

# Innovation and technology in hong kong

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The TIC supports mainly 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 TIC also works closely with other government departments, the industrial and business sectors, tertiary institutions and industrial support organizations 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, the TIC set up five R&D centers In 2006 to drive and co-ordinate applied R&D In five focus areas, namely automotive parts and accessory systems; information and communications technologies; logistics and supply chain management enabling technologies; nanotechnology and advanced materials; and textiles and clothing.

Since their establishment, the Centers have been working closely with the industries in conducting industriousness R&D and promoting commercialism's of the R results, thereby helping technology upgrading and enhancing the competitiveness of the industry in the Greater PR region. As at the end of February 2013, 527 projects from the R Centers were approved at a total reject cost of \$3 billion.

Steering Committee on Innovation and Technology: In January 2004, the Government established the Steering Committee on Innovation and Technology to co-ordinate the formulation and Implementation of Innovation

and technology policy and ensure greater synergy among different elements of the innovation and technology programmer. The Steering Committee is chaired by the Financial Secretary with members from relevant Government bureau, academia, industry, and innovation and technology organizations.

**Funding Schemes:** The TIC manages the following funding schemes to encourage Hong Kong companies to evolve innovative ideas and technology businesses. The Innovation and Technology Fund (TIFT): The Government set up the TIFT in 1999 with an injection of \$5 billion. It aims to support projects that contribute to innovation and technology upgrading in industry. There are four programmer under the TIFT to cater for different needs: Innovation and Technology Support Programmer; University-Industry Collaboration Programmer; General Support Programmer; and Small Entrepreneur Research Assistance Programmer.

As at the end of February 2013, 3 215 projects with a total TIFT funding of \$7. 3 billion were approved. Most of the funded projects were related to information technology (19 per cent); electrical and electronics (1 7 per cent); and Development Cash Rebate Scheme: In April 2010, the Government introduced the R Cash Rebate Scheme to reinforce the research culture among enterprises and encourage them to establish stronger partnerships with local research institutions. Under the Scheme, we will provide a cash rebate on the applied R investments by enterprises.

The Scheme covers projects funded by TIFT and applied R projects conducted by enterprises in partnership with local designated research institutions. Since February 2012, the level of cash rebate has been

increased from 10 per cent to 30 per cent. As at end of March 2013, 577 applications with a total cash rebate of \$41.4 million were approved.

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

The Hong Kong Science and Technology Parks Corporation (HECTIC) was established in May 2001 to offer one-stop infrastructural support services to technology-based companies and activities. It offers a comprehensive range of services to cater for the needs of industry at various stages, ranging from supporting technology start-ups through an incubation programme, providing premises and services in the Science Park for applied R activities, to providing land and premises in the industrial estates for production.

The 22-hectare Hong Kong Science Park located in Pak Shek Koo 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 buildings for lease to technology-based enterprises to carry out R&D work. Its target sectors are electronics; information technology and telecommunications; biotechnology; precision engineering; and green technology (including renewable energy and environmental technology).

The Park is being developed in three phases. Phase 1 was officially opened in June 2002. Phase 2 was completed in stages from 2007 to 2011.

Development of Phase 3 is underway, construction has commenced in 2011

and the first batch of buildings will be ready in 2014 while the whole phase will be completed in 2016. The Science Park provides state-of-the-art laboratories and shared facilities which help reduce the capital investment of R&D companies in product design and development, and enable rapid entry of new products onto the market at lower cost.

The facilities include the Integrated Circuit (C) Design and Intellectual Property Servicing Centre, Reliability Laboratory and ICC Failure Analysis Laboratory, Probe and Test Development Centre, Material Analysis Laboratory, Wireless Communications Test Laboratory, Solid State Lighting Test Laboratory, Biotechnology Support Centre and Solar Energy Technology Support Centre. The HECTIC operates three industrial estates and provides land therein at land development 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 ATA Pop, Yen Long and Tsetse Swan O, provide 217 hectares of land in total. The Corporation will take into account the latest industry needs and market situation to implement appropriate measures to revitalize the industrial estates to bring the greatest expanding the Yen Long Industrial Estate. The HECTIC 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 years of these start-up companies.

Each incubate has access to a financial aid package of value up to \$860, 000 during the incubation period. The HECTIC also provides small and mid-sized

technology companies; technology-related service providers; financial and legal service providers; and regional headquarters and regional offices with office premises and support services. The Hong Kong Applied Science and Technology Research Institute Company Limited (ASTIR) was set up in January 2000.

It performs high quality R for transfer to industry for commercialism's with a view to elevating the technology level of our industry and stimulating the growth of technology-based industry in Hong Kong. The ASTIR houses the R&D Centre for Information and Communications Technologies which focuses on five technology areas: communications technologies, enterprise and consumer electronics, integrated circuit design, material and packaging technologies and bio-medical electronics.

Through its participation in the expanded Internship Programmer under the TIFT, ASTIR helps enhance local high-technology human resources development by hosting fellows newly graduated from local universities to take part in its R&D projects. The Hong Kong Productivity Council (HACK) promotes productivity excellence of Hong Kong industry through the provision of integrated support across the value chain, from achieving more effective utilization of resources, enhancing the value-added content of products and services, to enhancing the industry's international competitiveness.

Its principal sector focus is on manufacturing, particularly on Hong Gong's foundation industries, and related service activities, while the main geographical focus is Hong Kong and the Pearl River Delta Region. Anchored

to its core competence in manufacturing technology, information technology, environmental technology, and management systems, HACK has been helping Hong Kong industry in technology and process upgrading; and helping innovative industries to move up the value ladder and tap new business opportunities. Human Capital: Provision of suitable human resources is essential to the promotion of innovation and technology in Hong Kong.

Towards this end, the TIC introduced an Internship Programmer to attract promising science and engineering graduates to take part in TIFT-funded R&D projects with an aim to stimulate their interest in a future career in industrial and commercial R&D. As at the end of February 2013, a total of 161 interns positions were approved. Science and technology co-operation with the Mainland: The Government strives to strengthen cooperation between Mainland and Hong Kong in innovation and technology. Through combining Mainland's rich human resources and research strengths with Hong Songs capability and experience in applied research and commercialism's, the competitiveness of the industries in both places can be enhanced. The State Ministry of Science and Technology and the Government of the Hong Kong Special Administrative Region have Jointly established the " Mainland and Hong Kong Science exchange programmer between the Mainland and Hong Kong in 2004. Gudgeon and Hong Kong have launched the " Gudgeon/Hong Kong Technology Cooperation Funding Scheme" since 2004 to encourage collaboration between research institutions and industries of the two places.

So far, the governments have jointly funded over 40 research projects under the scheme with a total funding of about \$250 million. Sheehan and Hong Kong signed a cooperation agreement in 2007 to establish "Sheehan/Hong Kong Innovation Circle". The two sides have agreed to strengthen exchange and sharing of talents and resources, and encourage closer co-operation between the research institutions of both places. Involving government departments, universities, research institutions and nongovernmental institutions of both places, the "3-Year Action Plan", which comprises 24 co-operation projects, has been completed.

Four Hong Kong universities have established their Industry, Academic and Research (AR) Bases in High-Tech Zone, Nashua District, Sheehan to carry out 'AR collaboration work between Sheehan and Hong Kong, including developing applied research and nurturing industrial projects. Fostering an Innovation and Technology Culture: The TIC organizes an annual Notched Month which comprises exhibitions, seminars, guided tours, Notched workshops, talks, technology competitions, and industry conference and seminars to arouse the interest of the general public in innovation and technology.