

**Head 155 — GOVERNMENT SECRETARIAT:
INNOVATION AND TECHNOLOGY COMMISSION**

Controlling officer: the Commissioner for Innovation and Technology will account for expenditure under this Head.

Estimate 2020–21	\$826.5m
Establishment ceiling 2020–21 (notional annual mid-point salary value) representing an estimated 305 non-directorate posts as at 31 March 2020 rising by four posts to 309 posts as at 31 March 2021	\$223.4m
In addition, there will be an estimated nine directorate posts as at 31 March 2020 and as at 31 March 2021.	
Commitment balance	\$485.0m

Controlling Officer’s Report

Programmes

Programme (1) Support for Research and Development	These programmes contribute to Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).
Programme (2) Promotion of Technological Entrepreneurship	
Programme (3) Planning for Innovation and Technology Development	
Programme (4) Infrastructural Support	
Programme (5) Quality Support	This programme contributes to Policy Area 15: Health (Secretary for Food and Health) and Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).
Programme (6) Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited	This programme contributes to Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).

Detail

Programme (1): Support for Research and Development

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)	69.1	85.6	84.6 (–1.2%)	85.8 (+1.4%)
				(or +0.2% on 2019–20 Original)

Aim

2 The aim is to promote and support applied research and development (R&D) activities which can contribute to innovation and technology (I&T) upgrading in industry.

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Brief Description

3 The Commission achieves this aim by providing funding support and putting in place appropriate infrastructural facilities to encourage applied R&D activities. The Innovation and Technology Support Programme (ITSP) under the Innovation and Technology Fund (ITF) supports applied R&D projects with a view to transferring the results to companies in the relevant industry. The Guangdong-Hong Kong Technology Cooperation Funding Scheme (TCFS) supports applied R&D projects which will facilitate R&D collaboration between organisations in Hong Kong and Guangdong/Shenzhen. The Mainland-Hong Kong Joint Funding Scheme (MHKJFS), introduced in April 2019, supports and encourages R&D collaboration between Hong Kong and various provinces in the Mainland. The Partnership Research Programme (PRP), which merged the University-Industry Collaboration Programme (UICP) and the collaborative stream of the ITSP in January 2019, supports R&D projects undertaken by local universities and other public research institutions in collaboration with local companies. The Midstream Research Programme for Universities (MRP) supports institutions funded by the University Grants Committee to carry out more theme-based midstream research in key technology areas, which has the potential of leading to further downstream R&D work or product development. The Commission also administers the Patent Application Grant (PAG) to provide funding assistance to local companies and individuals applying for patent registration of their own inventions for the first time.

4 Five R&D centres were established in April 2006 to drive and co-ordinate R&D efforts in five focus areas, namely: nanotechnology and advanced materials, textiles and clothing, automotive platforms and application systems, logistics and supply chain management enabling technologies, and information and communications technologies (ICT). The R&D projects carried out by these centres, except for those contract researches the full costs of which are borne by sponsoring companies, are funded mainly by the ITF.

5 Funding assistance is provided to State Key Laboratories in Hong Kong and Hong Kong Branches of Chinese National Engineering Research Centres to enhance their research capabilities. Financial support is also provided to designated universities to enhance their technology transfer capabilities.

6 Under the R&D Cash Rebate Scheme, companies conducting applied R&D projects with the support of the ITF or in partnership with designated local public research institutions enjoy a cash rebate of 40 per cent on their investments.

7 To encourage more enterprises to conduct R&D in Hong Kong, the enhanced tax deduction for R&D expenditures was implemented for qualifying R&D expenditure incurred on or after 1 April 2018. Under the amended Inland Revenue Ordinance (Cap. 112), the Commissioner for Innovation and Technology (CIT) will advise the Commissioner of Inland Revenue on R&D tax deduction claims and advance ruling cases. In addition, CIT will be responsible for processing applications from local institutions for designation as “designated local research institutions” (DLRI) and the subsequent monitoring of these DLRIIs.

8 The performance under this programme is indicated by the extent to which the applied R&D activities receiving funding support is of relevance to the industry and the extent to which the R&D centres accomplish their research programmes effectively. Performance indicators in respect of the ITSP, TCFS, MHKJFS, PRP, UICP, MRP, PAG, R&D centres and R&D Cash Rebate Scheme are as follows:

Indicators

	2018 (Actual)	2019 (Actual)	2020 (Estimate)
ITSP ^Ψ			
applications received and processed	519	367 ^Ω	364
projects funded and being monitored	413	439	452
TCFS			
applications received and processed	153	163	158
projects funded and being monitored	53	64	97
MHKJFS [#]			
applications received and processed	N.A.	113	110
projects funded and being monitored	N.A.	N.A.	12
PRP [#]			
applications received and processed ^Ψ	N.A.	58	58
projects funded and being monitored ^Ψ	N.A.	15	30
UICP			
applications received and processed	34	22 ^Λ	N.A. ^Λ
projects funded and being monitored	85	101	89
MRP			
applications received and processed	58	0 [¶]	84
projects funded and being monitored	18	25	32
PAG			
applications received and processed	395	212 [§]	292
projects funded	181	164 [§]	153 [§]

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	2018 (Actual)	2019 (Actual)	2020 (Estimate)
R&D centres' projects ^Φ			
Automotive Platforms and Application Systems R&D Centres [⊖]			
new projects	17	19	21
projects funded and being monitored.....	62	68	80
R&D Centre for information and communications technologies			
new projects	36	48	50
projects funded and being monitored.....	111	127	138
Logistics and Supply Chain MultiTech R&D Centre			
new projects	14	24	25
projects funded and being monitored.....	60	63	71
Nano and Advanced Materials Institute			
new projects	50	36 [‡]	49
projects funded and being monitored.....	153	132	141
Hong Kong Research Institute of Textiles and Apparel			
new projects	21	15 [◇]	20
projects funded and being monitored.....	66	69	64
R&D Cash Rebate Scheme			
applications received and processed	334	362	380
applications approved	295	381	380

^Ψ The figures do not include applications submitted or projects undertaken by the five R&D centres, which are reported under the indicators "R&D centres' projects".

^Ω The number of ITSP applications received and processed in 2019 dropped due to the merging of the collaborative stream of the ITSP and UICP into the PRP in January 2019.

[#] New indicators as from 2019.

[^] UICP ceased to accept new applications from April 2019 onwards.

[¶] There was no MRP application received in 2019 as the solicitation exercise started in mid-December 2019.

[§] The uncertain business environment resulted in a drop in the number of applications received in 2019. Taking into account the time required for processing the applications, it is anticipated that there will be a decrease in the number of projects funded in 2020 accordingly.

^Φ All projects (including ITSP, TCFS, MHKJFS and PRP projects and feasibility studies) undertaken and/or monitored by R&D centres are included.

[⊖] Formerly known as Automotive Parts and Accessory Systems R&D Centre.

[‡] There was a decrease in the number of new projects in 2019 as the Institute focused on pursuing large-scale projects during the year.

[◇] The uncertain business environment hindered local companies' investment in R&D, resulting in a drop in the number of new projects in 2019.

Matters Requiring Special Attention in 2020–21

9 During 2020–21, the Commission will continue to:

- administer the various funding programmes and monitor progress of the funded projects;
- support the activities of the R&D centres with emphasis on commercialisation and technology transfer of funded projects;
- administer the R&D Cash Rebate Scheme to reinforce the research culture among companies and encourage them to establish stronger partnership with designated local public research institutions; and
- process applications for designation as DLRIs.

Programme (2): Promotion of Technological Entrepreneurship

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)	22.1	27.2	27.5 (+1.1%)	27.5 (—)

(or +1.1% on
2019–20 Original)

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Aim

10 The aim is to promote technological entrepreneurship in Hong Kong and provide essential support to technology-based entrepreneurial activities and technology R&D in the private sector.

Brief Description

11 To encourage more private sector investment in R&D, the Commission launched in April 2015 the Enterprise Support Scheme (ESS) under the ITF to replace the Small Entrepreneur Research Assistance Programme (SERAP). The ESS provides funding support to registered Hong Kong companies of all sizes to carry out R&D on I&T. The Applied Research Fund (ARF) provides funding to technology companies in Hong Kong at the venture capital stage but has been in a winding down mode since 2005.

12 The Commission administers the Technology Start-up Support Scheme for Universities (TSSSU). The TSSSU provides funding to six local universities to support their teams to start technology businesses and commercialise their R&D results. In addition, the Commission works closely with the Hong Kong Science and Technology Parks Corporation (HKSTPC) which operates incubation programmes to provide technology start-ups with support in marketing, finance, technology and management in their critical initial years of operation. HKSTPC also launched in 2015 a Corporate Venture Fund (CVF). The CVF co-invests with private funding in promising technology start-ups, which are tenants in the Hong Kong Science Park (HKSP), or incubatees or graduates of its incubation programmes. To provide more support to I&T start-ups in Hong Kong, the Commission launched the Innovation and Technology Venture Fund (ITVF) to co-invest with private organisations, venture capital funds and angel investors in eligible I&T start-ups in Hong Kong.

13 During 2019–20, the Commission:

- administered the ESS and the TSSSU;
- monitored progress of the funded projects under the ESS and the SERAP;
- administered the ITVF; and
- monitored the residual work relating to the ARF and the SERAP.

14 The key performance measures are:

Indicators

	2018 (Actual)	2019 (Actual)	2020 (Estimate)
SERAP			
applications received and processed	N.A. ^μ	N.A. ^μ	N.A. ^μ
projects funded and being monitored	41	39	25
ESS			
applications received and processed	142	118	124
projects funded and being monitored	59	86	101

^μ Applications for SERAP were no longer accepted since 28 April 2015.

Matters Requiring Special Attention in 2020–21

15 During 2020–21, the Commission will continue to:

- administer the ESS and the TSSSU;
- monitor progress of the funded projects under the ESS and the SERAP;
- administer the ITVF; and
- monitor the residual work relating to the ARF and the SERAP.

Programme (3): Planning for Innovation and Technology Development

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)	60.7	152.5	96.2 (–36.9%)	141.6 (+47.2%)
				(or –7.1% on 2019–20 Original)

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Aim

16 The aim is to support the formulation and co-ordination of I&T policies and sustain public awareness of I&T.

Brief Description

17 The Commission supports technology co-operation with the Mainland and overseas economies, and participates in relevant regional and international activities which help promote I&T.

18 To enhance public awareness and understanding of the importance of I&T, the Commission organises promotional events locally and administers the General Support Programme (GSP) under the ITF to fund projects such as seminars, exhibitions and student technology competitions which help foster an I&T culture.

19 To enhance the long-term competitiveness of local enterprises, the Commission administers the Technology Voucher Programme (TVP), which aims to subsidise local non-listed enterprises in using technological services and/or solutions to improve productivity, or upgrade or transform their business processes. The eligibility criteria have been expanded since 27 February 2019 to cover companies incorporated and registered in Hong Kong under the Companies Ordinance (Cap. 622) that are exempted from business registration as well as statutory bodies set up in Hong Kong that are not receiving recurrent government subventions.

20 The Commission also administers four programmes to pool together and nurture technology talent:

- The Researcher Programme (RP) provides financial support for eligible organisations/companies to recruit researchers to assist in R&D work. It aims to provide opportunities for graduates from tertiary institutions to acquire research and industrial experience, stimulate the interest of graduates in applied R&D activities and help create a larger pool of research talents;
- The Postdoctoral Hub (PH) provides funding support to eligible organisations/companies to recruit postdoctoral talent for R&D work;
- The Technology Talent Admission Scheme (TechTAS) provides a fast-track arrangement for eligible companies to admit overseas and Mainland technology talent to undertake R&D work for them in Hong Kong; and
- The Reindustrialisation and Technology Training Programme (RTTP) subsidises local companies to train their staff in advanced technologies.

21 During 2019–20, the Commission:

- enhanced technology co-operation with the Mainland at the central, regional, provincial and municipal levels through various co-operation mechanisms, including the Mainland/Hong Kong Science and Technology Co-operation Committee, the Pan-Pearl River Delta (PRD) Joint Conference on Regional Co-operation in Science and Technology, the Guangdong/Hong Kong Expert Group on Co-operation in Technology and Innovation, and the Steering Group on Shenzhen/Hong Kong Co-operation in Innovation and Technology;
- organised seminars, roadshows and competitions to promote I&T to different sectors of the community;
- sponsored and supported the Innovation and Technology Scholarship to nurture young talents to become future leaders in I&T;
- participated in the SmartBiz Expo to promote the five R&D centres and to introduce the Commission's funding schemes to visitors;
- completed the nomination exercise for the Hong Kong Special Administrative Region in two categories of the State Science and Technology Awards, namely the State Technological Invention Award and the State Scientific and Technological Progress Award;
- enhanced promotion at enterprise level through organising a “Hong Kong Pavilion” at the China Hi-Tech Fair 2019;
- expanded the eligibility of the RP and PH to cover all technology companies conducting R&D activities in Hong Kong;
- extended the coverage of TechTAS to all companies undertaking R&D activities in 13 technology areas;
- enhanced the promotion of the TVP via briefings and other channels; and
- supported the development of Chinese medicines, and co-ordinated various parties in promoting the development of R&D and testing of Chinese medicines through a government-led committee.

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22 The key performance indicators are:

Indicators

	2018 (Actual)	2019 (Actual)	2020 (Estimate)
GSP			
applications received and processed	33	43	35
projects funded and being monitored	91	100	107
RPO			
applications received and processed	813	1 093 [⊖]	1 829 ^Δ
researcher positions funded	1 406	1 772 [⊖]	2 762 ^Δ
PH			
applications received and processed	331 ^φ	608	951 ^Δ
postdoctoral talent positions funded	319 ^φ	863	1 337 ^Δ
RTTP			
applications received and processed	135 ^φ	744	660
trainees funded	275 ^φ	1 795	1 550
TVP			
applications received and processed	707	954	1 049
projects funded and being monitored	981	1 695	2 168

⊖ The figures increased significantly in 2019 due to the extension of the maximum engagement period of each researcher under the RP from two years to three years since February 2019.

Δ The figures are expected to increase significantly in 2020 due to the expansion of the eligibility of the RP and PH to cover all technology companies conducting R&D activities in Hong Kong starting from March 2020.

φ The PH and RTTP were launched in August 2018, hence the “2018 (Actual)” figures were not full-year figures.

Matters Requiring Special Attention in 2020–21

23 During 2020–21, the Commission will:

- launch the Re-industrialisation Funding Scheme to subsidise manufacturers, on a matching basis, to set up smart production lines in Hong Kong;
- continue to administer the RP, PH and TechTAS;
- continue to strengthen technology co-operation with the Mainland under established co-operation mechanisms and in accordance with the “Arrangement on Enhancing Innovation and Technology Co-operation between the Mainland and Hong Kong”;
- continue to administer the GSP, TVP and RTTP, and monitor progress of the funded projects;
- continue to promote I&T culture to the general public and nurture more young innovative talents, such as to organise the City Innovation and Technology Grand Challenge;
- continue to nominate entries for the State Science and Technology Awards; and
- continue to organise promotional and educational activities to enhance public awareness on I&T development.

Programme (4): Infrastructural Support

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)	32.9	59.6	62.3 (+4.5%)	46.2 (–25.8%)
				(or –22.5% on 2019–20 Original)

Aim

24 The aim is to develop world-class support infrastructure to facilitate technological upgrading and development of the industry and to promote I&T.

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Brief Description

25 The Commission achieves the aim through planning, supporting and overseeing technological infrastructural projects; and participating actively in the formulation and implementation of policies by other government bureaux and departments which impinge on I&T development in Hong Kong. The Commission works closely with relevant industry support organisations such as the HKSTPC, the Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI) and the Hong Kong Productivity Council (HKPC) in the process.

26 During 2019–20, the Commission:

- received and processed over 60 proposals for admission to the two InnoHK research clusters to be established in the HKSP, one on healthcare technologies and another on artificial intelligence/robotics technologies, with the objective to attract world renowned universities and research institutions to conduct collaborative researches with local institutions in Hong Kong;
- worked closely with the HKSTPC on various major initiatives, including completion of Stage 1 of the Science Park Expansion Programme, development of the InnoCell, facilities for supporting researches on healthcare and artificial intelligence and robotics technologies in HKSP, the Advanced Manufacturing Centre and Data Technology Hub under the revised Industrial Estate (IE) policy;
- worked closely with the Hong Kong-Shenzhen Innovation and Technology Park Limited (HSITPL), a subsidiary company of HKSTPC, on the development of the Hong Kong-Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop;
- worked closely with the ASTRI in strengthening its institutional and research capabilities; and
- monitored the delivery of value-added support services to the manufacturing and related service industries by the HKPC.

Matters Requiring Special Attention in 2020–21

27 During 2020–21, the Commission will continue to:

- work on the establishment of two InnoHK research clusters and examine the setting up of the third InnoHK research cluster to further promote global research collaboration in Hong Kong;
- work closely with the HKSTPC on the implementation of its various new developments and business plans of the HKSP and the IEs, including the Microelectronics Centre in Yuen Long IE and Phase 2 of the Science Park Expansion Programme;
- work closely with the HSITPL on the development of the Hong Kong-Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop; and
- assist the ASTRI in strengthening its R&D capabilities and leading research programmes.

Programme (5): Quality Support

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)	132.4	143.3	146.3 (+2.1%)	143.3 (–2.1%)
				(or same as 2019–20 Original)

Aim

28 The aim is to promote internationally accepted standards and conformity assessment services to underpin technological development and international trade, and the development of the testing and certification industry in Hong Kong.

Brief Description

29 The Commission achieves this aim through the operation of the Standards and Calibration Laboratory (SCL), the Product Standards Information Bureau (PSIB), the Hong Kong Accreditation Service (HKAS) and the Secretariat of the Hong Kong Council for Testing and Certification (HKCTC).

30 Through participation in Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures (CIPM), SCL's calibration certificates are accepted worldwide.

31 Through the MRAs signed with international and regional organisations of accreditation bodies, the endorsed test reports and accredited certificates issued by organisations accredited by the HKAS under the Hong Kong Laboratory Accreditation Scheme (HOKLAS), the Hong Kong Certification Body Accreditation Scheme (HKCAS) and the Hong Kong Inspection Body Accreditation Scheme (HKIAS) are recognised worldwide.

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32 During 2019–20,

- SCL took part in the following international metrology activities to substantiate its CIPM MRA claims for worldwide recognition:
 - participation in the inter-laboratory comparisons of measurement standards and proficiency testing programmes;
 - participation in the peer reviews of the capabilities and quality systems of other CIPM MRA partners;
 - publication of its technical achievements at international conferences and journals; and
 - participation in the Asia Pacific Metrology Programme General Assembly/Technical Committees;
- HKAS participated in the activities and meetings of the Asia Pacific Accreditation Cooperation (APAC), the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF);
- PSIB participated in the Asia-Pacific Economic Cooperation (APEC) Sub-Committee on Standards and Conformance, the International Organization for Standardization (ISO) and Pacific Area Standards Congress (PASC); and
- the Secretariat of the HKCTC continued to provide support to the HKCTC in implementing measures to support the development of the testing and certification industry.

33 The key performance measures for the SCL, PSIB and HKAS are:

Targets

	Target working days	2018 (Actual)	2019 (Actual)	2020 (Plan)
processing of quotation for calibration services.....	2	2	2	2
calibration of equipment.....	13	13	13	13
processing of simple enquiries on product standards.....	1	1	1	1
processing of complicated enquiries on product standards	8	8	8	8
issue of quotations for standards	1	1	1	1
processing of orders for licensed reproduction of standards@.....	2	2	2	2

@ Revised description of previous target “processing of orders for photocopies of documented standards” as from 2020.

Indicators

	2018 (Actual)	2019 (Actual)	2020 (Estimate)
SCL			
calibrations performed.....	1 217	1 160	1 220
revenue generated (\$).....	4,038,701	4,197,661	4,000,000
SCL’s overseas CIPM MRA partners (cumulative)§.....	104	106	106
PSIB			
technical enquiries received□.....	387	302	320
sales of standards			
enquiries receivedΦ.....	134	59	60
quotations given	323	262Ψ	200
orders placed	94	37Ψ	40
revenue generated (\$).....	66,325	60,770	40,000
HOKLAS			
accredited laboratories (cumulative).....	227	225	230
assessments, re-assessments and surveillance visits conducted.....	388	345	350
overseas laboratory accreditation schemes entered into MRA with the HOKLAS (cumulative)β.....	96	98	100

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	2018 (Actual)	2019 (Actual)	2020 (Estimate)
HKCAS			
accredited certification bodies (cumulative)	25	26	26
assessments, re-assessments and surveillance visits conducted	71	96	96
overseas certification bodies accreditation schemes entered into MRA with the HKCAS (cumulative) ^α	70	73	74
HKIAS			
accredited inspection bodies (cumulative)	22	22	22
assessments, re-assessments and surveillance visits conducted	27	25	25
overseas inspection bodies accreditation schemes entered into MRA with the HKIAS (cumulative) ^τ	72	76	76

§ This indicator provides information on how well SCL's measurement standards and calibration certificates are recognised internationally. These figures include all CIPM MRA partners, which comprise overseas national metrology institutes and four international organisations, namely International Atomic Energy Agency, Joint Research Centre, World Meteorological Organization and European Space Agency.

□ Revised description of previous indicator “technical enquiries” as from 2020.

Φ Revised description of previous indicator “enquiries” as from 2020.

Ψ The number of quotations given by PSIB and orders placed in 2019 were lower than those in the previous year. This was mainly because of the prevailing downturn of business environment and the absence of major updates of international popular standards in 2019.

β Revised description of previous indicator “overseas laboratory accreditation schemes with MRA with the HOKLAS (cumulative)” as from 2020.

α Revised description of previous indicator “overseas certification bodies accreditation schemes with MRA with the HKCAS (cumulative)” as from 2020.

τ Revised description of previous indicator “overseas inspection bodies accreditation schemes with MRA with the HKIAS (cumulative)” as from 2020.

Matters Requiring Special Attention in 2020–21

34 During 2020–21, the Commission will continue to:

- provide support to the HKCTC in implementing measures to support the development of the testing and certification industry;
- pursue further liberalisation measures relevant to the testing and certification industry under the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA);
- participate in activities to promote the MRAs of APAC, ILAC and IAF;
- develop plans to extend accreditation services to other areas to support industry and continue to work closely with the HKCTC to promote existing accreditation services to industry;
- participate in the activities of the CIPM MRA and the Asia Pacific Metrology Programme;
- participate in more projects on inter-laboratory comparison of measurement standards;
- strengthen interactions between staff of the SCL and local metrology users with a view to disseminating measurement techniques and knowledge to local industries;
- conduct visits to SCL customers to gauge their needs and offer professional advice on-site;
- participate in APEC, ISO and PASC activities in the areas of standards and conformance; and
- participate in international standardisation activities.

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

	2018–19 (Actual)	2019–20 (Original)	2019–20 (Revised)	2020–21 (Estimate)
Financial provision (\$m)				
Hong Kong Productivity Council	210.5	206.7	212.2 (+2.7%)	212.2 (—) (or +2.7% on 2019–20 Original)
Hong Kong Applied Science and Technology Research Institute Company Limited	150.2	145.9	145.9 (—)	169.9 (+16.4%) (or +16.4% on 2019–20 Original)
Total	360.7	352.6	358.1 (+1.6%)	382.1 (+6.7%) (or +8.4% on 2019–20 Original)

HKPC

Aim

35 The aim is to promote productivity excellence through the provision of integrated support across the value chain of the industry, in order to achieve more effective utilisation of resources, enhance the value-added content of products and services, and enhance the industry's international competitiveness and sustainability.

Brief Description

36 The HKPC provides integrated support to innovative and growth-oriented Hong Kong firms across the value chain. Its principal sectoral focus is on manufacturing, particularly in Hong Kong's foundation industries, and related service activities. The main geographical focus is Hong Kong and the Mainland.

37 The work of the HKPC is anchored on its core competence of manufacturing technologies, management systems, information technologies and environmental technologies, including the following:

- providing one-stop services to the manufacturing industries, particularly the foundation industries, in the areas of smart manufacturing, intelligent automation, robotics, product innovation and technology commercialisation;
- promoting re-industrialisation and assisting the relevant enterprises in moving towards high value-added production;
- promoting the application of good management practices and continuous benchmarking across the value chain for innovative and growth-oriented enterprises, especially small and medium enterprises (SMEs), through organisational development, people development, process management, knowledge and innovation management and corporate sustainability;
- assisting information technology (IT) service providers, in particular SMEs, to enhance their ICT capabilities, and supporting the integration of IT services across the value chain;
- providing environmental technology support in green manufacturing, efficient energy and resource usage, compliance with environmental legislation and international standards, as well as environmental technology transfer; and
- operating the Automotive Platforms and Application Systems R&D Centre, which undertakes market-led R&D projects in collaboration with industry, universities and research institutions.

38 During 2019–20, the HKPC ran the following subsidiaries:

- the HKPC Technology (Holdings) Company Limited which functions as a vehicle for commercialisation of patents, technologies and project deliverables of the HKPC and other R&D institutes; and
- the Productivity (Holdings) Limited which operates consulting firms in PRD to strengthen the HKPC's integrated support and services for Hong Kong firms operating in the Mainland.

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39 The key performance indicators for the HKPC are:

Indicators

	2018–19 (Actual)	2019–20 (Revised Estimate)	2020–21 (Estimate) ^Λ
overall income/expenditure ratio (%).....	78.3	67.8	68.1
income from integrated solutions (\$m).....	370.9	349.0	349.7
income from training courses (\$m).....	7.6	11.3	10.5^α
income from exhibitions/study missions/ conferences (\$m).....	6.2	6.0	6.0
no. of consultancy projects accepted.....	889	840	600[#]
no. of people who attended the HKPC fee-charging training courses.....	6 067	3 000	3 000
no. of people who attended the HKPC events/networking activities for associations/non-fee-charging seminars.....	28 556	22 000	22 000
no. of people who participated in the HKPC exhibitions/study missions/conferences.....	4 640	4 000	4 000
no. of R&D projects ^β			
new projects.....	44	40	40
ongoing projects.....	133	80	100

Λ HKPC will conduct a review on the key performance indicators in 2020. The 2020–21 Estimates are interim figures.

α The estimated income for 2020–21 dropped by 7% compared to the revised estimate for 2019–20 as companies are likely to adopt a more prudent approach in spending on training in the light of the subdued economic condition.

The number of consultancy projects accepted is estimated to decrease in 2020–21 because enterprises will likely further scale back on investment spending in anticipation of uncertainties in the business environment, and the Commission will implement a new funding arrangement for HKPC’s secretariat service for the PAG from 2020–21 onwards, under which around 200 PAG related projects per year would no longer be counted as consultancy projects.

β The figures do not include projects undertaken by the Automotive Platforms and Application Systems R&D Centre independently, which are reported under the relevant indicators for the Centre in paragraph 8 above.

Matters Requiring Special Attention in 2020–21

40 During 2020–21, the HKPC will continue to:

- provide integrated support to innovative and growth-oriented Hong Kong companies across the value chain, with the main sectoral focus on manufacturing, particularly in Hong Kong’s foundation industries, and related service industries for their transition towards Industry 4.0 and Enterprise 4.0;
- provide Industry 4.0 consultancy services through the INC Invention Centre Hong Kong (The HATCH) jointly established with the Fraunhofer Institute for Production Technology in October 2018 and assist the local business sector in embarking on digital transformation;
- promote re-industrialisation and move relevant enterprises towards high value-added production;
- promote smart living by offering smart solutions in mobility, gerontech, green technology, training and business transformation;
- nurture the start-up culture and facilitate the translation of innovative and technological ideas into industrial designs of products through the Inno Space;
- assist local enterprises in developing brands, upgrading and restructuring operations, and promoting sales in the Mainland and Association of Southeast Asian Nations (ASEAN) markets through the Dedicated Fund on Branding, Upgrading and Domestic Sales launched on 25 June 2012;
- help the retail industry, in particular SMEs, adopt relevant ICT and other technologies to enhance productivity and manage manpower demand through the Retail Technology Adoption Assistance Scheme for Manpower Demand Management launched on 1 December 2014;
- assist the recycling industry to upgrade its operational capabilities and efficiency for sustainable development through the Recycling Fund launched on 6 October 2015;
- promote the development of Chinese medicine and the Chinese medicine drug sectors through the Chinese Medicine Development Fund launched on 25 June 2019;

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- enhance its support to Hong Kong companies operating in the Mainland and contribute to the Guangdong-Hong Kong-Macao Greater Bay Area (Greater Bay Area) development, through subsidiary consulting firms set up in Shenzhen and Dongguan and the HKPC Shenzhen Innovation and Technology Centre (Futian);
- operate the Automotive Platforms and Application Systems R&D Centre;
- promote the adoption of cleaner production technologies and practices in Hong Kong and the Mainland through such initiatives as the Cleaner Production Partnership Programme; and
- provide integrated service in partnership with other SME support entities and reach out to SMEs and start-ups to promote government funding schemes, and form a dedicated service team to support enterprises to apply for funding support through suitable schemes.

ASTRI

Aim

41 The aim is to provide research capability for Hong Kong's technological development and stimulate the growth of technology-based industry in Hong Kong, and to enhance Hong Kong's competitiveness in technology-based industries through applied research.

Brief Description

42 ASTRI's missions are to:

- perform high quality R&D and transfer the technologies developed to industry;
- promote greater application of technology in industry;
- become a focal point for attracting international R&D talent to work in Hong Kong;
- enhance Hong Kong's technological human resources development;
- act as a spawning ground for technology entrepreneurs; and
- provide a focal point for industry-university collaboration.

43 ASTRI is designated as the R&D Centre for information and communications technologies. ASTRI focuses its R&D on five core initiatives – financial technologies, intelligent manufacturing (focusing on artificial intelligence and robotics), smart city, health technologies, and application specific integrated circuits. Its operating strategy is to transfer the technologies and results developed from its R&D projects to the industry. This process will elevate the technology level of Hong Kong industry and accelerate the expansion of its technology industry base to create new employment opportunities and enhance competitiveness. Over the years, ASTRI has become more customer-focused in its R&D business.

44 The key performance indicators for ASTRI are:

Indicators

	2018 (Actual)	2019 (Actual)	2020 (Estimate)
no. of new full projects [^]	20	24	31
no. of new seed projects [¶]	16	24	19
no. of patents filed ^Δ	35	33	33
no. of technology transfers.....	54	48	50
no. of clients engaged in technology transfer.....	48	36	38
no. of members joining consortia formed by ASTRI.....	361	366	381
no. of technology workshop/seminars organised.....	80	70	70
no. of participants of seminars.....	13 692	14 250	14 250
amount of income from industry (\$m).....	111.7	107.4	112.8

[^] Full projects are R&D projects with more than \$2 million funding support from the ITF, including collaborative projects with the industry.

[¶] Seed projects are feasibility studies for developing substantive R&D project proposals. The maximum ITF funding support for each of them is \$2.8 million.

^Δ Refers to the number of inventions filed. One invention may generate multiple patent filings.

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Matters Requiring Special Attention in 2020–21

45 During 2020–21, the ASTRI will continue to:

- transfer technologies developed from its R&D projects to industry and commercialise project deliverables through implementing corporate-level initiatives and encourage more collaborative projects;
- strengthen co-operation with the industry, public organisations and universities in R&D, for example, through the establishment of joint laboratories/R&D centres and alliances;
- collaborate with enterprises and research institutions in the Mainland and overseas and explore development potential in the Greater Bay Area;
- develop research capabilities in identified emerging technology areas and create synergy through clustered-seed projects;
- carry out the research projects initiated in 2019–20 and before;
- enhance institutional R&D infrastructure and research capabilities; and
- contribute to development of local high-technology human capital by recruiting local engineering graduates as research fellows under the ITF PH and RP.

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ANALYSIS OF FINANCIAL PROVISION

Programme	2018–19 (Actual) (\$m)	2019–20 (Original) (\$m)	2019–20 (Revised) (\$m)	2020–21 (Estimate) (\$m)
(1) Support for Research and Development	69.1	85.6	84.6	85.8
(2) Promotion of Technological Entrepreneurship.....	22.1	27.2	27.5	27.5
(3) Planning for Innovation and Technology Development.....	60.7	152.5	96.2	141.6
(4) Infrastructural Support.....	32.9	59.6	62.3	46.2
(5) Quality Support.....	132.4	143.3	146.3	143.3
(6) Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited	360.7	352.6	358.1	382.1
	677.9	820.8	775.0 (-5.6%)	826.5 (+6.6%)
				(or +0.7% on 2019–20 Original)

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2020–21 is \$1.2 million (1.4%) higher than the revised estimate for 2019–20. This is mainly due to increased provision for salary. In addition, there will be an increase of three posts in 2020–21.

Programme (2)

Provision for 2020–21 is the same as the revised estimate for 2019–20.

Programme (3)

Provision for 2020–21 is \$45.4 million (47.2%) higher than the revised estimate for 2019–20. This is mainly due to increased provision for general departmental expenses and cash flow requirements for the City Innovation and Technology Grand Challenge.

Programme (4)

Provision for 2020–21 is \$16.1 million (25.8%) lower than the revised estimate for 2019–20. This is mainly due to decreased provision for general departmental expenses.

Programme (5)

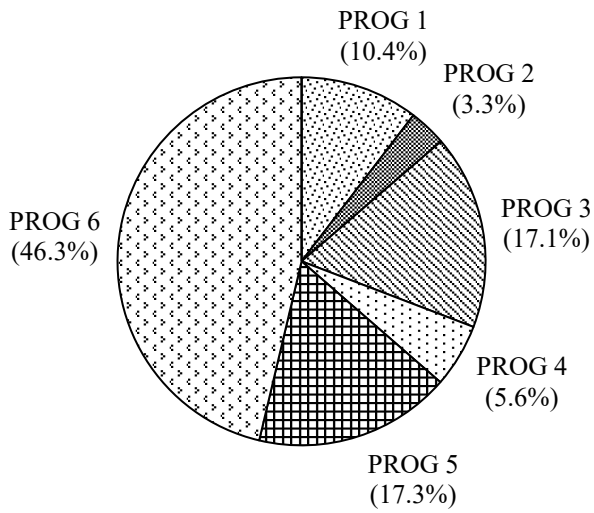
Provision for 2020–21 is \$3.0 million (2.1%) lower than the revised estimate for 2019–20. This is mainly due to decreased provision for procurement of capital equipment. In addition, there will be an increase of one post in 2020–21.

Programme (6)

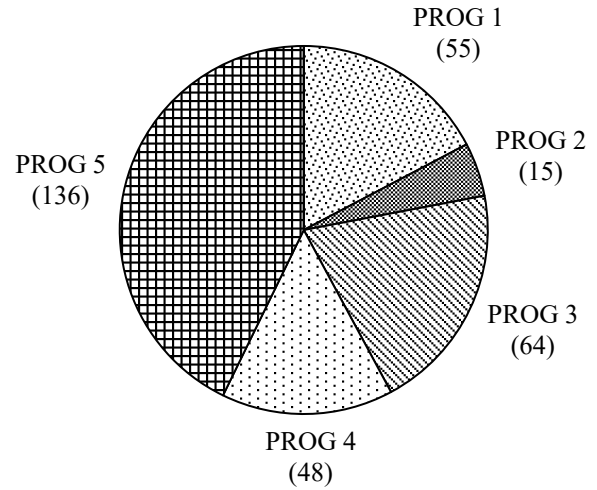
Provision for 2020–21 is \$24.0 million (6.7%) higher than the revised estimate for 2019–20. This is mainly due to increased provision for the ASTRI.

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*Allocation of provision
to programmes
(2020-21)*

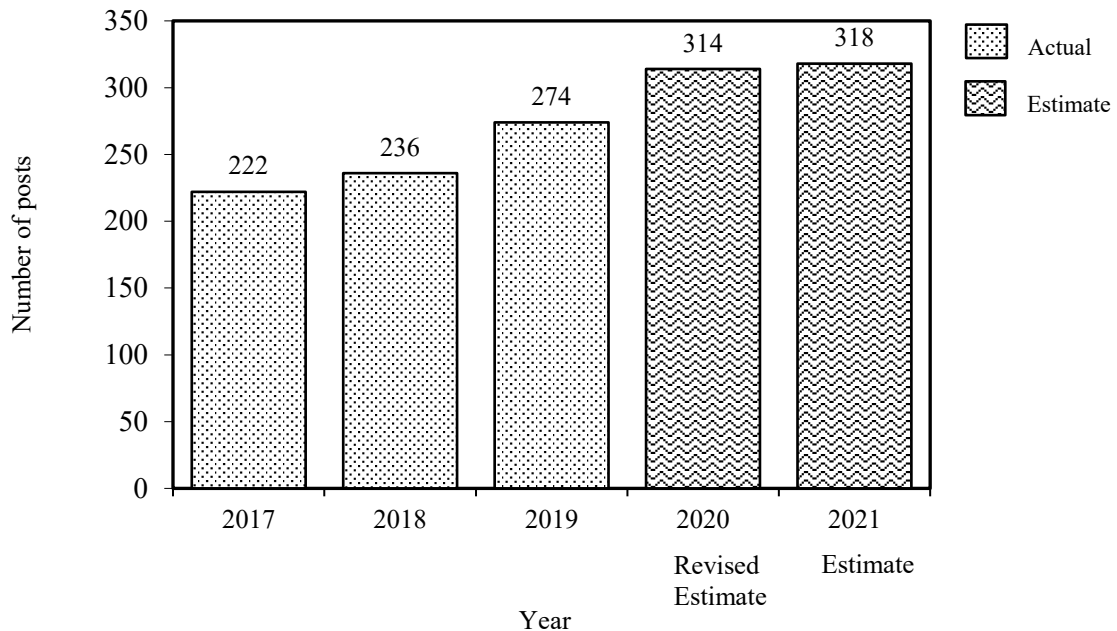


*Staff by programme
(as at 31 March 2021)*



(No government staff under PROG 6)

*Changes in the size of the establishment
(as at 31 March)*



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Sub-head (Code)	Actual expenditure 2018–19	Approved estimate 2019–20	Revised estimate 2019–20	Estimate 2020–21	
	\$'000	\$'000	\$'000	\$'000	
Operating Account					
Recurrent					
000	Operational expenses	654,697	719,739	728,982	745,020
	Total, Recurrent.....	<u>654,697</u>	<u>719,739</u>	<u>728,982</u>	<u>745,020</u>
Non-Recurrent					
700	General non-recurrent	—	70,000	15,000	55,000
	Total, Non-Recurrent.....	<u>—</u>	<u>70,000</u>	<u>15,000</u>	<u>55,000</u>
	Total, Operating Account	<u>654,697</u>	<u>789,739</u>	<u>743,982</u>	<u>800,020</u>
Capital Account					
Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote).....	16,670	28,800	28,800	26,467
	Total, Plant, Equipment and Works.....	<u>16,670</u>	<u>28,800</u>	<u>28,800</u>	<u>26,467</u>
Subventions					
	Hong Kong Applied Science and Technology Research Institute - Office renovation, fitting-out, and reinstatement works (block vote).....	6,533	2,255	2,255	—
	Total, Subventions	<u>6,533</u>	<u>2,255</u>	<u>2,255</u>	<u>—</u>
	Total, Capital Account.....	<u>23,203</u>	<u>31,055</u>	<u>31,055</u>	<u>26,467</u>
	Total Expenditure	<u><u>677,900</u></u>	<u><u>820,794</u></u>	<u><u>775,037</u></u>	<u><u>826,487</u></u>

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Details of Expenditure by Subhead

The estimate of the amount required in 2020–21 for the salaries and expenses of the Innovation and Technology Commission is \$826,487,000. This represents an increase of \$51,450,000 over the revised estimate for 2019–20 and \$148,587,000 over the actual expenditure in 2018–19.

Operating Account

Recurrent

2 Provision of \$745,020,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Innovation and Technology Commission.

3 The establishment as at 31 March 2020 will be 314 posts. It is expected that there will be an increase of four posts in 2020–21. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2020–21, but the notional annual mid-point salary value of all such posts must not exceed \$223,424,000.

4 An analysis of the financial provision under *Subhead 000 Operational expenses* is as follows:

	2018–19 (Actual) (\$'000)	2019–20 (Original) (\$'000)	2019–20 (Revised) (\$'000)	2020–21 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	171,992	220,779	216,474	225,919
- Allowances.....	4,014	4,219	6,715	8,098
- Job-related allowances.....	1	2	2	2
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	694	1,010	872	999
- Civil Service Provident Fund contribution.....	10,266	11,875	12,792	15,232
Departmental Expenses				
- General departmental expenses	113,621	131,495	136,260	112,700
Subventions				
- Hong Kong Productivity Council	210,461	206,711	212,219	212,219
- Hong Kong Applied Science and Technology Research Institute Company Limited.....	143,648	143,648	143,648	169,851
	654,697	719,739	728,982	745,020

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INNOVATION AND TECHNOLOGY COMMISSION**

Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2019	Revised estimated expenditure for 2019–20	Balance
			\$'000	\$'000	\$'000	\$'000
<i>Operating Account</i>						
700		<i>General non-recurrent</i>				
	802	City Innovation and Technology Grand Challenge	500,000	—	15,000	485,000
		Total	<u>500,000</u>	<u>—</u>	<u>15,000</u>	<u>485,000</u>