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Panel on Commerce, Industry, Innovation and Technology

Meeting on 19 November 2024

Background brief on funding schemes under the Innovation and Technology Fund

Purpose

This paper provides background information on funding schemes under the Innovation and Technology Fund ("ITF"), as well as a summary of views and concerns expressed by Members during discussions on the subject at meetings of relevant panel and subcommittees.

Background

2. ITF was established by a Resolution passed by the Legislative Council on 30 June 1999 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. The Finance Committee ("FC") approved on 9 July 1999 an appropriation of \$5 billion to ITF, which came into operation on 1 November 1999. As at June 2023, FC has approved a total of \$50.925 billion for ITF.

Funding schemes under the Innovation and Technology Fund

3. Currently, there are a number of funding schemes under ITF, 1 providing funding support for more than 50 research centres/laboratories,

In addition to funding schemes, ITF also funds, in full or in part, the operation expenditures of research and development ("R&D") Centres, the Technology Transfer Offices of universities and laboratories to enable them to carry out more R&D work, technology transfer and talent training, or commercialize their R&D

other designated public research institutions and private companies to conduct research and development ("R&D") and application of relevant technologies in various technology areas. ITF **supports six I&T areas**, namely supporting R&D, facilitating technology adoption, nurturing I&T talent, supporting technology start-ups, promoting new industrialization and developing new quality productive forces and fostering an I&T culture. The statistics of approved projects and details of each of the funding schemes are in **Appendices 1 and 2**.

Members' views and concerns

4. Matters relating to ITF funding schemes were raised at meetings of the Panel on Commerce, Industry, Innovation and Technology² ("the Panel") and the Subcommittee on Matters Relating to the Promotion of New Industrialization. The views and concerns expressed by Members are summarized in the ensuing paragraphs.

Supporting research and development

- 5. Members urged the Administration to increase the resources for supporting R&D and encourage more investments in R&D by the private sector, as well as promote commercialization of R&D outcomes. Members also suggested that the Administration further increase the ratio of gross domestic expenditure on research and development to gross domestic product ("GDP") beyond 1.5%, which would be comparable to that of other Mainland cities in the Guangdong-Hong Kong-Macao Greater Bay Area.
- 6. The Administration advised that, apart from promoting I&T development through ITF, measures, such as enhanced tax deduction for expenditure incurred by enterprises on R&D, had been put in place to incentivize the private sector to increase investment in technological R&D. In addition, other funding schemes had also been introduced to promote commercialization of R&D outcomes. For example, the **Partnership**

outcomes. Funded organizations include: (a) 16 State Key Laboratories in Hong Kong; (b) six Hong Kong Branches of Chinese National Engineering Research Centres; (c) 30 research laboratories set up under the InnoHK Research Clusters; (d) six R&D Centres (namely the Hong Kong Applied Science and Technology Research Institute, the Nano and Advanced Materials Institute, the Logistics and Supply Chain MultiTech R&D Centre, the Hong Kong Research Institute of Textiles and Apparel, the Automotive Platforms and Application Systems R&D Centre and Hong Kong Microelectronics Research and Development Institute); and (e) the Technology Transfer Offices of eight universities.

Formerly known as Panel on Commerce and Industry and renamed since 26 October 2022.

Research Programme (see item 4 of Appendix 2) had been launched to fund collaborative R&D projects undertaken by the R&D Centres, universities and other designated public research institutes.

Public Sector Trial Scheme

7. Members noted that the Public Sector Trial Scheme ("PSTS") (see item 7 of Appendix 2) was a measure in support of the commercialization of R&D outcomes, but they observed that public organizations were not proactive in trying out technology products, some of which had even been Members expected the public sector to proactively shelved after trial. facilitate the development of I&T products or services in Hong Kong. They enquired whether policies would be adopted to take the lead in procuring local R&D products. The Administration responded that the Innovation and Technology Commission ("ITC") had set up the PSTS Helpdesk to facilitate the use of technology products and services from startups or various enterprises by policy bureaux, departments or public Funding was also provided to assist enterprises in organizations. conducting relevant trials and promoted wider application of new technologies by different departments to enhance their services.

New Industrialisation Funding Scheme and New Industrialisation Acceleration Scheme

- 8. Members conveyed the views from the industries that the application procedures of the **New Industrialisation Funding Scheme** ("NIFS") (see item 16 of Appendix 2) were complicated, with relatively long vetting and approval time and cumbersome terms and conditions. Members urged the Administration to **streamline the application procedures** and step up efforts in **explaining the details of the funding scheme** to the industries. In addition, Members suggested that the Administration extend the funding support under the New Industrialisation Acceleration Scheme ("NIAS") (see item 17 of Appendix 2) to cover the establishment of pilot facilities or prototype rooms in traditional manufacturing industries for prototype production using Hong Kong-developed technologies or small-batch production, with a view to boosting the development of supply chain management as a whole.
- 9. The Administration advised that it would conduct timely review and make improvements to NIFS and liaise with the industries, relevant trade associations, representatives of various sectors, etc., to promote various funding schemes. Regarding the support for Hong Kong's traditional manufacturing industries, the Administration advised that it would encourage local enterprises to upgrade and transform their operations with the use of I&T and pursue smart manufacturing to enhance their

competitiveness.

10. Members were concerned about the **economic benefits** to be brought by **NIAS** to Hong Kong, and suggested that the Administration consider setting **performance targets** for **NIAS**, including increasing its share of the local GDP. The Administration explained that the establishment of NIAS would encourage enterprises to set up new smart production facilities and R&D centres to facilitate the development of downstream I&T sector, boost multi-pronged collaboration among the industry, academic and research sectors, promote the development of the I&T ecosystem, and create more opportunities for research talents. The Administration aimed to attract 50 to 100 enterprises to set up new production facilities in Hong Kong with a corresponding direct investment of no less than \$20 billion from these enterprises under NIAS starting from 2024-2025 over a period of five to eight years.

Nurturing local innovation and technology talent

- 11. Members urged the Administration to **further enhance** the **skills of** local **middle and low-skilled labour** in the light of **the development of new industrialization**. The Administration advised that through the New Industrialisation and Technology Training Programme, it would continue to subsidize eligible enterprises to train their local staff. Moreover, in recruiting enterprises to Hong Kong, the Administration would encourage them to participate in the training of local talent or bring in talent to assist in the relevant training work.
- 12. Members called on the Administration to **encourage secondary school students to take mathematics, science and technology** related subjects, and proactively **promote the development of vocational and professional education and training** ("VPET"). In response, the Administration advised that the Education Bureau would put emphasis on developing VPET in parallel with the traditional academic articulation pathway.

Research Talent Hub

- 13. Members enquired about the criteria for vetting applications and method for evaluating the effectiveness of the Research Talent Hub ("RTH") Scheme (see item 10 of Appendix 2). They were of the view that the Administration should **relax the threshold of applicant companies** and **expedite the reimbursement** process.
- 14. The Administration advised that ITC would take into consideration, among other things, the applicant company's experience in conducting

R&D, and the nature of the R&D work to be conducted by the research talents engaged through RTH. A majority of the research talent who had completed their RTH engagement periods had expressed interest in pursuing a career in scientific research in the future, and some of them had indicated that they had secured a job in R&D-related areas.

Technology Start-up Support Scheme for Universities

15. Members noted that the amount of investment received by some start-ups under the enhancement measure of the Technology Start-up Support Scheme for Universities ("TSSSU") (see item 13 of Appendix 2) had increased. Members enquired about the Administration's assistance for start-ups which had not received further capital injections. The Administration advised that over 60% of the start-ups participating in TSSSU had launched popular products and services in the market, and more than 70% of the start-ups had received further capital injections, the continuation of which would depend on the market environment and investors' perception.

Research, Academic and Industry Sectors One-plus Scheme

- 16. Members suggested that the Administration might **receive shares of start-ups** established by teams funded by the Research, Academic and Industry Sectors One-plus Scheme ("the RAISe+ Scheme") (see item 15 of Appendix 2), or future **profits** from project outcomes. The Administration explained that, the RAISe+ Scheme was set up with with the aim of facilitating the formation of a platform for collaboration among the industry, academia and research sectors, and promoting universities to transform R&D outcomes into products or services, it did not intend to take up any shares or profits of such start-ups.
- 17. Members suggested that the Administration encourage research teams interested in joining the RAISe+ Scheme to **indicate** in their applications that products successfully derived from their R&D would be **produced in Hong Kong**, so as to contribute to Hong Kong's I&T and industrial development. Members also suggested NIAS successful projects under the RAISe+ Scheme could be encouraged to **set up production bases in Hong Kong** to showcase Hong Kong's achievements in commercializing R&D outcomes.
- 18. The Administration responded that the promotion of I&T not only concerned upstream basic research, but also required integration with the midstream transformation of R&D outcomes as well as the downstream commercialization and industrial development so as to build up the local technology industry system and promote employment. Therefore, it was a

requirement for projects under the RAISe+ Scheme that at least half of the work procedures, including some core R&D components, or possibly the test batch production and pilot batch production or even commercial production in the future, be conducted in Hong Kong.

Council questions

19. Members raised questions relating to ITF funding schemes at Council meetings. The relevant hyperlinks are in **Appendix 3**.

Latest position

20. The Administration will brief the Panel on 19 November 2024 on the latest progress of and proposed capital injection for ITF funding schemes.

Relevant papers

21. A list of relevant papers is in **Appendix 3**.

Council Business Divisions
<u>Legislative Council Secretariat</u>
12 November 2024

Innovation and Technology Fund Statistics of approved projects (as at 30 September 2024)¹

Funding Scheme	Approved	Funds approved (\$ million)
Innovation and Technology Support Programme	3 325	12,301.1
Mainland-Hong Kong Joint Funding Scheme	110	213.6
Guangdong-Hong Kong Technology Cooperation Funding Scheme	408	1,076.9
Partnership Research Programme	315	578.9
Midstream Research Programme for Universities	65	325.7
University-Industry Collaboration Programme	384	481.3
Small Entrepreneur Research Assistance Programme	412	503.6
Enterprise Support Scheme ("ESS")	237 ²	708.2
Research and Development Cash Rebate Scheme (since April 2016)	787^3	1,080.9
Public Sector Trial Scheme	422	905.2
Public Sector Trial Scheme - Special Call for Projects for the Prevention and Control of Coronavirus Disease 2019 (COVID-19) in Hong Kong	63	102.3

The statistics were extracted from the <u>dedicated website</u> for ITF. The statistics do not include information on the statistics of approved projects for the New Industrialisation Acceleration Scheme, the STEM Internship Scheme, the Technology Start-up Support Scheme for Universities, the Innovation and Technology Venture Fund, and the Research, Academic and Industry Sectors Oneplus Scheme.

In addition to the above approved projects, there are seven applications recommended for funding by the ESS Panel which involve a funding amount of about \$20.35 million.

The number of partnership projects only.

Technology Voucher Programme	35 006	6,252.9
General Support Programme	456	873.6
New Industrialisation Funding Scheme (formerly known as the Re-industrialisation Funding Scheme)	38	261.2
Innovation and Technology Fund for Better Living	17	48.9
Patent Application Grant	2 574	547.7
Research Talent Hub	13 825	6,927.0
New Industrialisation and Technology Training Programme	17 743	667.3
Total	76 187 ⁴	46,040.8 ⁵

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Excluding cases of funding for operation of R&D Centres.

Including funding for operation of the R&D Centres, the New Industrialisation and Technology Training Programme - Annual Implementation Fee, the Patent Application Grant - Annual Implementation Fee, the Technology Voucher Programme - Annual Implementation Fee, the State Key Laboratories, the Hong Kong Branch(es) of Chinese National Engineering Research Centre(s), the Technology Transfer Offices of universities, the Hong Kong Institute of Biotechnology Limited - GMP Product Development and Technical Support Platform for Traditional Oral Solid Proprietary Chinese Medicine Products, the Technology Start-up Support Scheme for Universities, the STEM Internship Scheme, and R&D projects under the InnoHK Research Clusters.

Funding schemes under Innovation and Technology Fund

Suppo	Supporting research and development		
1.	Innovation and Technology Support Programme ("ITSP")	ITSO was introduced in 1999 to fund applied research and development ("R&D") projects undertaken by the local R&D Centres, ¹ local universities as well as other designated local public research institutes. ² The Administration have subsumed Midstream Research Programme for Universities ("MRP") under ITSP. MRP was launched in 2016 to support University Grants Committee-funded universities to conduct midstream researches.	
2.	Mainland-Hong Kong Joint Funding Scheme ("MHKJFS")	MHKJFS was introduced in 2019 to support and encourage universities and research institutes in Hong Kong and the Mainland to conduct collaborative R&D projects, with a view to enhancing R&D collaboration between the two places.	
3.	Guangdong-Hong Kong Technology Cooperation Funding Scheme ("TCFS")	TCFS was introduced in 2004 to fund applied R&D projects that include elements of cooperation between Guangdong and Hong Kong (i.e. projects involving collaboration between research institutes and/or enterprises in Guangdong/Shenzhen and Hong Kong) to enhance R&D collaboration between Hong Kong and the Guangdong Province.	

Namely the Automotive Platforms and Application Systems R&D Centre, the Hong Kong Applied Science and Technology Research Institute, the Hong Kong Research Institute of Textiles and Apparel, the Logistics and Supply Chain MultiTech R&D Centre, the Nano and Advanced Materials Institute and Hong Kong Microelectronics Research and Development Institute.

Including self-financing degree-awarding institutions registered under the Post Secondary Colleges Ordinances (Cap. 320), the Hong Kong Productivity Council, the Vocational Training Council, the Clothing Industry Training Authority and the Hong Kong Institute of Biotechnology.

4.	Partnership Research Programme ("PRP")	Launched in 2019, PRP aims to support R&D projects undertaken by the five R&D Centres, local universities and other designated local public research institutes in collaboration with companies incorporated in Hong Kong. In order to encourage enterprises to fund R&D work, funded enterprises can own the intellectual property rights if they contribute 50% of the project cost.
5.	Enterprise Support Scheme ("ESS")	Launched in 2015, ESS provides funding support for enterprises to conduct in-house R&D work. Funding of up to \$10 million is provided per approved project on a dollar-for-dollar matching basis. Recipient companies can own the intellectual property rights developed within the funded projects.
6.	Research and Development Cash Rebate Scheme ("CRS")	Launched in 2010, CRS provides cash rebate on local enterprises' eligible R&D expenditure so as to encourage enterprises to establish stronger partnership with local public research institutes ³ . The level of cash rebate was 10% in its inception and subsequently increased to 30% in 2012 and 40% in 2016.
Facili	tating technology adoption	1
7.	Public Sector Trial Scheme ("PSTS")	Launched in 2011, PSTS aims to provide funding for R&D projects under ITF, start-ups and technology companies conducting R&D activities in Hong Kong for producing prototypes/samples of their R&D outcomes and conducting trials in the public sector (including government departments) so as to promote the realization and commercialization of R&D outcomes.

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Including R&D Centres established by the Government, the Hong Kong Productivity Council, the Vocational Training Council, the Clothing Industry Training Authority and the Hong Kong Institute of Biotechnology.

8.	Technology Voucher Programme ("TVP")	TVP was launched in November 2016 with an aim of subsidizing local enterprises and organizations, on a matching basis, in using technological solutions to improve productivity, or upgrade and transform their business processes. With effect from 1 April 2020, TVP has been further enhanced with the Government funding ratio raised from two-thirds to three-quarters. The funding ceiling of each applicant has been increased from \$400,000 to \$600,000 and the maximum number of projects funded has also been increased from four to six.
9.	Innovation and Technology Fund for Better Living ("FBL")	FBL was launched by the Innovation and Technology Bureau in May 2017 and transferred to ITF in June 2021. It aims to fund I&T projects which will make people's daily living more convenient, comfortable and safer, or address the needs of specific community groups.
Nurtu	ring innovation and techn	ology talent
10.	Research Talent Hub ("RTH")	RTH was introduced in July 2020 (merging the Researcher Programme launched in 2004 and the Postdoctoral Hub launched in 2018), providing funding support for eligible companies or organizations to engage up to four graduates in STEM (Science, Technology, Engineering and Mathematics)-related disciplines from local universities or well-recognized non-local institutions to conduct R&D work. It provides maximum monthly allowances of \$20,000, \$23,000 or \$35,000 for each research talent with a bachelor's, master's or doctoral degree respectively. Research talent with a doctoral degree will be provided with an additional living allowance of \$10,000 per month under the RTH. The maximum engagement period for each research talent is generally 36 months.

All technology companies conducting R&D activities in Hong Kong, incubatees and I&T tenants of the Hong Kong Science and Technology Parks Corporation and the Hong Kong Cyberport Management Company Limited, organizations and companies undertaking R&D projects funded by ITF as well as companies subsidized under the New Industrialisation Acceleration Scheme.

⁵ "Well-recognized non-local institution" refers to one of the top 100 institutions for STEM-related

11.	New Industrialisation and Technology Training Programme ("NITTP") (formerly known as Reindustrialisation and Technology Training Programme")	NITTP was introduced in August 2018 to subsidize local enterprises on a 2 (Government): 1 (enterprise) matching basis to train their staff in advanced technologies, especially those related to new industrialization.
12.	STEM Internship Scheme	The STEM Internship Scheme was launched in June 2020 as a pilot scheme to subsidize undergraduates and post-graduates taking STEM-related programmes in local universities to enrol in short-term internships, with a view to encouraging STEM students to gain I&T-related work experience during their studies and to fostering their interest early in pursuing a career in I&T after graduation, so as to enlarge the local I&T talent pool. The scheme has been regularized starting from 2021-2022, and its coverage expanded in June 2023 to cover internship opportunities offered by the five government-funded R&D Centres and the Hong Kong Productivity Council ("HKPC") to students studying STEM programmes at local and non-local universities (including the campuses in Guangdong-Hong Kong-Macao Greater Bay Area established by designated local universities).

subjects in the latest Quacquarelli Symonds World University Rankings, the Academic Ranking of World Universities, the Times Higher Education World University Rankings, or the U.S. News & World Report Best Global Universities Rankings.

The nine universities currently participating in the Scheme are: City University of Hong Kong, Hong Kong Baptist University, The Chinese University of Hong Kong, The Education University of Hong Kong, The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology and The University of Hong Kong that have participated since 2020-2021, and Lingman University and the Hong Kong Metropolitan University that have joined the Scheme in 2023-2024 and 2024-2025 respectively.

Suppo	orting technology start-ups	S
13.	Technology Start-up Support Scheme for Universities ("TSSSU")	Launched in 2014, TSSSU provides funding to students and teachers of six designated universities (i.e. City University of Hong Kong, Hong Kong Baptist University, The Chinese University of Hong Kong, The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology and The University of Hong Kong) to support their teams in establishing technology start-ups and commercializing their R&D outcomes. Currently, an annual funding of up to \$16 million is provided for each of the designated universities. Each funded start-up may receive up to \$1.5 million each year.
14.	Innovation and Technology Venture Fund ("ITVF")	Launched in 2017, ITVF aims to encourage venture capital ("VC") funds to invest in local I&T start-ups and create a more vibrant I&T ecosystem in Hong Kong. ITC has selected a total of 20 VC funds as co-investment partners ("CPs") since the third quarter of 2018 to co-invest at a matching ratio of approximately 1 (Government): 2 (CPs).
15.	Research, Academic and Industry Sectors One- plus Scheme ("RAISe+ Scheme")	Launched in October 2023, the RAISe+ Scheme aims to encourage universities to transform excellent original breakthrough R&D outcomes which have reached a certain level of technology readiness to products or services for the initiation of the commercialization stage, so as to facilitate the commercialization of R&D outcomes.
Promo	oting New Industrializatio	n and Developing New Quality Productive Force
16.	New Industrialisation Funding Scheme ("NIFS") (formerly known as the Re- industrialisation Funding Scheme)	NIFS was launched in 2020 to subsidize manufacturers to set up new smart production lines in Hong Kong on a 1 (Government): 2 (enterprise) matching basis. The funding ceiling is one-third of the total project cost or \$15 million, whichever is lower. The Government announced in the 2023 Policy Address that each company could have a maximum of three project applications and ongoing projects under the scheme at the same time, i.e. an enterprise can receive a total maximum funding of \$45 million. These arrangements have been implemented since 8 January 2024.

17.	New Industrialisation Acceleration Scheme ("NIAS")	Launched in September 2024, NIAS provides funding support on a 1 (Government): 2 (enterprise) matching basis for enterprises engaging in life and health technology, AI and data science, and advanced manufacturing and new energy technologies, subject to a funding ceiling of \$200 million per enterprise.	
Foster	Fostering an innovation and technology culture		
18.	General Support Programme ("GSP")	GSP was introduced in 1999 to support non-R&D projects that help upgrade local industries and promote I&T culture in Hong Kong.	
19.	The Patent Application Grant ("PAG")	Launched in 1998 and with HKPC as its implementation agent, PAG aims to encourage local companies and individual inventors who are first-time patent-seekers to protect and capitalize their intellectual work through patent registration. The maximum amount of grant for each approved application is \$250,000.	

Sources: LC Paper Nos. $\underline{CB(1)141/2022(04)}$, $\underline{CB(1)326/2024(01)}$, $\underline{CB(1)487/2024(01)}$ and $\underline{CB(1)818/2024(02)}$

Appendix 3

Funding schemes under Innovation and Technology Fund

List of relevant papers

Committee	Date of meeting	Paper
Panel on Commerce and Industry	19 April 2022	Agenda Item IV: Progress report of the funding schemes under the Innovation and Technology Fund Minutes of meeting Follow-up paper
Panel on Commerce, Industry, Innovation and Technology	21 March 2023	Agenda Item V: Proposed launch of a \$10 billion "Research, Academic and Industry Sectors One-plus Scheme" Minutes of meeting
	8 April 2024	Agenda Item III: New Industrialisation Acceleration Scheme Minutes of meeting
Subcommittee on Matters Relating to the Promotion of New Industrialization	22 March 2024	Agenda Item I: Facilitating the transformation and upgrading of traditional industries Minutes of meeting
	26 April 2024	Agenda Item I: Supporting the commercialization of research and development outcomes Minutes of meeting Follow-up paper
Finance Committee	17 May 2024	Agenda Item 2: INNOVATION AND TECHNOLOGY FUND HEAD 111 – INNOVATION AND TECHNOLOGY New Subhead "New Industrialisation Acceleration Scheme" Minutes of meeting

Council meeting	Paper
7 June 2023	Question 11: Performance indicators for Research and Development Centres
8 November 2023	Question 22: The work of Research and Development Centres
15 November 2023	Question 11: Assisting small and medium-sized law firms in applying technologies
31 January 2024	Question 7: Research, Academic and Industry Sectors One-plus Scheme
21 February 2024	Question 13: New Industrialisation Funding Scheme
13 March 2024	Question 17: Technology Voucher Programme
27 March 2024	Question 5: Developing new quality productive forces
10 July 2024	Question 8: Developing industries related to new quality productive forces
6 November 2024	Question 7: New Industrialisation and Technology Training Programme