshops and competitions to arouse the interest of primary and secondary students in science subjects, promote STEM education and nurture younger generation's interest in learning STEM-related subjects.

A vibrant I&T ecosystem is a crucial driving force for attracting talent to come and stay for development in Hong Kong. The Government will continue with its efforts in developing Hong Kong into an international I&T hub, as well as review and enhance different measures on I&T talent in a timely manner.

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[1] Well-recognised non-local institution refers to one of the top 100 institutions for STEM-related subjects in the latest Quacquarelli Symonds World University Rankings, the Academic Ranking of World Universities and the Times Higher Education World University Rankings.

[2] Include artificial intelligence, biotechnology, cybersecurity, data analytics, financial technologies, material science, robotics, 5G communications, digital entertainment, green technology, integrated circuit design, Internet-of-Things and microelectronics.

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0873)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

To help universities realise their research and development (R&D) outcomes, the Financial Secretary states in paragraph 58 of the Budget that the amount of subsidy will be doubled to $16 million. The increased subsidy will be provided to start-ups of universities with private investments on a matching basis of one to one. Each start-up may receive an annual subsidy of up to $1.5 million for a maximum of three years. In this connection:

1. What is the quantity of local R&D products procured by the Government in 2021-22, with a breakdown by government department? What is the name and R&D area of each product, the expenditure involved, its use and the effectiveness in department?

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 8)

Reply:

As bureaux/ departments (B/Ds) have been individually inviting tenders for the products and services they need, we do not have record of the relevant statistics on the procurement of local research and development (R&D) products.

The Government has been actively implementing various policies and measures to encourage B/Ds to use local R&D products and services. The key measures are as follows:

(i) The Government launched a pro-innovation government procurement policy in April 2019. The procuring departments are required to raise the weighting of technical scores and product quality in the tender assessment and consider whether the technological innovation factor is included with a view to facilitating the participation of more small and medium enterprises and start-ups in bidding Government contracts.

(ii) The Innovation and Technology Bureau (ITB) set up the TechConnect (block vote) in mid-2017 to support government departments in carrying out technology projects to enhance operational efficiency and improve public services. As at the end of February 2022, the ITB has supported 107 technology projects proposed by 31 departments, involving a total sum of around $510 million.

(iii) The Public Sector Trial Scheme under the Innovation and Technology Commission provides funding support for production of prototypes or samples for trials in public sector organisations so as to facilitate the realisation and commercialisation of local R&D results. As at the end of February 2022, 375 projects have been funded with an amount of about $716 million, benefiting over 180 organisations to participate in more than 510 trials.

(iv) The Office of the Government Chief Information Officer (OGCIO) established the Smart Government Innovation Lab in April 2019 to invite industry players to assist government departments in introducing various information technology solutions to improve public services. In 2021-22 (as at the end of February 2022), the OGCIO has matched over 20 business needs of departments with solutions offered by local technology industry.

- End -

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CONTROLLING OFFICER'S REPLY

(Question Serial No. 0482)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: ()

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

In the absence of specific re-industrialisation initiatives, the Budget has only mentioned that "Apart from fostering economic growth and job creation, innovation and technology development can also promote re-industrialisation and enhance the competitiveness of our manufacturing sector as well as enable digital transformation across various trades".

1. What will be the resources and manpower involved in the Government's implementation of its re-industrialisation policy in the coming year? According to the Bureau's planning, what is the future provision of staff for the Innovation, Technology and Industry Bureau? Will the Trade and Industry Department be transferred to the Innovation, Technology and Industry Bureau in future for such work? If yes, what will be the manpower establishment of the department in future?

2. What is the latest progress of various Government projects to promote re-industrialisation development in Industry 4.0? Will resources be allocated to improve the relevant statistics data of manufacturing industries to better reflect their actual development?

3. Are there plans to allocate resources to further explore the pilot production of new generation semiconductors in Hong Kong, such as conducting feasibility studies or taking proactive measures to further attract external semiconductor manufacturers to Hong Kong?

4. What is the development plan of the Bureau for the development and pilot production of new generation microelectronic products upon completion of the Microelectronics Centre in Yuen Long?

5. How many resources will be allocated to study the site of the second Advanced Manufacturing Centre, with emphasis on possible sites in Tuen Mun and Yuen Long in Northwest New Territories and the future efficient transport infrastructure in Qianhai?

6. What is the Government's plan to further assist manufacturing industries in Hong Kong to enhance smart production in food processing and health medical products?

Asked by: Hon CHOW Ho-ding, Holden (LegCo internal reference no.: 1)

Reply:

The Government has been actively promoting re-industrialisation and developing advanced manufacturing, which is less land or labour-intensive, based on new technologies and smart production, with a view to creating quality employment opportunities for young people and driving the diversified development of the Hong Kong economy. With Hong Kong's strong capabilities in research and development and advantages of internationalisation and highly-market oriented, the Government has adopted a multi-pronged approach to promote re-industrialisation. A reply to the respective parts of the question is provided as follows:

1. As promoting "re-industrialisation" forms part of the work of the Innovation and Technology Bureau (ITB), the ITB will take forward such work in collaboration with the Innovation and Technology Commission (ITC) under its purview using existing manpower and resources. A breakdown of the expenditure involved for each work item is not available.

   The 2021 Policy Address has proposed renaming the ITB as the Innovation, Technology and Industry Bureau to reflect its policy functions of and work focus on re-industralisation based on innovation and technology (I&T) application and smart production. The future Innovation, Technology and Industry Bureau will implement policies to attract more high value-added and technology-intensive manufacturing processes and production lines to set up operations in Hong Kong to enhance our I&T ecosystem. We will inform the Legislative Council of our work in this regard in due course.

2. The ITB has been promoting re-industrialisation in five areas, namely infrastructure, talent, capital, technology and scientific research, with some of the major initiatives in recent years and the following year listed below.

   On infrastructure, the Advanced Manufacturing Centre (AMC) being developed by the Hong Kong Science and Technology Parks Corporation (HKSTPC) in the Tseung Kwan O InnoPark is expected to complete this year; the Microelectronics Centre (MEC) being developed in the Yuen Long InnoPark is expected to complete in 2023; and the Data Technology Hub (DT Hub) in the Tseung Kwan O InnoPark was completed in 2020. The HKSTPC has commenced leasing activities for the DT Hub and the AMC. In light of the good industry response to the AMC, the 2021 Policy Address has announced plans for the construction of the second AMC.

   In respect of technology, the Hong Kong Productivity Council (HKPC) has been assisting enterprises to move towards high value-added production and gradually upgrade to "Industry 4.0" and organising a wide range of training

courses and seminars. Relevant initiatives include the implementation of the Industry 4.0 Upgrade and Recognition Programme in collaboration with the Fraunhofer Institute for Production Technology of Germany (the Institute) and the setting up of the INC Invention Centre ("the Hatch"), a joint project also with the Institute, to accelerate the adoption of innovative industrial technologies by the industries to promote the development of smart industry and digital manufacturing. In addition, the HKPC also operates the Inno Space and the "Digital@HKPC (Digital Transformation)" to promote "re-industrialisation". The HKPC will continue to assist various sectors in setting up smart production lines in Hong Kong, including establishing fully automatic and digital production systems for enhanced productivity. It will also organise Hong Kong Industry Network Clusters consultation sessions to conduct discussions with major chambers of commerce, industry support organisations, government representatives and enterprises on the needs of the industries in response to technological innovation, and to introduce the latest technological solutions.

In respect of talent, the Government will continue to take forward the "Re-industrialisation and Technology Training Programme" (RTTP), which funds local enterprises, on a matching basis, for their staff to receive training in advanced technologies, especially those related to "Industry 4.0". Since the RTTP was launched in August 2018, over 4 250 applications for grant have been approved. The RTTP has so far subsidised training in advanced technology for about 11 400 attendees. The total funding involved has exceeded $83 million.

Regarding capital, the Government launched the "Re-industrialisation Funding Scheme" (RFS) in July 2020, which subsidises manufacturers, on a matching basis, to set up new smart production lines in Hong Kong. Since the RFS was introduced, 36 applications have been received. The RFS Vetting Committee has vetted 33 applications and has agreed in principle to support 28 of them. The total funding involved is about $197 million.

As for scientific research, the 5 Research and Development (R&D) Centres established by the Government (namely the Hong Kong Applied Science and Technology Research Institute, the Logistics and Supply Chain MultiTech R&D Centre, the Nano and Advanced Materials Institute, the Hong Kong Research Institute of Textiles and Apparel, as well as the Automotive Platforms and Application Systems R&D Centre) will also continue to carry out R&D work related to "re-industrialisation" and facilitate the commercialisation of R&D results in close collaboration with the relevant industries.

Furthermore, in order to keep abreast of the latest development of the manufacturing industry, the ITB has been maintaining close liaison with the Census and Statistics Department to improve the statistical methodology for the manufacturing industry.

3. and 4. The MEC, which is expected to be completed in 2023, will provide essential infrastructure to support the development and pilot production/manufacturing

of microelectronics products, thereby fostering the development of the microelectronics industry. The MEC will provide a gross floor area of about 36 180 square meters. In addition to providing the specific facilities required for manufacturing microelectronics products, such as dangerous goods storage, clean rooms with very high standards of production environment, and dedicated chemical waste and sewage treatment systems, the MEC will also make available shared ancillary facilities such as shared laboratories for product quality and reliability testing, with a view to attracting enterprises that manufacture microelectronics products (e.g. semiconductor wafers including sensors, third generation semiconductors and heterogeneous integrated microelectronics products) and enterprises of associated industries (e.g. advanced materials) as well as promoting the development of high value-added industries.

5. and 6. At the invitation of the Chief Executive in the 2021 Policy Address, the HKSTPC has started to plan for the construction of the second AMC, and is currently identifying suitable land for enterprises to set up advanced production lines so as to further promote the development of "re-industrialisation" in Hong Kong. The HKSTPC will conduct, with its internal resources, the relevant preliminary work, including the technical feasibility studies and economic benefit analyses for site location. Also, the HKSTPC will communicate with different industries in order to gain a better understanding of their needs.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0521)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding the support for the development of arts technology and sports technology, will the Government advise this Committee of the following:

a. As mentioned in paragraph 50 of the Budget Speech this year, a "Digital Economy Development Committee" will be set up in order to accelerate the progress of digital economy. What are the estimated expenditure and details concerned? Will the work of the Digital Economy Development Committee include promoting the development of industries that integrate creative arts with technology such as digital art and non-fungible tokens? If yes, what are the details? If no, what are the reasons?

b. To enhance the capacity and capability in scientific research, it is mentioned in item 8 under Programme (2) that the InnoLife Healthtech Hub will be set up in the Hong Kong-Shenzhen Innovation and Technology Park for strengthening the life and health-related industrial chain. What is the proportion of research projects involving sports and physical education? What is the estimated expenditure of the entire project?

Asked by: Hon FOK Kai-kong, Kenneth (LegCo internal reference no.: 3)

Reply:

a. The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" which will help accelerate the development of digital

economy in Hong Kong and promote digital transformation across different industries. We are now conducting further study on the details and particulars of the committee which are yet to be finalised.

b. To promote multi-faceted collaboration in scientific research and development of industries, and act in concert with national development in the field of life and health sciences while leveraging our strengths to develop Hong Kong into a major research and development (R&D) hub in this field, the Government has announced in the 2022-23 Budget to earmark $10 billion to provide more comprehensive support in the long run, including hardware, talent, clinical trials and data application, for the development of life and health scientific research in Hong Kong so as to enhance our capacity and capability in this area, including setting up the "InnoLife Healthtech Hub" will be set up in the Hong Kong-Shenzhen Innovation and Technology Park. With 16 laboratories related to life and health sciences and 8 relevant State Key Laboratories as the basis, the InnoLife Healthtech Hub can pool together top-notch research teams from all over the world and focus our efforts on R&D work as well as global research collaboration in the field of life and health sciences. This includes biomedicine, big data and artificial intelligence, which can be applied in various areas related to scientific research of sports and physical education, such as diagnosis, drug discovery, advanced treatment and rehabilitation.

At this stage, the Innovation and Technology Bureau and the Innovation and Technology Commission of the Government will absorb the work related to the study of the operational details of the InnoLife Healthtech Hub with their existing manpower, so no relevant breakdown of expenditure is available.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0890)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government plans to increase the funding allocated to the Hong Kong Growth Portfolio under the Future Fund by $10 billion, of which $5 billion will be used to set up the Strategic Tech Fund. As for the remaining $5 billion, it will be used to set up a Guangdong-Hong Kong-Macao Greater Bay Area (GBA) Investment Fund, which will focus on investment opportunities in the GBA. Please inform this Committee of the following:

1. Regarding the Strategic Tech Fund, apart from advanced innovation and technology industries, will the Government consider investment in other industries, such as aero engine repairing, manufacturing of medicine and medical equipment, vaccine production and food processing, which can drive middle-level employment, provide development opportunities for young people and achieve upward mobility? If yes, what is the detailed action plan for the coming year?

Asked by: Hon HONG Wen, Wendy (LegCo internal reference no.: 5)

Reply:

The Government has been providing comprehensive support to start-ups at different stages of development through various investment funds, such as the Innovation and Technology Venture Fund as well as the Hong Kong Science and Technology Parks Corporation's (HKSTPC) Corporate Venture Fund and the Cyberport's Cyberport Macro Fund.

The Strategic Tech Fund (STF) however aims to invest in technology enterprises with strategic value, considerable scale and more development potential, so as to to enriching the I&T ecosystem. The STF is an investment fund, not a funding scheme. We are open to the technology areas for investment. The HKSTPC and the Cyberport will be invited to identify investment opportunities and relevant preparations are underway.

The Government has been actively promoting "re-industrialisation" through a multi-pronged approach in recent years to develop advanced manufacturing industries that are based on new technologies and smart production without the need for much land and manpower, thereby creating quality jobs for young people and promoting diversified economic development in Hong Kong. For instance, in terms of infrastructure, the HKSTPC is developing the Advanced Manufacturing Centre (AMC) and the Microelectronics Centre, and will plan for the construction of a second AMC. Currently, more than 10 enterprises from different industries, for example soundproofing technologies and materials, commercial satellite production and nanofiber mask production, etc., have signed tenancy agreements for the AMC. In terms of talent and capital, we will continue to implement the Reindustrialisation and Technology Training Programme to subsidise local enterprises on a matching basis to train their staff on high-end technologies, especially those relating to Industry 4.0. We will also continue to take forward the Re-industrialisation Funding Scheme (RFS) to subsidise manufacturers on a matching basis to set up smart production lines in Hong Kong. Applications supported under the RFS involve industries, such as biotechnology, food manufacturing and processing, construction, printing, medical device, nanofiber materials and health products.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0643)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

In 2021-22, the Innovation and Technology Bureau launched the Global STEM Professorship Scheme (the Scheme) to strengthen support for local universities to attract world-renowned Science, Technology, Engineering and Mathematics (STEM) scholars as well as their teams to work in Hong Kong. Will the Government advise this Committee of:

a. the figures on the flow of such academic personnel and the effectiveness of the Scheme in 2021-22, as well as the estimated figures and effectiveness of the Scheme in the coming year?

b. the specific plan and timetable, if any, in respect of taking forward the planning of the development of various new sites earmarked for innovation and technology uses, such as the new land provided by the Ma Liu Shui reclamation project and relocation of Sha Tin Sewage Treatment Works?

Asked by: Hon LAM Chi-yuen, Nelson (LegCo internal reference no.: 10)

Reply:

The current-term Government proactively promotes innovation and technology (I&T) development in the eight major areas set forth by the Chief Executive. Various I&T policies and initiatives, including those for the pooling of I&T talents and providing land for I&T uses, have been initiated smoothly with good progress made in recent years, further enhancing the overall I&T ecosystem in Hong Kong.

a. The Government launched the Global STEM Professorship Scheme (the Scheme) in June 2021 to support local universities in recruiting world-renowned or promising I&T scholars. The Assessment Panel of the Scheme, in the meetings held in July and December last year, considered the nominations submitted by universities and gave support for recruiting more than 60 overseas outstanding scholars in the first 2

tranches. It has also invited the universities for a third tranche of nominations, and the assessment is expected to be conducted in the second quarter of the year. The selected scholars and their research teams are gradually arriving Hong Kong to take up their teaching and research positions.

b. In view of the increasing land use demand for scientific research and new industries in Hong Kong, the Government has been actively identifying land for short, medium and long term uses to provide the industries with space necessary for their development. It is stated in the 2021 Policy Address that a substantial amount of land, nearly 250 hectares (ha.) in total, has been reserved for I&T development, including those from the San Tin Technopole and the Ma Liu Shui reclamation project. In addition to the quantity aspect, we are also committed to leveraging the clustering effect and synergistic development of the relevant projects whilst ensuring adequate ancillary facilities for building a comfortable community environment besides meeting the demand for I&T land uses.

Take the Ma Liu Shui reclamation project as an example. Most of the 88 ha. of land, which is to be provided by the reclamation project and the relocation of the Sha Tin Sewage Treatment Works to caverns, will be reserved for I&T development. In respect of the Ma Liu Shui reclamation project, the Innovation and Technology Bureau and the Development Bureau are planning to carry out a preliminary study on the land use planning and a reclamation-related study respectively. Upon completion of these studies, the Government will submit funding application to the Legislative Council to proceed with the next stage of work.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0564)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding the Greater Bay Area Youth Employment Scheme (the Scheme) which provides job opportunities for local STEM graduates, please inform this Committee of:

(a) the numbers of innovation and technology (I&T) related posts provided and the numbers of young graduates employed for these posts since the implementation of the Scheme;

(b) the amount approved by the Government so far in respect of the allowance for which the enterprises applied for employing the young graduates to fill the I&T posts; and

(c) whether the Government will gradually reduce the proportion of the I&T posts in the Scheme and increase the expenditure for continuing to take forward the STEM Internship Scheme, the Research Talent Hub and so forth in order to enhance the nurturing of local I&T talents and provide incentives to encourage them to stay in Hong Kong for employment; if so, the various measures to be implemented and the expenditures involved; if not, the reasons for that.

Asked by: Hon LAM Chun-sing (LegCo internal reference no.: 6)

Reply:

The Government launched the Greater Bay Area Youth Employment Scheme in January 2021 to encourage enterprises with businesses in both Hong Kong and the Mainland cities of the Greater Bay Area to employ university graduates from Hong Kong for innovation and technology (I&T) posts as well as non-I&T posts. Employees for I&T posts are required to work in Hong Kong and the Mainland cities of the Greater Bay Area. Participating enterprises employ graduates with a monthly salary of not less than HK$18,000. The Government will pay a monthly allowance of HK$10,000 to enterprises for each graduate employed for a maximum period of 18 months. Our reply to the various parts of the question is as follows:

(a) and (b)

For I&T posts, about 270 enterprises have submitted around 1 800 vacancies. As at the end of February 2022, 344 graduates employed for I&T posts have reported duty, and around $6.22 million of allowance for enterprises has been approved by the Government.

(c)

The Greater Bay Area Youth Employment Scheme has ceased to receive submission of vacancies from enterprises. Participating graduates in general have reported duty at the end of August 2021 at the latest. In addition to the scheme, the Government has adopted a multi-pronged approach in enlarging the I&T talent pool through attracting, nurturing and retaining talent with a series of initiatives. In order to nurture students' interest in I&T from a young age, the "IT Innovation Lab in Secondary Schools" and the "Knowing More About IT" Programmes subsidise secondary and primary schools respectively to organise extra-curricular activities related to information technology. Applications from over 460 schools have been received under the 2 programmes and the total amount of approved funding has exceeded $150 million.

In order to attract university students to explore opportunities in I&T, we will continue to implement the STEM Internship Scheme and the Research Talent Hub. Over 4 700 university students have benefitted with a total funding of around $110 million under the former scheme, while more than 6 200 research talents have been employed with a total funding of around $2.8 billion over the past 5 years under the latter scheme. In addition, the Reindustrialisation and Technology Training Programme subsidises local enterprises on a matching basis for their staff to receive training in advanced technologies, having supported over 8 600 trainees to participate in over 11 400 training sessions so far. The amount of subsidy has exceeded $83 million. As for the Global STEM Professorship Scheme which supports universities in attracting world-renowned I&T scholars and their teams to undertake research and teaching activities in Hong Kong, over 60 scholars have been supported in the first 2 rounds of the scheme.

The flagship I&T project, "*InnoHK* research clusters" has successfully attracted over 30 world-renowned universities and research institutes to collaborate with local universities in setting up 28 research laboratories in the Hong Kong Science Park, attracting around 2 000 high quality talents around the world. In addition, $10 billion has been earmarked in the Budget this year to promote the development of life and health technology, including hardware, research talent, clinical trials and data application, with the aim of enabling institutions, including universities, to enhance their capacity and capability in this area, while the InnoLife Healthtech Hub under planning will pool together top-notch research teams from all over the world for research collaboration. The Government will also double the amount of subsidy provided to the 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres in Hong Kong under the Innovation and Technology Fund with the total funding ceiling reaching $440 million per year, so that they can have more resources to carry out various initiatives, including nurturing local talent, attracting more local and overseas I&T talent, and furthering their co-operation and exchanges with institutions in the Mainland.

It is equally important to continually improve the ancillary facilities for I&T talent working and living in Hong Kong. The InnoCell in the Hong Kong Science Park, completed at the end of 2020, provides around 500 residential units as living and collaborative space at relatively concessionary rent to promote interactions and exchanges among I&T talent. As at end February 2022, its occupancy rate is about 74%. When developing flagship I&T infrastructure (e.g. the Hong Kong-Shenzhen Innovation and Technology Park which will become part of the San Tin Technopole), we will also provide a comprehensive range of ancillary facilities including various types of accommodations.

A vibrant I&T ecosystem is a crucial driving force for attracting talent to come and stay for development in Hong Kong. The Government will continue with its efforts in developing Hong Kong into an international I&T hub, as well as review and enhance different measures on I&T talent in a timely manner.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0232)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government will set up a "Digital Economy Development Committee", with members comprising experts and scholars, industry elites, and relevant government officials. In this connection, please provide information on the relevant estimated expenditure of the Committee; the specific types of industries involved; and the functions of the Committee, apart from those of an advisory body.

Asked by: Hon LAM Lam, Nixie (LegCo internal reference no.: 3)

Reply:

The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" with an objective to accelerate the development of digital economy in Hong Kong and promote digital transformation across different industries. The committee members comprise industry practitioners, experts and scholars, and relevant government officials. Other details will be announced in due course.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0800)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): (000) Operational expenses

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding innovation and technology, it is mentioned in the Budget that the Government will attract and facilitate the entry of talent into Hong Kong. Does it imply that fiscal resources will be allocated to provide outside talent with places of residence or sufficient subsidies to cope with high rental expenses? If yes, at what level will the subsidy be set? If no, will the Government consider offering funding support in this respect?

Asked by: Hon LAU Chi-pang (LegCo internal reference no.: 5)

Reply:

Talent is an essential propeller for innovation and technology (I&T) development. The Government has been adopting a multi-pronged approach to enlarge the I&T talent pool through attracting, nurturing and retaining talent with a series of initiatives.

At present there are various admission schemes to facilitate the admission of I&T talent to settle and work in Hong Kong, including the Quality Migrant Admission Scheme (QMAS) which seeks to facilitate the admission of highly skilled or talented people to settle in Hong Kong. From 2017 to February 2022, about 1 400 applicants of relevant industries/sectors were allotted with quotas under QMAS. The Technology Talent Admission Scheme seeks to facilitate engagement of talents in undertaking research and development (R&D) work in Hong Kong. Since its launch in June 2018 to end-February 2022, 614 quotas were approved by the Innovation and Technology Commission and 283 visas or entry permits have been issued for them by the Immigration Department. The Global STEM Professorship Scheme was launched in June 2021 to strengthen support for universities to attract world-renowned I&T scholars and their teams to conduct research and teaching activities in Hong Kong. In the first 2 rounds, over 60 outstanding scholars from the Mainland and overseas had been supported. They, together with their R&D teams, are gradually arriving Hong Kong.

Continuous enhancement of ancillary facilities for I&T talent working and living in Hong Kong is also very important. The Hong Kong Science and Technology Parks Corporation and the Cyberport have been providing one-stop support services to their tenants, including funding schemes, incubation programmes, investment matching opportunities, office accommodation and R&D facilities, etc. The InnoCell in the Hong Kong Science Park, completed in end-2020, provides around 500 residential and sharing working spaces and its occupancy rate was about 74% as at end-February 2022. Additionally, a comprehensive range of ancillary facilities including various types of accommodations will be provided in the development of flagship I&T infrastructures (such as the Hong Kong Shenzhen Innovation and Technology Park which will form part of the San Tin Technopole).

The Government will continuously review the progress of various initiatives and enhance them in a timely manner with a view to further expanding the local and non-local I&T talent pool.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. ITB015

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0601)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The entrepreneurial atmosphere in Hong Kong has been of concern to the society. Apart from the establishment of the Innovation and Technology Venture Fund, the Government has also set up the Corporate Venture Fund and the Cyberport Macro Fund through the Hong Kong Science and Technology Park Corporation and the Cyberport respectively. In this connection, will the Government inform this Committee of:

1. whether the above three funds have clear sector preferences, the lists of companies and areas invested during their lifetime and their current audited investment performance (if applicable);

2. whether the investment strategies of the above three funds have synergy with the Hong Kong Growth Portfolio, and with the new established Strategic Tech Fund;

3. whether it has assessed the contribution of the start-ups in which the above three funds invested in stimulating the development of industries and employment in Hong Kong; if so, the effectiveness; and

4. the selection criteria of general partners (GPs) of the above three funds and their current GPs?

Asked by: Hon LEE Hoey Simon (LegCo internal reference no.: 9)

Reply:

Supporting start-ups is an essential element in enhancing the local innovation and technology (I&T) ecosystem. The Government has all along been offering comprehensive assistance to start-ups at their different stages of development through different investment funds. Our reply to parts 1 to 4 of the question is as follows:

1. The Innovation and Technology Venture Fund (ITVF) under the Innovation and Technology Fund seeks to encourage venture capital (VC) funds to invest in local I&T start-ups. The ITVF co-invests in local I&T start-ups at a matching ratio of approximately 1 (Government) : 2 (co-investment partners (CPs)), keeping an open mind towards all industries. At present, the ITVF has selected a total of 11 investment funds as CPs. As at end of February 2022, the ITVF has invested more than $180 million in 23 start-ups, covering business areas in supply chain management, e-commerce, financial technology, biotechnology and artificial intelligence, etc., and has attracted more than $1.5 billion of private investment.

   In addition, the Hong Kong Science and Technology Parks Corporation (HKSTPC) and Cyberport have established the $600 million Corporate Venture Fund (CVF) and the $400 million Cyberport Macro Fund (CMF) respectively to co-invest with angel investors or VC funds, etc., in start-ups supported by the HKSTPC and Cyberport on a matching basis. As at end-February 2022, the CVF has invested around $280 million in 22 start-ups in areas including biotechnology, artificial intelligence, robotics, information and communication technology and has attracted over $4.3 billion of private investment. As for the CMF, it has invested more than $168 million in 21 companies, covering business areas in financial technology, intelligent logistics, educational technology, etc., and has attracted over $1.466 billion of private investment.

2. The ITVF, the CVT and the CMF are intended to assist local I&T start-ups to attract more private investment while providing funding support for them at different stages of development, so as to enhance the I&T ecosystem in Hong Kong. These funds are not set up for investment returns and hence the investment performance of the start-ups concerned is not their primary concern.

   For the Hong Kong Growth Portfolio, its vision is to make strategic investments in projects with a Hong Kong nexus, reinforce Hong Kong's status as a financial, commercial and innovation centre, and raise the productivity and competitiveness of Hong Kong in the long run, while seeking reasonable risk-adjusted returns. The 2022-23 Budget announced the setting up of the $5 billion Strategic Tech Fund under the Hong Kong Growth Portfolio. The Fund will focus on investing in technology enterprises with strategic value, considerable scale and more development potential, so as to enrich the local I&T ecosystem.

3. Since the launch of different investment funds and the implementation of various initiatives to promote I&T development, we have seen a satisfactory growth in many I&T-related figures in recent years. This reflects that various I&T initiatives are gradually taking effect, and that the I&T ecosystem in Hong Kong has become increasingly vibrant and the I&T atmosphere consistently enhanced. For example, the number of start-ups rose from around 1 000 in 2014 to around 4 000 in 2021, and the number of start-up employees increased from some 2 400 to some 14 000. We have also witnessed the birth of more than 10 unicorns in the same period. Meanwhile, venture capital investment in Hong Kong also substantially increased from around $1.2 billion in 2014 to over $40 billion in 2021. Hong Kong is also currently Asia's largest and the world's second largest fundraising hub for biotechnology

companies. As at end-February 2022, 49 pre-revenue or pre-profit biotechnology companies have listed in Hong Kong, with the relevant funds raised through initial public offering amounting to over $113 billion. All these show that the above funds are conducive to the overall I&T development and the creation of a more vibrant I&T ecosystem in Hong Kong.

4. The above 3 funds do not involve general partners and are co-invested with private capital on a matching basis.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. **ITB016**

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0193)

Head:	(135) Government Secretariat: Innovation and Technology Bureau
Subhead (No. & title):	()
Programme:	(2) Innovation and Technology
Controlling Officer:	Permanent Secretary for Innovation and Technology (Ms Annie CHOI)
Director of Bureau:	Secretary for Innovation and Technology

Question:

Regarding the estimate and work under Programme (2): Innovation and Technology, please inform this Committee of the following:

1. What are the reasons for the significant decrease of 35.3% in financial provision from the original estimate of $321.9 million to the revised estimate of $208.3 million for 2021-22?

2. There will be a decrease of 6 posts under Programme (2) in 2022-23. What are the reasons for the decrease, the details of the posts and the expenditure involved?

3. As stated in the Matters Requiring Special Attention in 2022-23, it is planned that the InnoLife Healthtech Hub will be set up in the Hong Kong-Shenzhen Innovation and Technology Park to focus on aspects related to life and health disciplines. It is also mentioned in paragraph 61 of the Budget Speech that to further promote the development of life and health technology in Hong Kong, the Financial Secretary will earmark $10 billion to provide more comprehensive support in the long run. Please provide information on the expenditure and manpower allocation of the Bureau for implementing the development of the hub, and the specific measures proposed to follow up on the progress of laboratory/research teams of the hub. As far as monitoring is concerned, what are the consequences if the progress of the relevant laboratories is found to be unsatisfactory?

Asked by: Hon LIAO Cheung-kong, Martin (LegCo internal reference no.: 2)

Reply:

1. Under Programme (2) of the Innovation and Technology Bureau (ITB), the decrease of $113.6 million in the revised estimate for 2021-22 was mainly due to (1) the decreased cash flow requirement by $46.56 million for the Innovation and Technology Fund for Better Living having transferred to the Innovation and Technology Fund for continuous operation; (2) the lower than expected cash flow requirement for the TechConnect (block vote) by $36.04 million; and (3) the lower than expected operational expenses of the ITB by $31.03 million.

2. The reduction of 6 posts under Programme (2) in 2022-23 are all time-limited posts upon their lapse on 1 April 2022. They include 1 Senior Executive Officer, 1 Treasury Accountant, 1 Personal Secretary I and 3 Assistant Clerical Officers, representing an annual saving of about $3.48 million.

3. It is announced in the 2022-23 Budget that $10 billion has been earmarked to provide more comprehensive support in the long run, including hardware, talent, clinical trials and data application, for the development of life and health scientific research in Hong Kong so as to enhance our capacity and capability in this area. The support includes setting up the "InnoLife Healthtech Hub" in the Hong Kong-Shenzhen Innovation and Technology Park. With 16 laboratories related to life and health sciences and 8 relevant State Key Laboratories as the basis, the InnoLife Healthtech Hub will pool together top-notch research teams from all over the world and focus our efforts on research and development work as well as research collaboration in the field of life and health sciences. At the current stage, the ITB and the Innovation and Technology Commission will absorb the work related to the study of the establishment and future operation of the InnoLife Healthtech Hub with their existing manpower and no relevant breakdown of expenditure is available yet.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0086)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Innovation and Technology Bureau (ITB) is responsible for promoting the adoption of innovation and technology by bureaux and departments (B/Ds) through the Smart Government Innovation Lab and the TechConnect (block vote), and overseeing the implementation of the *Smart City Blueprint for Hong Kong* 2.0 and "iAM Smart" Platform. In this connection, please advise this Committee of the following:

1. Since the outbreak of the first wave of the COVID-19 epidemic in Hong Kong in January 2020, how many resources have the Government devoted to promote e-Government services, including speeding up the adoption of electronic processing for works submission, so as to facilitate civil servants and persons of relevant sectors to work from home? What are the key initiatives implemented in this regard? What progress has been made?

2. Given the fifth wave of the COVID-19 epidemic situation has not yet fully come under control, what are the resources and manpower expected to be deployed by the Government for further taking forward the aforesaid e-government initiatives in 2022-23? What are the priorities to be addressed?

3. Owing to the severe epidemic situation, many enterprises and members of the public cannot travel to the Mainland to handle commerce and trade as well as livelihood matters. Will the Government allocate additional resources and expedite the discussion with the Mainland and Macao on collaboration between their identity authentication systems and the "iAM Smart" Platform in Hong Kong, including implementing the mechanism for mutual recognition of electronic signature certificates and performing digital signing with legal backing, with a view to promoting "cross-boundary government services" and bringing convenience to the business sector and the public? If yes, what are the details; if not, what are the reasons?

Asked by: Hon LO Wai-kwok (LegCo internal reference no.: 8)

Reply:

1. The Government strives to promote the adoption of technology by government departments for enhancement in operational efficiency and continuous improvement of public services. In the past two financial years, we continued with our proactive efforts in encouraging policy bureaux/departments (B/Ds) to provide more electronic services. Our target is that on or before mid-2022, all licences can be processed electronically unless there are legal or operational constraints, while other government services and all government forms can be applied and submitted by electronic means. Besides, e-payment options will be available for making relevant payments in respect of most licences and services starting from mid-2022.

   Currently, the industry and the public can apply for nearly 1 000 licences and government services and make payment for most licence and services fees electronically. More than 2 500 government forms can also be submitted via electronic means. We assist departments to take forward the relevant work with existing manpower and resources.

   During the epidemic, we have approved a total of about $100 million under the Capital Works Reserve Fund Head 710 Computerisation Block Allocation to enable the deployment of the necessary information technology facilities by B/Ds in support of the work-from-home arrangements for civil servants.

   In addition, the Architectural Services Department (ASD) completed the development of its Digital Works Supervision System in 2021-22, in which supervision procedures such as application forms for works inspection and site records are digitalised to support remote and home working. Effectiveness and quality management could be enhanced. Meanwhile, the ASD is developing a digitalised works materials vetting and approval system and a digitalised works plans vetting and approval system, with expected completion in 2022-23 and 2023-24 respectively.

2. We will continue to encourage B/Ds to provide more electronic services in 2022-23. Also, the Office of the Government Chief Information Officer (OGCIO) will conduct from 2022-23 to 2024-25 a 3-year service-wide e-government audit for the information technology systems and electronic services of B/Ds and recommend enhancement solutions, with a view to accelerating digital government development and building Hong Kong into a smarter city. Such enhancements aim at providing services of greater convenience and benefits to the public through the optimal use of advanced technologies (such as artificial intelligence, blockchain, cloud computing and big data). The resources required will amount to around $600 million, while the manpower requirements will be met by internal redeployment and employment of contract staff.

3. The OGCIO has been actively promoting the adoption of "iAM Smart" in online services provided by different government departments and public and private organisations, so as to facilitate Hong Kong citizens to use "iAM Smart" to log in different electronic services, including cross-boundary e-commerce applications, in different places (including the Greater Bay Area). For the implementation of "cross-boundary government services", we will develop a mutual recognition mechanism

between “iAM Smart” and the Mainland’s identity authentication system to provide residents of Guangdong, Hong Kong and Macao with more convenient electronic services.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0087)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary has mentioned in paragraph 57 of the Budget Speech that a new investment fund of $5 billion named the Strategic Tech Fund will be set up. The Hong Kong Science and Technology Parks Corporation and the Cyberport will be invited to identify technology enterprises which are of strategic value to Hong Kong as well as investment opportunities conducive to enriching the innovation and technology ecosystem. In this connection, please advise this Committee of the following:

1. Will the Government clearly define the objectives, positioning and functions of the fund in relation to the existing Innovation and Technology Fund? If yes, what are the details? If no, what are the reasons?

2. Does the Government have any initial ideas of using the fund for identifying the first batch of technology enterprises which are of strategic value to Hong Kong as well as investment opportunities conducive to enriching the I&T ecosystem? Will the Government consult the relevant industries? If yes, what are the details? If no, what are the reasons?

3. Will the Government consider using the fund to promote collaboration on the development of healthcare technology industrial chains and artificial intelligence industry in the Guangdong-Hong Kong-Macao Greater Bay Area so as to achieve synergy with the InnoLife Healthtech Hub set up in the Hong Kong-Shenzhen Innovation and Technology Park? If yes, what are the details? If no, what are the reasons?

Asked by: Hon LO Wai-kwok (LegCo internal reference no.: 9)

Reply:

It is an essential element to support start-ups in enhancing the local innovation and technology (I&T) industry chain. The Government has all along been offering comprehensive assistance to start-ups at their different stages of development through different investment funds. The I&T ecosystem in Hong Kong has become increasingly vibrant, with the number of start-ups rising from around 1 000 in 2014 to around 4 000 in 2021. The venture capital investment also substantially increased from $1.24 billion to over $40 billion in the same period. The reply to the various parts of the question is as follows:

The Government launched the Innovation and Technology Fund (ITF) in 1999 to finance projects that contribute to the technology upgrading of the manufacturing and services industries and promote innovative projects. At present, there are 17 funding schemes under ITF. Each funding scheme has its own objective, scope, and modus operandi, supporting 5 I&T areas, namely supporting research and development (R&D), facilitating technology adoption, nurturing I&T talent, supporting technology start-ups, and fostering an I&T culture. In addition to the 17 funding schemes, the ITF funds, in full or in part, the operating expenditure of R&D Centres, Technology Transfer Offices of Universities and laboratories (including the State Key Laboratories, the Hong Kong Branches of the Chinese National Engineering Research Centres, and the research centres/laboratories set up by the *InnoHK* Research Clusters).

Apart from the Technology Start-up Support Scheme for Universities and the $2 billion Innovation and Technology Venture Fund under ITF, the Hong Kong Science and Technology Parks Corporation (HKSTPC) and the Cyberport have established the Corporate Venture Fund and the Cyberport Macro Fund respectively. These funds have their own specific key areas of investment with the early-stage start-ups being their main investment targets.

It is announced in the 2022-23 Budget that the funding allocated to the Hong Kong Growth Portfolio will be increased by $10 billion, of which $5 billion will be used to set up the Strategic Tech Fund (STF) dedicated to investing in technology enterprises with strategic value, considerable scale and more development potential, so as to enrich the I&T ecosystem of Hong Kong. We are open to the technology areas of investment. The Government will invite the HKSTPC and the Cyberport to identify investment opportunities and is currently undertaking the preparatory work.

Besides, the remaining $5 billion out of the increased funding allocated to the Hong Kong Growth Portfolio will be used to set up the Greater Bay Area Investment Fund, which will focus on some Greater Bay Area projects beneficial to Hong Kong, including the projects launched by the companies which are based in Hong Kong or investing in the Greater Bay Area. Projects which meet the investment criteria, including those facilitating the promotion of I&T industry development, can be taken into consideration.

The STF and other I&T-related initiatives will further enhance Hong Kong's I&T ecosystem, and support Hong Kong to develop into an international I&T hub and integrate into the national development.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0304)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary mentions in paragraph 50 of the Budget Speech that a "Digital Economy Development Committee", with members comprising experts and scholars, industry elites, and relevant government officials, will be set up in order to accelerate the progress of digital economy. What are the specific timetable of the establishment and details of the work plan? What are the manpower and expenditure to be involved? What are the details and breakdown of expenditure? What is the estimated effectiveness of the work in the coming year? What has been done by the SAR Government over the past year in promoting the development of digital economy and the expenditure involved? What are the specific plans for the coming year? What are the estimated resources to be allocated?

Asked by: Hon NG Kit-chong, Johnny (LegCo internal reference no.: 1)

Reply:

The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" with an objective to accelerate the development of digital economy in Hong Kong and promote digital transformation across different industries. The committee members comprise industry practitioners, experts and scholars, and relevant government officials. Other details will be announced in due course.

In addition, the Government actively promotes the development of digital economy and smart city through a series of initiatives. The Government published the Smart City Blueprint for Hong Kong 2.0 in 2020, setting out over 130 initiatives under six smart areas. Bureaux and departments (B/Ds) have been actively pursuing and implementing the initiatives, and will timely update the development goals in view of the latest development in smart city and innovative technologies.

For digital infrastructure, with the Next Generation Government Cloud Platform and Big Data Analytics Platform commencing operation in September 2020, it has effectively facilitated the data interchange among B/Ds and the implementation of more projects adopting artificial intelligence and big data analytics. So far, over 350 digital government services and over 15 projects for conducting big data analytics have been supported. Apart from the ongoing implementation of the aforementioned platforms, the Government is currently developing a shared blockchain platform, which is expected to commence operation in 2022, to facilitate the implementation of smart government services using blockchain technology. Launched in December 2020, the one-stop personalised digital services platform "iAM Smart" has recorded around 1.2 million users so far. Over 190 commonly used online services are accessible through the platform, and the number of accessible services is increasing.

To actively promote digital transformation of the Government, government departments can make use of the following initiatives and schemes:

(i) The TechConnect (block vote) supports government departments in implementing technology projects to enhance operational efficiency and improve public services. As at end February 2022, the scheme supported 107 technology projects proposed by 31 B/Ds, involving a total funding of around $510 million.

(ii) The Public Sector Trial Scheme under the Innovation and Technology Fund provides funding support for enterprises to produce prototypes or samples and conduct trials in the public sector in order to facilitate the realisation and commercialisation of local research and development outcomes. As at end February 2022, the scheme supported 375 projects with funding of about $716 million, benefiting over 180 different organisations to conduct more than 510 trials.

(iii) The Smart Government Innovation Lab (Smart Lab), established by the Office of the Government Chief Information Officer in April 2019, encourages and invites industry practitioners to assist government departments in introducing IT solutions. As at end February 2022, the Smart Lab matched over 60 business needs from various departments with solutions and arranged more than 90 thematic workshops. The Smart Lab will take into account of the latest technological development and continue to arrange promotional activities to enhance the understanding of departments in innovation and technology.

The Government will also continue to support local enterprises/organisations in using technological services and solutions to improve productivity, or upgrade or transform their business processes through the Technology Voucher Programme. As at end February 2022, 10 052 applications were approved, involving funding of around $1.56 billion.

On the other hand, the Hong Kong Monetary Authority (HKMA) is developing the Commercial Data Interchange (CDI) to enable banks, with the authorisation by enterprises, to obtain more data of the enterprises from third party service providers for conducting credit assessment, thereby facilitating small and medium enterprises to gain access to more convenient financing services. The HKMA is exploring the introduction of more commercial data sources, including data kept by Government departments, with a view to expanding the function of the CDI, and enriching the data-driven financial service ecosystem.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0305)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Under this Programme, one of the main responsibilities of the Innovation and Technology Bureau is to promote "re-industrialisation" through the development of smart production and high value-added industries. Please advise this Committee on the effectiveness and expenditure of the relevant work in 2021-22. How to promote "re-industrialisation" in Hong Kong through the development of smart production and high value-added industries in 2022-23? What are the specific initiatives and expenditure? What is the anticipated effectiveness in the coming year?

Asked by: Hon NG Kit-chong, Johnny (LegCo internal reference no.: 5)

Reply:

The Government has been actively promoting "re-industrialisation" in recent years to develop advanced manufacturing industries that are based on new technologies and smart production and do not require much land, so as to identify new growth points for Hong Kong's economic development and create quality jobs. The Government has been fostering favourable conditions for "re-industrialisation" in terms of infrastructure, technology, talent, funding and scientific research. As announced in the Policy Address last year, the Government is also considering expanding the Innovation and Technology Bureau (ITB) into the Innovation, Technology and Industry Bureau to highlight the role of innovation and technology (I&T) in promoting the development of re-industrialisation.

In respect of infrastructure, the construction of the Data Technology Hub in the Tseung Kwan O (TKO) InnoPark was completed in 2020. The Hong Kong Science and Technology Parks Corporation (HKSTPC) is developing the Advanced Manufacturing Centre (AMC) in the TKO InnoPark. It is expected to be completed within this year to provide services on logistics, warehousing, prototyping and low-volume assembly. The Microelectronics

Centre, which is under construction in the Yuen Long InnoPark is expected to be completed in 2023. It will be equipped with facilities such as clean rooms, dangerous goods storage and waste treatment, etc. to attract companies that produce microelectronic products and related industries (such as advanced materials). Given the good industry response to the AMC, it was announced in the 2021 Policy Address that the Government would plan for the construction of the second AMC, and that the Hong Kong-Shenzhen Innovation and Technology Park and the areas around Lok Ma Chau/San Tin would be consolidated to form the San Tin Technopole, with a view to creating a critical mass of I&T facilities with greater economy of scale and providing land for advanced manufacturing industries.

In terms of technology, the Hong Kong Productivity Council (HKPC) has been dedicating efforts to assist enterprises to move towards high value-added production and gradually upgrade towards "Industry 4.0". The HKPC also organises different types of training programmes and seminars to introduce new technologies and scientific research. The major efforts of the HKPC include running the Industry 4.0 Upgrade and Recognition Programme in collaboration with the Fraunhofer Institute for Production Technology (IPT) of Germany, and through the Invention Centre jointly established with the IPT, assisting the industry to accelerate the adoption of innovative industrial technologies, thereby promoting the development of smart industries and digital manufacturing. In addition, the HKPC runs the Inno Space and Digital@HKPC (Digital Transformation) to assist the industry in gradually moving towards smart production. Many enterprises have successfully implemented re-industralisation in recent years. For example, with the support of the HKPC, a Hong Kong enterprise which produces security equipment and devices has decided to set up smart production lines in Hong Kong and thus significantly reduced manpower and production costs.

In terms of talent, we rolled out in August 2018 the Reindustrialisation and Technology Training Programme (RTTP) to subsidise local enterprises on a matching basis to train their staff on high-end technologies, especially those relating to Industry 4.0. So far, the RTTP has approved over 4 250 applications for training subsidies with a total funding of over $83 million, subsidising more than 11 400 staff to receive training in high-end technologies. Subsidised enterprises are from different industries, such as hotel, catering, retail and others, many of which are small and medium enterprises.

In respect of funding, the Re-industrialisation Funding Scheme (RFS) was launched in July 2020 to subsidise manufacturers on a matching basis to set up new smart production lines in Hong Kong. Since the launch of the RFS, 36 applications have been received. The RFS Vetting Committee has vetted 33 applications and agreed in principle to support 28 of them, with a total funding amount of about $197 million. Various industry sectors are involved. For example, a local technology company has planned to set up two smart electrospinning production lines for nanofiber filter material at the AMC, and a local food processing enterprise has planned to set up a food processing smart production line using technologies such as Industrial Internet of Things and data analysis.

In respect of scientific research, the 5 Research and Development (R&D) Centres established by the Government (i.e. the Hong Kong Applied Science and Technology Research Institute, the Logistics and Supply Chain MultiTech R&D Centre, the Nano and Advanced Materials Institute, the Hong Kong Research Institute of Textiles and Apparel, and the Automotive

Platforms and Application Systems R&D Centre) will continue to engage in R&D related to "re-industrialisation" and co-operate closely with the industry to promote commercialisation of R&D results.

The Government and the relevant organisations will continue to release information about the progress and effectiveness of the above measures to the public through different channels, such as annual reports and briefing sessions for the relevant panels and subcommittees of the Legislative Council. Promoting "re-industrialisation" is part and parcel of the ITB's regular work. The ITB is taking forward the said work in collaboration with the Innovation and Technology Commission under its purview using existing manpower and resources. A breakdown of the expenditure involved for each work item is not available.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0312)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary mentions in paragraphs 59 to 61 of the Budget Speech the promotion of life and health sciences and the sum of $10 billion earmarked to further promote the development of life and health technology in Hong Kong, as well as the setting up of the InnoLife Healthtech Hub in the Hong Kong-Shenzhen Innovation and Technology Park. Please advise this Committee on the specific work of the relevant projects, the timetables, the details and breakdown of expenditures and the anticipated outcomes to be achieved in the coming year.

Asked by: Hon NG Kit-chong, Johnny (LegCo internal reference no.: 11)

Reply:

The SAR Government aims to promote multi-faceted collaboration in scientific research and development (R&D) of industries, with a view to developing Hong Kong into a major R&D hub in life and health disciplines. It has been announced in the 2022-23 Budget that $10 billion has been earmarked to provide more comprehensive support for the long-term development of life and health science research in Hong Kong, including hardware, talent, clinical trials and data application, so as to enhance our capacity and capability in life and health science research. Among which, we plan to set up the "InnoLife Healthtech Hub" in the Hong Kong-Shenzhen Innovation and Technology Park (HKSITP). With the 16 life and health-related laboratories in the "*Inno*HK Research Clusters" and the 8 relevant State Key Laboratories as basis , the InnoLife Healthtech Hub can pool together top-notch research teams from all over the world and focus our efforts on R&D work as well as global research collaboration in the field of life and health sciences.

At the early stage of commissioning, the InnoLife Healthtech Hub may continue its operation in a distributed mode locating in the Hong Kong Science Park and various universities. It

will then officially move into the HSITP upon the gradual completion of the first batch of development. During the process, the SAR Government will also attract more top-notch research teams. The Government has already invested $32.5 billion for the supporting infrastructure and the first batch of the HSITP development, which is expected to be completed by phases from late 2024 onwards. At the current stage, the Innovation and Technology Bureau and the Innovation and Technology Commission of the SAR Government will study the implementation details of the InnoLife Healthtech Hub with their existing manpower. A breakdown of the relevant expenditure is thus not available yet.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0050)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in the Budget Speech that the current-term Government has invested over $130 billion in innovation and technology (I&T) development, which has seen results trending up gradually in recent years. The Financial Secretary states that he will allocate additional resources in the Budget to keep reinforcing the entire value chain and the I&T ecosystem. In the 2017 Policy Address, the Government has set a goal to raise the expenditure on research and development (R&D) as a percentage of the Gross Domestic Product (GDP) to 1.5%, i.e. $45 billion a year, within the current Government's term of office. According to the statistical data of the Census and Statistics Department, the Gross Domestic Expenditure on research and development (GERD) in 2020 amounted to $26.554 billion, representing 0.99% of the GDP in the year, which was still quite a distance from the goal. Is the Bureau confident that the goal will be achieved within the current Government's term of office? If not, has the Government estimated the difference between the actual percentage and the target percentage? Will the Government set a new goal on R&D expenditure? Will the Government formulate more refined sub-indicators, such as indicators reflecting resource injection and planning, and draw up indicators for measuring I&T outputs and efficiency? If yes, what are the details; if not, what are the reasons?

Asked by: Hon NG Wing-ka, Jimmy (LegCo internal reference no.: 7)

Reply:

Promoting research and development (R&D) is an indispensable part of innovation and technology (I&T) development. The current-term Government proactively promotes I&T development in Hong Kong in the eight major areas set forth by the Chief Executive. Various policies and initiatives, including measures for promoting R&D, have been initiated with good progress, notably enhancing the overall I&T ecosystem in Hong Kong. Despite the impact on Hong Kong from various challenges in recent years, such as the social unrest and the COVID-19 pandemic, the gross domestic expenditure on R&D (GERD) increased

from around $19.7 billion in 2016 to around $26.5 billion in 2020. While the ratio of the GERD to Gross Domestic Product had hovered at around 0.74% over the past decade or so, it increased to 0.99% in 2020. Since the Census and Statistics Department's statistical work would begin after the completion of a year, the 2021 figures will be available in end-2022. Hong Kong's I&T development has also been internationally acclaimed. For example, Hong Kong ranked first in Asia and second worldwide in the World Digital Competitiveness Ranking 2021, and first worldwide in terms of "Technology".

The Government has proactively introduced several initiatives to support R&D work by universities and public research institutes. For instance, to develop Hong Kong into a global research collaboration hub, the flagship project "*InnoHK* research clusters" have already attracted over 30 world-renowned universities and research institutes to collaborate with local universities and research institutes in setting up 28 research laboratories in the Hong Kong Science Park. In addition, local universities have established close collaborative relationships with research institutions in the Mainland over the years through various research programmes, many of which have borne fruits. In recent years, the Central Government and some provincial and municipal governments have opened up quite a number of R&D projects and funding schemes to researchers in Hong Kong.

The Government amended the Inland Revenue Ordinance in 2018 to provide enhanced tax deduction for qualifying R&D expenditure incurred by enterprises on or after April 1, 2018. The deduction is 300% for the first $2 million of the aggregate amount of the relevant expenditure, and 200% for the remaining amount. There is no cap on the amount of the relevant tax deduction. The claims for tax deduction on R&D expenditure for the year of assessment 2019/20 amounted to about $3.21 billion, representing nearly a double as compared with $1.67 billion in the year of assessment 2017/18 (prior to the implementation of the measure).

To further promote R&D, it is announced in the Budget 2022-23 that $10 billion will be earmarked to provide more comprehensive support for life and health sciences in Hong Kong in the long run, including hardware, research talent, clinical trials and data application, with the aim of enhancing the capacity and capability in life and health sciences. For instance, the "InnoLife Healthtech Hub" will be set up in the Hong Kong-Shenzhen Innovation and Technology Park. Besides, starting from 2022-23, we will double the total (maximum) amount of annual funding for 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres in Hong Kong to $440 million in order to provide them with more resources for R&D activities, nurture talents and foster co-operation and exchanges with institutions in the Mainland. We will also enhance the Technology Start-up Support Scheme for Universities to double the annual subsidy for each specified university to $16 million. The increased subsidy will be provided to start-ups of universities with private investments on a 1:1 matching basis. Each start-up may receive an annual subsidy of up to $1.5 million for a maximum of three years to further realise their R&D outcomes.

The Government will continue to closely monitor the latest I&T development in Hong Kong, introduce more appropriate measures and devise relevant performance indicators in a timely manner.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0062)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

As mentioned in the Budget Speech, the Government will allocate an additional funding amounting to about $7 billion in total for relevant departments to procure anti-epidemic items and services, implement anti-epidemic measures, etc., and a further injection of $12 billion into the Anti-epidemic Fund for the construction of various anti-epidemic related facilities. Please inform this Committee of:

1. the percentage of products or services to be procured from local technological enterprises; and

2. the largest 5 procurements of anti-epidemic items or services from local enterprises in the last financial year.

Asked by: Hon QUAT Elizabeth (LegCo internal reference no.: 3)

Reply:

1. As mentioned in the Budget Speech, the Government will allocate additional resources for relevant departments to procure anti-epidemic items and services, implement anti-epidemic measures and others. The Innovation and Technology Bureau (ITB) will continue to implement various measures to assist in the fight against the epidemic, including procuring products or services from local enterprises to provide system maintenance and support services for the Hong Kong Health Code system, launching an upgraded version of the "LeaveHomeSafe" mobile application, providing information system support for the Electronic Testing Record System, as well as supporting compulsory quarantine measures. The estimated amount involved is around $30.51 million out of the total estimated amount of $40.93 million, amounting to about 74.5% of the allocation for procurement of products or services from technological enterprises.

2. The 5 procurements of anti-epidemic items and services from local enterprises incurring the highest amount of expenses made by the ITB in 2021-22 are as follows:

Item	Amount ($m)
Data Preparation Services[1]	9.00
Call Centres Management Services[1]	7.78
Wristband Operations at Hong Kong International Airport[1]	6.92
Manpower services for manning mobile support stations	3.72
Wristband Operations at Hong Kong-Zhuhai-Macao Bridge/Shenzhen Bay Control Points[1]	3.46

Note 1: Payment for the related items was made with the allocation of the Anti-epidemic Fund, which does not form part of the Appropriation Bill or the estimates on the General Revenue Account.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. **ITB024**

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0704)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): (700) General non-recurrent

Programme: (2) Innovation and Technology, (3) Efficiency Office

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary indicates in the Budget this year that apart from allocating funding in conventional initiatives such as relief measures as well as land and housing, the Government will also offer significant supports to the development of the innovation and technology (I&T) industry. It is also mentioned in the Budget Speech that the Government "has invested over $130 billion in I&T development" and "will allocate additional resources in the Budget to keep reinforcing the entire value chain and the I&T ecosystem". In this connection, will the Government advise this Committee of the following:

1. the specific projects to which the $130 billion mentioned above has been allocated; how the allocation was made among the projects; when the allocation was made to each of the projects; and the anticipated effects to be achieved;

2. given that the "kNOw Touch - Contactless Elevator Control Panel" developed by the Hong Kong Productivity Council in making efforts to fight the epidemic has gained many commendations and favourable comments from the research community, whether the Government has any plan to put into practice and install the contactless elevator control panels at all Government office buildings so as to minimise the risk of COVID-19 transmission; if so, the details and expenditure involved; if not, the reasons for that;

3. given that one of the Matters Requiring Special Attention of the Innovation and Technology Bureau is to "support the Government in promoting I&T, and assist in taking forward initiatives in the public sector in collaboration with stakeholders to enhance public services and efficiency in operations through the application of technology, and innovation in business processes", and that many anti-epidemic actions and public services require extensive use of technologies amid the current severe situation of large scale infection, what timely measures and specific arrangements the Government has in place; and whether budget has been set aside for such?

Asked by: Hon SO Cheung-wing (LegCo internal reference no.: 5)

Reply:

To promote sustained and diversified socio-economic development, the Government is committed to developing innovation and technology (I&T), in order to drive the upgrading and transformation of our overall economic structure, thereby enhancing Hong Kong's competitiveness and improving people's quality of life. To boost I&T development along the 8 major areas set forth in the Chief Executive's 2017 Policy Address, the Government has implemented a series of measures to enhance the local I&T ecosystem.

1. The current-term Government has invested over $130 billion in I&T development in the past 4 years or so and the breakdown is as follows:

   (i) Over $70 billion for developing I&T infrastructure, including –
   - injecting capital to the Innovation and Technology Fund (ITF) in 2018 for setting up "*InnoHK* research clusters";
   - providing funding support in 2018 and 2021 for developing the Hong Kong-Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop;
   - announcing the Phase 2 of the Science Park Expansion Programme in 2020; and
   - providing funding support in 2022 for Cyberport 5 development;

   (ii) Over $30 billion for promoting research and development (R&D), including –
   - providing funding in 2019 for the Research Grants Council to support universities in conducting scientific research; and
   - injecting capital to ITF in 2021 and 2022 to sustain its 17 funding schemes (such as the Innovation and Technology Support Programme and the Enterprise Support Scheme), and;

   (iii) Over $10 billion for supporting start-ups and technology investments, including –
   - providing funding for the Hong Kong Science and Technology Parks Corporation (HKSTPC) and the Cyberport to support their tenants and start-ups in 2018;
   - launching the Re-industrialisation Funding Scheme in 2020; and
   - the HKSTPC and Cyberport injecting capital to their Corporate Venture Fund and Cyberport Macro Fund respectively in 2021;

   (iv) About $10 billion for promoting technology adoption and nurturing I&T culture through –
   - continuing to implement different funding schemes (such as the General Support Programme and the Technology Voucher Programme launched in 2016);
   - launching the TechConnect (block vote) in 2017;
   - launching the Innovation and Technology Fund for Application in Elderly and Rehabilitation Care in 2018;
   - announcing the set-up of the Smart Traffic Fund in 2019;
   - launching the Distance Business Programme in 2020; and
   - injecting capital to the Social Innovation and Entrepreneur Development Fund in 2021; and

(v) Over $6 billion for nurturing and attracting I&T talent through –
- continuing to implement the funding schemes under the ITF (such as "Research Talent Hub" and the Re-industrialisation and Technology Training Programme launched in 2018);
- launching the IT Innovation Lab in Schools in 2019; and
- launching the Global STEM Professorship Scheme, and the Knowing More About IT Programme in 2021.

Various initiatives have been gradually taking effect in recent years. For example, the number of start-ups significantly rose from around 1 000 in 2014 to around 4 000 in 2021. We have also witnessed the birth of over 10 unicorns in the same period; venture capital investment has also substantially increased from around $1.2 billion to over $40 billion; and Hong Kong is currently Asia's largest and the world's second largest fundraising hub for biotechnology companies. Hong Kong's I&T development has also won internationally acclaim. For example, Hong Kong ranked first in Asia and second worldwide in the World Digital Competitiveness Ranking 2021, and first worldwide in terms of "Technology".

It was further announced in the 2022-23 Budget that more resources would be devoted, including setting up a $5 billion Strategic Tech Fund to invest in technology enterprises which are of strategic value to Hong Kong, with considerable scale and development potential, earmarking $10 billion to further promote the development of life and health technology in Hong Kong, and doubling the amount of annual subsidy provided to 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres in Hong Kong. These initiatives will further strengthen the entire value chain and the I&T ecosystem.

2. The Hong Kong Productivity Council has developed a novel "kNOw Touch" contactless panel to lessen the risk of coronavirus transmission whilst using an elevator. The prototypes of this R&D outcome are supported by the Public Sector Trial Scheme (a special call for projects for the prevention and control of COVID-19) under the ITF, and participating organisations include the Electrical and Mechanical Services Department (EMSD) and the Airport Authority Hong Kong. At present, the "kNOw Touch" contactless panel has been installed or will be installed at over 680 elevators at around 50 locations, including a number of housing estates under the Hong Kong Housing Authority and the Hong Kong Housing Society, the Central Government Offices, the Legislative Council Complex, the Hong Kong International Airport and Justice Place. The EMSD also advocates the adoption of the technology in Government buildings. The "kNOw Touch" contactless panel has progressed from the R&D trial stage to application in the community, and two local authorised companies are currently in charge of the production, sales, installation and maintenance work of related products.

3. The Government is committed to promoting the adoption of technology and streamlining of business processes in various government departments to enhance their operational efficiency and service delivery. Under the "Be the Smart Regulator" ("BTSR") and the "Streamlining of Government of Services" ("SGS") programmes,

45 participating bureaux and departments have implemented different business facilitation measures and streamlining measures, with a view to offering more service options and channels, including offering online application services via "iAM Smart", developing different electronic payment options and providing end-to-end electronic services so that the public and the sectors can continue to use different government services electronically during the epidemic, such as applying for Vehicle Licence Renewal and Working Family Allowance via "iAM Smart" and paying water charges via the Faster Payment System. Meanwhile, we also provide a series of supporting measures to help departments further explore or test whether the solutions are suitable for the relevant services, including co-organising Innovation and Technology Trade Show and I&T Solution Day with the I&T sector, and collaborating with stakeholders such as Hong Kong Science Park, Cyberport and other platforms to identify and showcase the latest I&T solutions and arrange one-on-one business matching.

In the meantime, the Government has been adopting a multi-pronged approach to implement various anti-epidemic policies and measures in response to the latest development of the epidemic and actively apply different innovative technologies to make these measures more effective. Major examples are as follows:

- As early as in February 2020, through the concerted effort of a local university, a start-up and an R&D institution, we developed the "StayHomeSafe" mobile app adopting geo-fencing technologies and Bluetooth Low Energy electronic wristbands to assist in the monitoring of confinees with quarantine requirements. So far, over 800 000 persons have used the electronic wristbands.

- In February 2020, the Government launched the Interactive Map Dashboard on the Latest Situation of Coronavirus Disease in Hong Kong with the application of open data and geographical information technology to enable the public to keep abreast of the latest situation of the epidemic and other related information effectively. It has so far recorded over 60 million views.

- In November 2020, we launched the "LeaveHomeSafe" mobile app which did not require registration of any personal information of users to provide members of the public with a convenient digital tool for recording their visits. The number of downloads of the app has exceeded 7.8 million and more than 120 000 public and private venues have collaborated and supported the use of the app.

  To tie in with the full implementation of the "vaccine pass", we launched the "LeaveHomeSafe" mobile app version 3.0.2 in January 2022. Upon successful scanning of the venue QR codes, the app will automatically show users' QR codes of electronic vaccination records or Exemption Certificates stored in their mobile phones. Premises operators may scan and record the information of the QR codes with the "QR Code Verification Scanner" mobile app. If there are confirmed cases in the premises, the record in the app can assist the Centre for Health Protection in tracing persons with a high risk of infection and cut the transmission chains as quickly and precisely as possible.

- To enable citizens to make bookings for the testing services in an efficient and secure manner, we established an online booking system and registration system

for all Community Testing Centres in Hong Kong. Since its launch in November 2020, the system has processed over 9.98 million bookings. In February 2021, we also established an online booking system of the vaccination programme for the public to make bookings in respect of the time and venue for receiving vaccination. The system has processed over 12.4 million bookings of vaccination.

We will continue to press ahead with the development of suitable technology solutions to fully meet the latest anti-epidemic needs. The ITB will take forward the work in collaboration with its departments using existing manpower and resources. We do not have a breakdown of the expenditure involved in individual work.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0752)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The strongest advantage of the innovation and technology development in Hong Kong lies in our frontline scientific researchers who are mostly middle-aged and young researchers and small and medium-sized research teams. Will the Government inform this Committee that apart from allocating more resources to key laboratories and large-scale research centres, how the Budget will enhance the support for frontline scientific researchers at large, in particular the middle-aged and young researchers and small and medium-sized research teams; and how the funding coverage of scientific research will be expanded?

Asked by: Hon SUN Dong (LegCo internal reference no.: 1)

Reply:

Promoting research and development (R&D) is an essential part of innovation and technology (I&T) development. Hong Kong has world-class universities and tremendous strength in scientific research which has all along been well recognised both nationally and internationally. The current-term Government has been actively promoting I&T development in the eight major areas set forth by the Chief Executive. Policies and initiatives implemented in these areas, including those in promoting R&D, have achieved good progress since their successful launch, contributing to a more vibrant I&T ecosystem in Hong Kong. The number of start-ups rose from around 1 000 in 2014 to around 4 000 in 2021, and that of start-up employees increased from some 2 400 to some 14 000. We have also witnessed the birth of more than 10 unicorns in the same period while venture capital investment in Hong Kong also substantially increased from around $1.2 billion in 2014 to over $40 billion in 2021.

The coverage of various initiatives in encouraging and supporting R&D has been extensive, benefiting frontline scientific researchers at large and research teams of different scales. For instance, the Government amended the Inland Revenue Ordinance in 2018 to introduce enhanced tax deduction for qualifying R&D expenditure incurred by enterprises on or after 1

April 2018. The deduction is 300% for the first $2 million of the aggregate amount of the relevant expenditure, and 200% for the remaining amount. There is no cap on the amount of the relevant tax deduction. Among the tax returns received as at 28 February 2022, the total amount of relevant expenditure claiming tax deduction in the year of assessment 2020/21 was about $2.51 billion. For the year of assessment 2019/20, the relevant amount of R&D expenditure for claiming tax reduction was about $3.21 billion, an increase of about 100% over the $1.67 billion in the year of assessment 2017/18, prior to the implementation of the measure.

In addition, among the 17 funding schemes under the Innovation and Technology Fund (ITF) administered by the Innovation and Technology Commission, 6 of them provide support for applied R&D, such as the Innovation and Technology Support Programme and the Enterprise Support Scheme. As at the end of January 2022, the above 6 schemes have provided an aggregate funding amount of over $14.43 billion. The research personnel of the funded R&D projects come from universities, R&D centres, research institutions and private enterprises. Furthermore, the Innovation and Technology Venture Fund under the ITF co-invests with venture capital funds on a matching basis in local I&T start-ups.

The Hong Kong Science Park (HKSP) and Cyberport, as Hong Kong's I&T flagships, have also been committed to providing start-ups with infrastructure, incubation programmes and one-stop support. The Hong Kong Science and Technology Parks Corporation (HKSTPC) and Cyberport provide pre-incubation support for entrepreneurial technology talent through various incubation programmes, including subsidised office space and shared facilities, financial aid package, technical and management assistance, promotion and development assistance and business support, with a view to helping them bring their innovative ideas to life. The HKSTPC and Cyberport also set up the Corporate Venture Fund and the Cyberport Macro Fund respectively, which are mainly targeted at early-stage start-ups.

Besides, the University Grants Committee has been facilitating the research development of local universities through allocation of recurrent grants and various research funding schemes while the Health and Medical Research Fund supports locally-based tertiary institutions, hospitals, medical schools, non-governmental organisations or other appropriate centres, units or services to undertake health and medical research.

The above initiatives are effective in supporting R&D research teams and enterprises of different scales and background, in particular young and middle-aged researchers as well as small and medium-sized research teams. We will keep a close eye on the situation and roll out timely initiatives to enhance the support for frontline scientific researchers.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0756)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

One of the main responsibilities of the Innovation and Technology Bureau is to formulate policies to augment the pool of innovation and technology talents. Apart from the existing initiatives, such as Research Talent Hub, STEM Internship Scheme, Technology Talent Admission Scheme and Global STEM Professorship Scheme, are there new measures to attract outstanding R&D talents to come and stay in Hong Kong for development?

Asked by: Hon SUN Dong (LegCo internal reference no.: 5)

Reply:

The Government has been adopting a multi-pronged approach to enlarge the innovation and technology (I&T) talent pool through nurturing, retaining and attracting talents with a series of initiatives, and keep reviewing the effectiveness of various measures from time to time. Various enhancement and new initiatives have been rolled out in recent years, including:-

- the "IT Innovation Lab in Secondary Schools" Programme and "Knowing More About IT" Programme were launched in 2020 and 2021 respectively to provide funding support for secondary and primary schools for organising information technology-related extra-curricular activities. Up to now, these two programmes have received applications from more than 460 schools with total approved funding exceeding $150 million;

- the STEM Internship Scheme launched in 2020 has been regularised from 2021, benefitting over 4 700 university students with a total funding of about $110 million so far;

- the Innovation and Technology Scholarship subsidises outstanding university students to take part in overseas exchange, local internships, mentorship programmes, etc., annually,

with a view to nurturing future leaders in the I&T sector. It has benefited 275 universities students as at end-2021;

- the eligibility for the Research Talent Hub was extended in 2021 to include holders of a bachelor's or master's degree in a science, technology, engineering and mathematics (STEM)-related discipline awarded by a well-recognised non-local institution[1]. More than 6 200 research talents have been employed under this scheme in the past 5 years and the total funding is about $2.8 billion;

- the Reindustrialisation and Technology Training Programme (RTTP) was launched in August 2018 to subsidise staff of local companies to receive training in advanced technologies on a matching basis. So far, the RTTP has subsidised over 8 600 trainees to participate in over 11 400 training sessions with total funding exceeding $83 million;

- the Global STEM Professorship Scheme introduced in 2021, supports universities in recruiting internationally renowned I&T scholars and their teams to conduct research and teaching activities in Hong Kong. This scheme has supported over 60 outstanding scholars in the first two rounds and the scholars and their teams are gradually arriving in Hong Kong;

- the flagship I&T project, "*InnoHK* research clusters" has successfully attracted over 30 world-renowned universities and research institutes to collaborate with local universities in setting up 28 research laboratories in the Hong Kong Science Park, attracting around 2 000 high quality talents around the world; and

- the Technology Talent Admission Scheme launched in 2018 handles applications that involve the admission of non-local talents to undertake research and development work in Hong Kong expeditiously, covering 13 technology areas[2]. Up to end-February 2022, 614 quotas were approved by the Innovation and Technology Commission and 283 visas or entry permits have been issued for them by the Immigration Department.

Besides, the Hong Kong Science and Technology Parks Corporation and the Cyberport have launched incubation programmes to assist I&T talents in starting their business and provided internship and training opportunities. Currently, around 30% of the start-ups in the two parks come from outside Hong Kong. The InnoCell in the Hong Kong Science Park, completed at the end of 2020, provides around 500 residential units as living and collaborative space to promote interactions and exchanges among I&T talents. Its occupancy rate was about 74% as at end-February 2022.

Looking forward, this year's Budget has earmarked $10 billion to further promote the development of life and health technology, including hardware, research talents, clinical trials and data application, with the aim of enabling institutions, including universities, to enhance their capacity and capability in this area. Furthermore, the InnoLife Healthtech Hub under planning will also pool together top-notch research teams from all over the world for research collaboration. Meanwhile, the Government will double the maximum annual funding support under the Innovation and Technology Fund for the 16 State Key Laboratories in Hong Kong and 6 Hong Kong Branches of Chinese National Engineering Research Centres up to $440 million in total, so that they can have more resources to carry out various tasks, which

include nurturing local talents, attracting more local and non-local I&T talents to come to Hong Kong, and further their co-operation and exchanges with institutions in the Mainland.

A vibrant I&T ecosystem is a crucial force in attracting talents to come and stay for development in Hong Kong. The Government will continue to develop Hong Kong into an international I&T hub.

- End –

[1] Well-recognised non-local institution refers to one of the top 100 institutions for STEM-related subjects in the latest Quacquarelli Symonds World University Rankings, the Academic Ranking of World Universities and the Times Higher Education World University Rankings.

[2] Include artificial intelligence, biotechnology, cybersecurity, data analytics, financial technologies, material science, robotics, 5G communications, digital entertainment, green technology, integrated circuit design, Internet-of-Things and microelectronics.

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0758)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Innovation and Technology Bureau supported the development of the Guangdong-Hong Kong-Macao Greater Bay Area into an international innovation and technology hub in 2021-22 and will continue such support in 2022-23. In this connection, will the Government advise this Committee of the following:

(a) the details of the above support provided by the Bureau in 2021-22 (including the types of funded projects, the direction of support and the expenditure involved);

(b) in what way will the Bureau continue the above support in 2022-23 and the details; and

(c) how the support will help Hong Kong develop into an international innovation and technology hub?

Asked by: Hon SUN Dong (LegCo internal reference no.: 7)

Reply:

The consolidated reply to parts (a) to (c) of the question is as follows:

Our country promulgated in March last year the Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives Through the Year 2035 (the 14th Five-Year Plan), which set out, inter alia, its support for developing the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) into an international innovation and technology (I&T) hub, Hong Kong's development as an international I&T hub and integrating Hong Kong into national development. The HKSAR Government will make every endeavour to complement the work relating to the 14th Five-Year Plan, so that Hong Kong can serve the country's needs by capitalising on its strengths, as well as to proactively participate in the domestic and international dual circulation as well as the work on developing an international I&T hub in the GBA.

The current-term Government has unprecedentedly invested over $130 billion to promote I&T development along the 8 major areas since 2017. In the future, to better complement the country's I&T development, the Government has put forward forward-looking and ground breaking I&T initiatives in the 2021 Policy Address and the 2022-23 Budget, which mainly include the following 3 directions:

(1) Regarding setting aside additional land and infrastructure development, the Government has reserved a number of sites for I&T development, such as consolidating the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) in the Lok Ma Chau Loop and the areas around Lok Ma Chau/San Tin to form the "San Tin Technopole", building landmark I&T facilities with a scale comparable to Cyberport in Lau Fau Shan, reviving the Ma Liu Shui reclamation project, providing land to universities for research and development (R&D) use, planning for the construction of the second Advanced Manufacturing Centre, etc.

(2) In terms of promoting R&D and strengthening our talent pool, the Government will set up an "InnoLife Healthtech Hub" in the HSITP to focus on the work of R&D in life and health disciplines. The Hong Kong Science and Technology Parks Corporation (HKSTPC) will also explore collaboration with the Hospital Authority on better utilising its clinical data for R&D purposes. The Government has also earmarked $10 billion to provide more comprehensive support such as hardware, talent, clinical trials and data application for the development of life and health science research in Hong Kong in the long run, with a view to enhancing our capacity and capability in this area and developing Hong Kong into a major R&D hub in life and health disciplines. Besides, the Government will double the maximum annual funding support under the Innovation and Technology Fund for the 16 State Key Laboratories and 6 Hong Kong Branches of Chinese National Engineering Research Centres up to $440 million in total, and will set up a dedicated fund to further finance local universities or research institutes to participate in national R&D projects. Moreover, the Government will explore the extension of the "Immigration Arrangement for Non-local Graduates" to cover those graduated from the Hong Kong universities' campuses in the GBA and will continue to implement the "Global STEM Professorship Scheme".

(3) As for supporting start-ups in gaining a foothold in the GBA, the "GBA InnoAcademy" and "GBA InnoExpress" set up by the HKSTPC at its branch in Shenzhen will commence operation within this year. The HKSTPC will also work with the local universities which have campuses in the GBA to establish incubator networks in those campuses.

In addition, the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area (Outline Development Plan) promulgated in February 2019 set out the target of developing the GBA into an international I&T hub. While Hong Kong possesses strong R&D capabilities and advantages as an international and market-oriented economy, the GBA has a sizeable market as well as capabilities in commercialising R&D results and advanced manufacturing. With the ability of pooling innovation resources from the Mainland and across the globe and achieving synergistic development with other cities in the GBA with regard to their comparative strengths, Hong Kong can build up a comprehensive industry chain for commercialising R&D results. Since the promulgation of the Outline

Development Plan, the HKSAR Government has been making efforts to facilitate the work on developing an international I&T hub in the GBA, with remarkable progress made in areas such as allowing cross-boundary remittance of R&D funding directly from the Mainland to Hong Kong, relaxing the limitation on exporting Mainland human genetic resources to Hong Kong, and launching the Mainland-Hong Kong Joint Funding Scheme by the Innovation and Technology Commission and the State Ministry of Science and Technology. We will continue our efforts in facilitating the flow of innovation elements in the days ahead.

The ITB will take forward the work concerned in collaboration with relevant departments through its existing manpower and resources. Please refer to "Head 135 – Government Secretariat: Innovation and Technology Bureau" of the Estimates for details.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0882)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Concerning the strengthened support for innovation and technology (I&T) research and development in the current Budget, including the Cyberport Macro Fund which targets start-ups, will the Government advise this Committee of the following:

(a) The current situation of I&T funds (including the types, directions, expenditures involved of funded projects); and

(b) Given that many small and medium-sized enterprises were deterred by the overly complicated application and approval procedures, what measures are in place to strike a balance between managing and simplifying approval procedures to improve the mechanism?

Asked by: Hon SUN Dong (LegCo internal reference no.: 2)

Reply:

As the flagship for Hong Kong's information and communications technology (ICT) industry, Cyberport has over the years been implementing its public mission programmes through provision of financial and professional support to nurture start-ups, inspire and motivate young people to pursue a career in the innovation and technology (I&T) industry and create business opportunities, thereby fostering the development of ICT in Hong Kong. The consolidated reply to the 2 parts of the question is as follows:

Established in 2016, the $200 million Cyberport Macro Fund (CMF) aims to provide Cyberport's start-ups with early financing. A sum of $200 million has been injected into the CMF in 2021, and its scope has been extended to cover Series B and later stage investments. As at February 2022, the CMF has invested more than $168 million in 21 companies, attracting over $1.466 billion of private investment. Cyberport will review the operation

and effectiveness of the CMF in due course, including refining its assessment mechanism, in order to continue to promote the development of the venture capital ecosystem for digital entrepreneurs in Hong Kong.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0427)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is stated in paragraph 52 of the Budget Speech that "Continuous promotion of innovation and technology (I&T) development is an important strategy to foster a more vibrant and diversified economy. The 14th Five-Year Plan supports Hong Kong's development into an international I&T hub. Apart from fostering economic growth and job creation, I&T development can also promote re-industrialisation and enhance the competitiveness of our manufacturing sector as well as enable digital transformation across various trades." Regarding the work on re-industrialisation, please advise the Committee of the following:

1. As it is mentioned in the proposal on the re-organisation of government structure mentioned that the Innovation and Technology Bureau (ITB) would be re-organised into the Innovation, Technology and Industry Bureau, what is the progress of the study and review on the re-organisation? Upon the establishment of the Innovation, Technology and Industry Bureau, what are the estimated percentage increases in manpower establishment and expenditure?

2. Under Head 135, the estimate for Programme (2) in 2021-22 is $321.9 million and the revised expenditure is $208.3 million. What are the reasons for the 35.3% decrease in the revised expenditure compared with the estimate for 2021-22?

3. The estimate for Programme (2) in 2022-23 is $231.2 million, which is 11% higher than the revised expenditure in 2021-22. Which area of work will the additional expenditure be spent on?

4. It is stated in Programme (2) that one of the ITB's main responsibilities is to "promote 're-industrialisation' through the development of smart production and high value-added industries." What major work was carried out by the ITB in the last financial year to promote re-industrialisation? What are the specific work and strategies to be implemented by the ITB in 2022-23 to further promote re-industrialisation?

5. Re-industrialisation should not only concerns smart production and high value-added industries. The ITB must also help traditional industries to engage in the process of re-industrialisation. How will the ITB assist traditional industries in engaging in re-industrialisation in the coming year?

Asked by: Hon TAN Sunny (LegCo internal reference no.: 8)

Reply:

In recent years, the Government has been actively promoting re-industrialisation and developing advanced manufacturing, which is less land or labour-intensive, based on new technologies and smart production, with a view to creating quality employment opportunities for young people and fostering the diversification of economic development. Capitalising on Hong Kong's strong capabilities in scientific research and advantages such as internationalisation and highly-market oriented, the Government adopts a multipronged approach in promoting re-industrialisation in Hong Kong. Our reply to the various parts of the question is as follows:

1. It is proposed in the 2021 Policy Address that the Innovation and Technology Bureau (ITB) will be re-titled as the Innovation, Technology and Industry Bureau to reflect its mission of driving the re-industrialisation policy with innovation and technology (I&T) application and smart production. The re-titling will enable stakeholders to have a better understanding of our policy functions and work focus. The future Innovation, Technology and Industry Bureau will implement policies to promote more high value-added and technology-intensive manufacturing processes and production lines to set up operations in Hong Kong to enhance the I&T ecosystem. The Government will report to the Legislative Council on our work in this area as and when appropriate.

2. and 3. The revised estimate of ITB for 2021-22 shows a decrease of $113.6 million under Programme (2). This is mainly due to the decrease of $46.56 million in the cash flow requirement for the Innovation and Technology Fund for Better Living (FBL) arising from its transfer to the Innovation and Technology Fund (ITF) and, the cash flow requirement for the TechConnect (block vote) is $36.04 million less than the estimated while the operational expenses is also $31.03 million less than the estimated. The estimate for 2022-23 is $22.9 million higher than the revised estimate for 2021-22. This is mainly due to the increase of about $15.60 million in the cash flow requirement for the TechConnect (block vote) and increased provision of $11.54 million for operational expenses, partly offset by the decreased cash flow requirement for the FBL being transferred to the ITF.

4. and 5. The ITB has been promoting re-industrialisation in the 5 areas of infrastructure, talent, capital, technology and scientific research. Major work in recent years and the next year is listed below:

In terms of infrastructure, the Hong Kong Science and Technology Parks Corporation (HKSTPC) is developing the Advanced Manufacturing Centre (AMC) in the Tseung Kwan O InnoPark, which is expected to be completed within this year. It is also developing the Microelectronics Centre in the Yuen Long InnoPark to attract

companies that produce microelectronic products and related industries, and promote research and development and technology applications in high value-added industries. The Microelectronics Centre is expected to be completed in 2023. The Data Technology Hub in the Tseung Kwan O InnoPark was completed in 2020. The HKSTPC has started the leasing work for the Data Technology Hub and the AMC. In view of the good industry response to the AMC, the 2021 Policy Address announced the planning for the construction of the second AMC.

On technology, the Hong Kong Productivity Council (HKPC) has been assisting enterprises to move towards high value-added production and gradually upgrade to i4.0 by organising a range of training programmes and seminars, including co-operating with the Fraunhofer Institute for Production Technology in Germany to implement the Industry 4.0 Upgrade and Recognition Programme as well as assisting the industry in accelerating the adoption of innovative industrial technologies and promoting the development of smart industry and digital manufacturing via the jointly established Invention Centre. In addition, the HKPC operates Inno Space and Digital@HKPC (Digital Transformation) to promote "re-industralisation". It also continues to assist different industries in setting up smart production lines, such as establishing automated and digital manufacturing systems to enhance productivity, and convening the Hong Kong Industry Network Clusters consultation sessions to meet the major local chambers of commerce, industry support organisations, government representatives and enterprises for exploring the needs required by the industry in facing technology innovation and brief them on the latest technology solutions.

On talent, we will continue to implement the Re-industrialisation and Technology Training Programme (RTTP) to fund local enterprises on a matching basis to train their staff in advanced technologies, especially those related to "Industry 4.0". Since its launch in August 2018, the RTTP has approved over 4 250 applications and funded about 11 400 persons to receive trainings in advance technologies, with a total funding of more than $83 million.

On capital, we launched the Re-industrialisation Funding Scheme in July 2020 to subsidise manufacturers on a matching basis for setting up new smart production lines in Hong Kong. Since the launch of the scheme, a total of 36 applications have been received. The Vetting Committee has vetted 33 applications and agreed in principle to support 28 applications, with a total funding of about $197 million.

On scientific research, the five R&D centres established by the Government (i.e. Hong Kong Applied Science and Technology Research Institute, Logistics and Supply Chain MultiTech R&D Centre, Nano and Advanced Materials Institute, Hong Kong Research Institute of Textiles and Apparel, and Automotive Platforms and Application Systems R&D Centre) will also continue to work on applied R&D related to re-industrialisation in close collaboration with the industry, thereby fostering the commercialisation of R&D outcomes.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0023)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

In order to accelerate the progress of a digital economy, the Financial Secretary will set up a "Digital Economy Development Committee" (DEDC), with members comprising experts and scholars, industry elites, and relevant government officials. Given the attention paid by the Government to the development of a digital economy, will more resources be devoted to this area in future? If yes, what are the specific details? Has the Government estimated the benefits that can be brought by the development of a digital economy?

As regards the DEDC, will the Government provide details such as the size of its membership and the proportion of members from various fields, timetable for its establishment and working schedule and to whom it will be accountable?

To help accelerate the development of a digital economy and enhance its effectiveness, will the Government set up a digital economy co-ordination group with the Guangdong Province on the basis of the DEDC, with the aim of achieving greater effectiveness through complementary co-operation?

Asked by: Hon WONG Ying-ho, Kennedy (LegCo internal reference no.: 6)

Reply:

The Government will continue to actively promote the development of digital economy and smart city through a series of initiatives. The Government released the Smart City Blueprint for Hong Kong 2.0 in 2020, setting out over 130 initiatives under six smart areas. Bureaux and departments (B/Ds) will timely update their development goals in view of the latest development in smart city and innovative technologies.

On digital infrastructure, the Government will continue to take forward the Next Generation Government Cloud Platform and Big Data Analytics Platform, which commenced operation in September 2020, with a view to facilitating data interchange among B/Ds and the implementation of more projects adopting artificial intelligence and big data analytics. The Government is developing a shared blockchain platform, which is expected to come into operation in 2022, to facilitate the implementation of smart government services using blockchain technology. Meanwhile, commonly used online services accessible through the one-stop personalised digital services platform "iAM Smart", which was launched in December 2020, are increasing progressively.

To actively promote digital transformation of the Government, government departments can continue to make use of various policies and schemes, such as TechConnect (block vote) and the Public Sector Trial Scheme under the Innovation and Technology Fund, to implement technology projects, thereby fostering the realisation and commercialisation of local research and development outcomes. The Smart Government Innovation Lab, established by the Office of the Government Chief Information Officer in April 2019, will continue to encourage and invite industry practitioners to assist government departments in introducing IT solutions, having regard to the latest technological development.

The Government will also continue to support local enterprises/organisations in using technological services and solutions to improve productivity, or upgrade or transform their business processes through the Technology Voucher Programme.

On the other hand, the Hong Kong Monetary Authority (HKMA) is developing the Commercial Data Interchange (CDI) to enable banks, with the authorisation by enterprises, to obtain more data of the enterprises from third party service providers for conducting credit assessment, thereby facilitating small and medium entrerprises to gain access to more convenient financing services. The HKMA is exploring the introduction of more commercial data sources, including data kept by Government departments, with a view to expanding the function of the CDI, and enriching the data-driven financial service ecosystem.

The Government understands that digitalisation is an inevitable trend in driving the economy towards high-quality development. To have a more comprehensive understanding of the whole economy and individual segments to enhance efficiency and promote innovative operation, we need to collect various data in the economic system, followed by digitalisation, organisation and analysis of these data. For enterprises, digitalisation can give impetus to upgrading and transformation, innovation stimulation, and competitiveness enhancement. Therefore, we plan to set up a "Digital Economy Development Committee" with an objective to accelerate the development of digital economy in Hong Kong and promote digital transformation across different industries. The committee members comprise industry practitioners, experts and scholars, and relevant government officials. Other details will be announced in due course.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0892)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding the promotion of technology transfer in universities and the development of the innovation and technology (I&T) industry, the Budget Speech has mentioned about the allocation of an additional matching funding of $48 million to the Technology Start-up Support Scheme for Universities under the Innovation and Technology Fund each year, the use of $5 billion to set up the Strategic Tech Fund under the Hong Kong Growth Portfolio of the Future Fund, and the setting aside of $10 billion for the development of life and health technology. In this connection, would the Government advise this Committee of the following:

(1) As the initiatives to strengthen the industrial chain of life and health technology mentioned in the Speech cover a number of government departments and public organisations, such as the Innovation and Technology Bureau, the Food and Health Bureau, the Development Bureau, and the Hong Kong Science and the Technology Parks Corporation, will the Government set up a steering group and publish a development blueprint for the industry on the development of I&T in Hong Kong so as to take up the work that include but not limited to co-ordination of the use of the funding of $10 billion?

(2) What are the amount of provision, capital management and operation mode of the InnoLife Healthtech Hub? As the Shenzhen Municipal Government has planned to establish a biomedicine innovation and research platform for Shenzhen and Hong Kong, will the InnoLife Healthtech Hub join and operate with this platform? If yes, what are the details? If no, what are the reasons?

Asked by: Hon WONG Yuen-shan (LegCo internal reference no.: 1)

Reply:

Consolidated reply to the various parts of the questions is as follows –

Supporting the development of innovation and technology (I&T) is a priority of the current-term Government. The Innovation and Technology Bureau (ITB) has been proactively promoting the related work, which involves co-ordinating with relevant bureaux/departments and organisations. Among these, with a view to promoting multi-faceted collaboration in scientific research and development of industries, thereby developing Hong Kong into a major research and development (R&D) hub in this field, the Government has announced in the 2022-23 Budget to earmark $10 billion to provide more comprehensive support in the longer run, including hardware, talent, clinical trials and data application, for the development of life and health scientific research in Hong Kong so as to enhance our capacity and capability in this area. The support includes setting up the "InnoLife Healthtech Hub" in the Hong Kong-Shenzhen Innovation and Technology Park (HSITP). With 16 laboratories related to life and health sciences under "*InnoHK* Research Clusters" and 8 relevant State Key Laboratories as basis, the InnoLife Healthtech Hub will pool together top-notch research teams from all over the world and focus our efforts on R&D work as well as global research collaboration in the field of life and health sciences. Adjacent to Shenzhen, the location of the HSITP also facilitates R&D collaboration of the two places.

At the early stage of commissioning, the InnoLife Healthtech Hub may continue its operation in a distributed mode locating in the Hong Kong Science Park and various universities. It will then officially move into the HSITP upon the gradual completion of the first batch of development. With the Government's injection of HK$32.5 billion for the supporting infrastructural facilities and Batch 1 development of the HSITP, it is expected that the Batch 1 development will be completed by phases from late 2024 onwards. The Government is studying the establishment and future operation of the InnoLife Healthtech Hub, including the resources required and how to achieve synergy with Shenzhen in scientific research and development of industries in the field of life and health sciences.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0917)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in paragraph 127 of the Budget Speech that the Government will introduce measures for enriching our local talent pool, which include providing training to talent and enhancing the skills, knowledge and creativity of our manpower resources. Would the Government advise this Committee of the following:

Regarding providing training to talent for the innovation and technology industry as stated in the Budget Speech, please set out the relevant expenditure items and their amounts.

Asked by: Hon WONG Yuen-shan (LegCo internal reference no.:5)

Reply:

The Government has been adopting a multi-pronged approach to enlarging the innovation and technology (I&T) talent pool through attracting, nurturing and retaining talents with a series of initiatives, many of which have been rolled out or enhanced in recent years. The progress of the measures and the amounts involved are as follows:

- the "IT Innovation Lab in Secondary Schools" Programme and "Knowing More About IT" Programme were launched in 2020 and 2021 respectively to provide funding support for secondary and primary schools for organising information technology-related extra-curricular activities. Up to now, these two programmes have received applications from more than 460 schools with total approved funding exceeding $150 million;

- the STEM Internship Scheme launched in 2020 has been regularised from 2021, benefitting over 4 700 university students with a total funding of about $110 million so far;

- the eligibility for the Research Talent Hub was extended in 2021 to include holders of a bachelor's or master's degree in a science, technology, engineering and mathematics (STEM)-related discipline awarded by a well-recognised non-local institution[1]. More than 6 200 research talents have been employed under this scheme in the past 5 years and the total funding is about $2.8 billion;

- the Innovation and Technology Scholarship subsidises outstanding university students to take part in overseas exchange, local internships, mentorship programmes, etc., annually, with a view to nurturing future leaders in the I&T sector. It has benefited 275 universities students as at end-2021;

- the Global STEM Professorship Scheme, introduced in 2021, supports universities in recruiting internationally renowned I&T scholars and their teams to conduct research and teaching activities in Hong Kong. This scheme has supported over 60 outstanding scholars in the first two rounds and the scholars and their teams are gradually arriving in Hong Kong;

- the Reindustrialisation and Technology Training Programme (RTTP) was launched in August 2018 to subsidise staff of local companies to receive training in advanced technologies on a matching basis. So far, the RTTP has subsidised over 8 600 trainees to participate in over 11 400 training sessions with total funding exceeding $83 million;

- the Technology Talent Admission Scheme launched in 2018 handles applications that involve the admission of non-local talent to undertake research and development work in Hong Kong expeditiously, covering 13 technology areas[2]. Up to end-February 2022, 614 quotas were approved by the Innovation and Technology Commission and 283 visas or entry permits have been issued for them by the Immigration Department; and

- the first Talent List of Hong Kong was drawn up in 2018, with a view to attracting high quality talent in an effective and focused manner to support Hong Kong's development into a high value-added and diversified economy. Upon the review in 2021, the list sets out more explicitly the scope of some professions to include experts of Medical and Healthcare Sciences, Microelectronics, Integrated Circuit Design, Arts Technology, etc.

It is equally important to continually improve the ancillary facilities for I&T talent working and living in Hong Kong. The InnoCell in the Hong Kong Science Park, completed at the end of 2020, provides around 500 residential units as living and collaborative space to promote interactions and exchanges among I&T talent. As at end February 2022, its occupancy rate is about 74%. When developing flagship I&T infrastructure (e.g. the Hong Kong-Shenzhen Innovation and Technology Park which will become part of the San Tin Technopole), we will also provide a comprehensive range of ancillary facilities including various types of accommodations.

Looking forward, this year's Budget has earmarked $10 billion to further promote the development of life and health technology, including hardware, research talents, clinical trials and data application, with the aim of enabling institutions, including universities, to enhance their capacity and capability in this area. Furthermore, the InnoLife Healthtech Hub under planning will also pool together top-notch research teams from all over the world for research collaboration. Meanwhile, the Government will double the maximum annual funding

support under the Innovation and Technology Fund for the 16 State Key Laboratories in Hong Kong and 6 Hong Kong Branches of Chinese National Engineering Research Centres up to $440 million in total, so that they can have more resources to carry out various tasks, which include nurturing local talents, attracting more local and non-local I&T talents to come to Hong Kong, and further their co-operation and exchanges with institutions in the Mainland.

A vibrant I&T ecosystem is a crucial driving force for attracting talent to come and stay for development in Hong Kong. The Government will continue with its efforts in developing Hong Kong into an international I&T hub, as well as review and enhance different measures on I&T talent in a timely manner.

- End –

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[1] Well-recognised non-local institution refers to one of the top 100 institutions for STEM-related subjects in the latest Quacquarelli Symonds World University Rankings, the Academic Ranking of World Universities and the Times Higher Education World University Rankings.

[2] Include artificial intelligence, biotechnology, cybersecurity, data analytics, financial technologies, material science, robotics, 5G communications, digital entertainment, green technology, integrated circuit design, Internet-of-Things and microelectronics.

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0672)

Head: (135) Government Secretariat: Innovation and Technology Bureau

Subhead (No. & title): ()

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology (Ms Annie CHOI)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Budget has mentioned many times that the total financial expenditure related to the Innovation and Technology Fund financial amounts to $10 billion and that over $130 billion has been invested in innovation and technology (I&T) development. Has the Government reviewed the mode of operation and the overall effectiveness of I&T related funding? How does the Government allocate I&T related funding in a precise manner in consideration of the market and national development strategy, in particular the development of Guangdong-Hong Kong-Macao Greater Bay Area (the Greater Bay Area), including the financial support to the I&T enterprises established by Hong Kong people in the Greater Bay Area?

Asked by: Hon YIM Kong (LegCo internal reference no.: 6)

Reply:

Supporting the development of innovation and technology (I&T) is a priority focus of the current-term Government. Our efforts in recent years have gradually achieved results. The number of start-ups increased from about 1 000 in 2014 to about 4 000 in 2021 and the amount of venture capital investment significantly rose from $1.24 billion to more than $40 billion in the same period. We have also witnessed the birth of over 10 unicorns. All these demonstrated the growing vibrancy of our I&T ecosystem.

The Government has all along been offering comprehensive support to different stakeholders in the I&T ecosystem, such as research and development (R&D) institutions, technology enterprises (including start-ups) and I&T talent, through various kinds of funds and funding schemes. The mode of operation of the funds and funding schemes and their overall effectiveness are reviewed from time to time.

The Innovation and Technology Fund (ITF), established in 1999, is administered by the Innovation and Technology Commission (ITC). The ITF has all along been financing projects that contribute to I&T upgrading in our manufacturing and service industries to

promote the long-term development of Hong Kong. Currently, there are 17 funding schemes under the ITF, each having its own objective, scope and modus operandi, in supporting five I&T areas, namely supporting R&D, facilitating technology adoption, nurturing I&T talent, supporting technology start-ups, and fostering an I&T culture. In addition to funding schemes, the ITF funds, in full or in part, the operating expenditure of R&D Centres, Technology Transfer Offices of universities and laboratories (including State Key Laboratories, Hong Kong Branches of the Chinese National Engineering Research Centres and the research centres/laboratories in the "*InnoHK* research clusters") to enable them to carry out more R&D work and technology transfer, or commercialise their R&D outcomes. Since its introduction two decades ago, the ITF has made significant contributions to the local I&T development by nurturing numerous R&D talent and start-ups, delivering commercialised R&D results, as well as attracting substantial private investment. These are elements essential in a vibrant I&T ecosystem, laying a solid foundation for Hong Kong's development into an international I&T hub as supported under the 14th Five-Year Plan.

For investment funds, the Innovation and Technology Venture Fund (ITVF) under the ITF aims to encourage venture capital (VC) investment in local I&T start-ups, by co-investing with co-investment partners (CPs) at a matching ratio of approximately 1 (Government): 2 (CPs). At present, the ITVF has selected a total of 11 VC funds as CPs. As at the end of February 2022, the ITVF has invested more than $180 million in 23 start-ups, covering business areas in supply chain management, e-commerce, financial technology, biotechnology and artificial intelligence, etc., and attracted more than $1.5 billion of private investment. Some of the start-ups also operate business or conduct R&D in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). To invest in more potential local I&T start-ups, the ITC has invited a new round of applications from VC funds to become CPs at the end of October 2021 and preliminary assessment has already commenced.

Besides, the Hong Kong Science and Technology Parks Corporation (HKSTPC) and Cyberport have also established the Corporate Venture Fund (CVF) and Cyberport Macro Fund (CMF) respectively, with a size of $600 million and $400 million, to co-invest with angel investors or VC funds, etc., in start-ups, which are supported by the HKSTPC and Cyberport, on a matching basis with a view to encouraging more private investment in local I&T start-ups. As at the end of February 2022, the CVF has invested around $277.2 million in 22 start-ups, attracting over $4.3 billion of private investment, while the CMF has invested more than $168 million in 21 companies, attracting over $1.466 billion of private investment.

The 2022-23 Budget has announced to further increase the funding allocated to the Hong Kong Growth Portfolio by $10 billion, of which $5 billion will be used to set up the Strategic Tech Fund, aiming to invest in technology enterprises of strategic value with considerable scale and development potential. Relevant preparations are underway. We are open to the technology areas for investment. As for the remaining $5 billion additionally allocated to the Hong Kong Growth Portfolio, it will be used to set up a GBA Investment Fund focusing on projects in the GBA that can benefit Hong Kong, including a project that would be undertaken by a Hong Kong-based company, or a company with investment in the GBA, including projects conducive to the development of I&T industry.

In addition, to further support start-ups in gaining a foothold in the GBA, the GBA InnoAcademy and GBA InnoExpress set up by the HKSTPC at its branch in Shenzhen will

commence operation within this year. The HKSTPC will also work with the local universities which have campuses in the GBA to establish incubator networks in those campuses.

To act in concert with national development in life and health sciences and leverage the strength of Hong Kong at the same time, the Government has announced in the 2022-23 Budget to earmark $10 billion to provide more comprehensive support in the long run, including hardware, talent, clinical trials and data application, for the development of life and health scientific research in Hong Kong so as to enhance our capacity and capability in this area. The support includes setting up the "InnoLife Healthtech Hub" in the Hong Kong-Shenzhen Innovation and Technology Park. With the 16 life and health-related laboratories in the *InnoHK* research clusters and 8 relevant State Key Laboratories as the basis, the InnoLife Healhtech Hub can pool together top-notch research teams from all over the world and focus our efforts on R&D work as well as global research collaboration in the field of life and health sciences.

The Government will continue to review the operation of I&T related funds and roll out enhancement measures to tie in with international trend of technological developments and national initiatives, such as the development of the GBA into an international I&T hub.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0536)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (6) Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

In 2022-23, the Hong Kong Productivity Council will continue to provide digitalisation and cyber security support for enterprises to migrate to Enterprise 4.0 and engage in digital transformation for sustainable development. Will the Government advise on:

1) whether there are any plans to expedite the efforts in supporting digitalisation of small and medium enterprises (SMEs) in the light of the present epidemic; if yes, the details; if not, the reasons; and

2) as Covid-19 has ravaged the world for over 2 years, SMEs are facing operating difficulties and no extra resources can be deployed for digitalisation. In this connection, has the Government provided financial assistance to enterprises for this purpose? If yes, what are the details and the amount involved?

Asked by: Hon CHAN Hok-fung (LegCo internal reference no.: 10)

Reply:

The coronavirus disease 2019 pandemic has highlighted the importance of developing and promoting technology application. Making use of e-commerce has become more important. This has created new opportunities for the innovation and technology (I&T) sector, at the same time expediting digitalisation of the city. A consolidated reply to the questions is as follows:

On the front of expediting the efforts in supporting digitalisation of small and medium enterprises (SMEs), the Hong Kong Productivity Council (HKPC) will continue to provide technical support to SMEs through consultancy services, online forums and training, etc. A series of services include:

(a) introducing the Digital Transformation Starter Kit that offers handy packages of selected information technology (IT) software and solutions that fit the business needs of SMEs, so as to help them embark on digital transformation;
(b) assisting SMEs to streamline work processes, minimise labour-intensive processes and enhance operational efficiency through the adoption of big data consultancy, service robots, Internet of Things, smart operation and system integration, etc.;
(c) organising online forums to help enterprises adapt to new modes of business operation through digital technologies and online business, and explore new clientele despite geographic constraints; and
(d) switching the HKPC Academy courses and activities to online mode during the pandemic to meet the SMEs' demand of enhancing the technology knowledge and digital skills of their employees. The HKPC Academy is opening its online learning platform for free from 25 March to 8 April to equip individual learners and enterprise employees with futureskills.

To assist SMEs to get well-prepared for digital transformation in the post-pandemic times, the HKPC offers half-price concessions to SMEs from March to September 2022. The offer applies to eligible consultancy and testing services, as well as venue charges.

Meanwhile, the Distance Business (D-Biz) Programme and the Technology Voucher Programme (TVP) under the Innovation and Technology Commission (ITC) have rendered strong support to the digital transformation of SMEs. The time-limited D-Biz Programme aims to support enterprises to continue their business and provide services during the pandemic through the adoption of IT solutions. ITC has engaged the HKPC as the Secretariat of the D-Biz Programme. During the application period from 18 May to 31 October 2020, the D-Biz Programme received over 38 000 applications. All the vetting work was completed in January 2021. Of about 35 000 applications approved, over 25 740 applications have proceeded to implementation. Among them, about 95% are SMEs, involving a total funding of around $1.7 billion. As at mid-March 2022, over 20 700 applications have completed the projects. The funding needed for the implementation of the D-Biz Programme comes from the Anti-epidemic Fund, which is outside the scope of the Appropriation Bill or the estimates of the General Revenue Account.

As for the TVP, it is a regular programme which aims to support enterprises in using technological services and solutions to improve productivity, or upgrade or transform their business processes. Having regard to the operational experience and the industry's views, ITC further introduced a number of enhancements to the TVP in 2020. At present, three-quarters of the project cost with a cumulative funding of up to $600,000 will be funded for each approved project. As at end February 2022, 10 052 applications were approved under the TVP. Among them, about 95% are SMEs, with a total approved funding of about $1.26 billion. ITC welcomes enterprises to submit applications.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0417)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): (000) Operational expenses

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

In recent years, the Government has set up a number of funds to drive the development of innovation and technology in Hong Kong, which include the Innovation and Technology Fund for Better Living, the Applied Research Fund and the Innovation and Technology Fund. In this connection, will the Government please advise this Committee of the following:

(1) the balance, the amount of government injection, investment or other income and the total expenditure of the aforesaid funds in 2020-21;

(2) whether key performance indicators have been developed by the Government to review if the desired targets of the funds are met; if yes, the details; if not, the reasons for that; and

(3) in what ways the Government will promote the commercialisation and application of research and development results in 2022-23, with a view to creating economic value and improving people's quality of life?

Asked by: Hon CHAN Siu-hung (LegCo internal reference no.: 10)

Reply:

The information sought is provided as follows:

(1)

(A) Innovation and Technology Fund for Better Living (FBL)

The Innovation and Technology Bureau launched the $500 million FBL in 2017 to fund innovation and technology (I&T) projects which will make people's daily living more convenient, comfortable and safer, or address the needs of specific community groups. To enhance the flexibility in utilising the funds, the Finance Committee (FC) of the Legislative

Council (LegCo) approved in June 2021 to transfer the then remaining balance of about $425 million under the FBL to the Innovation and Technology Fund (ITF) and the FBL will continue to be administrated by the Innovation and Technology Commission (ITC). The balance, amount of government injection, investment or other incomes, and total amount of expenditure of the FBL in 2020-21 are as follows:

Financial year	Balance ($)	Commitment that has been approved yet pending disbursement ($)	Government injection ($)	Investment or other incomes ($)	Expenditure ($)
2020-21	430 million (note)	47.62 million	0	0	31.02 million

Note: The balance includes a total of $47.62 million of commitment that has been approved yet pending disbursement under the FBL. The grant will be disbursed according to the mechanism subject to the project progress.

(B) Applied Research Fund (ARF)

The ARF is a Government venture capital fund of $750 million set up in 1993. The Government reported the result of the review on the mode of operation of the ARF to the LegCo Panel on Commerce and Industry (the Panel) in 2005. With the consent of the Panel, the Government decided to gradually wind down the ARF and cease making new investments. The ARF has already returned $525 million to the Government previously. The balance, amount of government injection, investment or other incomes, and total amount of expenditure of the ARF in 2020-21 are as follows:

Financial year	Balance ($)	Government injection ($)	Investment or other incomes ($)	Expenditure ($)
2020-21	157 million	0	57.85 million (Note)	1.31 million

Note: Taking into account the disposal of financial assets, and a re-assessment of the fair value of the financial assets held by the ARF conducted by an independent appraisal company.

(C) ITF

The Government established the $5 billion ITF in 1999 to fund projects that contribute to technology upgrading in manufacturing and service industries and promote innovation. The following injections were approved by the FC:

(i) An injection of $5 billion was made into the ITF in February 2015, and two further injections of $2 billion each were made in June and July 2016 respectively to implement the "Midstream Research Programme for Universities" and the "Innovation and

Technology Venture Fund". The above total of $9 billion was transferred into the ITF in 2016-17;

(ii) An additional injection of $20 billion into the ITF was approved in July 2018, including $10 billion for supporting the continued operation of the schemes under the ITF and introducing various new initiatives, and another $10 billion for providing financial support to establish the *InnoHK* research clusters. The above total of $20 billion was transferred into the ITF in 2018-19;

(iii) An additional injection of $2 billion into the ITF was approved in May 2020 to set up the "Re-industrialisation Funding Scheme". The amount was transferred into the ITF in 2020-21; and

(iv) An injection of $9.5 billion into the ITF was approved in June 2021, of which $4.75 billion was injected in June 2021, and the injection of the remaining $4.75 billion is sought in the context of the Appropriation Bill 2022 and will be made into the ITF subject to the approval of the Bill.

The balance, amount of government injection, investment or other incomes, and total amount of expenditure of the ITF in 2020-21 are as follows:

Financial year	Balance ($ billion)	Commitment that has been approved yet pending disbursement ($ billion)	Government injection ($ billion)	Investment or other income ($ billion)	Expenditure ($ billion)
2020-21	23 (Note)	7	2	0.966	4.8

Note: The balance includes a total of $7 billion of commitment that has been approved yet pending disbursement under the ITF. The funding will be disbursed according to the mechanism subject to the project progress. Excluding the relevant amounts, the uncommitted balance is $16 billion.

(2)

Regarding the existing 17 funding schemes (including the FBL) under the ITF, the main indicators for assessing the performance of each funding scheme are listed in the Controlling Officer's Report of Head 155 – Government Secretariat: Innovation and Technology Commission. Each of the ITF funding schemes has its specific nature, objectives and target beneficiaries, and the ways and criteria for evaluating their effectiveness vary. On the whole, the funding schemes and research and development (R&D) institutions or laboratories under the ITF all accomplished their desired objectives last year, supporting the I&T development of Hong Kong in different aspects (such as supporting applied R&D, facilitating technology adoption, nurturing technology talent, supporting technology start-ups and fostering an I&T culture). The Government will report to the Panel in respect of the mode of operation of the ITF from time to time.

As the ARF is currently operated in a winding down mode, no performance indicators have been formulated.

(3)

ITC endeavours to promote and support applied R&D activities which can contribute to I&T upgrading in industry. In 2022-23, ITC will continue to fund applied R&D projects through the funding schemes under the ITF (including the Partnership Research Programme and the Enterprise Support Scheme) to promote transfer of technology outcomes. On the front of promoting technology adoption, the Public Sector Trial Scheme under the ITF supports local universities, R&D centres and technology companies to produce prototypes or samples of their R&D outcomes and/or conduct trials in the public sector for improving their products and moving towards the commercialisation stage.

The Technology Start-up Support Scheme for Universities (TSSSU) under the ITF has been supporting universities in setting up their own start-ups and commercialising their R&D results, with a view to creating economic value. It is proposed in the 2022-23 Budget that the amount of subsidy for each participating university under the TSSSU will be doubled to $16 million. In addition, ITC will promote not only new technology application and commercialisation through the 5 R&D Centres and the Hong Kong Productivity Council but also "re-industrialisation" as well, and improve the quality of life of the public.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0365)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in paragraph 57 of the Budget that the Financial Secretary will further increase the funding allocated to the Hong Kong Growth Portfolio (HKGP) under the Future Fund by $10 billion, of which $5 billion will be used to set up a new investment fund, namely the Strategic Tech Fund (Tech Fund). The Hong Kong Science and Technology Parks Corporation (HKSTPC) and the Cyberport will be invited to identify technology enterprises which are of strategic value to Hong Kong as well as investment opportunities conducive to enriching the innovation and technology (I&T) ecosystem. As for the remaining $5 billion, it will be used to set up a Greater Bay Area (GBA) Investment Fund, which will focus on investment opportunities in the GBA. In this connection, please advise on the following:

1. Will there be a breakthrough in the specific operation of the Tech Fund by replacing the current mode of appointing only fund managers with direct government investment or requiring fund managers to allocate a certain proportion of their fund investments to technology enterprises in Hong Kong and the GBA by other means? If yes, what are the specific details? If no, what are the reasons?

2. Are there plans to appoint new fund managers to tie in with the setting up of the Tech Fund? If yes, what are the requirements and criteria for selecting fund managers and the targeted number of fund managers to be appointed? What is the anticipated earliest time to set up the Tech Fund?

3. Has the Government provided specific guidelines for inviting the HKSTPC and the Cyberport to identify technology enterprises which are of strategic value to Hong Kong, including the definition of technology enterprises which are of strategic value, whether only local enterprises are eligible, and whether there are requirements on the total asset value as well as the areas of technology?

4. On enriching the I&T ecosystem, has the Government set targets of developing the I&T ecosystem? Has the Government fully reviewed the current problems of the existing I&T

ecosystem? If yes, what are the main problems involved and the short-, medium-, and long-term measures to be adopted?

5. What is the assessment of the overall performance of the HKGP since its establishment, including whether its original objectives have been achieved and its contribution to enhance Hong Kong's productivity and competitiveness? What are the specific objectives of the new Tech Fund and what is the anticipated number of technology enterprises which will receive investments from the fund in the coming year?

6. How many fund managers will be appointed as partners of the GBA Investment Fund? How will these fund managers be selected? Have specific objectives been set for the fund, including measures adopted and investment ratio of Hong Kong enterprises? What is the anticipated earliest time to set up the fund?

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 2)

Reply:

1 to 3 It was announced in the 2022-23 Budget that the funding allocated to the Hong Kong Growth Portfolio (HKGP) will be increased by $10 billion, of which $5 billion will be used to set up the Strategic Tech Fund (Tech Fund). The Tech Fund will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the innovation and technology (I&T) ecosystem in Hong Kong. The Government will invite the Hong Kong Science and Technology Parks Corporation and the Cyberport to identify investment opportunities, and the relevant preparatory work is underway. We are open to the technology areas in which investment will be made.

4 The current-term Government has invested over $130 billion in I&T development and launched a series of initiatives to enhance the I&T ecosystem. The satisfactory growth in many I&T-related figures in recent years reflects that various I&T initiatives are gradually taking effect, and that the I&T ecosystem in Hong Kong has become increasingly vibrant and the I&T atmosphere consistently enhanced. For example, the number of start-ups rose significantly from around 1 000 in 2014 to around 4 000 in 2021, and that of start-up employees increased from some 2 400 to some 14 000. We have also witnessed the birth of over 10 unicorns in the same period; venture capital investment in Hong Kong also substantially increased from around $1.2 billion to over $40 billion; and Hong Kong has now become Asia's largest and the world's second largest fundraising hub for biotechnology companies. The Innovation and Technology Bureau will continue to review the I&T ecosystem from time to time and formulate suitable policies to facilitate on multiple fronts the continued development of the local I&T industry.

5 and 6 After consulting the Financial Services and the Treasury Bureau, the reply to parts 5 and 6 of the question is as follows:

The vision of the HKGP is to make strategic investments in projects with a Hong Kong nexus, with a view to reinforcing Hong Kong's status as a financial, commercial and I&T centre and raising Hong Kong's productivity and competitiveness in the long run, while also seeking reasonable risk-adjusted returns. However, since private equity projects are usually long-term investments which would take time to realise their return, it would be more appropriate to appraise its outcome over a longer-term horizon. At the current stage, it is difficult to estimate the number of enterprises to be invested under the Tech Fund in the coming year.

The Greater Bay Area (GBA) Investment Fund will focus on certain projects in the GBA that can benefit Hong Kong, including projects that are undertaken by Hong Kong-based companies and companies that make investments in the GBA. The Investment Committee of the HKGP will formulate selection criteria in accordance with the investment guidelines specified by the Governance Committee, as well as specific policy objectives and investment directions of the GBA Investment Fund. Apart from those industries (including real estate and the tobacco industry) that the Expert Group advised earlier that the HKGP should not invest in, the Government does not rule out any projects from other industries meeting the relevant investment guidelines, and is now taking forward the preparatory work in relation to the GBA Investment Fund.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0371)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary mentioned in paragraph 58 of the Budget that in order to help universities further realise their research and development (R&D) outcomes, the amount of subsidy for each university would be doubled to $16 million. The increased subsidy would be provided to start-ups of universities with private investments on a matching basis of one to one. Each start-up might receive an annual subsidy of up to $1.5 million for a maximum of three years. In this connection, please advise on:

1. the respective numbers of start-ups currently set up by each university; the scopes of R&D work, projects carried out, R&D outcomes and R&D expenditures of each start-up; and the respective numbers of R&D outcomes successfully commercialised by each university in 2021-22 and the areas these products fell into;

2. in 2022-23, the respective numbers of start-ups expected to be set up by each university and the scopes of R&D work they will primarily engage in as well as the expenditures involved; and the numbers of R&D outcomes developed by the universities to be commercialised and the areas these products fell into;

3. whether the Government will help the universities explore private investment opportunities in regard to fund matching; if yes, the way the Government will identify investment targets and the specific details; the numbers of expected and targeted private investment units participating in the matching exercise; and whether the Government will increase the amount of subsidy if the matching fund exceeds $16 million; and

4. whether the Government will increase the resources to procure more R&D products developed by local universities in 2022-23, apart from increasing the subsidy for starts-ups set up by universities; if yes, the expenditures involved and the target products and numbers to be procured; if not, the reasons.

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 8)

Reply:

1&2. The Innovation and Technology Commission (ITC) has been implementing the Technology Start-up Support Scheme for Universities (TSSSU) since 2014 to encourage university teams to start businesses and commercialise their research and development (R&D) results. Each start-up may receive funding for no more than 3 years. As participating universities recommend start-ups to apply for the TSSSU after their assessment and selection each year, ITC does not have records of the number or information of all the start-ups under each university. For TSSSU, since its implementation in 2014 and up to the financial year 2021-22, a total of 334 start-ups have already been funded with a total approved funding amount of $257 million. The number of start-ups funded and the funding amount for each university are set out in the following table:

University that submitted recommendations	**Number of start-ups funded**	**Total funding amount approved ($ million)**
The University of Hong Kong	67	44
The Chinese University of Hong Kong	60	43.47
City University of Hong Kong	47	44
The Hong Kong University of Science and Technology	78	43.5
Hong Kong Baptist University	20	43.23
The Hong Kong Polytechnic University	62	38.6
Total	**334**	**256.8**

According to the information provided by the universities, as at the financial year 2020-21, the 293 start-ups funded mainly engaged in the technology areas of information and communications technology, biotechnology and electronics. Among them, more than 190 start-ups (nearly 70%) have already commercialised their R&D outcomes and nearly 300 products or services have already been successfully rolled out in the market; 176 (60%) have generated around 1 500 intellectual property rights; and 148 (51%) have even received a total income amounting to $150 million. The universities will collect and verify the information in relation to the funded start-ups in 2021-22 after the end of the financial year and subsequently submit it to ITC. As participating universities are not required to submit to ITC the number or information of the start-ups to be set up in the coming financial year, we do not have the breakdown of the figures as requested in question 2.

It is announced in this year's Budget that the annual amount of subsidy for each participating university, funded by the TSSSU under the Innovation and Technology Fund, would be doubled from $8 million to $16 million, involving a total annual subsidy of $96 million. The additional subsidy will be provided to university start-ups with private investments on a

matching basis of one to one. Each start-up can receive an annual subsidy of up to $1.5 million for an additional maximum period of 3 years, meaning that each start-up may receive subsidies of up to 6 years. It is believed that more start-ups will be benefitted, which in turn will be conducive to the commercialisation of R&D results by universities.

3. For fund matching, universities will assist their start-ups to explore private investment opportunities and the relevant application procedures are similar to the existing ones under the TSSSU. The universities will select suitable start-up teams and propose the amount of the matching fund in accordance with their assessment mechanisms, and make recommendations to ITC for the latter's approval and funding allocation.

Besides, ITC has been providing an annual subsidy of $8 million to the technology transfer offices of universities in order to support the universities to organise activities for promoting entrepreneurship and actively connecting with industry players, investors, public and private incubators/accelerators, as well as the local and overseas R&D communities. Mentorship programmes have also been implemented by individual universities to strengthen the connection between the institutions and the industries, and promote the realisation of R&D outcomes.

4. In support of innovation, the Government introduced a new government procurement policy in April 2019 by raising the technical weighting in tender assessment so that tenders with innovative suggestions will stand a better chance of winning government contracts. We have also enhanced exchange with the industries and disseminated relevant procurement information with a view to facilitating I&T start-ups and small and medium-sized enterprises to participate in government procurement. As the procurement work of individual departments are undertaken by their own Controlling Officers in accordance with the Government's procurement policy, we are unable to provide information in relation to government department's procurement of R&D products developed by local universities.

In fact, the Government has been actively encouraging government departments and the public sector to adopt I&T solutions developed by the local I&T sector (including universities and start-ups), acting as a focal point for technology collaboration among the Government, industry, academia and research sectors, and driving the commercialisation of R&D results. As at end February 2022, the Public Sector Trial Scheme has supported a total of 375 projects, involving a funding of about $716 million with more than 180 organisations participating in over 510 trials. The thematic website of the Smart Government Innovation Lab has published about 140 business needs from different government departments. The industry has already submitted more than 390 technology solutions and product suggestions in response to the relevant issues. In 2021-22 (as at end February 2022), the Government has already matched 20 business needs of departments with the solutions offered by local I&T sector, as well as arranged testing and proof-of-concept. The E&M InnoPortal has collected about 380 I&T wishes and about 870 I&T solutions. More than 140 I&T projects are under trial at different stages, and among which about 80 projects have been completed. The above-mentioned measures are conducive to the creation of business opportunities for the local industries and fostering the popularisation of technology.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0224)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (2) Promotion of Technological Entrepreneurship

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in the Budget that the Technology Start-up Support Scheme for Universities (TSSSU) under the Innovation and Technology Fund (ITF) has been supporting universities in setting up their own start-ups and commercialising their research and development (R&D) results, with a view to creating economic values. In this connection, will the Government inform this Committee of the following:
1. the names of the projects funded, the universities concerned and the funding amount granted by the TSSSU under the ITF in the past 3 years; and
2. the effectiveness in commercialising the R&D results and creating economic values; as well as the specific amount created.

Asked by: Hon CHOW Man-kong (LegCo internal reference no.: 1)

Reply:

1. The Innovation and Technology Commission (ITC) has been implementing the Technology Start-up Support Scheme for Universities (TSSSU) since 2014 to encourage university teams to set up start-ups and commercialise their research and development (R&D) results. Each start-up may receive funding for no more than 3 years. From the financial years 2019-20 to 2021-22, a total funding of $143 million was provided to 178 start-ups recommended by 6 universities under the TSSSU, the details of which are set out at Annex. As the funding under the TSSSU is on a start-up basis, no names of the R&D projects can be provided in the table.

2. According to the information provided by the universities for the financial years from 2018-19 to 2020-21, of the 174 funded start-ups, 112 (64%) had commercialised their R&D results with nearly 200 products or services successfully rolled out in the market; 104 (60%) had generated around 720 intellectual property rights; and 89 (51%) had even received a total income amounting to $115 million. In addition, these funded start-ups had created over 1 000 jobs/training opportunities in this 3-year period, comprising 65% technical positions

that facilitate the nurturing of innovation and technology talents. The universities will collect and verify the information in relation to the funded start-ups for 2021-22 after the end of the financial year and subsequently submit it to ITC.

It is announced in this year's Budget that the annual amount of subsidy for each participating university, funded by the TSSSU under the Innovation and Technology Fund, would be doubled from $8 million to $16 million, involving a total annual subsidy of $96 million. The additional subsidy will be provided to university start-ups with private investments on a matching basis of one to one. Each start-up can receive an annual subsidy of up to $1.5 million for an additional maximum period of 3 years, meaning that each start-up may receive subsidies of up to 6 years.

- End -

Annex

Technology Start-up Support Scheme for Universities

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019-20	2020-21	2021-22	
1	The University of Hong Kong	AI Academy Limited	/	150	/	150
2	The University of Hong Kong	AICity Technology Holding Limited	460	390	200	1,050
3	The University of Hong Kong	AlhenaBio Limited	/	390	/	390
4	The University of Hong Kong	archiREEF Limited	/	/	300	300
5	The University of Hong Kong	Brain Investing Limited	250	200	/	450
6	The University of Hong Kong	Clear Robotics Limited	/	/	300	300
7	The University of Hong Kong	CYC Motor Limited	360	/	/	360
8	The University of Hong Kong	Datax Limited	250	200	/	450
9	The University of Hong Kong	DigiDent AI Limited	260	250	200	710
10	The University of Hong Kong	EchoX Technology Limited	110	50	/	160
11	The University of Hong Kong	Farmacy HK Limited	250	250	/	500
12	The University of Hong Kong	GoldPorp Pharma Limited	/	/	1,000	1,000
13	The University of Hong Kong	Hestia Technology Limited	/	200	/	200
14	The University of Hong Kong	High Performance Solution Limited	730	520	/	1,250
15	The University of Hong Kong	Hollo Limited	/	/	1,000	1,000
16	The University of Hong Kong	Hong Kong Univisual Intelligent Technology Limited	/	300	200	500
17	The University of Hong Kong	HydroSoft Limited	/	300	300	600
18	The University of Hong Kong	InterLitho Technology Limited	730	530	1,000	2,260
19	The University of Hong Kong	Kin Technology Limited	110	100	/	210
20	The University of Hong Kong	Levobio Limited	/	300	300	600
21	The University of Hong Kong	Lifespans Limited	580	/	/	580

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
22	The University of Hong Kong	Llewellyn and Partners Company Limited	/	300	300	600
23	The University of Hong Kong	Mega Whiz Education Limited	110	/	/	110
24	The University of Hong Kong	MetTactics Limited	/	/	1,000	1,000
25	The University of Hong Kong	Momentus Robotics Limited	/	390	1,000	1,390
26	The University of Hong Kong	Nanopath Technologies Limited	/	100	/	100
27	The University of Hong Kong	Next Insurtech Limited	250	250	/	500
28	The University of Hong Kong	Novel Sonics Limited	460	/	/	460
29	The University of Hong Kong	Ossfila Technology Limited	110	250	/	360
30	The University of Hong Kong	PhrmaSec Limited	260	500	/	760
31	The University of Hong Kong	Physight Limited	460	300	/	760
32	The University of Hong Kong	Progaze Technology Company Limited	/	/	200	200
33	The University of Hong Kong	QuantumFabless Limited	730	390	/	1,120
34	The University of Hong Kong	Regtics Limited	110	/	/	110
35	The University of Hong Kong	Schotar Company Limited	/	/	200	200
36	The University of Hong Kong	Serinno Holdings Limited	490	300	300	1,090
37	The University of Hong Kong	Sherpa Careers Limited	/	100	/	100
38	The University of Hong Kong	Soonlution Technology Limited	/	150	/	150
39	The University of Hong Kong	Spiral Capital Limited	110	/	/	110
40	The University of Hong Kong	Swifthon Technology Consultancy Company Limited	110	200	/	310
41	The University of Hong Kong	Tale Limited	360	/	/	360
42	The University of Hong Kong	Ubiquity Diagnostics Limited	/	390	/	390
43	The University of Hong Kong	Vox Solutions Limited	/	/	200	200
44	The University of Hong Kong	Weavatools Limited	360	250	/	610

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
45	The Chinese University of Hong Kong	A-Biotech (Hong Kong) Company Limited	500	/	/	500
46	The Chinese University of Hong Kong	Advanced Plasmon Technologies Limited	600	400	200	1,200
47	The Chinese University of Hong Kong	AIROTA Diagnostics Limited	/	500	/	500
48	The Chinese University of Hong Kong	Bay Jay Ray Technology Limited	700	400	200	1,300
49	The Chinese University of Hong Kong	Beth Bioinformatics Company Limited	/	500	350	850
50	The Chinese University of Hong Kong	BinoViz Limited	400	300	/	700
51	The Chinese University of Hong Kong	Capmi Technology Limited	/	300	350	650
52	The Chinese University of Hong Kong	Cornerstone Robotics Limited	/	500	350	850
53	The Chinese University of Hong Kong	Dragon Way Technology Limited	400	/	/	400
54	The Chinese University of Hong Kong	EggLogics Limited	/	500	350	850
55	The Chinese University of Hong Kong	Foresight Language and Learning Solutions Limited	400	300	/	700
56	The Chinese University of Hong Kong	GenieBiome Limited	/	500	400	900
57	The Chinese University of Hong Kong	Gnetwork Limited	400	300	/	700
58	The Chinese University of Hong Kong	Golden Biotech Limited	/	/	550	550
59	The Chinese University of Hong Kong	Han-Peng Assisted Reproductive Technology Limited	/	/	500	500
60	The Chinese University of Hong Kong	Hopebotics Limited	/	/	400	400

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
61	The Chinese University of Hong Kong	Hynovel Biotech Limited	/	500	350	850
62	The Chinese University of Hong Kong	Illuminatio Medical Technology Limited	/	/	550	550
63	The Chinese University of Hong Kong	Imsight Medical Technology Company Limited	400	/	/	400
64	The Chinese University of Hong Kong	Intelligent Sensing Limited	300	/	/	300
65	The Chinese University of Hong Kong	LaSense Technology Limited	/	700	400	1,100
66	The Chinese University of Hong Kong	LOOP Sports Technology Company Limited	300	300	200	800
67	The Chinese University of Hong Kong	Luquos Energy Limited	/	/	500	500
68	The Chinese University of Hong Kong	Mechawaves Manufacturing Limited	500	400	200	1,100
69	The Chinese University of Hong Kong	MicroMag Healthcare Limited	/	/	500	500
70	The Chinese University of Hong Kong	MTcure Biotech Limited	500	400	300	1,200
71	The Chinese University of Hong Kong	Mushroom-X Limited	400	200	200	800
72	The Chinese University of Hong Kong	n-hop technologies Limited	700	400	300	1,400
73	The Chinese University of Hong Kong	Shape Driven Tech Limited	700	400	/	1,100
74	The Chinese University of Hong Kong	Smarteye Tech Limited	300	/	/	300
75	The Chinese University of Hong Kong	Targene Biotech (Hong Kong) Limited	/	200	350	550
76	The Chinese University of Hong Kong	TiFi Technologies Limited	/	/	500	500

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
77	The Chinese University of Hong Kong	WIT Enterprises Limited	500	/	/	500
78	City University of Hong Kong	6J Biotechnology (Hong Kong) Limited	820	1,000	/	1,820
79	City University of Hong Kong	AI Guided Limited	/	300	600	900
80	City University of Hong Kong	AI Motion Sports Limited	400	440	800	1,640
81	City University of Hong Kong	Alternis Medical Limited	/	300	/	300
82	City University of Hong Kong	AmaZinc Energy Limited	820	570	800	2,190
83	City University of Hong Kong	Baomatics Limited	200	/	/	200
84	City University of Hong Kong	Beon Ad Limited	350	/	/	350
85	City University of Hong Kong	Cellomics International Limited	820	900	800	2,520
86	City University of Hong Kong	Freedrop Limited	350	/	/	350
87	City University of Hong Kong	GenEditBio Limited	/	440	/	440
88	City University of Hong Kong	Genie6 Technology Limited	500	300	700	1,500
89	City University of Hong Kong	Herbsphere Biotech Limited	/	300	/	300
90	City University of Hong Kong	HYDD Technology Limited	200	/	/	200
91	City University of Hong Kong	ITsci Company Limited	/	530	500	1,030
92	City University of Hong Kong	J&K Brassiere Company Limited	500	/	/	500
93	City University of Hong Kong	Medi Biotech Limited	720	440	800	1,960
94	City University of Hong Kong	MindAmp Limited	450	300	/	750
95	City University of Hong Kong	PATech Limited	450	440	600	1,490
96	City University of Hong Kong	Portalyze Point of Care Limited	710	1,000	800	2,510
97	City University of Hong Kong	VBT Biotechnology Limited	/	/	500	500
98	City University of Hong Kong	Xiaomo Biotech Limited	710	300	600	1,610
99	City University of Hong Kong	Zeta Motion Limited	/	440	500	940

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
100	The Hong Kong University of Science and Technology	Allos Limited	/	/	300	300
101	The Hong Kong University of Science and Technology	Atom Semiconductor Technologies Limited	/	/	150	150
102	The Hong Kong University of Science and Technology	Centauri Optics Limited	/	800	150	950
103	The Hong Kong University of Science and Technology	Cognitact Limited	/	/	590	590
104	The Hong Kong University of Science and Technology	Dayta AI Limited	400	/	/	400
105	The Hong Kong University of Science and Technology	Deltron Intelligence Technology Holdings Limited	/	800	/	800
106	The Hong Kong University of Science and Technology	D-Engraver Limited	400	/	/	400
107	The Hong Kong University of Science and Technology	Direct Drive Technology Limited	600	300	/	900
108	The Hong Kong University of Science and Technology	eFlexPV Limited	800	400	/	1,200
109	The Hong Kong University of Science and Technology	ETH Smart Contract Tech Ecosystem Limited	400	/	/	400
110	The Hong Kong University of Science and Technology	Gabi Education Limited	/	400	150	550
111	The Hong Kong University of Science and Technology	Gense Technologies Limited	300	/	/	300
112	The Hong Kong University of Science and Technology	Global Medical Biotech Limited	/	/	590	590
113	The Hong Kong University of Science and Technology	Hong Kong Xianxing Holdings Limited	/	/	300	300
114	The Hong Kong University of Science and Technology	Hongkong Oasis Future Technology Development Company Limited	400	/	/	400
115	The Hong Kong University of Science and Technology	Horizon Biochip Limited	800	300	/	1,100

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
116	The Hong Kong University of Science and Technology	Infitech Limited	200	/	/	200
117	The Hong Kong University of Science and Technology	Innoair Technology Limited	/	/	590	590
118	The Hong Kong University of Science and Technology	Intelligent Design Technology Limited	/	/	590	590
119	The Hong Kong University of Science and Technology	Intensel Limited	/	/	300	300
120	The Hong Kong University of Science and Technology	iPV Limited	/	800	150	950
121	The Hong Kong University of Science and Technology	Levolution Technology Limited	800	400	/	1,200
122	The Hong Kong University of Science and Technology	Licool Materials Tech Limited	/	800	/	800
123	The Hong Kong University of Science and Technology	Lisee Technology Corporation Company Limited	300	/	/	300
124	The Hong Kong University of Science and Technology	Luk Advisor Limited	/	/	300	300
125	The Hong Kong University of Science and Technology	Ocean Science (Hong Kong) Limited	200	/	/	200
126	The Hong Kong University of Science and Technology	Oxpecker Labs Limited	300	/	/	300
127	The Hong Kong University of Science and Technology	PanopticAI Limited	/	/	590	590
128	The Hong Kong University of Science and Technology	Perspectivar Technology International Limited	/	500	/	500
129	The Hong Kong University of Science and Technology	PhoMedics Limited	/	/	590	590
130	The Hong Kong University of Science and Technology	Point Fit Technology Limited	/	/	590	590
131	The Hong Kong University of Science and Technology	Raysolve Technology Company Limited	/	800	/	800

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
132	The Hong Kong University of Science and Technology	Roumei (Hong Kong) Technology Limited	/	/	590	590
133	The Hong Kong University of Science and Technology	Set Sail Venture Limited	200	/	/	200
134	The Hong Kong University of Science and Technology	Sinocore Biotechnology Limited	500	/	/	500
135	The Hong Kong University of Science and Technology	Smart Sensing Limited	/	/	590	590
136	The Hong Kong University of Science and Technology	SOCIF Limited	/	500	/	500
137	The Hong Kong University of Science and Technology	Solid-X Limited	/	/	590	590
138	The Hong Kong University of Science and Technology	SPES Tech Limited	800	400	/	1,200
139	The Hong Kong University of Science and Technology	Syncord 3D Technology Limited	/	800	/	800
140	The Hong Kong University of Science and Technology	TREE BEAR Limited	/	/	300	300
141	The Hong Kong University of Science and Technology	AUISET Biotechnology Company Limited	600	/	/	600
142	Hong Kong Baptist University	BP InnoMed Limited	1,060	1,500	1,200	3,760
143	Hong Kong Baptist University	CD133 Innovation Limited	1,060	1,200	/	2,260
144	Hong Kong Baptist University	CP2Joy IT Company Limited	/	290	270	560
145	Hong Kong Baptist University	Crimson Vision Technology Limited	1,060	/	1,350	2,410
146	Hong Kong Baptist University	Gihon Biotech Limited	880	/	/	880
147	Hong Kong Baptist University	Herbap Biotech Limited	/	1,390	1,100	2,490
148	Hong Kong Baptist University	HK-Dtech Limited	/	/	1,240	1,240
149	Hong Kong Baptist University	Hong Kong Authentication Centre of Valuable Chinese Medicines Limited	850	/	/	850

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
		(formerly known as Hong Kong Authentication Centre of Dendrobii Officinalis Caulis Limited)				
150	Hong Kong Baptist University	iCounseling International Company Limited	/	/	270	270
151	Hong Kong Baptist University	LuminMed Limited	/	/	1,370	1,370
152	Hong Kong Baptist University	Mat-A-Cell Limited	900	1,350	/	2,250
153	Hong Kong Baptist University	MIND and Tech Limited	1,060	1,500	1,200	3,760
154	Hong Kong Baptist University	New Life Medicine Technology Company Limited	890	/	/	890
155	Hong Kong Baptist University	Smilie Technology Limited	240	/	/	240
156	The Hong Kong Polytechnic University	Acquaintance Enterprises Limited	300	/	/	300
157	The Hong Kong Polytechnic University	Active Biotechnology (Hong Kong) Company Limited	/	1,500	750	2,250
158	The Hong Kong Polytechnic University	Airwood Technology (Hong Kong) Limited	1,000	/	/	1,000
159	The Hong Kong Polytechnic University	APEX PowerLab Company Limited	/	/	550	550
160	The Hong Kong Polytechnic University	Arise Education Limited	/	1,000	/	1,000
161	The Hong Kong Polytechnic University	ASA Innovation & Technology Limited	500	/	/	500
162	The Hong Kong Polytechnic University	Blue Pin (HK) Limited	/	500	/	500
163	The Hong Kong Polytechnic University	Bo InnoHealth Biotechnology Company Limited	/	/	900	900
164	The Hong Kong Polytechnic University	Degree (Hong Kong) Education Consulting Limited	290	500	/	790
165	The Hong Kong Polytechnic University	Eieling Medical Limited	/	/	1,500	1,500

Serial No.	University that Submitted Recommendations	Name of Technology Start-ups	Amount of Funding Approved ($'000)			Total ($'000)
			2019 -20	2020 -21	2021 -22	
166	The Hong Kong Polytechnic University	Eternal Billion (Hong Kong) Limited	410	1,500	/	1,910
167	The Hong Kong Polytechnic University	Grand Rise Technology Limited	/	1,500	/	1,500
168	The Hong Kong Polytechnic University	Hercz Rehabilitation Technology Limited	1,000	/	1,500	2,500
169	The Hong Kong Polytechnic University	Husky Data Science Company Limited	/	500	/	500
170	The Hong Kong Polytechnic University	NoMatterWhat Technologies Limited	1,000	/	/	1,000
171	The Hong Kong Polytechnic University	Okay Healthcare Limited	1,000	/	/	1,000
172	The Hong Kong Polytechnic University	ORCA Innovation Holdings Limited	/	/	750	750
173	The Hong Kong Polytechnic University	Pokeguide Limited	500	/	/	500
174	The Hong Kong Polytechnic University	Qualife Hong Kong Limited	1,000	/	/	1,000
175	The Hong Kong Polytechnic University	RC Labs Limited	/	/	1,050	1,050
176	The Hong Kong Polytechnic University	TOZI Technology Company Limited	1,000	/	/	1,000
177	The Hong Kong Polytechnic University	Watts Optical Instruments Limited	/	/	500	500
178	The Hong Kong Polytechnic University	Win Victory Enterprises Limited	/	1,000	500	1,500
Total						**143,230**

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0894)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (3) Planning for Innovation and Technology Development

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding the support for the development of arts technology and sports technology, will the Government advise this Committee of the following:

a. Regarding the "Distance Business Programme", what are the number of applications, the success rate of application, the average amount of approved funding and the main purposes of enterprises in applying for the programme? In addition, what are the number of applications and the average amount of approved funding for enterprises in relation to sports, performing arts, culture and publication?

Asked by: Hon FOK Kai-kong, Kenneth (LegCo internal reference no.: 3)

Reply:

The Innovation and Technology Commission (ITC) has launched the time-limited Distance Business (D-Biz) Programme under the Anti-epidemic Fund to support enterprises to continue their business and provide services during the pandemic through the adoption of information technology (IT) solutions. During the application period from 18 May to 31 October 2020, the D-Biz Programme received over 38 000 applications. All the vetting work was completed in January 2021. About 35 000 applications were approved and the success rate is over 90%. Among them, over 25 740 approved applications have proceeded to implementation, involving a total funding of around $1.7 billion and an average approved funding of about $65,000.

The D-Biz Programme covers 12 IT solution categories relating to distance business. The most popular solutions are online business, online customer services and engagement, and digital customer experience enhancement. Beneficiary enterprises come from various sectors, including the creative industry as well as media, printing and publishing sector. Approximately 480 enterprises which have proceeded to implementation engaged in the creative industries, involving a funding of around $31 million and an average approved

funding of approximately $64,000; approximately 400 enterprises which have proceeded to implementation come from the media, printing and publishing sector, involving a funding of around $26 million and an average approved funding of approximately $65,000. The aforesaid Programme under the Anti-epidemic Fund is outside the scope of the Appropriation Bill or the estimates of the General Revenue Account.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0452)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in the Budget Speech that the Government will increase the funding allocated to the Hong Kong Growth Portfolio under the Future Fund by $10 billion, of which $5 billion will be allocated to the Strategic Tech Fund (Tech Fund). The Hong Kong Science and Technology Parks Corporation and the Cyberport will be invited to identify technology enterprises which are of strategic value to Hong Kong as well as investment opportunities conducive to enriching the innovation and technology ecosystem. In this connection, will the Government inform this Committee of the following:

1. Regarding the injection of $5 billion, (a) how is it determined, and (b) is there any room for increase?
2. Regarding the Tech Fund, (a) will it be open for applications starting from 2022-23? If yes, in 2022-23, what are (b) the estimated number of applications to be received and (c) amount of funding to be approved?
3. The way the Government will monitor the application criteria and the use of funding under the Tech Fund?

Asked by: Hon LUK Chung-hung (LegCo internal reference no.: 7)

Reply:

A consolidated reply to questions (1) to (3) is as follows:

The Strategic Tech Fund will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the innovation and technology (I&T) ecosystem in Hong Kong. The Government will invite the Hong Kong Science and Technology Parks Corporation and the Cyberport to identify investment opportunities, and the relevant preparatory work is underway.

As to the number of enterprises to be invested per year and whether a ceiling should be set on the funding amount for each enterprise, the Government will consider in detail by taking into account the market situation and the development of the I&T sector.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. **ITB041**

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0331)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (3) Planning for Innovation and Technology Development

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

(a) What are the number of applications received under the Technology Voucher Programme of the Innovation and Technology Fund (ITF), the number of applications received which were related to the cultural and creative industries, the overall number of applications approved, the number of applications related to the cultural and creative industries that were approved and the average amount of funding approved for each application in the past year?

(b) What are the number of applications received under the General Support Programme of the ITF, the number of applications received which were related to the cultural and creative industries, the overall number of applications approved, the number of applications related to the cultural and creative industries that were approved and the average amount of funding approved for each application in the past year?

(c) What measures has the Government put in place to encourage more projects related to the cultural and creative industries to apply for the relevant funding schemes under the ITF?

(d) As Hong Kong's publishing sector has a limited market, it lacks a common electronic book-reading platform. Will the Government consider supporting the establishment of a local electronic book-reading platform through the ITF?

Asked by: Hon MA Fung-kwok (LegCo internal reference no.: 5)

Reply:

The industry is welcome to apply for funding through the various funding schemes under the Innovation and Technology Fund (ITF) to help promote the development of the cultural and creative industries. Among the funding schemes, the Technology Voucher Programme (TVP) and the General Support Programme (GSP) are relevant to the promotion of the application of technology to the cultural and creative industries. Last year, the Hong Kong Science and Technology Parks Corporation (HKSTPC) unveiled the Experience Centre at the

Hong Kong Science Park to showcase Hong Kong's leading achievements and ambition in innovation and technology development, and provide a practical shared space for HKSTPC's partner companies and the larger innovation and technology (I&T) community to co-create. In addition, the HKSTPC and the Cyberport also cooperated with the Leisure and Cultural Services Department respectively to organise activities by inviting I&T start-ups to showcase, demonstrate and share their latest technological outcomes to the cultural and arts sector. The reply to the various parts of the question is as follows:

(a) The TVP provides funding for enterprises and organisations to use technological services and solutions to improve productivity, or upgrade or transform their business processes. In the past year (from January to December 2021), a total of 4 887 applications were received under the TVP. Among the 90 applications submitted by local enterprises and organisations from the creative industries or the film and entertainment sectors, 47 of them were approved as at end February 2022 with an average funding amount of about $160,000 for each application, while another 1 application was rejected, and 3 applications were withdrawn by the applicants. We are now processing the remaining 39 applications.

Since the Innovation and Technology Commission (ITC) launched further enhancement measures for the TVP in April 2020, the number of applications increased substantially from about 1 600 in 2019 to about 5 800 in 2020 and 4 900 in 2021. ITC has allocated resources and made arrangements to reduce the vetting time as far as practicable.

(b) The GSP supports non-research and development projects that contribute to the upgrading and development of the local industries as well as the fostering of an I&T culture in Hong Kong. In the past year (from January to December 2021), 59 applications were received under the GSP. Among them, 5 applications were related to the cultural and creative industries, of which 2 applications were approved as at end February 2022 with an average funding amount of about $760,000 for each application, and the remaining 3 applications are still under processing.

(c) and (d)

We will continue our efforts in promoting and administering the said schemes under the ITF, so as to support more technological adoption by the cultural and creative industries.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0052)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (3) Planning for Innovation and Technology Development

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

Under Programme 3, the Innovation and Technology Commission will continue to oversee the implementation of the Distance Business (D-Biz) Programme under the Anti-epidemic Fund in the coming year. Though well received by enterprises, D-Biz is nevertheless a short-term initiative and the application period has closed a while ago. With the outbreak of the fifth wave of the epidemic, the business environment is unfavourable. Will the Government relaunch the D-Biz Programme to support enterprises to continue business and provide services during the epidemic through adoption of information technology solutions? If yes, what are the details; if no, what are the reasons?

Asked by: Hon NG Wing-ka, Jimmy (LegCo internal reference no.: 2)

Reply:

The Innovation and Technology Commission (ITC) has launched the time-limited Distance Business (D-Biz) Programme under the Anti-epidemic Fund to support enterprises to continue their business and provide services during the pandemic through the adoption of information technology (IT) solutions. ITC has engaged the Hong Kong Productivity Council as the Secretariat of the D-Biz Programme. Programmes under the Anti-epidemic Fund is outside the scope of the Appropriation Bill or the estimates of the General Revenue Account.

During the application period from 18 May to 31 October 2020, the D-Biz Programme received over 38 000 applications. All the vetting work was completed in January 2021. Of about 35 000 applications approved, over 25 740 applications have proceeded to implementation. Among them, about 95% are small and medium-sized enterprises, involving a total funding of around $1.7 billion. As at early March 2022, over 20 000 applications have completed the projects.

The Government does not have any plan to re-introduce the D-Biz Programme. That said, the Technology Voucher Programme (TVP) of the ITC, a regular programme which is similar

in nature to the D-Biz Programme, also aims to support enterprises in using technological services and solutions to improve productivity, or upgrade or transform their business processes. Having regard to the operational experience and the trade's views, ITC introduced further enhancement measures for the TVP in 2020. For instance, each approved project can be funded up to three-quarters of its cost, with a cumulative funding ceiling of $600,000. ITC welcomes enterprises to submit applications.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0055)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (3) Planning for Innovation and Technology Development

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

Under Programme 3, the Innovation and Technology Commission administers the "Re-industrialisation Funding Scheme" (RFS) this year to expedite "re-industrialisation". How many RFS applications in total have been received and approved by the Government this year? What are the average funding amount for each approved application, the average time required for the Government to vet each application, as well as the manpower and expenditure involved in vetting the applications under the RFS this year? Will the Government raise the funding ceiling of the RFS and the Government's funding ratio to attract more manufacturers to set up new smart production lines? If yes, what are the details; if not, what are the reasons?

Asked by: Hon NG Wing-ka, Jimmy (LegCo internal reference no.: 8)

Reply:

The Re-industrialisation Funding Scheme (RFS) was launched in end July 2020 to subsidise manufacturers, on a 1 (Government): 2 (company) matching basis, to set up new smart production lines in Hong Kong. The funding ceiling is one-third of the total project cost or $15 million, whichever is lower. As at end February 2022, a total of 36 applications were received. The RFS Vetting Committee (the Committee) has vetted 33 applications and agreed in principle to support 28 of them, involving a total funding amount of $197 million.

Of the 36 applications, 23 of them were received in 2021-22 (as at end February). The Committee has vetted 20 applications and agreed in principle to support 17 of them, involving a total funding amount of $124 million and an average funding amount of approximately $7.27 million. The remaining 3 applications are being processed.

The time required for processing applications by the Innovation and Technology Commission (ITC) depends on the completeness of the information provided by the applicant as well as the complexity of the projects, etc. The average time required from receiving the

applications to the receipt of vetting results from the Committee is approximately 60 working days. The RFS is administered by ITC with its existing manpower and no breakdown of expenditures is available.

We will continue to monitor closely the operation of the RFS and introduce enhancement measures in a timely manner as and when necessary.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0185)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (4) Infrastructural Support

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

Under Programme 4, the Government will continue to oversee the setting up of *InnoHK* research clusters in the Hong Kong Science Park to foster collaboration with international science and research institutions in the coming year. What are the manpower and expenditure involved for this task in the coming year? As mentioned in the 2020-21 Budget, the Government was actively exploring the establishment of a third *InnoHK* research cluster. What is the latest progress in this regard and when is the exploratory work expected to be completed? Has a theme for the third research cluster been proposed? If yes, what are the details?

Asked by: Hon NG Wing-ka, Jimmy (LegCo internal reference no.: 10)

Reply:

The Government has allocated $10 billion for the establishment of the "*InnoHK* research clusters" in the Hong Kong Science Park. The two world-class research clusters are "Health@InnoHK" focusing on healthcare technologies and "AIR@InnoHK" focusing on artificial intelligence and robotics technologies. The two research clusters have attracted 33 world-renowned universities and research institutes around the world from 11 economies to collaborate with local universities in setting up 28 research laboratories in Hong Kong, which have already commenced operation to undertake cross-disciplinary, cross-area, frontier research and development work.

The scope of work of the Infrastructure Division under the Innovation and Technology Commission (ITC) includes the implementation of the "*InnoHK* research clusters". At present, the Infrastructure Division is headed by an Administrative Officer Staff Grade C (D2), and the work relating to the "*InnoHK* research clusters" is fully supported by 16 non-directorate staff. In addition, 4 non-directorate staff also provide support at times. ITC will continue to deploy its existing manpower and resources in a flexible manner. We do not have a breakdown of the expenditure for the individual work.

We will endeavour to promote global research collaboration in Hong Kong and take into account factors such as including the operational experience of the first two research clusters, the strengths of Hong Kong and the global technological development in considering the development direction and research focus of the third "*InnoHK* research cluster".

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0199)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (3) Planning for Innovation and Technology Development

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Innovation and Technology Commission states that it will continue to oversee the implementation of the Distance Business (D-Biz) Programme under the Anti-epidemic Fund during 2022-23. Will the Government advise on:

1) the way to oversee the implementation of the D-Biz Programme;
2) whether any non-compliance cases have been identified so far; if yes, the number of cases concerned, the funding amount and the details of the non-compliance involved; and
3) whether the effectiveness of the D-Biz Programme has been assessed; if yes, the details; if not, the reasons.

Asked by: Hon SHIU Ka-fai (LegCo internal reference no.: 10)

Reply:

The Innovation and Technology Commission (ITC) has launched the time-limited Distance Business (D-Biz) Programme under the Anti-epidemic Fund to support enterprises to continue their business and provide services during the pandemic through the adoption of information technology (IT) solutions. ITC has engaged the Hong Kong Productivity Council as the Secretariat of the D-Biz Programme.

During the application period from 18 May to 31 October 2020, the D-Biz Programme received over 38 000 applications. All the vetting work was completed in January 2021. Of about 35 000 applications approved, over 25 740 applications have proceeded to implementation. Among them, about 95% are small and medium enterprises, involving a total funding of around $1.7 billion. As at early March 2022, over 20 000 applications have completed the projects.

The reply to the various parts of the question is as follows:

1) Under the funding agreement, grantee is required to submit the final report and relevant documents to the Secretariat upon completion of the project. The Secretariat will examine whether the project has been completed in accordance with the requirements of the funding agreement, conduct random surprised on-site inspection and report the results to ITC. ITC, by reviewing the regular progress reports prepared by the Secretariat and holding regular meetings, has been closely monitoring the implementation of the D-Biz Programme and the disbursement of the final payment of the project. In case of more complicated situations, the Secretariat will consult the D-Biz Programme Vetting Committee (the Vetting Committee) chaired by the Commissioner for Innovation and Technology, with members from the technology and professional services sectors, academia and the Office of the Government Chief Information Officer.

2) As at early March 2022, the Secretariat found that there were 4 cases where the applicant enterprises might have potential conflict of interests with the IT service providers, involving a funding amount of $273,200, and 2 cases where the applicant enterprises might have made false declarations in their submitted applications, involving a funding amount of $24,000. The Secretariat will refer the cases to the relevant enforcement authorities for follow-up as and when necessary.

3) The D-Biz Programme covers 12 IT solution categories relating to distance business. The most popular solutions are online business, online customer services and engagement, and digital customer experience enhancement. Beneficiary enterprises come from various sectors. ITC and the Secretariat will, upon completion of the D-Biz Programme, review and assess the effectiveness of the Programme and report the results to the Vetting Committee.

The aforesaid Programme under the Anti-epidemic Fund is outside the scope of the Appropriation Bill or the estimates of the General Revenue Account.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0753)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

Support for the research and development in the innovation and technology (I&T) field has been enhanced in this year's Budget, including the $2 billion Innovation and Technology Venture Fund and the Corporate Venture Fund for start-ups. Will the Government inform this Committee of:

(a) the specific details of the I&T funds at present (including the types and directions of the funded projects as well as the expenditures involved); and

(b) the measures taken to strike a balance between managing and streamlining the vetting processes with a view to optimising the vetting mechanism, given that the overly complicated application and vetting procedures discouraged many small and medium enterprises from filing applications previously.

Asked by: Hon SUN Dong (LegCo internal reference no.: 2)

Reply:

The Government has been providing comprehensive support through different funds and funding schemes to various stakeholders in the innovation and technology (I&T) ecosystem, including research institutes, technology enterprises (including start-ups), as well as I&T talents, and the operation of the funds and funding schemes concerned will be reviewed from time to time.

The Government aims to encourage more private investments in local I&T start-ups through the $2 billion Innovation and Technology Venture Fund (ITVF), the $600 million Corporate Venture Fund (CVF) under the Hong Kong Science and Technology Parks Corporation (HKSTPC), and the $400 million Cyberport Macro Fund under the Cyberport. It was announced in the 2022-23 Budget that the funding allocated to the Hong Kong Growth Portfolio will be increased by $10 billion, of which $5 billion will be used to set up the

Strategic Tech Fund. The Strategic Tech Fund will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the I&T ecosystem in Hong Kong. The information of the ITVF and CVF is provided as follows:

(a) The ITVF under the Innovation and Technology Fund aims to encourage more venture capital (VC) funds to invest in local I&T start-ups by co-investing at a matching ratio of approximately 1(Government): 2(Co-investment partners (CPs)). At present, 11 VC funds have been selected as CPs. As at end February 2022, the ITVF invested about $180 million in 23 start-ups engaging in business areas such as supply chain management, e-commerce, financial technology, biotechnology and artificial intelligence (AI), and attracted private investments of over $1.5 billion.

Meanwhile, the CVF co-invests, on a matching basis with angel investors or VC funds, in start-ups which are located in the Hong Kong Science Park (Science Park) or have participated in the HKSTPC's incubation programmes. As at end February 2022, the CVF invested around $280 million in 22 start-ups and attracted private investments of over $4.3 billion. These 22 enterprises engaged respectively in areas such as biotechnology, AI, robotics, as well as information and communications technology.

(b) Regarding the ITVF, CPs will submit their investment proposals and assessments to us for vetting, and it does not involve the submission of applications from small and medium enterprises. Before making investment decisions, we will consult the ITVF Advisory Committee comprising members from the I&T, legal and accounting sectors as well as the business community. The current process has kept up with the needs of the investment market. If all the necessary documents relating to the investment proposals are submitted by CPs, the vetting process can be completed within one month at the earliest. We will continue to maintain close liaison with CPs to optimise the investment process.

The investment targets of the CVF are start-ups which are located in the Science Park or have participated in the HKSTPC's incubation programmes. The HKSTPC will identify suitable investment opportunities among these start-ups, and it does not involve submission of applications from start-ups to the HKSTPC. The HKSTPC will continue to monitor the situation of the start-ups in the Science Park and support the growth of start-ups by providing funding or encouraging private investors to provide capital.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0754)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is mentioned in this year's Budget that the funding allocated to the Hong Kong Growth Portfolio under the Future Fund will be increased by $10 billion, of which $5 billion will be used to set up a new investment fund, namely the Strategic Tech Fund (Tech Fund). The Hong Kong Science and Technology Parks Corporation and the Cyberport will be invited to identify technology enterprises which are of strategic value to Hong Kong as well as investment opportunities conducive to enriching the innovation and technology ecosystem. In the connection, will the Government inform this Committee of:

(a) the specific application requirements and funding criteria of the Tech Fund; and
(b) the way the Tech Fund can help develop industries with advantages in Hong Kong?

Asked by: Hon SUN Dong (LegCo internal reference no.: 3)

Reply:

Our consolidated reply to the questions is as follows:

The Strategic Tech Fund (Tech Fund) will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the innovation and technology ecosystem in Hong Kong. The Tech Fund is an investment fund and not a funding scheme. The Government will invite the Hong Kong Science and Technology Parks Corporation and the Cyberport to identify investment opportunities, and the relevant preparatory work is underway.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0757)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: (4) Infrastructural Support

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

One of the aims of the Innovation and Technology Bureau is to oversee the work of the *InnoHK* research clusters in the Hong Kong Science Park to promote international research collaboration. Since its establishment in 2018, *InnoHK* has been promoting research and fostering development of industries in life and health disciplines. In this connection, will the Government inform this Committee of the number of outstanding research talents attracted to Hong Kong through the *InnoHK* programme and if there are any, the expenditures and specific details involved.

Asked by: Hon SUN Dong (LegCo internal reference no.: 6)

Reply:

The Government announced in 2018 that $10 billion would be earmarked to support the establishment of the "*InnoHK* research clusters". The two world-class research clusters, namely "Health@InnoHK" focusing on healthcare technologies and "AIR@InnoHK" focusing on artificial intelligence and robotics technologies.

The "*InnoHK* research clusters" have successfully attracted 33 world-renowned universities and research institutes around the world from 11 economies to collaborate with local universities in setting up 28 research laboratories in Hong Kong to undertake cross-disciplinary, cross-area, frontier research and development (R&D) work. The research laboratories have already commenced operation and recruited research talents with different academic backgrounds. It is estimated that about 2 000 local and non-local researchers will take part in the R&D work. The Innovation and Technology Commission will deploy our existing manpower and resources in a flexible manner. We do not have a breakdown of the expenditure involved for individual work.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0715)

Head: (155) Government Secretariat: Innovation and Technology Commission

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government has stated that $5 billion will be used to set up the Strategic Tech Fund to invest in technology enterprises and projects which are of strategic value to Hong Kong. Please advise this Committee of the following:

(1) the current stage of the idea and whether there is a specific operational plan;
(2) the intended guidelines and assessment criteria for the selection of enterprises and projects for investment; and
(3) areas of technology or investment that are accorded with priority for selection; whether a list will be compiled for assessment.

Asked by: Hon TAN Yueheng (LegCo internal reference no.: 7)

Reply:

A consolidated reply to questions (1) to (3) is as follows:

The Strategic Tech Fund will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the innovation and technology ecosystem in Hong Kong. We are open to the technology areas to be invested. The Government will invite the Hong Kong Science and Technology Parks Corporation and the Cyberport to identify investment opportunities, and the relevant preparatory work is underway.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0367)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is stated in paragraph 63 of the Budget Speech that the Financial Secretary has reserved $600 million to conduct a comprehensive e-government audit in the coming three years with the aim of reviewing the progress made by government departments in using technologies, as well as assisting them in enhancing the efficiency of public service provision through the adoption of innovation and technology (I&T) solutions. In this connection, please advise the following:

1. the specific details and mechanism of conducting the comprehensive e-government audit, including the official in charge and the responsible department of this exercise, and the objectives, audit scope and contents, the order of priority of the departments to be audited and the timetable, whether the industry players will be engaged, whether the audit will only be conducted after the completion of the government structure reorganisation by the next-term Government ?

2. in view of the audit work, whether the Government will establish a marking scheme to evaluate technology procurement and application, and engage the industry players to participate in devising an appropriate marking scheme ?

3. the number, rank and post of the staff required for conducting the audit, the respective numbers of additional posts on the civil service establishment and the supernumerary posts required, and the respective numbers of civil servant and non-civil service contract staff who will take up the newly created posts ?

Asked by: Hon CHIU Duncan (LegCo internal reference no.: 4)

Reply:

Our consolidated reply to the questions is as follows:

The Office of the Government Chief Information Officer (OGCIO) under the Innovation and Technology Bureau (ITB) is responsible for coordinating and implementing the whole e-government audit programme. We will categorise the bureaux/departments (B/Ds) into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services and expedite the development of digital government.

Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc.

B/Ds may also procure products and services via various Standing Offer Agreements coordinated by OGCIO to expedite the implementation of the enhanced solutions. If B/Ds have any needs for other innovation and technologies, they can make their requests to the Smart Government Innovation Lab so that the industry can recommend related technology products and solutions and arrange pilot testing to assist B/Ds in adopting the related technologies.

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

Furthermore, the manpower required for coordinating and implementing the whole e-government audit programme will be met through internal redeployment within OGCIO and by engaging contract staff to provide support. There will be no increase in the civil service and non-civil service posts.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0893)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (3) Information Technology in the Community

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

In connection with the support for the development of art tech and sport tech, will the Government inform this Committee of the following:

Regarding the enhancement of public Wi-Fi services, will the Government provide the statistics of cultural and sports premises which are yet to be installed with Wi-Fi networks? If there are still some premises yet to be installed with Wi-Fi networks, what is the expected time for such premises to be fully covered by Wi-Fi networks?

Asked by: Hon FOK Kai-kong, Kenneth (LegCo internal reference no.: 3)

Reply:

In order to make effective use of public resources, Government Wi-Fi service is provided mainly at government venues with a higher public patronage and being technically feasible, while the provision of such service at premises such as outdoor ball courts and swimming pools are generally accorded a lower priority. As of February 2022, free Wi-Fi service coverage has already been extended to reach over 82% of the cultural and sports premises in Hong Kong, including all public libraries and performance venues, as well as most of the museums, sport centres and sports grounds.

The Office of the Government Chief Information Officer and the Leisure and Cultural Services Department will maintain regular review of the Wi-Fi services provision at existing venues and, subject to resources availability and technical feasibility, explore the extension of Wi-Fi services to more cultural and sports premises so as to ensure that the services are cost-effective and in line with public needs.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0161)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Financial Secretary announced that the Government has earmarked $600 million to conduct a comprehensive e-government audit in the coming three years with the aim of reviewing the progress made by government departments in using technologies, as well as assisting them in enhancing the efficiency of public service provision through the adoption of innovation and technology (I&T) solutions. Will the Government please inform this Committee of the following:

1) how a budget of $600 million is worked out and the breakdown of expenditure; and

2) whether it is possible for the Government to accelerate its digital infrastructure enhancement having regard that three years' time is unacceptably long for conducting the audit, and that government departments are backward in terms of their technology development, in particular, their digital technology is lagging far behind the Mainland? If yes, what are the details? If no, what are the reasons?

Asked by: Hon IP LAU Suk-yee, Regina (LegCo internal reference no.: 2)

Reply:

1) The Government has earmarked $600 million to conduct e-government audit for bureau/departments (B/Ds) and implement the enhanced solutions recommended in the audit. The estimated expenditure is as follows -

Item	Budget ($ million)
Service fee for conducting e-government audits for B/Ds	100
Expenditure for engaging additional contract staff by the Office of the Government Chief Information Officer (OGCIO) to assist in coordinating the whole programme	20
Expenditure for B/Ds to implement the recommended solutions	480
Total	**600**

2) We will categorise the B/Ds into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services and expedite the development of digital government. Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions and they may procure products and services via various Standing Offer Agreements coordinated by OGCIO to expedite the implementation of the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc.

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0744)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in the Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is stated in paragraph 63 of the Budget Speech that the Government will "conduct a comprehensive e-government audit in the coming three years with the aim of reviewing the progress made by government departments in using technologies". Will the Government inform this Committee of the following:

1. whether the e-government audit will be conducted internally by the Government or outsourced to other professional organisations; how will the audit be conducted systematically given the numerous government departments and services; the government department which will be responsible for the audit work and the additional staffing establishment involved; given that the Office of the Government Chief Information Officer (OGCIO) has been providing leadership for delivering information technology functions within the Government, how can the independence and effectiveness of audit be ensured if such exercise is to be conducted by OGCIO;
2. whether the direction of the e-government audit is to expedite the process of digitalisation of paper copies, enhance and integrate the existing systems, assess the efficacy of the existing e-services or strengthen the security measures for information protection;
3. the yardsticks that the Government will use to evaluate whether the objective of "assisting government departments in enhancing the efficiency of public service provision" is achieved upon the completion of the e-government audit since both "iAM Smart" and "GovHK" are criticised for being too complicated. Different systems are incompatible with each other and members of the public are required to acknowledge lots of terms and conditions. How will the Government tackle these problems in the e-government audit; and
4. the security measures which will be implemented in the audit to prevent the leakage of the vast amount of data held by various government departments during the process?

Asked by: Hon KAN Wai-mun, Carmen (LegCo internal reference no.: 6)

Reply:

Our consolidated reply to the questions is as follows:

The Office of the Government Chief Information Officer (OGCIO) under the Innovation and Technology Bureau (ITB) is responsible for coordinating and implementing the whole e-government audit programme. The manpower required for coordinating and implementing the whole e-government audit will be met through internal redeployment within OGCIO and by engaging contract staff to provide support. There will be no increase in the civil service and non-civil service posts.

We will categorise the bureaux/departments (B/Ds) into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group. Areas of audits will include whether the design of the digital government services is citizen-centric, the feasibility of streamlining the workflow through interconnection of systems and interchange of data (e.g. enabling citizens to give their consent with the "iAM Smart" for the exchange of their personal information among B/Ds without the need to re-enter the information required), whether user interfaces are easy to use (e.g. reducing or simplifying the declarations and terms that require citizens to confirm), and the feasibility of leveraging advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) for providing more convenient public services. We will also recommend enhanced IT solutions for expediting the development of digital government.

Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc., amongst which the Next Generation Government Cloud has been equipped with an Application Programming Interface Gateway for strengthening information interchange and interconnection of systems among B/Ds.

Furthermore, we will also request the consultancy firms and their staff responsible for the e-government audit work to sign a confidentiality undertaking, committing not to disclose information obtained while conducting the audit work to any unauthorised persons.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0820)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government of Hong Kong is lagging far behind other countries of the world in terms of its application of technology. Given that the Government has earmarked $600 million for conducting an audit in the coming 3 years, please advise on the following:

1) What is the expected number of staff to be employed with $600 million to conduct the audit over 3 years?

2) Upon completion of the audit, what is the Government's estimated expenditure to spend on revamping its technology application and digitalisation of services for all government departments in the future?

3) What is the expected time required for the completion of the digitalisation of government departments and the related work?

Asked by: Hon KWOK Ling-lai, Lillian (LegCo internal reference no.: 5)

Reply:

Our consolidated reply to the questions is as follows:

The Government has earmarked $600 million to conduct an e-government audit programme for bureaux/departments (B/Ds) and implement the enhanced solutions recommended in the audit from 2022-23 to 2024-25. The manpower required for coordinating and implementing the whole e-government audit will be met through internal redeployment within the Office of the Government Chief Information Officer (OGCIO) and by engaging contract staff to provide support.

We will categorise the B/Ds into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services and expedite the development of digital government.

The estimated expenditure for the programme is as follows –

Item	**Budget ($ million)**
Service fee for conducting e-government audit for B/Ds	100
Expenditure for engaging additional contract staff by OGCIO to assist in coordinating the whole programme	20
Expenditure for B/Ds to implement the recommended solutions	480
Total	**600**

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0231)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government has earmarked $600 million to conduct a comprehensive e-government audit in the coming three years. In this connection, please inform this Committee of the government departments which will be ready for providing e-Services. Under this programme, is there any schedule for a phased review of the progress achieved by government departments in their adoption of technology in three years? If yes, what are the details and the related estimated expenditure? If no, what are the reasons?

Asked by: Hon LAM Lam, Nixie (LegCo internal reference no.: 2)

Reply:

At present, various bureau and departments have already made available a number of their own electronic services. To expedite the development of digital government, the Government plans to conduct an e-government audit programme for bureaux/departments (B/Ds) in the coming 3 years. We will categorise the B/Ds into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services. Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions and they may procure products and services via various Standing Offer Agreements coordinated by the Office of the Government Chief Information Officer (OGCIO) to expedite the implementation of the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big

Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc.

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

The estimated expenditure for the programme is as follows –

Item	**Budget ($ million)**
Service fee for conducting e-government audits for B/Ds	100
Expenditure for engaging additional contract staff by OGCIO to assist in coordinating the whole programme	20
Expenditure for B/Ds to implement the recommended solutions	480
Total	**600**

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 238)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government has earmarked $20 billion for various anti-epidemic needs that may arise. In this connection, please inform this Committee of the following:

What are the estimated expenditure and manpower required for the follow-on update and management of the "LeaveHomeSafe" mobile app?

Asked by: Hon LAM Lam, Nixie (LegCo internal reference no.: 9)

Reply:

In the 2022-23 financial year, the estimated expenditure of the Office of the Government Chief Information Officer on the operation and enhancement of the "LeaveHomeSafe" mobile app in support of the Government's latest anti-epidemic measures is around $8.6 million, of which around $3.6 million is for the upgrade and maintenance of the mobile app and its back-end systems, and $5 million is for its support and operation expenses (including the related manpower expenses). To support Hong Kong's anti-epidemic efforts, we will continue to take into account the feedback from the public and the industry and examine all feasible technical solutions in order to further enhance the functionalities and user experience of the "LeaveHomeSafe" mobile app.

- End -

Examination of Estimates of Expenditure 2022-23 Reply Serial No.

ITB057

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0079)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government, (2) Information Technology Infrastructure and Standards

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding overseeing the planning for and implementation of smart city infrastructure projects including "iAM Smart" Platform, Multi-functional Smart Lampposts and the Next Generation Government Cloud Infrastructure/Big Data Analytics Platform, please inform this Committee of the following:

1. the provision of open data to the Big Data Analytics Platform by various bureaux and departments and the expenditure involved in the past 3 years;

2. the open data policy of various bureaux and departments and the expenditure involved in the coming year;

3. regarding the scheme of Multi-functional Smart Lampposts that will expire soon without meeting the target in the original plan, the expected period of extension; as well as the estimated expenditures and numbers of ordinary lampposts and smart lampposts in the coming year;

4. the estimated expenditures and details of planning for and implementation of smart city infrastructure in the coming year; and

5. the number of bureaux and departments participating in "iAM Smart" Platform, the information and services provided through the platform and the estimated expenditures involved over the past 3 years and in the coming year.

Asked by: Hon LAM Siu-lo, Andrew (LegCo internal reference no.: 3)

Reply:

1. In the past 3 years, the total expenditure of the Office of the Government Chief Information Officer (OGCIO) for big data analytics and the work in relation to open data is around $29 million.

2. Since the announcement of the new Open Data Policy in October 2018, bureaux/departments (B/Ds) have opened up over 1 590 new datasets via the Public Sector Information (PSI) Portal (data.gov.hk), including real-time meteorological data, digital maps and real-time arrival data of all franchised buses and MTR railway lines (Airport Express, Tung Chung Line, Tseung Kwan O Line, Tuen Ma Line and Light Rail Line). The portal currently provides over 4 890 open datasets.

   According to the fourth annual open data plans published by B/Ds in December 2021, over 270 new datasets will be opened up in 2022. As at the end of February 2022, 48 datasets have been published as scheduled.

   In 2022-23, OGCIO will revamp the PSI Portal to enhance user experience. The estimated expenditure is about $3.3 million and will be funded under Capital Works Reserve Fund Head 710 Computerisation. Bureaux and departments will carry out the ongoing work in relation to open data with their existing manpower and resources. If additional resources are required for the related work, B/Ds concerned can seek funding from the block allocation under Capital Works Reserve Fund Head 710 Computerisation.

3. Under the Multi-functional Smart Lampposts Pilot Scheme (Pilot Scheme), some 400 smart lampposts with smart devices will be installed by phases in 4 urban locations (namely Central and Admiralty, Wan Chai, Yau Tsim Mong and Kwun Tong/Kai Tak Development Area) with higher pedestrian and vehicular flow, with a view to collecting real-time city data such as air quality and traffic flow, as well as supporting the development of digital infrastructure for 5G services. The Government already installed 50 smart lampposts in Kwun Tong and Kowloon City in mid-2019. On the recommendations made by the Smart Lampposts Technical Advisory Ad Hoc Committee in March 2020 in respect of privacy protection, we launched an online exhibition for the public and continued with the implementation of the Pilot Scheme. Installation works of some 350 remaining smart lampposts will be rolled out by phases having regard to actual circumstances, which is targeted to be completed by mid-2023. The estimated expenditure for the Pilot Scheme in 2022-23 is $28.5 million.

4. In order to promote the smart city development, OGCIO has made efforts in the construction and implementation of a host of smart city infrastructure projects, including the Next Generation Government Cloud Infrastructure Services (GCIS) and the Big Data Analytics Platform (BDAP) launched in September 2020 and the "iAM Smart" one-stop personalised digital services platform launched in December 2020, etc. In 2022-23, apart from continuing to actively promote the adoption of the "iAM Smart" by the public and private organisations in their online services as well as increasing the number of digital government services and system capacities of GCIS and BDAP, OGCIO is also planning to launch a Shared Blockchain Platform in 2022. The estimated expenditure for implementation of the above projects is about $131.9 million.

5. Since the launch of "iAM Smart" in end-December 2020, 41 B/Ds and 9 private organisations have adopted "iAM Smart" as of end-February 2022 in the provision of over 190 online services, which include COVID-19 electronic vaccination and testing records, eHealth, eTAX, renewal of vehicle licence, etc. (please visit https://www.iamsmart.gov.hk/en/e-service.html for the full service list). Taking into account the government services which will adopt "iAM Smart" upon their major systems upgrade, we expect that over 220 online services of the Government as well as public and private organisations will be accessible through "iAM Smart" by end-2023.

The expenditures for "iAM Smart" in 2019-20, 2020-21 and the estimated expenditure in 2021-22 are $21 million, $65 million and $74 million respectively. Its estimated expenditure in 2022-23 is about $70 million.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0151)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

Given that $600 million has been reserved for conducting a comprehensive e-government audit in the coming three years with the aim of reviewing the progress made by government departments in using technologies, as well as assisting them in enhancing the efficiency of public service provision through the adoption of innovation and technology (I&T) solutions, please inform this Committee of the following:

1. the criteria for auditing the progress achieved by bureaux or departments in using technology;

2. the bureaux or departments involved and their progress, as well as their implementation details;

3. the allocation of the estimated expenditure, such as the amount to be spent on audit, I&T solutions, as well as the contents of these solutions; and

4. the next plan, upon completion of the audit, for enabling bureaux and departments to leverage technology and the resources required.

Asked by: Hon LAM Siu-lo, Andrew (LegCo internal reference no.: 6)

Reply:

Our consolidated reply to the questions is as follows:

The Office of the Government Chief Information Officer (OGCIO) will conduct a 3-year e-government audit programme from 2022-23 to 2024-25 with a view to expediting the development of digital government for building Hong Kong into a more advanced smart city.

We will categorise the bureaux/departments (B/Ds) into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services and expedite the development of digital government. Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions and they may procure products and services via various Standing Offer Agreements coordinated by OGCIO to expedite the implementation of the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc.

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

Furthermore, the estimated expenditure for the programme is as follows –

Item	**Budget ($ million)**
Service fee for conducting e-government audits for B/Ds	100
Expenditure for engaging additional contract staff by OGCIO to assist in coordinating the whole programme	20
Expenditure for B/Ds to implement the recommended solutions	480
Total	**600**

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0451)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government, (3) Information Technology in the Community

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Office of the Government Chief Information Officer (OGCIO) states in Programme (1) that it will "support and facilitate various anti-epidemic related initiatives with technology, including …the "LeaveHomeSafe" exposure notification system"; and in Programme (3), in 2021-22, it already "continued to implement the Outreach and Training Programmes to enrich the information and communications technology (ICT) knowledge and skills among the elderly and update the contents of the web-based learning portal"; and in 2022-23, it will "continue to enrich the ICT knowledge and skills among the elderly through the Outreach and Training Programmes as well as the web-based learning portal". However, in the past year, the elderly still generally find it difficult to use the "LeaveHomeSafe" app. In this connection, will the Government inform this Committee of the following:

1. in 2021-22, regarding the efforts made by OGCIO to enable the elderly to use the "LeaveHomeSafe" app, (a) the number of outreaching activities organised; (b) the number of voluntary organisations which have worked in partnership with OGCIO; (c) the number of participants and (d) the total expenditure and manpower involved;

2. in response to the extension of the requirement for the mandatory use of the "LeaveHomeSafe" in 2021, some organisations in our community reached out to the elderly and distributed smart phones to them. Had the Government provided any support for these organisations? If yes, (a) what were the expenditure and manpower involved and (b) the number of the elderly beneficiaries? If no, what were the reasons?

3. In 2022-23, for the sake of enhancing user experience of the "iAM Smart" app, whether OGCIO will consider providing the elderly and the visually impaired with more options such as using the app by tapping the Octopus or through the reverse scanning function for their convenience. Please give information on the expenditure and manpower to be earmarked for studying improvement measures; and

4. given the uncertainties surrounding the pandemic and the implementation of group gathering regulation, what are (a) the other measures that OCGIO will implement in 2022-23 for enabling the elderly to overcome the difficulties in using the "LeaveHomeSafe" apart from "the Outreach and Training Programmes as well as the web-based learning portal", and (b) the estimated expenditure and manpower involved ?

Asked by: Hon LUK Chung-hung (LegCo internal reference no.: 6)

Reply:

1. To help the elderly in need use the "LeaveHomeSafe" (LHS) mobile app, the Office of the Government Chief Information Officer (OGCIO) has, in coordination with 6 partner organisations under the information and communications technology (ICT) Outreach Programme for the Elderly (Outreach Programme), expanded the coverage of the ICT outreach activities to include the use of LHS mobile app. OGCIO has also launched a pilot scheme in tandem with these organisations to set up mobile outreach service stations at community locations frequented by the elderly to teach them on using some commonly used and practical mobile apps such as the LHS. As at December 2021, we have briefed over 1 600 elderly people on how to use the LHS through around 400 activities organised under the ICT Outreach Programme. In view of the current epidemic situation of COVID-19, outreach activities have been suspended since early January 2022. Together with the organisations, we will keep in view the development of the pandemic and resume the outreach activities in due course.

   In addition, in the first round of the Enriched ICT Training Programme for the Elderly (Training Programme) that completed in August 2021, the 11 funded elder academies had included the training of using the LHS for the elderly in some 20 free courses they provided, and over 300 elderly people had attended these courses. Meanwhile, to meet the needs for self-learning among the elderly, OGCIO had launched a LHS online course to help the elderly learn how to use the LHS mobile app on the "Elderly IT Learning Portal" tailor-made for them.

   The above LHS related activities are organised by the 6 partner organisations participating in the Outreach Programme and 11 elder academies participating in the Training Programme through the resources provided under the Programme. No additional funding is involved.

2. In 2021-22, the Government provided a range of support which include matching, coordination, train-the-trainer and provision of training resources for LHS to facilitate a number of local groups and organisations to further support the people in need (in particular the elderly) to use the LHS for the anti-epidemic needs. The abovementioned support was provided by the existing staff of OGCIO. No additional resources and manpower are involved. We do not maintain the information in respect of the number of beneficiaries of these groups and organisations.

3. The LHS mobile app has recorded over 7.8 million downloads since its launch. Members of the public have now become familiar with the use of the app and formed a habit of keeping a record of their whereabouts in their daily lives. OGCIO will continue

improving the user experience of the LHS mobile app, and add more new functions according to the latest anti-epidemic requirements.

Apart from the abovementioned measures, OGCIO has, with an aim to help building a caring and inclusive society, prepared LHS Venue QR Code Braille folders for distribution to operators of scheduled premises, catering businesses, public markets and other venues to assist the visually impaired persons to scan the LHS venue QR code by touching the Braille printed on the folder. More than 130 000 LHS Braille folders have been distributed so far.

Moreover, taking into account that some persons may not be able to comply with the requirement of using the LHS mobile app due to legitimate reason, the Government has made exemption arrangement for the following three types of specified persons who are allowed to complete a specified form as an alternative measure for complying with the requirement on using the LHS mobile app: persons aged 65 or above or aged 15 or below; persons with disability; or persons recognised by the Government or organisations authorised by the Government as eligible for the arrangement (such as the homeless).

4. OGCIO has been providing ICT information and introducing the latest functions of the LHS mobile app to the elderly through various activities and publicity events. For example, we have, in association with partner organisations under the Outreach Programme, set up mobile outreach service stations at community locations frequented by the elderly (such as parks, shopping centres and the vicinity of housing estates) to proactively assist them in using the LHS mobile app. Furthermore, we have set up mobile service stations at 25 MTR stations and engaged external service contractors to assist members of the public who need help in downloading, updating or using the LHS mobile app, as well as opening the "Hong Kong Health Code" accounts starting from December 2021. The estimated expenditure for the Outreach Programme and mobile service stations in the financial year 2022-23 is around $20 million.

Besides, the Social Innovation and Entrepreneurship Development Fund (SIE Fund) made a grant of $13 million in October 2021 to support four innovative projects that promote inter-generational digital inclusion, whereby young people will be engaged to assist the elderly in learning to use digital technologies, which include teaching the elderly on the basic operation knowledge of tablet computer or smart phone as well as the operation of mobile apps (such as the LHS).

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0061)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is stated in the Matters Requiring Special Attention in 2022-23 that the Government will commence an e-government audit for the information technology (IT) systems and services of bureaux and departments to identify areas of improvements. In this connection, please inform this Committee of the following:

1. the audit criteria;

2. the specific timetable for conducting the audit; and

3. whether private technology enterprises will be engaged to conduct the audit? If yes, what are the details? If no, what are the reasons?

Asked by: Hon QUAT Elizabeth (LegCo internal reference no.: 2)

Reply:

Our consolidated reply to the questions is as follows:

The Office of the Government Chief Information Officer (OGCIO) will conduct a 3-year e-government audit programme from 2022-23 to 2024-25 with a view to expediting the development of digital government and building Hong Kong into a more advanced smart city.

We will categorise the bureaux/departments (B/Ds) into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence,

blockchain, cloud computing, big data analytics) to provide more convenient public services and expedite the development of digital government. Based on the recommendations made in the audit, B/Ds will then implement the enhanced solutions and they may procure products and services via various Standing Offer Agreements coordinated by OGCIO to expedite the implementation of the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc.

We expect that the audit work will commence in the second quarter of 2022-23 and the whole audit work for all B/Ds will be completed by the third quarter of 2023-24. As for the implementation of the enhanced solutions, related work will start in the first quarter of 2023-24, and is expected to be completed in 2024-25.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. **ITB061**

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0063)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (2) Information Technology Infrastructure and Standards

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

It is stated in the Matters Requiring Special Attention in 2022-23 that the Government will continue to monitor the implementation of smart city initiatives under the Smart City Blueprint for Hong Kong 2.0. Please advise this Committee of the following:

1. the current percentages of completion of the initiatives under the Smart City Blueprint for Hong Kong 2.0 in the six areas: "smart mobility", "smart living", "smart environment", "smart people", "smart government" and "smart economy";

2. the current percentage shares of products or services procured from local technology-based enterprises during the implementation of the Smart City Blueprint for Hong Kong 2.0; and

3. the implementation timetable of the Smart City Blueprint for Hong Kong 3.0.

Asked by: Hon QUAT Elizabeth (LegCo internal reference no.: 4)

Reply:

1. The Government published the Smart City Blueprint for Hong Kong 2.0 (Blueprint 2.0) in December 2020, covering six smart areas, namely "Smart Mobility", "Smart Living", "Smart Environment", "Smart People", "Smart Government" and "Smart Economy". Currently, over 40% of the work has been completed or ongoing, and the remaining work being at the implementation stage. Details are as follows:

Smart Area	Percentage of Completion[#]
Use of innovation and technology (I&T) in Combating COVID-19	38%
Smart Mobility	26%
Smart Living	31%
Smart Environment	28%
Smart People	77%
Smart Government	35%
Smart Economy	65%

[#]*Including completed or ongoing initiatives*

2. In order to enhance the Government's capacity in providing information technology (IT) services and to expedite the rollout of IT solutions to meet the growing demand for digital government services, the Office of the Government Chief Information Officer (OGCIO) has formulated the Standing Offer Agreement for Quality Professional Services (SOA-QPS) for reference and use by bureaux/departments (B/Ds). A category of "Minor Group" has been provided in the SOA-QPS which covers work assignments with contract value not exceeding $3 million to facilitate local small and medium enterprises (SMEs) to provide IT services to B/Ds. Since the launch of the "pro-innovation government procurement policy" in 2019, the Government has further lowered the threshold for service providers to participate in government procurements, thereby enabling more local SMEs to participate in tendering. The latest SOA-QPS which took effect from the end of January 2022 has also lowered the requirements on service providers' experiences and adjusted upward the limit for the number of participating contractors to attract more local SMEs to participate.

All government departments have been inviting tenders for their required products and services individually based on their business needs, with the participating contractors coming from local, the Mainland and overseas sectors. OGCIO does not maintain the information regarding B/D's procurements of relevant products and services.

3. Blueprint 2.0 was published at the end of 2020 and most of the initiatives are still actively ongoing. We are now focusing on implementation of the various initiatives in Blueprint 2.0, and will conduct a comprehensive review in 2023 on the progress and achievements made in taking forward Blueprint 2.0 for preparing the formulation of Blueprint 3.0. In the meantime, the Innovation and Technology Bureau and OGCIO will continue to coordinate the smart city initiatives and provide bureaux and departments with necessary technical support. B/Ds will also continue to keep abreast of the latest development in smart city and I&T, update their development goals and related initiatives under Blueprint 2.0 regularly, and introduce new initiatives from time to time to reflect the latest situation of smart city development in Hong Kong. We have uploaded the progress of individual initiatives under Blueprint 2.0 to the dedicated Smart City Portal (www.smartcity.gov.hk) and will update it timely to facilitate members of the public to understand better the latest progress of smart city initiatives.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0905)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (2) Information Technology Infrastructure and Standards

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

In this year's Budget, apart from spending public money on standard items such as implementing relief measures for improving people's livelihood and allocating lands for housing, the Financial Secretary will also give tremendous funding support for the development of innovation and technology (I&T) industry, and it is stated in the Budget Speech that "Government has invested over $130 billion in I&T development" and "allocate additional resources in the Budget to keep reinforcing the entire value chain and the I&T ecosystem". In this connection, will the Government inform this Committee of:

the resources and manpower expected to be deployed for promoting the implementation of the Smart City Blueprint for Hong Kong 2.0 in 2022-23? What are the priority issues to be addressed? Will the Government make continuous efforts to update the Smart City Blueprint for Hong Kong, and launch more facilitation measures to enable members of the public to better perceive how Hong Kong as a smart city and the use of I&T can benefit their daily lives. If yes, what are the details? If no, what are the reasons?

Asked by: Hon SO Cheung-wing (LegCo internal reference no.:5)

Reply:

Bureaux/departments (B/Ds) concerned will arrange and prioritise their own resources and manpower to take forward and implement the smart city initiatives set out in the Smart City Blueprint for Hong Kong 2.0 (Blueprint 2.0). The Office of the Government Chief Information Officer (OGCIO) does not maintain the relevant information.

OGCIO will deploy its existing resources and manpower to take forward the implementation of the Blueprint 2.0, which includes to continue coordinating various smart city initiatives and providing technical support to relevant B/Ds, with a view to fully realising and

implementing the vision of smart city development as proposed in the Chief Executive's 2020 Policy Address.

B/Ds have been actively pursuing and taking forward the initiatives under Blueprint 2.0, with a view to addressing city management challenges and improving people's livelihood through innovation and technology (I&T). The Government will launch a number of projects in 2022-23 which include:

(a) developing a Traffic Data Analytics System to enhance traffic management and efficiency and providing the public with traffic forecast via "HKeMobility" mobile app and Public Sector Information (PSI) portal in the second half of 2022 to facilitate their commuting and trip planning;

(b) launching the Common Spatial Data Infrastructure (CSDI) portal with about 500 datasets from B/Ds which will be disseminated in phases for government and public use before end-2022; and

(c) continuing to facilitate all licence applications and some 900 government services involving application and approval processes to be submitted electronically by mid-2022, unless there are legal or operational constraints, under the "Be the Smart Regulator" Programme and "Streamlining of Government Services" Programme.

Blueprint 2.0 was published at the end of 2020 and most of the initiatives are still actively ongoing. We are now focusing on the implementation of the various initiatives in Blueprint 2.0, and will conduct a comprehensive review in 2023 on the progress and achievements in taking forward Blueprint 2.0 for preparing the formulation of Blueprint 3.0. The Innovation and Technology Bureau and OGCIO will continue to coordinate the smart city initiatives and provide B/Ds with necessary technical support. B/Ds will also continue to keep abreast of the latest development in smart city and I&T, update their development goals and related initiatives under Blueprint 2.0 regularly and introduce new initiatives from time to time to reflect the latest situation of smart city development in Hong Kong so that members of the public can better perceive the benefits of smart city and I&T in their daily lives.

- End -

Examination of Estimates of Expenditure 2022-23 | Reply Serial No. ITB063

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0338)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (2) Information Technology Infrastructure and Standards

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The "iAM Smart", a one-stop personalised digital service platform was launched last year. It has since been widely adopted in various electronic Government services. Members of the public can choose to obtain their data kept by individual government departments via electronic means, and submit such data electronically when applying for services from financial institutions. In this connection, will the Government inform this Committee of the following:

1. the number of government services supported by the "iAM Smart" one-stop personalised digital service platform since its launch;

2. the number of user-times of the government services through "iAM Smart" since its launch with a breakdown by the category of government services;

3. the Government indicated earlier that the Hong Kong Monetary Authority (HKMA) is currently working with the Office of the Government Chief Information Officer (OGCIO) to develop the business version of the "iAM Smart" digital authentication platform. It can be used to authenticate the identity of enterprises through an electronic channel. Please provide details on the estimates and staffing establishment required for developing its business version;

4. the current development progress of the business version of the "iAM Smart"; whether the timetable of launching the platform can be provided; and

5. the number of government services or subsidy schemes to be included in the business version of the "iAM Smart"?

Asked by: Hon TAN Sunny (LegCo internal reference no.: 9)

Reply:

1. As at end-February 2022, more than 180 commonly used government online services have adopted the "iAM Smart" platform, including the COVID-19 electronic vaccination and testing records, eHealth, eTAX, renewal of vehicle licence, etc.

2. As at end-February 2022, there were about 13.6 million instances of access through "iAM Smart" to different online services. Details of usage count by category of government online services are listed as follows:

Government Online Service Category	Usage Count
COVID-19	7 760 000
Taxes & Duties	1 415 000
Communications & Technology	1 358 000
Health & Medical Services	1 107 000
Transport & Motoring	582 000
Government, Law & Order	576 000
Housing & Social Services	308 000
Employment	286 000
Education & Training	85 000
Business & Trade	55 000
Immigration Services	47 000
Culture, Leisure & Sports	25 000
Environment	2 000
Total	**13 606 000**

3, 4 and 5. The Office of the Government Chief Information Officer (OGCIO) and the Hong Kong Monetary Authority (HKMA) completed the first phase of Proof-of-Concept (PoC) trials and research on the business version of the "iAM Smart" platform in the second quarter of 2021. Currently, we are exploring a sustainable development proposal through a public-private partnership approach based on the PoC results. To this end, OGCIO and the HKMA will work with other stakeholders to explore on a number of issues in respect of digital authentication of business identities including assessing the industry players' acceptance of the proposed solution and exploring its application, the governance framework of the platform and the detailed implementation plan. A trial run of sandbox will also be conducted for assessing the system security, protection of users' privacy and its compatibility with related platforms in other jurisdictions, etc., with a view to working out the feasibility of the sustainable development of the proposal, as well as to perform the corresponding legal and regulatory consultation. The implementation timetable, scope and the bureaux and departments involved will be decided then. The development of the business version of the "iAM Smart" platform will be met by the existing manpower and resources of OGCIO and the HKMA. No additional expenses are involved.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0844)

Head: (47) Government Secretariat: Office of the Government Chief Information Officer

Subhead (No. & title): ()

Programme: (1) Use of Information Technology in Government

Controlling Officer: Government Chief Information Officer (Victor LAM)

Director of Bureau: Secretary for Innovation and Technology

Question:

The Government endeavours to promote further digitalisation in government operations. In this connection, will the Government inform this Committee of the following:

1. the specific work plan and the expenditure involved;

2. whether there are specific indicators to assess the effectiveness of the work? If yes, what are the details? If no, what are the reasons? And

3. the scope of work covered in the e-government audit which is to be conducted in the coming 3 years?

Asked by: Hon ZHANG Xinyu, Gary (LegCo internal reference no.: 6)

Reply:

1.&2. The Government has been committed to promoting the adoption of technology by government departments to enhance operational efficiency and continuously improve public services. In the past two financial years, we have been actively driving bureaux/departments (B/Ds) to provide more e-government services. The target is that by mid-2022, unless there are legal or operational constraints, electronic licensing will be implemented for all licensing applications; and applications for other government services and all government forms can also be submitted electronically. Besides, e-payment options will be made available for making relevant payments in respect of most licences and services starting from mid-2022.

Currently, the business sector and the general public can submit applications through electronic means for about 1 000 licences and government services, and relevant payments for a majority of these licences and government services can be made electronically. In addition, more than 2 500 government forms can also be submitted electronically. The Office of the Government Chief Information Officer (OGCIO) and the Efficiency Office will assist B/Ds in implementing the aforementioned work with existing manpower and resources.

3. To expedite the development of digital government, OGCIO will conduct a 3-year e-government audit programme from 2022-23 to 2024-25, and the enhanced solutions recommended in the audits will also be implemented under the programme. We will categorise B/Ds into different groups having regard to relevant policies and the scope of their businesses. Consultancy firms with relevant experience will be engaged to conduct e-government audits. Each audit will take about 3 to 6 months to review the information technology (IT) systems and services of the B/Ds respectively in the same group and the consultancy firms will make recommendations on the enhanced IT solutions that leverage advanced technologies (e.g. artificial intelligence, blockchain, cloud computing, big data analytics) to provide more convenient public services. B/Ds may procure products and services via various Standing Offer Agreements coordinated by OGCIO to expedite the implementation of the enhanced solutions. To support and facilitate B/Ds' implementation of the enhanced solutions, OGCIO will provide the necessary digital infrastructure and shared platforms, including the Next Generation Government Cloud, Big Data Analytics Platform, and the "iAM Smart" one-stop personalised digital services platform, which have commenced operation in 2020, as well as the shared blockchain platform that will come into operation in 2022, etc..

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0821)

Head: (111) Innovation and Technology Fund: Innovation and Technology

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

In respect of the Technology Start-up Support Scheme for Universities (TSSSU) under the Innovation and Technology Fund, please advise on:

1) the manpower and expenditure in operating the TSSSU in the past 2 years;
2) the enterprises funded and the number of research and development (R&D) projects funded, to be listed in tabular form; and
3) the numbers of R&D results successfully commercialised by the projects funded under the TSSSU in the past 2 years.

Asked by: Hon KWOK Ling-lai, Lillian (LegCo internal reference no.: 6)

Reply:

(1) The Technology Start-up Support Scheme for Universities (TSSSU) is one of the initiatives under Programme 2: Promotion of Technological Entrepreneurship. As the TSSSU is administered by the Innovation and Technology Commission (ITC) with its existing manpower and the same staffing establishment is also responsible for handling other funding schemes under the Innovation and Technology Fund (ITF), no breakdown of expenditure is available.

(2) The aim of the TSSSU is to encourage university teams to set up start-ups and commercialise their research and development (R&D) results. Since the financial year 2019-20, the annual funding ceiling for each university has been raised from the initial $4 million to $8 million and that for each start-up from $1.2 million to $1.5 million. In the past 2 financial years, the numbers of start-ups funded and the funding amounts for respective participating universities are as follows:

University that submitted recommendations	2020-21		2021-22	
	Number of start-ups funded	Total amount of funding approved for beneficiary start-ups ($ million)	Number of start-ups funded	Total amount of funding approved for beneficiary start-ups ($ million)
The University of Hong Kong	29	8	17	8
The Chinese University of Hong Kong	20	8	22	8
City University of Hong Kong	16	8	12	8
The Hong Kong University of Science and Technology	14	8	19	8
Hong Kong Baptist University	6	7.23	8	8
The Hong Kong Polytechnic University	8	8	9	8
Total	**93**	**47.23**	**87**	**48**

As the funding under the TSSSU is on a start-up basis, no number or names of the R&D projects can be provided in the above table.

(3) According to the information provided by the universities for the financial years 2019-20 and 2020-21, of the 137 funded start-ups, 81 (59%) had already commercialised their R&D results with nearly 100 products or services successfully rolled out in the market; 84 (61%) had generated 520 intellectual property rights; and 62 (45%) had even received a total income amounting to over $78 million. The universities will collect and verify the information relating to the funded start-ups for the financial year 2021-22 after the end of the financial year and subsequently submit it to ITC.

It is announced in this year's Budget that the annual amount of subsidy for each participating university, funded by the TSSSU under the ITF, would be doubled from $8 million to $16 million, involving a total annual subsidy of $96 million. The additional subsidy will be provided to university start-ups with private investments on a matching basis of one to one. Each start-up can receive an annual subsidy of up to $1.5 million for an additional maximum period of 3 years, meaning that each start-up may receive subsidies of up to 6 years.

We will review the operation of the TSSSU in a timely manner and introduce enhancement measures as and when appropriate.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0796)

Head: (111) Innovation and Technology Fund: Innovation and Technology

Subhead (No. & title): (000) Operational Expenses

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

The funding amount of the Technology Start-up Support Scheme for Universities (TSSSU) is going to be increased to only $16 million. Is it an underestimation of the ever-increasing demand for funding support? As there are over 10 University Grants Committee-funded universities and self-financing tertiary institutions in Hong Kong, the meagre $1.5 million average funding amount allocated to each institution seems insufficient to convey the Government's message of encouraging university students to engage in start-ups. Will the Government consider stepping up its financial efforts to promote university students' engagement in start-ups?

Asked by: Hon LAU Chi-pang (LegCo internal reference no.: 1)

Reply:

The Innovation and Technology Commission (ITC) has been implementing the Technology Start-up Support Scheme for Universities (TSSSU) since 2014 to encourage university teams to set up technology start-ups and commercialise their research and development (R&D) results. Since the financial year 2019-20, the annual funding ceiling for each university has been raised from the initial $4 million to $8 million, and that for each start-up from $1.2 million to $1.5 million for a maximum period of 3 years. As these start-ups are still at their initial stage, the present funding ceiling should be sufficient in providing the necessary financial support required by start-ups in different technological areas.

It is announced in this year's Budget that the annual amount of subsidy for each participating university, funded by the TSSSU under the Innovation and Technology Fund, would be doubled from $8 million to $16 million, involving a total annual subsidy of $96 million. The additional subsidy will be provided to university start-ups with private investments on a matching basis of one to one. Each start-up can receive an annual subsidy of up to $1.5 million for an additional maximum period of 3 years, meaning that each start-up may receive subsidies of up to 6 years.

According to the information provided by the universities for the financial years 2019-20 and 2020-21, of the 137 funded start-ups, 81 (59%) had already commercialised their R&D results with nearly 100 products or services successfully rolled out in the market; 84 (61%) had generated 520 intellectual property rights; and 62 (45%) had even received a total income amounting to $78 million.

We will review the operation of the TSSSU in a timely manner and introduce enhancement measures as and when appropriate.

- End -

CONTROLLING OFFICER'S REPLY

(Question Serial No. 0430)

Head: (111) Innovation and Technology Fund: Innovation and Technology

Subhead (No. & title): ()

Programme: Not Specified

Controlling Officer: Commissioner for Innovation and Technology (Ms Rebecca PUN)

Director of Bureau: Secretary for Innovation and Technology

Question:

In respect of fostering technology transfer of universities and development of the innovation and technology industry, it is mentioned in the Budget Speech that an additional matching fund of $48 million per year will be allocated to the Technology Start-up Support Scheme for Universities (TSSSU) under the Innovation and Technology Fund (ITF); a $5 billion Strategic Tech Fund (Tech Fund) will be set up under the Hong Kong Growth Portfolio of the Future Fund; and $10 billion will be earmarked for the development of life and health technology. In this connection, please advise this Committee on:
(1) the actual mode of operation under the TSSSU in relation to the additional matching fund, especially the ways to coordinate with the existing funding support; as well as the responsible party and ways to select the co-investment partners and investment projects; and
(2) whether the Tech Fund, with an aim "to nurture enterprises that are relatively more mature and have good potential" as mentioned in the Budget Speech, will follow the practice of certain overseas deep technology funds (such as the IP Group in the United Kingdom) to invest in scientific research projects of universities at an early stage and foster the setting up of related start-ups.

Asked by: Hon WONG Yuen-shan (LegCo internal reference no.: 1)

Reply:

The reply to questions (1) to (2) is as follows:

(1) The Innovation and Technology Commission (ITC) has been implementing the Technology Start-up Support Scheme for Universities (TSSSU) since 2014 to encourage university teams to set up start-ups and commercialise their research and development (R&D) outcomes. Currently, each start-up may receive an annual subsidy of up to $1.5 million for a maximum of 3 years.

In order to help universities further realise their R&D outcomes, it is announced in the 2022-23 Budget that the annual amount of subsidy for each participating university,

funded by the TSSSU under the Innovation and Technology Fund, would be doubled from $8 million to $16 million, involving a total annual subsidy of $96 million. The additional subsidy will be provided to university start-ups with private investments on a matching basis of one to one. Each start-up can receive an annual subsidy of up to $1.5 million for an additional maximum period of 3 years, meaning that each start-up may receive subsidies of up to 6 years.

Under the existing TSSSU, university teams that wish to seek funding support will submit applications to their respective universities. Each participating university will establish a selection panel to assess and select suitable teams and make recommendations to ITC for its approval. The selection panel will take into account various factors, such as the innovation and technology (I&T) content and commercial viability of the business proposed by the applicant teams, the R&D and company management capabilities of the team members, as well as the impact to be brought by the business on the community. ITC will review the eligibility of the start-ups recommended by the universities and the reasonableness of their proposed budget before determining whether funding will be granted.

The operating procedure of the new initiative will be similar to the existing one, by which the universities will continue to assess and select suitable teams and propose the amount of matching fund, and then make recommendations to ITC for its approval.

(2) The Government has been investing in start-ups at different development stages through various channels, such as the said TSSSU, the Innovation and Technology Venture Fund, the Corporate Venture Fund under the Hong Kong Science and Technology Parks Corporation (HKSTPC), and the Cyberport Macro Fund under the Cyberport.

The Strategic Tech Fund will focus on the investment in technology enterprises which are of strategic value, considerable scale and have good development potential, with a view to enriching the I&T ecosystem in Hong Kong. The Government will invite the HKSTPC and the Cyberport to identify investment opportunities, and the relevant preparatory work is underway.

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