

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

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

<b>Estimate 2016–17</b> .....	<b>\$588.3m</b>
<b>Establishment ceiling 2016–17</b> (notional annual mid-point salary value) representing an estimated 196 non-directorate posts as at 31 March 2016 rising by 21 posts to 217 posts as at 31 March 2017.....	<b>\$131.2m</b>
In addition, there will be an estimated eight directorate posts as at 31 March 2016 and as at 31 March 2017.	
<b>Commitment balance</b> .....	<b>\$6.9m</b>

**Controlling Officer's Report**

**Programmes**

<p><b>Programme (1) Support for Research and Development</b></p> <p><b>Programme (2) Fostering University-Industry Collaboration</b></p> <p><b>Programme (3) Promotion of Technological Entrepreneurship</b></p> <p><b>Programme (4) Planning for Innovation and Technology Development</b></p> <p><b>Programme (5) Infrastructural Support</b></p> <p><b>Programme (6) Quality Support</b></p>	<p>These programmes contribute to Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).</p> <p>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).</p> <p>This programme contributes to Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).</p>
<p><b>Programme (7) Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited</b></p>	<p>This programme contributes to Policy Area 17: Information Technology and Broadcasting (Secretary for Innovation and Technology).</p>

**Detail**

**Programme (1): Support for Research and Development**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	<b>2016–17 (Estimate)</b>
Financial provision (\$m)	84.9	109.0	104.0 (–4.6%)	<b>55.0</b> (–47.1%)
				(or –49.5% on 2015–16 Original)

**Aim**

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

**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 Co-operation Funding Scheme (TCFS) under the ITSP supports applied R&D projects which will facilitate economic development in the Greater Pearl River Delta (PRD) region. 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.

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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 parts and accessory 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 Partner State Key Laboratories in Hong Kong and Hong Kong Branches of Chinese National Engineering Research Centres (CNERCs) to enhance their research capabilities. Financial support is also provided to six local universities to enhance their technology transfer capabilities.

6 To reinforce the research culture among companies and encourage them to establish stronger partnership with designated local public research institutions, the R&D Cash Rebate Scheme was introduced in April 2010. Under the 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 on their investments. In order to provide a more stable and longer-term financial support to sustain our efforts in the promotion of private sector investment in R&D, the Scheme will be subsumed under the ITF with effect from 1 April 2016.

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

### *Indicators*

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
ITSP $\Psi$			
applications received and processed .....	383	407	387
projects funded and being monitored .....	276	328	365
PAG			
applications received and processed .....	234	252	243
projects funded .....	153	161	157
R&D centres' projects $\gamma$			
Automotive Parts and Accessory Systems R&D Centre			
new projects .....	12	14	18
projects funded and being monitored .....	35	49	64
Hong Kong R&D Centre for Information and Communications Technologies			
new projects .....	37	40	43
projects funded and being monitored .....	96	104	107
Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies			
new projects .....	18	19	20
projects funded and being monitored .....	39	50	50
Nano and Advanced Materials Institute			
new projects .....	32	64	59
projects funded and being monitored .....	75	118	159
Hong Kong Research Institute of Textiles and Apparel			
new projects .....	27	20 $\tau$	30
projects funded and being monitored .....	64	69	83
TCFS			
applications received and processed .....	60 $\Omega$	40	49
projects funded and being monitored .....	69	76	77
R&D Cash Rebate Scheme			
applications received and processed .....	261	279	280
applications approved .....	252	251	260

$\Psi$  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".

$\gamma$  All projects (including TCFS projects and feasibility studies) undertaken and/or monitored by R&D centres are included.

$\tau$  The Centre took a longer time in preparing six project proposals due to their complexity, which will be submitted for funding approval in 2016.

$\Omega$  The figure has been adjusted to reflect the number of applications received under the 2014 TCFS as closed in February 2015.

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**Matters Requiring Special Attention in 2016–17**

8 During 2016–17, 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 technology transfer of funded projects, and
- 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.

**Programme (2): Fostering University-Industry Collaboration**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	<b>2016–17 (Estimate)</b>
Financial provision (\$m)	6.9	6.6	6.6 (—)	<b>6.9</b> (+4.5%)
				(or +4.5% on 2015–16 Original)

**Aim**

9 The aim is to promote university-industry partnership in R&D projects.

**Brief Description**

10 The Commission achieves this aim through administering the University-Industry Collaboration Programme (UICP) under the ITF to support commercial R&D projects undertaken by companies in collaboration with local universities. Companies in the private sector are encouraged to invest and leverage on the knowledge and resources of local universities through three schemes under the UICP, namely, the Teaching Company Scheme, Matching Grant for Joint Research, and Industrial Research Chair Scheme. The Teaching Company Scheme provides financial incentives to local companies to take on graduate students from local universities to assist in proprietary R&D work. Under the Matching Grant for Joint Research, companies contribute half of the project cost in respect of R&D projects taken up jointly with local universities. They are also able to hold the intellectual property rights arising from the projects. The Industrial Research Chair Scheme provides funding support to research efforts of universities and industry in technology fields.

11 The UICP received a total of 22 applications requesting \$40.5 million in 2015.

12 The key performance indicators are:

**Indicators**

	2014 (Actual)	2015 (Actual)	<b>2016 (Estimate)</b>
UICP			
applications received and processed .....	24	22	<b>21</b>
projects funded and being monitored .....	70	76	<b>77</b>

**Matters Requiring Special Attention in 2016–17**

13 During 2016–17, the Commission will continue to administer the UICP and monitor progress of the funded projects.

**Programme (3): Promotion of Technological Entrepreneurship**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	<b>2016–17 (Estimate)</b>
Financial provision (\$m)	8.4	10.4	10.7 (+2.9%)	<b>21.6</b> (+101.9%)
				(or +107.7% on 2015–16 Original)

**Aim**

14 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.

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### *Brief Description*

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

**16** The Commission administers the Technology Start-up Support Scheme for Universities (TSSSU). The TSSSU provides funding support, initially for three years from 2014–15, to six local universities to encourage their students, faculty members, etc. to start technology businesses, bring R&D results from the campus to the real world, and facilitate the realisation of 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 current tenants in the Hong Kong Science Park (HKSP), or incubatees or graduates of its incubation programmes.

**17** During 2015–16, the Commission:

- administered and monitored projects approved under SERAP,
- administered the TSSSU,
- launched the ESS and publicised ESS via talks and seminars,
- administered and monitored projects approved under ESS, and
- monitored the residual work relating to the ARF.

**18** The key performance measures are:

#### *Target*

	Target working days	2014 (Actual)	2015 (Actual)	2016 (Plan)
informing applicants of the result of their SERAP applications after receipt of full information.....	50.0	35.4	37.2	N.A. <sup>μ</sup>

#### *Indicators*

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
SERAP			
applications received and processed .....	48	21 <sup>μ</sup>	N.A. <sup>μ</sup>
projects funded and being monitored.....	112	112	92
ESS <sup>‡</sup>			
applications received and processed .....	N.A.	151	200
projects funded and being monitored.....	N.A.	2	40

<sup>μ</sup> Applications for SERAP were no longer accepted since 28 April 2015. This target/indicator is to be removed as from 2016.

<sup>‡</sup> New indicators as from 2016.

### *Matters Requiring Special Attention in 2016–17*

**19** During 2016–17, the Commission will continue to:

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

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### Programme (4): Planning for Innovation and Technology Development

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	<b>2016–17 (Estimate)</b>
Financial provision (\$m)	36.9	39.1	38.8 (–0.8%)	<b>42.2</b> (+8.8%)
				(or +7.9% on 2015–16 Original)

#### *Aim*

**20** The aim is to support the formulation and co-ordination of innovation and technology policies and sustain public awareness of innovation and technology.

#### *Brief Description*

**21** The Commission provides secretariat support to the Advisory Committee on Innovation and Technology, chaired by the Secretary for Innovation and Technology. The committee provides advice to the Government on the strategic and developmental enhancements of innovation and technology in Hong Kong.

**22** The Commission supports technology co-operation with the Mainland and other overseas economies, and participates in relevant regional and international activities which help promote innovation and technology.

**23** To enhance public awareness and understanding of the importance of innovation and technology, 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 innovation and technology culture.

**24** The Commission also administers an Internship Programme which provides financial support for organisations undertaking R&D projects funded by the ITF to recruit interns to assist in the projects. 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.

**25** During 2015–16, 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-PRD Joint Conference on Regional Co-operation in Science and Technology, the Guangdong/Hong Kong Expert Group on Co-operation in Innovation and Technology, and the Steering Group on Shenzhen/Hong Kong Co-operation in Innovation and Technology;
- completed the invitation exercise on application of Hong Kong Branches of CNERCs, with five applications approved by the Ministry of Science and Technology (MOST);
- organised the InnoTech Month (ITM) 2015 to promote innovation and technology to the general public, in particular the youth. Activities of the ITM included the InnoCarnival, road shows, seminars, competitions, technology workshops and publication of science education books for young children;
- implemented the Innovation and Technology Scholarship Award Scheme to nurture young talents to become future leaders in innovation and technology;
- participated in Innovation, Design and Technology 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 2015; 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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26 The key performance indicators are:

*Indicators*

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
GSP			
applications received and processed .....	30	218	27
projects funded and being monitored .....	53	70	75
Internship Programme			
applications received and processed .....	352	353	360
intern positions funded .....	653	710	765

δ The drop of application in 2015 was due to withdrawal of a number of applications by the applicants.

*Matters Requiring Special Attention in 2016–17*

27 During 2016–17, the Commission will continue to:

- strengthen technology co-operation with the Mainland through established co-operation mechanisms;
- administer the GSP, including Internship Programme, and monitor progress of the funded projects;
- promote innovation and technology culture to the general public and nurture more young innovative talents;
- nominate entries for the State Science and Technology Awards; and
- organise promotional and educational activities.

**Programme (5): Infrastructural Support**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	2016–17 (Estimate)
Financial provision (\$m)	11.7	12.1	12.7 (+5.0%)	13.3 (+4.7%)  (or +9.9% on 2015–16 Original)

*Aim*

28 The aim is to develop world-class support infrastructure to facilitate technological upgrading and development of the industry and to promote innovation and technology.

*Brief Description*

29 The Commission achieves the aim through planning, supporting and overseeing technological infrastructural projects; and participating actively in the formulation and implementation of planning and development policies by other government bureaux and departments which impinge on innovation and technology 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.

30 During 2015–16, the Commission:

- worked closely with the HKSTPC on various major initiatives, including implementation of the Phase Three development of HKSP, planning further development of HKSP as well as updating of the Industrial Estate (IE) Programme;
- worked closely with the ASTRI in strengthening their institutional and research capabilities to develop its ICT R&D Centre; and
- monitored the delivery of value-added support services to the manufacturing and related service industries by the HKPC.

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### *Matters Requiring Special Attention in 2016–17*

31 During 2016–17, the Commission will continue to:

- work closely with the HKSTPC on implementation of its various new developments and business plans of the HKSP and the IEs; and
- assist the ASTRI in strengthening its R&D capabilities and lead research programmes of its core competences as organised under seven Technology Divisions, namely Integrated Circuit (IC) Design (Analog), IC Design (Digital), Opto-electronics, Electronics Components, Software and Systems, Security and Data Sciences, and Communications Technologies.

### **Programme (6): Quality Support**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)#	<b>2016–17 (Estimate)#</b>
Financial provision (\$m)	111.0	108.7	112.4 (+3.4%)	<b>113.4</b> (+0.9%)
				(or +4.3% on 2015–16 Original)

# The figure excludes \$142,000 in 2015–16 and \$341,000 in 2016–17 which have been transferred to Head 135 – Government Secretariat : Innovation and Technology Bureau following the establishment of the Innovation and Technology Bureau on 20 November 2015.

### *Aim*

32 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*

33 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).

34 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.

35 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.

36 During 2015–16,

- SCL took part in the following international metrology activities to substantiate its CIPM MRA claims for worldwide recognition:
  - participation in inter-laboratory comparisons of measurement standards and proficiency testing programmes,
  - participation in 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 extended its accreditation service to conformity assessment bodies for:
  - product certification for Chinese Materia Medica,
  - construction product certification on water closet suites and uPVC pipes and fittings for foul water drainage, and
  - certification service to Mainland enterprises for export purpose under the Supplement X to the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA);

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- 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 HKCTC continued to provide support to HKCTC in implementing measures to further support the development of the testing and certification industry recommended in the Review Report of HKCTC 2013. It also hosted an ISO Technical Committee plenary meeting in November 2015.

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

**Targets**

	Target working days	2014 (Actual)	2015 (Actual)	2016 (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 documented standards.....	1	1	1	1
processing of orders for photocopies of documented standards.....	2	2	2	2

**Indicators**

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
<b>SCL</b>			
calibrations performed.....	1 091	1 163	1 150
revenue generated (\$).....	2,498,420	2,820,050	2,800,000
SCL's overseas CIPM MRA partners (cumulative)§.....	98	98	98
<b>PSIB</b>			
technical enquiries.....	367	384	390
sales and photocopying of documented standardsΔ			
enquiries.....	94	204	210
quotations given.....	417	964	970
orders placed.....	53	94	110
revenue generated (\$).....	80,904	86,657	109,600
<b>HOKLAS</b>			
accredited laboratories (cumulative)@.....	210	210	213
assessments and re-assessments conducted.....	405	427	418
overseas laboratory accreditation schemes with MRA with the HOKLAS (cumulative).....	84	86	86
<b>HKCAS</b>			
accredited certification bodies (cumulative).....	23	23	24
assessments, re-assessments and surveillance visits conducted.....	48	59	50
overseas certification bodies accreditation schemes with MRA with the HKCAS (cumulative).....	59	61	59
<b>HKIAS</b>			
accredited inspection bodies (cumulative)ω.....	21	20	20
assessments, re-assessments and surveillance visits conducted.....	26	29	26
overseas inspection bodies accreditation schemes with MRA with the HKIAS (cumulative).....	55	56	56

§ This new indicator replaces the indicator “overseas national metrology institutes as the SCL’s CIPM MRA partners (cumulative)” as from 2015. This new indicator provides more 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 (IAEA), Institute for Reference Materials and Measurements (IRMM), World Meteorological Organization (WMO) and European Space Agency (ESA). The actual figure of 2014 has also been updated accordingly under the new indicator.



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- △ The new version of ISO 9000, ISO 9001 and ISO 14001 was published in September 2015. There has been a surge in demand for these standards since October 2015. The demand is expected to have a slight growth in 2016.
- @ The registration numbering system for Proficiency Testing Providers (PTP) and Reference Material Producers (RMP) was revised in 2015. Under this system, accredited laboratories that are also accredited as PTP and/or RMP may choose to use their laboratory registration number for PTP and/or RMP accreditations as well. Accredited laboratories choosing this registration numbering system will be counted once in this indicator.
- ω An inspection body voluntarily terminated its accreditation in 2015 based on its business decision. As such, the number of accredited inspection bodies under HKIAS decreased by one.

### *Matters Requiring Special Attention in 2016–17*

**38** During 2016–17, the Commission will continue to:

- provide support to HKCTC in implementing measures to support the development of the testing and certification industry;
- implement various liberalisation measures relevant to testing and certification industry under CEPA;
- participate in activities to promote the MRAs of the Asia Pacific Laboratory Accreditation Co-operation, the International Laboratory Accreditation Co-operation, the Pacific Accreditation Co-operation, and the International Accreditation Forum;
- develop plans to extend accreditation services to other areas to support industry and continue to work closely with 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.

### **Programme (7): Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited**

	2014–15 (Actual)	2015–16 (Original)	2015–16 (Revised)	<b>2016–17 (Estimate)</b>
Financial provision (\$m)				
Hong Kong Productivity Council	192.9	192.9	197.7 (+2.5%)	<b>195.9</b> (–0.9%)  (or +1.6% on 2015–16 Original)
Hong Kong Applied Science and Technology Research Institute Company Limited	141.5	141.5	141.5 (—)	<b>140.0</b> (–1.1%)  (or –1.1% on 2015–16 Original)
Total	334.4	334.4	339.2 (+1.4%)	<b>335.9</b> (–1.0%)  (or +0.4% on 2015–16 Original)

*HKPC*

#### *Aim*

**39** 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.

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### *Brief Description*

40 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 PRD.

41 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 manufacturing and materials technology, product design and development, technology commercialisation and e-manufacturing;
- 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 operation management, human resources management, innovation management, knowledge management, strategic business management, corporate social responsibility and sectoral platforming with quality certification schemes;
- assisting information technology (IT) service providers, in particular SMEs, to improve their quality, capacity and productivity, 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 internal standards, as well as environmental methods and technology transfer; and
- operating the Automotive Parts and Accessory Systems R&D Centre which undertakes market-led R&D projects in collaboration with industry, universities and research institutions.

42 During 2015–16, HKPC runs the following subsidiaries:

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

43 The key performance indicators for the HKPC are:

### *Indicators*

	2014–15 (Actual)	2015–16 (Revised Estimate)	2016–17 (Estimate)
overall income/expenditure ratio (%).....	71.1	68.4	<b>69.0</b>
income from consultancy/technical assistance (\$m).....	265.4	300.0	<b>312.6</b>
income from training courses (\$m) <sup>α</sup> .....	12.9	19.0	<b>17.6</b>
income from exhibitions/study missions/conferences (\$m).....	9.4	3.9	<b>3.9</b>
income from manufacturing support/process control (\$m).....	26.0	34.0	<b>36.6</b>
no. of consultancy projects accepted.....	970	1 070	<b>1 020</b>
no. of people who attended the HKPC fee-charging training courses <sup>α</sup> .....	3 041	5 370	<b>3 390</b>
no. of people who attended the HKPC events/networking activities for associations/non-fee-charging seminars.....	23 531	18 430	<b>22 000</b>
no. of people who attended the HKPC exhibitions <sup>α</sup> .....	217	1 200	<b>220</b>
no. of people who participated in the HKPC study missions/conferences.....	3 752	980	<b>3 780</b>
no. of R&D projects <sup>β</sup>			
new projects.....	31	29	<b>30</b>
on-going projects.....	67	52	<b>49</b>

α The estimated amount of income from and the number of participants in fee-charging training courses decrease in 2016–17 because more HKPC's training resources will be devoted to organising non-fee-charging courses to respond to market needs.

α The exhibitions refer to industry-specific exhibitions commissioned by or co-organised with industry associations, which are normally small-scale and the number of visitors vary from year to year. In 2014–15, HKPC did not organise any large-scale exhibitions, hence the number of participants fell below its revised estimate.

β The figures do not include projects undertaken by the Automotive Parts and Accessory Systems R&D Centre independently, which are reported under the relevant indicators for the Centre under paragraph 7 above.

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### *Matters Requiring Special Attention in 2016–17*

**44** During 2016–17, 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 activities;
- assist local manufacturers in industrial upgrading, business transformation or relocating their operations under the challenges of the Mainland’s processing trade policy, such as through the Enterprise Support Programme under the Dedicated Fund on Branding, Upgrading and Domestic Sales and the integrated support centre “SME One” launched on 25 June 2012 and 17 July 2012 respectively;
- help the retail industry, in particular SMEs, adopt relevant information and communications technology 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;
- enhance its support to Hong Kong companies operating in the PRD, through subsidiary consulting firms set up in Guangzhou, Shenzhen and Dongguan;
- operate the Automotive Parts and Accessory Systems R&D Centre;
- promote the adoption of cleaner production technologies and practices in Hong Kong and the PRD through such initiatives as the Cleaner Production Partnership Programme; and
- support R&D institutions in commercialising advanced manufacturing and processing technologies, and promote technology commercialisation and effective intellectual property management to Hong Kong and Mainland enterprises.

### *ASTRI*

#### *Aim*

**45** 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*

**46** 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.

**47** ASTRI is designated as the R&D Centre for Information and Communications Technologies. Its core R&D competences are organised under seven Technology Divisions – namely, IC Design (Analog), IC Design (Digital), Opto-electronics, Electronics Components, Software and Systems, Security and Data Sciences, and Communications Technologies. Four areas of applications including financial technologies, intelligent manufacturing, next generation networks and medical and health are identified for major pursuit. Its operating strategy is to transfer the technologies and results developed from its R&D projects to industry through licensing, contract research and spinning-off new technology companies. 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.

**48** The key performance indicators for ASTRI are:

#### *Indicators*

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
no. of new full projects <sup>^</sup> .....	21	22	27
no. of new seed projects <sup>¶</sup> .....	16	18	16
no. of patents filed.....	27	23	26

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

	2014 (Actual)	2015 (Actual)	2016 (Estimate)
no. of technology transfers.....	82	59	<b>68</b>
no. of clients engaged in technology transfer.....	57	47	<b>58</b>
no. of members joining consortia formed by ASTRI.....	292	333	<b>350</b>
no. of technology workshop/seminars organised.....	56	60	<b>55</b>
no. of participants of seminars.....	6 490	7 022	<b>6 500</b>
amount of income from industry (\$m).....	79.5	81.6	<b>85.7</b>

^ 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.

***Matters Requiring Special Attention in 2016–17***

**49** During 2016–17, 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, such as establishing joint laboratories, alliances and R&D centres, to jointly advance innovation and technology;
- align its R&D directions with that of the 13th Five-Year Plan to implement major technology projects, to develop strategic emerging industries, and to conduct basic research and frontier technologies;
- strengthen co-operation with the industry and universities in R&D;
- collaborate with enterprises and research institutions in the Mainland and overseas;
- develop research capabilities in identified emerging technology areas and create synergy through clustered-seed projects;
- carry out the research projects initiated in 2015–16 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 fellows under the ITF Internship Programme.

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

**ANALYSIS OF FINANCIAL PROVISION**

<b>Programme</b>	2014–15 (Actual) (\$m)	2015–16 (Original) (\$m)	2015–16 (Revised) (\$m)	<b>2016–17 (Estimate) (\$m)</b>
(1) Support for Research and Development .....	84.9	109.0	104.0	<b>55.0</b>
(2) Fostering University-Industry Collaboration .....	6.9	6.6	6.6	<b>6.9</b>
(3) Promotion of Technological Entrepreneurship .....	8.4	10.4	10.7	<b>21.6</b>
(4) Planning for Innovation and Technology Development .....	36.9	39.1	38.8	<b>42.2</b>
(5) Infrastructural Support .....	11.7	12.1	12.7	<b>13.3</b>
(6) Quality Support .....	111.0	108.7	112.4	<b>113.4</b>
(7) Subvention: Hong Kong Productivity Council, Hong Kong Applied Science and Technology Research Institute Company Limited.....	334.4	334.4	339.2	<b>335.9</b>
	594.2	620.3	624.4 (+0.7%)	<b>588.3 (–5.8%)</b>
				<b>(or –5.2% on 2015–16 Original)</b>

**Analysis of Financial and Staffing Provision**

**Programme (1)**

Provision for 2016–17 is \$49.0 million (47.1%) lower than the revised estimate for 2015–16. This is mainly due to the exclusion of cash flow requirements for the R&D Cash Rebate Scheme which will be subsumed under the ITF with effect from 1 April 2016, partly offset by the increased provision for salary. There will be an increase of eight posts in 2016–17.

**Programme (2)**

Provision for 2016–17 is \$0.3 million (4.5%) higher than the revised estimate for 2015–16. This is mainly due to increased provision for general departmental expenses.

**Programme (3)**

Provision for 2016–17 is \$10.9 million (101.9%) higher than the revised estimate for 2015–16. This is mainly due to increased provision for salary and general departmental expenses. In addition, there will be an increase of seven posts in 2016–17.

**Programme (4)**

Provision for 2016–17 is \$3.4 million (8.8%) higher than the revised estimate for 2015–16. This is mainly due to increased provision for salary. In addition, there will be an increase of four posts in 2016–17.

**Programme (5)**

Provision for 2016–17 is \$0.6 million (4.7%) higher than the revised estimate for 2015–16. This is mainly due to increased provision for salary. In addition, there will be an increase of two posts in 2016–17.

**Programme (6)**

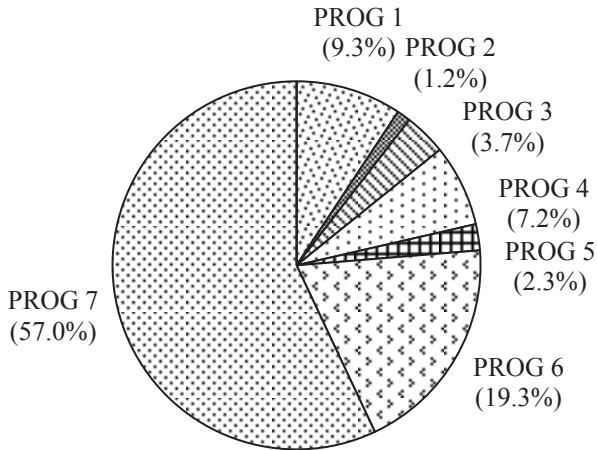
Provision for 2016–17 is \$1.0 million (0.9%) higher than the revised estimate for 2015–16. This is mainly due to increased provision for procurement of capital equipment.

**Programme (7)**

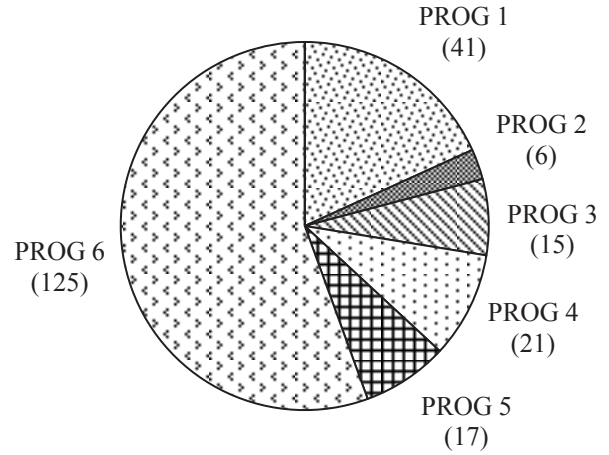
Provision for 2016–17 is \$3.3 million (1.0%) lower than the revised estimate for 2015–16. This is mainly due to decreased provision for the HKPC and ASTRI.

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

*Allocation of provision  
to programmes  
(2016-17)*

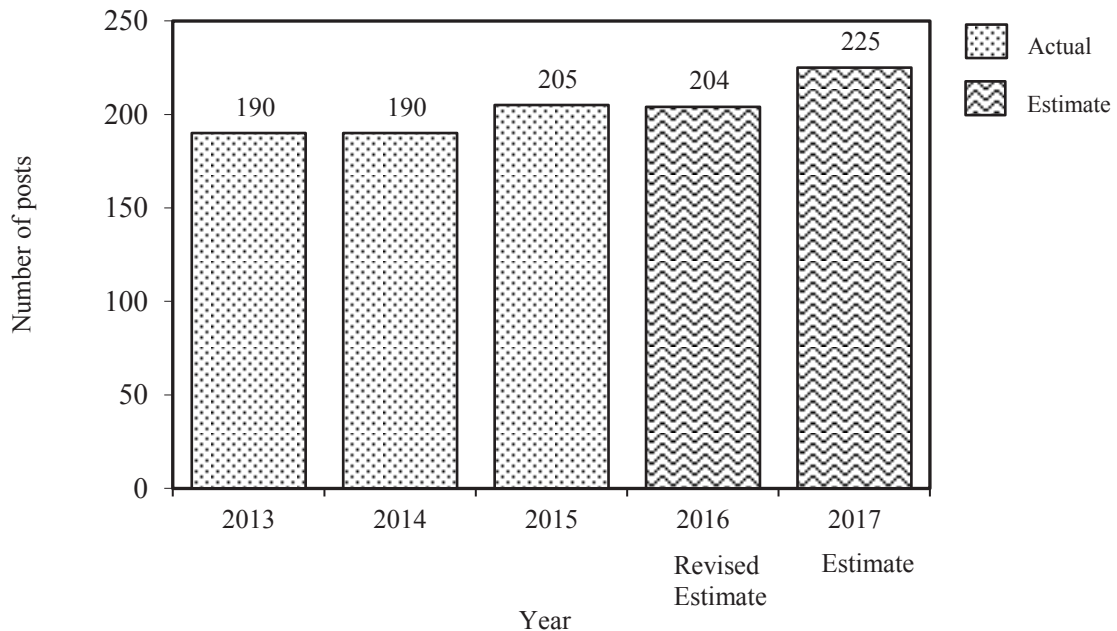


*Staff by programme  
(as at 31 March 2017)*



(No government staff under PROG 7)

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



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

Sub-head (Code)	Actual expenditure 2014–15	Approved estimate 2015–16	Revised estimate 2015–16	<b>Estimate 2016–17</b>	
	\$'000	\$'000	\$'000	<b>\$'000</b>	
<b>Operating Account</b>					
Recurrent					
000	Operational expenses .....	537,959	547,580	557,364	<b>573,913</b>
	Total, Recurrent.....	<u>537,959</u>	<u>547,580</u>	<u>557,364</u>	<u><b>573,913</b></u>
Non-Recurrent					
	General non-recurrent .....	43,884	63,000	58,000	<b>—<sup>Φ</sup></b>
	Total, Non-Recurrent.....	<u>43,884</u>	<u>63,000</u>	<u>58,000</u>	<u><b>—</b></u>
	Total, Operating Account .....	<u>581,843</u>	<u>610,580</u>	<u>615,364</u>	<u><b>573,913</b></u>
<b>Capital Account</b>					
Plant, Equipment and Works					
603	Plant, vehicles and equipment.....	5,219	4,315	3,651	<b>4,487</b>
661	Minor plant, vehicles and equipment (block vote).....	7,130	5,400	5,400	<b>9,946<sup>Λ</sup></b>
	Total, Plant, Equipment and Works.....	<u>12,349</u>	<u>9,715</u>	<u>9,051</u>	<u><b>14,433</b></u>
	Total, Capital Account.....	<u>12,349</u>	<u>9,715</u>	<u>9,051</u>	<u><b>14,433</b></u>
	Total Expenditure .....	<u><u>594,192</u></u>	<u><u>620,295</u></u>	<u><u>624,415</u></u>	<u><u><b>588,346</b></u></u>

Φ The general non-recurrent item of Research and Development Cash Rebate Scheme will be subsumed under the Innovation and Technology Fund with effect from 1 April 2016.

Λ Provision of \$9,946,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents an increase of \$4,546,000 (84.2%) over the revised estimate for 2015–16. This reflects the updating of the ambit of this block vote subhead as set out in the Introduction to the Estimates and the increased requirement for scheduled replacement of minor plant and equipment.

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

### Details of Expenditure by Subhead

The estimate of the amount required in 2016–17 for the salaries and expenses of the Innovation and Technology Commission is \$588,346,000. This represents a decrease of \$36,069,000 against the revised estimate for 2015–16 and \$5,846,000 against the actual expenditure in 2014–15.

#### *Operating Account*

##### Recurrent

**2** Provision of \$573,913,000 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 2016 will be 204 posts. It is expected that there will be an increase of 21 posts in 2016–17. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2016–17, but the notional annual mid-point salary value of all such posts must not exceed \$131,212,000.

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

	2014–15 (Actual) (\$'000)	2015–16 (Original) (\$'000)	2015–16 (Revised) (\$'000)	2016–17 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	122,088	129,277	134,552	152,065
- Allowances.....	1,158	2,009	1,649	2,126
- Job-related allowances.....	—	2	2	2
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	511	513	472	372
- Civil Service Provident Fund contribution.....	2,237	3,026	3,408	4,611
Departmental Expenses				
- General departmental expenses .....	77,602	78,390	78,049	78,794
Subventions				
- Hong Kong Productivity Council .....	192,885	192,885	197,754	195,880
- Hong Kong Applied Science and Technology Research Institute Company Limited.....	141,478	141,478	141,478	140,063
	537,959	547,580	557,364	573,913

#### *Capital Account*

##### Plant, Equipment and Works

**5** Provision of \$9,946,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents an increase of \$4,546,000 (84.2%) over the revised estimate for 2015–16. This reflects the updating of the ambit of this block vote subhead as set out in the Introduction to the Estimates and the increased requirement for scheduled replacement of minor plant and equipment.



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

**Commitments**

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2015	Revised estimated expenditure for 2015–16	Balance
			\$'000	\$'000	\$'000	\$'000
<b><i>Capital Account</i></b>						
603		<i>Plant, vehicles and equipment</i>				
	843	For Temperature Laboratory of Standards and Calibration Laboratory to replace an existing humidity chamber.....	2,800	1,046	1,215	539
	844	For Length Laboratory of Standards and Calibration Laboratory to set up new service for measurement of three-dimensional spatial coordinates and dimensions .....	3,000	—	2,105	895
	852	For Acoustics Laboratory of Standards and Calibration Laboratory to set up new calibration service for head and torso simulator .....	2,300	—	100	2,200
	859	For Low Frequency Laboratory of Standards and Calibration Laboratory to replace the quantum hall resistance system .....	3,500	—	204	3,296
		Total .....	<u>11,600</u>	<u>1,046</u>	<u>3,624</u>	<u>6,930</u>