

For discussion
on 21 May 2019

Legislative Council
Panel on Commerce and Industry

New Measures to Promote “Re-industrialisation”

PURPOSE

This paper seeks Members’ support for the Government’s new measures to promote “re-industrialisation”.

BACKGROUND

2. Hong Kong has been a service-oriented economy. With the rapid development of innovation and technology (“I&T”) in recent years, more development opportunities are opened up for high-end manufacturing industries. Hong Kong has world-class universities and outstanding research and development (“R&D”) talent. Possessing important strengths of a free and open economy, sound legal system and robust intellectual property protection regime, coupled with the professional knowledge and quality standards of traditional industries, Hong Kong has become an ideal place for industrialists, especially those engaging in high value-added and high-tech production, to set up their production lines.

3. The Government has been actively promoting “re-industrialisation” in recent years to develop advanced manufacturing industries that are based on new technologies and smart production, so as to identify new growth points for Hong Kong’s economic development. However, due to constraints in land resources and labour, Hong Kong is unable to accommodate manufacturing industries which are labour intensive or require large parcels of land. Therefore, the Government aims at attracting those manufacturing operations which adopt advanced technologies and do not require much labour or land. The Government has been supporting the development of “re-industrialisation” through the provision of infrastructural, financial, technological and talent support. The relevant measures are detailed in **Annex 1**.

PROPOSALS

4. The Government announced in the 2018 Policy Address and the 2019-20 Budget its plan to inject \$2 billion into the Innovation and Technology Fund (“ITF”) for launching a Re-industrialisation Funding Scheme (“RFS”) to subsidise manufacturers on a matching basis to set up smart production lines in Hong Kong, and allocate an additional \$2 billion for the Hong Kong Science and Technology Parks Corporation (“HKSTPC”) to identify suitable land in industrial estates (“IEs”) for building manufacturing facilities required by the dedicated manufacturing sector, thereby facilitating more manufacturers to set up operations in Hong Kong. These initiatives for promoting the development of high-end production in Hong Kong will help diversify the economy and reduce our reliance on service industries. High-end manufacturing industries will also provide quality jobs for local I&T talents, particularly young people. Detailed proposals are set out in the ensuing paragraphs.

Re-industrialisation Funding Scheme

Eligibility Criteria and Funding Principles

5. We propose that all companies incorporated in Hong Kong under the Companies Ordinance (Cap. 622) are eligible to apply for funding under the RFS for setting up new smart production lines in Hong Kong. The production lines can be set up in or outside the IEs of the HKSTPC.

6. Funding will be provided on a 1 (government) : 2 (enterprise) matching basis, with the Government covering a maximum of one-third of the total approved project expenditure or \$15 million per project, whichever is lower. In other words, the applicant has to contribute no less than two-thirds of the total approved project expenditure. There is no limit on the total number of projects that may be approved in respect of an enterprise, but each enterprise can only apply for funding for a new project after completion of the previously approved project under the RFS.

7. The funding under the RFS 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.

8. Grants will generally be disbursed on a reimbursement basis after project completion and upon the Government’s acceptance of the final project

report and final audited accounts submitted by the enterprises. If the project duration is over 12 months, the Government will disburse interim funding of up to 50% of the approved funding amount upon the Government's acceptance of the progress report and audited accounts submitted by the enterprises which certify that certain project milestones have been achieved. We expect that most approved projects will be completed within 24 months.

Project Vetting and Implementation

9. We will set up a Vetting Committee ("VC") for the RFS comprising the trade, industry associations, I&T sector, and representatives from relevant government departments. The VC will endorse a set of application guidelines as well as assessment and funding criteria, consider and approve applications, oversee the implementation and evaluate the outcome of approved projects, regularly review and monitor the overall progress of the RFS and evaluate its effectiveness, and if necessary, formulate enhancement measures, etc. The Innovation and Technology Commission ("ITC") will conduct initial vetting of applications and submit its recommendations to the VC for consideration. If necessary, external experts will be engaged and consulted on the technical aspects of the applications. The secretariat will also monitor the progress of approved projects, and conduct relevant promotion and publicity activities of the RFS, etc.

Control and Review Mechanism

10. To ensure the proper use of public money, we propose to assess applications according to the following guiding principles –

- (a) the project should involve actual set up of a production line in Hong Kong;
- (b) the production line or a significant portion of the production line should fulfil the "smart" criteria, e.g. involving the use of "smart" technologies such as Internet of Things, real-time data, application of data analytics and advanced human-machine interfaces, artificial intelligence/machine learning/deep learning, and robotics, etc. in the production process; and
- (c) the project should have a reasonable budget with itemised cost breakdown and detailed justifications of costs and expenses.

We will formulate more detailed assessment criteria after consulting the VC.

11. Suitable measures will be put in place to guard against duplication in the source of funding and possible abuse. For example, enterprises will not be

eligible for funding under the RFS if the production line concerned has already obtained other source(s) of government funding support. In addition, funding provided must not be used to subsidise the general operating expenses of the enterprise concerned. Enterprises have to submit a report and audited accounts upon project completion. If the duration of the project exceeds 12 months, progress report(s) and accounts will be required to facilitate the secretariat's monitoring of project progress and disbursement of interim funding. Apart from reviewing progress and final reports submitted by the enterprises, on-site checking of projects will be conducted. Funding will only be disbursed to the enterprises upon the Government's acceptance of the progress/final report and audited accounts.

12. Upon project completion, the enterprises concerned would be required to provide information to the Government on the benefits of the relevant production line, such as the business turnover after the commissioning of the production line, and the number and types of new jobs created, etc.

13. Given that public money is involved in each application, to ensure that the funded projects can bring substantive economic benefits to Hong Kong for a reasonable period, unless with prior written approval from the Government, the production line funded cannot be transferred to other parties or to any place outside Hong Kong within a specified period of, say, five years after project completion. The VC will determine the length of the period concerned. Successful applicants will be required to sign a project agreement with the Government, which would set out the above restriction and that the Government has the right to recoup the funding disbursed in case of non-compliance. We will also create a legal charge in respect of the relevant production line and register such a charge with the Companies Registry.

Financial Implications

14. Subject to the approval of the Finance Committee ("FC") of the Legislative Council, the Government will transfer \$2 billion from the General Revenue Account to the ITF to create a new dedicated subhead for launching the RFS. The ITC will set up a secretariat to handle relevant work and has included provision in the 2019-20 Estimates to meet the relevant operating cost.

Implementation Timetable

15. We plan to seek funding approval of the RFS from the FC in June this year, with a view to launching the scheme in the latter half of the year.

Public Consultation

16. We have consulted major industry and trade organisations in drawing up the operational details of the RFS. We have also consulted the “Committee on Innovation, Technology and Re-industrialisation” chaired by the Financial Secretary in this March. The industry generally welcomed the proposal.

Development of Microelectronics Centre

17. To dovetail with the Government’s policy on “re-industrialisation”, the HKSTPC refurbished a four-storey factory in the Tai Po IE into the Precision Manufacturing Centre (“PMC”) in 2017 to promote smart production. At present, the PMC is fully occupied. In addition, following the approval of the FC, the Government has injected funding to HKSTPC in 2016 for developing the Advanced Manufacturing Centre (“AMC”) in the Tseung Kwan O IE. The project is expected to be completed by 2022 as scheduled. The HKSTPC invited tenders for tenancy of the AMC in April this year, and has received a good number of applications for admission, reflecting positive response from the industry. The above development reflects that there is certain demand for local production facilities from the manufacturing sector.

18. At present, microelectronics technology has been widely used in the fields of electronics and communications products, medical equipment, and robots etc. Local universities and research institutes also possess strong research capabilities in the related fields. For instance, the Hong Kong Applied Science and Technology Research Institute has developed the next generation microelectronic material silicon carbide power devices, which would replace traditional silicon power devices to further improve energy efficiency. Developing microelectronics manufacturing facilities in Hong Kong would strengthen our support to the growth of these sectors.

19. The HKSTPC has in recent years received quite a number of enquiries, which indicate the interest of industries to establish microelectronics and relevant production lines (such as advanced materials) in Hong Kong. The manufacturing of microelectronics products requires specific facilities, such as dangerous goods storage, super-clean rooms with very high standards of production environment, and dedicated chemical waste and sewage treatment systems, etc. Due to the lack of these manufacturing facilities in Hong Kong at present, local enterprises have to entrust the relevant production to manufacturing plants in Singapore, Taiwan or the Mainland, etc.

20. In view of this, we propose to convert an old factory in the Yuen Long IE (see [Annex 2](#)) into the Microelectronics Centre. The two-storey factory will have a gross floor area of 36 180 square metres after conversion. It will adopt

flexible design and be equipped with dedicated facilities such as high standard super-clean rooms, dangerous goods storage and waste treatment, etc. It will also provide shared ancillary facilities such as shared laboratories for product quality and reliability testing analysis, ancillary offices, conference rooms, shared work spaces, etc. The estimated cost of this conversion project is \$2 billion.

Implementation Plan

21. We plan to seek funding approval from the FC in June this year, and commence the conversion works as soon as possible, with a view to completing the conversion by end-2020.

Financial Arrangement

22. We propose to inject \$2 billion from the Government's Capital Investment Fund to the HKSTPC for implementing this proposal.

23. In recommending the financial arrangement above, we have taken into account HKSTPC's overall financial position, as well as the infrastructure projects and new initiatives that it needs to implement in the coming years. In terms of financial position, the HKSTPC has shouldered over \$5.8 billion of debts¹, which have to be repaid by 2038-39, for the development of Science Park Phases 2 and 3, Stage 1 of the Science Park Expansion Programme, the AMC, the Data Technology Hub, the InnoCell and other facilities. Although the Government obtained the approval of the Legislative Council in 2018 for injecting \$10 billion to the HKSTPC, the provision has already been designated for specific uses. The HKSTPC does not have adequate financial reserve to undertake this project, and its operation surplus has to be deployed for the improvement and maintenance of its buildings and facilities as well as for its daily operations. Meanwhile, the HKSTPC has to ensure that it maintains an adequate level of cash balance to cater for its daily operation and unexpected capital requirements.

Expected Benefits

24. As mentioned in paragraph 4 above, developing high-end production in Hong Kong will help diversify Hong Kong's economy, reduce our reliance on service industries, provide new impetus to economic growth, and rejuvenate the "Made in Hong Kong" brand. Through providing concrete support, the two measures proposed above will provide substantive assistance to local manufacturers in moving towards high value-added production and upgrading to "Industry 4.0".

¹ Including the outstanding principal loans of about \$5 billion and interests of about \$0.83 billion arising therein.

25. The setting up of smart production lines in Hong Kong can provide direct job opportunities, especially quality I&T jobs for young people. It can also encourage relevant enterprises to set up other business operations in Hong Kong (such as marketing and promotion, sales and accounting, supply chain management, wholesale and distribution, etc.), and create demand for services from other sectors (such as advertising, testing and certification, etc), thereby creating further jobs and bringing wider benefits to different sectors in Hong Kong.

26. In addition, high-end manufacturing will generate R&D needs and encourage private enterprises to invest more resources in R&D, thus contributing to the robust and sustainable development of local R&D work. This would help Hong Kong develop into an international I&T hub. The two measures can help retain in Hong Kong the value chain from R&D to finished goods, thereby creating a clustering effect to attract start-ups as well as local, Mainland and overseas enterprises, universities, and R&D institutions to conduct R&D and production in Hong Kong, and add new impetus to the development of advanced manufacturing industries in Hong Kong.

27. The Microelectronics Centre proposed in paragraphs 17 to 20 can also meet the industry's demand for this type of advanced manufacturing facilities in the near term. It is estimated that the Centre will create about 420 direct job opportunities and generate a value added of over \$600 million² annually.

ADVICE SOUGHT

28. Members are invited to support the proposals for implementing the RFS and developing the Microelectronics Centre. Subject to Members' agreement on the above proposals, we would seek approval from the FC for the funding required.

Innovation and Technology Bureau
Innovation and Technology Commission
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² Including an indirect value added of about \$190 million and an induced value added of \$65 million at 2018 prices.

The Government's Measures to Promote "Re-industrialisation"

The Government has been actively promoting "re-industrialisation" in recent years to develop advanced manufacturing industries that are based on new technologies and smart production, so as to identify new growth points for Hong Kong's economic development. We have been supporting the development of "re-industrialisation" through the provision of infrastructural, financial, technological and talent support. Our work is detailed as follows:

Infrastructure

- The Hong Kong Science and Technology Parks Corporation ("HKSTPC") is developing the Data Technology Hub and the Advanced Manufacturing Centre ("AMC") in the Tseung Kwan O Industrial Estate ("IE") to provide infrastructural facilities for advanced manufacturing industries. The two projects are expected to be completed in 2020 and 2022 respectively. The AMC will foster smart production and advanced assembly of high value-added manufacturing industries and cover extended activities such as research and development ("R&D"), logistics support, prototyping and design, etc.
- Separately, the HKSTPC converted a factory in the Tai Po IE into the Precision Manufacturing Centre ("PMC") in 2017 to foster high technology smart production. The four-storey PMC has been fully occupied by tenant enterprises engaging in precision engineering and assembly, new material manufacturing and environmentally-friendly yarn production, tooling and advanced indoor hydroponic industries, etc.

Financial Support

- The Government, through the Innovation and Technology Fund ("ITF"), continues to provide financial support for local R&D work and finance projects that can contribute to the technological upgrading of industries and promotion of innovation, thereby promoting "re-industrialisation". Relevant funding schemes include the Innovation and Technology Support Programme, Partnership Research Programme and Enterprise Support Scheme, etc.
- The HKSTPC will designate part of the Government's \$10 billion allocation to offer incentives for advanced manufacturers to set up operations in the IEs. In this connection, the HKSTPC is working out the relevant details and will decide on the form of support as well as the amounts having regard to the size and needs of enterprises.

Technological Support

- The Hong Kong Productivity Council (“HKPC”) has been dedicating efforts to assist enterprises to move towards high value-added production and gradually upgrade to “Industry 4.0”. For example, the HKPC has jointly established the Invention Centre with the Fraunhofer Institute for Production Technology of Germany, the world pioneer of “Industry 4.0”, to introduce to the industry technologies relating to “Industry 4.0” and assist the industry to accelerate the adoption of innovative industrial technologies, thereby promoting the development of smart industries. It has also been running the “Industry 4.0 Upgrade and Recognition Programme”, the Inno Space and Smart Industry One to drive “re-industrialisation” and assist the industry in gradually moving towards smart production and operations. In addition, the HKPC also organises different types of training programmes and seminars to introduce new technologies and the latest scientific research results, and encourage the industry to grasp the opportunities brought about by innovation and technology.
- In addition, the five R&D Centres established by the Government (i.e. the Hong Kong Applied Science and Technology Research Institute, the Logistics and Supply Chain MultiTech R&D Centre, the Nano and Advanced Materials Institute, the Hong Kong Research Institute of Textiles and Apparel, and the Automotive Parts and Accessory Systems R&D Centre) would also continue to engage in R&D related to “re-industrialisation” and work closely with the industry to drive the commercialisation of R&D outcomes and assist the industry to capture and capitalise on business opportunities.

Nurturing of Talent

- We introduced in August 2018 the Re-industrialisation and Technology Training Programme under the ITF to subsidise local enterprises on a 2 (government) : 1 (enterprise) matching basis to train their staff in technologies, especially those relating to “Industry 4.0”. As at end of March 2019, 313 training grant applications have been approved under the Programme to subsidise 636 staff of local enterprises to receive technology training, with a total funding amount of around \$4.38 million.
- In addition, the HKPC, together with the Vocational Training Council and the Fraunhofer Institute for Production Technology of Germany, also launched in March 2018 the first “Industry 4.0” professional diploma programme in Hong Kong to strengthen training of industry practitioners in “Industry 4.0”-related skills.

