

For Information
On 18 December 2001

Legislative Council Panel on Commerce and Industry

Applied Science and Technology Research Institute

Purpose

This paper informs Members of the progress in the establishment of the Applied Science and Technology Research Institute (ASTRI).

Background

2. The establishment of ASTRI was one of the major recommendations of the former Chief Executive's Commission on Innovation and Technology chaired by Professor Tien Chang-lin. In November 1999, the Trade and Industry Panel of the Legislative Council was informed of the planning details for ASTRI, as contained in the Report of the Task Force on ASTRI¹.

3. ASTRI has the following mission:
- to perform relevant and high quality research and development (R&D) for transfer to industry;
 - to enhance Hong Kong's technological human resources development;
 - to be a focal point for attracting outside R&D personnel to work in Hong Kong;
 - to act as a spawning ground for technology entrepreneurs;
 - to promote greater application of technology in industry; and
 - to provide a focal point for industry-university collaboration.

¹ LC Paper No. CB(1)207/99-00(03) – Report of the Task Force on the Applied Science and Technology Research Institute

Progress

4. Major progress, which has been made since the last submission to the Trade and Industry Panel in 1999, includes:

- the setting up of a limited company entitled the “Hong Kong Applied Science and Technology Research Institute Company Limited” (ASTRI) in January 2000 to take forward the project;
- the appointment of a 17-member Board of Directors, comprising industrialists, academics and representatives from the Government, in April 2000 to build up the institutional capability of ASTRI;
- the appointment of the Chief Executive Officer of ASTRI in April 2001 to lead the development of ASTRI’s R&D programme and operating strategy;
- the formulation of ASTRI’s R&D programme which initially focuses on selected technology areas such as optical, wireless, Internet contents and applications, and semiconductor design;
- the recruitment so far of about 30 core research and administrative staff working at ASTRI. ASTRI is continuing with its efforts to build up its human resources and research capabilities to support its R&D programme;
- the commencement of operation in leased premises in September 2001 pending the construction of its permanent building located at the Hong Kong Science Park;
- the establishment of a close working relationship with the universities to forge collaborations with industry to keep itself abreast of the market needs and explore collaboration opportunities;
- the earmarking, for budgetary planning purposes, of an annual subvention of up to some \$90 million when ASTRI operates in leased premises and \$240 million when it operates in its permanent building at the Hong Kong Science Park, tentatively in 2005. The exact annual allocation is determined by the annual estimates of income and expenditure proposed by ASTRI as accepted by the Government and approved by the Legislative Council through the Budget process; and

- the earmarking, for project funding purposes, of about 60% of the Innovation and Technology Fund (ITF) (i.e. about HK\$3 billion) for ASTRI's R&D programme.

Strategy

5. To enable Hong Kong to develop into a knowledge-based economy to enhance our economic competitiveness, we need to expand our technology industrial base by upgrading the technological level of our industry and creating new technology-based industries. ASTRI will play a key role in this development :

- ASTRI will carry out R&D for transfer to industry for commercialisation through licensing arrangements. It will license the technologies to industry to upgrade their technological level and add value to their products and services; and
- ASTRI will also promote spin-offs of its R&D projects as possible joint ventures with industry or start-up companies. ASTRI will license the intellectual properties of the successful R&D projects to joint ventures or start-up companies and encourage its employees to join them so that their knowledge and experience will also be transferred along. This strategy will not only accelerate the creation of new industries but also ensure that the research results will be deployed to the commercial sector in a timely and competitive manner.

6. As the current demand for contract research is not high and ASTRI is in the process of building up its R&D capabilities, and given that the Hong Kong Productivity Council and the universities are supporting contract research for industry, ASTRI will not perform contract research for industry initially. It will review the need to perform contract research at a later stage, having regard to the development of the local technological landscape.

ASTRI's R&D Programme

7. In working out the R&D programme, ASTRI's basic considerations are that the programme must be market-driven, relevant to the economic development of Hong Kong and focused in order to make an impact. Individual projects are being formulated. In addition to longer term projects, ASTRI will also undertake shorter term projects in order to secure quick results necessary for

inspiring and sustaining public confidence in the new set-up of ASTRI. To optimise resources and before its research facilities are set up, ASTRI will leverage on the capabilities of the local universities in performing its research projects.

Funding and Financial Control Mechanism

8. ASTRI is a subvented organisation. It is provided with an annual recurrent subvention, in the form of an annual block grant, to meet its day-to-day operating expenses. To ensure that the public funds are used properly by ASTRI for the fulfilment of its public mission, ASTRI will enter into Memoranda of Administrative Arrangements (MAAs) on respectively the administration of the subvention and the management of the ITF funding allocated to it with the Government. The MAAs provide the framework for the relationship between the Government and ASTRI on the administration of the funds and set out the responsibilities of each party. In essence, ASTRI will need to observe the general rules on the use of the subvention that are normally applied to other subvented bodies. Likewise, ASTRI will need to observe the general rules on the use of the ITF funding that are applied to other ITF recipient organisations. Important checks and balances will be incorporated into the MAAs to ensure transparency and public accountability of ASTRI on the use of the funds.

Monitoring of ASTRI's Performance

9. We recognise that ASTRI's research activities will be of major public interest and the basis of any decisions for such activities must be publicly defensible and transparent as far as possible. ASTRI is therefore required to put in place acceptable formal mechanisms to set out clearly its decision-making process from the formulation to approval of the research projects, monitor the progress of the projects and address the potential problem of conflict of interests. ASTRI's Board of Directors determines the goals and directions of ASTRI and gives advice to the ASTRI management.

10. Separately, ASTRI's operation is monitored by the Government through its representatives on ASTRI's Board of Directors. Currently, the Secretary for Commerce and Industry, the Secretary for the Treasury and the Commissioner for Innovation and Technology are the Official Directors of ASTRI. Furthermore, ASTRI is also subject to examination by the Director of Audit of its accounts and the economy and efficiency with which ASTRI has expended its resources in performing its functions and exercising its powers.

Evaluation of ASTRI's Performance

11. Given ASTRI's public mission, the performance of ASTRI should not be narrowly assessed only by the financial return on the public funds devoted to it but should also be assessed by the long term social and economic benefits brought by ASTRI's endeavours. Hence, ASTRI's performance may be evaluated in due course by yardsticks including the number of technology transfer activities, joint ventures or start-ups created, number of jobs created and income and equity holding from the licensing of the intellectual properties.

Advice Sought

12. Members are invited to note this paper.