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**Legislative Council**

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**Panel on Commerce and Industry**

**Meeting on 17 May 2005**

**Background Brief on  
New Strategic Framework for Innovation and Technology Development**

**Purpose**

This paper provides a summary of the views and concerns expressed by Members on the new strategic framework for innovation and technology development supported by the Innovation and Technology Fund (ITF).

**Consultation exercise**

2. On 30 June 2004, the Innovation and Technology Commission (ITC) issued a consultation paper to invite the public's views on the new strategy, particularly on the 13 proposed technology focus areas<sup>1</sup> and the proposal of setting up research and development (R&D) centres. Concurrently, ITC also invited expressions of interest from universities and technology support organizations in hosting R&D centres. Between July and September 2004, ITC received a total of 167 written submissions. According to the Administration, the vast majority of respondents supported the general direction and key initiatives of the new strategy.

**New Strategic Framework**

3. The Administration has briefed the Panel on Commerce and Industry (CI) on the outcome of the public consultation, the implementation plan for the

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<sup>1</sup> The 13 proposed focus areas are: (1) Advanced Manufacturing Technologies; (2) Automotive Parts and Accessory Systems; (3) Chinese Medicine; (4) Communications Technologies; (5) Consumer Electronics; (6) Digital Entertainment; (7) Display Technologies; (8) Integrated Circuit Design; (9) Logistics/Supply Chain Management Enabling Technologies; (10) Medical Diagnostics and Devices; (11) Nanotechnology and Advanced Materials; (12) Opto-electronics; and (13) Textile and Clothing.

new strategic framework and the new three-tier structure of the ITF at the meeting on 18 January 2005.

#### Technology focus areas

4. In line with the market-driven and demand-led approach of the new strategy, four technology focus areas have been selected for priority development. They are automotive parts and accessory systems; logistics and supply chain management (SCM) enabling technologies; textile and clothing; and nanotechnology and advanced materials.

5. R&D centres with an initial term of operation of five years will be set up under the above four technology areas as separate legal entities such that the centres can play an independent and impartial role in fostering coordination among R&D institutions and cooperation with industry partners.

6. As part of the development plan under the new strategy, the Applied Science and Technology Research Institute<sup>2</sup> (ASTRI) will subsume R&D centres under the technology areas of communications technologies, consumer electronics, integrated circuit design, opto-electronics and Chinese medicine under its existing operation infrastructure and take forward these focus areas as its research priority areas in its five-year plan. The overall management of R&D projects will be overseen by the existing management structure of ASTRI.

#### New funding model of ITF

7. The 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 which came into operation on 1 November 1999. The ITF is currently administered by the ITC.

8. The ITF will adopt a new three-tiered funding model. Tier one will be for the R&D centres and ASTRI in the nine technology areas. The ITF will be deployed to cover the cost of the initial operation of the R&D centres and to sponsor individual projects. The amount of funding for the R&D centres may vary according to the manpower and equipment requirements etc.

9. Tier two will be for focus themes identified in the consultation paper for which no R&D centres will be set up, ie, advanced manufacturing technologies, digital entertainment, display technologies and medical diagnostics and devices. Tier three will be for innovative projects on new technologies with good market potential and more forward-looking in nature. R&D efforts under these two tiers will be supported through the current Innovation and Technology Support

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<sup>2</sup> The mission of ASTRI is to perform R&D activities to enhance Hong Kong's competitiveness in technology-based industries.

Programme of the ITF and the amount of funding will be subject to the number and nature of applications.

#### Review of Applied Research Fund (ARF)

10. The ARF is a government-owned venture capital fund set up in 1993 with an initial capital of \$250 million to provide funding support to technology ventures. The ARF is administered by the Applied Research Council (ARC), a company wholly owned by the Government and formed specifically for this purpose. Since November 1998, private-sector managers have been engaged to manage the investment of ARF. Its capital has also been increased to \$750 million. Up to 31 March 2004, the ARF had invested in 50 projects in the form of loan or equity injection at a total sum of \$452 million but the total residual value stood at some \$235 million (or a loss of 48%).

11. A recent review of the ARF has shown that investment decisions are always torn between its public mission to support technology start-ups and the pursuit of financial return. It is also noted that over the last decade, the venture capital industry has become well developed in Hong Kong such that promising project with commercial potential should have no great difficulty in securing funding. Given that the strategic framework for innovation and technology development is now being realigned to ensure that government and industrial investment will result in a more relevant critical mass of output, the Administration has proposed to cease making new investments under the ARF and to inject the residual balance of the ARF (some \$400 million, subject to cash flow requirements for the winding-down process) into the ITF To augment the pool of resources to support the industry.

#### **Members' concerns**

12. In general, Panel members are supportive of the new strategic framework for innovation and technology development. They have nevertheless raised a number of concerns for the Administration's consideration.

#### Selection of technology focus areas

13. Members have noted the dissatisfaction of the IT sector that information and communications technology (ICT) has not been selected as one of the technology focus areas under the new strategy.

14. The Administration's view is that the scope covered by ICT is too broad and it would be difficult for a new R&D centre in ICT to have a sharp focus. Nevertheless, ICT is recognized as an important tool for supporting the development of other technology focus areas such as consumer electronics, logistics and SCM enabling technologies, and digital entertainment. According to the Administration, ICT-related projects have taken up a substantial share of the projects supported by ITF and ARF.

### Mode of operation of R&D centres

15. Concern has been raised about possible duplication of work of the future R&D centres and ASTRI with that of existing R&D institutions. The Administration has pointed out that the R&D centres will proactively seek industry support and participation in individual research projects through different modes of cooperation, such as forming consortia to implement R&D projects, or collaborating with the industry to carry out R&D on individual products or technologies etc. The R&D centres will also work out with the participating industries on the arrangements of commercializing R&D deliverables, including intellectual property rights and royalties. There is also no question of double funding for individual research projects undertaken by local universities as ITF supports applied R&D projects that contribute to technology upgrading in industry, while basic researches are funded by the University Grants Committee.

16. Members have highlighted that R&D centres should be of practical use and serve a value-adding function. The Administration has stressed that through the use of new technologies, the R&D centres will facilitate the manufacturing industry to move up the value chain by upgrading the production mode from merely taking customer orders to developing products with brand names.

### R&D results

17. To ensure that R&D deliverables will be relevant to the needs of the industries, members have noted that every R&D centre will set out the technology roadmap and the implementation plan in the focus area. The centres will also leverage on the resources of local universities and other R&D institutions. A Steering Committee and a Technical Advisory Committee will be set up for each R&D centre to monitor its performance and to provide technical advice respectively.

18. On concern about promoting the application of R&D results, members have noted that the Administration will enhance the awareness of local and Mainland industrialists by launching a publicity and promotional programme in 2005, in which those R&D results that have been transferred and applied for industry use will be presented.

### Changes to ARF

19. On the proposed lateral transfer of the residual balance from ARF to ITF, some members have pointed out that in accordance with established public finance practice, funds of the ARF should be ploughed back into the General Revenue Account while the ITF should seek further government funding injection if necessary. They have nevertheless remarked that the lateral transfer of funds should not be taken as a precedent for other "inter-Fund" transfers.

20. Concern has been raised on the exit strategy for the ARF. Members have called for a progressive winding-down of existing investments to avoid causing too much disruption and impact to the companies concerned. They have noted that ARC will cease making new investments after March 2005 but will continue to monitor and oversee existing investments.

### **Latest position**

21. The Administration will consider the proposals on hosting R&D centres and, depending on the amount of funding required, seek the Finance Committee's approval. It will brief the CI Panel on details of the R&D proposals and the way forward in May 2005.

Council Business Division 1  
Legislative Council Secretariat  
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