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Panel on Commerce and Industry

Meeting on 16 June 2015

**Updated 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 Members on the subject during previous discussions.

Background

2. Following consultation with the Panel on Commerce and Industry ("the Panel") on 17 May 2005, the Administration submitted a funding proposal to the Finance Committee ("FC") for the establishment of four R&D Centres, namely Automotive Parts and Accessory Systems R&D Centre (APAS), R&D Centre for Logistics and Supply Chain Management Enabling Technologies ("LSCM"), Hong Kong Research Institute of Textiles and Apparel ("HKRITA") and Nano and Advanced Materials Institute ("NAMI"), to promote innovation and technology development. On 24 June 2005, FC approved a total commitment of \$273.9 million under ITF for the establishment of the four R&D Centres and their first five-year operation up

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 ("FC") approved the proposed injection of HK\$5 billion into ITF and ITF came into operation on 1 November 1999. FC approved a further injection of \$5 billion into ITF on 27 February 2015. ITF is currently administered by the Innovation and Technology Commission and comprises four programmes, namely the Innovation and Technology Support Programme, the University-Industry Collaboration Programme, the General Support Programme and the Enterprise Support Scheme.

to 31 March 2011.

3. On 19 June 2009, FC approved a further 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.

4. 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.

5. On 24 January 2014, FC further approved an additional grant of \$100.8 million under the ITF to support the continued operation of the HKRITA (\$44.1 million) and the LSCM (\$56.7 million) for another two years up to 2016-2017.

6. Taken together, the total funding commitment approved by FC for the operating expenditure of the four R&D Centres for a total of 11 years (from April 2006 up to 31 March 2017) is \$1,019 million. The R&D expenditure of the R&D Centres are funded separately out of ITF on a project basis.

7. In addition to the four ITF-funded R&D Centres set up in June 2005, the R&D Centre for Information and Communications Technologies ("ICT") was set up under the Hong Kong Applied Science and Technology Research Institute ("ASTRI") in April 2006. 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 recurrent subvention to ASTRI. The five R&D Centres served as focal points to drive and coordinate applied R&D and to promote commercialization of R&D results and technology transfer.

Views and concerns expressed by Members

Deliberations of the Panel on Commerce and Industry

8. Panel members have followed closely the operation of the R&D Centres over the years, and received annual updates on the operation of the R&D Centres. The Panel was also briefed on the outcome of the mid-term review in April 2009, the review on the modus operandi and operating costs of the R&D centers in November 2010 and the full review on the R&D

Centres' operation and overall performance for the first five-year period in December 2011. The Panel generally supported the role of R&D Centres to spearhead the advancement of applied 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

9. Noting 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 the estimated R&D expenditure of \$2,431.7 million for the same period, some members expressed concern about the high operating costs of the R&D Centres. Given the substantial funding invested in the operation of the R&D Centres, 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 projects.

10. The Administration advised that a review was conducted in 2010 to look into the modus operandi of the R&D Centres to explore room for achieving greater savings and higher cost-effectiveness. 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, APAS was merged with the Hong Kong Productivity Council with a view to enhancing cooperation between the two organizations and achieving higher cost-effectiveness.

Realization and commercialization of R&D results

11. 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 advised to help R&D Centres forge closer ties with manufacturers in the Pearl River Delta region, and to strengthen R&D Centres' co-operation with local and Mainland universities/institutions as well as overseas research institutes or multinational technology companies.

12. To facilitate commercialization of R&D results and technology transfer, some Panel members called on the Administration to encourage local manufacturing of R&D deliverables and 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. In this connection, members supported the Public Sector Trial Scheme ("PSTS") which provided additional funding to completed R&D projects funded by the ITF for the production of tools/prototypes/samples and the conducting of trials in the public sector. Members noted that taking into consideration the wealth of experience and technology knowhow the R&D Centres had accumulated and the networks built up with various stakeholders in PSTS projects over the years, a new measure to increase the funding ceiling of PSTS projects undertaken/coordinated by the R&D Centres from 50% to 100% of the actual cost of the original R&D projects was introduced by the Administration on a trial basis so as to speed up the process of industry adoption of R&D outcomes.

Industry participation and collaboration

13. Panel members were of the view that R&D Centres should forge closer ties with industry-support bodies, trade associations and enterprises to develop more demand-led and industry-driven R&D projects relevant to the needs of industry users, in particular small and medium enterprises. The R&D Centres should also strengthen their 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. Some members suggested that more trade shows should be staged to strengthen the connection between the R&D Centres and the industry.

14. Some members noted with concern that the industry was not very keen on collaborating with the R&D Centres in conducting R&D projects as the existing funding arrangements under ITF were too restrictive while the project vetting requirements and procedures were too complex and cumbersome to facilitate worthy projects to be undertaken quickly. Members considered that the Administration should avoid micro managing the operations of the R&D Centres.

Performance assessment and way forward

15. Some Panel members were of the view that innovation and technology was a long-term investment that required time for the realization of R&D deliverables and therefore the Administration should not take short-term monetary income as the sole performance indicator for the R&D Centres. The management of the R&D Centres was requested to include in their annual reports to the Panel information on the social and economic benefits brought about to the community by their R&D results, so as to enhance public's understanding of the effectiveness and value of R&D to the

society.

16. There was a suggestion that each of the R&D Centres should conduct an analysis on their strengths, weaknesses, opportunities and challenges, so as to facilitate a better assessment of their performance and to provide a basis for formulating improvement measures as necessary. The Administration was advised to explore the need for additional R&D Centres in other focus areas as fit. The Administration advised that the Innovation and Technology Commission ("ITC") had, in consultation with the R&D Centres, developed a more comprehensive/systematic post-project evaluation framework to better measure the performance of the R&D Centres. The Administration would evaluate the operation and performance of all the R&D Centres in mid-2015 and put forward recommendations with regard to their future operation.

Council meeting

17. At the Council meeting on 16 October 2013, Hon Kenneth LEUNG moved a motion on "Optimizing public finances and enhancing the impetus for innovation in Hong Kong's economy". Members called upon the Administration to formulate long-term, comprehensive and concrete policies on technology industries, including, inter alia, supporting the development of local applied scientific research and technology transfer. The motion as amended by Dr Hon Elizabeth QUAT, Hon Andrew LEUNG Kwan-yuen, Hon Ronny TONG Ka-wah and Hon Charles Peter MOK was passed.

Examination of the Estimates of Expenditure 2015-2016

18. At the special FC meeting on 30 March 2015 to examine the Estimates of Expenditure 2015-2016, Members enquired about the operating expenditure, R&D expenditure, and performance of the R&D Centres in respect of commercialization of R&D results. Some Members noted with concern that the R&D Centres were still unable to meet the original objective of self-financing, and enquired whether the Administration would raise R&D Centres' industry contribution target to the original level of 40%.

19. The Administration considered it not feasible for the R&D Centres to achieve the self-financing target in the near future. The Administration advised that following the mid-term review on the first five-year operation (i.e. April 2006 to March 2011) of the R&D Centres in 2008, the R&D Centres' industry contribution target was adjusted from 40% to 15%, taking into account all relevant factors, including the then prevailing economic environment, the actual operation and experience of the R&D Centres, as well as the feedbacks from the Centres and the industry. The R&D Centres' industry contribution target was raised to 20% for their second five-year operation period (i.e. April 2011 to March 2016). In 2013-2014, all R&D Centres had achieved this target. The details of the questions and the

Administration's replies are hyperlinked in the **Appendix**.

Latest position

20. The Administration will report R&D Centres' operation for 2014-2015 to the Panel on 16 June 2015.

Relevant papers

21. A list of relevant papers is set out in the **Appendix**.

Council Business Division 1
Legislative Council Secretariat
12 June 2015

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

List of relevant papers

Date of meeting	Meeting	Paper
17/5/2005	Panel on Commerce Industry	<p>Administration's paper on "Implementation of new strategic framework for innovation and technology development" (LC Paper No. CB(1)1496/04-05(03))</p> <p>Background brief on new strategic framework for innovation and technology development prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1497/04-05)</p> <p>Minutes of meeting (LC Paper No. CB(1)1794/04-05)</p>
24/6/2005	Finance Committee	<p>Administration's paper on establishment of Research and Development Centres (FCR(2005-06)21)</p> <p>Minutes of meeting (LC Paper No. FC125/04-05)</p>
19/5/2009	Panel on Commerce and Industry	<p>Administration's paper on "Mid-term review of the Research and Development Centres: Funding proposal" (LC Paper No. CB(1)1551/08-09(05))</p> <p>Updated background brief on Research and Development Centres under the Innovation and Technology Fund prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1286/08-09(08))</p> <p>Minutes of meeting (LC Paper No. CB(1)2643/08-09)</p>

Date of meeting	Meeting	Paper
19/6/2009	Finance Committee	<p>Administration's paper on establishment of Research and Development Centres (FCR(2009-10)27)</p> <p>Minutes of meeting (LC Paper No. FC19/09-10)</p>
17/4/2012	Panel on Commerce and Industry	<p>Administration's paper on "Funding proposals for Research and Development Centres" (LC Paper No. CB(1)1549/11-12(03))</p> <p>Updated background brief on Research and Development Centres set up under the Innovation and Technology Fund prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1549/11-12(04))</p> <p>Minutes of meeting (LC Paper No. CB(1)1809/11-12)</p>
11/5/2012	Finance Committee	<p>Administration's paper on Research and Development Centres (FCR(2012-13)21)</p> <p>Minutes of meeting (LC Paper No. FC183/11-12)</p>
16/10/2013	Council	<p>Motion on "Optimizing public finances and enhancing the impetus for innovation in Hong Kong's economy" moved by Hon Kenneth LEUNG (Wording of the motion passed) (Progress report)</p>
19/11/2013	Panel on Commerce and Industry	<p>Administration's paper on "Extension of the operation of Research and Development Centres" (LC Paper No. CB(1)290/13-14(03))</p>

Date of meeting	Meeting	Paper
		<p>Updated background brief on Research and Development Centres set up under the Innovation and Technology Fund prepared by the Legislative Council Secretariat (LC Paper No. CB(1)290/13-14(04))</p> <p>Minutes of meeting (LC Paper No. CB(1)747/13-14)</p>
24/1/2014	Finance Committee	<p>Administration's paper on Research and Development Centres (FCR(2013-14)55)</p> <p>Minutes of meeting (LC Paper No. FC73/13-14)</p>
17/6/2014	Panel on Commerce and Industry	<p>Administration's paper on "Progress report on Research and Development Centres for 2013-2014" (LC Paper No. CB(1)1595/13-14(05))</p> <p>Updated background brief on Research and Development Centres set up under the Innovation and Technology Fund prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1595/13-14(06))</p> <p>Minutes of meeting (LC Paper No. CB(1)1976/13-14)</p>
30/3/2015	Special meeting of the Finance Committee to examine the Estimates of Expenditure 2015-2016	<p>Administration's replies to Members' initial written questions (Reply serial nos. CEDB(CT)077, 078, 099 and 104)</p>