

香港特別行政區政府

創新及科技局

香港添馬添美道二號
政府總部西翼二十樓



INNOVATION AND
TECHNOLOGY BUREAU

THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

20/F, West Wing, Central Government Offices,
2 Tim Mei Avenue, Tamar, Hong Kong

By Email

10 January 2020

Mr Desmond LAM
Clerk to Panel on Commerce and Industry
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

Dear Mr LAM,

**Panel on Commerce and Industry
Meeting on 19 November 2019**

**Four-Year Progress Report on Research & Development (R&D) Centres and
Funding Proposal to Extend the Operation of the R&D Centres**

At the meeting on 19 November 2019, the Panel requested the Government to provide supplementary information in respect of the proposal to allocate an additional funding commitment of HK\$1,015.1 million from the Innovation and Technology Fund to extend the operation of four R&D Centres (i.e. the Automotive Platforms and Application Systems R&D Centre (APAS), Hong Kong Research Institute of Textiles and Apparel (HKRITA), Logistics and Supply Chain MultiTech R&D Centre (LSCM), and Nano and Advanced Materials Institute (NAMI)) for four years up to 31 March 2025. The relevant supplementary information is enclosed herewith for Members' reference.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Ricky Chong'.

(Ricky CHONG)

for Secretary for Innovation and Technology

c.c. Commissioner for Innovation and Technology (Attn.: Miss Kathy CHAN)

Legislative Council Panel on Commerce and Industry
Meeting on 19 November 2019

Four-Year Progress Report on Research & Development (R&D) Centres
and Funding Proposal to Extend the Operation of the R&D Centres

Supplementary Information

(a) Operating expenditure of each of the four R&D Centres between 2015-16 and 2018-19 as compared to their estimated operating expenditure from 2021-22 to 2024-25

Between 2015-16 and 2018-19, the operating expenditure of the four R&D Centres was \$565.7 million, averaging about \$141.4 million per year. Between 2021-22 and 2024-25, the estimated operating expenditure of the four R&D Centres is \$1,078.7 million, averaging about \$269.7 million per year. The actual and estimated operating expenditures of the R&D Centres in the respective years are set out in the table below. The relevant information has also been set out in Tables 1 and 9 of the paper discussed at the subject Panel meeting (Panel Paper No. CB(1)135/19-20(06)) –

	Table 1: Operating Expenditure (\$ million)										
	2015-19 (Actual)					2021-25 (Estimated)					% changes [(B-A)]/A
	2015-16	2016-17	2017-18	2018-19	4-year Period (2015-19) (A)	2021-22	2022-23	2023-24	2024-25	4-year Period (2021-25) (B)	
APAS	15.8	17.7	16.4	18.3	68.2	29.0	32.2	35.6	39.4	136.2	+100%
HKRITA	29.6	31.4	34.3	37.1	132.4	50.6	50.8	54.6	58.3	214.3	+62%
LSCM	25.1	27.1	29.5	37.2	118.9	84.0	71.4	58.4	63.0	276.8	+133%
NAMI	54.3	52.7	65.6	73.6	246.2	96.1	109.0	117.7	128.6	451.4	+83%
Total	124.8	128.9	145.8	166.2	565.7	259.7	263.4	266.3	289.3	1,078.7	+91%

(b) **Level of industry income of each of the four R&D Centres between 2015-16 and 2018-19 as compared to their estimated level of industry income from 2021-22 to 2024-25**

The new indicator “level of industry income” of the R&D Centres, which covers industry contribution to their R&D projects, income arising from licensing/royalty and contract services, etc., with a target level of 30%, has been adopted from 2017-18 onwards. The indicator replaces the previous indicator “level of industry contribution”, which measures only the industry contribution pledged in respect of their R&D projects with a target level of 20%. In both 2017-18 and 2018-19, the level of industry income of the four R&D Centres met the 30% target. The relevant information has also been set out in Table 2 of Panel Paper No. CB(1)135/19-20(06).

	Table 2: Level of Industry Income	
	2017-18	2018-19
APAS	47%	49%
HKRITA	30%	34%
LSCM	40%	46%
NAMI	53%	55%

Note: The level of industry income is calculated as follows –

$$\frac{\text{Industry Contribution Pledged} + \text{Other Sources of Financial Contribution Pledged} + \text{Commercialisation Income Received}}{\text{Approved Project Expenditure}} \times 100\%$$

As the R&D Centres have been gradually building up stronger client base and network as well as industry reputation, we are optimistic that their performance in industry collaboration will continue to improve. In addition, the R&D Centres will continue to devote vigorous efforts to promote commercialisation of their R&D outcomes. As such, it is expected that the level of industry income of the R&D Centres should be able to achieve the 30% target each year between 2021-22 and 2024-25.

- (c) **Number of new and on-going R&D projects and the relevant project cost as well as the R&D expenditure of each of the four R&D Centres between 2015-16 and 2018-19 as compared to their estimated number of new and on-going R&D projects and the relevant project cost as well as the R&D expenditure from 2021-22 to 2024-25; and**

Number of new projects commenced - The number of new projects commenced by the four R&D Centres between 2015-16 and 2018-19 and the estimated number of new projects from 2021-22 to 2024-25 are as follows. The relevant information has also been set out in Table 3 and Annexes A, C, D and E of Panel Paper No. CB(1)135/19-20(06).

	Table 3: Number of New Projects Commenced										
	2015-19 (Actual)					2021-25 (Estimated)					% changes [(B-A)]/A
	2015-16	2016-17	2017-18	2018-19	4-year Period (2015-19) (A)	2021-22	2022-23	2023-24	2024-25	4-year Period (2021-25) (B)	
APAS	13	16	13	16	58	23	25	27	30	105	+81%
HKRITA	21	18	21	23	83	26	27	28	29	110	+33%
LSCM	16	18	21	25	80	26	26	27	27	106	+33%
NAMI	45	45	41	43	174	51	53	55	57	216	+24%
Total	95	97	96	107	395	126	131	137	143	537	+36%

Project cost of new projects commenced – The project cost of new projects commenced by the four R&D Centres between 2015-16 and 2018-19 and the estimated project cost of new projects commenced from 2021-22 to 2024-25 are as follows. Information relating to 2015-19 has also been set out in Table 4 of Panel Paper No. CB(1)135/19-20(06).

	Table 4: Project Cost of New Projects Commenced (\$ million)										
	2015-19 (Actual)					2021-25 (Estimated)					% changes [(B-A)]/A
	2015-16	2016-17	2017-18	2018-19	4-year Period (2015-19) (A)	2021-22	2022-23	2023-24	2024-25	4-year Period (2021-25) (B)	
APAS	70.1	45.3	69.1	65.5	250.0	69.0	75.0	81.0	90.0	315.0	+26%
HKRITA	66.9	71.3	100.5	93.5	332.2	101.9	107.9	110.4	112.9	433.1	+30%
LSCM	79.0	78.1	117.1	123.9	398.1	151.0	159.0	167.0	175.0	652.0	+64%
NAMI	110.9	125.2	141.9	151.3	529.3	180.0	190.0	200.0	210.0	780.0	+47%
Total	326.9	319.9	428.6	434.2	1,509.6	501.9	531.9	558.4	587.9	2,180.1	+44%

Number of on-going projects – The number of on-going projects by the four R&D Centres between 2015-16 and 2018-19 and the estimated number of on-going projects from 2021-22 to 2024-25 are as follows. Information relating to 2015-16 to 2018-19 has also been set out in Table 5 of Panel Paper No. CB(1)135/19-20(06).

	Table 5: Number of On-going Projects							
	2015-19 (Actual)				2021-25 (Estimated)			
	As at 31 Mar 2016	As at 31 Mar 2017	As at 31 Mar 2018	As at 31 Mar 2019	As at 31 Mar 2022	As at 31 Mar 2023	As at 31 Mar 2024	As at 31 Mar 2025
APAS	36	44	47	51	54	56	58	61
HKRITA	62	59	52	54	51	60	62	64
LSCM	35	37	38	45	63	67	71	74
NAMI	82	86	78	67	75	78	81	84
Total	215	226	215	217	243	261	272	283

Project cost of on-going projects – The project cost of on-going projects by the four R&D Centres between 2015-16 and 2018-19 and the estimated project cost of on-going projects from 2021-22 to 2024-25 are as follows –

	Table 6: Project Cost of On-going Projects (\$ million)							
	2015-19 (Actual)				2021-25 (Estimated)			
	As at 31 Mar 2016	As at 31 Mar 2017	As at 31 Mar 2018	As at 31 Mar 2019	As at 31 Mar 2022	As at 31 Mar 2023	As at 31 Mar 2024	As at 31 Mar 2025
APAS	203.6	223.4	219.3	252.0	257.0	265.0	273.0	284.0
HKRITA	172.7	184.1	226.8	273.6	178.2	238.9	247.4	252.4
LSCM	186.1	191.1	213.4	259.3	386.4	423.2	462.0	496.0
NAMI	86.9	100.1	115.0	117.4	110.1	116.4	122.8	128.9
Total	649.3	698.7	774.5	902.3	931.7	1,043.5	1,105.2	1,161.3

R&D expenditure – Between 2015-16 and 2018-19, the total R&D expenditure of the four R&D Centres was \$1,133.4 million, averaging \$283.4 million per year. Between 2021-22 and 2024-25, the estimated R&D expenditure of the four R&D Centres is \$2,162 million, averaging \$540.5 million per year. Details are in the table below. The relevant information has also been set out in Table 7 and Annexes A, C, D and E of Panel Paper No. CB(1)135/19-20(06).

	Table 7: R&D Expenditure (\$ million)										
	2015-19 (Actual)					2021-25 (Estimated)					% changes [(B-A)]/A
	2015- 16	2016- 17	2017- 18	2018- 19	4-year Period (2015-19) (A)	2021- 22	2022- 23	2023- 24	2024- 25	4-year Period (2021-25) (B)	
APAS	54.6	34.2	47.6	45.8	182.2	74.0	84.0	94.0	109.0	361.0	+98%
HKRITA	51.1	41.8	65.1	96.5	254.5	114.6	123.6	129.0	134.6	501.8	+97%
LSCM	67.4	83.3	90.6	82.0	323.3	104.0	119.6	137.5	158.1	519.2	+61%
NAMI	63.2	92.4	105.5	112.3	373.4	180.0	190.0	200.0	210.0	780.0	+109%
Total	236.3	251.7	308.8	336.6	1,133.4	472.6	517.2	560.5	611.7	2,162.0	+91%

(d) **Commercialisation income of each of the four R&D Centres between 2015-16 and 2018-19 as compared to their estimated commercialisation income from 2021-22 to 2024-25**

The commercialisation income of the four R&D Centres between 2015-16 and 2018-19 is set out below. The relevant information has also been set out in Table 8 of Panel Paper No. CB(1)135/19-20(06).

	Table 8: Commercialisation Income (\$ million)				
	2015-19 (Actual)				
	2015-16	2016-17	2017-18	2018-19	4-year Period (2015-19)
APAS	0.75	1.57	1.19	1.87	5.38
HKRITA	1.05	0.89	1.24	10.98	14.16
LSCM	0.43	0.97	4.27	10.09	15.76
NAMI	5.86	15.85	14.05	17.11	52.87
Total	8.09	19.28	20.75	40.05	88.17

During 2021-22 to 2024-25, the R&D Centres would continue to be proactive in commercialising and transferring their technologies to the industry. With an increasing number of R&D projects to be commenced during the period, it is expected that the overall commercialisation income of the R&D Centres will increase gradually in the future.

Innovation and Technology Bureau
Innovation and Technology Commission
January 2020