

立法會
Legislative Council

LC Paper No. CB(1)1312/20-21
(These minutes have been seen
by the Administration)

Ref : CB1/PL/CI

Panel on Commerce and Industry

Minutes of meeting
held on Tuesday, 15 June 2021, at 2:30 pm
in Conference Room 1 of the Legislative Council Complex

- Members present** : Hon CHUNG Kwok-pan (Chairman)
Hon Jimmy NG Wing-ka, BBS, JP (Deputy Chairman)
Hon Jeffrey LAM Kin-fung, GBS, JP
Hon WONG Ting-kwong, GBS, JP
Hon YIU Si-wing, BBS
Hon MA Fung-kwok, GBS, JP
Hon Christopher CHEUNG Wah-fung, SBS, JP
Hon Martin LIAO Cheung-kong, GBS, JP
Dr Hon CHIANG Lai-wan, SBS, JP
Ir Dr Hon LO Wai-kwok, SBS, MH, JP
Dr Hon Junius HO Kwan-yiu, JP
Hon SHIU Ka-fai, JP
Hon CHAN Chun-ying, JP
Hon LAU Kwok-fan, MH
- Member attending** : Hon Holden CHOW Ho-ding
- Public officers attending** : Agenda item IV
Constitutional and Mainland Affairs Bureau

Mr Erick TSANG, IDSM, JP
Secretary for Constitutional and Mainland Affairs

Miss Katharine CHOI
Deputy Secretary for Constitutional and Mainland
Affairs (2)

Mr Benjamin MOK
Deputy Commissioner for the Development of the
Guangdong-Hong Kong-Macao Greater Bay Area

Commerce and Economic Development Bureau

Dr Bernard CHAN, JP
Under Secretary for Commerce and Economic
Development

Education Bureau

Dr CHOI Yuk Lin, JP
Under Secretary for Education

Financial Services and the Treasury Bureau

Mr Joseph CHAN, JP
Under Secretary for Financial Services and the Treasury

Ms Candy LAU
Principal Assistant Secretary for Financial Services and
the Treasury (Financial Services)³

Home Affairs Bureau

Mr Jack CHAN, JP
Under Secretary for Home Affairs

Mr Frederick YU
Principal Assistant Secretary for Home Affairs
(Culture)¹

Innovation and Technology Bureau

Mr Alfred SIT, JP
Secretary for Innovation and Technology

Mr Alan LO
Deputy Secretary for Innovation and Technology (1)

Security Bureau

Mr Sonny AU, PDSM, PMSM, JP
Under Secretary for Security

Transport and Housing Bureau

Dr Raymond SO, BBS, JP
Under Secretary for Transport and Housing

Agenda item V

Innovation and Technology Bureau

Ms Annie CHOI, JP
Permanent Secretary for Innovation and Technology

Innovation and Technology Commission

Ms Rebecca PUN, JP
Commissioner for Innovation and Technology

Mr Indiana WONG
Assistant Commissioner for Innovation and Technology
(Funding Schemes)

Attendance by invitation : Agenda item V

Research and Development Centres

Dr Lawrence CHEUNG
Chief Executive Officer
Automotive Platforms and Application Systems R&D
Centre, Hong Kong Productivity Council

Dr Martin SZETO
Acting Co-Chief Executive Officer cum Chief Operating
Officer
Hong Kong Applied Science and Technology Research
Institute

Dr Lucas HUI
Acting Co-Chief Executive Officer cum Chief
Technology Officer
Hong Kong Applied Science and Technology
Research Institute

Mr Edwin KEH, MH
Chief Executive Officer
Hong Kong Research Institute of Textiles and Apparel

Mr Simon WONG, MH
Chief Executive Officer
Logistics and Supply Chain MultiTech R&D Centre

Mr Daniel YU
Chief Executive Officer
Nano and Advanced Materials Institute

Clerk in attendance : Mr Boris LAM
Chief Council Secretary (1)3

Staff in attendance : Mr Joey LO
Senior Council Secretary (1)8

Ms May LEUNG
Legislative Assistant (1)3

Miss Teresa HO
Clerical Assistant (1)3

Action

I. Information papers issued since last meeting

(LC Paper No. CB(1)952/20-21(01) -- Information paper on the financial position of the Applied Research Fund for the period from 1 September to 30 November 2020, and the annual report and audited financial statements of the Applied Research Council for the year ended 31 March 2020

File Ref: CITB CR 75/53/9 -- Legislative Council Brief on United Nations Sanctions (Yemen) Regulation 2019 (Amendment) Regulation 2021

LC Paper No. CB(1)997/20-21(01) -- Information paper on the financial position of the Applied Research Fund for the period from 1 December 2020 to 28 February 2021)

2. Members noted the above papers issued since the last meeting.

II. Schedule of meetings for the remainder of the 2020-2021 session

3. Members agreed that two additional meetings on 17 August 2021 (Tuesday) and 21 September 2021 (Tuesday) from 2:30 pm to 4:30 pm would be held for the remainder of the 2020-2021 session.

(Post-meeting note: The schedule of meetings to be held in August and September 2021 was circulated to members vide LC Paper No. CB(1)1021/20-21 on 18 June 2021.)

III. Date of next meeting and items for discussion

(LC Paper No. CB(1)987/20-21(01) -- List of outstanding items for discussion

LC Paper No. CB(1)987/20-21(02) -- List of follow-up actions)

4. Members noted that the next regular Panel meeting would be held on 17 August 2021 at 2:30 pm.

(Post-meeting note: Members were informed vide LC Paper No. CB(1)1902/20-21 dated 6 July 2021 that the following two items: (a) New programme to step up promotion of Hong Kong's professional services under the Professional Services Advancement Support Scheme; and (b) Measures to support re-industrialization in Hong Kong would be discussed at the meeting on 17 August 2021.)

IV. National 14th Five-Year Plan

(LC Paper No. CB(1)987/20-21(03) -- Administration's paper on "Hong Kong Special Administrative Region's positioning and supporting measures under the National 14th Five-Year Plan"

FS06/20-21

-- Fact sheet on "National 14th Five-Year Plan" prepared by the Research Office of the Legislative Council Secretariat)

Presentation by the Administration

5. At the invitation of the Chairman, Secretary for Constitutional and Mainland Affairs ("SCMA") briefed members on the positioning of the Hong Kong Special Administrative Region ("HKSAR") in the Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives Through the Year 2035 ("National 14th Five-Year Plan"); and its work to complement the National 14th Five-Year Plan. Details were set out in the Administration's paper (LC Paper No. CB(1)987/20-21(03)).

Discussion

Work to complement the National 14th Five-Year Plan

6. Mr LAU Kwok-fan said that in order to seize the opportunities offered by the National 14th Five-Year Plan and the development of the Guangdong-Hong Kong-Macao Greater Bay Area ("Greater Bay Area"), the Hong Kong Special Administrative Region Government ("HKSARG") should set up a dedicated high-level organization to coordinate and expedite the planning and development of the Shenzhen-Hong Kong Loop and the New Territories North to leverage its advantageous location in the Greater Bay Area.

7. SCMA advised that HKSARG attached great importance to its work to complement the National 14th Five-Year Plan. HKSARG had recently appointed Mr LING Kar-kan, former Director of Planning, as Strategic Planning Advisor for Hong Kong/Shenzhen Co-operation. Secretary for Innovation and Technology ("S for IT") added that the Steering Committee for the Development of the Greater Bay Area, chaired by the Chief Executive and comprising all Secretaries of Departments and Directors of Bureaux as members, was responsible for the overall co-ordination of matters relating to HKSAR's participation in the development of the Greater Bay Area, including the development of the Hong Kong-Shenzhen Innovation and Technology Park ("HSITP") in Lok Ma Chau Loop ("the Loop"). Besides,

HKSARG also took forward the synergistic development with the Shenzhen Innovation and Technology Zone adjacent to the HSITP by establishing the Shenzhen/Hong Kong Innovation and Technology Co-operation Zone ("Co-operation Zone"), with a view to establishing "one zone, two parks" at "one river, two banks" under "one country, two systems".

Deepening and widening mutual access between the financial markets of the Mainland and Hong Kong

8. Mr CHAN Chun-ying enquired about the measures to be taken by HKSARG in support of the "Fintech 2025" Strategy launched by the Hong Kong Monetary Authority ("HKMA") to facilitate the development and use of central bank digital currencies, namely e-HKD and e-CNY, in Hong Kong; how Hong Kong could develop its position as a green and sustainable financing hub to provide matching service to Mainland businesses; and the progress and implementation timetable of Wealth Management Connect ("WMC").

9. Under Secretary for Financial Services and the Treasury ("USFST") advised that HKMA's technical pilot testing with the Digital Currency Institute of the People's Bank of China ("PBoC") on using e-CNY for making cross-boundary payments went smoothly. HKMA was collaborating with PBoC on the next phase of technical testing, including the feasibility of broadening and deepening the use of e-CNY for cross-boundary payments. It would offer an additional, safe, convenient and innovative means of cross-boundary retail payments to residents in Hong Kong and the Mainland. It would also enhance the efficiency and user experience of cross-boundary payments, and help promote the financial interconnection among the various cities of the Greater Bay Area.

10. USFST added that in order to support green and sustainable bond issuance and lending to further enrich the green and sustainable finance ecosystem in Hong Kong, the Green and Sustainable Finance Grant Scheme was launched in May 2021 to provide subsidy for eligible bond issuers and loan borrowers to cover their expenses on bond issuance and external review services. The Scheme would last for three years. In fact, the world's first Greater Bay Area-themed international green bonds was issued in September 2019 in Hong Kong, which was well-placed to become a major offshore green bond market for Chinese-domiciled entities to raise funds for their green transformation.

11. As regards WMC, USFST advised that in May 2021, the Guangdong financial regulators promulgated the draft implementation guidelines of the scheme for public consultation. The latest guidelines provided more flexibility including allowing Mainland residents to open an investment account under Southbound Scheme by remote on-boarding and allowing each eligible bank to partner with more than one

eligible bank in the other market. HKMA would continue to work closely with the relevant authorities to expedite the implementation of WMC.

12. Mr Christopher CHEUNG urged the Administration to expedite the widening of the scope of participation under WMC and the Government Green Bond Programme from banks to securities firms, so as to allow the Hong Kong securities industry to achieve diversification and benefit from remote on-boarding under WMC.

13. USFST advised that WMC aimed to allow residents in Hong Kong, Macao and nine Mainland cities of the Greater Bay Area to carry out cross-boundary investment in wealth management products distributed by banks in the area. Initially, WMC would be implemented in a risk-managed and incremental approach. Nevertheless, the Administration noted members' suggestions for allowing securities firms to participate in WMC. HKSARG and regulators would continue to discuss with the relevant Mainland authorities on different proposals for expanding and enhancing the existing mutual capital market access schemes.

14. USFST added that since 1 April 2020, the Mainland authorities had removed the restrictions on the percentage (which should not exceed 51%) of foreign investment for securities companies, thus allowing Hong Kong and overseas securities companies to enjoy national treatment. In April 2021, China Securities Regulatory Commission also relaxed the shareholding restrictions on securities firms. The definition of principal shareholders was revised from over 25% to over 5% in shareholding, with net asset requirement revised from over RMB200 million to RMB50 million. Moreover, Mainland-Hong Kong Stock Connect and Bond Connect would also expand business opportunities for Hong Kong securities firms. For example, the scope of eligible securities under the Southbound Trading of Stock Connect was expanded in December 2020 to cover pre-revenue biotechnology companies listed in Hong Kong under the new listing regime. HKSARG would continue to strive for Hong Kong securities firms' business opportunities in the Mainland.

Supporting Hong Kong in developing into an international aviation hub

15. Mr Martin LIAO said that the National 14th Five-Year Plan had reaffirmed the Central Government's support for Hong Kong in enhancing its status as, inter alia, an international aviation hub. He enquired about the measures to nurture aviation management talents in support of the sustainable development of the industry, and the Administration's assessment on the five-to-ten-year demand and supply of talents in aviation management and logistics, and ground crew; and whether the Hong Kong International Aviation Academy ("HKIAA") and other local tertiary institutions would be able to meet the demand for such talents. Mr LIAO also enquired about the impact of the initiative of Hong Kong-Zhuhai Airport Co-operation on manpower resources and talent nurturing of the aviation industry.

16. Under Secretary for Transport and Housing ("USTH") said the Administration attached great importance to the nurturing of aviation talents, and kept close watch on the demand and supply of aviation talents in Hong Kong. Transport and Housing Bureau ("THB"), through the Maritime and Aviation Training Fund, supported the manpower training of the maritime and aviation industries. HKIAA and local education institutions also provided multifarious training programmes catering to the needs of different sectors of the aviation industry.

17. Mr WONG Ting-kwong urged HKSARG to discuss with the airport authorities of Shenzhen, Guangzhou, Zhuhai and Macao to achieve greater synergy of the airports concerned.

18. USTH advised that THB and the Civil Aviation Administration of China signed a Memorandum of Understanding on 19 February 2019 to expand the air services and the intermodal arrangements between the Mainland and Hong Kong. Airport Authority Hong Kong would continue to develop more intermodal products, including air-to-sea and air-to-land passenger transit arrangements and baggage tag through service, and enhance airport facilities for intermodal cargo transshipment in order to better serve the Greater Bay Area.

Accelerating the construction of intercity railways

19. Ir Dr LO Wai-kwok said that as the development of the Greater Bay Area was a major component of the National 14th Five-Year Plan driving economic growth for Hong Kong in the aftermath of the Coronavirus Disease 2019 ("COVID-19") pandemic, HKSARG should adopt a forward-looking approach and actively participate in the development plan for the inter-city rail links and expedite the development of traffic and transportation infrastructures in Hong Kong, so as to seize the development opportunities in the Greater Bay Area.

20. USTH advised that having regard to the long-term cross-boundary transport needs in view of the development of the Greater Bay Area, HKSARG would study in due course the need for improving connectivity between Hong Kong and the western part of Shenzhen, thereby facilitating the flow of personnel between both places. THB would maintain close liaison with its counterparts in Shenzhen and MTR Corporation Limited ("MTRCL") on enhancing the transport connections to the redeveloped Huanggang and Luohu Ports. Based on Shenzhen's redevelopment plan, the redeveloped Huanggang Port would become a transport hub complex. If the Northern Link ("NOL") bifurcation could be realigned to connect with the redeveloped Huanggang Port through the Loop, it would help strengthen the cross-boundary transport link as well as the connection between the Loop and the urban area. It would also provide another option for residents and tourists

travelling within the Greater Bay Area. THB noticed that the Shenzhen authorities had reserved space adjacent to the redeveloped Huanggang Port to enable connection of the NOL. This would provide flexibility in the planning of the NOL bifurcation.

Supporting Hong Kong in developing into a hub for arts and cultural exchanges

21. Mr MA Fung-kwok enquired about the new initiatives to be taken forward by HKSARG to support the development of the cultural and creative industries under the National 14th Five-Year Plan, and the additional resources involved.

22. Under Secretary for Home Affairs ("USHA") advised that a number of new initiatives had been taken to facilitate the development of cultural and creative industries. In terms of hardware, the M+ Museum in West Kowloon Cultural District would open in end 2021, whereas the Hong Kong Palace Museum and the East Kowloon Cultural Centre were anticipated to open in mid-2022 and 2023 respectively. The current term Government had allocated HK\$20 billion for the development of cultural infrastructure. Moreover, the Legislative Council Finance Committee ("FC") had approved on 11 June 2021 the funding proposals for the improvement projects for Sai Wan Ho Civic Centre and Tai Po Civic Centre. In terms of software, HKSARG allocated about HK\$5.4 billion annually for developing cultural and creative industries, mainly for nurturing talents, promoting arts activities and sponsoring arts organizations.

23. USHA added that the world-renowned Art Basel Hong Kong 2021 was organized in Hong Kong in May 2021. Hong Kong had now overtaken London as the world's second largest art auction centre only after New York. Hong Kong had signed cultural cooperation agreements with 20 overseas countries including France, Italy, Russia and the United Kingdom and was negotiating similar agreements with four other countries. Hong Kong had also signed agreements with various Mainland authorities and cities.

Supporting Hong Kong in enhancing its status as an international trade centre

24. Mr Holden CHOW said that in order to seize the opportunities provided by the National 14th Five-Year Plan, HKSAR should forge more strategic trade partnerships with cities of the Greater Bay Area to achieve synergy, as in the case of the Loop development and the initiative of Hong Kong-Zhuhai Airport Co-operation. Mr CHOW also enquired about the timetable and progress for HKSAR's accession to the Regional Comprehensive Economic Partnership ("RCEP").

25. SCMA advised that HKSARG had established co-operation platforms with many cities in the Mainland, including Beijing, Shanghai, and provinces in the Pan-Pearl River Delta region. HKSAR stood ready to reinforce co-operation with these

municipalities and provinces in the post-pandemic era to promote further integration of Hong Kong into national development. Hong Kong Economic and Trade Offices ("HKETOs") in the Mainland also stood ready to step up promotion efforts.

26. Under Secretary for Commerce and Economic Development ("USCED") added that HKSARG had indicated to participating economies Hong Kong's keen interest in joining RCEP, and received favourable response. The accession process was now at the internal ratification stage which would take around one to one and a half years. Meanwhile, HKSARG was actively engaging the participating economies to make early preparations for Hong Kong's accession to RCEP, with the aim to be among the first batch of economies joining RCEP after its entry into force.

27. The Chairman noted that the 14th Five Year Plan had reaffirmed the Central Government's support for HKSAR in enhancing its status as an international trading and transportation centre. In this regard, HKSAR would need to forge more free trade agreements with different jurisdictions. The Chairman enquired about HKSAR's response and positioning in the global stage in view of the antagonistic approach taken by the Group of Seven countries towards China.

28. USCED advised that in order to rebuild international trust in Hong Kong, HKSARG would continue to disseminate information on HKSAR's competitive advantages and the successful implementation of "One Country, Two Systems" abroad. With the stabilization of COVID-19 pandemic, overseas HKETOs, Invest Hong Kong, Hong Kong Trade Development Council and Information Services Department, etc., would spare no effort to launch promotional campaigns around the world to promote the unique opportunities offered by Hong Kong, including the development of the Greater Bay Area and the Belt and Road Initiative.

Supporting Hong Kong in developing into an international innovation and technology hub

29. Mr Jeffrey LAM noted that the National 14th Five-Year Plan raised for the first time the support for Hong Kong to enhance its status as, inter alia, an international innovation and technology ("I&T") hub. He enquired about the concrete measures to be implemented by the Administration in furtherance of the policy objective.

30. S for IT advised that in furtherance of the objective of developing Hong Kong into an international I&T hub, the development of the *InnoHK* research clusters was a major initiative of HKSARG to develop Hong Kong as the hub for global research collaboration. HKSARG also launched the Global STEM Professorship Scheme to support local universities in recruiting internationally renowned I&T scholars and their teams to work in Hong Kong. Also, HKSARG was taking forward the

development of the HSITP in the Loop in full swing, and jointly developing the Co-operation Zone with the Shenzhen Government. Meanwhile, HKSARG launched the Greater Bay Area Youth Employment Scheme, under which I&T posts were designated, to provide young people with an opportunity to explore the I&T development in the Mainland cities of the Greater Bay Area.

Strengthening the co-ordinated development of education in Guangdong, Hong Kong and Macao

31. Dr CHIANG Lai-wan said that HKSARG should adopt a long term development plan on education for the next 15 years to dovetail with the long-range objectives through the year 2035 promulgated under the National 14th Five-Year Plan.

32. SCMA advised that HKSARG's priority areas and latest progress relating to the National 14th Five Year Plan were detailed in Annex II of the Administration's paper, covering short, medium and long term objectives. Under Secretary for Education added that the Education Bureau supported local students to pursue further studies in the Mainland through a number of schemes, details of which were also set out in Annex II of the Administration's paper.

Facilitating Hong Kong people to pursuit development opportunities and live in the Mainland

33. Mr WONG Ting-kwong urged the HKSARG to strive for more facilitation measures in different aspects of life for Hong Kong people studying, working or living in the Mainland.

34. SCMA advised that since August 2017, the relevant Central Authorities had introduced a number of policy measures to facilitate Hong Kong people studying, working and living in the Mainland, including permitting Hong Kong residents living in the Mainland who met relevant criteria to apply for residence permits in the Mainland, and facilitating Hong Kong residents to use Home Return Permits in the Mainland in the areas of transport, finance, communications, education, healthcare, social security, commerce and industry, taxation and accommodation, etc.

35. SCMA added that the Central Government supported the implementation of the 24 facilitation measures that had been approved in principle by the Leading Group for the Development of the Guangdong-Hong Kong-Macao Greater Bay Area. HKSARG would continue to work closely with the Mainland authorities and relay to the Central Government the needs of Hong Kong people living and working in the Mainland.

36. Mr Jeffrey LAM enquired about the progress of launching of business travel bubble in the Greater Bay Area.

37. SCMA advised that with the COVID-19 pandemic gradually brought under control in Hong Kong and Guangdong Province, there might be opportunities for discussions for the gradual and orderly resumption of cross-boundary activities amongst Hong Kong, Macao and Guangdong, provided that the pandemic situation could continue to be kept under control. SCMA encouraged Hong Kong people to get vaccinated, as a high vaccination rate in the population would be more conducive to a favourable outcome of such discussions.

V. Progress report on Research and Development Centres in 2019-2020 and 2020-2021

(LC Paper No. CB(1)987/20-21(04) Administration's paper on "Latest Progress Report on Research & Development Centres"

LC Paper No. CB(1)987/20-21(05) -- Paper on Research and Development Centres prepared by the Legislative Council Secretariat (updated background brief))

Presentation by the Administration

38. At the invitation of the Chairman, Permanent Secretary for Innovation and Technology ("PSIT") briefed members on the operation of the five Research and Development ("R&D") Centres under the purview of ITC in 2019-2020 and 2020-2021. The Panel also received a video presentation on the subject at the meeting. Details were set out in the Administration's paper (LC Paper No. CB(1)987/20-21(04)).

Discussion

Commercialization of research and development outcomes

39. Mr Jeffrey LAM expressed support for the work of the five R&D Centres. He said that one of the main problems facing the R&D Centres rested on the lack of promotion of outstanding R&D deliverables to businesses, thus hindering the commercialization process. He enquired when HKSARG could implement an integrated transport card system for the payment of all kinds of public transport fares to facilitate daily commute.

40. PSIT advised that while the use of the smart identity card for payment of different kinds of transport fares might be more complicated involving, for instance, privacy and security issues, the use of a single platform for access to various public and commonly used business services would provide much convenience to members of the public. To this end, the Administration launched the "iAM Smart" mobile application in end 2020 to provide a one-stop personalized digital services platform, which enabled users to log in and use online services by their personal mobile phone in a smart and convenient way. Over 40 public and commercial services (including banking and insurance services) were now available on the iAM Smart platform. More services were in the pipeline, and some 100 public services were anticipated to come on stream this summer.

41. Dr CHIANG Lai-wan enquired about the R&D outcomes delivered by the R&D Centres which had been adopted for use by the public sector. Dr CHIANG said that R&D Centres should strike a balance between the need for developing R&D outcomes for fulfillment of public mission and the need for commercialization. To encourage innovation and prevent draining of talents, she suggested the adoption of a profit-sharing system to incentivize inventors of R&D deliverables.

42. PSIT advised that many R&D outcomes delivered by the R&D Centres had great social benefits and were widely adopted for use by the public sector and non-government-organizations. For example, at the onset of the COVID-19 pandemic, the Logistics and Supply Chain MultiTech R&D Centre ("LSCM") developed the "StayHomeSafe" electronic wristband and surveillance system to support the mandatory home quarantine measures implemented in HKSAR.

43. PSIT added that it was important for R&D Centres to support the delivery of public services while going for as much commercialization as possible. Inventors of relevant R&D deliverables were staff of the R&D Centres. While they would not be entitled to any profit-sharing of the deliverables, their contribution would be reflected in their performance appraisals. To encourage innovation, R&D Centres had been allowed to keep their commercialization income since 2017-2018 for strategic development and training purposes.

44. Mr YIU Si-wing urged the Administration to adopt a proactive approach in liaising with the R&D Centres so as to come up with I&T solutions to address the daily problems faced by members of the public, ranging from upgrading of public toilet sanitation and traffic lights system to rodent control.

45. PSIT advised that both the R&D Centres and the user departments/organizations would make suggestions/requests for I&T solutions. R&D Centres were interested to undertake midstream research which could then be transferred to the industry for commercialization. User departments/organizations

could also actively engage R&D Centres to undertake R&D projects. For example, the Hong Kong Customs and Excise Department had engaged LSCM to develop the Single E-lock Scheme to streamline the cross-boundary cargo clearance process. The Hong Kong Sports Institute also collaborated with the Nano and Advanced Materials Institute ("NAMI") to design intelligent sportswear for professional athletes.

46. Commissioner for Innovation and Technology ("CIT") added that NAMI had developed an ozone nano bubble generator which was used in the flushing water system of public toilets managed by the Food and Environmental Hygiene Department for disinfecting flushing water and reducing the spread of bacteria and viruses. Besides, LSCM had developed a Smart Traffic Control System with the Transport Department ("TD") to alleviate traffic congestion along Tai Tam Road (Dam Section). The Administration would step up promotion on such R&D outcomes in future to enhance their visibility to the public.

Target level of industry income

47. Mr CHAN Chun-ying said that he had all along supported the work of the five R&D Centres. Noting that all five R&D Centres had met the target level of industry income of 30% which was set in 2017-2018, he suggested that the Administration should raise the target level to, say 35%, to further enhance the R&D Centres' performance. Regarding the industry income of the Hong Kong Applied Science and Technology Research Institute ("ASTRI") in particular, Mr CHAN enquired about the reasons for: (i) 39% decrease in industry contribution and 70% decrease in contract services in 2020-2021 compared to 2019-2020; and (ii) being able to obtain the largest number of patents among all R&D Centres through the years.

48. PSIT advised that prior to 2017-2018, the target level of industry income was only 20%. Although it was subsequently raised to 30%, all the R&D Centres were able to meet through considerable effort the new target during the first four-year cycle. The Administration would review from time to time, and might raise the target further if necessary. PSIT added that due to its larger scale compared to the other R&D Centres, ASTRI was capable of undertaking more R&D projects, and thus able to obtain a larger number of patents than other R&D Centres. In response to the Chairman's further enquiry, PSIT advised that the number of patents to be obtained by an individual R&D Centre was determined by the number of projects completed, scale of the R&D Centre and its annual budget on patent-related projects, etc. ASTRI would keep an eye on the number of patents to be maintained and filed every year.

49. Acting Co-Chief Executive Officer cum Chief Operating Officer, ASTRI advised that the COVID-19 pandemic and the work-from-home arrangement had adversely affected the income from industry contribution and contract services as more time was needed for ASTRI to liaise with business partners and agree on the project arrangements. That said, in parallel with the steady rise in licensing/royalty income in these years, the number of contract services had increased in both 2019-2020 and 2020-2021, indicating that the demand for ASTRI's R&D work remained, although the industry had become more conservative in investing in R&D.

50. Mr Martin LIAO enquired about the original rationale for setting the target level of industry income at 30%. He also suggested that the target level of industry income be raised to encourage more R&D projects to be undertaken by the R&D Centres.

51. PSIT advised that the level of industry income was not the only indicator to measure the work of R&D Centres. In fact, apart from raising the target for the level of industry income to 30% from 2017-2018 onwards, the Administration had also set other new key performance indicators ("KPIs") to assess R&D Centres' performance in conducting R&D in collaboration with the industry. These new KPIs included number of on-going projects involving industry participation, number of companies participating in these on-going R&D projects, and number of patents filed, etc. The Administration would continue to review the KPIs and make adjustments when necessary.

Commercialization income

52. Ir Dr LO Wai-kwok noted that although the average annual total R&D expenditure of the five R&D Centres in the past four years amounted to some \$700 million, the average annual total commercialization income of the R&D Centres was only \$70 million, equivalent to one-tenth of the R&D expenditure.

53. PSIT advised that apart from income from commercialization, the amount of industry income also consisted of industry sponsorship for R&D projects, contract services, as well as licensing/royalty income.

54. Ir Dr LO Wai-kwok suspected that information on certain successful R&D outcomes which brought great indirect economic benefits were left out from the Administration's paper. He suggested that more information on the indirect benefits brought by the commercialization of the R&D outcomes should be provided in future reports to the Panel. He urged the Administration to support the R&D Centres' commercialization of their R&D outcomes (e.g. the swappable battery e-motor minibus) for greater benefit of the industries concerned.

55. Chief Executive Officer, Automotive Platforms and Application Systems R&D Centre ("APAS"), Hong Kong Productivity Council, advised that the prototype of the swappable battery e-motor minibus (a collaborative project between APAS and its industry partner) had been completed. Subject to some minor amendments to the design of the battery compartment, the minibus was expected to be launched in early 2022, when type approval of the minibus was granted by TD.

56. Mr Martin LIAO noted that while Hong Kong's economy was beset by social incidents and COVID-19 pandemic in the past two years, some of the R&D Centres were still able to raise their commercialization income during the period. However, ASTRI's and Hong Kong Research Institute of Textiles and Apparel ("HKRITA")'s commercialization income in 2020-2021 had dropped by over 60% and 400% respectively. Mr LIAO enquired about the specific challenges faced by these two R&D Centres.

57. Acting Co-Chief Executive Officer cum Chief Operating Officer, ASTRI advised that due to the longer negotiation process with ASTRI's business partners, there was a time lag in the figure on commercialization income of \$10.03 million in 2020-2021 provided in Table 4 of the Administration's paper. Moreover, demand for contract services had risen from 16 cases in 2019-2020 to 21 cases in 2020-2021.

58. Chief Executive Officer, HKRITA ("CEO, HKRITA") advised that HKRITA's commercialization income was steadily increasing from 2018-2019 to 2019-2020. For 2020-2021, due to social incidents in late 2019, HKRITA's offices and R&D laboratories at Hong Kong Polytechnic University campus and Hong Kong Science Park were suspended from operation for some time. As a result, certain R&D projects were delayed, while some local industry sponsors had deferred their sponsorship projects. HKRITA trusted that commercialization income would pick up progressively. CEO, HKRITA added that the textile and apparel industry was highly affected by the COVID-19 pandemic which impacted on the global demand and supply of textile and apparel products. Nevertheless, there was no decline in the overall level of industry support.

Admin 59. In response to Mr YIU Si-wing's request, PSIT undertook to provide information on the ratio of the R&D Centres' royalty/licensing income arising from the use of their patented R&D outcomes in the Mainland to that in overseas countries/places.

60. At 4:24 pm, the Chairman extended the meeting for 15 minutes.

Funding position of the Research and Development Centres

61. Mr YIU Si-wing noted that in June 2020, FC approved a total funding commitment of \$1,015.1 million to support the continued operation of four out of five of the R&D Centres, namely NAMI, HKRITA, APAS and LSCM. Although ASTRI was not covered by such funding commitment, its work was always included in the Administration's progress report to the Panel. Mr YIU suggested that for better presentation of the income and expenditure figures, the Administration should group together all five R&D Centres in its future funding proposals for the continued operation of the R&D Centres; or even subsume ASTRI under the Innovation and Technology Fund ("ITF") to facilitate monitoring of its performance.

62. PSIT advised that the funding allocation sought in June 2020 excluded ASTRI as its operating expenditure was met separately from Government's annual recurrent subvention since its establishment. The other four R&D Centres were required to apply for funding under ITF for their continued operation every four years. That said, the Administration considered it appropriate to give an annual report on the operations of the five R&D Centres in one go.

63. Mr YIU Si-wing noted that with the \$1,015.1 million of funding per year for four years up to 2025, each of the four R&D Centres concerned would be allocated with about \$250 million per year. He enquired why with an average annual expenditure of about \$180 million and an average annual industry income of about 140 million, each of the four R&D Centres should still be allocated with \$250 million annually.

64. PSIT advised that R&D Centres incurred non-R&D operating costs such as administrative expenditure and utility expenses, and allocation for the operation of R&D Centres was based on the overall expenditure projection for the next few years. Apart from this, R&D Centres were also required to submit funding applications to ITF for each R&D project that it wished to pursue.

Positioning of the Research and Development Centres

65. The Chairman noted that when FC discussed the funding proposal for the continued operation of the four R&D Centres up to end of March 2025, members urged the Administration to conduct a comprehensive review of their operation, role and positioning, and KPIs to ensure proper use of public funds and avoid direct competition with the relevant industries and private R&D institutions (as in the case of the CuMask+™ project coordinated by HKRITA, which had aroused suspicion of transfer of benefits). The Chairman enquired about the progress of the review.

66. CIT explained that the outcome of the review had been reported in the Administration's Paper and advised that the key mission of R&D Centres was to undertake applied R&D with the aim of transferring the R&D outcomes to the industry for commercialization. The Administration attached great importance to the performance of R&D Centres in commercialization, which had seen steady improvements over the years. R&D Centres also served a public mission to support government departments and public organizations. In this regard, when COVID-19 epidemic started in early 2020, the Administration commissioned HKRITA to coordinate the production of reusable face masks to address the acute shortage at that time.

67. The Chairman noted that the five R&D Centres were established in 2006 and there had been significant changes in the realm of R&D ever since. With the advent of the 5G generation, the Chairman enquired whether consideration would be given to establishing new R&D Centres to develop projects such as those relating to microchips which were in acute shortage globally.

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68. PSIT advised that although each R&D Centre had its specific R&D area of expertise, the scope of I&T to be used in their projects could be extensive. 5G technology, as a type of telecommunications technology, was a major part of ASTRI's work. On the other hand, artificial intelligence, robotics and healthcare-related technologies were the main R&D focuses of the *InnoHK* Clusters. In response to the Chairman's request, PSIT undertook to provide examples of R&D outcomes which had been adopted for use by the Government.

VI. Any other business

69. There being no other business, the meeting ended at 4:38 pm.