

Promotion of Innovation and Technology: Innovation and technology are drivers for economic growth and the key to enhance competitiveness of our industries. In November 2015, the Innovation and Technology Bureau was established with the responsibility of formulating holistic innovation and technology policies, thereby fostering the development of innovation and technology and related industries in Hong Kong. The Innovation and Technology Commission (ITC) under the bureau implements the related policies and measures. The goal is to create a vibrant ecosystem with excellent software and hardware support for the key players to collaborate on research, development and innovation activities. The approach in promoting innovation and technology development is underpinned by five core strategies: providing world-class technology infrastructure for enterprises, research institutions and universities; offering financial support to stakeholders in the industry, academia and research sector to develop and commercialise their R&D results; nurturing talent; strengthening science and technology collaboration with the Mainland and other economies, and fostering a vibrant culture of innovation.

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.

In 2006, the ITC set up five R&D centres 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 Centres have been working closely with the industries in conducting industry-oriented R&D and promoting commercialisation of the R&D results, thereby helping technology upgrading and enhancing the competitiveness of the industry in the Greater PRD region. As at the end of March 2016, 907 projects from the R&D Centres were approved at a total project cost of \$4.8 billion.

Advisory Committee on Innovation and Technology: In April 2015, the Government established the Advisory Committee on Innovation and Technology to tender advice on the development of innovation and technology. The Advisory Committee is chaired by the Secretary for Innovation and Technology.

Funding Schemes: The ITC administers the Innovation and Technology Fund (ITF) to encourage the development of innovative ideas and technology businesses.

The Government set up the ITF in 1999 with an injection of \$5 billion. It aims to support projects that contribute to innovation and technology upgrading in industry. In February 2015, the Government injected another \$5 billion into the ITF. 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 Enterprise Support Scheme (which was launched in late April 2015 to replace the Small Entrepreneur Research Assistance Programme). As at the end of March 2016, 5 088 projects with a total ITF funding of \$11 billion were approved, of which 2 103 are R&D projects. Most of the funded R&D projects were related to information technology (27 per cent); electrical and electronics (21 per cent); manufacturing technology (18 per cent); and biotechnology (10 per cent).

In April 2016, the R&D Cash Rebate Scheme was subsumed under the ITF. Introduced by the Government in April 2010, the Scheme aims to reinforce the research culture among enterprises and encourage them to establish stronger partnerships with local research institutions through providing cash rebate on applied R&D investments by enterprises. The Scheme covers projects funded by the ITF and applied R&D projects conducted by enterprises in partnership with local designated research institutions. The level of cash rebate has been increased from 10 per cent in 2010 to 30 per cent in February 2012, and further increased to 40 per cent in February 2016. As at end of March 2016, 1 303 applications with a total cash rebate of \$170 million were approved.

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 provide 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 incubation programmes, 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 buildings for lease to

technology-based enterprises to carry out R&D work. Its target sectors are biomedical technology, electronics, green technology, information and communications technology, and material and precision engineering. 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 progressing on schedule. Its first three buildings were completed in March 2014 and officially opened in September 2014, while the remaining two buildings will be completed in 2016. In order to cope with the development trend and ensure continuing development of the Park, the HKSTPC plans to develop two building blocks as Stage 1 of the Science Park Expansion Programme in the next few years.

The Science Park provides state-of-the-art laboratories and shared facilities which help reduce the capital investment of technology companies in product design and development, and enable rapid entry of new products into the market at lower cost. They include the Integrated Circuits Design Centre, Intellectual Property Servicing Centre, Probe and Test Development Centre, Wireless Communications Test Laboratory, and Biomedical Technology Support Centre.

The HKSTPC manages three **industrial estates (IE)**, located at Tai Po, Yuen Long and Tseung Kwan O, provide 217 hectares of land in total. The Government and the HKSTPC have revised the IE policy to accommodate innovation and technology industries. In future, HKSTPC would mainly build and manage specialised multi-storey industrial buildings for rental to multiple innovation and technology industrial partners. The HKSTPC plans to develop two pilot projects on the vacant sites in the Tseung Kwan O IE in the next few years.

The HKSTPC nurtures technology-based start-ups through its incubation programmes which provide subsidised office space and facilities, management, marketing, and technical assistance, as well as financial aid package in the critical initial years of these start-ups. The HKSTPC also provides small and medium-sized technology companies, technology-related service providers, financial and legal service providers, and regional headquarters and regional offices with office space and support services.

The Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI) was set up in January 2000. It performs 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. The ASTRI is designated as the R&D Centre for Information and Communications Technologies which focuses on seven technology areas: communications technologies, electronics components, IC design (Analog), IC design (Digital), opto-electronics, security and data sciences, and software and systems.

Through its participation in the expanded Internship Programme under the ITF, ASTRI 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 (HKPC) provides integrated support services to help Hong Kong's industrial and

commercial enterprises achieve more effective use of resources and increase the value added content of products and services, thereby enhancing productivity and competitiveness. Anchored on its core competence in manufacturing technologies, information technologies, environmental technologies, and management systems, HKPC has been helping Hong Kong's industrial and commercial enterprises in technology and process upgrading, and helping innovative industries 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 ITF introduced an Internship Programme to attract promising science and engineering graduates to take part in ITF-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 March 2016, a total of 2 132 interns positions were approved.

Science and technology co-operation with the Mainland:

The Government strives to strengthen co-operation between Mainland and Hong Kong in innovation and technology. Through combining Mainland's rich human resources and research strengths with Hong Kong's capability and experience in applied research and commercialisation, the competitiveness of the industries in both places can be enhanced. There are 16 Partner State Key Laboratories in Hong Kong and six Hong Kong Branches of Chinese National Engineering Research Centres.

The State Ministry of Science and Technology and the Government of the Hong Kong Special Administrative Region (SAR Government) have jointly established the Mainland/Hong Kong Science and Technology Co-operation Committee to formulate technology collaboration and exchange programmes between the Mainland and Hong Kong in 2004.

Guangdong and Hong Kong have launched the "Guangdong-Hong Kong Technology Cooperation Funding Scheme" (TCFS) since 2004 to encourage collaboration between research institutions and industries of the two places. As at end-March 2016, the ITF has funded 238 TCFS projects at the total amount of about \$822 million, of which 79 projects were jointly funded by Guangdong/Shenzhen authorities and the SAR Government, with about \$193 million from the ITF funding.

Shenzhen and Hong Kong signed a co-operation agreement in 2007 to establish "Shenzhen/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. City University of Hong Kong, The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology and The Chinese University of Hong Kong have established Industry, Academic and Research Bases in High-Tech Zone, Nanshan District, Shenzhen, whereas The University of Hong Kong and Hong Kong Baptist University have established research centres in the same area.

Fostering an Innovation and Technology Culture: The ITC organises an annual InnoTech Month which comprises InnoCarnival, roadshows, exhibitions, seminars, guided tours, workshops, talks, technology competitions, industry conference and seminars to arouse the interest of the general public in innovation and technology. ITC also supports innovation and technology related competitions such as the

Hong Kong Student Science Project Competition and Joint School Science Exhibition. The Innovation and Technology Scholarship Award Scheme provides recognition to outstanding science undergraduates in local universities and encourages them to pursue innovation and technology as a career.