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Panel on Commerce and Industry

Meeting on 18 June 2013

**Background brief on Research and Development Centres
set up under the Innovation and Technology Fund**

Purpose

This paper provides background information on the Research and Development (R&D) Centres set up under the Innovation and Technology Fund (ITF)¹. It also summarizes the views and concerns expressed by the Panel on Commerce and Industry (the Panel) on the subject during previous discussions.

Background

2. Following public consultation in 2004, the Government promulgated in early 2005 a new strategic framework aimed at adopting a more focused approach to promote innovation and technology development.

3. After consulting the Panel on 17 May 2005 on the new strategic framework, the Administration submitted a funding proposal to the Finance Committee (FC) to take forward the new framework. On 24 June 2005, FC approved a total commitment of \$273.9 million under ITF for the

¹ ITF was set up as a statutory fund under the Public Finance Ordinance (Cap. 2) by resolution of the Legislative Council on 30 June 1999. On 9 July 1999, the Finance Committee approved the proposed injection of HK\$5 billion into ITF and ITF came into operation on 1 November 1999. ITF is currently administered by the Innovation and Technology Commission (ITC) and comprises four programmes, namely the Innovation and Technology Support Programme, the University-Industry Collaboration Programme, the General Support Programme and the Small Entrepreneur Research Assistance Programme.

establishment of four R&D Centres² and their first five-year operation up to 31 March 2011. In April 2006, the Government set up the following five R&D Centres as focal points to drive and coordinate applied R&D and to promote commercialization of R&D results and technology transfer:

- (a) Automotive Parts and Accessory Systems R&D Centre (APAS);
- (b) R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM);
- (c) Hong Kong Research Institute of Textiles and Apparel (HKRITA);
- (d) Nano and Advanced Materials Institute (NAMI); and
- (e) R&D Centre for Information and Communications Technologies (ICT)³ under the Hong Kong Applied Science and Technology Research Institute (ASTRI).

4. On 19 June 2009, FC further approved an increase in the funding commitment by \$369 million to extend the operation of the APAS, LSCM, HKRITA and NAMI for three years up to 31 March 2014.

5. Following FC's approval on 11 May 2012, the funding commitment was further increased by \$275.3 million to support the continued operation of NAMI and APAS for another three years up to 31 March 2017, and the operation of LSCM for one more year up to 31 March 2015. While the operation of HKRITA was extended up to 31 March 2015, no additional funding was required as its estimated total expenditure of \$140.2 million by 31 March 2015 could be adequately covered by its approved commitment of \$153.6 million.

6. Taken together, the total funding commitment approved by FC for the R&D Centres to meet their operating expenditure for a total of either nine or 11 years (up to 31 March 2015 and 31 March 2017 respectively) is \$918.2

² The four centres are Automotive Parts and Accessory Systems R&D Centre, R&D Centre for Logistics and Supply Chain Management Enabling Technologies, Hong Kong Research Institute of Textiles and Apparel and Nano and Advanced Materials Institute.

³ Unlike the other four R&D Centres which have been established as independent legal entities, ICT has been established within the existing operational infrastructure of ASTRI, which is a limited company wholly owned by the Government. The operating cost of ICT is funded separately by the Government's annual subvention to ASTRI.

million.

Views and concerns expressed by the Panel

7. Panel members have followed closely the operation of the R&D Centres over the years and were briefed on the outcome of the mid-term review, the review on the modus operandi and operating costs of the R&D centers and the full review on the R&D Centres' operation and overall performance for the first five-year period conducted by the Administration in 2009, 2010 and 2011 respectively. The Panel generally supported the role of R&D Centres to spearhead the advancement of R&D of Hong Kong, and hoped that the commercialization of local R&D results could bring about wider social and economic benefits to the community. The major concerns expressed by members are summarized below.

Cost-effectiveness of the R&D Centres

8. The cost-effectiveness of the R&D Centres has been a major concern of the Panel given the substantial funding invested in the operation of the R&D Centres. Members noted with concern that the estimated operating costs of \$642.9 million for the four ITF-funded R&D Centres from 2006-2007 to 2013-2014 represented an average of about 26% of their estimated R&D expenditures of \$2,431.7 million for the same period. Members were of the view that the operating costs of the R&D Centres should not be too high in order that adequate resources would be available for R&D project.

9. To address members' concern about the high operating costs, a review was conducted by the Administration in 2010 to look into the modus operandi of the R&D Centres to explore room for achieving greater savings and higher cost-effectiveness. Panel members were briefed on the findings and observations of the review at the meeting on 16 November 2010. Options including the provision of central supporting services and co-location of the R&D Centres were recommended to lower operating costs and facilitate synergy. Following a full review in early 2012 on the way forward for R&D Centres as to whether the R&D Centres should merge, disband or maintain the status quo, APAS was merged with the Hong Kong Productivity Council with a view to enhancing cooperation between the two organizations and achieving higher cost-effectiveness. The Administration assured members that APAS would maintain its autonomy in conducting R&D projects as it would continue to be fully funded by the Administration after the merger.

Realization of R&D results

10. Panel members were keen to ensure that the R&D Centres could help promote the realization of R&D results and urged the Administration to speed up the commercialization of R&D deliverables, especially in the Mainland market. Members were of the view that the market strategy of R&D products should be competitive in terms of creativity rather than price, and that the R&D Centres should play a critical role in providing novel ideas to the enterprises. The Administration was requested to strengthen R&D Centres' co-operation with local and Mainland universities/institutions to fully leverage on their technical hardware and software, and help the R&D Centres forge closer ties with manufacturers in the Pearl River Delta (PRD) Region. The Administration undertook to step up efforts in encouraging R&D Centres to be more proactive in commercialization of R&D results and technology transfer. The performance of the R&D Centres in this respect would be assessed on the basis of industry income from licensing fees, royalty payments and contract research, number of companies granted with technology licence, etc.

11. To help promote commercialization of R&D results and technology transfer, some Panel members called on the Administration to take the lead to adopt more local R&D results in the public sector (including government departments, public bodies and trade associations) so that researchers and product developers could gain actual experience to fine-tune their products, and build up "reference" for subsequent marketing. The Administration should also encourage local manufacturing of R&D deliverables so as to create more job opportunities for grass root people. While welcoming the introduction of the Public Sector Trial Scheme (PSTS) introduced in March 2011 to provide additional funding support to completed R&D projects funded by the ITF for the production of tools/prototypes/samples, members urged the Administration to consider allowing trial schemes to be conducted in private organizations and outside Hong Kong so as to enlarge the clientele and establish credibility internationally. There were views that the Administration should explore co-operation between Hong Kong and the Mainland in innovation and technology under the Mainland and Hong Kong Closer Economic Partnership Agreement, and increase the funding level and flexibility of ITF to encourage R&D in industry. The Administration advised that in the light of the good response to the public-sector trial initiative, the PSTS was extended in July 2012 to cover not only projects undertaken by R&D Centres but also all R&D projects funded under the ITF. Trial schemes were also allowed to be applied in the public sector outside Hong Kong and in the Mainland.

Industry participation and collaboration

12. Panel members have from time to time raised concern about the effectiveness of the R&D Centres in establishing connections with the industry. There were views that the Administration should review whether the R&D projects matched the needs of the industry and that the R&D Centres should not limit their contacts to trade associations only but should outreach to ascertain the varying needs of the industry customers to ensure the relevancy of the R&D projects to the industry's needs. Members considered that the R&D Centres should strengthen their promotion and publicity efforts to enhance industry customers' awareness of the R&D projects undertaken and the research output so as to secure continued support from the industries concerned for applied R&D in Hong Kong. Noting that not many exhibitors and manufacturers had established a working relationship with the R&D Centres, members suggested that more trade shows should be staged to strengthen the connection between the Centres and the industry.

13. The Administration assured members that the R&D Centres had attached great importance to promoting their activities to industry customers of both local companies and companies in the PRD region. The head of each R&D Centre had also been establishing effective connections with the industry to promote the Centre's activities. To further assist the work of the R&D Centres, the Innovation and Technology Commission (ITC) had linked up the R&D Centres with the relevant Government departments and public bodies to explore opportunities of collaboration. Networking events in different technology areas/sectors were organized to promote closer collaboration among stakeholders, i.e. Government, industry, academia and research.

14. Some members raised concern about the low number of collaborative projects undertaken by certain R&D Centres and the low level of industry contribution during their first five-year operation. Some other members however considered that the level of industry contribution should not be taken as the sole performance target for R&D Centres. As Hong Kong's gross expenditure on R&D as a ratio to the gross domestic product at 0.72% in 2011 was relatively low compared to neighbouring economies and by international standard, members urged the Administration to put in more resources to promote R&D development by making reference to international indicators on innovation and technology as well as R&D development.

Latest position

15. The Administration will brief the Panel on 18 June 2013 on the operation of the R&D Centres for 2012-2013.

Relevant papers

16. A list of relevant papers is set out in **Appendix I**.

Council Business Division 1
Legislative Council Secretariat
14 June 2013

Appendix I

Research and Development Centres set up under the Innovation and Technology Fund

List of relevant papers

Date of meeting	Committee	Minutes/Paper	LC Paper No.
18/1/2005	Panel on Commerce and Industry	Information paper	CB(1)690/04-05(04) http://www.legco.gov.hk/yr04-05/english/panels/ci/papers/ci0118cb1-690-4e.pdf
		Background brief	CB(1)688/04-05 http://www.legco.gov.hk/yr04-05/english/panels/ci/papers/ci0118cb1-688-e.pdf
		Minutes meeting	of
17/5/2005	Panel on Commerce and Industry	Administration's paper	CB(1)1496/04-05(03) http://www.legco.gov.hk/yr04-05/english/panels/ci/papers/ci0517cb1-1496-3e.pdf
		Background brief	CB(1)1497/04-05 http://www.legco.gov.hk/yr04-05/english/panels/ci/papers/ci0517cb1-1497e.pdf
		Minutes meeting	of

Date of meeting	Committee	Minutes/Paper	LC Paper No.
24/6/2005	Finance Committee	Information paper Minutes meeting of	FCR(2005-06)21 http://www.legco.gov.hk/yr04-05/english/fc/fc/papers/f05-21e.pdf FC125/04-05 http://www.legco.gov.hk/yr04-05/english/fc/fc/minutes/fc050624.pdf
21/4/2009	Panel on Commerce and Industry	Information paper Updated background brief Minutes meeting of	CB(1)1286/08-09(07) http://www.legco.gov.hk/yr08-09/english/panels/ci/papers/ci0421cb1-1286-7-e.pdf CB(1)1286/08-09(08) http://www.legco.gov.hk/yr08-09/english/panels/ci/papers/ci0421cb1-1286-8-e.pdf CB(1)2281/08-09 http://www.legco.gov.hk/yr08-09/english/panels/ci/minutes/ci20090421.pdf
19/5/2009	Panel on Commerce and Industry	Information paper Updated background brief	CB(1)1551/08-09(05) http://www.legco.gov.hk/yr08-09/english/panels/ci/papers/ci0519cb1-1551-5-e.pdf CB(1)1286/08-09(08) http://www.legco.gov.hk/yr08-09/english/panels/ci/papers/ci0421cb1-1286-8-e.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
		Minutes meeting of	CB(1)2643/08-09 http://www.legco.gov.hk/yr08-09/english/panels/ci/minutes/ci20090519.pdf
19/6/2009	Finance Committee	Information paper Minutes meeting of	FCR(2009-10)27 http://www.legco.gov.hk/yr08-09/english/fc/fc/papers/f09-27e.pdf FC19/09-10 http://www.legco.gov.hk/yr08-09/english/fc/fc/minutes/fc20090619a.pdf
20/12/2011	Panel on Commerce and Industry	Information paper Updated background brief Minutes meeting of	CB(1)624/11-12(05) http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci1220cb1-624-5-e.pdf CB(1)624/11-12(06) http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci1220cb1-624-6-e.pdf CB(1)1039/11-12 http://www.legco.gov.hk/yr11-12/english/panels/ci/minutes/ci20111220.pdf
17/4/2012	Panel on Commerce and Industry	Information paper	CB(1)1549/11-12(03) http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci0417cb1-1549-3-e.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
		<p>Updated background brief</p> <p>Minutes meeting of</p>	<p>CB(1)1549/11-12(04)</p> <p>http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci0417cb1-1549-4-e.pdf</p> <p>CB(1)1809/11-12</p> <p>http://www.legco.gov.hk/yr11-12/english/panels/ci/minutes/ci20120417.pdf</p>
11/5/2012	Finance Committee	<p>Administration's paper</p> <p>Minutes meeting of</p>	<p>FCR(2012-13)21</p> <p>http://www.legco.gov.hk/yr11-12/english/fc/fc/papers/fl2-21e.pdf</p> <p>FC183/11-12</p> <p>http://www.legco.gov.hk/yr11-12/english/fc/fc/minutes/fc20120511.pdf</p>
19/6/2012	Panel on Commerce and Industry	<p>Administration's paper</p> <p>Updated background brief</p> <p>Minutes meeting of</p>	<p>CB(1)2153/11-12(03)</p> <p>http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci0619cb1-2153-3-e.pdf</p> <p>CB(1)2153/11-12(04)</p> <p>http://www.legco.gov.hk/yr11-12/english/panels/ci/papers/ci0619cb1-2153-4-e.pdf</p> <p>CB(1)2493/11-12</p> <p>http://www.legco.gov.hk/yr11-12/english/panels/ci/minutes/ci20120619.pdf</p>