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**Panel on Commerce and Industry**

**Meeting on 21 April 2020**

**Updated background brief on the funding schemes  
under the Innovation and Technology Fund**

**Purpose**

This paper provides updated background information on the funding schemes under the Innovation and Technology Fund ("ITF"). It also provides a summary of views and concerns expressed by members of the Panel on Commerce and Industry ("the Panel") during previous discussions on the subject.

**Background**

The Innovation and Technology Fund

2. ITF was established by Resolution passed by the Legislative Council on 30 June 1999<sup>1</sup> as a statutory fund under the Public Finance Ordinance (Cap. 2) to finance projects that contribute to innovation and technology ("I&T") upgrading and development in manufacturing and services industries in Hong Kong, thereby enhancing Hong Kong's economic development. As of end 2019, the Finance Committee ("FC") approved a total of HK\$34 billion for ITF.<sup>2</sup>

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<sup>1</sup> The Innovation and Technology Fund ("ITF") came into operation on 1 November 1999.

<sup>2</sup> The Finance Committee ("FC") approved injections of HK\$5 billion into ITF on 9 July 1999, a further HK\$5 billion on 27 February 2015, and another HK\$10 billion on 13 July 2018. FC also approved injections into ITF of: (a) HK\$2 billion as endowment capital to generate investment income to finance projects under the Midstream Research Programme for Universities on 10 June 2016; (b) HK\$2 billion to finance the Innovation and Technology Venture on 12 July 2016; and (c) HK\$10 billion to provide financial support to establish two InnoHK research clusters in the Hong Kong Science Park ("HKSP") on 13 July 2018.

3. According to the Administration, ITF has significantly increased its financial support from about HK\$0.7 billion in 2013-2014 to over HK\$2 billion in 2018-2019. Over 80% of ITF's funding is used to fund enterprise-led projects, which, apart from research projects, include other non-research projects such as recruitment of researchers, fostering of technology adoption and promotion of technology culture.

### **Funding schemes under the Innovation and Technology Fund**

4. Currently, there are 16 funding schemes under ITF,<sup>3</sup> each having its own objectives, scope, and modus operandi. Details of the funding schemes are set out below. The statistics of the approved projects of each of the funding schemes are tabulated in **Appendix I**.

#### Innovation and Technology Support Programme

5. The Innovation and Technology Support Programme ("ITSP") was launched in 1999 to support research and development ("R&D") projects undertaken by institutions funded by the University Grants Committee ("UGC"), self-financing degree-awarding institutions registered under the Post-Secondary Colleges Ordinance (Cap. 320) ("PSCO"), the five R&D Centres under ITF, and other designated local public research institutions.

#### Guangdong-Hong Kong Technology Cooperation Funding Scheme

6. The Guangdong-Hong Kong Technology Cooperation Funding Scheme was introduced in 2004 to fund research projects involving Guangdong/Hong Kong cooperation (such as projects involving collaboration between research institutions and/or enterprises in Guangdong/Shenzhen and Hong Kong) to enhance R&D collaboration between the two places.

#### Mainland-Hong Kong Joint Funding Scheme

7. Following the signing of the "Agreement on Commencing Jointly Funded Projects between the Ministry of Science and Technology and the Innovation and Technology Bureau of the Hong Kong Special Administrative

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<sup>3</sup> In addition to funding schemes, ITF also funds, in full or in part, the operation of (a) four Research and Development ("R&D") centres; (b) the Technology Transfer Offices ("TTOs") of designated universities; (c) 16 State Key Laboratories ("SKLs") in Hong Kong; (d) six Hong Kong Branches of Chinese National Engineering Research Centres ("CNERCs"); and (e) the research centres/laboratories to be set up in the InnoHK research clusters in HKSP to enable them to carry out more R&D work and technology transfer, or commercialize their R&D outcome.

Region Government" in September 2018, the Mainland-Hong Kong Joint Funding Scheme was launched in April 2019 to support and encourage further R&D collaboration between Hong Kong and various provinces in the Mainland.

#### Partnership Research Programme

8. The Partnership Research Programme ("PRP") was launched in January 2019.<sup>4</sup> It provides matching funding support for approved R&D projects undertaken by private companies in collaboration with UGC-funded institutions, self-financing degree-awarding institutions registered under PSCO, the five R&D Centres under ITF, and other designated local public research institutions.

#### Enterprise Support Scheme

9. The Enterprise Support Scheme ("ESS") was introduced in 2015 as a major funding initiative under ITF to encourage the private sector to invest in R&D.<sup>5</sup> It provides dollar-for-dollar matching of up to HK\$10 million for each approved project for private companies to carry out R&D projects.

#### Research and Development Cash Rebate Scheme

10. The Research and Development Cash Rebate Scheme ("CRS") was introduced in 2010.<sup>6</sup> It provides private companies cash rebate equivalent to 40% of their expenses in (a) ITF R&D projects, and (b) other contract R&D projects funded by these companies and undertaken by the designated local universities, the five R&D Centres under ITF or other designated local public research institutions.

#### Midstream Research Programme for Universities

11. The Midstream Research Programme for Universities ("MRP") was introduced in 2016 to encourage UGC-funded institutions to conduct more theme-based midstream research in key technology areas. The funding ceiling for each project is HK\$5 million. Priority will be given to projects involving collaboration across multiple disciplines or institutions, where a higher funding ceiling of HK\$10 million per project will be given. According to the

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<sup>4</sup> It merges the previous University-Industry Collaboration Programme and the collaborative stream of the Innovation and Technology Support Programme.

<sup>5</sup> It replaces the previous Small Entrepreneur Research Assistance Programme.

<sup>6</sup> With FC's approval in February 2015, the Research and Development Cash Rebate Scheme was subsumed under ITF with effect from 1 April 2016.

Administration, the third round of MRP application under the theme of "Health Technologies for Diagnosis" will be closed for application on 20 April 2020.

### Public Sector Trial Scheme

12. The Public Sector Trial Scheme ("PSTS") was introduced in 2011. It provides funding support for public sector bodies to try out new technologies or products developed in ITF projects and by incubatees/graduate tenants of the Cyberport and the Hong Kong Science and Technology Parks Corporation ("HKSTPC").

13. To enable public sector organizations to use more local R&D outcomes on a trial basis with a view to promoting the commercialization of R&D results, the Administration has since 30 March 2020 expanded the scope of PSTS to cover production of prototypes or samples and/or conducting of trials in the public sector of the R&D outcomes by all technology companies conducting R&D activities in Hong Kong since 30 March 2020.<sup>7</sup>

14. On 9 March 2020, the Administration launched a special call under PSTS for projects to support product development and application of technologies for the prevention and control of the Coronavirus Disease 2019. The target funding recipients were the five R&D Centres under ITF, UGC-funded institutions, self-financing degree-awarding institutions registered under PSCO, designated local public research institutes, as well as all technology companies conducting R&D activities in Hong Kong. The funding ceiling for each project will be HK\$2 million in general and a higher ceiling for individual projects may be considered if necessary and justified. The deadline for application is 10 April 2020.

### Technology Voucher Programme

15. The Technology Voucher Programme ("TVP") was introduced in 2016. It subsidizes local enterprises, companies incorporated and registered in Hong Kong and statutory bodies set up in Hong Kong (except government subvented organizations and their subsidiaries) in using technological solutions to improve productivity, or facilitate the upgrading or transformation of their business processes.

16. The Financial Secretary ("FS") has announced in the 2020-2021 Budget that, starting from April 2020, the Government's funding ratio will increase from two thirds to three fourths, and the funding ceiling from HK\$400,000 to HK\$600,000. The ceiling on the number of approved projects will also rise from four to six.

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<sup>7</sup> The Chief Executive announced to launch this new measure in the 2019 Policy Address.

### Researcher Programme (formerly known as Internship Programme) and Postdoctoral Hub

17. The Researcher Programme was launched in 2004 to support ITF projects as well as incubatees/I&T tenants of HKSTPC and Cyberport to hire local graduates as researchers to assist in R&D projects. The Postdoctoral Hub was launched in 2018 to support ITF projects, incubatees/I&T tenants of HKSTPC and Cyberport as well as start-ups selected for co-investment under the Innovation and Technology Venture Fund ("ITVF") to recruit postdoctoral talent for R&D work.

18. Each ITF project/eligible applicant company can engage up to two researchers under the Researcher Programme and up to two postdoctoral talent under the Postdoctoral Hub at any one time for a maximum engagement period of 36 months for each researcher/postdoctoral talent. The maximum monthly allowances for researchers with a Bachelor's and a Master's degree are HK\$18,000 and HK\$21,000 respectively; and the maximum monthly allowance for each postdoctoral talent is HK\$32,000.

19. Since 9 March 2020, the Researcher Programme and the Postdoctoral Hub have been expanded to all technology companies conducting R&D activities in Hong Kong. FS also announced in the 2020-2021 Budget that the two programmes would be consolidated with a view to providing more flexibility for eligible organizations to engage R&D talent.

### Reindustrialisation and Technology Training Programme

20. The Reindustrialisation and Technology Training Programme ("RTTP") was launched in 2018.<sup>8</sup> It subsidizes local companies on a 2:1 matching basis (capped at HK\$500,000 for each company in each financial year) to train their staff in advanced technologies, especially those related to Industry 4.0.

### Technology Start-up Support Scheme for Universities

21. The Technology Start-up Support Scheme for Universities ("TSSSU") was launched in 2014 to support university faculties and students to start technology businesses and commercialize their R&D results. With the support of the Panel, starting from 2019-2020 onwards, the maximum annual funding for each of the six universities<sup>9</sup> has been increased to HK\$8 million and the

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<sup>8</sup> It replaces the previous New Technology Training Scheme run by the Vocational Training Council.

<sup>9</sup> They are The Chinese University of Hong Kong, City University of Hong Kong, The Hong Kong Baptist University, The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology and The University of Hong Kong.

maximum annual funding for each funded technology start-up has been increased to HK\$1.5 million.

### Innovation and Technology Venture Fund

22. ITVF was rolled out in 2017 to co-invest with private venture capital ("VC") funds in local I&T start-ups with an overall matching ratio of approximately 1:2. It helps local I&T start-ups meet funding needs and provides them with professional management knowledge as well as business and marketing network through the support and participation of venture capitalists. Currently, there are six VC funds participating in ITVF. The Administration has recently invited a new round of applications from VC funds to become co-investment partners of ITVF.

### General Support Programme

23. The General Support Programme was introduced in 1999. It supports non-R&D projects that help upgrade local industries and promote an I&T culture in Hong Kong.<sup>10</sup> Organizations in Hong Kong such as non-profit making trade or industry associations or chambers of commerce, public bodies, charitable organizations, tertiary institutes, District Councils, or private companies are eligible to apply.

### Patent Application Grant

24. The Patent Application Grant was launched in 1998 to provide funding support to first-time patent applicants to apply for a patent. An approved application will be granted up to HK\$250,000 or 90% of the sum of the total direct cost of the patent application and the administration fee charged by the Hong Kong Productivity Council, whichever is the lower.

### The proposed Re-industrialisation Funding Scheme

25. As announced in the 2018 Policy Address and the 2019-2020 Budget, the Administration plans to launch the Re-industrialisation Funding Scheme ("RFS") to expedite re-industrialization by subsidizing manufacturers on a matching basis to set up smart production lines in Hong Kong. According to the Administration's proposal, the funding under the proposed RFS will be provided on a 1(government):2(enterprise) matching basis, capped at

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<sup>10</sup> Examples include conferences, exhibitions, seminars, workshops, promotional events, studies and surveys, youth activities, events or projects to support platform building / upgrading of industry, etc.

HK\$15 million per project.<sup>11</sup> All companies incorporated in Hong Kong are eligible to apply for the funding.

26. The Panel discussed the proposed RFS with the Administration at the meeting on 21 May 2019 and agreed in principle that the relevant funding proposal of injecting HK\$2 billion into ITF for creating a commitment to launch RFS be submitted to FC for approval.

### **Previous discussions**

27. The Administration briefed the Panel at the meetings on 20 March 2018 and 15 January 2019 on the implementation progress of the funding schemes under ITF,<sup>12</sup> and sought the Panel's support at the meeting on 21 May 2019 for introducing the proposed RFS. The major views and concerns expressed by members are summarized in the ensuing paragraphs.

### Achievements of the Innovation and Technology Fund

28. At the meetings on 20 March 2018 and 15 January 2019, members raised concern on the effectiveness of ITF and the achievements of ITF funded projects. They suggested that the Administration should (a) set key performance indicators to evaluate the effectiveness of each funding programme under ITF; and (b) include in its next report to the Panel information on the achievements of ITF in terms of number and education level of R&D talent funded by the various programmes under ITF, as well as the commercial value of the technology products/services realized from ITF funded R&D projects.

29. Other members opined that the Panel should not evaluate ITF by simply studying ITF's total expenditure and the number of successful projects. They were worried that emphasizing too much on the short-term returns of I&T investments would hinder Hong Kong's I&T development.

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<sup>11</sup> The funding will cover expenses directly related to the establishment of the new production line in Hong Kong, including the costs of procurement, installation and commissioning of the machinery/equipment/apparatus, as well as fees for engaging technical consultancies for the design and setting up of the production line concerned, including testing and staff training. General business operating expenses of the applicant enterprise will not be funded.

<sup>12</sup> At these two meetings, the Administration also sought members' support for injecting HK\$10 billion into ITF to enable it to continue operation beyond 2018 and increase the funding support through ITF for SKLs, Hong Kong Branches of CNERCs and TTOs of designated local universities respectively.

30. The Administration submitted a follow-up paper (LC Paper No. CB(1)724/18-19(01)) after the meeting on 15 January 2019 to provide the number of approved applications and the amount of funding approved in respect of all funding schemes under ITF since their launch, and the effectiveness of some of the funding schemes.

### Positioning of the Innovation and Technology Fund

31. At the meeting on 15 January 2019, some members suggested that the Administration should increase ITF's annual expenditure to a level equivalent to 2% of Hong Kong's Gross Domestic Product ("GDP") and to grant funding on the condition that GDP growth could be boosted as a result. They also considered that ITF should concentrate its resources on encouraging enterprises to undertake more R&D projects instead of subsidizing enterprises in hiring R&D interns and postdoctoral talent.

32. The Administration advised that ESS provided matching fund for private enterprises to carry out R&D activities whereas TSSSU supported university professors and students to start technology businesses and commercialize their R&D results. It was hoped that the Government's investment in I&T would in turn incentivize the private sector to invest more on R&D so as to boost Hong Kong's annual expenditure on R&D and GDP.

33. At the meetings on 20 March 2018 and 15 January 2019, members expressed concern about the Administration's lack of effective policies to support commercialization of R&D outcomes. They referred to the cases of rideable autonomous drone and driverless ship that locally developed technologies could only be commercialized in other countries/places eventually. They sought further elaboration on the Administration's strategies to promote the commercialization of local R&D results in Hong Kong, the industrialization of locally developed technology products, and ultimately the internationalization of Hong Kong's technology industry.

34. The Administration advised that it had been proactively promoting the commercialization of local R&D deliverables in Hong Kong. Two notable examples were the face recognition technology and the non-invasive prenatal test which were developed by two local unicorn enterprises. Following the evolvement of ITF over the years, ITF had different funding schemes that supported different aspects of the I&T ecosystem. In addition to R&D activities, ITF supported the commercialization of R&D deliverables by funding technology start-ups of local universities through TSSSU and co-investing with private VC funds in local I&T start-ups through ITVF.

35. Some members pointed out that none of the funding schemes was dedicated to financial technology or e-commerce although financial services were one of the key industries in Hong Kong. They suggested that the Administration should consider establishing trade-specific programmes to facilitate the development of particular trades.

#### Vetting and approval procedure of the funding schemes

36. At the meetings on 20 March 2018 and 15 January 2019, members called on the Administration to speed up the processing time for ITF applications. They also relayed the comments from I&T start-ups and small and medium enterprises that they found it difficult to handle the administrative work associated with their ITF funding applications due to the lack of experience and resources. Members then suggested that the Administration should (a) consult the ITF applicants and improve the application procedures and arrangements of the funding schemes; (b) set up a centralized frontline office to provide one-stop services to assist enterprises in their submission of applications; and (c) include details of the enhancement measures in its next report to the Panel.

37. At the meeting on 15 January 2019, in response to members' suggestions of consolidating funding schemes with similar nature to make the funding schemes more user-friendly, the Administration advised that PRP would be launched in January 2019 by merging the University-Industry Collaboration Programme ("UICP") and the collaborative stream of ITSP. The Administration would identify further opportunities to consolidate different funding schemes as appropriate.

38. During the discussion at the same meeting, members noted that applicant enterprises might apply for support from more than one funding scheme. For example, after conducting R&D projects in partnership with designated local public research institutions under ITSP, UICP, or PRP, private companies might apply for cash rebate on its expenditure under CRS and further enjoy enhanced tax deduction for qualifying R&D activities. They called on the Administration to remind ITF applicants to consider applying for additional funds from other applicable funding schemes.

#### Internship Programme

39. At the meetings on 20 March 2018 and 15 January 2019, members asked whether the Administration had carried out any follow-up survey of the career path of the R&D interns supported under the Internship Programme, in particular on the number of jobs cut when the I&T companies were no longer provided with monthly allowances to engage R&D interns after the end of the approved internship period.

40. The Administration advised that it did not have information on the number of jobs cut after the internship period ended. The Administration would consider the feasibility of undertaking follow-up surveys by cost-effective means.

#### Midstream Research Programme for Universities

41. At the meeting on 15 January 2019, noting that MRP had supported only 18 projects since it was launched in 2016, some members opined that the progress was too slow and suggested that the Administration should better utilize the fund to support UGC-funded institutions in conducting midstream research projects.

42. The Administration advised that MRP, which relied on the investment return from the endowment of HK\$2 billion and invited applications once a year, aimed to encourage UGC-funded institutions to conduct theme-based midstream research in key technology areas. In future, the Administration would consider setting a theme with a wider coverage so that more researchers could apply for MRP. UGC-funded institutions might also apply for funding under ITSP when conducting midstream R&D projects.

#### The proposed Re-industrialisation Funding Scheme

43. During the discussion of the proposed RFS at the meeting on 21 May 2019, some members expressed concern that with a low government financing ratio of 33%, the creation of a legal charge in respect of the relevant production line would lessen the attractiveness of RFS. They enquired about the effect of the legal charge vis-à-vis debentures which were commonly required by banks in providing credit facilities to companies.

44. The Administration advised that RFS would effectively reduce the funded enterprises' investment risk by one third as the funding would be grants rather than loans. The aim of the legal charge was to retain the funded production line in Hong Kong for a reasonable period in order to bring substantive economic benefits to Hong Kong. Despite the legal charge, the Administration would provide flexibility for the funded projects by allowing the transfer of shareholding rights (rather than a transfer of the whole production line) and addition of new investors.

45. Noting that enterprises would be allowed to apply for funding for a new project after the completion of a previously approved project under RFS, some members enquired about the definition of a "new project", and whether a project for upgrading and restructuring would be considered as a new one. They also

enquired whether expenses for business promotion and software development would be eligible for funding.

46. The Administration advised that a new project would mean a different project involving a different production line. Whether an upgrading and restructuring project would be eligible for funding would depend on whether it involved the setting up of new advanced manufacturing facilities. No limit would be set on the total number of projects which could be approved in respect of an enterprise under RFS. Projects involving business promotion and software development could apply for other funding schemes such as SME Export Marketing Fund and ESS respectively.

### **Council question**

47. At the Council meeting of 19 June 2019, Hon Charles MOK asked a written question on whether the Administration had plans to streamline the procedure for course registration and approval under RTTP. Mr MOK's question and the Administration's reply are hyperlinked in the **Appendix II**.

### **Latest position**

48. The Administration will brief the Panel on 21 April 2020 on the latest progress of the funding schemes under ITF.

### **Relevant papers**

49. A list of relevant papers is shown in the **Appendix II**.

**Innovation and Technology Fund  
Statistics of Approved Projects (as at 31 January 2020)**

	<b>Funding scheme<sup>1</sup></b>	<b>Approved projects</b>	<b>Funds approved (HK\$ million)</b>
1.	Innovation and Technology Support Programme	2 611	9,363.3
2.	Guangdong-Hong Kong Technology Cooperation Funding Scheme	288	896.3
3.	Mainland-Hong Kong Joint Funding Scheme	0	0
4.	Partnership Research Programme ("PRP")	35	61.5
5.	Enterprise Support Scheme ("ESS")	110	352.7
6.	Research and Development Cash Rebate Scheme (Since April 2016)	318 <sup>2</sup>	428.6
7.	Midstream Research Programme	25	121.0
8.	Public Sector Trial Scheme	238	430.9
9.	Technology Voucher Programme	1 784	267.7
10.	Researcher Programmer (formerly known as Internship Programme)	4 759	1,265.7
11.	Postdoctoral Hub	890	515.2
12.	Reindustrialisation and Technology Training Programme – Training Grant Application	885	13.2
13.	Technology Start-up Support Scheme for Universities (From 2014-2015 to 2018-2019)	291	114.0
14.	General Support Programme	238	393.9
15.	University-Industry Collaboration Programme (replaced by PRP since 2019)	382	476.6
16.	Small Entrepreneur Research Assistance Programme (replaced by ESS since 2015)	412	503.6

<sup>1</sup> As for the Innovation and Technology Venture Fund, the Administration has invested over HK\$35 million in five local innovation and technology start-ups (as at early October 2019). The above table does not include statistics of approved projects for the Patent Application Grant.

<sup>2</sup> It refers to the number of partnership projects only.

## List of relevant papers

Date of meeting	Meeting	Paper
20/3/2018	Panel on Commerce and Industry	<p>Administration's paper on "Injection into the Innovation and Technology Fund" (<a href="#">LC Paper No. CB(1)684/17-18(05)</a>)</p> <p>Updated background brief on the initiatives for promotion of innovation and technology under the Innovation and Technology Fund prepared by the Legislative Council Secretariat (<a href="#">LC Paper No. CB(1)684/17-18(06)</a>)</p> <p>Administration's follow-up paper (<a href="#">LC Paper No. CB(1)1189/17-18(01)</a>)</p> <p>Minutes of meeting (<a href="#">LC Paper No. CB(1)1098/17-18</a>)</p>
7/7/2018 & 13/7/2018	Finance Committee	<p>Administration's paper on "Innovation and Technology Fund and Capital Investment Fund" (<a href="#">FCR(2018-19)38</a>)</p> <p>Administration's follow-up paper (<a href="#">LC Paper No. FC38/18-19(01)</a>)</p> <p>Minutes of meetings (<a href="#">LC Paper No. FC148/18-19</a>) (<a href="#">LC Paper No. FC94/18-19</a>)</p>

Date of meeting	Meeting	Paper
15/1/2019	Panel on Commerce and Industry	<p>Administration's paper on "Progress of the Innovation and Technology Fund and continuing the funding support to promote technology transfer and commercialisation of research and development results after 2018-19"  <a href="#">(LC Paper No. CB(1)406/18-19(03))</a></p> <p>Updated background brief on the initiatives for promotion of innovation and technology under the Innovation and Technology Fund prepared by the Legislative Council Secretariat  <a href="#">(LC Paper No. CB(1)406/18-19(04))</a></p> <p>Administration's follow-up papers  <a href="#">(LC Paper No. CB(1)589/18-19(01))</a>  <a href="#">(LC Paper No. CB(1)724/18-19(01))</a></p> <p>Minutes of meeting  <a href="#">(LC Paper No. CB(1)699/18-19)</a></p>
21/5/2019	Panel on Commerce and Industry	<p>Administration's paper on "New measures to promote 're-industrialisation' "  <a href="#">(LC Paper No. CB(1)1046/18-19(03))</a></p> <p>Updated background brief on the re-industrialization policy and Industrial Estates prepared by the Legislative Council Secretariat  <a href="#">(LC Paper No. CB(1)1046/18-19(04))</a></p> <p>Minutes of meeting  <a href="#">(LC Paper No. CB(1)1248/18-19)</a></p>
19/6/2019	Council	<p>Question No. 16 on "Reindustrialisation and Technology Training Programme" raised by Hon Charles Peter MOK  <a href="#">(Government press release)</a></p>