



本函檔號: ED-2019025

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立法會政府帳目委員會秘書  
朱漢儒先生

朱先生：

**政府帳目委員會**  
**考慮審計署署長第七十三號報告書第 2 章**  
**香港生產力促進局提供顧問、研發和培訓服務的工作**

就 12 月 19 日來信( 來函檔號: CB4/PAC/R73 )要求提供資料，現附上有關資料以及與第 2.24 段個案一的相關回覆，詳情如下：

在個案一中，客戶委託生產力局研發一種新型便攜式水分氣化空調。生產力局期望通過本項目提升本局的能力、和累積經驗，並展現生產力局為客戶開發高增值的新產品提供一站式解決方案的能力，包括從可行性研究、原型製作，到工程樣品以及整個製造過程、工具和設備開發等方面。因未有先例可循，雙方未能在合同中明確訂定新產品的技術規範，及後按客戶要求研發產品，項目複雜程度超出生產力局原本預期，進度未如理想，生產力局最後決定向客戶提出終止合同，並在雙方同意下退款。生產力局承認這個個案的安排並不理想，會吸取經驗，改善項目風險管理。

(a) 有關生產力促進局與客戶簽訂的項目合同副本，請參閱附件「a1」、「a2」和「a3」。

該項目合同中未有訂定關於客戶更改需求的條款。

一般情況下，生產力局會把客戶提出的更改需求視為合同變更，會向客戶收取因此而帶來的額外費用。

惟在個案一當中，生產力局向客戶提出的項目建議中沒有明確訂定產品的技術規範 ( Specifications )，而是列出暫定 ( Tentative/TBC ) 的技術規範。客戶多次提出來的產品設計更改都是在未確認最終技術規範前提出的，而且設計更改並未超出項目建議書內暫定技術規範列出的技術範疇，所以不能被視為合同變更要求。

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**\* 委員會秘書附註：附件 a2 及附件 a3 並無在此隨附。**

(b) 項目團隊在與客戶簽署協議前，已完成相關的可行性研究，當中包括了以下各方面的分析：

- 項目可為生產力局帶來的得益：項目的背景文件（附件「b1」）闡明了生產力局的總監批准該項目的背景和原因。在附件「b1」第7段中解釋到：「該項目將支持本地初創公司開發一種新型便攜式水分氣化空調，以減少夏季的能源消耗。」以及本項目「將有助於進一步提升生產力局的能力、和累積經驗，並展現生產力局為客戶開發高增值的新產品提供一站式解決方案的能力，包括從可行性研究、原型製作，到工程樣品以及整個製造過程、工具和設備開發等方面」。
- 項目的風險：項目團隊完成的項目風險評估表（附件「b2」）向生產力局的總監提供有關項目風險水平的分析。項目風險評估有總共4個風險類別，當中資源風險和進度風險被評為3分（從1到4，其中4代表最高風險）；技術風險和外部風險的評分為2；風險評分2和3被分類為中度風險。在項目風險評估中，項目團隊對當中兩個風險為3分的類別提供了其理據或緩解方案。
- 項目的成本：項目團隊已評估執行項目的總成本（附件「b3」）。生產力局在此項目中向客戶收取的總價格相等於成本計算表中估算的總和。

(c) 項目團隊呈交數碼科總監尋求終止項目的批准的文件見附件：附件「c1」。該文件已獲數碼科總監檢閱並簽署批核（文件「c1」上的簽署已遮蓋）。生產力局內部法律部門準備的和解協議（見附件「c2」），協議內反映向客戶退還港幣40萬元及半成品的安排，並由數碼科總監和客戶共同簽署，表示同意此安排。

(d) 客戶更改產品設計要求（如上文(a)點所述，符合合同範圍內）令產品技術開發難度大增，導致工時超出預算。項目團隊於2018年10月建議終止該項目時，已產生港幣254,286元的項目成本，其中工時成本為港幣230,992元（佔該項目預算工時總成本的58%）。整個項目原計劃12個月內完成，一共分為四個階段，第一階段原計劃於2018年5月中旬完成。惟由於項目團隊需要額外的時間來執行客戶的產品設計更改要求，所以截至2018年10月，第一階段仍未完成，該項目已嚴重延遲5個月。

在項目第一階段的執行過程中，項目團隊根據項目協議要求，分批提供了半成品，包括3D打印生成的零件模型、設計草圖、控制電路板尺寸圖，以供客戶確定。

直至項目終止時，零件模型樣品仍需要進行徹底修改，才能實際使用，相應的設計草圖未經修改亦無法使用。這批零件模型樣品及其相應設計草圖便是生產力局與客戶和解協議中提及的「半成品」（Semi-finished deliverables），不能組裝成為產品原型。

如上文(a)點所述，項目建議書內沒有明確訂定產品的技術規範，生產力局項目團隊需要交付的成果必須要符合客戶最終接納及同意的技術規範。客戶因此可多次在合同範圍內要求更改產品設計，令項目中的技術困難增加（項目當中遇到的詳細技術困難詳見附件「d」）。某些技術困難有可能無法在短時間內解決，或需要尋找其他替代方法，在任何情況下都將花費額外時間和人工成本。有鑑項目累計工時成本已佔預算工時總成本的 58%，而第一階段仍未完成，項目潛在超支成本極有可能大大超過港幣 254,000 元。


此外，客戶（透過通訊軟件 WhatsApp 及/或電郵）在 2018 年 4 月、2018 年 7 月、2018 年 8 月和 2018 年 9 月向項目管理人員表示對項目執行進度的關注，並強調該電子設備的開發時間對他們而言非常關鍵，因為該電子設備是夏季的產品。對於初創中小企兩年沒有銷售，只有產品開發成本，他們很難生存。客戶非常關注項目進度的另一個原因（如客戶在 2018 年 9 月 26 日發送給生產力局的電子郵件所示），是因為客戶獲准於 2019 年 1 月在美國消費電子展（Consumer Electronics Show, CES）上展示該產品。CES 是世界上最著名的消費電子設備展覽會之一，而此產品的首個目標市場是美國。客戶於 2018 年 10 月 26 日致函生產力局項目團隊的電子郵件中，提到除了要求生產力局退還港幣 40 萬元外，還打算索償港幣 40 萬元，以補償此產品開發的時間損失的責任。

為了盡力降低項目對生產力局成本上的影響，同時考慮到時間表上未能滿足客戶的要求，生產力局項目團隊決定提出終止項目，數碼科總監最終批准了項目團隊的項目終止請求，並邀請生產力局內部法律顧問就和解協議提供法律意見。考慮到生產力局未能履行客戶提出的要求及潛在的訴訟風險，因此決定向客戶全額退款港幣 40 萬元及交付半成品。

- (e) 有關與客戶通訊的檔案請參閱「e1」和「e2」，當中相關個人私隱資料已經被遮蓋。
- (f) 有關預期會遇到的其他技術困難，請參考附件「f」。
- (g) 根據生產力局《標準守則》F3 號（附件「g1」），任何項目價值達到港幣 150 萬元，總監級具有管理項目的批准權限，此權限高於個案一的項目價值港幣 105 萬元；項目管理權限包括報價、批准項目、項目預算修訂、項目完成、項目終止（由客戶或生產力局）等。《標準守則》內並無訂明有關終止項目的細節的（例如是否向客戶退還費用或讓客戶保留半成品）批准權限，一般情況下此等細節會於與客戶議妥後在和解協議內列明，並由批核終止項目的人員簽署作實（個案一的安排相同）。本局認為安排合理。

總結個案一：生產力局需要改善的地方 - 項目合同未能清晰界定雙方都同意的產品技術規範，沒有明確的技術規範大大增加了潛在的技術風險；最初的项目風險評估嚴重低估了技術風險，因此而可能導致額外成本和項目執行時間。另外，尋求終止項目批准的文件沒有清晰描述整件事情的細節。今次個案實屬個別事件，生產力局會吸取經驗，改善項目風險管理。

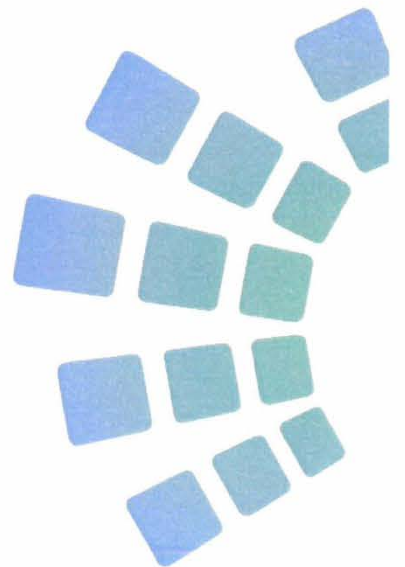
就上述提供的資料，如有疑問，歡迎聯絡本人。



香港生產力促進局總裁  
畢堅文先生

副本送： 創新及科技局局長  
創新科技署署長  
財經事務及庫務局局長  
審計署署長 (經辦人：高級審計師盧逸恒先生)

2020年1月2日





Ref: 0711/006/01/18

Date: January 22, 2018

H

Dear

**Re: Research and Development of an Eco-friendly Smart Portable Evaporation Air Conditioner for Personal Use**

Thank you for inviting our Council to render the captioned R&D service to your company. I would like to inform you that our Council is pleased to offer this R&D service to your Company with the following details.

**Background**

In the recently decade, global warming is becoming a critical issue not only to environment, but also to people's daily life. Especially in summer, air conditioner is indispensable equipment for everyone in Hong Kong. However, traditional air conditioner normally causes high energy consumption and even harms to the environment due to the releasing of Freon. Moreover, since the large size scale and heavy weight, the traditional air conditioner only can be used in the certain place which cannot meet the need of mobile using for individual. Therefore, air conditioner is always looking for a smart method to save energy, minimize the size scale, and reduce the weight.

Our concept is to apply an eco-friendly water evaporation method to provide hydrated cooling, which could be much more powerful than water cooling without generates greenhouse gas. The power usage will be controlled to lower than 10 Watts, thus a standard, rechargeable battery could be used to provide sufficient power. Furthermore, by carefully controlling the size of water molecules, amount of water molecules and air flow, the water evaporation could reach the highest efficiency to

**\*委員會秘書附註：本文件只備英文本。**

provide maximum cooling power. Therefore, this product, we believe, would be small enough to bring it to anywhere you want to and powerful enough to cool yourself.

## Objective & Scope

The objective of the project is to assist H (hereinafter ) to conduct an up- and down- stream research and development for eco-friendly smart portable evaporation air conditioner based on the proof of concept model provided by H . Water evaporation method will be studied to enhance the cooling efficiency of the smart portable evaporation air conditioner. The functional and reliability specification will be established. The weight and size of final product will be minimized. Specific moulds for each mechanical part will be designed and developed in this project. A mini membrane pump will be installed with the water tank to improve the ability of water evaporation. Meanwhile, 3D-printing will be adopted to build a prototype. All designed components will be fabricated and installed for testing the new concept in Hong Kong. The combination of the parameters, including power consumption, water evaporation rate, air flow speed, and relative cooling rate of the fan outlet compared with the atmosphere nearby will be studied and identified after the system have been installed. It is assumed that the minimum functional performance will not lower than the proof-of-concept model.

H will fine tune the process parameters of the others specific shape on their own after project completion and technology transfer. HKPC will assist H to prepare documents for applying certifications. The first target market would be the Unit State of America. In this project it will covers the most common test items including EMC and RoHS for low voltage consumer electronic product. If more test items are required, HKPC will suggest a 3<sup>rd</sup> party certify body to H to carry out the test in his own expense.

Based on our understanding, discussion and mutual consent after back and forth meetings, the following are the tentative specifications proposed for your reference:

Equipment Characteristics	Parameter (Tentative)
Voltage Input	5V DC, USB charging, TBC

Power	<10W, TBC
Overall Machine Size	25cmx 15cm x 15cm, TBC
Air flow rate	Equivalent or not lower than the proof of concept model. TBC
Water vaporized rate	Equivalent or not lower than the proof of concept model. TBC
Weight	<600g, TBC

Our service will include the following activities and deliverables:

Stage	Activity	Deliverable& Acceptance for Each Phase	Estimated Time
Initial Design and Engineering Drawings, Electronic circuit design, and Risk management	<ol style="list-style-type: none"> <li>3D model design</li> <li>3D assembly design</li> <li>2D drawing and dimensioning</li> <li>Electronic circuit design</li> <li>Functional and reliability specification</li> <li>Safety consideration</li> <li>Risk management</li> </ol>	<ol style="list-style-type: none"> <li>Device design input</li> <li>3D molding of the device and 2D drawings.</li> <li>Electronic circuit design</li> <li>Functional and reliability specification</li> </ol>	3 months
Prototyping and design validation	<ol style="list-style-type: none"> <li>Rapid Prototyping (RP)</li> <li>Design validation and Engineering Change.</li> <li>Repeat RP(s) until the product meet the specification defined at the first stage</li> </ol>	<ol style="list-style-type: none"> <li>Not more 10's Functional Prototype of the product</li> </ol>	3 months

Mould Fabrication, Assembly, Testing	<ol style="list-style-type: none"> <li>1. Mould fabrication</li> <li>2. Parts fabrication</li> <li>3. Parts assembly</li> <li>4. Functional test of the engineering samples</li> </ol>	<ol style="list-style-type: none"> <li>1. 10's Smart portable air conditioner machine (Engineering Sample)</li> <li>2. Experimental test report</li> </ol>	3 months
Design transfer	<ol style="list-style-type: none"> <li>1. Design transfer to H</li> </ol>	<ol style="list-style-type: none"> <li>1. Technical file (all design documents, findings and reports, etc.)</li> </ol>	3 months

(Remark: HKPC will only assist H to apply Research and Development Cash Rebate Scheme under ITC (hereinafter "Cash Rebate") by filling the pre-registration form, provide necessary project information and submission of mid-term (if applicable) and final report. The final approval of the Cash Rebate is not guaranteed by ITC. H have to bear the risk of final granting approval.)

This is a R&D-based project with high technical risk. The performance of the developed water vaporized air conditioner cannot be guaranteed. HKPC is only responsible for providing technical support to improve the performance of the original proof of concept model provided by H.

### **Methodology and Duration**

The whole project will tentatively be divided into 4 implementation phases and the methodology is detailed in the attached proposed implementation plan. The project will last for around 12 months to complete depending on the overall progress, tentatively commence in January 2018. The consultancy service will include research and development of the eco-friendly smart portable evaporation air conditioner, functional specification establishing, prototyping, parts fabrication, parts assembly, testing and parameters fine tuning. The confirmed implementation schedule will be subjected to mutual agreement upon project confirmation. During the project implementation period, our responsible consultants will work closely with your



Company's staff for the project implementation.

Our consultants will visit your Company regularly to provide service and monitor the overall project progress. All the time being estimated is based on the assumption that the management of your Company will fully support the project and can commit adequate resources deemed necessary such as adherence to the project milestone, consultant advice, project team formation, delegation, required supplies, people, etc. for implementation and effort in working with our consultants throughout all stages of implementation. The tentative project duration may be extended according to actual situation with prior mutual consent from each party. However, the Council further reserves the right to claim your Company for any additional or incremental costs and expenses incurred arising out of, resulting from or in connection with any delay or extension of the project attributable to or caused by your Company.

The Council shall not be responsible or liable in any way for any delay or default in delivery of services or goods, or failure to perform any of its obligations under this Agreement if such delay, default or failure was caused by (i) any delay or fault by your Company or your selected contractors or suppliers, or (ii) any other unforeseeable events or circumstances beyond the Council's control, including but not limited to war, riots, fire, flood, typhoon, lightning, severe weather, earthquake, explosion, strikes, shortage of energy supplies, acts of state or governmental action or operational disruptions.

#### **Project Team**

A HKPC consultant will be assigned to serve as the project manager in this project to manage the entire development work and service delivery. We will arrange sufficient manpower such as an electronics expert, a mechanical expert or other relevant experts to handle the project according to the actual situation whenever necessary and consider appropriate.

#### **Cost Estimate and Terms of Payment**

The total service charge is **HK\$1,050,000**. The project will commence after confirmation and receipt of deposit. The service charge will be payable to the Council based on the following tabulated payment schedule which are non-refundable after

confirmation.

Description	Payment Schedule	Service Cover	HK\$
1 <sup>st</sup> installment	Upon Project Acceptance	All activities and deliverable(s) mention in the Initial Design and Engineering Drawings, Electronic circuit design, and Risk management stage	400,000
2 <sup>nd</sup> installment	Completion of Initial Design and Engineering Drawings, Electronic circuit design, and Risk management. And H accepts to move to next stage.	All activities and deliverable(s) mention in the Prototyping and design validation stage	150,000
3 <sup>rd</sup> installment	Completion of Prototyping. H accepts the overall performance and agree to move to next stage.	<ul style="list-style-type: none"> <li>- Mould Drawings</li> <li>- Production Failure Mode Effect and Analysis</li> <li>- BOM</li> <li>- Overall management of mould fabrication</li> </ul>	200,000
4 <sup>th</sup> installment	Completion of Mold Fabrication. H accepts the overall performance and agree to move to next stage.	All activities and deliverable(s) mention in the Mould Fabrication, Assembly, Testing stage	200,000
5 <sup>th</sup> installment	After Design Transfer	All activities and deliverable(s) mention in the Design transfer stage	100,000
<p><i>Remark:</i></p> <p>1. HKPC is only responsible for the purchase of hardware, software and external subcontracted services up to maximum amount of HK\$650,000. H shall</p>			

*be responsible for paying the additional cost for any hardware, software and external subcontracted services if so required to complete the project due to whatever reasons.*

The consultancy fee quoted does not include cost of certified material, equipment calibration, hardware and software investment cost, etc. necessary for carrying out the R&D process. The service charge does not also include the transportation and hotel accommodation for our staff working in the PRC if necessary. H is responsible for such logistic arrangements and bears the associated costs fully. If H cannot arrange the required logistics service to our staff, our staff will arrange by themselves and charge H directly for the logistic cost incurred. H will be required to settle the payment within 45 days from the date of the receipt. Otherwise, HKPC will suspend the service until all outstanding costs are settled by H. The Council further reserves the right to claim the H for any additional or incremental costs and expenses incurred arising out of, resulting from or in connection with any delay or extension of the project attributable to or caused by H.

This quotation remains valid for **two weeks** from the date of this letter. If you need further details, please do not hesitate to contact my colleague, Mr. A Consultant at (852) , Mr. R , Principal Consultant at (852) or directly to me at (852)

Thank you for your consideration and I am looking forward to your favorable reply soon.

Yours sincerely,

Mr. K  
General Manager

Hong Kong Productivity Council

b1

M1

This is for prototyping  
service & it will be the  
first prototype procedure ever  
for start-up.

**BACKGROUND AND JUSTIFICATION**

Background of the project

1. This is a consultancy project on "Research and Development of an Eco-friendly Smart Portable Evaporation Air Conditioner for Personal Use" for H (hereinafter ), a local startup SME focusing on developing portable cooling device. This project has been pre-registered for R&D Rebate Scheme under ITC of HKSAR government.
2. This project aim to assist H (hereinafter ) to conduct an up- and down- stream research and development for eco-friendly smart portable evaporation air conditioner based on the proof of concept model provided by Water evaporation method will be studied to enhance the cooling efficiency of the smart portable evaporation air conditioner. The functional and reliability specification will be established. The weight and size of final product will be minimized. Specific moulds for each mechanical part will be designed and developed in this project. A mini membrane pump will be installed with the water tank to improve the ability of water evaporation. Meanwhile, 3D-printing will be adopted to build a prototype. All designed components will be fabricated and installed for testing the new concept in Hong Kong. The combination of the parameters, including power consumption, water evaporation rate, air flow speed, and relative cooling rate of the fan outlet compared with the atmosphere nearby will be studied and identified after the system have been installed. It is assumed that the minimum functional performance will not lower than the proof-of-concept model.
3. will fine tune the process parameters of the others specific shape on their own after project completion and technology transfer. HKPC will assist to prepare documents for applying certifications. The first target market would be the Unit State of America. In this project it will covers the most common test items including EMC and RoHS for low voltage consumer electronic product. If more test items are required, HKPC will suggest a 3rd party certify body to H to carry out the test in his own expense.

HKPC 25020

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Description of the project methodology, stage, work & duration

4. The consultancy service scope covers research and development of the device, prototype, engineering samples and testing.
5. This project will be divided into 4 implementation phases and tasks under each phase are as follows:
  - i. Initial Design and Engineering Drawings, Electronic circuit design, and Risk management: Modify the current functional prototype provided by the Client, define specification and risk management, details 3D, 2D and circuit design;
  - ii. Prototyping and design validation: construct the prototype by Rapid Prototyping (RP) and design validation;
  - iii. Mould Fabrication, Assembly and Testing: fabricate the moulds, parts, and circuit board, carry out functional test.
  - iv. Design transfer: Transfer the design and design documents to the Client for mass production.
6. This project will commence by mid of February 2018 upon client formal acceptance of project. Project duration is around 12 months.

Justifications for the project

7. This project will support local startup company to develop a new type portable water vaporized air conditioner that can reduce energy consumption during summer. It will also help to further enhance HKPC capabilities and built up our track record in provision of one-stop solution for manufacturers in value-added new product development from feasibility study, prototyping to engineering sample as well as whole manufacturing process, tooling and equipment development.

**STAFFING AND FINANCIAL IMPLICATIONS**

8. Budgeted estimation of this project are as below:

Income	Staff Cost	Other Cost	Recovery Rate %	Charging Rate
HKD1,050,000	HKD399.884	HKD650,000	100.00	C35

9. Project payment will be in 5 installments, 38.10% upon acceptance, 14.29%

upon completion of initial design and engineering drawings, electronic circuit design, and Risk management, 19.05% upon completion of prototype, 19.05% upon completion of mould fabrication, 9.52% balance after design transfer.

10. This project, if approved, will not create additional manpower or financial implications on SMD, and even if there are additional manpower and financial implications, they will be absorbed within the existing resource of SMD.

**ADVICE SOUGHT**

11. We would like to seek your approval for launching this consultancy project at value of HK\$1,050,000 in accordance with Section 3 (a) of SP F3 "Approval Authorities for Project Management System".

Best regards,

\_\_\_\_\_  
R

12 February, 2018

b2

**SMD Project Risk Assessment**  
(for the consultancy projects over HK\$300K)

**Project Title** : Research and Development of an Eco-friendly Smart Portable Evaporation Air Conditioner for Personal Use  
**Project Code** : 10006528

Using the scale below, please rate the risk level of the following areas.

Risk Level	Low	Moderate		High
Risk Score	1	2	3	4

Risk Area	Risk Score	Impacts and Measures
Technical Risk - <i>technical feasibility, viability</i>	2	The Client already got a proof of concept model
Resource Risk - <i>staff loading, staff expertise and equipment</i>	3	Our R&D team is busy, but still have capability to handle this project
Schedule Risk - <i>project schedule, delivery, procurement</i>	3	We have included 2 months buffer for the development
External Risk - <i>contractual issues, liability, IP</i>	2	No background IP found

Prepared by : A

Date : February 12, 2018

Additional comments or control action required (if any)

Click here to enter text

By GM/SM

\*委員會秘書附註：本文件只備英文本。

**Project Proposal / Quotation Cost Summary**

Section I – Background Information	
Potential Client	H
Project Title /Brief Description	Research and Development of an Eco-friendly Smart Portable Evaporation Air Conditioner for Personal Use
Estimated Project Sum	HK\$1,050,000
Estimated Project Duration	12 months

Section II – Income	
External	HK\$1,050,000

Section III – Concession	
Concession Rate	C35
Justification	The Client is a start-up SME (from Inno Space) and the project nature is R&D

Section IV – Staff Cost				
Project Activity	Grade	Rate	Man Hours	Amount (HK\$)
Initial Design and Engineering Drawings, Electronic circuit design, and Risk management	8	2,560	0	HK\$0
	6	1,600	7.8	HK\$12,480
	5	610	50	HK\$30,500
	4	350	150	HK\$52,500
	3	320	150	HK\$48,000
	2	320	150	HK\$48,000
Prototyping and design validation	8	2,560	0	HK\$0
	6	1,600	7.8	HK\$12,480
	5	610	46.8	HK\$28,548
	4	350	70.2	HK\$24,570
	3	320	78	HK\$24,960
	2	320	78	HK\$24,960
Mould Fabrication, Assembly, Testing	8	2,560	0	HK\$0
	6	1,600	7.8	HK\$12,480
	5	610	15.6	HK\$9,516
	4	350	39	HK\$13,650
	3	320	78	HK\$24,960
	2	320	78	HK\$24,960
Design transfer	5	610	12	HK\$7,320
				HK\$399,884

Section V – Project Other Costs & Expenses		
Project Other Costs	Mechanical components	HK\$200,000
	Electrical/Electronic components	HK\$85,000
	Mould, jig and fixture	HK\$300,000
	Testing	HK\$60,000
	Operation cost (eg. Transportation)	HK\$5,000

\*委員會秘書附註：本文件只備英文本。



Total	HK\$650,000
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<b>Section VI – Financial Highlight</b>	
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Value Added	HK\$399,884
Operating Result	HK\$116
Remark	Nil

<b>Section VII – Prepared by</b>		
----------------------------------	--	--

	Signature	Date
Project Officer in charge, Division	R / A	24/1/2018

C1

HKPC<sup>7</sup>

Memorandum

備忘錄

Date 日期 26 OCT, 2018  
To 傳致 DBD via DGM/44J  
From 傳自 A /J  
cc. 閱者抄送 GM/FP  
Subject 題目 Project Termination for 10006528

**Background**

We are implementing a consultancy project entitled “**Research and Development of an Eco-friendly Smart portable Evaporation Air Conditioner for Personal Use**” (Project code: 10006528). The project actual commencement date was 20 March 2018 right after the settlement of down payment by the client and the proposed project duration is 12 months.

**Justification**

The project team has been preparing some ground works including the initial mechanical design and electronics design of the device based on requirement agreed at the proposal. During the project implementation and back and forth design review meeting held, the project team experienced that both parties cannot compromise on both mechanical and electronic design up to this stage. It is because the requirements have changed several times by the client and he also insisted to stick to his own design which our team doesn't agreed due to several risk, cost and functional factors. Our team therefore suggested with prior consent from the client to terminate this project at this stage due to the expected difficulty in further cooperation with each other.

We have received HK\$400,000 down payment from the client out of which HK\$254,286 has been used for engineering preparation work including some components purchased for initial testing. We therefore will refund the down payment of HK\$400,000 to the client for mutual settlement. Our in-house legal has prepared a termination agreement to be signed by both parties to protect the Council from further negotiation by the client.



HKPC - 4354

**\*委員會秘書附註：本文件只備英文本。**

**Recommendation**

We would like to seek your prior approval to terminate this project due to the abovementioned reasons.

Thank you

Yours sincerely,

---

A

Consultant/I4U

C2

THIS SETTLEMENT AGREEMENT ("Agreement") is made 29 October 2018

BETWEEN

- (i) Hong Kong Productivity Council of HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong ("HKPC"); and
- (ii) H

WHEREAS:

- (A) On 15 February 2018, HKPC and H have entered into a consultancy services agreement (the "Contract") in relation to "Research and Development of an Eco-friendly Smart Portable Evaporation Air-Conditioner for Personal Use" (the "Project").
- (B) Pursuant to the Contract, H has paid the 1<sup>st</sup> installment of HK\$400,000 to HKPC upon its acceptance of the Project.
- (C) However subsequently, both parties have certain disagreement on the technical specifications and function requirements of the project deliverables.
- (D) Upon recent discussions and negotiations between the parties, HKPC and H have reached a mutual agreement to fully and amicably resolve and settle all disputes and outstanding matters arising out of and/or in connection with the Contract and the Project, subject to the terms and conditions as set forth hereunder.

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, both parties hereby agree as follows:

- 1. HKPC and H shall terminate the Contract and abandon the Project with immediate effect.
- 2. Within 14 days after signing of this Agreement, HKPC will (a) refund the amount of HK\$400,000 (the "Refund") to H by way of cheque, and (b) handover the semi-finished deliverables per the attached list on "as-is" condition without any warranty to H

**\*委員會秘書附註：本文件只備英文本。**

3. Upon receipt of the Refund and semi-finished deliverables by H HKPC shall owe no further obligations and/or liabilities to H relating to the Project under the Contract.
4. Each party shall irrevocably forego and waive all its rights to claim against the other party as well as fully release and forever discharge the other party (including its members, directors, officers, employees, agents, subsidiaries and affiliates) from any and all claims, demands, complaints, actions, liabilities and causes of actions, of every kind, nature and character arising out of and/or in connection with the Contract and/or the Project.
5. Each party shall confirm and agree that neither this Agreement, nor any compromise made hereto, shall be taken or construed to be an admission or concession to any liability or fault by either party arising out of and/or in connection with the Contract and/or the Project.
6. Both parties shall keep confidential and not disclose to any third party the terms and conditions of this Agreement.
7. Both parties shall represent and warrant that it will not take any steps to publicize the contents of this Agreement, and will not undertake to aid or assist any third party in publicizing the contents of this Agreement.
8. This Agreement constitutes the entire agreement and understanding of the parties and supersedes all prior negotiations, understandings and agreements, proposed or otherwise, written or oral, concerning the subject matter hereof. Furthermore, no modification of this Agreement shall be binding unless in writing signed by each party.
9. Should any provision of this Agreement be declared illegal or unenforceable by any court of competent jurisdiction and if such provision cannot be modified to be enforceable, such provision shall immediately become null and void, leaving the remainder of this Agreement in full force and effect.
10. Each party shall use all reasonable efforts to take, or cause to be taken, all actions, and to do, or cause to be done, all other things reasonably necessary, proper or advisable to consummate as promptly as practicable the transactions contemplated by this Agreement.
11. This Agreement is governed by and shall be construed in accordance with the laws of Hong Kong. Each party irrevocably agrees to submit to the exclusive

## List of semi-finished deliverables

- 1, mock up sample and
- 2, disc (including design content)

Received on Oct 29, 2018

jurisdiction of the courts of Hong Kong over any claim, dispute or matter arising under or in connection with this Agreement.

**IN WITNESS WHEREOF**, all the parties have executed this Agreement as of the day and year first above written.

SIGNED BY )  
for and on behalf of )  
**Hong Kong Productivity Council** )



SIGNED BY )  
for and on behalf of )  
**H Limited** )

## 項目詳細技術困難

### 客戶需求：減少 40% 產品重量

#### 選擇更輕盈和堅固的物料

- 戶外使用產品，外殼需要具備以下機械強度 (拉伸強度 Tensile Strength > 400kg/cm<sup>2</sup>，硬度 Hardness > R scale 100，衝擊強度 Impact Strength >15 J/m)
- 需要符合 ASTM D785, ASTM D638, ASTM D256 的強度要求
- 需要耐 UV，符合 ASTM G154 UV 燈照射測試標準
- 需要符合 ASTM D5276，8 個方向 2m 跌落測試標準
- 因此選擇材料會有一定限制

#### 減少塑膠厚度

- 由於產品零件較為複雜，加上需要縮減產品外殼的厚度，以達致減重的目的因此對模具和注塑機有高要求
- 多個零件需要特殊的分模和多邊行位，為了避免零件出現毛口，飛邊等情況，注塑機需要有充足，而平均的合模壓力避免在注塑中出現漏膠的情況。
- 由於減少塑膠厚度容易令塑膠在填充時冷卻，因此塑膠需要在高溫高壓和高速的狀態下注射進模具內，以確保塑膠在冷卻前完成澆注。
- 為免高壓注射令產品內應力增加，引致產品工件在生產後爆裂，因此在冷卻後還需要使用退火處理，以確保產品的質量和尺寸。
- 縮減塑膠厚度容易令塑膠在冷卻時變形，因此需要先進隨形冷卻技術，才能確保塑膠能均勻冷卻。

#### 取消重疊牆壁的設計

- 需要重新修正產品的氣道和水道，由於修正後一些氣道和水道會放在外殼的內則，一些扣模的部分需要分件製造，需要更複雜的模具處理內則結構，同時要考慮模具中的內行位抽離方向和距離，增加模具設計和製作的難度。
- 為使產品在戶內及戶外都能使用，產品不可以漏水，漏氣或入砂。產品需要根據 IP 67 的防水要求設計(完全防塵及在 1 米的水底抵禦 30 分鐘不進水)；但取消重疊牆壁，需要把氣道和水道分段製作，容易因為塑膠收縮而出現漏水，漏氣或入砂的問題。



## 改善氣流率(Air Flow Rate)及水份蒸發率(Water Vaporised Rate)

### 水泵設計

- 客戶的水泵設計不能通過標準測試(HKPC Test) · 需要開發新的泵設計。
- 需要考慮水泵的防水問題 · 需要根據 IP 67 或以上的標準設計水泵以防止水份(完全防塵及在 1 米的水底抵禦 30 分鐘不進水)進入馬達引發故障。
- 客戶要求水泵需要在 2,800 rpm 以上的速度連續使用 3,000 小時 · 因此對於馬達的設計難度和傳動部件負荷要求增加。
- 產品在不同方向擺放時水泵也需要正常運作 · 另外在戶外手提使用時 · 水流不是靜止的狀態 · 水流供應不穩定 · 為了霧化器有穩定的水份供應 · 水泵最少在每分鐘供應需要每分鐘 1 公升的水量。
- 由於產品是手提產品 · 水泵的尺寸需要設計在 30×30×30 mm 以內 (市面上的功能和價格相似的產品尺寸大約在 30X30X45mm) · 這樣對於水泵的功能和設計有很大的障礙。
- 水泵需要放在水箱內 · 而且需要完全防水 · 零件和外殼不可生鏽。
- 由於水泵的馬達需要長期運作 · 為防止水泵過熱影響運作 · 因此需要散熱的設計。

### 風扇馬達設計

- 風扇馬達需要在 2,900 rpm 以上的速度連續使用 3,000 小時。
- 馬達需要耐用、輕巧、尺寸小。
- 馬達需要通過 EMC 電磁測試 · RoHS (The Restriction Of The Use Of Certain Hazardous Substances In Electrical And Electronic Equipment 危害性物質限制指令)測試。

### 模組化水箱及控制箱設計

- 需要重新設計產品的外殼 · 由於控制箱 · 外殼和水箱設計需要分離 · 其外殼連接的曲面需要在組裝後完全連貫 · 這對於模具製作和生產是一個很大的考驗 · 塑膠在注塑後 · 在冷卻時會有不同程度的收縮 · 零件的收縮會根據產品的結構 · 支撐和外殼的厚薄會有所不同 · 零件需要在注塑後放在特製的支架上冷卻。
- 由於是戶外產品 · 設計需要考慮防水問題 · 根據 IP 67 或以上的防水標準(完全防塵及在 1 米的水底抵禦 30 分鐘不進水) · 設計產品 · 防止水和塵在模組之間的隙罅滲入 · 影響產品的操作。
- 需要有防錯設計(Fool Proof design) · 特別是水箱連接處 · 霧化器等的安裝 · 不能因為使用者安裝失誤而引發漏水。

- 產品設計需要穩定，尤其是信號傳輸的部份，不可以因為產品震動而發生號故障。
- 產品的生產時需要有嚴格的尺寸和公差，塑膠零件公差需要控制在 0.1 mm 內，工件配合不能過鬆或過緊。使用時會出現搖晃。
- 產品設計需要有清晰的指示和對位設計，以方便使用者準確地安裝。

## 產品可靠性

### 開發獨立的電池為風扇和其他設備充電

- 電池需要通過震動、熱衝擊、潮濕環境、物理撞擊、短路、過充過放等，根據 ISO 12405-1、-2、-3 的測試。
- 由於產品是戶外使用的產品，電池外殼設計需要防水，防止水分進入引致短路。
- 由於產品是戶外產品，電池外殼需要通過跌落測試，防止電池因為跌落和衝擊而損壞。
- 電池外殼需要以模組化的方法固定在產品上，產品設計需要有清晰的指示和對位設計，以及防錯提示(fool proof design)，以方便使用者準確地安裝電池。
- 由於電池需要獨立為其他電子產品充電，因此電池需要通過 universal serial bus (USB) 標準的性能要求，同時具備保護線路，防止電池因為充放電引發故障。

如項目需要繼續進行，必須先克服附件 d 所列出的所有詳細技術困難，方可進行此步驟。當中包括：

#### 原型製造、設計驗證及工程樣板

- 即使所有零件能通過個別性能測試，也不能保證組裝成原型後能通過整體功能驗證，因此部分零件可能需要從新設計。
- 雖然設計圖能確保產品可以順利生產和安裝，但是產品為手提的戶外產品，因此需要製作多次的工程樣板讓客戶測試產品的重量、重心，和使用的口感。
- 根據設計圖紙以生產時的物料製作工程樣板，組裝工程樣板確保模組化的設計安裝正常；安裝後和客戶確認產品的重量、重心、和口感。
- 尋找多名非工程人員為產品模組安裝測試，以確保一般使用者能成功安裝模組化產品。

#### 最終測試

- 為工程樣板進行 ASTM D5276，2m 跌落測試。
- 為工程樣板進行 ASTM G154，UV 測試。
- 在工程樣板進行產品耐用測試。
- 在工程樣板進行 EMC 電磁測試。
- 根據 ISO 12405-1,-2,-3 和 usb 標準為電池進行震動、熱衝激、潮濕環境、物理撞擊、短路、過充過放等測試。

#### 模具生產

- 根據產品零件制定合適的模具生產方法。
- 根據每一件產品零件的特性和物料製作合適的模具，並決定合適的注塑機，由於外殼厚度較簿，為免外殼變形，產品需要以先進的隨形冷卻技術輔助冷卻。
- 由於部份零件十分複雜，部份的零件需要以注塑機加上急冷急熱系統進行生產，模腔內的溫度隨著產品的注射進度而改變，以確保產品的轉寫率。
- 透光的零件需要與光學零件的專用注塑機進行生產，並嚴格監控原材料，在原料的運輸和安裝過程中需要乾燥，防止氣紋和水紋的出現，以確保光學件的質素。

Standard Practice No.:	F3
Subject:	Project Management
Prepared by:	Finance and Procurement Division
Date issued: (dd/mm/yyyy)	<u>7/8/2018</u>
Supersedes that issued on:	30/11/2017

### **Policy**

1. The Council strives to exhibit quality project management meeting the expectation of corporate governance and management efficiency.

### **Objective**

2. The Standard Practice depicts the principle and guidelines on project management so as to ensure the project initiation, planning, execution, controlling and completion processes are properly carried out.
3. Timely and accurate project management in a transparent and documented manner help alert project managers and the management to the Council's business operations and financial performance.

### **Principle**

4. As the Council engages in projects of very diverse nature, the system and process stipulated herewith on project management serves to provide broad guidance only. Staff, particularly project managers, should exercise their professionalism and due judgment reasonably in managing details connected with overall project management even if those details are not explicitly stated in the Standard Practice.
5. Project managers (who must be at Consultant rank or Senior Project Officer rank or above) are responsible for the overall relevance, accuracy and timeliness of the project activities related information contained in the Council's enterprise resources planning (ERP) system.

### **Regulations**

6. Details required for project management are set out in the "Guidance Notes on Project Management".

\* **委員會秘書附註**：本文件只備英文本。

- (a) project should be properly approved by management in accordance with internal approval matrix (paragraph 7 below); and
- (b) Project details and milestones should be recorded in the ERP system in accordance with the agreed proposal with the client and the signed agreement with client.

**Project Approval Authorities**

7. Project approval authorities are in accordance with project value as listed in the table below.

Table of Project Approval Authorities

Project Value*	Approved By
Above HK\$1,500,000	Executive Director
Up to HK\$1,500,000	Branch Director
Up to HK\$500,000	General Manager

\* Project value refers to the estimated income or estimated cost, whichever is the higher.

**Commencement Date**

8. The Standard Practice will commence on the date of its promulgation.

**Related Guidance Notes, Appendices and Forms**

Guidance Notes on Project Management

Appendix A: Project Definition

Appendix B: Table of Credit Note Approval Authorities.

Appendix C: Table of Timesheet Approval Authorities.

Certificate of Project Completion (CPC) Template

Issued by: Executive Director

Issued to: All Staff Member

# **Guidance Notes on Project Management**

## **Classification of Project Type**

1. HKPC has a duty to report on the kinds of activity it engaged and so project is classified according to its nature. Project has to be set up according to its Type, or Business Area, in ERP system.
2. Definitions and details reference on Business Areas are listed in Appendix A (“Project Definition”) of this Guidance Notes.

## **Project Approval Authority**

3. For each project, there are only one Project Manager (PM) and maximum two Deputy Project Managers (DPM). PM has responsibility on the project management and maintenance of project information in ERP. PM and DPM must be either Associate Consultant / Senior Project Officer Grade or above. If a project involves more than one unit, there should have one PM and not more than 2 DPMs in each unit.
4. Before releasing the project proposal to client, PM is required to upload and input the following to ERP:
  - (a) Enter the preliminary project financial information into the quotation summary with management approval (as per Project Approval Authority)
  - (b) attach a draft project proposal

FPD will validate the above information in ERP.

5. If the client accepts the proposal, PM is required to upload and input the following to ERP:
  - (a) Signed Agreement and other relevant documents
  - (b) Project details (Work Breakdown Structure and Easy Cost Planning)
  - (c) Billing Schedule (Billing Plan and Billing Request)
  - (d) **Staff Cost and Other Cost** projected to end of project (Period Split)
  - (e) Manpower planning (Capacity Planning and Personnel Assignment)

Then PM should submit the project to management for acceptance and FPD validation in ERP.

6. For Low Value project with value up to HK\$100,000 and project duration not exceeding 3 months, the project could be approved and accepted in one step with simplified project information:
  - (a) Project details (Work Breakdown Structure and Easy Cost Planning)
  - (b) Billing Schedule (Default at the beginning of the project)
  - (c) Manpower planning (Personnel Assignment only)

Then PM should upload signed agreement and submit the project to GM for acceptance and FPD validation in ERP.

7. If the project is cancelled or rejected by client, PM should obtain approval from management per Table of Project Approval Authorities and change the project status according to the approval workflow in ERP.

#### **Billing plan and payment terms**

8. Once billing plan is confirmed on project acceptance, PM cannot change the billing schedule in ERP without GM approval. Should the billing schedule be revised, either in billing amount or postpone in billing date, PM should provide supporting document in ERP to justify the revision with approval from GM. FPD will then **validate** the billing schedule in ERP accordingly.
9. Exception to paragraph 8 above is allowed for amendment in billing plan:
  - (a) GA and CB type project, for internal monthly income recognition
  - (b) Billing for Patent / Trademark application
  - (c) CG, SA, SB, SC, and TA type project.
10. Invoice will be sent to client by FPD as per billing plan. Credit note can only be issued upon request from PM with justification and approval from management per Appendix B.
11. Payment terms and payment schedule must be included in the project plan in ERP. Deposit payment is required as per SP F1 (Deposit/Payment).

#### **Project costs**

12. For staff cost, PM applies standard staff cost rate as per Standard Practice (SP) F7 (Pricing) on estimated working hours for the staff.
13. Staff needs to fill out timesheet and submit to GM for approval. Timesheet submission and GM approval should be done at least once a week during the month and before weekly cut-off day. Timesheet submission and GM approval should be done no later than the **last day of**

**the calendar month.**

14. For Out of pocket project expenses such as travelling cost, this should be complied with SP A5 (Official Expenses).
15. As part of project opening validation, PM should declare on whereby assets purchased for a project will remain with HKPC and become HKPC's own fixed asset during or at the end of the project.

**Amendment of project plan, budget, and project end date extension**

16. PM and project members should execute the project as per project plan. If there is any foreseeable deviation, the project plan in ERP should be amended.
17. Project fee should be amended in ERP if the project scope is increased due to additional jobs.
18. If the actual outlay booked is more than the project budget, no further purchase requisition or purchase order can be processed. PM should provide justification and revise the project budget in ERP accordingly. In case the revision of the project budget will exceed 20% in each category at WBS Level (or as per the respective Government Funding Guideline, which may allow for a higher percentage) of the original budget, or result in higher total Project Cost, PM should obtain management approval per Table of Project Approval Authorities **(except for cross unit budget transfer under the same line item).**
19. If the estimated end date of the project is required to be extended, PM should obtain management approval per Table of Project Approval Authorities with justification and client's consent to the extension of the project end date. Relevant supportive document should be attached to ERP.
20. Percentage Of Completion (POC%) indicates the portion of work completed. It is calculated automatically in ERP based on actual total cost incurred against estimated total cost of the project. The information is used for the calculation of deferred income.

**Project completion**

21. **CDD** coordinates with PM to issue a Project Satisfaction Poll and record the feedback in ERP **as per Standard Practice G9 PSP.**



22. As soon as the deliverables are performed, all other outstanding items such as outstanding purchase order and staff claim should be cleared and the project should be completed in ERP within 3 months (except for government funding scheme projects, within 12 months.)
23. PM should analyze and report income and cost variances during project execution. Post project review report should be prepared and uploaded to ERP if, the income or total cost variance is more than 5% or above HKD10,000 against budget, whichever is higher; or actual recovery is below 100%.
24. Upon project completion, PM should declare on whereby assets# purchased for a project will be delivered to client or remained at HKPC.

*#Assets include fixed assets (defined under SP A06/01) and low-value moveable items (defined under SP A06/05).*

PM should transfer assets declared in paragraph 15, or fixed assets come into existence incidental to project execution, to HKPC's own fixed asset pool upon project completion.

25. PM should attach a "Certificate of Project Completion" (CPC) confirmed and signed by client in ERP upon project completion. CPC should be obtained before the final billing as per the Agreement (except final billing will be issued before final project deliverables per Agreement). The CPC is not required in the following circumstances:
  - (a) Project value not exceeding HK\$50,000
  - (b) Government Funded Project (e.g. GA, CB type and BUD project)
  - (c) Projects from Hong Kong Government Departments
  - (d) Project under PAG Scheme
  - (e) Multi-client project (SA and TC)
  - (f) Internal projects (IA, IB and IC)
  - (g) In-Class Training (e.g. TA type)
  - (h) Projects from WFOEs
26. When all outstanding items are cleared, PM submits the project for completion to management for approval per Table of Project Approval Authorities. Then FPD validates the project completion process.

### **Project termination**

27. Project termination is defined as any on-going project being terminated by either the client or HKPC before its completion.

28. PM submits justification for termination request and management approves as per Table of Project Approval Authorities.

### **Value-added Content Consideration**

29. HKPC provides value-added services to its clients through direct consulting services instead of by trading equipment and/or subcontracting its services to third parties. To maintain a reasonable level of staff contribution in each project, the staff cost assigned to a project should be no less than 30% of the total project cost.
30. Government Funded projects (GA, CB), Study Mission (TC) and Patent projects are exempted due to their inherent high third-party costs.
31. **If the above requirement is not met, approval is required as per table of project approval authorities.** The following factors may be considered before granting approval-
- (i) to secure business from a new client;
  - (ii) the project concerned is considered a stepping stone to more consultancy projects;
  - (iii) the overall risks and opportunities trade-off to HKPC; and
  - (iv) any other valid justification.

### **Project Risk Assessment and Contingency Expense**

32. As a prudent risk management measure, divisions should, if circumstances warrant, include contingency expenses within their project cost estimation to protect HKPC from any unnecessary exposure to financial loss. In so doing, divisions should take into account the following factors-
- (i) the special nature of the product, for example, whether the project involves unpredictable level of novelty; whether HKPC has little or no prior exposure in such projects, etc.;
  - (ii) the scale of the project, for example, whether the overall project sum is of an inordinate scale and therefore certain margin of errors should be allowed;
  - (iii) the complexity of the project, for example, whether the project is highly complex whereby the satisfactory delivery of the project is beyond the control of HKPC (such as involving many different business partners and stakeholders);
  - (iv) the duration of the project, for example, whether the project lasts over an extended period of time; and/or

- (v) other miscellaneous factors such as staff cost increment, fluctuation in inflation rate, currency exchange rate; or any other regional or global financial situation that poses unpredictable financial risks.
- 33. Should the risk factors determining the contingency expense do not eventuate at the end of the project, the contingency portion would be retained by HKPC for future development need.
- 34. PM should explicitly provide a statement at the inception of a project that he/she has assessed any expected risk, either financial or non-financial in nature, in engaging the project, and that measure, if applicable, has been built into the project to deal with the expected risk.
- 35. The level of contingency expenses should under no circumstances exceed 15% of the overall project cost.

**Report to the Business Development Committee (BDC) of Council on projects funded by the Innovation and Technology Fund (ITF)**

- 36. For completed ITF projects, except those with project funding below \$1M each, a final performance review with detailed assessment of the impact created by individual projects should be conducted within one year after project completion for submission to the BDC of Council. This applies to ITF projects with HKPC as applicant/ co-applicant/ implementing organization. The review should cover target achievements, industry response and new service opportunities for HKPC.

Enquiry:        Manager, Management Accounting  
                    (ext. 5875)

Issued to: All Staff Member

Reviewed by: General Manager, Finance and  
                    Procurement; and  
                    Director, Corporate Services

Issue Date : 7 August 2018

Project Definition

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
CA	Consultancy - Advisory Service	Project relied on the domain knowledge of consultant(s) to provide professional help and advice to the client	<ul style="list-style-type: none"> <li>- Project master plan preparation</li> <li>- Consultancy team formation</li> <li>- Onsite visit / Client interview</li> <li>- Information collection / Fact finding</li> <li>- Situation analysis / Problem diagnosis</li> <li>- Improvement areas identification</li> <li>- Advice / Solution recommendation</li> <li>- Consultancy report submission / Presentation to client</li> </ul>	Subject expert / Consultancy team	Charged by fixed amount as per agreement
CB	Consultancy - Government Funding (Implementation Agent/Service Provider)	Project sponsored by government funding scheme in which HKPC is responsible for implementing the scheme or providing the service	<ul style="list-style-type: none"> <li>- Project master plan preparation as per the schedule commitment in funding proposal</li> <li>- Financial accounting arrangement</li> <li>- Project team and committee formation (usually with representatives from external parties)</li> <li>- Equipment / Product / Service procurement</li> <li>- Vendor / Subcontractor management</li> <li>- Project task execution and delivery</li> </ul>	<ul style="list-style-type: none"> <li>- Project manager / Coordinator</li> <li>- Project team</li> <li>- Committee member</li> </ul>	Charged by fixed amount as per agreement

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
CC	Consultancy - Secretariat Service	Project relied on a service team to handle secretarial, clerical, administrative affairs for the client (usually a trade association or Government funding scheme); sometimes provide event management service as well	<ul style="list-style-type: none"> <li>- Project committee meeting / Progress review meeting / report</li> <li>- Deliverables submission / propagation</li> <li>- Final report compilation</li> <li>- Project closing and audit</li> <li>-</li> <li>- Secretariat / Service team formation</li> <li>- Hotline / Enquiry support</li> <li>- Correspondence handling</li> <li>- Meeting (such as ExCo meeting and AGM) scheduling, facilitation, and support</li> <li>- Documentation and filing</li> <li>- Membership registration and support</li> <li>- Bookkeeping and basic accounting support (such as petty cash and cheque payment)</li> <li>- Regular event (such as annual dinner) planning and execution</li> <li>- Additional event (such as seminar) management and support</li> </ul>	<ul style="list-style-type: none"> <li>- Secretariat / Service team</li> </ul>	Charged by basic annual / monthly service fee, plus extra charge on optional service
CD	Consultancy - Development /	Project relied on a technical team to design	<ul style="list-style-type: none"> <li>- Overall planning and scheduling</li> <li>- Technical team formation</li> </ul>	<ul style="list-style-type: none"> <li>- Project manager</li> <li>- Technical team</li> </ul>	Charged by fixed amount as per

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
	Implementation/ Turnkey Engineering Service	and/or develop a product / component / system and/or install / implement the deliverables for the client	<ul style="list-style-type: none"> <li>- Requirement collection and analysis</li> <li>- Technical design / prototyping / machining / small batch production</li> <li>- System and feature customization</li> <li>- Vendor / Subcontractor engagement</li> <li>- Development and testing / fine tuning</li> <li>- Deliverables Implementation / Installation</li> <li>- Post-implementation review</li> </ul>		agreement
CE	Consultancy – Award	Project relied on a service team to organize an award / competition	<ul style="list-style-type: none"> <li>- Award programme design and planning</li> <li>- Judging and nomination criteria</li> <li>- Judges / Assessors invitation</li> <li>- Sponsors / Supporting organization engagement</li> <li>- Promotion and Entry recruitment</li> <li>- Assessment / Judging process</li> <li>- Trophy preparation and award booklet</li> <li>- Award ceremony and publicity</li> <li>- Post-programme evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Programme manager / Coordinator</li> <li>- Award secretariat</li> <li>- Assessment team</li> </ul>	Charged by organizing fee (paid by award organizer) / sponsorship fee
CF	Training – In-Company Programme	Training programme for a particular company aiming to delivering	<ul style="list-style-type: none"> <li>- Training requirement confirmation</li> <li>- Training venue / equipment booking and setup</li> </ul>	<ul style="list-style-type: none"> <li>- Programme / Course coordinator</li> </ul>	Charged by fixed amount as per agreement

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
		knowledge / skill to employees	<ul style="list-style-type: none"> <li>- Trainer engagement / Training team formation</li> <li>- Training programme / course design and material compilation</li> <li>- Training programme / course execution</li> <li>- Post-training evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Trainer / Training team</li> <li>- Logistics support staff</li> </ul>	
CG	Consultancy – Professional Manufacturing Supporting Service	Project providing multiple testing / machining / professional supporting services with consultancy advisory to a client	<ul style="list-style-type: none"> <li>- Service scope and schedule confirmation</li> <li>- Service team formation / booking</li> <li>- Design, engineering and precision fabrication</li> <li>- Laboratory / Equipment booking and setup</li> <li>- Service provision and delivery</li> <li>- Post-service evaluation</li> <li>- Deliveries include analysis report / consultancy advice</li> </ul>	<ul style="list-style-type: none"> <li>- Service team</li> <li>- Laboratory assistant</li> </ul>	Charged by service fee or fixed amount as per agreement
IA	Internal Corporate Research and Development Project	Project initiated by a division regarding product / service development and project work, and approved by	<ul style="list-style-type: none"> <li>- Project scoping and planning</li> <li>- Project team formation</li> <li>- Project task execution and progress monitoring</li> <li>- Deliverables submission / propagation</li> </ul>	<ul style="list-style-type: none"> <li>- Team members within the same division</li> </ul>	Internal income from Corporate to the division who executed the project

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
	(i.e., CRD project)	top Management with funding under the Corporate budget	<ul style="list-style-type: none"> <li>- Project closing and evaluation</li> </ul>		
IB	Internal Project - Divisional Development, Maintenance and Support	Project initiated by a division regarding internal development, maintenance / support and project work undertaken by the same division	<ul style="list-style-type: none"> <li>- Project scoping and planning</li> <li>- Project team formation</li> <li>- Project task execution and progress monitoring</li> <li>- Deliverables submission / propagation</li> <li>- Project closing and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Team members within the same division</li> </ul>	<ul style="list-style-type: none"> <li>No project fee.</li> <li>Logging of internal labor hours only</li> </ul>
IC	In-house Project - Inter Divisional Consultancy and Maintenance Service	Project initiated within HKPC and implemented by more than one divisions	<ul style="list-style-type: none"> <li>- Project scoping and planning</li> <li>- Project team formation</li> <li>- Project task execution and progress monitoring</li> <li>- Deliverables submission / propagation</li> <li>- Project closing and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Team members from the division who executed the project</li> </ul>	<ul style="list-style-type: none"> <li>Internal income transferred to the division who executed the project</li> </ul>
GA	Government Funding - Applicant	Project sponsored by government funding scheme in which HKPC is either the applicant or co-applicant	<ul style="list-style-type: none"> <li>- Project master plan preparation</li> <li>- Financial account arrangement</li> <li>- Project team and committee formation (including external parties, if needed)</li> <li>- Equipment / Product / Service</li> </ul>	<ul style="list-style-type: none"> <li>- Project manager / Coordinator</li> <li>- Project team</li> <li>- Committee member</li> </ul>	<ul style="list-style-type: none"> <li>Charged by actual manpower consumption as per project milestone</li> </ul>



Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
			<ul style="list-style-type: none"> <li>- procurement</li> <li>- Vendor / Subcontractor management</li> <li>- Project task execution and delivery</li> <li>- Project committee meeting / Progress review meeting / report</li> <li>- Deliverables submission / propagation</li> <li>- Final report compilation</li> <li>- Project closing and audit</li> <li>-</li> </ul>		
MA	Miscellaneous	Project not belong to any of the above nature			
SA	Professional Manufacturing Supporting Service (without Consultancy Element)	Project providing testing / machining / professional supporting services to a client or multiple clients	<ul style="list-style-type: none"> <li>- Service scope and schedule confirmation</li> <li>- Service team formation / booking</li> <li>- Laboratory / Equipment booking and setup</li> <li>- Service provision and delivery</li> <li>- Post-service evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Service team</li> <li>- Laboratory assistant</li> </ul>	Entire Amount Booked As Income
SB	Exhibition	Programme designed with physical display booth for exhibitors (such as vendors /	<ul style="list-style-type: none"> <li>- Programme theme, design and planning</li> <li>- Venue booking and decoration design</li> <li>- Floor plan and display booth design</li> <li>- VIP invitation and sponsor engagement</li> </ul>	<ul style="list-style-type: none"> <li>- Programme manager / Coordinator</li> <li>- On-stage official</li> </ul>	Charged by exhibitor fee / sponsorship fee / entrance fee

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
		solution providers) to promote / demonstrate their products / services / messages to public / targeted participants	<ul style="list-style-type: none"> <li>- Visitor promotion and exhibitor recruitment</li> <li>- Display booth setup and contractor coordination</li> <li>- Opening ceremony and media coverage</li> <li>- Move-in, registration and onsite logistics</li> <li>- Concurrent events</li> <li>- Post-programme evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Onsite logistics support staff</li> </ul>	
SC	Publication	Project aiming to producing publications, in print or electronic format, as a major deliverable	<ul style="list-style-type: none"> <li>- Conceptual design and planning</li> <li>- Editorial team formation</li> <li>- Writer and/or Interviewee identification and invitation</li> <li>- Interview, write-up proofreading and editing</li> <li>- Photo-shooting and processing</li> <li>- Production house engagement, coordination and management</li> <li>- Page layout and artwork design</li> <li>- Production and printing</li> <li>- Sales and circulation</li> </ul>	<ul style="list-style-type: none"> <li>- Editor in chief</li> <li>- Editor and/or Reporter</li> <li>- Designer</li> <li>- Production team</li> <li>- Marketing &amp; circulation team</li> </ul>	Charged by production fee / charges per copy
TA	Training – In-Class	Training programme for public aiming to	<ul style="list-style-type: none"> <li>- Training venue / equipment booking and setup</li> </ul>	<ul style="list-style-type: none"> <li>- Programme / Course</li> </ul>	Charged by tuition fee per head

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
	Programme	delivering knowledge / skill to participants	<ul style="list-style-type: none"> <li>- Trainer engagement / Training team formation</li> <li>- Training programme / course design and material compilation</li> <li>- Training programme / course promotion and recruitment</li> <li>- Training programme / course execution</li> <li>- Post-training evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- coordinator</li> <li>- Trainer / Training team</li> <li>- Logistics support staff</li> </ul>	
TB	Conference	Programme presented by one or more subject experts to share their knowledge / skill / messages to public / targeted participants	<ul style="list-style-type: none"> <li>- Programme theme, design and planning</li> <li>- Venue booking and decoration design</li> <li>- VIP invitation</li> <li>- Speaker and/or Sponsor engagement</li> <li>- Rundown design and confirmation</li> <li>- Promotion and attendee recruitment</li> <li>- Opening ceremony and media coverage</li> <li>- Registration and onsite logistics</li> <li>- Post-programme evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- Programme manager / Coordinator</li> <li>- On-stage official</li> <li>- MC</li> <li>- Speaker</li> <li>- Onsite logistics support staff</li> </ul>	Charged by sponsorship fee / conference fee
TC	Study Mission/ Overseas Training	Programme designed for participants to go outside of Hong Kong to have onsite exposure and experience to	<ul style="list-style-type: none"> <li>- Programme design and itinerary planning</li> <li>- Site visit negotiation and arrangement</li> <li>- Travelling &amp; Accommodation arrangement</li> </ul>	<ul style="list-style-type: none"> <li>- Programme manager / Coordinator</li> <li>- Guide</li> <li>- Supporting staff</li> </ul>	Charged by trip fee per head

Code	Project Type	Project Nature	Major Activities	Core Resources	Project Fee
		diverse technological / business practices	<ul style="list-style-type: none"> <li>- Promotion and delegate recruitment</li> <li>- Trip guidance, coordination and support</li> <li>- Post-programme evaluation</li> </ul>		

**Note: Income recognition is covered by Hong Kong Financial Reporting Standard 15 and Accounting Standard 20.**

Table of Credit Note Approval Authorities

Credit Note Value	Approved By
Above HK\$100,000	Branch Director & GM/FP
Up to HK\$100,000	General Manager & GM/FP

Table of Timesheet Approval Authorities

Staff	Approved by
General Manager	Branch Director
Principal Consultant and Below	General Manager

## CERTIFICATE OF PROJECT COMPLETION

**Purpose:** To ensure that the requirements and expectations of the Deliverables are met, approved and accepted. This form shall be used at the end of completion for the whole Project when all Deliverables are submitted, delivered or handed over to the Client.

<b>Project Title</b>	
<b>Project Code</b>	
<b>Client</b>	
<b>Deliverables</b>	

### To BE COMPLETED BY CLIENT

<b>Date of Completion</b>	
<b>We certify and confirm that all the above Deliverables have been (i) duly delivered by HKPC in compliance with project requirements; and (ii) accepted by us to our satisfaction.</b>	
<b>Accepted &amp; Signed Off By</b>	
<b>Client's Authorized Representative</b>	Signature
	Name :
	Title :
	Date :

### PREPARED BY

<b>HKPC Officer-in-charge</b>	Signature
	Name :
	Title :
	Date :

AF569 (06/2016)