



Innovation and Technology

Promotion of Innovation and Technology: Innovation and technology add value to products and services, and enhance competitiveness of our industries. The Innovation and Technology Commission (ITC) was set up on July 1, 2000 with the mission to spearhead Hong Kong's drive to become a world-class, knowledge-based economy. To achieve this mission, the ITC supports applied research and development (R&D) and technology transfer and application; fosters an innovation and technology culture in the community; promotes technological entrepreneurship; provides technological infrastructure; facilitates the development of human capital to support innovation and technology; and promotes internationally accepted standards and conformity assessment services.

The ITC also works closely with other government departments, the industrial and business sectors, tertiary institutions and industrial support organisations to promote applied R&D in different technology areas, as well as the upgrading of foundation industries.

Following a comprehensive review and a public consultation exercise in 2004, the Government decided to adopt a new strategic framework for innovation and technology development which emphasizes focus, market relevance, industry participation, leverage on the Mainland, and better coordination among different elements of the innovation and technology programme. Under the new strategy, the Government plans to set up five R&D centres to conduct industry-oriented R&D in selected technology areas and promote technology transfer to the relevant industries, thereby helping technology upgrading and enhancing the competitiveness of the industry in the Greater PRD region. The five R&D centres will focus on the following areas: automotive parts and accessory systems; information and communications technologies; logistics and supply chain management enabling technologies; nanotechnology and advanced materials; and textile and clothing. The R&D centres are expected to commence operation between end 2005 and early 2006.

Steering Committee on Innovation and Technology: In January 2004, the Government established the Steering Committee on Innovation and Technology to coordinate the formulation and implementation of innovation and technology policy and ensure greater synergy among different elements of the innovation and technology programme. The Steering Committee is chaired by the Secretary for Commerce, Industry and Technology with members from relevant Government bureaux, academia, industry, and innovation and technology organisations.

Steering Group on the Promotion of Innovation and Design: In November 2002, the Government formed the Steering Group on the Promotion of Innovation and Design in examining policy issues and coordinating the various elements of the Government's programme and resources

to spearhead the promotion of innovation and design in industry. The Steering Group is chaired by the Secretary for Commerce, Industry and Technology with members from relevant Government bureaux, academia, industry and design professionals.

Funding Schemes: The ITC manages the following funding schemes to assist Hong Kong companies to develop innovative ideas and technology businesses.

The Innovation and Technology Fund (ITF): The fund was set up in November 1999 with an initial injection of \$5 billion. It aims to support projects that contribute to innovation and technology upgrading in industry, as well as those essential to the upgrading and development of industry. There are four programmes under the ITF to cater for different needs: Innovation and Technology Support Programme; University-Industry Collaboration Programme; General Support Programme; and Small Entrepreneur Research Assistance Programme. As at the end of June 2005, a total of 2 315 applications have been received requesting \$13.5 billion funding. Among them, 724 (\$1.9 billion) have been approved. Most of the funded projects were related to information technology (33%); electrical and electronics (23%); and manufacturing technology (15%).

The Applied Research Fund (ARF): This is a government-owned venture capital fund to support local technology ventures with commercial potential. The ARF has a capital of \$750 million. It is administered by the Applied Research Council (ARC), a private company wholly owned by the Government. The ARC has appointed private sector venture capital firms to manage the investment of funds from the ARF. The fund managers assess the technical and commercial viability of proposed technology ventures; determine the terms of the fund's investment in a company; and provide management and business advice to the investee companies. As at the end of June 2005, ARF has made 25 investments with funding of \$410 million since the engagement of the fund managers.

After a recent review, it has been concluded that the original objective of the ARF, i.e., to foster the development of technology-based ventures and R&D projects with commercial potential, could be better spearheaded under the new strategic framework for innovation and technology development, and there was little case to continue making new investments under the ARF model in parallel. The ARC has accordingly ceased making new investments since March 2005, but will continue to oversee existing investments and their exit.

The DesignSmart Initiative: The \$250 million "DesignSmart Initiative", launched in June 2004, aims to strengthen Government support for design and innovation, and to promote wider use of design and innovation in industries to help them move up the value chain. It

comprises two main elements, namely, financing a design support programme and setting up the InnoCentre as a one-stop shop for a design cluster. The design support programme is to finance projects in four categories: design research; design/business collaboration; design professional continuing education; and promoting and honouring design excellence. The InnoCentre aims at creating and sustaining a cluster of high value-added design activities among design professionals, interns and companies, where creative ideas with functionality will be stimulated, nurtured, researched, promoted, commercialised and branded.

Technological Infrastructure: The ITC helps develop world-class support infrastructure to facilitate technological upgrading and development of the industry.

The Hong Kong Science and Technology Parks Corporation (HKSTPC) was established in May 2001 to offer one-stop infrastructural support services to technology-based companies and activities. It is a statutory body formed by merging the former Hong Kong Industrial Estates Corporation, the Hong Kong Industrial Technology Centre Corporation and the Provisional Hong Kong Science Park Company Ltd. It offers a comprehensive range of services to cater for the needs of industry at various stages, ranging from nurturing technology start-ups through an incubation programme, providing premises and services in the Science Park for applied R&D activities, to providing land and premises in the industrial estates for production.

The 22-hectare **Hong Kong Science Park** located in Pak Shek Kok is an important part of our infrastructure in support of the Government's mission to turn Hong Kong into a regional hub for innovation and technology. It provides a conducive environment to nurture world-class clusters, through making available suitable land or buildings for lease to technology-based enterprises to carry out R&D work. Its target sectors are electronics; information technology and telecommunications; biotechnology; and precision engineering. The Park is being developed in three phases. Phase One was officially opened in June 2002. Construction of Phase Two is underway, aimed for completion in 2007.

The HKSTPC operates three **industrial estates** and provides developed land therein at cost to both manufacturing and services companies with new or improved technology and processes which can broaden Hong Kong's industrial base and upgrade its technology levels. The existing industrial estates, located at Tai Po, Yuen Long and Tseung Kwan O, provide 217 hectares of land in total.

The HKSTPC also nurtures technology-based start-up companies through its **incubation programme** which provides low-cost accommodation as well as management, marketing, financial and technical assistance in the critical initial three years of these start-up companies. To strengthen support for technology start-ups, the HKSTPC has strengthened the incubation programme in September 2001 and April 2002, to offer more attractive rental, streamlined admission procedures and comprehensive services, and assist incubatees in the commercialisation of their technology into products and services through greater collaboration between universities and industry.

The Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI) was set up in January 2000. ASTRI performs relevant and high quality R&D for transfer to industry for commercialisation with a view to elevating the technology level of our industry and stimulating the growth of technology-based industry in Hong Kong. ASTRI's research foci are material and packaging technologies; communications technologies; enterprise and consumer electronics; and integrated circuit design.

The Hong Kong Jockey Club Institute of Chinese Medicine Limited (HKJICIM) was established as a subsidiary of ASTRI in May 2001. Its mission is to promote and support the modernisation and further development of Chinese medicine in Hong Kong through co-ordination of related activities and strategic support for scientific and evidence-based development programmes. HKJICIM's research and development priorities include enhancing the quality assurance and quality control of Chinese medicine; ageing-related endocrinology; and neuroscience.

The Hong Kong Productivity Council (HKPC) promotes productivity excellence through the provision of integrated support across the value chain of Hong Kong firms, in order to achieve a more effective utilisation of resources, to enhance the value-added content of products and services, and to increase international competitiveness. Its principal sectoral focus is on manufacturing, particularly in Hong Kong's foundation industries, and related service activities. Its main geographical focus is Hong Kong and the Pearl River Delta. Anchored on its core competence of manufacturing technologies, management systems, information technologies and environmental technologies, HKPC's productivity enhancement support to industries is provided according to three strategies: technology and process upgrading; new manufacturing opportunities arising from the Mainland and Hong Kong Closer Economic Partnership Arrangement and innovative industries; and regionalisation and globalisation facilitation to improve the cost-effectiveness of manufacturing activities.

The Hong Kong Design Centre (HKDC) was set up in 2002 by four leading design professional bodies in Hong Kong with Government support and a donation from the Hong Kong Jockey Club Charities Trust, with a view to promoting the design industry and its competitiveness in the region as a service industry. It is a multi-disciplinary design centre which aims to promote design as a value-added activity; raise design standards and foster design-related education; and raise the profile of Hong Kong as an innovative and creative hub. It also plays an important and active role in the development of the InnoCentre.

Human Capital: Provision of suitable human resources is essential to the promotion of innovation and technology in Hong Kong. Towards this end, the ITC assists in the implementation of the New Technology Training Scheme, which provides financial assistance to companies that wish to have their staff trained in a new technology that would be useful to their business either locally or overseas.

Standards and Conformity Assessment: The Hong Kong Accreditation Service (HKAS) of ITC provides a wide range of accreditation services through three accreditation schemes, namely, the Hong Kong Laboratory Accreditation Scheme (HOKLAS); the Hong Kong Certification Body Accreditation Scheme (HKCAS); and the Hong Kong Inspection Body Accreditation Scheme (HKIAS). Accredited laboratories, certification bodies and inspection bodies need to undergo rigorous on-site assessments before they are recognised to be competent in performing the conformity assessment activities listed in their respective scopes of accreditation. To facilitate the public and other parties in identifying and selecting competent organisations for performing specified conformity assessment activities, HKAS publishes a directory of accredited organisations on its website www.itc.gov.hk/hkas. As at the end of June 2005, 122 laboratories, 9 certification bodies and 8 inspection bodies were holding valid HKAS accreditation for various activities. To improve the acceptance of results issued by HKAS accredited organisations in other economies and thus facilitate cross-border trade, HKAS has concluded bilateral recognition arrangements with individual accreditation

bodies and multilateral recognition arrangements through international and regional organisations of accreditation bodies. Through such arrangements, 58 accreditation bodies in 41 economies, including all major trading partners of Hong Kong, accept and recommend others to accept reports and certificates of conformity assessment results issued by HKAS-accredited organisations.

ITC's **Product Standards Information Bureau (PSIB)** promotes awareness of standards requirements of Hong Kong's major markets, in order to facilitate manufacturers and exporters in understanding and complying with these requirements. In addition to operating

a library of 120 000 product standards, the PSIB also offers technical enquiry and sales services for product standards.

The Standards and Calibration Laboratory (SCL) of the ITC is the custodian of Hong Kong's physical measurement standards and is the authoritative point of reference on measurement matters. The laboratory also provides calibration services in various measurement areas, traceable to the International System of Units. SCL is a signatory to the Global Mutual Recognition Arrangement for National Measurement Institutes operated by the International Bureau of Weights and Measures.