創新科技署
Innovation and Technology Commission
香港特別行政區政府
The Government of the Hong Kong Special Administrative Region

Our Ref: ITC CR/F/820/8/7/8
Our Tel: 2810 2750

2 May 2012

Ms YUE Tin-po
Clerk to Panel on Commerce and Industry
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central
Hong Kong

Dear Ms Yue,

At the Panel meeting on 17 April 2012, a Member asked about statistics on Research and Development (R&D) in Hong Kong (especially Gross Expenditure on R&D) as well as policy/strategy in promoting innovation and technology in Hong Kong.

2. I attach the following -

(a) Annex 1 - a note on "Key Statistics on R&D in Hong Kong"; and

(b) Annex 2 - a note on "Policy and Strategy in Promotion of Innovation and Technology in Hong Kong".

In this regard, we will be submitting a more detailed paper to the Panel for consideration as its meeting on 15 May 2012.

3. We have also included the information in the paper to be submitted to the Finance Committee on 11 May 2012 as fit.

Yours sincerely,

(Davey Chung)
for Commissioner for Innovation and Technology

21/F., West Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong 香港添馬添美道二號政府總部西翼二十一樓
Facsimile 傳真： 2730 4633

Annex 1

Key Statistics on Research and Development (R&D) in Hong Kong

The gross expenditure on research and development (GERD) for 2010 stood at $13.3 billion, 4% higher than 2009. However, when expressed as a ratio to GDP, the GERD in 2010 stood at 0.76%, slightly lower than that of 0.79% in 2009. Please see table below -

Table 1. R&D Expenditure in Hong Kong, 2007 to 2010

	2007	2008	2009	2010
Expenditure on R&D (HK$ million)				
[a] Total gross domestic expenditure on R&D* =[b]+[c]	**12,407**	**12,293**	**12,833**	**13,313**
	(+4%)	**(-1%)**	**(+4%)**	**(+4%)**
	<0.77%>	**<0.73%>**	**<0.79%>**	**<0.76%>**
[b] *Business sector in-house R&D*	6,055	5,265	5,474	5,767
	(-4%)	(-13%)	(+4%)	(+5%)
	<0.37%>	<0.31%>	<0.34%>	<0.33%>
[c] *Public sector R&D*	6,352	7,028	7,359	7,545
	(+12%)	(+11%)	(+5%)	(+3%)
	<0.39%>	<0.42%>	<0.45%>	<0.43%>

Notes:
* *Gross domestic expenditure on R&D refers to expenditure on in-house R&D performed by undertakings (in the business, higher education and government sectors) in Hong Kong.*
( ) *Figures in brackets refer to % change over the preceding year.*
< > *Figures in brackets refer to % share of GDP.*

Source: Hong Kong Innovation Activities Statistics 2010, Census and Statistics Department.

2. However, the 4% increase in GERD is dwarfed by the strong growth of GDP (7%) which was fuelled by other economic sectors such as tourism (47%), financial services (11%), trading and logistics (16%) during the same period.

3. We recognise that our GERD as a ratio to GDP remains low by international standard. This is mainly due to the lack of defence and manufacturing industries — Hong Kong is a service-driven economy, the service sector contributed to 93% of GDP while the manufacturing sector only stood at about 2% in 2010. Please see tables below -

Table 2. Defence Budget R&D as a Percentage of Total Government Budget Appropriations or Outlays for R&D (GBAORD), 2010

	Defence Budget R&D as a % of Total GBAORD	GERD as % of GDP
Hong Kong [a]	0	0.76
Israel	---	4.40 [b]
Japan	4.8 [b]	3.57 [c]
Korea	15.8 [b]	3.74 [b]
Taiwan	6.8 [b]	2.90 [d]
USA	57.3 [b]	2.88 [e #]

Note:
 # Figures in 2009.

Sources:
a. Census and Statistics Department (C&SD), HKSARG;
b. OECD Main Science and Technology Indicators
c. Statistics Bureau, Japan
d. National Science Council, Taiwan; and
e. National Science Foundation, USA.

Table 3. Percentage Contribution to GDP (at Basic Prices) by Economic Activity of Selected Economies in 2010

	% Contribution to GDP			GERD as % of GDP
	Agriculture	Manufacturing	Services	
Hong Kong [a]	NA	2%	93%	0.76
Korea	3% [b ^]	30% [b]	59% [b]	3.74 [i]
Mainland China	10% [c * #]	32% [c #]	43% [c #]	1.76 [d]
Singapore	NA	22% [e]	72% [e]	2.14 [f]
USA	1% [g]	12% [g]	80% [g]	2.88 [h #]

Notes:
^ Refers to Agriculture, forestry and fishing.
** Refers to Agriculture, forestry, animal husbandry and fishery.*
 # Figures in 2009.

Source:
a. Census and Statistics Department (C&SD), HKSARG
b. Bank of Korea
c. National Statistical Bureau, China
d. Ministry of Science & Technology, China;
e. Singapore Department of Statistics;
*f. Agency for Science, Technology and Research (A*STAR), Singapore*
g. Bureau of Economic Analysis, U.S.;
h. National Science Foundation, U.S.; and
i. OECD Main Science and Technology Indicators;

4. With the efforts made by various sectors over the years, Hong Kong has made considerable achievements in the development of innovation and technology –

(a) In the past decade or so, Hong Kong's GERD has been increasing at an average annual growth rate of 7%, from 0.55% to 0.76% when expressed as a ratio to GDP;

(b) The R&D expenditure by the public sector (including Government and higher education sectors) has continued to increase at an average annual growth rate of 4.8%, from $5 billion in 2001 to $7.5 billion in 2010, accounting for 57% of the GERD;

(c) The number of companies operating in the Science Park has also been on the rise over the years from about 160 in 2007 to over 380 at the moment, employing over 6 300 R&D personnel; and

(d) The number of R&D personnel (full time equivalent) increased for two consecutive years between 2008 and 2010. In 2009, it registered 6% growth over the preceding year. It was then increased by a further 4% in 2010. As at 2010, the number of R&D personnel amounted to 24 100.

Annex 2

Policy and Strategy in Promotion of Innovation and Technology in Hong Kong

In 2009, innovation and technology (I&T) was designated as one of the six new industries that Hong Kong enjoys clear advantages. To promote I&T, we aim to create a vibrant ecosystem with both hardware and software support.

2. We have adopted the following policy statement to guide our work –

> "The Government firmly believes that innovation and technology is a key driver for economic development. We are committed to developing Hong Kong into a knowledge-based economy that thrives as an innovation hub in the region. In meeting such commitment, we will enhance collaboration among the Government, industry, academia and research sectors to promote research and development as well as technology transfer. A multi-pronged approach will be adopted, comprising provision of infrastructural and financial support, human resource development, collaboration with economies outside Hong Kong and fostering an innovation culture in the community."

The statement reveals our belief, our commitment and the direction and strategy in delivering this.

Hardware

3. On the hardware side, the Hong Kong Science Park is our flagship infrastructure which now houses over 380 companies occupying 95% of Phases 1 and 2 combined. With the staged completion of the $4.9 billion Phase 3 development starting from early 2014, the existing floor area of the Park will be increased by about 50%.

4. In addition, the Hong Kong Science and Technology Parks Corporation is managing three Industrial Estates (IEs) in Tai Po, Yuen Long and Tseng Kwan O. The three IEs offer a total of 217 hectares of

land to industries which cannot be accommodated in ordinary and multi-storey industrial or commercial buildings. The IEs are home to over 160 local and international companies, including those from traditional manufacturing sectors as well as technology and service sectors (e.g. high-end data centre projects). To capture opportunities in the high technology industries in the longer run, it was announced in the 2012-13 Budget that we would explore the feasibility of expanding Yuen Long IE by 16 hectares.

Software

5. On the software side, our key measures include –

(a) provision of financial support to research and development (R&D) as well as technology transfer activities that boost our I&T capability and foster an ecosystem favourable for I&T development. This is mainly done via the Innovation and Technology Fund (ITF) as well as other means such as the R&D Cash Rebate Scheme;

(b) nurturing human resource development with the approach of providing exposure and incentives to our younger generation at different stages of their academic and intellectual development;

(c) strengthening Mainland and international collaboration in science and technology to build a wider network for local organisations to tap into the resources and opportunities outside of Hong Kong; and

(d) fostering a vibrant innovation culture in the community by increasing public awareness and understanding of how science and technology bring socio-economic benefits.

6. Looking into the future, we will make use of our strengths (including rule of law, robust intellectual property protection, free flow of information, international financial services, well established infrastructure etc.) as well as our strategic location (gateway to the Mainland and heart of Asia) to further promote Hong Kong as a vibrant

innovation hub in the region.

7. In particular, with the promulgation of the National 12th Five-Year Plan, we will do our best to dovetail it so as to create maximum opportunities.