A. Introduction

The Audit Commission ("Audit") conducted a review to examine the provision of consultancy, research and development and training services by the Hong Kong Productivity Council ("HKPC"). A related review was conducted and the findings were reported in October 2009.[1]

2. Hon SHIU Ka-fai declared that he was engaged in the trading business of construction materials, and unremunerated honorary adviser or honorary member to some non-governmental organizations or trade associations.

Background

3. The Administration established HKPC in 1967 under the Hong Kong Productivity Council Ordinance (Cap. 1116) ("HKPCO") with a mission to improve the productivity, operational efficiency and competitiveness of local industries. HKPC is governed by a Council,[2] and is supported by four Standing Committees.[3] In March 2003, the Administration and HKPC entered into a Memorandum of Administrative Arrangements ("MAA"), which provides a framework for the relationship between the Administration and HKPC and sets out in detail the responsibilities of each party. According to paragraph 5.1 of MAA, HKPC is autonomous in the management and control of its activities and resources.

4. Commissioner for Innovation and Technology is the Controlling Officer of the subventions granted to HKPC. In 2017-2018, HKPC had a total income of $711 million, which included government subventions of $223.3 million (31.4%) and

---

1 The review results on the corporate governance and administrative issues of HKPC were reported in the Director of Audit's Report No. 53 of October 2009 and the Public Accounts Committee's conclusions and recommendations made in respect of the subject were published in its Report No. 53 of February 2010.

2 According to HKPCO, the Council shall consist of not more than 23 members appointed by the Chief Executive, comprising a Chairman, 17 persons representing management, labour and professional or academic interests, and not more than five public officers. The five public officers appointed as Council members are: (a) the Permanent Secretary for Innovation and Technology; (b) the Commissioner for Innovation and Technology; (c) the Director-General of Trade and Industry; (d) the Government Economist; and (e) the Deputy Commissioner for Labour (Labour Administration).

3 The four Standing Committees are Audit Committee, Business Development Committee, Finance Committee and Staffing Committee.

a total expenditure of $663.7 million. It was announced in the 2016 Policy Address that re-industrialization was a potential new area of economic growth for Hong Kong and that HKPC would facilitate industrial upgrading and transformation, enabling enterprises to embrace re-industrialization and move towards high value-added production.

5. The Committee held three public hearings on 13, 17 December 2019 and 7 January 2020 to receive evidence on the findings and observations of the Director of Audit's Report ("Audit Report").

The Committee's Report

6. The Committee's Report sets out the evidence gathered from witnesses. The Report is divided into the following parts:

- Introduction (Part A) (paragraphs 1 to 17);
- Provision of consultancy and manufacturing support services (Part B) (paragraphs 18 to 62);
- Research and development projects (Part C) (paragraphs 63 to 83);
- Provision of training programmes (Part D) (paragraphs 84 to 105); and
- Conclusions and recommendations (Part E) (paragraphs 106 to 108).

Speech by Director of Audit

7. **Mr John CHU Nai-cheung, Director of Audit**, gave a brief account of the Audit Report at the beginning of the Committee's public hearing held on 13 December 2019. The full text of his speech is in *Appendix 19*.

Opening statement by Secretary for Innovation and Technology

8. **Mr Nicholas YANG Wei-hsiung, Secretary for Innovation and Technology**, made an opening statement at the beginning of the Committee's public hearing held on 13 December 2019, the summary of which is as follows:

- while HKPC was unable to recover the full costs in some of its projects as revealed by the Audit Report, it had been maintaining a healthy financial position; and

- HKPC had already implemented the majority of Audit's recommendations, and was actively following up on the remaining ones. The Administration would continue to closely monitor the operation of HKPC to ensure its prudent use of public money and fulfilment of public mission.

The full text of Secretary for Innovation and Technology's opening statement is in *Appendix 20*.

Opening statement by Executive Director, HKPC

9. **Mr Mohamed D BUTT, Executive Director, HKPC**, made an opening statement at the beginning of the Committee's public hearing held on 13 December 2019, the summary of which is as follows:

- HKPC had taken measures to address the 64 recommendations in the Audit Report, with over 75% of them implemented and it was expected that the remaining would be implemented in the coming six months; and

- a few of the improvement measures in relating to project management, undertaking of innovation and technology projects, commercialization of results of research and development ("R&D") projects and provision of training, were highlighted in the opening statement.

The full text of Executive Director, HKPC's opening statement is in *Appendix 21*.

10. Noting from paragraphs 1.3 and 1.4 of the Audit Report the commissioning of a consultancy study, which was completed in April 2002, by HKPC to review its role, management and operation, the Committee asked whether the Administration/HKPC had carried out similar studies since then.

11. **Secretary for Innovation and Technology** responded at the public hearings, and **Executive Director, HKPC** and **Ms Rebecca PUN Ting-ting,**

Commissioner for Innovation and Technology, added in their respective letters dated 3 January 2020 (*Appendices 22* and *23* respectively) that:

- in view of the rapid economic changes and technological advancement of Hong Kong, with the agreement of the Council, HKPC engaged a consultant in 2001 to review its role, management and operation;

- though similar studies had not been conducted since the completion of the above consultancy study in 2002, HKPC held a strategic planning meeting in 2011 to discuss with Council members the needs of the industry at that time in order to map out HKPC's long-term objectives and direction. Another strategic planning meeting was held by HKPC in 2016 to discuss the future strategy and positioning of HKPC in meeting different new demands of the industry; and

- in recent years, HKPC had been implementing various initiatives in support of the Innovation and Technology Bureau ("ITB")'s policy direction of promoting re-industrialization and developing innovation and technology. The Innovation and Technology Commission ("ITC") would discuss with HKPC the need to review its mode of operation, future business direction and subvention mode having regard to the future economic development of Hong Kong.

12. On the Committee's enquiry about the role of the Administration in formulating the policy for HKPC's implementation under MAA, **Ms Annie CHOI Suk-han, Permanent Secretary for Innovation and Technology**, explained at the public hearings and **Commissioner for Innovation and Technology** added in her letter dated 3 January 2020 (*Appendix 23*) that according to paragraphs 5.3 and 5.4 of MAA, Commissioner for Innovation and Technology would ensure that HKPC's activities accorded with its objectives and relevant public policies and priorities, and its subvention was properly used and disbursed. Commissioner for Innovation and Technology would also ensure that HKPC's policy objectives were appropriate, and might advise HKPC of the need to review these objectives in the light of changes in the economic environment.

13. The Committee asked whether ITB/ITC would give any direction guide to HKPC for implementing the Administration's policies on innovation and technology. The Committee was concerned how ITB/ITC would coordinate the work of HKPC

and other organizations with the mission to promote innovation and technology in Hong Kong.

14. **Permanent Secretary for Innovation and Technology** responded at the public hearings and **Commissioner for Innovation and Technology** added in her letter dated 21 January 2020 (*Appendix 24*) that:

- ITC would tender its views on the direction of HKPC's work through housekeeping meetings[4] from time to time and day-to-day communication at different levels. ITB and ITC would also offer views on HKPC's development strategies through participation in the Council meetings of HKPC to ensure that its work could support the Administration's policies;

- ITC noted that there had been increasing demand for integrated solutions by the industry in recent years, and many manufacturing and technical support services had thus been included by HKPC in consultancy projects which were related to upgrading the technological level of production lines and Industry 4.0. ITC considered that such arrangement was in line with the Administration's policy direction;

- in view of the above situation and to better reflect the overall performance of HKPC in meeting the market demand, Commissioner for Innovation and Technology introduced a new indicator in her Controlling Officer's Report for 2018-2019 on "Income from integrated solutions", which included the income from consultancy/technical assistance and the income from manufacturing support/process control. The relevant figures were previously reported under separate indicators; and

- ITB had been implementing various policy measures to promote the development of innovation and technology through organizations under its purview, including HKPC, the five R&D centres,[5] the Hong Kong

---

[4] Housekeeping meetings are held three times per year, during which the Executive Director of HKPC will highlight the major discussion items of the next round of Council and Standing Committee meetings to Commissioner for Innovation and Technology.

[5] The five R&D centres, established in 2006, include 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, and the Nano and Advanced Materials Institute.

Science and Technology Parks Corporation and the Hong Kong Cyberport Management Company Limited. As Directors of the Boards of the above organizations, Permanent Secretary for Innovation and Technology and/or Commissioner for Innovation and Technology participated in their Board meetings to discuss how they could assist the Administration in promoting the development of innovation and technology.

15. Noting from paragraph 1.6 of the Audit Report that a number of revisions were made to MAA upon its renewal in June 2009 and the details of such revisions in the reply letter dated 11 December 2019 from Commissioner for Innovation and Technology (*Appendix 25*), the Committee asked about the rationale behind the revision made to paragraph 5 of MAA about the role of the Administration's representatives in the Council of HKPC, and whether such revision contradicted the operational autonomy of HKPC.

16. **Permanent Secretary for Innovation and Technology** and **Commissioner for Innovation and Technology** responded at the public hearings, and **Commissioner for Innovation and Technology** supplemented in her letter dated 3 January 2020 (*Appendix 23*) that:

- the Administration issued in December 2008 internal guidelines on the appointment of Government officials to Boards of Government-owned or funded statutory bodies and companies. It was stated that should a policy bureau consider it necessary to appoint Government officials as board members of Government-funded statutory bodies, as there might be rare instances that the Government officials might face situations where the interests of the body did not totally coincide with the public interest, the policy bureau should seek to include an express provision in the ordinance requiring the Government officials to represent public interests in priority over those of the statutory body when the ordinance was next reviewed in order to minimize the relevant legal risks; and

- with reference to the above guidelines, and after consulting the Department of Justice, paragraph 5.9 of MAA was reviewed in 2009 to clarify the role of Government officials in the Council of HKPC (i.e. to represent the Government's interests in priority over those of HKPC). The revision was agreed by the Council in June 2009.

According to experience, the above revision had not affected the autonomous operation of HKPC.

17. With reference to paragraph 1.15 of the Audit Report, the Committee enquired about the procedures for the provision of government subventions to HKPC. **Commissioner for Innovation and Technology** explained in her letter dated 11 December 2019 (*Appendix 25*) that:

- Commissioner for Innovation and Technology would advise HKPC in the middle of the financial year the draft estimate of recurrent subvention for the following financial years, so that HKPC could compile its Annual Programme and Estimates. Upon approval by the Council, HKPC would submit the Annual Programme and Estimates to the Administration for approval;

- after review by Secretary for Financial Services and the Treasury, Secretary for Innovation and Technology would grant approval to the Annual Programme and Estimates of HKPC in accordance with section 16(1) of HKPCO. ITC would then release the annual block grant to HKPC monthly in equal instalments. During the year, in accordance with the civil service salary adjustment rate of the subject financial year, the Administration would release additional subvention to HKPC for salary adjustment of its staff;[6] and

- the Administration might also allocate one-off subvention apart from recurrent subvention to HKPC for specific non-recurrent purposes. HKPC was required to provide a detailed proposal and a budget for consideration by ITC of the provision of additional funding. In 2017-2018 and 2018-2019, ITC disbursed $14.01 million and $3.75 million to HKPC respectively for the proposal of setting up Inno Space and the financing of its operation for the first two years.

---

[6] Since 2010-2011, the annual draft estimate of recurrent subvention has been equivalent to the draft estimate of recurrent subvention of the preceding financial year plus the subvention provided to HKPC for salary adjustment in the course of the preceding financial year.

B. Provision of consultancy and manufacturing support services

18. With reference to paragraph 2.6 of the Audit Report, the Committee sought the reasons for the downward adjustment in the target on key performance indicator ("KPI") "Number of consultancy projects accepted" for five consecutive years from 2014-2015 to 2018-2019.

19. **Executive Director, HKPC** explained in his letter dated 3 January 2020 (*Appendix 22*) that with the changing market needs over recent years, the required consultancy projects from the industry had become more complex which involved advanced technology development. From 2014-2015 to 2018-2019, the scale of consultancy projects accepted by HKPC had become larger. The percentage of projects with value over $1 million increased from 48% in 2014-2015 to 73% in 2018-2019. In view of this, HKPC adjusted the target every year according to the evolving market needs. While the target on the number of consultancy projects accepted was lowered, the overall revenue of consultancy projects had increased.

20. In response to the Committee's enquiry about the current KPI development process and the review/monitoring mechanism for KPI performance of HKPC, **Permanent Secretary for Innovation and Technology** explained at the public hearings and **Commissioner for Innovation and Technology** added in her letter dated 3 January 2020 (*Appendix 23*) that:

- according to paragraph 7 of MAA, HKPC was required to propose for Commissioner for Innovation and Technology's approval a set of performance indicators for measuring the progress of its activities. Such performance indicators should include the dimensions of service delivery, operating efficiency, financial results and effectiveness of HKPC. The performance indicators and targets might be reviewed from time to time and amended as agreed in writing by both parties. HKPC should submit to Commissioner for Innovation and Technology, together with the Annual Programme and Estimates, a report on its achievements on the performance indicators. If HKPC failed to meet the agreed performance targets, it should provide explanations for such failures to the satisfaction of Commissioner for Innovation and Technology; and

- ITC would receive in July every year from HKPC a Council paper reporting its performance in KPIs in the preceding financial year.

HKPC would submit to the Council in November every year the Annual Programme and Estimates of the forthcoming year, which contained the proposed activities, KPIs and the corresponding targets, as well as the relevant financial estimates. Upon approval by the Council, HKPC would submit KPIs and targets for the next financial year for Commissioner for Innovation and Technology's approval. HKPC had adopted 23 KPIs since 2016-2017 with the Council's agreement obtained in November 2015 and Commissioner for Innovation and Technology's subsequent approval.

21. The Committee further asked whether ITC had followed up with HKPC its underperformance in achieving the KPI target on "Number of consultancy projects accepted" since 2014-2015, and whether HKPC had provided explanations for such failures in accordance with paragraph 7.4 of MAA.

22. **Commissioner for Innovation and Technology** replied in her letter dated 3 January 2020 (*Appendix 23*) that at the four housekeeping meetings held in 2015 to 2018, HKPC's Executive Director reported to Commissioner for Innovation and Technology HKPC's performance in KPIs in the preceding financial year and the reasons for shortfalls against the targets for the relevant KPIs. ITC also requested relevant explanations from HKPC in writing for record purpose.

23. The Committee noted from paragraph 2.7 of the Audit Report that the 35% increase in the number of consultancy projects accepted from 699 in 2017-2018 to 944 in 2018-2019 was due to the decision made at the management meeting in July 2018 to include manufacturing support projects with service fees over $5,000 in the number of consultancy projects in order to catch up with the target. A total of 141 such manufacturing support projects were classified as consultancy projects in 2018-2019. In reply to the Committee's enquiry at the public hearings on these cases, **Executive Director, HKPC** advised in his reply letter dated 16 December 2019 *(Appendix 26)* that HKPC discovered that 55 of these 141 manufacturing support projects with consultancy elements but with service fees below $5,000 were wrongly classified as consultancy projects. As a result, the number of consultancy projects accepted in 2018-2019 should be 889 instead of 944, and the percentage of the target met in the year should be 95% accordingly. HKPC believed that such error was made due to communication problems with frontline staff and failure to timely update its Standard Practices with respect to the new definition of consultancy project.

24. The Committee asked about the justifications for changing the definition of consultancy projects, whether such change might cause inconsistencies with the original intent of setting the relevant KPI and why HKPC had not revised the target correspondingly following the change of definition.

25. **Executive Director, HKPC** explained at the public hearings and added in his letter dated 3 January 2020 (*Appendix 22*) that:

- some of the manufacturing support services also included consultancy elements as per clients' requests. With the increase in such cross-function projects, HKPC was of the view that the then KPI could no longer reflect the actual work done by HKPC and therefore decided in July 2018 that the number of consultancy projects accepted should also include manufacturing support projects with consultancy elements and with service fees exceeding $5,000,[7] in order to reflect the real market scenario and HKPC's output in a more accurate and comprehensive manner. A table summarizing the types of services provided by the 86 manufacturing support projects with consultancy elements and with service fees over $5,000 was provided in the above letter; and

- as the adjustment to the definition of consultancy projects was aimed at reflecting more accurately the actual work currently done by HKPC, it was considered not necessary to amend the corresponding target, and it would have no impact on the manufacturing support services provided by HKPC staff in fulfilling the industry demands.

26. At the request of the Committee, **Executive Director, HKPC** provided in his letter dated 3 January 2020 (*Appendix 22*) a copy of HKPC Standard Practices on

7 According to HKPC, from July 2018, a new category of "Professional manufacturing support service with consultancy elements" has been included under the definition of consultancy projects. It refers to the provision of general manufacturing support services (for example, watch and clock technology, jewellery technology, advanced surface technology, advanced electronic processing technology, plastic machinery performance testing, reliability testing, electromagnetic compatibility testing, environmental analysis and innovative product testing conformal cooling technology and industry summit conference services, etc.) involving consultancy services (for example, advisory service for product improvement, functionality evaluation and recommendations for enhancement).

Project Management, which included guideline notes on classification of project type.

27. The Committee noted at the public hearings that the incumbent Executive Director, HKPC took up the post in late December 2017 and he had not served in public bodies before. The Committee questioned the propriety of making changes/enhancements to KPIs by HKPC without reporting to/seeking endorsement from its Council and Commissioner for Innovation and Technology, and asked whether there were any guidelines/rules in relating to KPI management, in particular changes made to KPIs.

28. **Executive Director, HKPC** admitted at the public hearings and added in his letter dated 3 January 2020 (*Appendix 22*) that:

- HKPC had not notified its Council and ITC of the change to the definition of consultancy projects when it submitted the Annual Programme and Estimates of 2019-2020 to the Council in November 2018, and when it reported to the Council in July 2019 its performance in the KPI "Number of consultancy projects accepted" in 2018-2019. HKPC acknowledged such omission and undertook to strictly abide by paragraph 7.2 of MAA;[8]

- there were currently no internal guidelines put in place by HKPC to govern the procedures for reporting to or seeking approval from the Council in respect of KPI-related matters or other important issues. Learning from this incident, HKPC would establish detailed procedures for items that were required to be reported to the Council for approval; and

- the KPI target on "Number of consultancy projects accepted" for 2019-2020 was based on the revised definition of consultancy projects, which would be subject to subsequent review and discussion among ITC and the Council in March 2020 before deciding whether any amendments deemed necessary.

[8] Paragraph 7.2 of MAA states that "[t]he performance indicators and targets may be reviewed from time to time and amended as agreed in writing by both the HKPC and the CIT".

29. The Committee enquired about the follow-up measures taken by ITC in respect of the revised definition of consultancy project, which had not been approved by Commissioner for Innovation and Technology and the Council, and the penalties/consequences for HKPC's failures to seek Commissioner for Innovation and Technology's agreement on the change in definitions of KPIs in accordance with MAA.

30. **Permanent Secretary for Innovation and Technology** advised at the public hearings and **Commissioner for Innovation and Technology** supplemented in her letter dated 3 January 2020 (*Appendix 23*) that:

- in the 2020-2021 Annual Programme and Estimates submitted to the Council in November 2019, the following was included in the definition of the KPI "Number of consultancy projects accepted": "[t]he proposed target has included estimates of the number of professional manufacturing support projects with consultancy elements, which are over $5,000 in project value that will be accepted in 2020-2021";

- HKPC also intended to submit to the Council in January 2020 the revised definition of consultancy project and the rectified actual performance (889 projects)[9] for the Council's review. Upon endorsement by the Council, HKPC would submit the relevant information and explanation to Commissioner for Innovation and Technology; and

- MAA did not specify the penalties or consequences for the changes in KPI definitions by HKPC without informing ITC. The Administration would specify in MAA that prior agreement of the Council and Commissioner for Innovation and Technology had to be obtained by HKPC for its change in definition of a KPI when reviewing MAA. In case of HKPC's non-compliance in this respect, it would be reflected in the Executive Director's annual performance appraisal, which in turn would affect his variable pay.

31. In reply to the Committee's enquiry, **Executive Director, HKPC** provided in his letter dated 3 January 2020 (*Appendix 22*) the adjustments made by HKPC to

[9] See paragraph 23.

KPIs other than "Number of consultancy projects accepted", and details of KPIs and their results in the past five years from 2014-2015 to 2018-2019.

32. The Committee asked about the tentative timeframe for the review on matters relating to KPIs of HKPC as mentioned by Permanent Secretary for Innovation and Technology at the public hearings. **Commissioner for Innovation and Technology** advised at the public hearings and supplemented in her letter dated 3 January 2020 (*Appendix 23*) that having regard to the views provided by Audit and the Committee during the audit exercise and public hearings, HKPC intended to submit after the review the set of KPIs and targets for 2020-2021 for consideration by the Council at its meeting in March 2020. Upon endorsement by the Council, HKPC would put forth the proposal to Commissioner for Innovation and Technology for approval in accordance with MAA by end March 2020, with a view to implementing the revised KPIs and targets starting from 2020-2021.

33. In response to the Committee's enquiry about the unexpected technical and executive difficulties causing the deficits of consultancy projects outside Hong Kong as referred to in paragraph 2.12(a) of the Audit Report, **Dr Lawrence CHEUNG, Chief Innovation Officer, HKPC**, explained at the public hearings and **Executive Director, HKPC** added in his letter dated 3 January 2020 (*Appendix 22*) that:

- consultancy projects generally contained technical components or R&D elements, which might involve unforeseen technical difficulties (for example, during exploration stage of new technology, lengthy process in finding relevant components or equipment, or new testing requiring approval by the relevant local governing bodies, etc.), or implementation difficulties, such as staff turnover; and

- HKPC agreed with Audit's recommendation, and had required all employees at special meetings held on 29 November and 2 December 2019 to comply with HKPCO to recover in full cost for overseas consultancy projects. In any exceptional case of not being able to recover the full cost, detailed documentation of the justifications was necessary.

34. In response to the Committee's enquiry about how the productivity-related assignments outside Hong Kong undertaken by HKPC could contribute to the development of domestic industries and the increase in the government revenue,

Secretary for Innovation and Technology explained at the public hearings and **Commissioner for Innovation and Technology** supplemented in her letter dated 3 January 2020 (*Appendix 23*) that the Administration amended HKPCO in 1985 to allow HKPC to undertake productivity-related assignments outside Hong Kong, in order to serve the Hong Kong enterprises more comprehensively and effectively, as well as to make the best use of the human resources of HKPC. With reference to paragraph 2.11 of the Audit Report regarding the 308 consultancy projects outside Hong Kong which did not recover all costs and were completed during the period from 2014-2015 to 2018-2019, 286 (93%) of them were projects conducted for Hong Kong enterprises or their subsidiaries in Guangdong Province and they could bring benefits to Hong Kong enterprises.

35. With reference to paragraph 2.12(b) of the Audit Report, the Committee asked why the inflationary factor built in at the quotation stage of the government funding programme was insufficient to cover the subsequent increase in staff charging rates given that the inflation rate of Hong Kong remained stable over the past few years.

36. **Ms Vivian LIN, Chief Financial Officer, HKPC**, explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that:

- the government funding programme had run for five years under a fixed-value agreement signed between the Government and HKPC in mid 2015. HKPC submitted in 2014 the quotation to the Government based on a full cost recovery charging rate according to the prevailing pricing policy, under which the standard cost rates would take into account the factor of government subvention. The inflationary factor built in at the quotation was 4.8% per annum;

- with the programme commencing in 2016, the project cost had already increased by more than 10% over the budgeted inflation factor due to the time gap. In February 2016, the Council approved a pricing structure based on full cost recovery and zero government subvention, leading to an increase of about 20% in the standard charging rate. As the programme was implemented under a fixed-value agreement, no additional costs were recovered from the Government having regard to the spirit of contract, resulting in a deficit in budget under the new standard charging rate; and

- HKPC would strengthen the project management, and consider the appropriate adjustment to the "Contingency Budget" when calculating costs to meet additional costs arising from unforeseen circumstances.

37. The Committee enquired about the follow-up actions taken by HKPC in response to Audit's recommendations in paragraph 2.27 of the Audit Report on documenting justifications for consultancy projects outside Hong Kong failing to recover all costs. **Executive Director, HKPC** advised in his letter dated 3 January 2020 (*Appendix 22*) that under the previous reporting mechanism, when a project was completed with deficit, or the actual variance was higher than 5% or $10,000 (whichever was higher), the project manager was required to provide a post-project review report to explain the reason for the deficit or variance. To further enhance the project cost monitoring mechanism, starting from December 2019, the management and relevant project officers would receive regular project cost monitoring reports in which officer-in-charge of projects reported and explained regularly to the management the technical or implementation difficulties they encountered. If necessary, the management would, in consultation with the expertise from other HKPC divisions, assist to overcome the difficulties and ensure that the project cost would not overrun.

38. According to paragraphs 2.14 and 2.18 of the Audit Report, while HKPC Standard Practices stipulated that pricing for all forms of HKPC services should be based on the full cost recovery principle, fee concessions to consultancy projects were offered on a client-by-client basis. The Committee asked whether HKPC had implemented any measures to ensure that proper concession rates were offered to clients.

39. **Executive Director, HKPC** explained at the public hearings and supplemented in his letter dated 3 January 2020 (*Appendix 22*) that the existing pricing policy and fee concession system was set up in February 2016. According to the Standard Practice for Pricing Policy, documentation of justifications was necessary for applying different concession rates. All concessions could only be given with prior approval by staff members at General Manager level or above. For projects with value over $500,000, the granting of concession could only be approved by Directors or Executive Director. The reports on the implementation of the pricing policy and concession system were regularly provided to the Finance Committee under the Council in the first year of operation. As the operation of the pricing and concession system had become stable for more than two years since its

implementation, General Managers of divisions were currently responsible for monitoring the system. A copy of new guidelines promulgated by HKPC in September 2019 on the provision of fee concessions was provided in the above letter.

40. According to paragraph 2.15 of the Audit Report, it was decided at a senior management meeting held in June 2016 that HKPC should try to charge clients at price levels that achieve full cost recovery without concession as far as practicable. However, the Committee noted with concern that as revealed by Table 5 in paragraph 2.21 of the Audit Report, the deficits of consultancy projects completed in 2017-2018 ($16 million) and 2018-2019 ($8 million) were even much higher than those completed in 2014-2015 to 2016-2017 (ranging from $2 million to $4 million), deviating further from the full cost recovery principle.

41. **Permanent Secretary for Innovation and Technology** and **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that the deficits in 2017-2018 and 2018-2019 were mainly due to the completion of several large-scale consultancy projects for the Government or public organizations within the two years. These projects were carried out in 2016 or earlier (before the relevant decision was made at the above senior management meeting), and did not recover the full cost as an effort to fulfil the public mission. Another reason was a higher manpower investment during transitions arising from talent turnover. As related projects were engaged through fixed-value agreements, no additional fees were charged for higher associated manpower costs.

42. Noting that the above decision in paragraph 40 had not been incorporated in HKPC Standard Practices, the Committee was concerned how the HKPC management could ensure that such directive was properly communicated to frontline staff. **Executive Director, HKPC** responded at the public hearings and supplemented in his letter dated 3 January 2020 (*Appendix 22*) that:

- in the HKPC Standard Practices, the framework and principle of full cost recovery and the system of concession, which were established on a long-term basis and were endorsed by the Council, were clearly stipulated. As for some short-term measures put in place by the management team, such as short-term pricing strategies, only relevant directives would be released to staff via emails; and

- the above decision on charging mechanism was approved at the management meeting on 14 June 2016, with participants including the Executive Director, Directors, General Managers of the divisions and other relevant staff members. The minutes of the management meeting had been sent to the relevant staff members, and any follow-up actions required would be conveyed to staff through emails after the meeting.

43. With reference to paragraph 2.20 of the Audit Report about the enhanced management control by HKPC over consultancy project completion, which resulted in only 14% of the projects completed in 2018-2019 with delay, the Committee sought the reasons for the high delay percentages ranging from 29% to 39% from 2014-2015 to 2017-2018, and the measures taken by HKPC to further improve the project delays and to ensure staff's adherence to the approved completion dates stipulated in project agreements.

44. **Executive Director, HKPC** and **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that the high percentages of consultancy projects with delays before July 2018 was due to inefficient monitoring system and follow-ups. Under the current monitoring mechanism, the Executive Director and the HKPC management would conduct regular meetings to review projects with the need for extension. Only consultancy projects with sufficient justifications could be extended to ensure that they could be completed within the designated timeframe.

45. On the Committee's enquiry about how HKPC promoted its consultancy services to members of the industry, and struck a balance between maintaining its self-financing operation and delivering its public mission, **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that:

- HKPC had conducted a series of promotional efforts as follows:

  (a) engaging industry associations through attending their activities or joining function committees to introduce HKPC's services available for the industry;

(b) distributing the updates about HKPC's homegrown inventions and technological outcomes, as well as related services through various social media tools;

(c) organizing technology-related activities to increase market awareness of the latest technology development, market trends and HKPC's technology applications, and arranging HKPC's experts to speak at R&D events or act as technical leaders in some specific technology regime, such as HKPC TechDive R&D Seminar held on 19 December 2019;

(d) organizing open day for the public to explore more about HKPC's expertise in R&D and professional equipment and the support provided by HKPC for the development of the Hong Kong industry; and

(e) organizing SME One Fund Fair in September 2019 to promote over 40 government funding schemes covering various industries. Starting from January 2020, HKPC would introduce the "SME ReachOut" team to contact small and medium enterprises ("SMEs"), with an aim to provide guidance and advice on the government funding schemes; and

- HKPC had announced four immediate measures in September 2019 to provide concessions until 31 March 2020 to support Hong Kong SMEs and start-ups in facing the unprecedented challenges from the global business environment, help them improve business performance, and enhance productivity and competitiveness.

46. With reference to Case 1 in paragraph 2.24 of the Audit Report, the Committee sought justifications for HKPC to terminate the consultancy project by providing to the client a full refund of his down payment of $400,000 and the semi-finished deliverables free of charge without reimbursing from the client the cost incurred for the project, which amounted to $254,000, given that the termination of the project was due to risk, cost and functional consideration arising from the frequent changes made by the client to the product design.

47. **Executive Director, HKPC** explained at the public hearings and supplemented in his letter dated 2 January 2020 (*Appendix 27*) that:

- HKPC entered into an agreement with the client in February 2018 for a consultancy project for developing an electric device with a project fee of $1,050,000. The entire project was planned to be completed within 12 months and was carried out in four stages. Stage 1 was expected to be completed in mid May 2018. However, as additional time was required by the project team for the changes in the product design as per the client's requests, as of October 2018, Stage 1 of the project had not yet completed with severe delay for five months. During the first stage of the project, the project team provided semi-finished deliverables in batches in accordance with the project agreement. However, by the time the project was terminated in October 2018, these semi-finished deliverables could not be assembled into a prototype;

- as the project proposal, which was included as part of the project agreement, did not clearly set out the technical specifications of the product, the client was allowed to request multiple changes in the product design within the scope of the agreement, which had resulted in the increase of technical difficulties in the project. Furthermore, the project's cumulative man-hour cost had already accounted for 58% of the total estimated man-hour cost, but the first stage had not yet been completed. Under such circumstances, the project's potential overrun costs were likely to exceed $254,000. Details of the relevant technical difficulties encountered in the project were provided in the above letter; and

- as the project delay had upset the client's marketing schedule for the product, the client indicated his intention on 26 October 2018 to claim a liability of $400,000 in addition to the refund of the down payment of $400,000 to compensate for the loss of time in the product development. Having considered that the project execution schedule could not meet the client's requirement and to minimize the cost impact on HKPC, the project team decided to propose project termination. Director of the Digital Branch, HKPC eventually approved the project termination, and asked the internal legal counsel for the legal advice on the settlement agreement. Having taken into account that HKPC could not meet the requirements of the client and the potential litigation risk, it was decided to provide a full refund of the down payment of $400,000 and the semi-finished deliverables to the client.

48. The Committee enquired about the HKPC Standard Practices/financial regulations stipulating the approving authority of the Director of the Digital Branch for termination of the project with the handover of all semi-finished deliverables and the waiver of the requirement for the client to reimburse HKPC the costs incurred for the project.

49. **Executive Director, HKPC** advised in his letter dated 2 January 2020 (*Appendix 27*) that according to HKPC Standard Practices, the Director of the Digital Branch had the approving authority on project management of any project with value up to $1,500,000, which was higher than the project value of Case 1. The authority included quotation, project approval, revision of project budget, project completion, project termination, etc. However, the Standard Practices did not specify the approving authority for the detailed arrangement of project termination, such as refund to the client and handover of the semi-finished deliverables. Normally, such details would be set out under the settlement agreement after negotiation with the client. HKPC considered such arrangement reasonable. The relevant Standard Practice was provided in the above letter.

50. At the request of the Committee, **Executive Director, HKPC** provided in his letter dated 2 January 2020 (*Appendix 27*) the details of other difficulties expected by the project team if the above terminated project continued.

51. The Committee further asked whether there were any clauses stipulated in the project agreement governing variations in the client's requirements and whether the project team had conducted a preliminary study to evaluate the feasibility/viability of and the risks involved in the project.

52. **Executive Director, HKPC** explained at the public hearings and supplemented in his letter dated 2 January 2020 (*Appendix 27*) that:

- no specific clause was stipulated in the project agreement to govern the variations in the client's requirements. Under normal circumstances, any proposed changes to the project requirements by the client would be considered as a modification to the agreement, and HKPC would charge the client for the resulting additional costs. In Case 1, however, as the project proposal only set out the tentative specifications, the multiple changes in the product design proposed by the client before the confirmation of the final specifications could not be regarded as variations to the agreement; and

- before entering into the agreement with the client, the project team had carried out feasibility study on the project, which covered benefits to HKPC from the project, risk assessment and cost estimation. Details of the justifications submitted by the project team for acceptance of the project, risk assessment results and the project cost estimation were provided in the above letter.

53. The Committee asked whether there were other project termination cases similar to Case 1 where the client obtained both the semi-finished deliverables free of charge and the full refund of down payment during the period from 2014-2015 to 2018-2019.

54. **Executive Director, HKPC** advised in his letter dated 22 January 2020 (*Appendix 28*) that during the five-year period from 2014-2015 to 2018-2019, HKPC carried out more than 4 000 consultancy projects. Terminated projects included Case 1 and three other projects with the total refund of $471,000 to the clients due to technical difficulties. For one of these three projects, semi-finished deliverables were released to the client. Details of these three terminated projects were provided in the above letter.

55. In reply to the Committee's enquiry about the follow-up measures taken by HKPC to avoid recurrence of incidents similar to Case 1 in future, **Mr Edmond LAI, Chief Digital Officer, HKPC**, advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- General Managers of divisions would strengthen the review on project risk assessments, technical specifications and outlining of project deliverables for consultancy projects to ensure that project deliverables were mutually confirmed by both parties when endorsing the formal agreement;

- external legal counsel would be engaged to evaluate the terms and conditions set out in the standard consultancy project proposal and contract. Amendments would be made in case of potential contradictory clauses or loopholes. For example, supplementary clause would be added to the standard agreement to stipulate that in case of inconsistency between project proposal and agreement, the agreement shall prevail;

- the HKPC management would strengthen the monitoring towards project management and execution. More regular reviews would be conducted on projects that were lagging behind schedule, and those with an accumulative cost almost reaching the estimated budget; and

- HKPC would consider seeking advice from external legal counsel on the project termination arrangement.

56. According to paragraphs 2.32 to 2.34 of the Audit Report, Staff A did not record some of workshop service income of Optics Manufacturing Workshop and instead intended to record the income as sponsorship to an Innovation and Technology Fund ("ITF") project for which he was in charge. At the public hearing held on 17 December 2019, the Committee noted that this case had not been detected until it was reported through the staff whistleblowing system of HKPC. The Committee queried the effectiveness of the accounting control system of HKPC in preventing and detecting such irregular cases, and asked whether there were any remedial measures taken by HKPC to prevent recurrence of similar incidents.

57. **Chief Financial Officer, HKPC** responded at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that upon the discovery of Staff A's case in September 2018, HKPC completed in December 2018 an evaluation and improvement plan on the related process, and required all quotations on the manufacturing support services to be issued via a centralized computing system, with a sequential number generated. The new arrangement could facilitate the monitoring and follow-up actions of those quotations by the General Managers of divisions every month, and ensure that all manufacturing support services would receive timely payment with proper records.

58. In response to the Committee's enquiries about whether HKPC's internal auditor had reviewed the work practices and procedures for the provision of manufacturing support services following the incident of Staff A, and the progress of the review on manufacturing support projects as referred to in paragraph 2.49(a) of the Audit Report, **Chief Financial Officer, HKPC** responded at the public hearings

and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that HKPC had further extended the scope of the review and had identified 315 cases of manufacturing support services through sampling from the division which Staff A belonged to. The number of cases identified accounted for about 10% of the total number of manufacturing support projects of the division. The whole review process was expected to be completed by the end of the fourth quarter of 2019-2020. The audit results and improvement suggestions made by the Internal Audit and Risk Management Office of HKPC in respect of the manufacturing support services were provided in the above letter.

59. Noting from paragraph 2.42 of the Audit Report that 236 (52%) of the 450 Inno Space members recruited in 2018-2019 were new members on one-month free trial, the Committee asked whether HKPC had taken any measures to retain members so as to boost the income from membership fee.

60. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that to increase the membership and income of Inno Space, HKPC launched in 2019 a new scheme, STEM Network, with an aim to connect secondary schools, universities, start-ups and the Hong Kong Science and Technology Park together, and to assist the development of STEM education in schools by offering basic to advanced courses ranging from $5,000 to $15,000. These courses included student workshops, train-the-trainer programmes, technology updates and the use of Inno Space facilities.

61. With reference to Table 9 in paragraph 2.45 of the Audit Report about the equipment booking of Inno Space, the Committee asked whether HKPC had taken any measures to promote the utilization of the equipment of Inno Space. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 3 January 2020 (*Appendix 22*) that to boost the utilization of Inno Prototype,[10] practical training had been added to the brand-new STEM training courses through STEM Network. The overall utilization rate of Inno Prototype from April to November 2019 had increased by 40% as compared to the same period one year before.

[10] Inno Prototype is an area in Inno Space where equipment items are available for members to create prototypes.

62. In response to the Committee's enquiry about the Administration's policy direction on Inno Space and its view on the way forward for Inno Space, **Secretary for Innovation and Technology** and **Permanent Secretary for Innovation and Technology** advised at the public hearings, and **Commissioner for Innovation and Technology** supplemented in her letter dated 3 January 2020 (*Appendix 23*) that:

- HKPC established Inno Space in October 2017 to provide workspace and technical support to start-up entrepreneurs, secondary or university students and graduates to assist them in developing their innovative ideas into industrial design, which might subsequently be translated into products through prototyping, so as to nurture a start-up culture in Hong Kong and support re-industrialization; and

- the operation of Inno Space was in line with ITB's policy direction of promoting re-industrialization, supporting start-ups and nurturing local innovation and technology talents. Since 2017-2018, the Administration provided additional funding of $17.76 million to HKPC by two annual instalments for setting up Inno Space and supporting its first two years of operation. It was believed that HKPC would sustain the operation of Inno Space, and continuously review its mode of operation and key service targets. The proposal submitted by HKPC to ITC in April 2017 for establishing Inno Space was provided in the above letter.

C. Research and development projects

63. With reference to paragraph 3.3 and Table 10 of the Audit Report, the Committee asked about the definitions of the two KPIs, namely "Number of new R&D projects" and "Number of on-going R&D projects", and how the targets on these two KPIs were set.

64. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- the KPI "Number of new R&D projects" was defined as the number of ITF funded projects with R&D elements, projects supported by the Corporate Fund for Commercial Research and Development, as well as R&D projects conducted by divisions with other funding sources (for example, government funding schemes other than ITF, funding from external clients), which were accepted during the year, excluding terminated projects. The KPI "Number of on-going R&D projects" was defined as the number of the aforesaid projects which were in progress during the year, excluding terminated projects; and

- when setting annual targets for the above two KPIs, reference would be made to the current year's target after taking into consideration the actual performance of the previous year and the economic forecast of the coming year.

65. The Committee further asked whether HKPC agreed that the targets on the above two KPIs had all along been set at a very low level given that the actual performance exceeded the targets significantly in the past five years from 2014-2015 to 2018-2019.

66. **Chief Innovation Officer, HKPC** responded at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that in view of the gloomy economic situation and the uncertainties from the ITF funded project applications over the past five years, these two KPI targets were made on a conservative principle. When setting the targets on the two KPIs for 2019-2020, reference was made to the adopted targets for 2018-2019, the actual performance achieved in 2017-2018, as well as the anticipated market conditions in 2019-2020. The targets set for KPIs "Number of new R&D projects" and "Number of on-going R&D projects" were 40 and 80 respectively in 2019-2020.

67. In reply to the Committee's enquiry about whether HKPC would consider using project income as a KPI for managing R&D projects, **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that under the current KPI framework, "Income from R&D projects" was not a KPI. HKPC and ITC would further evaluate and examine the suitability of including the income from R&D projects in KPIs to reflect the performance of HKPC in R&D projects in a comprehensive and holistic manner. As the income from R&D projects was not one of the KPIs, HKPC did not set any target on the budgeted income of R&D projects.

68. With reference to paragraph 3.4 of the Audit Report, the Committee sought the justifications for double counting the 68 new projects as both consultancy projects and R&D projects.

69. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that under the KPI framework, HKPC's performance was evaluated by KPIs under four performance measures, namely "service delivery", "operating efficiency", "financial results" and "effectiveness". The KPI "Number of consultancy projects accepted" was under the performance measure of "service delivery", while the KPI "Number of new R&D projects" was under the performance measure of "effectiveness". As such, the two KPIs were used to measure HKPC's performance in two different dimensions in a year.

70. Noting from paragraph 3.15(a) of the Audit Report that HKPC would draw up clear guidelines on the classification of consultancy projects and R&D projects, and on the counting of projects for performance measurement against targets, the Committee asked about the progress in this regard.

71. **Executive Director, HKPC** advised in his letter dated 22 January 2020 (*Appendix 28*) that:

- to define "R&D elements" more clearly, the KPI guidelines had been enhanced by stipulating that projects with "R&D elements" referred to "projects that involve the development of new knowledge or application of existing knowledge in new areas, or both. Such projects are required to have the following elements: novelty, creativity and uncertainty"; and

- the guidelines also stated clearly that only projects with the specified R&D elements, be they consultancy projects or other project types, should be counted under the KPIs "Number of new R&D projects" and "Number of on-going R&D projects" for performance measurement against targets.

72. According to paragraph 3.7 of the Audit Report, HKPC counted the number of on-going R&D projects as projects that were completed during the year plus

projects that were in progress at the end of the year. The Committee queried whether there would be double counting of projects if R&D projects accepted in a year would also be counted as on-going projects.

73. **Chief Innovation Officer, HKPC** responded at the public hearings and **Executive Director, HKPC** further explained in his letter dated 22 January 2020 (*Appendix 28*) that newly accepted projects with R&D elements which were completed or still in progress by the end of the year would also be included under the KPI "Number of on-going R&D projects". "Number of new R&D projects" was a KPI that reflected HKPC's performance in supporting enterprises through new technologies or innovation applications, while the KPI "Number of on-going R&D projects" served as an indicator to measure resources contributed to R&D efforts. As such, the two KPIs measured HKPC's performance in two different dimensions.

74. The Committee was concerned whether the counting practice in paragraph 72 would give project team an undesirable incentive to delay R&D projects in order to achieve the target on KPI "Number of on-going R&D projects", given that according to Table 12 in paragraph 3.7 of the Audit Report, on average, 60% of the on-going R&D projects during the period from 2014-2015 to 2018-2019 were projects brought forward from previous years, with delayed projects included therein accounting for 4%.

75. **Chief Innovation Officer, HKPC** clarified at the public hearings and **Executive Director, HKPC** added in his letter dated 22 January 2020 (*Appendix 28*) that in undertaking R&D projects for industry enterprises and SMEs, or ITF funded R&D projects, HKPC project teams always put their best efforts to honour the project timeframe committed to clients in the project agreements. As project delays might incur extra cost or even legal litigations, HKPC never considered delaying projects by intention for the purpose of meeting the KPI target on "Number of on-going R&D projects".

76. On the Committee's enquiry about the latest progress of the examination by HKPC on the suitability of using the number of on-going R&D projects as a KPI as mentioned in paragraph 3.15(b) of the Audit Report, **Executive Director, HKPC** advised in his letter dated 22 January 2020 (*Appendix 28*) that this issue would also be studied in HKPC's review exercise of KPIs, the results of which would be submitted to the Council for approval by March 2020.

77. With reference to paragraphs 3.9 and 3.10 of the Audit Report, the Committee asked about the measures taken by HKPC to improve the delays in R&D projects, particularly those supported by ITF which had 82% of projects experiencing delays in completion among those completed in the period from 2014-2015 to 2018-2019.

78. **Executive Director, HKPC** advised in his letter dated 22 January 2020 (*Appendix 28*) that the HKPC management decided in July 2018 to step up its supervision and monitoring efforts by introducing a new mechanism under which when potential delay of a project was foreseen, project managers were required to report and explain to the management on a weekly basis. The HKPC management would then monitor the progress and instruct other experts in HKPC to provide technical solution, with a view to expediting project completion. Project managers were also constantly reminded to complete the relevant project documents and reports to avoid delays in the project execution process. In 2019-2020 (as of December 2019), a total of four R&D projects were delayed, accounting for about 10% of R&D projects completed during the same period, a significant improvement as compared to 37% in 2018-2019.

79. With reference to paragraph 3.26 of the Audit Report, the Committee sought the reasons why only four (3%) of the 123 patents held by HKPC as at 31 August 2019 could generate licence or royalty income ($1.5 million) since patent registration. The Committee queried whether HKPC's R&D projects were able to meet the needs of the business sector.

80. **Chief Innovation Officer, HKPC** responded at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- as of December 2019, HKPC registered a total of 131 patents, and had submitted 45 patent applications which were still in progress, details of which were set out in the above letter. The patents that HKPC had applied for were generally used to develop new projects, with an aim to protect intellectual property rights and prevent plagiarism, instead of making them as income generator; and

- in the past five years from 2014-2015 to 2018-2019, HKPC had completed a number of R&D projects through the above operating model. The projects had generated a revenue of $140 million. This proved that HKPC's work could fulfil the R&D needs of the industries.

81. On the Committee's enquiry as to why HKPC had not included valuations for its patents in its accounts, **Chief Financial Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** further explained in his letter dated 22 January 2020 (*Appendix 28*) that:

- patents were accounted for in accordance with Hong Kong Accounting Standard 38 Intangible Assets. Under Hong Kong Accounting Standard 38, internally generated patent usually lacked sufficient ground to be capitalized because of the difficulty in ascertaining the future economic inflows that it might generate, as well as the reliability in measuring the costs; and

- according to paragraph 72 of Hong Kong Accounting Standard 38, patents could only be revalued if they could be traded in an active market. The policy should be applied to the whole of a class of patents and not merely to individual patents, unless there was no active market for individual patents. As such, HKPC did not capitalize patents as intangible assets and had not included valuation for its patents in its accounts.

82. The Committee sought the Administration's view on HKPC's accounting practice of not valuing its patents. **Commissioner for Innovation and Technology** responded in her letter dated 21 January 2020 (*Appendix 24*) that the Administration and the prevailing accounting standards had not specified that HKPC was required to carry out valuation of the patents developed and owned by it in its accounts. According to the prevailing accounting standards, HKPC's accounts were audited every year by an independent external auditor, who had not indicated any problem with such accounting arrangement when reporting their findings to the Audit Committee of HKPC after the annual audit. The Administration would suggest that HKPC should carefully consider the need to conduct valuation of its patents in future, and seek relevant professional advice when necessary.

83. The Committee sought the updated progress of implementing Audit's recommendations in paragraph 3.28 of the Audit Report by HKPC on reviewing the KPIs for managing R&D projects, reporting of R&D projects and commercialization

of new technologies. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- the KPI review exercise would cover the two KPIs "Number of patent/licence/royalty" and "Number of products/technologies commercialized". HKPC would also record R&D projects accomplished at division levels to reflect the R&D contribution and results on commercialization; and

- HKPC organized on 19 December 2019 the TechDive seminar to promote the latest technological development and trend, as well as its patent and applied solutions for the industry. This event was also live-broadcasted to the Greater Bay Area to disseminate the patent-related information. After the seminar, HKPC had been proactively following up with interested parties for the relevant patents.

D. Provision of training programmes

84. With reference to paragraph 4.2 of the Audit Report, the Committee sought the details of the revamp made to the HKPC Academy. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** elaborated in his letter dated 22 January 2020 (*Appendix 28*) that:

- in end 2018, HKPC planned to refresh its marketing strategies and structures, as well as the frameworks of the training courses to reflect the actual market needs. Since April 2019, with the establishment of a new management team for the HKPC Academy, HKPC had implemented a new training business strategy with more emphasis on market-oriented curriculum structure to better meet the market needs. The staff establishment and strength of the HKPC Academy was at 24 and 19 respectively as of end December 2019;

- from April 2019 onwards, all training courses were centrally coordinated by the HKPC Academy. Through the Public Training Administration system, divisions would be able to standardize the workflow in organizing training courses. The head of HKPC Academy would host regular meetings with the HKPC management to review the performance of the training courses. The HKPC Academy had also improved its records management by converting most of its working forms to electronic forms; and

- a course management team was set up in June 2019 in an effort to drive the delivery of training courses under the new management model. The newly established course management team would host regular meetings to review and monitor the actual activities of the training business on a quarterly basis and report to the HKPC management every week. With the implementation of the new training strategy, the revenue of training courses in 2019-2020 (as of end December 2019) had increased by 44% as compared to the same period one year before. To reflect the latest arrangements for the training programme review, HKPC was updating its "Guidebook for Organising Public Training Programme", and the revised copy would be available in March 2020.

85. The Committee noted with concern at the public hearing on 7 January 2020 that the HKPC Academy was running on a deficit given that training programme fees were determined on a full-cost recovery basis. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- in 2018-2019, the total operating income of the HKPC Academy was $22.5 million and the total operating expenditure was $26.5 million, with a loss of $4 million for the year. In general, the operating income of the HKPC Academy came from public and corporate training programme, venue and facilities fees. Its operating expenses included labour costs, expenses for certified qualification applications and teaching materials, marketing and promotion costs, etc. Detailed breakdowns of operating costs of the HKPC Academy for 2018-2019 were provided in the above letter; and

- apart from the new training strategy, HKPC had also stepped up its promotional efforts through social media campaigns and the HKPC Academy's new website, organizing various events to interact with professional institutions and human resources professionals, as well as participating in relevant exhibitions to showcase training courses. These measures had proven effective by the increase in training revenue in 2019-2020 (April to December 2019) by 44% as compared to the same period one year before.

86. Noting from the reply letter dated 11 December 2019 from Executive Director, HKPC (*Appendix 29*) that a two-day training on Intelligent Automation had been conducted by HKPC in Wuxi, Mainland China, the Committee was concerned how HKPC could ensure that such overseas training programmes could achieve full cost recovery, and sought the justifications for organizing this programme.

87. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- HKPC had been proactively promoting the use of digital manufacturing among the industry sector, and it was HKPC's mission to organize courses on specific technology and knowhow to nurture technological talents in the regime; and

- the two-day training course in Wuxi included visits to local factories for observing the technology of automated artificial intelligence applications. The total income of the programme was around $35,000, which had covered relevant expenses incurred for five participants and HKPC staff, and had achieved full cost recovery. Details of the programme proposal were provided in the above letter.

88. The Committee was concerned how HKPC could ensure that its public training programmes were properly managed and their effectiveness was accurately evaluated. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that participants of training courses were required to meet the minimum attendance rate at 75%, and to fulfil the assessment requirements specified in individual courses.

89. In response to the Committee's enquiry, **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that the minimum enrolment numbers and course fees of the 120 public training programmes organized by HKPC in 2018-2019 ranged from 3 to 66, and from $50 to $29,500 respectively.

90. The Committee sought details of HKPC training programmes attaining Qualifications Framework and Continuing Professional Development. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that two courses attained Qualifications Framework and 16 courses were Continuing Professional Development or Continuing Education Fund courses.

91. The Committee noted from paragraph 4.9 of the Audit Report that the actual numbers of training programmes from 2016-2017 to 2018-2019 under the programme areas of environmental technology and manufacturing technology consistently deviated from the estimated numbers. The Committee sought the reasons and the follow-up actions taken by HKPC to reduce such deviations.

92. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- in the past, there were quite a number of free training courses on environmental protection technology-related areas provided in the market, resulting in severe competition. As for training programmes on manufacturing technology, there were not so many courses on such topic organized during the past few years due to the low awareness of high-end manufacturing technology; and

- there was, however, an increasing awareness of high-end manufacturing knowhow recently and more participants had been recruited for such courses. In 2019-2020 (April to December 2019), the actual number of training programmes on manufacturing technology exceeded its estimated number by 13% while that of environmental technology training programmes was 58% of its estimate. HKPC would adjust as appropriate the target numbers of relevant courses for 2020-2021 to better reflect the market demands.

93. The Committee further asked whether Commissioner for Innovation and Technology was aware of the above deviations, and had given any directives to HKPC to ensure that its overall strategy on training services were implemented without departure from the Administration's policy direction and HKPC's public mission.

94. **Permanent Secretary for Innovation and Technology** responded at the public hearings and **Commissioner for Innovation and Technology** added in her letter dated 21 January 2020 (*Appendix 24*) that:

- in working out the estimates for 2016-2017 and 2017-2018, ITC had taken into account the fact that HKPC failed to meet the targets on the income from training courses and the number of people attending fee-charging training courses in 2014-2015 and 2015-2016. Commissioner for Innovation and Technology noted from the reports submitted by HKPC that the main reason was the low level of awareness of the industry of new technologies/management systems and the concept of Industry 4.0. It was thus considered that HKPC might need to first organize more non-fee-charging training activities to raise the understanding and interest of the industry in this regard;

- as HKPC could also assist enterprises in upgrading their technological level and promote re-industrialization through organizing non-fee-charging training activities, and this was in line with the Administration's policy direction and HKPC's public mission, Commissioner for Innovation and Technology accepted HKPC's explanation, and accordingly adjusted downwards the estimated number of people attending the HKPC's fee-charging training courses and the estimated income from training courses while adjusting upwards the estimated number of people attending the HKPC's non-fee-charging seminars in her Controlling Officer's Reports for 2016-2017 and 2017-2018;

- in assessing the performance of HKPC in organizing training programmes under the four programme areas (i.e. environmental technology, information technology, management systems and manufacturing technology), Commissioner for Innovation and Technology considered that focus should be placed on whether the objectives of the training programmes and the overall figure could meet the Administration's policy direction and HKPC's public mission, instead of the deviations appeared in individual programme areas; and

- in response to Audit's recommendations, HKPC would organize training courses according to the estimated number for each programme area set out in the Annual Programme and Estimates as far as practical. HKPC would also review and monitor quarterly the actual activities of training operation. If the numbers of courses deviated from the estimates, HKPC should submit full justifications to Commissioner for Innovation and Technology and the Council for approval.

95. In response to the Committee's concern over the low enrolment of public training programmes in 2018-2019 as revealed in paragraph 4.15 of the Audit Report, **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that at present, each training course was required to set a minimum number of applicants, which was generally determined based on the principle of cost recovery. HKPC currently adopted a two-tier monitoring mechanism under which the business unit would hold regular meeting with the HKPC Academy to review the enrolment rate of training courses, and the management would also hold regular meeting to review the performance of training courses.

96. With reference to paragraph 4.18 of the Audit Report, the Committee asked why the proposals of 15 (39%) out of 38 public training programmes with fewer than 10 participants had not set out the estimated numbers of enrolment, and whether these 38 public training programmes could achieve full cost recovery.

97. **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** added in his letter dated 22 January 2020 (*Appendix 28*) that:

- in the past, a small number of courses that involved considerable technical expertise were required to be developed by individual professional divisions, such as manufacturing or information technology, which had not included the number of estimated participants in the course proposals in accordance with the relevant guidelines;

- starting from 2019-2020, all public training courses had been coordinated and run by the HKPC Academy, and the course plan had to specify the expected number of participants and the minimum number of participants. All public training courses had to be recorded in the Public Training Administration system in which the expected enrolment rate must be included in the course budget; and

- among those 38 public training courses, 36 of them achieved cost recovery while two with a deficit of $281 in total, details of the two courses were provided in the above letter. HKPC would improve the project management of training courses and adjust the contingency budget as appropriate to meet the unexpected costs.

98. The Committee asked how HKPC could ensure its training programmes were able to meet the market demand but would not constitute competition with the existing training services provided in the market, and how HKPC would improve the market demand assessments for new public training programmes as recommended in paragraph 4.26(g) of the Audit Report.

99. **Chief Innovation Officer, HKPC** advised at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- from November 2019, all public training courses under the new workflow were required to complete market research and competitor analysis before launching. According to the new market research criteria, all public training courses should meet at least one of the following six requirements to justify its value and importance to the industry:

  (a) facilitate the advocacy of a government policy or initiative;

  (b) in response to the inquiry or requirement of client;

  (c) in response to the inquiry or requirement of trade association or professional body;

  (d) in accordance with professional analysis from trainer;

  (e) in accordance with market survey or industry consultation; and

  (f) in accordance with industry trends;

- programme team should carry out competitor analysis before organizing a training course to avoid competition with existing training service providers in the market. If there were similar courses available in the market, programme team should incorporate unique and innovative elements in the relevant courses to be offered by HKPC to differentiate them from those provided in the market; and

- HKPC was also dedicated to uplifting communication among industry practitioners through regular exchanges and meetings with local quangos, industry associations, or with training representatives from corporations.

100. In reply to the Committee's enquiry about the procedures for engaging external trainers, **Chief Innovation Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that:

- according to the "Guidebook for Organising Public Training Programme", the programme team would evaluate the suitability of trainers registered with HKPC according to the designated criteria. Recommended trainers would be included in HKPC's "Speakers Pool" for consideration by the management. Upon the endorsement by the management, selected trainers would be required to sign a training service agreement with HKPC; and

- the programme team would observe and assess the performance of the trainers in the first class of the programmes, and collect post-course feedback forms from the course participants to evaluate the performance and quality of the trainers.

101. With reference to Table 23 in paragraph 4.39 of the Audit Report, the Committee asked whether a notional cost of HKPC training venues would be included in the cost calculation of training programmes with a view to achieving full cost recovery.

102. **Chief Financial Officer, HKPC** explained at the public hearings and **Executive Director, HKPC** supplemented in his letter dated 22 January 2020 (*Appendix 28*) that before April 2019 (i.e. prior to the implementation of new training strategy), the cost calculation of training programmes included the HKPC venue cost. After reviewing the above arrangement, venue cost was considered as notional cost

and the HKPC venue cost was no longer included in the cost of training programme starting from 1 April 2019.

103. The Committee noted with concern from the reply letter dated 11 December 2019 from Executive Director, HKPC (*Appendix 29*) that there were off-site training prgrammes (i.e. Hygiene Manager Training Courses) organized by HKPC given the low utilization rates of its training venues as revealed by the Audit Report.

104. **Chief Innovation Officer, HKPC** explained at the public hearings and Executive Director, HKPC supplemented in his letter dated 22 January 2020 (*Appendix 28*) that HKPC divisions had to bear HKPC venue cost before April 2019. For the course in question, the programme team had chosen Ngau Chi Wan Civic Centre after taking into account the HKPC venue cost.

105. The Committee further asked whether HKPC had considered whether the unsatisfactory usage rates of its training venues might be due to high hiring fees. **Chief Innovation Officer, HKPC** responded at the public hearings and **Executive Director, HKPC** added in his letter dated 22 January 2020 (*Appendix 28*) that in general, venue rental pricing was set by making reference to similar venues. The most recent review conducted by HKPC in August 2018 indicated that the current pricing mechanism reasonable. A table showing the rental rates of HKPC venues and facilities was provided in the above letter.

E. Conclusions and recommendations

Overall comments

106. The Committee:

- notes that:

  (a) the Government established the Hong Kong Productivity Council ("HKPC") in 1967 under the Hong Kong Productivity Council Ordinance (Cap. 1116) ("HKPCO") with a mission to promote the productivity, operational efficiency and competitiveness of local industries. In 2017-2018, HKPC had a total income of $711 million, which included government subventions of $223.3 million (31.4%), and a total expenditure of $663.7 million;

(b) according to the Memorandum of Administrative Arrangements entered into between the Administration and HKPC ("MAA") in 2003, HKPC should have autonomy and flexibility in the management of its activities and utilization of its resources. The public officers sitting on the Council of HKPC[11] primarily represent the Administration's interests in priority over those of HKPC;[12] and

(c) HKPC completed a consultancy study in 2002 to review its role, management and operation. The study recommended that HKPC's future service focus should be on providing integrated support to innovative and growth oriented Hong Kong firms across the value chain. The main sectoral focus should be on manufacturing firms, particularly those in Hong Kong's foundation industries[13] and related service activities;

- emphasizes that:

(a) while Commissioner for Innovation and Technology, as the Controlling Officer of the subventions granted to HKPC, bears oversight responsibility over HKPC, she should foster HKPC's management autonomy as provided for under MAA and, under normal circumstances, should not impose undue compliance burden on HKPC;

(b) the Innovation and Technology Bureau ("ITB") and the Innovation and Technology Commission ("ITC")[14] should deliver

---

[11] The five public officers appointed as Council members are: (a) the Permanent Secretary for Innovation and Technology; (b) the Commissioner for Innovation and Technology; (c) the Director-General of Trade and Industry; (d) the Government Economist; and (e) the Deputy Commissioner for Labour (Labour Administration).

[12] The clause was added upon the MAA renewal in June 2009 to replace a then existing clause which required public officers to act in the best interests of HKPC where no conflict of interest arose.

[13] According to the consultancy study, Hong Kong's foundation industries included electronics, machinery and equipment, toys and plastics, textiles and clothing.

[14] Before the establishment of ITB in 2015, ITC was under the purview of the Commerce and Economic Development Bureau.

clear policy direction to facilitate HKPC in performing its role and functions of promoting the application of innovation and advanced technology among Hong Kong's industries and advising the Administration on the productivity issues concerning Hong Kong; and

(c) it is incumbent upon the HKPC management, while enjoying autonomous operation, to ensure compliance with the statutory requirements stipulated under HKPCO and internal guidelines by HKPC in delivering its objectives and making use of the public funds to achieve value for money;

Performance measurement and reporting

- finds it appalling and inexcusable that the deficiencies and irregularities of the HKPC management in respect of key performance indicators ("KPIs") had adversely affected the public's monitoring of HKPC's work, as evidenced by the following:

  (a) despite the fact that the target on "Number of consultancy projects accepted" was revised downwards in 2018-2019 to 935, the target was only met following a decision made at a management meeting chaired by HKPC's Executive Director in July 2018 to classify manufacturing support projects with consultancy element and with service fees over $5,000 as consultancy projects. The related performance target for 2018-2019 was however not revised according to the new definition of consultancy projects, and the approvals of the Council and ITC had not been sought for such reclassification either. It was also noted at the public hearings that the incumbent Executive Director of HKPC assumed office in late December 2017, some six months before the above meeting;

  (b) the HKPC management was still unaware of its obligation to notify its Council and ITC of the change to the definition of consultancy projects when it submitted the Annual Programme and Estimates of 2019-2020 to the Council in November 2018 and reported to the Council in July 2019 the KPI "Number of consultancy projects accepted" for 2018-2019. The change only became known to ITC when it was discovered by the Audit Commission ("Audit") in the course of the audit exercise in 2019;

(c) HKPC had not put in place internal guidelines stipulating clearly the procedures for reporting to and seeking approval from the Council the proposed changes/enhancements to KPIs or other related matters that should be reported to and endorsed by the Council;

(d) in replying to the queries of the Committee, HKPC advised after the first public hearing on 13 December 2019 that it discovered wrong inclusion of 55 manufacturing support projects with consultancy element but with service fees less than $5,000 into the number of consultancy projects accepted in 2018-2019. The actual percentage of the target met in 2018-2019 should be 95%. As a result, the 2018-2019 target could not be achieved even with the adoption of the new definition. HKPC believed that such error was made due to communication problems with frontline staff and failure to timely update its Standard Practices with respect to the new definition of consultancy project;

(e) before the discovery of the above error, the KPI target on "Number of consultancy projects accepted" had not been achieved for four consecutive years from 2014-2015 to 2017-2018 even though the target had been adjusted downwards annually, dropping by as much as 22.6% throughout the period;

(f) from 2014-2015 to 2018-2019, 68 (33%) of the 203 new projects were counted as both consultancy projects and research and development ("R&D") projects at the same time against two targets, namely "Number of consultancy projects accepted" and "Number of new R&D projects". There was no disclosure on the number of projects that were counted against both the targets for consultancy projects and R&D projects;

(g) "Number of on-going R&D projects" was used as a KPI for managing R&D projects while on average, 60% of the on-going R&D projects from 2014-2015 to 2018-2019 were projects brought forward from previous years, with delayed projects included therein accounting for 4%. Using such KPI for performance management might give an undesirable incentive for project teams to delay projects in hand unnecessarily; and

(h) from 2014-2015 to 2018-2019, the target on KPI "Number of patents/licences/royalties" was exceeded by 40% to 138% and the target on KPI "Number of products/technologies commercialized" was exceeded by up to 50%. Such persistent outperformance in KPIs indicated HKPC's failure to set the right targets to develop a corporate culture of learning and growth;

- notes that HKPC is reviewing the current 23 KPIs in response to Audit's recommendations, and plans to submit the set of KPIs and targets for 2020-2021 following the review to the Council for consideration at its meeting to be held in March 2020. Upon endorsement by the Council, HKPC will submit the proposal to Commissioner for Innovation and Technology for approval in accordance with MAA by end March 2020, with a view to implementing the revised KPIs and targets starting from 2020-2021;

Project budgeting and contract governance

- expresses dissatisfaction and finds it unacceptable that HKPC had failed to achieve full cost recovery in delivering its consultancy and manufacturing support services, as evidenced by the following:

  (a) from 2014-2015 to 2018-2019, 308 (39%) of the 788 productivity related assignments elsewhere than in Hong Kong did not recover all costs incurred, contrary to the requirement of HKPCO;[15] and

  (b) of the 4 299 consultancy projects completed in the period from 2014-2015 to 2018-2019, full cost was not recovered in 1 078 (25%), contrary to the requirement of HKPC Standard Practices. There was no documentary evidence showing the reasons for their deviations from the full-cost recovery basis as required;

- expresses dissatisfaction and finds it unacceptable that HKPC's poor project and contract management had hampered its effective

[15] According to section 4 of HKPCO, HKPC takes on productivity related assignments elsewhere than in Hong Kong should be subject to the following conditions: (a) the work can be carried out without prejudice to the performance by HKPC of the functions specified in the Ordinance; and (b) the minimum rate charged by HKPC for the work is sufficient to recover all costs incurred in carrying out that work, which costs shall include direct costs (recurrent and capital) and overhead costs.

monitoring of the consultancy project progress and had resulted in cost overruns, as evidenced by the following:

(a) for 58 (53%) of the 109 consultancy projects terminated in the period from 2014-2015 to 2018-2019, the clients did not reimburse HKPC for all costs incurred. The total costs not reimbursed amounted to $3 million. There was no documentary evidence showing the justifications for not seeking reimbursement from the clients;

(b) in 55 of the aforesaid 58 terminated projects, the deficits were resulted from poor project management and assessment, such as extra project manhours, technical and project execution challenges causing the deliverable not meeting project requirement, extra project preparation work, etc.; and

(c) in Case 1 in paragraph 2.24 of the Director of Audit's Report ("Audit Report"), the project was terminated by project team based on risk, cost and functional consideration arising from the frequent changes made by the client to the product design. However, HKPC subsequently agreed to hand over the semi-finished deliverables free of charge and fully refund the down payment of $400,000 to the client without reimbursing from the client the cost incurred for the project, which amounted to $254,000, upon the project termination. There was also no documentary evidence showing the justifications for not recovering the costs already incurred from the client concerned;

- is not convinced by HKPC's explanation that its handling of Case 1 above was due to the absence of clauses in the project agreement governing the number and scope of variations that could be made by the client and the fact that HKPC could not deliver the deliverables to the acceptance of the client;

- urges HKPC to:

(a) closely monitor and regularly review the setting of its KPIs, and its performance against them with a view to using these indicators as an effective means to enhance its management, governance and accountability. Any proposals on change(s) to the KPIs should follow the established procedure to seek prior approvals (both internal and external) from the appropriate authorities;

(b) in consultation with ITC, work out effective measures to address the long-standing problem with full cost recovery of consultancy projects, which was already raised in the Public Accounts Committee Report No. 53 of February 2010;[16]

(c) conduct a comprehensive review on the standard provisions contained in the project agreements and the management of performance of such agreements, and make necessary enhancements to minimize the project risks and safeguard HKPC's interests, including setting out specific clauses governing variations in the client's requirements, clearly defining the project specifications agreed by both parties and specifying the consequences for being unable to achieve the agreed result(s) by HKPC in accordance with the time-frame stipulated in the agreements; and

(d) enhance the preliminary feasibility study of a proposed project, particularly in respect of the scoring mechanism under the project risk assessment, with a view to effectively identifying valid reasons for undertaking/not proceeding with the project for consideration by the management;

- recommends that ITC should, taking into account HKPC's public mission, review the application of the full cost recovery principle to HKPC's activities and, in discussing with HKPC, work out appropriate cost recovery arrangements for its services, for example, whether a certain degree of deviation from full cost recovery is allowed for activities with significant public benefits, in view of a fast-changing market and policy changes over time;

[16] The corporate governance and administrative issues of HKPC were examined by the Public Accounts Committee in response to the findings contained in Chapter 7 of the Director of Audit's Report No. 53.

Way forward of HKPC

- notes that:

  (a) ITC and HKPC have not carried out any comprehensive review on the role, management and operation of HKPC since the last consultancy study of 2002; and

  (b) in recent years, HKPC has been implementing supporting initiatives in line with ITB's policy direction of promoting re-industrialization and developing innovation and technology;

- expresses concern about how HKPC could better fulfil its role and functions in promoting innovation and technology to Hong Kong's industries given that there are also other organizations in Hong Kong with similar business missions; and

- urges ITB and ITC to:

  (a) regularly keep in view the mode of operation, future business direction and subvention mode of HKPC having regard to the changing economic development of Hong Kong; and

  (b) better coordinate the efforts of various stakeholders in promoting the industry, particularly in respect of innovation and technology, and ensure that clear government direction is delivered to HKPC to facilitate the strategic planning for its services without departure from policy objectives.

Specific comments

107. The Committee:

Provision of consultancy and manufacturing support services

- expresses serious concern and finds it unacceptable that:

(a) from 2014-2015 to 2018-2019, of 308 consultancy projects outside Hong Kong that did not recover all costs incurred, 47 (15.3%), in which HKPC acted as the implementing agent of a government funding programme, had budgeted deficits because the programme lasted for more than five years and the inflationary factor built in at the quotation stage was insufficient to cover the subsequent increase in staff charging rates;

(b) in 2018-2019, of 484 consultancy projects involving small and medium enterprises, 221 (45.7%) were not offered any fee concession, 250 (51.6%) were offered 20% concessions, 12 (2.5%) were offered 30% concessions; and 1 (0.2%) was offered a 65% concession. There was no documentary evidence showing the justifications for the different concession rates offered;

(c) it was decided at a senior management meeting held in June 2016 that HKPC should try to charge clients at price levels that achieve full cost recovery without concession as far as practicable. However, the deficits of consultancy projects completed in 2017-2018 ($16 million) and 2018-2019 ($8 million) were even larger than those in 2014-2015 to 2016-2017, and the above decision was not incorporated in HKPC Standard Practices;

(d) of the 4 299 consultancy projects completed in the period from 2014-2015 to 2018-2019, 1 243 (29%) were completed after the approved completion date with an average delay of 42 days;

(e) in 2018-2019, the income of Inno Space fell short of the target of $532,000 by 40%. Although the number of Inno Space members recruited in 2018-2019 (450 members) exceeded the target of 200 by 125%, 236 (52%) were new members on one-month free trial; and

(f) for the 10 items of equipment of Inno Space reviewed by Audit, in 2018-2019, the number of days on which they were booked was only 26 (8.8% of the 297 days available for booking) on average, ranging from 1 (0.3%) to 138 (46.5%);

- expresses alarm and finds it unacceptable that a staff member did not bill two clients after providing workshop services to them with a total value of $200,000 and $70,000 respectively. On the other hand, the amounts were provided by the two clients as sponsorships for two Innovation and Technology Fund ("ITF") funded projects of which the staff member was in charge in order to fulfil ITC's minimum sponsorship requirement. The staff member subsequently resigned from HKPC and actions taken by HKPC to recover the amounts from the two clients concerned were not successful;

- notes that:

  (a) HKPC will study the appropriate adjustment in working out the "Contingency Budget" to meet the additional costs arising from unforeseen circumstances, such as technical difficulties or inflation. HKPC has also further enhanced the monitoring mechanism since December 2019 to require project officers to report to the management the cost control issues on a regular basis;

  (b) Executive Director, HKPC has agreed with Audit's recommendations in paragraphs 2.27 and 2.47 of the Audit Report; and

  (c) Commissioner for Innovation and Technology has agreed with Audit's recommendation in paragraph 2.48 of the Audit Report;

- recommends that HKPC should invite the Independent Commission Against Corruption to provide advisory service to enhance its practices and procedures, organize training courses to strengthen business ethics and integrity of its staff and enhance its internal monitoring or supervision of its staff who undertake independent projects or workshops;

<u>Research and development projects</u>

- expresses serious concern and finds it unacceptable that from 2014-2015 to 2018-2019:

  (a) 102 (59%) of the 173 completed R&D projects were completed after the approved completion date. In particular, of the 33 ITF funded R&D projects completed during the period, 27 (82%) was completed with delay and the major cause was uncompleted paper work and reporting;

(b) of the 106 Progress Reports and Final Reports due for submission by HKPC to ITC for 33 completed ITF funded R&D projects, 37 (35%) were submitted late;

(c) of the 86 patents, licences or royalties awarded/entered from 2014-2015 to 2018-2019, 77 (90%) were patents awarded, while the number of licence or royalty agreements entered only contributed 9 (10%) of the total. This suggested that the achievement in the target on KPI "Number of patents/licences/royalties" was largely attributable to the number of patents awarded. Given that granting of a patent does not represent that a product or technology is commercialized, putting patent, license and royalty under the same KPI might not be able to effectively measure HKPC's effort in the commercialization of its products and technologies; and

(d) of the 97 products or technologies commercialized, only 45 (46%) were developed from R&D projects, and the remaining 52 (54%) were mainly generated by pilot technology development projects conducted by individual divisions. Moreover, when a product/technology was sold to more than one client, the single product/technology was counted as more than one product/technology commercialized. The KPI "Number of products/technologies commercialized" was somewhat misleading and ambiguous that HKPC's performance in the commercialization of results of R&D projects could not be clearly demonstrated;

- expresses serious concern that of the 123 patents possessed by HKPC as at 31 August 2019, only four (3%) had generated licence or royalty income since patent registration, totalling $1.5 million. The remaining 119 (97%) patents had not generated any licence or royalty income since patent registration;

- notes that:

(a) the number of delayed R&D projects fell in 2018-2019; and

(b) Executive Director, HKPC has agreed with Audit's recommendations in paragraphs 3.14 and 3.28 of the Audit Report;

Provision of training programmes

- expresses serious concern and finds it unacceptable that:

(a) from 2014-2015 to 2018-2019, some of the targets on KPIs for training programmes were not met:

(i) the numbers of fee-charging training courses launched in the period from 2014-2015 to 2016-2017 were only 60% to 90% of the targets;

(ii) the numbers of people attending the fee-charging training courses in 2014-2015 and 2015-2016 were only 52% and 79% of the targets; and

(iii) the income from training courses for the period from 2014-2015 to 2018-2019 was only 47% to 65% of the targets, decreasing from $12.9 million in 2014-2015 to $7.6 million in 2018-2019;

(b) the actual numbers of training programmes from 2016-2017 to 2018-2019 under the programme areas of environmental technology and manufacturing technology consistently deviated from the estimated numbers;

(c) for 10 (33%) of the 30 public training programmes organized in 2018-2019 and examined by Audit, the estimated enrolment was not included in the proposals;

(d) for 12 (60%) of the remaining 20 public training programmes with estimated enrolment included in the proposals, the actual enrolment was less than the estimated enrolment (about 15% to 92% of the estimated enrolment, 59% on average);

(e) of the 120 public training programmes organized in 2018-2019, 38 (32%) had fewer than ten participants, including 15 programmes with the estimated number of enrolment not included in the proposals and eight programmes with the estimated number of enrolment set below 10. For all of the eight programmes, there was no documentary evidence showing the justifications for organizing such programmes despite the fact that only a few people were expected to attend the programmes;

(f) market demand assessment had not been conducted for 11 (37%) of the 30 new public training programmes organized in 2018-2019 and examined by Audit. For two (7%) programmes, the programme organisers stated in the proposals that market demand assessments had been conducted, but details and results of the market demand assessments could not be found in the proposals;

(g) the programme-end evaluation data of 242 (43%) of the 559 public training programmes organized in the period from 2015-2016 to 2018-2019 were not available in the Public Training Administration system. While the evaluation data of 65 (19%) of the 340 corporate training programmes organized were also kept in the Public Training Administration system and used for the computation of the overall participants satisfaction index (i.e. one of KPIs for training programmes), the evaluation data of the remaining 275 (81%) corporate training programmes were not kept in the Public Training Administration system;

(h) the annual response rate of the end-of-programme evaluation forms decreased from 51% in 2015-2016 to 43% in 2018-2019;

(i) from 2015-2016 to 2018-2019, annual reviews had not been conducted for some public training programmes, (ranging from 9% to 33% of the programmes organized in each year), contrary to the requirement of HKPC Guidebook for Organising Public Training Programme; and

(j) the overall utilization rates of HKPC's training venues in 2017-2018 and 2018-2019 were low (i.e. 17% and 16% respectively). In particular, the utilization rate of each and every training venue was less than 50% during both office hours and non-office hours; and

- notes that Executive Director, HKPC has agreed with Audit's recommendations in paragraphs 4.12, 4.26, 4.37 and 4.44 of the Audit Report.

Follow-up action

108. The Committee wishes to be kept informed of the progress made in implementing the various recommendations made by the Committee and Audit.