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### Replies to initial written questions raised by Finance Committee Members in examining the Estimates of Expenditure 2017-18

**Director of Bureau : Secretary for Innovation and Technology**

**Session No. : 9**

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**CONTROLLING OFFICER'S REPLY****S-ITB001****(Question Serial No. S0017)**Head: (135) Government Secretariat: Innovation and Technology BureauSubhead (No. & title):Programme: (2) Innovation and TechnologyControlling Officer: Permanent Secretary for Innovation and Technology  
(Cheuk Wing Hing)Director of Bureau: Secretary for Innovation and TechnologyQuestion:

Please provide information on the Innovation and Technology Fund (ITF), the Technology Start-up Support Scheme for Universities (TSSSU), the Enterprise Support Scheme (ESS), the Small Entrepreneur Research Assistance Programme (SERAP), the Patent Application Grant (PAG) and all other funding schemes not mentioned in the reply to Question Serial No. 3132 in the table below:

Title of Scheme	Objective	Target Applicant	Total Amount of Grant	Maximum Grant for each Application	Number of Projects Benefited

Asked by: Hon YIU Chung-yimReply:

The Government has implemented a number of funding schemes through the Innovation and Technology Fund to promote innovation and technology development on all fronts. Details of the schemes are tabulated as follows:

<b>Title</b>	<b>Objective</b>	<b>Target applicant</b>	<b>Total amount</b>	<b>Maximum grant per application (if applicable)</b>	<b>Number of projects benefited (if applicable)</b>
Technology Start-up Support Scheme for Universities	To fund the research teams of 6 local universities to start technology businesses and commercialise their research and development (“R&D”) results	Start-ups set up by the research teams of 6 local universities	(Note 1)	An annual funding of up to \$4 million is provided to each university. Each funded start-up may receive up to \$1.2 million each year for no more than 3 years.	Since the launching of the scheme in September 2014 to end January this year, a total of 122 start-ups were funded (of which 39 were funded for more than 1 year)
Enterprise Support Scheme	To provide financial support to enterprises to encourage them to conduct in-house R&D activities with a view to promoting more private sector R&D expenditure in Hong Kong	Limited companies registered in Hong Kong	(Note 1)	\$10 million	Since the launching of the scheme in end April 2015 to end January this year, a total of 28 projects were approved
Small Entrepreneur Research Assistance Programme	To provide financial support for small technology-based enterprises to carry out R&D activities on a commercial basis	Enterprises which have less than 100 employees and are not subsidiary companies significantly owned or controlled by publicly listed companies	(Note 1)	\$6 million	Since the setting up of the programme in 1999 to the close of application on 28 April 2015, a total of 412 projects were approved
Patent Application Grant	To encourage local companies and individual inventors to protect and capitalise their R&D results through patent registration	All locally incorporated companies, Hong Kong permanent residents or Hong Kong residents permitted to remain in Hong Kong for not less than 7 years which/who have never owned any patents in any countries or territories before	(Note 1)	\$250,000	Since the launching of the scheme in 1998 to end January this year, more than 1 800 applications were approved
Funding for Partner State Key Laboratories (“PSKLs”)	To strengthen the research capability and build up the necessary infrastructural support for PSKLs	PSKLs recognised by the State Ministry of Science and Technology (“MOST”)	(Note 1)	\$5 million per PSKL annually	There are currently 16 PSKLs in Hong Kong

<b>Title</b>	<b>Objective</b>	<b>Target applicant</b>	<b>Total amount</b>	<b>Maximum grant per application (if applicable)</b>	<b>Number of projects benefited (if applicable)</b>
Funding for Hong Kong Branches of Chinese National Engineering Research Centres (“CNERCs”)	To strengthen the research capability and build up the necessary infrastructural support for the Hong Kong Branches of CNERCs	Hong Kong Branches of CNERCs recognised by MOST	(Note 1)	\$5 million per branch annually	There are currently 6 Hong Kong Branches of CNERCs in Hong Kong
Funding for Technology Transfer Offices (“TTOs”) of the universities	To enhance the capability of the TTOs of 6 local universities	TTOs of 6 local universities	(Note 1)	\$4 million per office annually	Not applicable
Innovation and Technology Support Programme	To support midstream/downstream R&D projects	R&D Centres, local universities, public research institutes (Note 2) and private companies	(Note 1)	Nil (Note 3)	Since the launching of the programme in 1999 to end January this year, around 2 300 projects were approved
University-Industry Collaboration Programme	To encourage private sector to conduct more R&D through leveraging the knowledge and resources of universities	Local private enterprises and universities	(Note 1)	Nil (Note 3)	Since the launching of the programme in 1999 to end January this year, around 300 projects were approved
General Support Programme	To cater for non-R&D projects that contribute to the upgrading and development of local industries as well as fostering an innovation and technology culture in Hong Kong	local organisations (Note 4)	(Note 1)	Nil (Note 3)	Since the launching of the programme in 1999 to end January this year, 160 projects were approved

Note 1: All of the above schemes are funded by ITF and no funding ceiling has been set for individual schemes.

Note 2: Including the Hong Kong Productivity Council, the Vocational Training Council, the Clothing Industry Training Authority and the Hong Kong Institute of Biotechnology.

Note 3: Where the ITF funding for a project exceeds \$30 million, approval from the Finance Committee of the Legislative Council is required.

Note 4: For example, non-profit-making trade or industry associations or chambers of commerce, public bodies, charitable organisations registered under Section 88 of the Inland Revenue Ordinance, local universities or other statutory tertiary/post-secondary institutes, District Councils, and local unincorporated or incorporated company under the Companies Ordinance.

- End -

**CONTROLLING OFFICER'S REPLY**

**S-ITB002**

**(Question Serial No. S0018)**

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

Subhead (No. & title):

Programme: (2) Innovation and Technology

Controlling Officer: Permanent Secretary for Innovation and Technology  
(Cheuk Wing Hing)

Director of Bureau: Secretary for Innovation and Technology

Question:

Will the Bureau introduce any scheme to grant repayment-free venture capital for the application of start-ups by making reference to relevant policies of other economies?

If yes, please specify the details; if not, please advise the reasons.

Asked by: Hon YIU Chung-yim

Reply:

The Government has been providing financial support to innovation and technology start-ups through the Innovation and Technology Fund. For instance, the Technology Start-up Support Scheme for Universities provides an annual funding of up to \$4 million to each of the six local universities to support their research teams in starting their own technology business and commercialising their research and development deliverables. Funding is provided to the universities by the Innovation and Technology Commission on a reimbursement basis after the close of each financial year.

Moreover, the Hong Kong Science and Technology Parks Corporation provides support to start-ups in the fields of technology, biomedical technology, as well as web and mobile technology through its incubation programmes. Upon meeting the corresponding business targets and assessment, start-ups may be granted a cash funding of up to \$60,000 to \$240,000, depending on which incubation programme they participate in. Cyberport also provides various support programmes for start-ups, including financial assistance. For instance, the Cyberport Incubation Programme provides a funding of up to \$330,000 to each incubatee, while the Cyberport Creative Micro Fund provides \$100,000 seed funding for each selected project to assist participants in turning innovative ideas into prototypes. In addition, the Cyberport Accelerator Support Programme supports its incubatees and companies that have completed the incubation programme in participating in local, Mainland and overseas accelerator programmes, which may help them expand their business overseas and raise funds. Each start-up selected for admittance to the endorsed

accelerator programme will receive financial assistance of up to \$300,000 to cover programme fees, passage, accommodation and other relevant expenses.

The above programmes do not involve the provision of loans or other financial support requiring repayment to start-ups.

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**CONTROLLING OFFICER'S REPLY**

**S-ITB003**

**(Question Serial No. S0019)**

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

Subhead (No. & title):

Programme: (5) Infrastructural Support

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

Director of Bureau: Secretary for Innovation and Technology

Question:

In respect of the technology enterprise incubatees and tenants at the Hong Kong Science Park, will the Government advise the nationalities of employers and staff of the enterprises involved in the past 3 years?

	Hong Kong permanent residents	Mainland residents	Other nationals
2014			
2015			
2016			

Asked by: Hon MOK Charles Peter

Reply:

As nationality issue involves personal privacy, the Hong Kong Science and Technology Parks Corporation will not request tenants at the Science Park and technology enterprises participating in the incubation programmes to declare the nationalities of employers and staff. Therefore, relevant statistics are not available.

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**CONTROLLING OFFICER'S REPLY**

**S-ITB004**

**(Question Serial No. S0013)**

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

Subhead (No. & title):

Programme: (4) Planning for Innovation and Technology Development

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

Director of Bureau: Secretary for Innovation and Technology

Question:

Please explain the distribution of responsibilities on industrial policies among the Innovation and Technology Commission (ITC) and the Trade and Industry Department (TID). Are the focused industries different or do they support different production processes? Regarding the reply to Question Serial No. 3133, ITC only lists out the respective projects for which ITC and TID are responsible, but fails to address the question on distribution of responsibilities and positioning.

Asked by: Hon YIU Chung-yim

Reply:

The Trade and Industry Department (TID) supports and facilitates the development of Hong Kong's industries and small and medium enterprises (SMEs) through its various aspects of work.

In respect of areas such as obtaining finance and enhancing overall competitiveness, TID provides Hong Kong enterprises with a series of supporting schemes, including the SME Loan Guarantee Scheme, the SME Export Marketing Fund, the SME Development Fund as well as the Dedicated Fund on Branding, Upgrading and Domestic Sales.

TID also actively promotes trade and investment liberalisation and facilitation to assist Hong Kong traders in exploring markets. Through its endeavours to conclude free trade agreements, including the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), with trading partners, products that fulfil the rules of origin can enjoy preferential tariff treatment, thereby becoming more competitive in the Mainland and overseas markets. Under CEPA, so far over 1 800 Hong Kong origin products can enjoy zero tariff benefit for entering the Mainland market.



In addition, TID also provides various licensing, certification and registration services for commodities. Other than ensuring that the regimes are sound, TID also strives to streamline the procedures to facilitate the trade and promote the flow of goods.

On the other side, the Innovation and Technology Bureau and the Innovation and Technology Commission (ITC) under its purview focus on promoting innovation and technology (I&T) to drive re-industrialisation and formulating measures to promote the research and development of technologies, encourage collaboration with Mainland and overseas top-notch institutions, introduce and develop high-end manufacturing industries suitable for Hong Kong with the high value-added production processes being carried out in Hong Kong and facilitate the upgrading and transformation of SMEs through the adoption of I&T, etc.

As for ITC's efforts in promoting I&T and re-industrialisation, including the measures on software and hardware fronts, please refer to the reply to Question Serial No. 3133.

- End -

**CONTROLLING OFFICER'S REPLY**

**S-ITB005**

**(Question Serial No. S0014)**

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

Subhead (No. & title):

Programme: (4) Planning for Innovation and Technology Development

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

Director of Bureau: Secretary for Innovation and Technology

Question:

In respect of the strategy on re-industrialisation, please advise the number of projects and initiatives that are targeted to support the traditional manufacturing industries, including:

- (1) projects that encourage the improvement of manufacturing processes of the traditional manufacturing industries;
- (2) projects that encourage the traditional manufacturing industries to implement innovative technologies and processes;
- (3) projects that provide consultation and advisory services to those without experience in research and development activities; and
- (4) other projects that encourage companies engaged in relevant industries in Hong Kong.

Asked by: Hon YIU Chung-yim

Reply:

The Government strives to drive re-industrialisation, introduce and develop high-end manufacturing industries suitable for Hong Kong with the high value-added production processes being carried out in Hong Kong, so as to restore Hong Kong's manufacturing industries to the rise, promote economic growth and create high-quality job opportunities. Re-industrialisation does not necessarily refer to the development of brand-new industries; it could be the marriage of I&T elements and existing industries to bring them to a new level, enhancing quality and efficiency and achieving product diversification. The Innovation and Technology Commission and relevant organisations have implemented various measures to support enterprises (including the traditional manufacturing industries) to move towards high value-added production or develop emerging industries.

On the hardware side, the Government has been working closely with the Hong Kong Science and Technology Parks Corporation (HKSTPC) in promoting re-industrialisation and has revised the policy on Industrial Estates (IEs) in order to encourage smart production, attract high value-added technology industries as well as high value-added manufacturing processes. In future, HKSTPC will build and manage specialised

multi-storey industrial buildings for rental to different users. HKSTPC is building a Data Technology Hub and an Advanced Manufacturing Centre in the Tseung Kwan O IE to promote smart production. Stage 1 of the Hong Kong Science Park Expansion Programme has also been commenced to provide additional scientific research infrastructure to the industry. On long-term land planning, we have set aside sites near the Liantang/Heung Yuen Wai Boundary Control Point for future development of the IEs. Moreover, we will develop a Hong Kong/Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop. The key base for co-operation in scientific research in the Park would complement the industrial strength of Shenzhen, thereby promoting commercialisation and industrialisation of research and development (R&D) outcomes.

Quality R&D capabilities are necessary to support re-industrialisation. The Innovation and Technology Fund (ITF) was established in 1999 to finance applied R&D projects that contribute to I&T upgrading in manufacturing and services industries in Hong Kong and promotion of innovation. There are various funding programmes under the ITF, including the Innovation and Technology Support Programme, the University-Industry Collaboration Programme, the Enterprise Support Scheme, the Patent Application Grant, etc. One of the aims of these funding programmes is to encourage more R&D from universities and enterprises and promote re-industrialisation.

The R&D Centres established by the Government include the Hong Kong Applied Science and Technology Research Institute, the Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies, the Nano and Advanced Materials Institute, the Hong Kong Research Institute of Textiles and Apparel and the Automotive Parts and Accessory Systems R&D Centre. In recent years, these Centres have been actively engaging in R&D efforts related to re-industrialisation, covering various areas such as big data, Internet of Things, robotics, new materials and smart mobility, etc., thereby assisting the industry to ride the trend and capture business opportunities.

The Hong Kong Productivity Council (HKPC) has been dedicating efforts to promoting re-industrialisation to facilitate enterprises in moving towards high value-added production and achieving Industry 4.0. HKPC has been officially accredited as an “Industry 4.0 Expert” by Fraunhofer Institute for Production Technology, Germany and organised a series of activities for enhancing the industry’s understanding of Industry 4.0. In addition, HKPC will establish an Inno Space to provide workspace and technical support to enable users to develop their innovative ideas into industrial design, which may subsequently be translated into products through prototyping.

Besides, various government departments and quasi-government organisations have set up support schemes, e.g. Trade and Industry Department’s SME Loan Guarantee Scheme, SME Export Marketing Fund, SME Development Fund, and Dedicated Fund on Branding, Upgrading and Domestic Sales, to assist the industry in areas such as obtaining finance and enhancing their overall competitiveness.

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**CONTROLLING OFFICER'S REPLY**

**S-ITB006**

**(Question Serial No. S0015)**

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

Subhead (No. & title):

Programme: (6) Quality Support

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

Director of Bureau: Secretary for Innovation and Technology

Question:

In respect of the Standards and Calibration Laboratory (SCL), please provide the following information:

- 1) The total revenue generated from the calibration services for various measurement areas and the revenue of each area in the past 3 years.
- 2) The operating expenditure of SCL in the past 3 years.
- 3) The distribution of academic qualifications (bachelor's degree, master's degree, doctorate, diploma/certificate and others) and professional experience (0-3 years; 3-5 years; 5-10 years; 10-15 years; 15-20 years; above 20 years) of the staff of SCL.
- 4) The details of the 9 international events of inter-laboratory comparisons of measurement standards.

Asked by: Hon YIU Chung-yim

Reply:

The requested information is provided below:

- 1) The total revenue of the Standards and Calibration Laboratory (SCL) and the revenue of each area in the past 3 years are as follows:

	2014-15	2015-16	2016-17
Electricity and photometry	\$1.43 million	\$1.58 million	\$2.03 million
Length, mass and related quantities	\$500,000	\$660,000	\$710,000
Temperature, humidity, acoustics and vibration	\$720,000	\$780,000	\$890,000
Total revenue	\$2.65 million	\$3.02 million	\$3.63 million

- 2) Operating SCL is part of the work under Programme (6) “Quality Support”. We do not have a breakdown of expenditure for SCL. The expenditures for Programme (6) “Quality Support” in the past 3 years are as follows:

	2014-15	2015-16	2016-17 (Revised estimate)
Expenditure (\$ million)	111.0	113.3	114.7

- 3) The distribution of academic qualifications and professional experience of the staff of SCL are as follows:

Academic qualifications	Number of staff	Professional Experience	Number of staff
Doctorate	3	0-3 years	11
Master’s degree	16	3-5 years	5
Bachelor’s degree	8	5-10 years	4
Diploma/Certificate	8	10-20 years	1
Others	4	above 20 years	18
Total	39	Total	39

- 4) In the past 3 years, SCL participated in a total of 9 international inter-laboratory comparisons of measurement standards. The details are as follows:

Organiser	Details of comparison	Reference of comparison
Asia Pacific Metrology Programme (APMP)	Comparison of AC-DC current transfer standards	APMP.EM-K12
APMP	Comparison of mass standards	APMP.M.M-K5
APMP	Comparison of standards for the calibration of voltage, current and resistance meters	APMP.EM-S12
APMP	Comparison of radiation thermometers	APMP.T-S11
APMP	Comparison of calibration of a linescale	APMP.L-K7.2014
APMP	Comparison of the calibration of standard platinum resistance thermometers	APMP. T-K9
Gulf Association for Metrology (GULFMET)	Comparison of resistance at 100 ohm	GULFMET.EM-S1
APMP	Comparison of humidity standards	APMP.T-K6.2013
GULFMET and International Bureau of Weights and Measures	Comparison of DC voltage	GULFMET.EM.BIPM-K11

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**CONTROLLING OFFICER'S REPLY****S-ITB007****(Question Serial No. S0022)**

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

Subhead (No. & title):

Programme: (1) Use of IT in Government

Controlling Officer: Government Chief Information Officer (Allen YEUNG)

Director of Bureau: Secretary for Innovation and Technology

Question:

Regarding the employment of information technology (IT) staff by the Government, please advise on the ranks and the relevant pre-appointment working experience of the staff newly employed by government bureaux/departments in the past 3 years:

2014

	Newly employed civil service IT staff	Additional T-contract staff employed	Relevant working experience of the newly employed staff
Chief Systems Manager, Senior Systems Manager, and Systems Manager			Below 5 years: 5 to 7 years: Over 7 years:
Analyst/Programmer I			Below 3 years: 3 to 5 years: Over 5 years:
Analyst/Programmer II			Below 1 year: 1 to 3 years: Over 3 years:

2015

	Newly employed civil service IT staff	Additional T-contract staff employed	Relevant working experience of the newly employed staff
Chief Systems Manager, Senior Systems Manager, and Systems Manager			Below 5 years: 5 to 7 years: Over 7 years:

	Newly employed civil service IT staff	Additional T-contract staff employed	Relevant working experience of the newly employed staff
Analyst/Programmer I			Below 3 years: 3 to 5 years: Over 5 years:
Analyst/Programmer II			Below 1 year: 1 to 3 years: Over 3 years:

2016

	Newly employed civil service IT staff	Additional T-contract staff employed	Relevant working experience of the newly employed staff
Chief Systems Manager, Senior Systems Manager, and Systems Manager			Below 5 years: 5 to 7 years: Over 7 years:
Analyst/Programmer I			Below 3 years: 3 to 5 years: Over 5 years:
Analyst/Programmer II			Below 1 year: 1 to 3 years: Over 3 years:

Asked by: Hon MOK Charles Peter

Reply:

The required information is provided as follows:

In the past 3 years, the numbers of new recruits to the civil service information technology (IT) posts in the Government are as follows:

Rank	New recruits to the civil service IT posts		
	2014	2015	2016
Chief Systems Manager, Senior Systems Manager and Systems Manager	0	0	0
Analyst/Programmer I	0	0	0
Analyst/Programmer II	68	58	68
<b>Total</b>	<b>68</b>	<b>58</b>	<b>68</b>

When we recruited officers for the rank of Analyst/Programmer II, the entry requirements only included academic qualifications but not working experience. We have not verified the information on the pre-appointment working experience of the new recruits.

Chief Systems Manager, Senior Systems Manager, Systems Manager and Analyst/Programmer I are promotion ranks, and the vacancies of these ranks would normally

be filled by promotion within the civil service. Only if there were insufficient suitable candidates for promotion would consideration be given to fill vacancies at the promotion ranks by open recruitment. In the past 3 years, no direct recruitment was conducted by the Government to fill the vacancies of the above ranks.

In the past 3 years, the numbers of additional T-contract staff engaged<sup>Note</sup> for government bureaux/departments and the relevant working experience for entry are as follows:

<b>Category</b>	<b>Additional T-contract staff engaged<sup>Note</sup></b>			<b>Basic requirement on IT-related working experience</b>
	<b>As at 31 December 2014</b>	<b>As at 31 December 2015</b>	<b>As at 31 December 2016</b>	
Senior Project Manager and Project Manager	13	(9)	14	8 to 11 years
Senior Systems Analyst and Systems Analyst	136	107	97	4 to 6 years
Analyst/Programmer, Programmer and Junior Programmer	68	74	40	0 to 3 years
<b>Total</b>	<b>217</b>	<b>172</b>	<b>151</b>	

Prior to service engagement, all newly engaged T-contract staff were verified to have met the basic requirements on relevant working experience.

Note: The increase in the number of T-contract staff in the same category as compared with the same period of the previous year (as at 31 December). The figure in brackets denotes the decrease in the number of T-contract staff.

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