

## LegCo Panel on Trade and Industry

### Innovation and Technology Fund

#### INTRODUCTION

This paper provides an update on the latest development of the Innovation and Technology Fund (ITF) since members' discussion of the first report on 9 May 2000<sup>1</sup>.

#### BACKGROUND

2. The ITF was established as a statutory fund under the Public Finance Ordinance on 30 June 1999<sup>2</sup>. The Finance Committee approved an allocation of \$5 billion to the ITF on 9 July 1999<sup>3</sup>. The ITF was officially launched on 1 November 1999 with the promulgation of guidelines on its operation and commencement of invitation of applications. Members discussed a report on the operation of the ITF on 9 May.

3. The ITF finances projects that contribute to innovation or technology upgrading in industry, as well as those that contribute to the development of industry, to be undertaken by government or non-government entities. There are four programmes under the Fund with different purposes. They are -

- (a) ***Innovation and Technology Support Programme (ITSP)*** which supports midstream/downstream research and development projects undertaken by universities, industry support organisations, professional bodies and trade associations. Applications are invited twice a year;
- (b) ***University-Industry Collaboration Programme (UICP)*** which supports commercial research and development projects undertaken by private companies in collaboration with local universities. Funding is provided on a matching basis, with the private company and the ITF each bearing half of the project cost in cash. Applications are considered at any time of the year;
- (c) ***General Support Programme (GSP)*** which supports projects that contribute to fostering an innovation and technology culture, such as conferences, exhibitions, seminars and so on. As with the

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<sup>1</sup> Please refer to LC Paper CB(1)1512/99-00(04).

<sup>2</sup> Please refer to L.N.175 of 1999.

<sup>3</sup> Please refer to FCR(1999-2000)36.

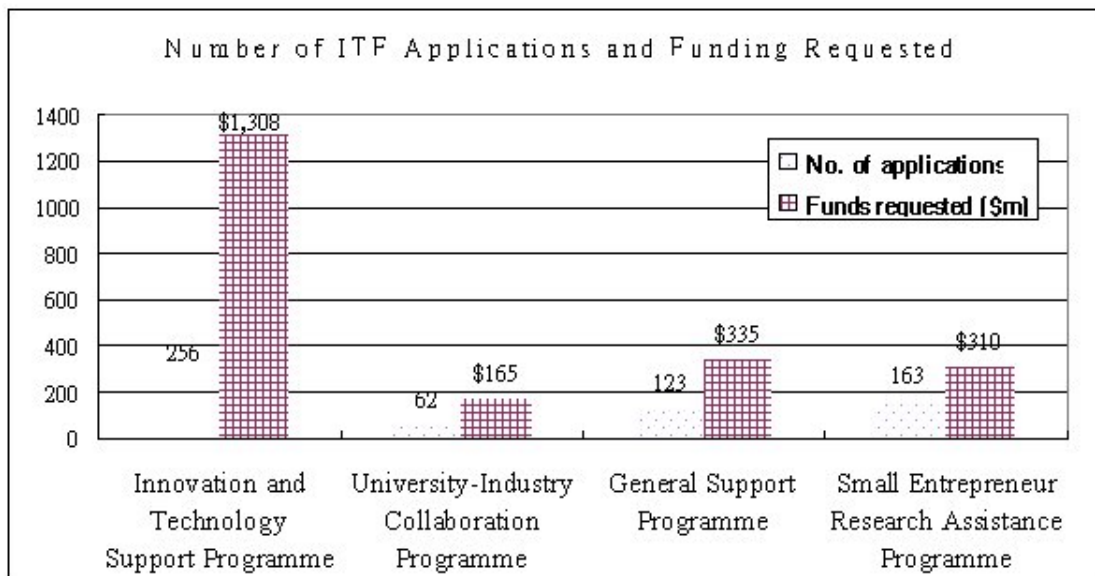
ITSP, applications are invited twice a year; and

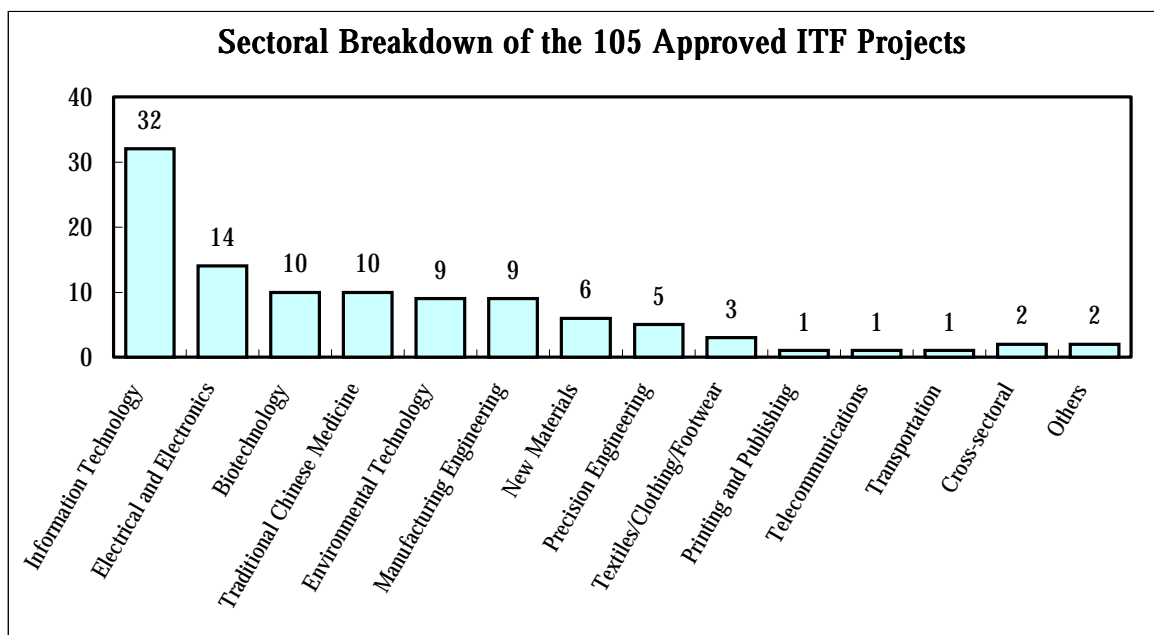
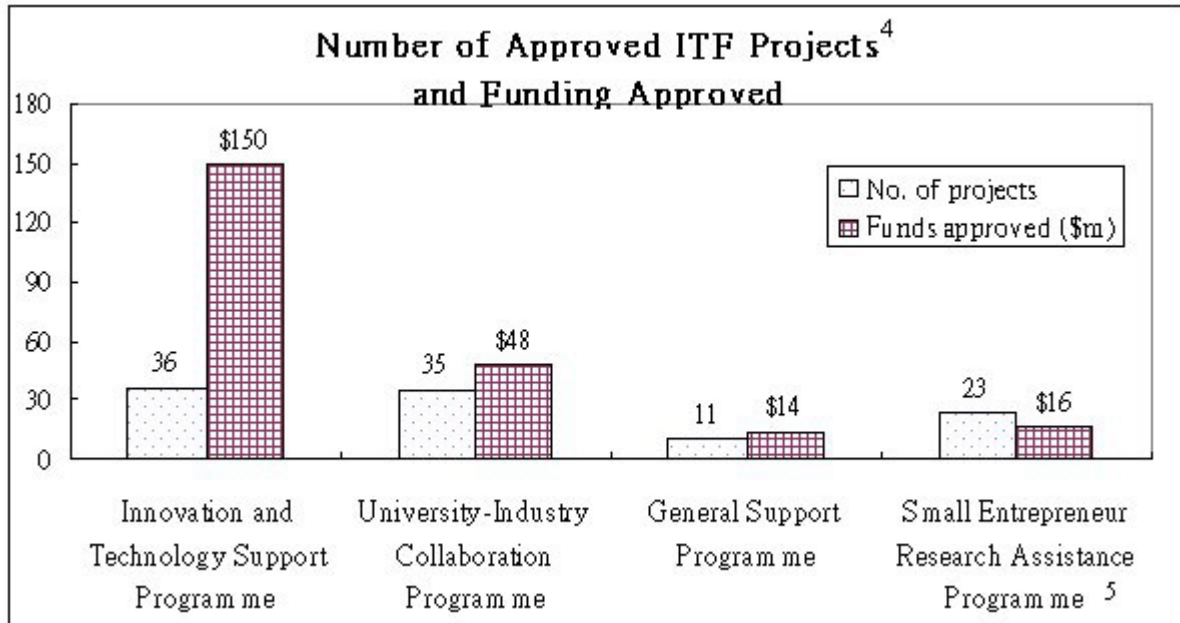
- (d) ***Small Entrepreneur Research Assistance Programme (SERAP)*** which provides financing for pre-venture capital stage of technology entrepreneurs for starting up, carrying out research and development, and conducting market validation. A grant of up to \$2 million will be provided by ITF on a dollar-for-dollar matching basis. The grant will only be recouped if the project is able to attract follow-on investment or generate revenue. Applications are considered at any time of the year.

**OVERVIEW**

4. We have received good response to the ITF. Since the Fund's establishment, the Innovation and Technology Commission (the Commission) has received a total of 604 applications in all the four categories totalling \$2.1 billion. Of these, 143 applications are still being processed. Of the remaining 461 applications, the Commission has approved 105 projects at \$228 million. The success rate is 23%.

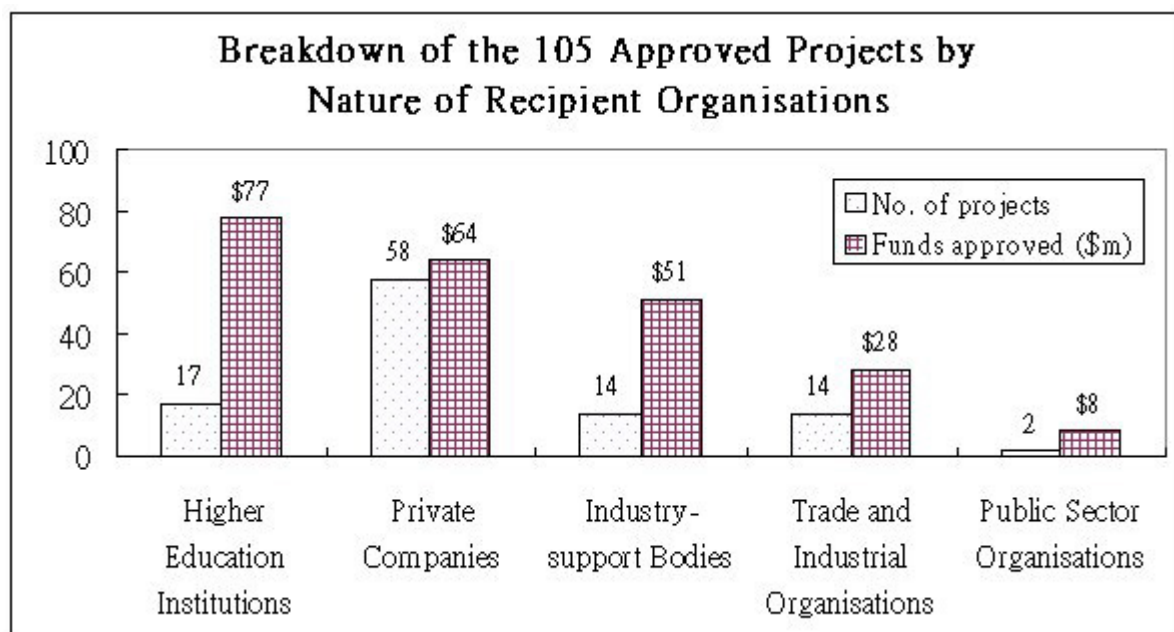
5. Details of the funding applications and approvals, broken down by programme categorization, sectors and nature of applicant organisations, are shown in the following charts. It can be seen that information technology, electronics and biotechnology are the three major sectors receiving ITF funding. Moreover, 34% and 28% respectively of the funding has been granted directly to higher education institutes and private companies as applicants.





4 Details on applications under consideration are as follows:  
ITSP: 69; GSP: 33; UICP: 19; SERAP: 22

5. The size of the approved funding refers mainly to Phase I commitments (\$400,000) at this early stage.



6. A detailed breakdown of the statistics in respect of individual categories is set out at Annex.

### **AREAS OF CONCERN**

7. There are a few areas of concern that have come to our attention. These are set out in the following paragraphs.

#### ***Quality of applications***

8. Our observation over the past few years is that the quality of ITF (and its predecessor, the Industrial Support Fund) applications in the two general categories, namely the ITSP and GSP, has been declining. This is reflected in the success rate which has dropped from 25% on average in the earlier applications to roughly 17% in the ITSP and the GSP categories this year. The major reasons seem to be that many local researchers are preoccupied with existing projects, that ideas appear to be drying up within the existing institutions in Hong Kong, and that overall there is a lack of focus for research programmes. To improve the situation, we will introduce an arrangement for the solicitation of projects.

9. At present we leave the initiatives for project proposals entirely to the applicants. The effect is that limited resources are spreading out too thin and that there is a lack of depth in the existing applied research programmes sponsored by the ITF. In the United States, for example, similar funding schemes such as those sponsored by the National Science Foundation, the National Institutes of Health and the Defence Advanced Research Projects Agency (DARPA) provide for the solicitation of mission-oriented project proposals.

10. In the coming round of invitation of applications commencing 10 November, we will start to solicit proposals in a limited way under the ITSP category.

The intention is to increase the proportion of solicitation in ITSP applications and to extend this arrangement in future to the GSP category as well. Such a more proactive approach with clearly set out project objectives will enable both competition and collaboration among the local research institutions. It will also enable proposal initiators to think and plan projects in a more focused manner. At any rate the solicitation arrangement will be the norm if the future Applied Science and Technology Research Institute (ASTRI) is to leverage through ITF allocations on the resources of our universities in meeting its research requirements.

### ***Capability of the Commission***

11. The Commission will need to be able to be more effective in assessing ITF applications. Apart from relying on the expertise of those members on existing vetting committees, the Commission is strengthening its technical capability through the recruitment of more technical experts. We already have had a Science Advisor on information technology and are looking for another on biotechnology. We have also been recruiting technologists for various fields, including information technology, biotechnology, materials science and other new technology areas. These experts will also enable the Commission to pursue the solicitation arrangement in consultation with industry and the universities.

### ***Commercialisation of ITF projects***

12. ITF projects, if they are successful, will lend themselves to commercialisation opportunities. In fact this is happening to some ITF projects. In principle, we welcome these opportunities as they are the most convincing proof that the technologies developed are useful and commercially viable. Commercialisation can be an obvious form of technology transfer and its prospect could transform the culture of our academic institutions into more entrepreneurial organisations. However, given that the projects concerned are publicly funded for a public mission, we will need to ensure that any commercialisation arrangement is publicly accountable. To this end, we are working on a set of clear guidelines to govern such activities to avoid any possible abuse.

### ***Development of evaluation criteria***

13. At present approved projects are subject to a stringent monitoring process with regard to the set milestones and deliverables. The satisfactory completion of a project is measured against these criteria. We are reviewing these arrangements and are also looking into the methodologies to adopt for post-completion evaluation of projects and the conduct of “impact studies” for selected projects.

***Financial accountability and discipline***

14. The ITF is the main source of funding for applied R&D and related activities in Hong Kong. The provisions of the ITF have been generous: the average size of the allocations in the ITSP category has been around \$4.2 million, compared with \$650,000 in the case of the Research Grants Council allocations. The integrity and accountability of our public institutions in the proper and responsible management of the ITF funding allocated to them need hardly any emphasis. They hold the key to the credibility of, and the public confidence in, the ITF's mission. We attach great importance to this aspect of public accountability.

15. ITF funds are allocated for a specific project. The management and application of such project-specific funding is subject to clear rules as set out in the relevant project agreement, conditions of funding, Guide to the ITF and other rules promulgated by the Innovation and Technology Commission from time to time. The main ones are that the funds should be deposited into a separate savings (interest bearing) account opened specifically for the project; that the interest accrued from this account would form part of the income of the project; that the use of this interest earning on the project concerned should be approved by this Commission; that in no circumstances the interest earning may be applied for other uses outside the approved scope and budget of the project concerned; and that upon completion of each project any residual funds in the project account should be returned to the Government.

16. Any case of non compliance is serious violation of the terms of ITF funding. This could undermine the public trust which has been placed on the organisations concerned. The Commission will tackle these cases rigorously when they have come to its attention. To this end the Commission has recently set up an inspection team to conduct field audits on ITF projects undertaken by recipient organisations. The Commission will initiate legal action for suitable remedies. Any record of mishandling of public funds or lack of discipline in financial management is a factor which the Commission takes into account in considering future ITF applications from the same organisation or the same project investigator(s).

**ADVICE SOUGHT**

17. Members are invited to note the content of this paper.

**ANALYSIS OF THE APPROVED/RECOMMENDED ITF APPLICATIONS  
BY PROGRAMME**

(a) Innovation and Technology Support Programme (ITSP)

Applications are invited twice a year. The first tranche of 189 applications were invited in November 1999 and 36 projects of them have been approved. Details are shown below. The sectoral breakdown of the approved applications is shown below.

The second tranche of applications were invited in May 2000 and we have received 67 proposals. The sectoral vetting committees have recommended 13 of them for funding support. The sectoral breakdown of these recommended applications is shown below.

(b) University-Industry Collaboration Programme (UICP)

This Programme is open for applications all year round. We have received a total of 63 applications and have approved 35 applications. The sectoral breakdown of the approved applications is shown below.

(c) General Support Programme (GSP)

Applications are invited twice a year. Under the first tranche of applications invited in November 1999, 11 projects have been approved. The sectoral breakdown of the approved applications is shown below.



Under the second tranche of applications invited in May 2000, 33 project proposals have been received and the vetting committee concerned has recommended 4 of them for funding support. The sectoral breakdown of the recommended projects is shown below.

(d) Small Entrepreneur Research Assistance Programme (SERAP)

The Programme is open for applications all year round. We have received a total of 163 applications and have approved 23 applications. The sectoral breakdown of the approved applications is shown below.