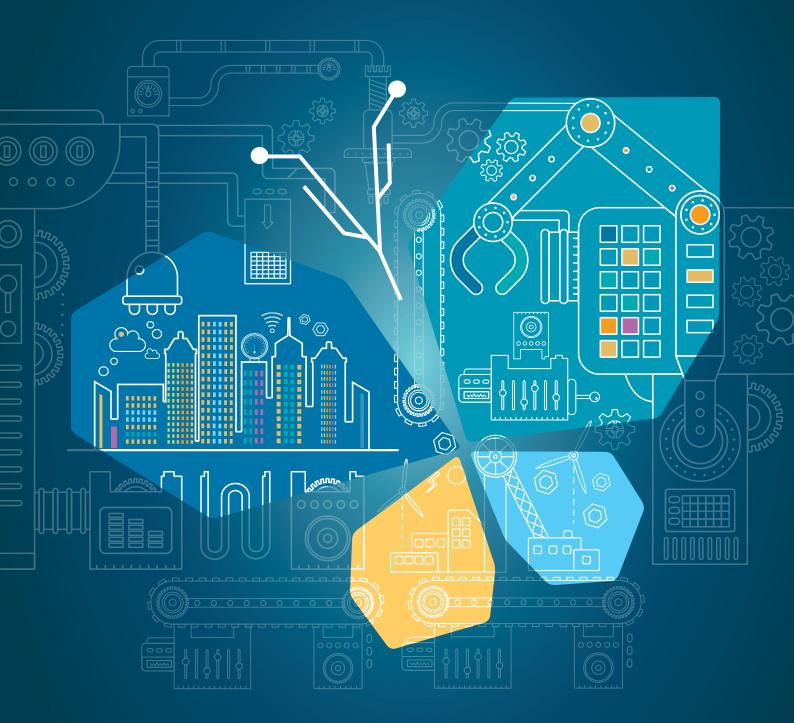
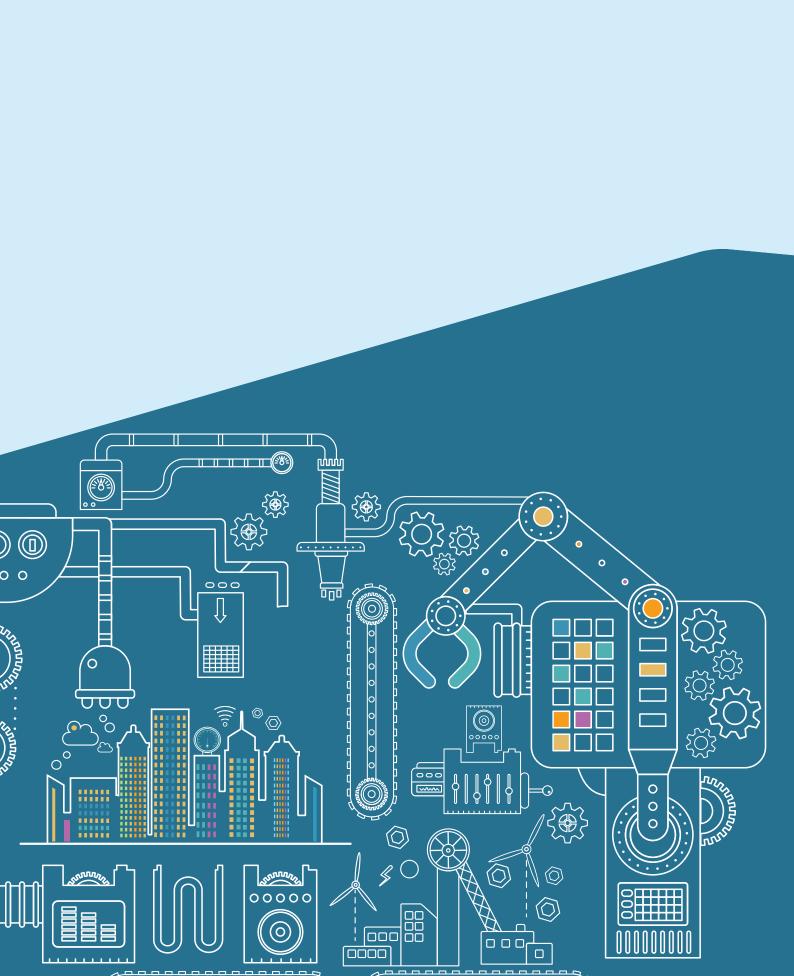


2017-18 年報 ANNUAL REPORT



共劍智慧未來 Innovate for a Smart Future



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一分鐘年報

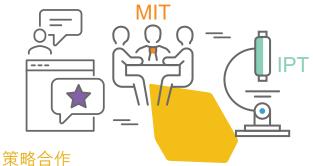
One-Minute Annual Report



營運摘要

Operational Highlights

- > 生產力局及其附屬公司年內的綜合服務收入達港幣 4.82 億元,較 2016/17 年度增長 5.67%。
- 推行了699個顧問項目、45個新研發項目。
- 推出了35項新服務和產品,成功將24項技術商品化,註冊了14 項專利。
- > HKPC and its subsidiaries received a consolidated service income of HK\$482 million, representing an increase of 5.67% over 2016/17;
- Undertook 699 consultancy projects and 45 new R&D projects; and
- Introduced 35 new services and products; commercialised 24 technologies and obtained 14 patents.



Major Collaborations

- > 美國麻省理工在生產力局開設首間 Hong Kong Innovation Node。
- > 與職業訓練局及德國弗勞恩霍夫生產技術研究所(Fraunhofer Institute for Production Technology, IPT)攜手推出全港首個「工業 4.0」專業文憑課程。
- > 與德國弗勞恩霍夫生產技術研究所(Fraunhofer IPT)合作,於 2018年下半年開設「科創中心」,推廣智能產品及服務。
- 與深圳市福田區簽署合作備忘錄,在深圳福田保税區成立「香港生 產力促進局深圳創新及技術中心」。
- Opened the first Hong Kong Innovation Node at HKPC for the Massachusetts Institute of Technology (MIT);
- Joined forces with the Fraunhofer Institute for Production Technology (Fraunhofer IPT) and the Vocational Training Council (VTC) to launch Hong Kong's first Professional Diploma Programme in Industry 4.0 (i4.0);
- > Collaborated with Fraunhofer IPT to set up an Invention Centre in the second half of 2018, to foster the development of smart products and
- Signed a Memorandum of Understanding with Futian Municipal Government to establish the HKPC Shenzhen Innovation and Technology Centre in the Shenzhen Futian Free Trade Zone.



客戶服務

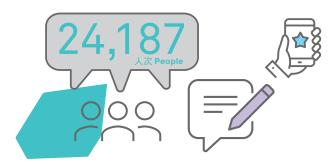
Customer Satisfaction

- > 客戶服務滿意度調查平均得分:8.99 (10 分為滿分)。
- Achieved an average score of 8.99 on a scale of one to 10 in customer satisfaction surveys.



新工業支援平台 **New Industry Support Platforms**

- 成立「智能產業廊」-全港首個展示「工業4.0」智能製造的示範中心。
- 成立「知創空間」協助初創企業及創客,將創意轉化為工業設計、 原型及產品設計。
- Opened Smart Industry One the first-of-its-kind in Hong Kong, to demonstrate digital manufacturing in i4.0; and
- Set up Inno Space, to help startups and makers turn their innovative ideas into industrial designs, prototypes or products.



聯繫持份者

Communication with Stakeholders

- > 舉辦50個業界諮詢活動。
- > 共 24,187 人次參加了生產力局為行業協會舉辦的各類交流活動及講
- 50 industry consultation events organised; and
- 24,187 people attended networking activities for industry associations and seminars in 2017/18



一分鐘年報 One-Minute Annual Report



- 擔任港幣 10 億元「回收基金」的執行伙伴及秘書處,以促進本港回收再造業的可持續發展。截至 2018 年 3 月底,已批准了 175 個申請項目,資助額約港幣 1 億 200 萬元。
- 擔任清潔生產夥伴計劃的執行機構,已完成41個示範項目,共節省 15億焦耳耗電量,並減少了13,146噸污水排放。
- Acted as the implementation partner and secretariat for the HK\$1 billion Recycling Fund, to promote sustainable development of the recycling industry in Hong Kong. To date, approximately HK\$102 million of funding has been approved for 175 projects; and
- > Acted as the implementation agent for the Cleaner Production Partnership Programme; with the completion of 41 demonstration projects that contributed to annual energy savings of 15 tera-joules and reduced annual effluent discharges by 13,146 tonnes.

支援中小企

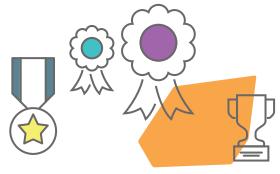
Support SMEs

- SME One 舉辦一系列研討會,介紹中小企資助計劃、營商知識及新 法律法規,吸引了超過3,800家中小企參加。此外,SME One 處理 了2,010多項查詢,為中小企提供關於資助計劃的資訊及諮詢服務。
- 擔任 BUD 專項基金「企業支援計劃」的執行機構。截至 2018 年 3 月底,已批出總額逾港幣 4.39 億元的資助項目,協助香港企業提升 在內地市場的競爭力。
- SME One organised seminars on various funding schemes, briefings and knowledge sharing sessions for over 3,800 SMEs, on new business ordinances and regulations. At the same time, SME One handled 2,010 enquiries to provide information and consultations on funding schemes; and
- Acted as the implementation partner for the Enterprise Support Programme (ESP) under the Dedicated Fund on Branding, Upgrading and Domestic Sales (BUD Fund). As end March 2018, grants totalling over HK\$439 million had been approved to assist Hong Kong enterprises enhancing their overall competitiveness in the mainland China market.

服務社區

Serving the Community

- > 香港電腦保安事故協調中心(HKCERT)與政府電腦保安事故協調中心(GovCERT.HK)聯手推出「齊抗勒索軟件運動」。
- > 舉辦「第八屆香港傑出企業公民獎」,以表揚公司、企業義工隊及 社企在企業社會責任方面的卓越表現。
- > 初創平台「知創空間」自 2017 年 10 月成立以來,舉辦了 30 多場以 初創及 STEM 教育為主題的活動,並舉行了 70 多場機器操作及安全 培訓。
- The Hong Kong Computer Emergency Response Team Coordination Centre (HKCERT) and the Government Computer Emergency Response Team Hong Kong (GovCERT.HK) jointly launched the "Fight Ransomware Campaign";
- Organised "The 8th Hong Kong Outstanding Corporate Citizenship Awards" to recognise companies, corporate volunteer teams and social enterprises with remarkable achievements in corporate social responsibility; and
- Inno Space, HKPC's platform for startups, hosted over 30 startups and STEM education-related events, as well as more than 70 safety and machine training sessions, since October 2017.



獎項殊榮

Awards and Honours

- > 兩項應用研發獲頒「2017香港工商業獎:設備及機器設計優異證書」
 - 用於防污表面塗層的先進真空鍍膜機
 - 與客戶合作開發的手提式電動車充電器
- 五項應用研發在「第45屆日內瓦國際發明展」連膺六項殊榮
 - 評審團特別嘉許金獎和泰國國家研究局「最佳國際研發」- 吹噴式腹腔鏡手術煙霧驅散技術
 - 評審團特別嘉許金獎 廚餘全面轉化系統
 - 金獎 自動化液態冷凍系統
 - 金獎 應用於矽膠產品的環保及耐用等離子體表面處理技術
 - 銀獎 智能虛擬訂製鞋履技術
- > 「廚餘全面轉化系統」獲兩大專業工程師學會嘉許
 - 於英國「國際工程技術學會創新獎」榮獲「能源組別 大獎」及 「可持續組別 - 高度嘉許獎狀」
 - 於香港工程師學會-環境分部主辦的「2017環境論文獎」中勇 奪冠軍
- > 締造「單一場地展示最多3D打印展品」健力士世界紀錄,當中包括1,214件3D打印展品,以慶祝香港特別行政區成立20週年。
- > 2017 Hong Kong Awards for Industries: Equipment and Machinery Design Certificate of Merit:
 - Advanced Vacuum Coater for Anti-fouling Surface Coating,
 - Portable Charger Kit co-developed with industry partner;
- Five applied R&D innovations won major awards at the "45th International Exhibition of Inventions Geneva":
 - Gold Medal with Congratulations from Jury and "Thailand Award for Best International Invention" by the National Council for Research of Thailand – "Surgical Smoke Evacuation Technology for Laparoscopic Surgery".
 - Gold Medal with Congratulations from Jury "Food Waste Total Recycling System",
 - Gold Medal "Automatic Liquid Immersion System for Rapid Food Chilling".
 - Gold Medal "Eco and Durable Plasma Surface Treatment Technology for Silicone Rubber Products",
 - Silver Medal "Smart Virtual Shoes Fitting System";
- "Food Waste Total Recycling System" won two major awards from professional engineering institutions:
 - Winner of the "Power" category and a "Certificate of Highly Commended" in the "Sustainability" category, IET Innovation Awards 2017.
 - "Champion prize" in the "2017 Environmental Paper Award" by the Hong Kong Institution of Engineers, Environmental Division; and
- Suinness World Record for "The Largest Display of 3D-Printed Sculptures" in a single venue, comprising 1,214 3D-printed sculptures to commemorate the 20th Anniversary of the HKSAR.



生產力局簡介 Who We Are

香港生產力促進局(生產力局)是成立於1967年的法定機構,致力協助香港企業提高生產力和競爭力。

The Hong Kong Productivity Council (HKPC) is a statutory organisation established in 1967, dedicated to helping Hong Kong companies enhance their productivity and competitiveness.







生產力局簡介 Who We Are



0 ----

加強工商企業的生產力及競爭力 Enhance business productivity and competitiveness

經費來源

How We are Funded

生產力局約三成經費來自政府年度一筆過的撥款 資助。

其餘約七成的收入主要來自各類收費服務、政府 資助的應用研發項目及工商業支援項目。 The operation of HKPC is supported by the HKSAR Government subvention in the form of an annual block grant, which covers approximately 30% of our income.

Around 70% of our income is generated predominantly by various fee-charging services and competitive Government-funded applied R&D programmes and industry support initiatives.





生產力局簡介 Who We Are

主要工作 What We Do

(i)

啟發創意 Idea Creation



0

工業應用 Industrial

Applications







◎ 應用

應用研發 Applied R&D



原型製作 Prototyping



0

政府資助計劃 執行夥伴 Implementation Partner of Government Funding Schemes





0

培育初創 Nurturing Innovative Enterprises



② 人才重塑及 STEM 推廣 Retooling and STEM Outreach

0

測試及標準 Testing and Standards



管治

Governance

生產力局的工作由理事會管轄,由一名主席和 22 名理事成員組成,理事會有管理層、勞方、學術界、專業界別和相關香港政府部門的代表。

HKPC is governed by a Council comprising a Chairman and 22 other members, representing management, labour, academic and professional interests, as well as related Government bureaux and departments in Hong Kong.

生產力大樓

HKPC Building

生產力大樓位於九龍塘,設有針對不同科技領域的支援中心及認可 檢測設施。生產力局亦在大灣區營運全資附屬公司,為港資企業提 供一應俱全的支援。

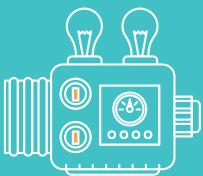
Centrally located in Kowloon, the HKPC Building features a wide range of industry support centres and accredited testing facilities dedicated to various technological areas and specific sectors.

HKPC also operates wholly-owned subsidiaries in the Greater Bay Area to provide readily available support to Hong Kong enterprises operating across the boundary, in nearby mainland China.



主席序言 Chairman's Foreword





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林宣武先生 Mr Willy LIN Sun-mo GBS, JP

主席 Chairman



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生產力局在 2017-18 年度再開創新里程,本局在協助政府推動「再工業化」及智慧城市的政策上喜見成果。年內我們推出一系列嶄新措施 - 先後成立「智能產業廊」、「智能產業聯盟」和「知創空間」,以促進本港「工業 4.0」的轉型以及創意文化的發展。此外,本局將繼續努力,為香港各個行業,特別是中小企,提供專門技術和業務流程支援。

The Hong Kong Productivity Council (HKPC) had another milestone year in 2017/18. Our efforts in facilitating the HKSAR Government policy directions of re-industrialisation and smart city started to bear fruits. During the year, exciting new initiatives such as "Smart Industry One", "Smart Industry One Consortium" and "Inno Space" were launched to foster the adoption of Industry 4.0 (i4.0) and a culture of innovation in Hong Kong, while we continued providing focused technology and business process support to Hong Kong industries, especially SMEs.



本局於 2017 年 9 月 21 日舉辦了以「智慧未來: 全球視野」為主題的國際會議,是生產力局五十 週年誌慶的壓軸項目。我們邀請了全球頂尖的專 家和企業領袖,令本港商界領袖和主要持份者深 入了解全球經濟所面對的轉變,使香港企業掌握 智慧時代的新機遇。 HKPC hosted an International Conference on "Smart Future: A Global Perspective" on 21 September 2017, as the grand finale to our 50th Anniversary celebration. We invited an ensemble of top-notch experts and business leaders around the globe, to give local business leaders and key stakeholders a deeper understanding of disruptions to the global economy landscape, helping Hong Kong businesses to grasp new opportunities in the smart era.



主席序言

Chairman's Foreword

2017年的經濟增長達3.8%,高於2016年的2.1%,令2018年的經濟開局向好。然而,隨著美國3月宣布對內地進口貨品加徵關稅,使外圍環境變得不明朗;加上貿易磨擦升級,令2018年下半年的營商環境對香港大部份企業,尤其是中小企而言充滿挑戰。

在區域和全球市場的動盪下,香港這個小型的開放經濟體系,委實難以獨善其身。要抵禦市場的 衝擊,本港各個行業必須透過「粵港澳大灣區」 等區域合作,開拓多元化業務和新興市場。

在開拓多元化市場之餘,「再工業化」亦能加強 香港經濟實力,以抵禦外圍衝擊。香港傳統製造 業以專業知識和優良品質取勝,香港有潛力憑先 進技術和智能製造,發展高增值、用地較少及非 勞工密集的製造業。

因此,本局正與業務夥伴與客戶緊密合作,共同 應對不明朗的經濟環境,並加強我們的服務,為 香港企業及時提供適切的支援。

生產力局將於 2018 年下半年,與德國弗勞恩霍夫生產技術研究所(Fraunhofer IPT)共同成立「科創中心」,致力增加香港企業的創新能力,將業務由代工生產(OEM)升級至原創品牌製造(OBM)。

Hong Kong got off to a good start as our economy grew by 3.8% in 2017, as compared to 2.1% growth in 2016. Yet, uncertainties in the external environment have increased, as the U.S. announced increased tariffs on imports from mainland China in March 2018. The second half of 2018 is going to be very challenging for most Hong Kong enterprises, especially SMEs, due to the escalating trade tensions.

Regional or global market turbulences will certainly ripple Hong Kong's small and open economy. To withstand the volatility, our industries have to explore diverse and emerging markets through regional partnerships such as the Guangdong-Hong Kong-Macao Bay Area (the Greater Bay Area).

Besides market diversification, re-industrialisation will also help strengthen the resilience of our economy against external shocks. Given Hong Kong's traditional manufacturing knowhow and quality standards, Hong Kong has the potential for developing high value-added, less land-intensive and labour-intensive manufacturing industries based on new technologies and digital manufacturing.

Against this backdrop, we are working hard with our partners and clients to navigate through the uncertain economic environment, while enhancing our service offerings to provide timely and relevant support to Hong Kong's enterprises.

In the second half of 2018, we are set to launch the INC Invention Centre with the Germany Fraunhofer Institute for Production Technology (Fraunhofer IPT), to enhance the innovation capability of Hong Kong's enterprises, and upgrade their business model from original equipment manufacturer (OEM) to original brand manufacturer (OBM).





主席序言 Chairman's Foreword



生產力局身為行業信賴的夥伴,將與香港工商界攜手同行, 共創智慧未來。

As the trusted partner of the industry, HKPC will go hand-in-hand with Hong Kong's enterprises to build a smart future.



本局將於深圳福田設立「香港生產力促進局深圳 創新及技術中心」,令香港企業探索大灣區的合 作機會,為其提供有關智能製造、人工智能、大 數據及環保科技等方面的解決方案及服務。新中 心可發揮協同作用,幫助本地初創企業尋找合適 的內地製造商進行大量生產,並向內地投資者展 示其新發明,發展業務合作。

另外,前總裁麥鄧碧儀女士自 2010 年上任以來, 一直盡心盡力領導本局,至 2017 年 10 月 31 日 合約期滿榮休。本人謹代表理事會感謝她對本局 發展所作的貢獻。

本局的新任總裁畢堅文先生,具有執行大規模轉型項目的豐富經驗,他的商業觸覺敏鋭,領導才能出眾,我們深信生產力局在他的帶領下,必能實現推動「再工業化」的使命,促進本港工業邁向智慧生產,並推動香港發展成為世界級的智慧城市。

最後,我謹在此感謝理事會成員及全體同事,在 過去一年的努力以及對本局的支持。

生產力局身為行業信賴的夥伴,將與香港工商界 攜手同行,共創智慧未來。

主席

林宣武 GBS, JP

To help the Hong Kong enterprises explore opportunities for collaboration in the Greater Bay Area, we will establish the HKPC Shenzhen Innovation and Technology Centre in Futian, Shenzhen. This will provide solutions and research in the areas of digital manufacturing, artificial intelligence, big data and environmental technology. Leveraging synergies with this new Centre, Hong Kong startups can hence find appropriate mainland China manufacturers for mass production, and showcase their innovations to investors for business collaboration.

On behalf of the Council, I would like to thank Mrs Agnes Mak, former Executive Director, for her dedication to leading the Council during the year until the completion of her contract on 31 October 2017, after serving in this capacity since 2010.

We are confident that HKPC's new Executive Director, Mr Mohamed D. Butt – with his extensive experience in executing large transformational projects, keen business acumen and outstanding leadership – will lead HKPC to realise its mission to drive re-industrialisation, facilitating the industry's journey towards digital manufacturing, and facilitate Hong Kong's development into a world-class smart city.

My thanks also go to all the Council Members and our staff members for their efforts and support over the past year.

As the trusted partner of the industry, HKPC will go hand-in-hand with Hong Kong's enterprises to build a smart future.

Willy LIN Sun-mo GBS, JP

Chairman



理事會成員

Council Membership



林宣武, GBS, JP **Mr Willy Lin Sun-mo**, GBS, JP





于健安。

Mr Emil Yu Chen-on, JP



陳祖恒 Mr Sunny Tan



Mr Leung Kwong-chuen



譚嘉因, МН Prof Tam Kar-yan, мн

香港科技大學工商管理學院院長 Dean of School of Business and Management, The Hong Kong University of Science and



查逸超』。 Prof John Chai Yat-chiu。』

福田集團控股有限公司董事總經理 Managing Director, Fook Tin Group Holdings Ltd.



周博軒 Mr Felix Chow Bok-hin

駿碼科技集團行政總裁 Chief Executive Officer, Niche-Tech Corporation Ltd.



史立德, BBS, MH, JP **Dr Allen Shi Lop-tak**, BBS, MH, JP

華彩集團有限公司主席 Chairman, Brilliant International Group Limited





管理/專業/學術界別代表 Management / Professional / Academic Representatives

理事會成員 Council Membership



政府官員 Public Officers



卓永興、』。 Mr Cheuk Wing-hing、』。

創新及科技局常任秘書長 Permanent Secretary for Innovation and Technology



蔡淑嫻ˌ』。 Ms Annie Choi Suk-han,』。

創新科技署署長 Commissioner for Innovation and Technology



李寶儀_.』 Ms Mabel Li Po-yi

勞工處副處長 (勞工事務行政) Deputy Commissioner for Labour (Labour Administration)





勞工界別代表 Labour Representatives



梁頌恩 Ms Juan Leung Chung-yan

香港工會聯合會副理事長 Vice-Chairman, The Hong Kong Federation of Trade Unions



甄美薇,」p Ms Salina Yan Mei-mei,」p

業貿易署署長 irector-General of Trade and Industry

李秀琼 Ms Amy Lee Sau-king

港九電器工程電業器材職工會秘書長 General Secretary, Hong Kong & Kowloon Electrical Engineering & Appliances Trade Workers Union



李凱 Mr Li Hoi

香港職工會聯盟培訓中心副行政總監 Deputy Executive Director, Hong Kong Confederation of Trade Unions Training Centre



那敏且 Ms Mandy Kwok Man-yee

退休 Potiroc



潘偉賢 Mr Paul Poon Wai-yin

中電學院校長 Vice Chancellor, CLP Power Academy



楊嘉燕 Ms Karmen Yeung Ka-yin

畢馬威會計師事務所合夥人 Partner, KPMG



張益麟 Mr Alan Cheung

Managing Director, TML Apparel Ltd.

成員變動情況 (2018 年 1 月 1 日生效) Membership Changes (Effective Date 1.1.2018) 新任成員 NEW MEMBERS

梁頌恩 Ms Juan Leung Chung-yan

潘偉賢 Mr Paul Poon Wai-yin

史立德 Dr Allen Shi Lop-tak, BBS, MH, JP

離任成員 OUTGOING MEMBERS

林錦儀 Miss Lam Kam-yi

李國本 Dr Delman Lee

吳宏斌 Dr Dennis Ng Wang-pun, BBS, MH

核數師 AUDITORS

安永會計師事務所 Ernst & Young 法律顧問 LEGAL ADVISERS

高露雲律師行 Wilkinson & Grist

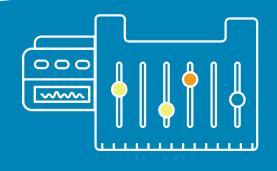
尼克松 • 鄭黃林律師行 Nixon Peabody CWL

截至 2018 年 3 月 31 日 As at 31 March 2018



總裁匯報

Executive Director's Review





畢堅文先生 Mr Mohamed D. Butt

總裁 Executive Director





總裁匯報 Executive Director's Review

生產力局 2017/18 年度的成績令人鼓舞,主要財務表現指標均達標。本局全年處理了 699 個顧問項目,並在 10 分為滿分的客戶服務滿意度調查中,平均取得 8.99 分。

The HKPC delivered promising results in 2017/18, achieving the budget targets in all key financial performance indicators. We undertook a total of 699 consultancy projects in the year, and achieved an average score of 8.99 out of 10 from customer satisfaction surveys.

年內生產力局繼續加強對香港工業的支援,協助 行業把握商機。本年度我們推出了35項創新服務 和產品、把24項技術商業化、取得14項專利註 冊,並展開45項新研發項目。大部分研發項目均 由行業共同贊助,證明了本局為備受信賴的研發 夥伴。

本局團隊多項研發成果除贏得市場口碑外,亦榮 獲國際及本地多項殊榮,包括在瑞士舉行的「第 45屆日內瓦國際發明展」中勇奪四金一銀的佳 績,令人感到自豪。 During the year, HKPC continued to strengthen its support to help Hong Kong industries seize new business opportunities. In 2017/18, we launched 35 new innovative services and products, commercialised 24 technologies, registered 14 patents, and commenced 45 new R&D projects. Most of these R&D projects were cosponsored by the industry, signalling a clear vote of confidence in HKPC as a trusted R&D partner.

In addition to receiving positive market feedback, I am also particularly proud of the fact that many of our R&D achievements have received international and local accolades, including four gold medals and one silver medal in the "45th International Exhibition of Inventions Geneva", held in Switzerland.

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過去一年,生產力局透過提供技術支援及人才培訓,協助香港 行業建立「工業 4.0」的業務基礎,並取得重大進展。

During the year, HKPC made great strides in helping Hong Kong industries build up their i4.0 business foundation through providing technological support and nurturing talents.





總裁匯報

Executive Director's Review

數碼轉型 邁向「再工業化」

「再工業化」的關鍵在於如何利用數碼轉型,在香港產業鏈發展高增值製造。因此,我已明確定立了生產力局的策略,把目前和未來的工業支援措施聚焦於「工業 4.0」,以推動智能製造與創新。

過去一年,生產力局透過提供技術支援及人才培訓,協助香港行業建立「工業 4.0」的業務基礎,並取得重大進展。

生產力局自 2016 年起,與德國弗勞恩霍夫生產 技術研究所 (Fraunhofer IPT) 合作推行「工業 4.0 升級與認可計劃」,令行業逐步提升運作,邁向 「工業 4.0」。迄今已有 30 家香港企業參加了該 認可計劃,並於不同範疇推行了「工業 4.0」。

2017年8月,生產力局成立了「智能產業廊」以展示「工業4.0」的概念及智慧功能,向不同行業推廣「工業4.0」相關技術的應用。本局的「智能連接器」為中小企提供低成本的升級方案,提升其現有設備的實時產生和收集數據的能力。我們會繼續與技術夥伴合作將「智能產業廊」升級,以展現「工業4.0」成熟運作的最佳狀態,透過智能數據分析和機器學習,達到全自動優化及編排運作流程。

Digital Transformation as a First Step for Re-industrialisation

The key to re-industrialisation hinges on digital transformation for developing high value-added manufacturing in the industrial chain in Hong Kong. To this end, I have clearly stated that HKPC's immediate and future industry support initiatives will focus on i4.0 as an enabler to drive digital manufacturing and innovation.

During the year, HKPC made great strides in helping Hong Kong industries build up their i4.0 business foundation through providing technological support and nurturing talents.

We have implemented the "Industry 4.0 Upgrade and Recognition Programme" with Fraunhofer IPT since 2016, to help industries gradually upgrade their operations towards i4.0. So far, 30 Hong Kong enterprises have joined the Programme to implement i4.0 in different aspects.

In August 2017, we established the "Smart Industry One" to demonstrate the concept and smart features of i4.0 and to promote the adoption of i4.0-related technologies to different sectors. Our Smart Connect technology offers a low-cost solution for SMEs to enhance the real-time data generation and collection capability of their existing machines. We will continue upgrading "Smart Industry One" with our technology partners in order to illustrate the highest maturity level of i4.0, achieving self-optimisation and self-organisation through smart data analytics and machine learning.





總裁匯報 Executive Director's Review



另外,生產力局亦於 2018 年 3 月成立「智能產業聯盟」,促進行業之間的交流切磋,掌握智能產業的最新情報,使企業在邁向「工業 4.0」的過程中循序漸進,成為創新的智能企業。

HKPC also formed the "Smart Industry One Consortium" in March 2018, to facilitate exchanges of the latest information in smart industry, assisting enterprises in becoming incrementally and progressively innovative and smart on the i4.0 journey.

生產力局屬下的生產力學院於 2018 年 3 月,與職業訓練局(VTC)和德國弗勞恩霍夫生產技術研究所 (Fraunhofer IPT) 攜手推出全港首個「工業 4.0 專業文憑課程」,此舉不但加深香港行業對「工業 4.0」的認識,也加強了培訓從業員的相關技能。此外,更提供實用知識和技術,令學員協助公司順利推行「工業 4.0」。

To strengthen industry awareness of i4.0 and enhance the relevant skills of industry practitioners, the HKPC Academy, the Vocational Training Council and the Fraunhofer IPT joined forces to launch Hong Kong's first Professional Diploma Programme in i4.0 in March 2018. The Programme also provides the students with practical knowledge and skills for the smooth and effective adoption of i4.0 in Hong Kong.

支援中小企及初創公司

本局的「中小企一站通」提供一站式的支援服務,以促進中小企的成長及發展,使他們充分利用香港和粵港澳大灣區的各種資助計劃和資源。在2017/18年度,有3,800多家中小企參加了「中小企一站通」舉辦的一系列資助計劃研討會、知識分享會以及新業務條例和法規簡報會。「中小企一站通」處理了超過2,010宗查詢,並提供有關資助計劃的詳情和諮詢服務。

Supporting SMEs and Startups

HKPC's SME One has been providing one-stop support for SMEs to facilitate their growth and development, enabling them to fully utilise various funding schemes and other support resources available in Hong Kong and the Greater Bay region. In 2017/18, over 3,800 SMEs participated in SME One's seminars on funding schemes, knowledge sharing sessions and briefings on new business ordinances and regulations. SME One handled over 2,010 enquiries and provided information and consultations on funding schemes.



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Executive Director's Review

生產力局於 2017 年 10 月成立了「知創空間」, 作為初創公司交流和技術支援的渠道,幫助初創 企業將創意轉化為工業設計和產品。

「知創空間」自啟用以來已招募了超過 200 名會員,未來,它會大力加強生產力局與其他機構及初創生態的聯繫。目前,「知創空間」已與 20 多個夥伴機構建立了互惠關係。此外,它亦與大學和其他學校合作,提供技能和設備,幫助學生實現創意;未來,生產力局將進一步拓展「知創空間」。

and technical support for startups, helping them to turn innovative ideas into industrial designs and products.

We also established the "Inno Space" in October 2017, as a platform for exchanges

With more than 200 members recruited since its opening, Inno Space will seek to strengthen HKPC's ties with other organisations and startup ecosystems. Inno Space have already established reciprocal relationships with over 20 partner organisations. It is also working with universities and schools to offer their students the skills and equipment for turning innovative ideas into reality. HKPC will further expand Inno Space in the years to come.

建造可持續發展的智慧城市

2017 年 12 月,香港特區政府發表了「香港智慧城市藍圖」,勾劃未來的發展策略,致力用創科提升城市管理的效率和可持續發展。

生產力局一直在智能運輸、智慧環境管理和智慧人才等方面,積極支持政府的智慧城市發展政策。

智能運輸是智慧城市不可或缺的一環,令城市的 人流更有效率、更環保。過去一年,生產力局及 屬下的汽車零部件研究及發展中心(研發中心), 與不同的持份者合作推動香港的綠色運輸發展。

Building a Sustainable Smart City

In December 2017, the HKSAR Government released the Smart City Blueprint for Hong Kong, mapping out development strategies and initiatives for enhancing the effectiveness and sustainability of city management by means of innovation and technology.

We are playing an active role in supporting the HKSAR Government's smart city initiatives, especially in the areas of smart mobility, smart environment and smart people.

Smart mobility is an indispensable piece in the smart city puzzle, allowing efficient and environmentally friendly flows of people in the city. During the year, HKPC and our Automotive Parts and Accessory Systems R&D Centre (APAS) partnered with different stakeholders to promote green transport development in Hong Kong.



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新總裁首次在員工大會發言 New Executive Director spoke for the first time at staff meeting



總裁匯報 Executive Director's Review



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生產力局一直在智能運輸、智慧環境管理和智慧人才等方面, 積極支持政府的智慧城市發展政策。

HKPC has been playing an active role in supporting the smart city initiatives of the government especially in the area of smart mobility, smart environment and smart people.

研發中心與香港汽車會合作推出全港首創的「智能流動電動車充電系統」試用計劃,提供緊急電動車充電服務。另外,生產力局亦與電動車充電服務供應商 Smart Charge (HK) Limited 合作開發、推廣電動車充電方案,為本港電動車用戶提供更多機會,使用生產力局及研發中心開發的創新方案,運用研發中心的科研成果,為本港電動車用戶提供更便捷、更多元化的電動車創新充電方案。

APAS and the Hong Kong Automobile Association (HKAA) jointly launched the "Smart Mobile EV Charger" Trial Scheme, to provide the city's first emergency roadside EV charging service. We also collaborated with local EV charging service provider Smart Charge (HK) Limited, on the development and promotion of EV charging solutions, offering local EV users more access to the innovative charging solutions developed by HKPC and APAS.

本局還聯同來自汽車零部件、移動互聯網、交通 及基礎建設三大行業的30多家企業夥伴·組成「香港智能網聯汽車產業聯盟」,探索智能網聯汽車 的創新和商機。 HKPC also brought together over 30 enterprises from the automotive accessories, mobile networks, transportation and infrastructure industries to form the "Hong Kong Connected Vehicles Cluster" to explore innovation and business development for smart vehicles.

回收業是實現智慧城市願景的另一個重要里程。 作為港幣 10 億元「回收基金」的秘書處,生產力 局積極推廣基金。截至 2018 年 3 月底,「回收基 金」共批出了 175 個項目,涉及資助金額達港幣 1 億 200 萬港元。 Another important milestone in the realisation of the smart city vision is the recycling industry. As the secretariat of the HK\$1 billion "Recycling Fund", HKPC has been actively promoting the Fund. As at the end of March 2018, HK\$102 million of funding had been approved for 175 projects.

生產力局正研發智能環保解決方案,利用城市的資訊和通訊技術設施,收集環境數據,以期更有效監控污染、減少碳排放。本局正計劃開發一套智能雲端平台,以監控及分析參與工廠的實時能源數據。這些智能數據可幫助廠房負責人作出精明決定,以節省能源成本。

We are also developing smart environmental solutions, making use of the city's ICT infra-structure to collect environmental data for effective pollution control and carbon reduction. We are planning to develop a smart cloud platform to monitor and analyse real-time energy data of participating factories. Armed with this smart intelligence, these factory owners will be able to make smarter decisions on energy cost-saving.



總裁匯報

Executive Director's Review



智能城市的發展有賴穩定可靠的網絡環境。香港資訊保安事故不斷上升,生產力局屬下的「香港電腦保安事故協調中心」(HKCERT)在2017年共處理6,506宗保安事故,較2016年增加約7%。

鑑於 2017 年 5 月全球爆發的 WannaCry 勒索軟件攻擊,HKCERT 與政府電腦保安事故協調中心(GovCERT.HK)聯手推出「齊抗勒索軟件運動」,包括舉辦公眾研討會,並在社交媒體設立「勒索軟件情報站」,上載勒索軟件的最新情報和保安警示等資訊。

去年,生產力局亦推行了兩項與大眾生活息息相 關的智慧城市項目。

第一,配置了感應器的智能路燈,可提供實時數據,在解決城市問題上扮演了重要角色。生產力局在2017年為路政署開發了智能路燈,縮短路燈故障時間。自2017年第三季以來,已在啟德及新蒲崗一帶安裝了超過220支智能路燈。

第二,生產力局亦參與了入境事務處新一代「e 道」的設計,新設計已於香港西九龍高鐵站投入 服務,並預計將於 2019 年在港珠澳大橋口岸應 用,不但能提升用戶體驗,也使維修保養更便捷。 Successful smart city development hinges on a stable and reliable cyber environment. Yet, information security incidents in Hong Kong continue to rise. In 2017, the Hong Kong Computer Emergency Response Team Coordination Centre (HKCERT), under the auspices of HKPC, handled a total of 6,506 incident reports, an increase of about 7% over 2016.

In the wake of the global WannaCry ransomware outbreak in May 2017, HKCERT and the Government Computer Emergency Response Team Hong Kong (GovCERT.hk) jointly launched the "Fight Ransomware Campaign", which included public seminars and the setting up of a "Ransomware Intelligence Portal" on the social media to upload the latest ransomware intelligence and security alerts.

During the year, we also undertook two smart city initiatives that will enhance daily lives of the general public.

First, intelligent street lighting fitted with sensors to collect real-time data plays an important role in solving urban problems. In 2017, HKPC developed a smart street lamp to reduce the downtime of malfunctioned street lamps for the Highways Department. Over 220 smart street lamps have been installed in Kai Tak and San Po Kong since the third quarter of 2017.

Second, HKPC also took part in the design of the new generation of e-Channel for the Immigration Department. The new design is in operation at Hong Kong West Kowloon High Speed Railway Station. It is expected to be installed at the boundary control point of the Hong Kong-Zhuhai-Macao Bridge in 2019. The new design will further enhance ergonomics and users' experience, as well as facilitate easy and speedy maintenance.



總裁匯報 Executive Director's Review

香港人才的知識和技能與時並進,對建立可持續發展的智慧城市來說極之重要。有見及此,生產力局把轄下的「生產力培訓學院」提升為「生產力學院」,增設顧問服務,為機構建立系統化及可持續的專才發展,應對科技和市場轉型所產生的挑戰。過去兩年,多家機構已在生產力局的協助下,成立了自己的企業學院。

Ensuring the knowledge and skills of Hong Kong's workforce to keep pace with the times is fundamental to building a sustainable smart city. In view of this, HKPC has upgraded its Productivity Training Institute to the HKPC Academy, and offers consultancy services in assisting organisations to achieve systematic and sustainable talent development, in order to address challenges arising from technology and market transformation. Over the past two years, we have helped many organisations successfully launch their own corporate academies.

清晰策略 力創智慧未來

能夠加入生產力局的專業團隊,推動香港工業升級轉型,把握智慧時代的機遇,令我深感榮幸。 這項使命既富挑戰亦意義重大。

本局業務策略的重點如下:

一、以智慧城市及智能製造為核心,按照市場和 行業的需要,定立策略主題並提供相關服務; 二、重點發展以「工業 4.0」為中心的工業支援 服務,推動「再工業化」、數碼化製造和創新; 三、全力配合政府在「再工業化」、創新科技及 粵港澳大灣區發展的政策。

要實現上述策略,我的首要任務是檢視並制定生產力局的業務目標,建立重視關鍵績效的企業文化,包括財務表現、策略重點、機構運作和風險管理等範疇,令生產力局更有效地配合未來的策略發展方向。同時,我亦會加強生產力局的市場推廣工作,向行業宣傳生產力局的創新方案,並與非政府機構和研究院緊密合作,發揮更大的協同效應,促進創新科技的發展。

我在此衷心感謝理事會主席林宣武先生及全體理事會成員,對本人不吝指導;亦感謝前任總裁麥鄧碧儀女士為本局所作出的貢獻。最後,我要感謝所有員工的支持和努力。生產力局將繼續與本港企業夥伴同行,共創未來!

總裁

畢堅文

Gearing Up for Performance

I am indeed privileged to join the professional team of HKPC, helping Hong Kong industries to transform and upgrade to grasp the opportunities in a smart era. This is certainly a very challenging yet purposeful mission.

Under my helmsmanship, HKPC's business strategy will: 1) Build on the Smart City and Digital Manufacturing concepts to pursue services under market-led and industry-centric strategic themes; 2) Focus on Industry 4.0 as HKPC's signature support to industry and the enabler to drive re-industrialisation and innovation; and 3) Complement HKSAR Government policy and initiatives in the areas of re-industrialisation, innovation and technology, and Greater Bay Area development.

To lay the groundwork for achieving these strategic aims, my priority is to review and map out our goals and objectives, so we can gear up the culture and mindset towards fulfilling critical aspects of organisation performance – identified as financial performance, strategic imperatives, organisational execution and enterprise risk management. By achieving these aims, we will better position HKPC to meet the strategic development directions in the coming years. To complement this, I will step up HKPC's marketing efforts to showcase our innovative solutions to industries, work more closely with non-governmental organisations and research institutes to achieve greater synergy for fostering developments in innovation and technology.

I would like to convey my heartfelt thanks to Council Chairman Mr Willy Lin and all Council Members for their valuable guidance. I am also grateful to my predecessor, Mrs Agnes Mak, for the dedication to the Council. My thanks also go to the staff members of the HKPC; with your relentless support and dedication, I am sure that HKPC will continue to be the trusted partner of our industries through rain or shine.

Mohamed D. Butt

Executive Director

智能製造 DIGITAL MANUFACTURING



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「再工業化」的關鍵是數碼轉型,善用數碼科技,協助企業在香港的 產業價值鏈中創優增值。有見及此,生產力局以「工業 4.0」作為旗 艦支援服務,推動香港「再工業化」、數碼製造和創新科技。

Re-industrialisation involves a digital transformation to help enterprises progress towards performing high value functions in the industrial value chain. This is the key first step to re-industrialisation in Hong Kong. To this end, HKPC is focusing on i4.0 as an enabler to drive re-industrialisation, digital manufacturing and innovation, to build up its signature support to industry.



智能製造 Digital Manufacturing

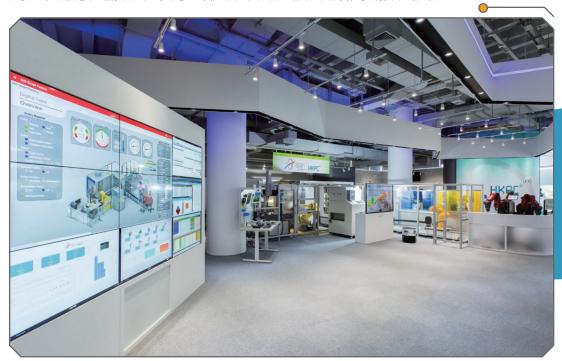
智能產業廊 - 工業 4.0 全體驗

Smart Industry One - Experience i4.0 at First Hand

生產力局「智能產業廊」於 2017 年 8 月正式啓用,展示「工業 4.0」的工作流程和主要技術,讓行業親身體驗「工業 4.0」的核心元素和運作模式。

HKPC's i4.0 smart demonstration centre, "Smart Industry One", commenced operation in August 2017, to showcase the workflow and key technologies of i4.0, as well as the core elements and operation model of i4.0.

「智能產業廊」設有不同區域,包括介紹「客戶、廠商、消費者」產業週期的展示區:「電腦化營運監控中心」 透過應用在不同範疇的智能系統模擬智能工廠的數碼化運作模式及進行實時數據分析:如何透過「智能生產單元」展示「信息物理融合生產系統」,製造個人化產品,配合「客製化」消費市場趨勢。



Smart Industry One features various demonstration zones, including a display on the "Consumer-Manufacturer-Customer Cycle"; the "Control Room" which simulates the digitalised operation of a smart factory, where real-time monitoring of various intelligent systems and data analysis can be performed via integrated cyber solutions; and the intelligent and agile production cell, which demonstrates the "Cyber Physical Production System" for producing personalised products to address the market trend of mass customisation.





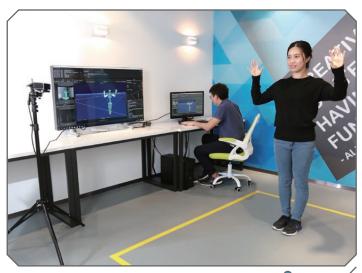
Digital Manufacturing

知創空間 - 創意轉化產品 Inno Space – from Idea to Industry

在香港特區政府委託下,生產力局於 2017 年 10 月成立「知創空間」(Inno Space),透過技術支援和知識分享,協助初創企業及創客,將創意轉化為工業設計、原型及產品。

Commissioned by the HKSAR Government, HKPC set up Inno Space in October 2017, to help startups, students and makers turn their innovative ideas into industrial designs, prototypes and products through technical support and knowledge sharing.







「知創空間」由 Inno Idea、Inno Prototype 及 Inno Network 三個區域組成,配置了各款先進的高端軟、硬件設施,還有生產力局專家提供由產品開發、生產、檢測至知識產權保護等一條龍技術支援。

Inno Space features a range of advanced software and hardware facilities in three zones: Inno Idea, Inno Prototype, and Inno Network. HKPC experts are on-site to provide members with one-stop technical support, ranging from product development, prototype production and testing, to intellectual property (IP) protection.



智能製造 Digital Manufacturing

智能產業聯盟 - 跨行業平台

Smart Industry One Consortium - Cross Industry Platform

為協助香港企業掌握「工業 4.0」的最新發展,生產力局牽頭成立「智能產業聯盟」。聯盟提供跨行業「工業 4.0」交流平台,讓行業掌握智能產業最新資訊,使其逐步提升為創新的智能企業。

To help Hong Kong companies keep abreast of the latest development in i4.0, we also launched the "Smart Industry One Consortium". Initiated by HKPC, this new cross industry platform facilitates better and swifter information exchanges on digital manufacturing, to help enterprises becoming smart and innovative.

「智能產業聯盟」歡迎製造商、供應商及學術界人士加入,專享多項優惠,例如德國弗勞恩霍夫生產技術研究所 (Fraunhofer IPT) 認可「工業 4.0」專家諮詢服務、免費參加「工業 4.0」指定活動和分享會等。

Manufacturers, suppliers and academics are welcome to join the Consortium and enjoy a host of benefits such as the Fraunhofer IPT-certified i4.0 consultancy services, free admission to selected i4.0 activities and case sharing seminars, etc.







Digital Manufacturing

「工業 4.0」專才 - 全港首個「工業 4.0」專業文憑課程 Talent for i4.0 – HK's First Diploma Programme in i4.0

為提升香港行業對「工業 4.0」的認知,並加強培訓從業員相關的技能,生產力局屬下生產力 學院、職業訓練局 (VTC) 及德國弗勞恩霍夫生產技術研究所 (Fraunhofer IPT) 攜手推出全港首 個「工業 4.0」專業文憑課程。

To strengthen Hong Kong industry's awareness of i4.0 and enhance the relevant skills of industry practitioners, the HKPC Academy, the Vocational Training Council (VTC) and Fraunhofer IPT from Germany joined forces to launch Hong Kong's first professional diploma programme in i4.0.

達資歷架構第4級的「工業4.0」專業文憑課程, 共分 4 個單元,分別探討「工業 4.0」實施、網 絡實體系統、智能自動化及物聯網科技的應用。

Accredited as a Qualifications Framework Level 4 course, the new professional diploma programme comprises four modules: implementation of i4.0, cyber physical system, smart automation, and Internet of Things applications.









Signing Ceremony of Professional Diploma in Industry 4



智能製造 Digital Manufacturing

整合 - 「工業 4.0」的第一步

First Step to i4.0 - Transformation from Offline to Online

「工業 4.0」的精髓在於訊息處理,讓企業根據由機器而來的實時數據迅速做決策。現時常見的情況 是每當公司發生重大事件,由於整個業務流程的數據未能整合及互通,以致延誤回應行動。

踏上「工業 4.0」階梯的第一步,是透過機器設備的數據化和數據聯通,達致機械數據可視化。許多廠商以為轉型至「工業 4.0」,需要投資昂貴的新設備及大量軟件。

生產力局開發了「智能連接器」,加裝在現有的傳統機械上,便可令現有的生產線聯網,實現工業4.0數據可視化,毋須大量投資。這創新設備為生產線增添聯網能力,融入「工業4.0」生態系統。此外,透過把機械升級為工業物聯網(IIoT),便能實現機械數據交換及整合數據分析,有助改善效率、提升經濟效益及減少人手。

The essence of i4.0 lies in the key role of information processing in enabling quick decision making with real-time data from the machines. Often, when a significant event occurs in a company, insufficient integration of relevant digitalised systems for end-to-end data acquisition and processing will lead to delays in taking responsive actions.

The first step to i4.0 is visualisation of machine data, which is achieved through machine digitalisation and connectivity. Many in the industrial sector believe that the transformation to i4.0 is costly, requiring expensive new equipment and hefty software investment.

HKPC has developed a "Smart Connect" system to make existing offline machines online, by enabling i4.0 visualisation of machine data at an affordable entry cost level. This innovation brings connectivity for these existing machines, allowing their integration into the i4.0 ecosystem. Furthermore, by transforming the machines into the Industrial Internet of Things (IIoT), subsequent integration of machine data exchanges and data analytics will result in efficiency improvements, economic benefits, and reduced human efforts.







Digital Manufacturing

推動基礎工業升級「工業 4.0」 Hong Kong Foundation Industry towards i4.0

雖然大部份香港中小企對投入「工業 4.0」的態度正面,但普遍不知從何入手。

While expressing positive sentiments about joining i4.0, most Hong Kong SMEs have no idea where to start.

工業貿易署中小企業發展支援基金的資助下,香港創新科技及製造業聯合總會(FITMI)與生產力局合作,推行「香港基礎工業邁進『工業 4.0』部署計劃」,由生產力局的「工業 4.0」團隊聯同國際專家,透過成熟度分析、現場評估、培訓及行業指南,協助塑膠、電子、金屬及機械設備等四大產業升級轉型。

這個計劃讓香港中小企掌握相關知識和技術,以按照本身的業務性質及發展程度,制訂合適的「工業 4.0」發展藍圖。



Supported by the SME Development Fund, HKPC and the Hong Kong Federation of Innovative Technologies and Manufacturing Industries jointly launched an "Industry 4.0 Deployment Project", to help upgrade the operation and production of SMEs from the metal, plastics, electronics and machinery equipment sectors through a series of maturity evaluations, onsite visits, training and a guidebook jointly delivered by international and HKPC experts.

This project will equip Hong Kong SMEs with the necessary knowledge and techniques for the implementation of i4.0 at different levels of adoption.



「工業 4.0」這場工業革命已迫在眉睫,「大有大做、 小有小做」,卻不可不做。

Given the pressing nature of i4.0, Hong Kong manufacturers must follow suit, regardless of the scale of the implementation.



Digital Manufacturing

3D 打印技術新突破 - 更快更強 Breakthroughs in 3D printing – Speed and Strength

3D 打印是「工業 4.0」的關鍵技術之一。生產力局在本年度與本地一家機械公司合作,引入全港首部「射流熔融 3D 打印設備」。

3D printing is one of the key technologies enabling innovative engineering design and a high level of customisation in manufacturing. During the year, HKPC collaborated with a local industrial machinery company to introduce the first-of-its-kind Multi Jet Fusion (MJF) 3D printing system.



射流熔融技術可以直接使用高韌度、高熱塑力的尼龍材料進行 3D 打印,大幅提升工件的機械強度,減低材料成本至其他材料的十分之一,打印速度更比一般塑膠 3D 打印機快 10 倍。

生產力局協助一家廠商採用此系統,製造和組裝手推車原型,速度較以往快約 10 倍, 兼可保持產品的高強度。

MJF can directly 3D print high strength and high thermoplastics nylon products. In addition to enhanced mechanical strength, the material cost can be reduced to one-tenth of other plastic materials, while the printing speed is ten times quicker than other plastic 3D printers.

Using the MJF 3D printing system, HKPC helped a client fabricate and assemble the prototype of a trolley approximately 10 times faster than before, while remaining the high strength.





Digital Manufacturing

一站式金屬 3D 打印銑削 - 拓高增值產品市場 Robotic Metal 3D Printing and Machining - Making it Bigger and Faster

生產力局成功開發「混合激光能量沉積及銑削技術」(HLEDM),可運用 3D 打印技術快速製造大型金屬零件。

HKPC has successfully developed the patentable "Hybrid Laser Energy Deposition and Milling" (HLEDM) technology, to rapidly fabricate large metal parts using metal 3D printing.

現時,行業主要利用「直接金屬激光燒結技術」 (DMLS) ,直接製造優質的功能產品和零件, 然而礙於該技術成本高昂、打印慢,應用並不廣 泛。再者,DMLS 技術對加工件的尺寸、形狀和 材料方面有技術限制。

相對而言,HLEDM 技術無論在生產成本、交付週期和設計自由度方面,均較 DMLS 優勝,可於加工件上製造獨特功能,特別是大型產品。其打印能力較 DMLS 大,速度也快三倍。

因此,HLEDM 有助提升本地廠商的競爭力,拓展汽車零部件、模具、植入式醫療器材、機械、 民航、關鍵部件及其他高增值產品市場。 Until the advent of HLEDM, direct manufacturing of quality functional products/parts mainly relied on Direct Metal Laser Sintering (DMLS) technology. Yet, high production costs hindered its wider application. In addition, the printing speed is slow, and there are technological limitations in the size, geometry and material of the parts fabricated by DMLS.

In contrast, HLEDM outperforms DMLS regarding production cost, lead-time and design freedom, and makes unique functions of the fabricated parts possible, especially for large products. Its printing capacity and speed are about three times larger and faster than DMLS.

HLEDM can therefore help enhance the competitiveness of local manufacturers of automotive parts, mould and die, medical implant, machinery, civil aviation, critical components and other high value-added products.





智能製造 Digital Manufacturing

碳纖維複合材料 助業界增值 Carbon Composites to Add Value

香港「再工業化」聚焦於高增值工藝。近年,碳纖維複合材料在航空、汽車和醫療等工業的應用日益普及,適用於各種高價值零部件。然而,傳統的複合材料加工方法較勞動密集和費時。生產力局的先進複合材料技術可協助業界克服上述的挑戰。

The re-industrialisation of Hong Kong will focus on high value-added manufacturing processes. In recent years, carbon composites have become more and more popular in the manufacturing of high value parts in many sectors, such as the aviation, automotive and medical industries. However, the traditional method for producing composite parts is labour intensive and time consuming. The advanced composite technology developed by HKPC helps the industries to tackle the problem.

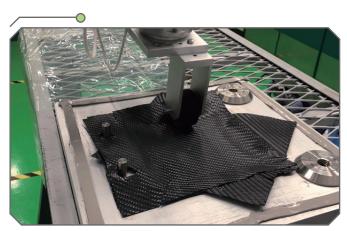


Supported by the Innovation and Technology Fund, HKPC developed three advanced processing methods for the effective production of different composite products: 1) Continuous fibre piping; 2) Two-material composite products; and 3) High strength, defect-free heavy-duty composite parts.

These new processing methods are aimed at enhancing production efficiency and lowering the production cost of composite products. They provide one-stop solutions in the fabrication of composite parts with shorter production cycles, lower production costs and minimum capital cost investment.

在創新及科技基金(ITF)的資助下,生產力局開發了三種先進的加工方法,以有效生產不同的複合材料產品,包括:1)連續纖維管道,2)雙物料複合材料產品及3)高強度、無缺陷、高負荷複合材料部件,從而提高生產效率,降低複合材料產品的生產成本。

新加工方法為複合材料零部件提供了一站式加工方案,有助縮短生 產週期,降低生產和投資的成本。



運用創新科技,發展適合香港的先進製造業,將高增值 的生產流程留在香港,實現「再工業化」,有助香港製 造業再次蓬勃發展。

With the use of innovation and technology, Hong Kong will be able to develop more advanced manufacturing. The high value-adding procedures will help the industry realise re-industrialisation, and facilitate further development in the manufacturing sector.





Digital Manufacturing

碳纖塑造未來

Moulding a Composite Future

一家塑膠製品廠留意到複合材料在航空和汽車行業的應用不斷增長,充滿商機,有意拓展業務。

在創新及科技基金創新及科技支援計劃的資助下,生產力局與廠商合作開發了粘結效果良好的混合成型技術,可為整車廠原件製造(OEM)及售後市場生產碳纖維複合汽車零件。

憑藉生產力局轉移有關技術知識,廠商除可生產汽車零部件,還可開拓其他碳纖維複合材料產品市場。

A manufacturer of injection moulded plastic products noticed the growing application of composite materials in the aviation and automotive industries, and would like to diversify its business.

Supported by ITF under the Innovation and Technology Support Programme, HKPC collaborated with the manufacturer to develop hybrid moulding technologies with an effective bonding mechanism, for the production of carbon composite auto parts for both the OEMs and the aftermarket.

With this know-how, the client can produce automotive parts as well as other carbon composite products.





智能製造 Digital Manufacturing

邁向「再工業化」

Towards Re-industrialisation

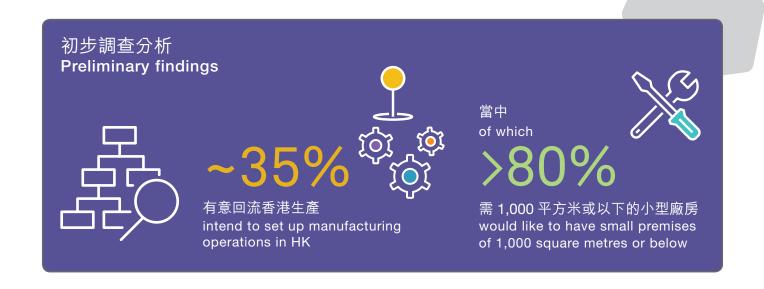
「再工業化」能夠為香港經濟開創新里程。憑藉傳統的製造技術及品質標準,香港有潛力邁 向高端、極為個人化和高增長的產業。

Re-industrialisation opens a new horizon for Hong Kong's economic growth. Given its traditional manufacturing knowhow and quality standards, Hong Kong has the potential to swiftly progress towards high-end, highly-customised and high-growth industries.

生產力局為香港科技園公司進行了一項研究, 探討有意在香港設立先進製造業務的行業,他 們欲在港發展的有利因素以及所面對的問題。 During the year, HKPC conducted an industry study for the Hong Kong Science and Technology Parks Corporation, to understand industry sectors with strong interest in setting up advanced manufacturing operations in Hong Kong, as well as the positive driving factors and problems that may hinder them from going down this path.

在 20 多個行業協會的支持下,生產力局深入研究的因素,包括行業對廠房、樓宇設施、行業支援服務及鼓勵措施的要求,促使企業在香港設立先進製造業務。研究結果為香港「再工業化」的發展路向提供了重要的參考資料。

With support from over 20 industry trade associations, HKPC conducted an indepth study on the specific requirements in terms of premises, building facilities, industry support services and incentives required by industries that would facilitate enterprises to set up advanced manufacturing operations in Hong Kong. The study would provide important insights for the re-industrialisation of Hong Kong.





Digital Manufacturing

智能機械人令生產更靈活 Go Flexible with Smart Robotics

在生產力局專家的協助下,一家領先行業的電源產品製造商啟動了「工業 4.0」轉型項目,建立智能自動化生產線和工場,把生產流程數據化。

作為項目的一部份,生產力局應用了機械人、物聯網(IoT)、機械視覺、機電一體化等一系列技術,研究出 USB 充電器的智能製造方案。

新方案可於同一生產線製造 4 款不同的產品,讓廠商可因應市場和客戶需求來調整生產。另外,取得實時數據之後,管理人員得以有效追溯品質,以作出持續改善。

Assisted by HKPC's experts, a leading manufacturer of power supply manufacturer launched an i4.0 transformation programme to achieve digitalisation of production processes through the setting up of smart automated production lines and workshops.

As part of the client's digital manufacturing programme, HKPC developed a digital manufacturing solution for USB chargers, through applying a series of technologies such as robotics, Internet of Things, machine vision and smart mechatronics etc.

The solution is able to produce four types of products on the same production line, allowing the client to readily adjust production according to market and customer needs. Also, through the acquisition of real-time data, quality can be effectively tracked and continuously improved by management.





智能製造 Digital Manufacturing

企業引進智能自動化技術,將重複或令人厭惡的 工作交由工業機器人處理,讓技術人員可以專注 管理及監控,提高產品質素和效率。

By applying intelligent automation technology, enterprises can let industrial robots handle repetitive and obnoxious duties, allowing their technical staff to focus on management and control to enhance product quality and efficiency.



踏上「再工業化」

Taking Strides Towards Re-industrialisation

傳統手造鞋樣本,一般需時 6 至 8 星期為新設計製作鞋板,其中大部份時間花在製作鞋底模 具上。平均而言,中小型鞋廠每年製作超過 100 對原型鞋。

The traditional hand-made footwear sample for a brand new design requires six to eight weeks for prototype building. Most of the time is spent in building the sole unit moulds. On average, footwear manufacturing SMEs build over 100 pairs of footwear prototypes every year.

3D 打印、3D 掃描和數碼建模等新技術可平均縮 短 80% 的鞋板製作時間,讓鞋板可在 1 至 2 週 內完成。

在中小企業發展支援基金的支持下,生產力局與 香港鞋業總會有限公司合作,透過應用先進的原 型技術,迎合款多量少的訂單需求,以提升中小 型鞋廠的競爭力。這個項目支持高增值的原型製 作工序轉移至香港,將有助促進香港鞋業的「再 工業化」。 New technologies such as 3D printing, 3D scanning and digital modelling will allow an average reduction of 80% on the lead time for new footwear prototype development, with just one to two weeks required for finishing a sample.

Supported by the SME Development Fund, HKPC collaborated with the Federation of Hong Kong Footwear Limited to enhance the competitiveness of footwear manufacturing SMEs through the application of advanced prototyping technologies for adapting to the high-mix, low-volume order requirement. By supporting the relocation of high-value added prototyping processes to Hong Kong, the project will help promote the re-industrialisation of the footwear industry in Hong Kong.



智能製造

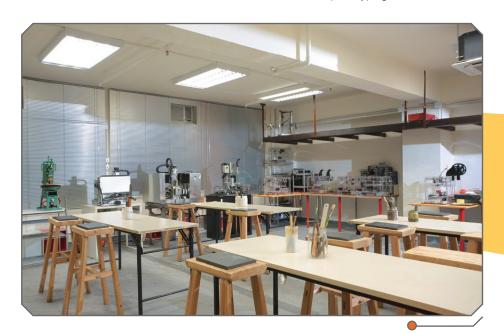
Digital Manufacturing

項目成立了一間先進鞋板製作工作室,歡迎中小型鞋廠和時裝業界預約使用。工作室內提供各種先進的鞋板製作設備,包括 3D 打印機、電腦數控機床、激光切割機、縫紉機和鞋履電腦數據庫等。





An advanced prototyping studio has been set up, and is open for booking by footwear SMEs and fashion industry practitioners. The studio features a variety of advanced footwear prototyping equipment, including 3D printing machine, Computer Numeric Control machine, laser cutting machine, sewing machines and footwear prototyping database.





智能製造 Digital Manufacturing

「再工業化」潔而綠

Clean and Green Re-industrialisation - Last But Not Least

「再工業化」的其中一個最重要的元素,是協助製造業採用智能和清潔生產技術,減低對環境的影響。

One of the most important elements of "re-industrialisation" is to assist existing manufacturing industries with adopting smart and clean production, to minimise impacts on the environment.

「清潔生產夥伴計劃」於 2015 年 3 月底順利完成兩年延展期後,為延續計劃成果,進一步鼓勵港資廠商採用清潔生產措施,政府把計劃延長五年至 2020 年 3 月。

Following the successful completion of a two-year extension of the Cleaner Production Partnership Programme in March 2015, and with the intention to sustain the impetus of the Programme and further encourage Hong Kong-owned factories to adopt cleaner production measures, the HKSAR Government has extended the Programme to March 2020.

該計劃為廣東省的港資廠商提供財務和技術支援,幫助他們採用更清潔的生產技術和作業方式,以減少能源消耗和污染物排放,有助於提高區域空氣質量。

The Programme offers financial and technical support for Hong Kong-owned factories in Guangdong Province to adopt cleaner production technologies and practices, in order to reduce energy consumption and pollutant emissions, thereby improving air quality in the region.

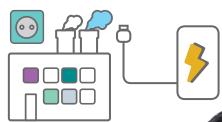
截至 2018 年 3 月 31 日,生產力局完成並評估了 41 個示範項目,每年減少揮發性有機化合物 170 噸、二氧化硫 188 噸、氮氧化物 378 噸、污水排 放13,146噸,而每年節省的耗電量約 15 萬億焦耳。

As at 31 March 2018, 41 demonstration projects were completed and evaluated by HKPC, and they contributed to an annual reduction of VOC by 170 tonnes, sulphur dioxide by 188 tonnes, NOx by 378 tonnes, and effluent discharges by 13,146 tonnes. The annual energy saving amounts to about 15 tera-joules.





15 萬億焦耳 tera-joules



清潔生產是投資,不是開支。從源頭減少污染, 更可節能降耗,為企業帶來經濟效益。

Cleaner production is an investment, not an expense. Reducing the pollution from source can enhance energy efficiency and bring economic benefits to businesses.



智慧城市 SMART CITY

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香港特區政府於 2017 年 12 月發表了「香港智慧城市藍圖」,致力用創科打造香港成為世界聞名、經濟蓬勃及優質生活的城市。藍圖明確勾畫未來五年的智慧城市發展計劃。

生產力局正透過其多元化的產業支援服務,幫助建立智慧城市的主要 基礎。

In December 2017, the HKSAR Government released the Smart City Blueprint for Hong Kong, with a vision to "Embrace innovation and technology to build a world-famed Smart Hong Kong characterised by a strong economy and high quality of living". It maps out development plans for the next five years, aiming to offer a clear and concrete direction for smart city development in Hong Kong.

HKPC contributes to this vision by facilitating the construction of essential building blocks for a smart city through its multi-faceted industry support services.



智能交通 Smart Mobility

智能交通是智慧城市的成功關鍵,能善用各種有效的交通模式,就能減少碳排放及空氣污染。

Smart mobility is a crucial piece in the smart city puzzle, as it will reduce carbon emissions and air pollution through the use of efficient modes of transportation.

車輛加入互聯網和無線連接功能,就能組成車聯網(V2X),作為輔助駕駛及無人駕駛應用的溝通基礎。

生產力局聯同來自汽車及零部件、移動互聯網、 交通及基礎建設三大行業的 20 多家企業,組成 「香港智能網聯汽車產業聯盟」(聯盟),開拓智 能網聯汽車業務,協助行業爭取新商機。

聯盟將集中發展四大技術領域,包括智慧傳感器 及控制、智慧出行、數據分析及保安,以及示範 及測試:並會積極開拓與國內外相關機構的合作 夥伴關係,促進技術創新和交流合作。 By equipping vehicles with Internet access and wireless connectivity, it will allow vehicle-to-everything communications for driver assistance and autonomous vehicle applications.

HKPC brought together over 20 enterprises from the automotive accessories, mobile networks, transportation and infrastructure industries to form the "Hong Kong Connected Vehicles Cluster" (HKCVC), to help local industries tap new business opportunities in this promising area.

HKCVC focuses on four technology areas: smart sensor and control; smart mobility; data analytics and security; and demonstration and testing. It also actively explores strategic partnerships with related mainland Chinese and overseas organisations, to promote technology innovation and collaboration.

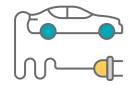


四大技術領域

Four technology areas

> 智慧傳感器及控制 Smart sensor and control





> 智慧出行 Smart mobility > 數據分析及保安 Data analytics and security





> 示範及測試 Demonstration and testing



智能安全帶 Smart Safety Seat Belt





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昏睡駕駛是常見的交通意外起因,往往造成人命傷 亡。

為防止司機昏睡駕駛,生產力局成功開發「智能安全帶」,透過在安全帶上安裝感應器,全程監察駕駛者的生理訊號和狀態,並傳送至智能手機或智能手表等裝置。

當發現駕駛者昏昏欲睡,會即時發出聲響、語音、 閃燈或震動,喚醒駕駛者,確保行車安全。

Drowsy driving is a common cause of traffic accidents.

To address the problem, HKPC developed a "Smart Safety Seat Belt" embedded with sensors to monitor the driver's physiological signals and drowsiness level during the journey, and transmit them to smart devices such as smart phones or smart watches.

If drowsiness is detected, alarms will be set off in the form of sound, voice, flashing light or vibration, to alert the driver to ensure safe driving.

電動車全速起動

Charge up EV Adoption

電動車有助提升全球城市的智能運輸能力。多年來,生產力局屬下的汽車零部件研究及發展中心,協助行業開發電動車的關鍵技術和充電基礎設施,並合力開發出中速、快速和流動電動車充電站。

The development of electric vehicles (EV) will enhance smart mobility for cities around the world. Over the years, HKPC and APAS have helped industries develop critical EV technologies and charging infrastructure, with collaborations in the development of semi-quick, quick and mobile EV charging stations.

傳統的掛牆式電動車充電站體積龐大,且安裝成本高昂,室礙電動車的普及。汽車零部件研發中心開發的「手提式電動車充電系統」,提供創新的電動車充電方案,大幅降低停車場安裝充電樁的成本, 既輕便又效率高,尤其適合用量高而容易滿座的停車場或並非為電動車而設的車位。



Set up of traditional wall-mounted EV chargers are bulky and costly, discouraging faster uptake of EVs. Developed by APAS, the Portable EV Charger Kit System provides an innovative medium EV charging solution which greatly reduces the installation costs of EV charging stations, provides efficient and handy charging, especially in congested car parks or parking spaces that were not designated for EVs.





汽車零部件研發中心與香港汽車會合作推出全港 首創「智能流動電動車充電系統」試用計劃,為 會員提供緊急電動車充電服務。系統由汽車零部 件研發中心開發,採用鋰電池包供電,毋需接駁 電網,只需設置於客貨車上,便可以前往不同地 點,為電動車提供緊急充電服務。 To help Hong Kong EV users stranded on the road without power, APAS and HKAA jointly launched the "Smart Mobile EV Charger" Trial Scheme, to provide a roadside charging service for HKAA members. The APAS-developed mobile charger – using a lithium battery pack as the power source – can be easily installed in a van, and taken to different locations across the city to provide an emergency EV charging service.



本年度,生產力局亦與 Smart Charge 合作在香港發展更便利的先進電動車充電技術。透過採用生產力局及汽車零部件研發中心的電動車充電技術,Smart Charge 現可為用家及商業機構提供度身定造的電動車充電服務,以解決電力負荷不足、「孤島式」的泊車位 (鄰近沒有牆身予以安裝充電器),以及戶外環境等問題。

During the year, HKPC also collaborated with local EV charging service provider Smart Charge (HK) Limited, to provide easier access to advanced EV charging technologies in Hong Kong. With the deployment of HKPC and APAS's EV charging technologies, Smart Charge is offering customised EV charging solutions to tackle the challenges of limited electricity capacity, "islanded" parking spaces (where there are no adjacent walls for mounting chargers) and outdoor environments, for endusers and commercial entities.



「智慧出行」要成功,首要建立車聯網(loV), 令「人」、「車」、「路」智能化。



潘志健博士 Dr Lawrence Poon





化廢為用

From Waste to Resources

智能城市關乎資源的有效運用。特區政府於 2015 年 10 月推出港幣 10 億元的回收基金,旨在促進資源和廢物回收及循環再造,推動回收業提升運作能力及效率,促進可持續發展。生產力局為回收基金的秘書處。

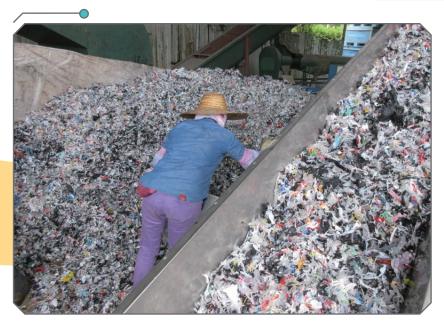
The smart city concept focuses on the effective use of resources. A HK\$1 billion Recycling Fund was launched by the HKSAR Government in October 2015, to promote the recovery and recycling of resources and waste. It enables the recycling industry to upgrade its operational capabilities and efficiency for its sustainable development. HKPC is the secretariat of the Fund.



香港每日棄置約3,600公噸廚餘,相當於250輛雙層巴士; 生產力局研發創新技術,將廚餘有效轉化生物能源及魚糧,轉廢為寶。

Everyday, Hong Kong disposes about 3,600 tonnes of food waste equivalent to the weight of approximately 250 double-decker buses. HKPC's innovative solution effectively converts food waste into bioenergy and fish feeds.







截至 2018 年 3 月底,回收基金諮詢委員會建議 為 175 宗申請批出約港幣 1 億 200 萬元的資助。 這些項目涉及不同類型的可回收材料,包括金 屬、紙張、塑料、木材、建築和拆卸物、電器、 碳盒、食品紙盒包裝、橡膠輪胎、廚餘,以及棄 置食用油等。

因應國內收緊進口固體廢物監管,可能衝擊香港回收業,回收基金諮詢委員會同意推出全新的「標準項目 - \$100 萬」計劃,每個標準項目的資助金額上限為港幣 100 萬元,支援行業購買或安裝回收設備,以提升處理廢紙及塑膠的能力。

生產力局開發全球首創的三段式「廚餘全面轉化 系統」,能把廚餘的有機物質全部轉化為高純度 沼氣、環保魚糧,並可生產生物柴油的高品質浮 油,共三種具商業價值的產品和原料,推動資源 回收再用。系統獲香港及英國專業工程師學會嘉 許。 As at the end of March 2018, the Advisory Committee on Recycling Fund ("the Advisory Committee") had recommended the approval of about HK\$102 million for 175 projects. These involved various recyclable materials, including metals, paper, plastics, wood, construction and demolition waste, electrical appliances, toner cartridges, Tetra Pak cartons, rubber tyres, food waste and used cooking oil.

In view of mainland China's tightened control on importing solid waste, which will have considerable impact on the operations of Hong Kong's recyclers, the Advisory Committee agreed to launch a new category of "Standard Project - \$1M", with a HK\$1 million funding ceiling for each application, to support the procurement or installation of equipment for upgrading the capability for processing waste plastics or paper.

HKPC developed the world's inaugural three-staged "FTR Total Food Waste Recycling System", converting organic fraction of food waste into three products with market values: high purity biogas, eco fish feed, and quality waste oil for biodiesel production. The System won two major awards from professional engineering institutions in Hong Kong and U.K.





「都市固體廢物收費計劃」是實現全民參與廢物管理的契機。生產力局協助企業制訂全盤固體廢物管理策略,了解徵費模式,尋找有效的回收減廢方法。

The MSW charging scheme is an opportunity to achieve full public participation in waste management. HKPC assists enterprises in formulating a comprehensive solid waste management strategy to understand the charging mechanism and identify effective waste recycling and reduction methods.

有費無廢 智醒減廢 Smart Up to Dump Less and Save More

特區政府環境局局長於 2017 年 3 月公布,香港最快將於 2019 年下半年實施「都市固體廢物收費計劃」。

Municipal Solid Waste (MSW) charging will be launched in Hong Kong in the second half of 2019 at the earliest, as announced by the Secretary for the Environment in March 2017.

為協助工商企業及早了解日後的徵費模式,並提 升行業的減廢及回收意識,生產力局與太古地產 合作推行了「都市固體廢物收費試行項目」。

項目以根據容量和重量收費的方式,在太古地產旗下的太古城中心商場、太古城中心一座寫字樓及香港東隅酒店試行,獲 105 間商場店舖、26 個辦公樓租戶及整幢酒店參與。經過六個月的試驗,整體垃圾棄置量減少約 18%。另外,整體回收率上升 15%,其中紙類及廚餘回收有顯著升幅,分別達約 10% 及 30%。



15%

整體回收率上升 Increase in overall recycling rate

18%

整體垃圾棄置減少 Reduction in overall waste disposal





To enhance the commercial sector's understanding of the MSW Charging Scheme's methodology and raise awareness of waste reduction, HKPC and Swire Properties carried out a MSW charging scheme trial programme, funded by the Environment and Conservation Fund.

Volume-based and weight-based MSW charging approaches were used on a trial basis at 105 retail outlets at Cityplaza, and 26 offices at Cityplaza One and EAST, Hong Kong. After the six-month trial, overall waste disposal by participants was reduced by 18%, while the overall recycling rate rose by 15%, with paper and food waste recycling up by 10% and 30% respectively.

安全智慧 Smart and Safe

在數碼轉型的推動下,通訊網絡無遠弗屆,大數據廣泛應用,雖然便利市民,卻讓不法份子有機可乘。

The promotion of digital transformation will provide opportunities for both bona fide users and malicious attackers, enabled through more extensive network communications and the use of big data.

生產力局屬下的香港電腦保安事故協調中心 (HKCERT),一直擔當回應資訊保安事故的通訊和 協調中心。 HKCERT, which operates under the auspices of HKPC, acts as a communication hub for responding to information security incidents.

具上網功能的裝置應用日趨廣泛,加上流動付款 服務盛行,引來更多針對物聯網設備及流動支付 應用程式的網絡攻擊。生產力局因此制定了「香 港企業網絡保安準備指數」,以評估香港企業在 應對網絡保安威脅方面的防禦工作,從而提高公 眾意識,有助制定政策和預防措施,應對網絡威 脅。 The growing use of Internet-enabled devices in all aspects of life, and the popularity of mobile payment services, will attract more attacks on "Internet of Things" devices and mobile payment apps. Against this background, HKPC developed the Hong Kong Enterprise Cyber Security Readiness Index (the Index) to keep track of cyber security awareness and readiness of local business sectors, to facilitate policy formulation for preventive measures to tackle cyber threats.

在 HKCERT 的支援下,綜合指數就「保安風險評估」、「技術控制」、「流程控制」及「人員意識」四個範疇,分析企業對關鍵資訊科技系統的保安情況,首次結果於 2018 年 4 月公布。

Supported by HKCERT, the Index tracks the comprehensiveness of "security risk assessment", "technology controls", "process controls" and "human awareness" of enterprises in securing their critical IT systems. The results of the inaugural index survey were released in April 2018.

協調中心在 2017 年共處理

6,506

security incidents handled by HKCERT in 2017 宗保安事故



本港企業雖然理解資訊保安的重要,但仍要積極加強保安管理,以應付網絡保安新威脅。

While Hong Kong companies understand the importance of information security, they still need to strengthen their security management and proactiveness to combat new cyber threats.





智慧城市

Smart City

智慧人才

Smart People

為支援香港持續發展為知識型經濟和智慧城市,吸引和培養合適的人才是企業的當前要務。 智慧城市的成功有賴持續的專業發展,為未來培養知識和技能兼備的人才。

To support Hong Kong's continuous development as a knowledge-based economy and smart city, attracting and developing the right talents have become critical for companies. Future-proofing the knowledge and skills of the workforce through continuous professional development hence deemed the most fundamental to building a smart city.

生產力學院

在瞬息萬變的營商環境下,企業需要重新提升實力迎接挑戰,培養能夠推動智慧城市和智慧型產業發展的智慧人才。

有見及此,生產力局把轄下的「生產力培訓學院」 提升為「生產力學院」,增設全港唯一的企業學 院顧問服務,協助機構建立系統化及可持續的專 才發展,應對科技及市場發展的挑戰。

過去兩年,已有多家機構在生產力局的協助下,成功建立企業學院,透過吸引及挽留人才建立人才庫,進一步提升僱主品牌,建立專業的公眾形象,促進可持續的人力資本及機構發展。



© 「生產力學院」 於 2018 年 1 月 正式開幕 HKPC Academy Launching Ceremony in Jan 2018

我們的支援 How we help





> 為各級別員工提供技能轉移 培訓

Provision of skill transfer workshops for all levels of staff

- > 模擬認證 Mock accreditation visit
- > 在認證日提供現場支援
 On-site accreditation visit day
 support

HKPC Academy

The changing business environment demands that enterprises retool themselves to meet challenges and cultivate smart people who can contribute to the development of smart city and digital manufacturing initiatives.

In view of this, HKPC has upgraded its Productivity Training Institute to become the HKPC Academy, the city's only corporate academy offering consultancy services for businesses, aiming to establish their own corporate academies, and foster systematic and sustainable talent development, so as to address new challenges arising from developments in technologies and markets.

Over the past two years, several notable organisations had successfully launched their own academies with the help of HKPC. Through this initiative, they can establish a talent pool by attracting and retaining talents, promote branding, create a professional public image, and attain ongoing human capital and organisational development.

企業學院顧問服務 Corporate Academy Consultancy Services

生產力局的企業學院顧問服務,協助港鐵學院成功獲得資歷架構認證,而學院的一個高等文憑課程及文憑課程 亦分別成功通過資歷架構第4級及第3級的評審。

港鐵學院乃針對培訓鐵路工程、營運及管理的專才而成立。

HKPC's corporate academy consultancy service facilitated The MTR Academy (MTRA) to successfully obtain the Qualifications Framework (QF) accreditation for both the institution as well as one Advanced Diploma programme at QF Level 4 and another Diploma programme at QF Level 3.

MTRA was founded for the development of railway engineering, operations and management professionals.



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生產力學院高級經理吳瀚博士,為港鐵學院 簡介資歷架構內容

QF briefing session for MTR colleagues by Dr Victor Ng of HKPC Academy

建立企業學院,不但能建立人才庫,更有助挽留人才,進一步提升僱主品牌,建立專業形象。

Establishment of corporate academies not only aims at building a talent pool but also helps retain talents, enhance employer brand and establish a professional public image.





年度剪影

The Year in Pictures





評審團特別嘉許金獎和泰國國家研究局「最佳國際研發」- 吹噴式腹 腔鏡手術煙霧驅散技術

Gold Medal with Congratulations from Jury and "Thailand Award for Best International Invention" by the National Council for Research of Thailand – "Surgical Smoke Evacuation Technology for Laparoscopic Surgery"





評審團特別嘉許金獎 - 廚餘全面轉化系統 Gold Medal with Congratulations from Jury – "Food Waste Total Recycling System"



金獎 - 自動化液態冷凍系統 Gold Medal – "Automatic Liquid Immersion System for Rapid Food Chilling"



金獎 - 應用於矽膠產品的環保及耐用等離子體表面處理技術 Gold Medal – "Eco and Durable Plasma Surface Treatment Technology for Silicone Rubber Products"



銀獎 - 智能虛擬訂製鞋履技術 Silver Medal – "Smart Virtual Shoes Fitting System"



年度剪影 The Year in Pictures



與香港提升快樂指數基金合辦第五屆 「開心工作間」推廣計劃,營造愉快 工作氣氛。

The 5th "Happiness-at-Work Promotional Scheme", in cooperation with the Promoting Happiness Index Foundation, to build a happy workplace.



與 3D 三維打印協會合辦為不同行業專門而設的「打破傳統 3D 打印行業講座」系列。

Industry-specific 3D printing seminars, jointly organised with Hong Kong 3D Printing Association.





年度剪影

The Year in Pictures



與澳洲斯威本科技大學合辦遙距博士學位課程,培育科研人才。 Offshore PhD programme with Swinburne University of Technology, Australia, to groom R&D talents







城台打不下

舉辦「工業 4.0」網絡安全國際會議, 介紹「工業 4.0」網絡安全所面對的 挑戰。

Cyber Security for Industry 4.0 International Conference, to present the cyber security challenges of Industry 4.0.





舉辦「第七屆生產力工業科技 青少年體驗計劃」。

Organised "7th HKPC Industrial Technology Experience Programme for Youth".

「滙智營商」高峰會 2017, 以「經濟新動力 轉型與創新」 為主題。

Wise Business Summit 2017, with the theme "New Economic Engine: Innovation and Transformation".





年度剪影 The Year in Pictures





Hong Kong secondary school students and HKPC set a

Harbour Display.



與 Smart Charge 合作在港 推動電動車。





年度剪影

The Year in Pictures





與深圳市福田區簽署合作備忘錄, 成立「香港生產力促進局深圳創新」 及技術中心上。

MOU signing with Futian Municipal Government, to set up the HKPC Shenzhen Innovation and Technology

民政府 香港生产力促进局 加工产力促进局深圳创新及技术中心"合作备忘录 签 约 仪 式



成立「智能產業廊」— 全港首個「工業 4.0」示範中心。

Setting up Smart Industry One, the first Industry 4.0 demonstration centre in Hong Kong.

九月 Sep 2017





Organised "HKPC Family Open Day".





年度剪影 The Year in Pictures





成立「香港智能網聯汽車產業聯盟」 開拓智能網聯汽車商機。







年度剪影

The Year in Pictures





Organised the "Standard Chartered Hong Kong SME Leading Business Index" – SME Conference 2017.



於「創新科技嘉年華 2017」設置「生產力展館」,以「智慧創未來」為主題, 展示多項自行研發的先進科技。

Showcased various HKPC-developed advanced technologies under the theme "Partnering for a Smart Future" at the InnoCarnival 2017.



成立「知創空間」推動初創文化、 建立創科生態。

Opening of Inno Space, which will nurture a startup culture and create a new ecosystem for innovation







年度剪影 The Year in Pictures



出版《升識相惜·生產力局與工商業同行五十載》金禧紀念特刊。 Published a commemorative

Industry", to celebrate HKPC's golden jubilee.







「廚餘全面轉化系統」在「2017 國際 工程技術學會創新獎」的能源組別榮 獲大獎,而可持續組別獲高度嘉許。



The "Food Waste Total Recycling System" won the "Power" category and was highly commended in the "Sustainability" category in the IET Innovation Awards 2017.



年度剪影

The Year in Pictures



畢堅文先生獲委任為 生產力局總裁。

Mr Mohamed D. Butt appointed as Executive Director.



舉辦丨醫療及保健系統網絡 安全國際會議」。

Organised the Symposium on Cyber Security on Medical and Healthcare System



兩項研發獲「2017 香港工商業獎:設備及機器設計優異證書」,包括「用於防污表面塗層的先進真空鍍膜機」及「手提式電動車充電器」。

"Advanced Vacuum Coater for Anti-fouling Surface Coating" and "Portable Charger Kit" each received a Certificate of Merit in the Equipment and Machinery Design category in the 2017 Hong Kong Awards for Industries.



舉辦「第八屆香港傑出企業公民獎」, 表揚機構、企業義工隊及社企在企業社會 責任的卓越表現。

Organised "The 8" Hong Kong Outstanding Corporate Citizenship Awards Presentation Ceremony" to recognise companies, corporate volunteer teams and social enterprises with remarkable achievements in corporate social





年度剪影 The Year in Pictures



與香港工業總會及珠三角工業 協會在東莞合辦第十六屆「香 港珠三角工商界合作交流會」。 Organised the 16th Hong Kong-

Organised the 16th Hong Kong-PRD industry networking event in Dongguan, together with the Federation of Hong Kong Industries and PRD Council.







成立「生産力學院」,與企業攜手培育人才。

Set up HKPC Academy to join hands with corporations for systematic talent development.

舉辦「嶄新材料科技國際會議」 探討業界新機遇。

Organised the "International Conference on New Material Technologies", to explore new opportunities in industry.







年度剪影

The Year in Pictures





三月 Mar 2018

> 舉辦「香港零售科技創新日」 介紹各種智慧零售科技。 Organised "Hong Kong Retail Innovation Day 2018", to introduce various smart retail technologies.









年度剪影 The Year in Pictures



舉行「2018 香港生產力促 進局周年晚宴」。

Organised the "2018 HKPC Annual Dinner".



companies keep abreast with the latest developments in Industry 4.0.

汽車零部件研發中心及香港汽車會 合推「智能流動電動車充電系統」 試用計劃。

Automotive Parts and Accessory Systems R&D Centre (APAS) and Hong Kong Automobile Association jointly introduced the "Smart Mobile EV Charger" trial scheme.





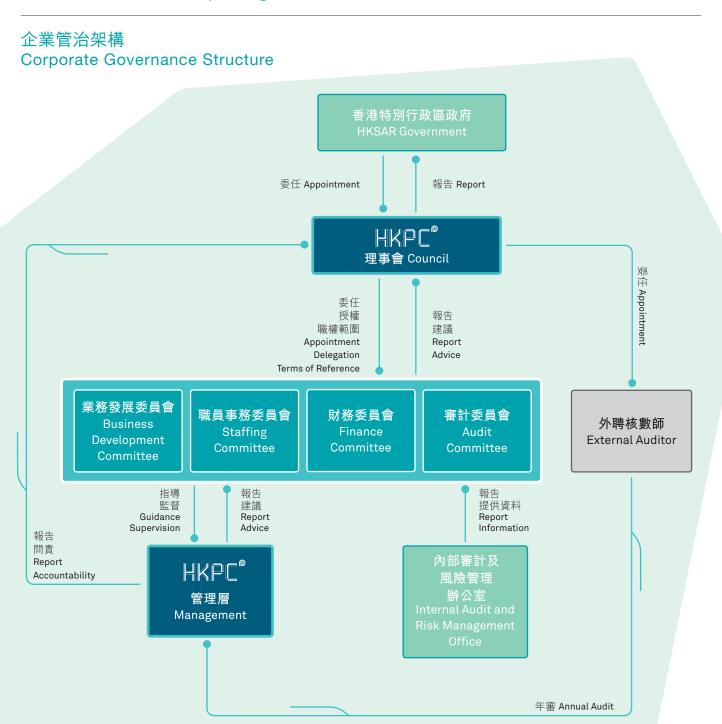


企業管治

Corporate Governance

生產力局是受《香港生產力促進局條例》(香港法律第 1116 章)管轄的法定組織。生產力局致力維持良好企業管治,以履行公眾使命,滿足社會期望。本局極為重視問責、透明度、公平及道德操守,以此作為企業管治架構的基石。

HKPC is a statutory organisation governed by the Hong Kong Productivity Council Ordinance (Chapter 1116 of Laws of Hong Kong). HKPC is fully committed to maintaining good corporate governance as it strongly believes that good corporate governance is essential to accomplishing its public mission and meeting the expectations of its stakeholders. HKPC attaches paramount importance to adopting accountability, transparency, fairness and ethics as the cornerstones of its corporate governance framework.





企業管治 Corporate Governance

理事會

理事會是生產力局的管治組織,為生產力局履行 職能提供策略領導。

理事會成員最多 23 人,由香港特區政府委任,包括不多於五位政府官員,並於其餘的非官守成員中(包括資方、勞方及專業/學術界代表)委任一位主席及一位副主席。

理事會主席及其他成員均屬非執行性質。在本年度內,理事會召開了三次會議。個別成員的出席 紀錄詳列於第70頁。

理事會每年審批生產力局的三年預測、詳盡的年 度計劃及預算及三年策略計劃。

理事會成員對賬目的責任

各理事會成員均明白本身有責任確保本局週年會 計賬目的編製,已遵照法例要求及適用會計準 則。

生產力局核數師就本身對生產力局賬目審核報告 的責任,刊載於獨立核數師報告及財務報告。

理事會委員會

理事會轄下成立了四個委員會,以處理不同範疇的事務。這四個委員會分別為審計委員會、財務委員會、職員事務委員會以及業務發展委員會。 各委員會均對理事會負責。

理事會委員會的會議紀錄均以不具名方式刊載於 生產力局網站(若討論事項涉及敏感或機密商業 資料,以及審計委員會會議紀錄則除外)。

審計委員會

審計委員會負責在財務報告、風險管理、內部監控,核數師的委任及表現,以及遵從相關法規等方面進行監察並提出建議,提升本局的企業管治水平。審計委員會並獲理事會授權,就責任範圍內的任何相關事項進行調查及協調。職員亦可向審計委員會主席舉報任何違規或不當行為。

The Council

The Council is HKPC's governing body, providing strategic leadership in the fulfilment of the organisation's functions.

The Council comprises not more than 23 Members appointed by the HKSAR Government, of whom not more than five shall be public officers. Among the non-official members (who represent management, labour and professional or academic interests), a Chairman and a Deputy Chairman shall be appointed.

The Chairman, and other Members, of the Council are non-executive in nature. In the year under review, the Council convened three meetings. The attendance records of individual members are available on page 70.

On an annual basis, the Council approves HKPC's Three-Year Forecast, the detailed Programme and Estimates of HKPC, and the Three-year Strategic Plan.

Council Members' Responsibility for the Accounts

Council Members acknowledge their responsibilities for ensuring that the preparation of the annual accounts of HKPC is in accordance with statutory requirements and applicable accounting standards.

The statement of the Auditor of HKPC about their reporting responsibilities on the accounts of HKPC is set out in the Independent Auditor's Report and Financial Statements.

Council's Committees

Four Committees have been set up under the auspices of the Council, to look after different aspects of Council business: the Audit Committee, the Finance Committee, the Staffing Committee and the Business Development Committee. All the Committees are accountable to the Council.

The minutes of the Council and Committees (except discussion items containing commercially sensitive or confidential information and the minutes of the Audit Committee) are made available on a non-attributable basis on the HKPC website.

Audit Committee

The Audit Committee has been established to monitor and make recommendations to enhance HKPC's healthy corporate governance in financial reporting, risk management, internal control, appointment and performance of the external auditor, and compliance with relevant laws and regulations. The Committee is authorised by the Council to investigate any activity and resolve any disagreement within its scope of duties.



企業管治

Corporate Governance

本局設有內部審計及風險管理辦公室支援審計委員會的工作。辦公室向委員會匯報工作進度,而 行政上則向總裁匯報。辦公室致力協助委員會保 障及促進生產力局的企業管治水平。

審計委員會由一位理事會成員擔任主席,現時共 有七位成員。在本年度內,委員會召開了四次會 議。 Staff members can directly report to the Chairman of the Audit Committee on cases of malpractice or irregularities. The Committee is underpinned by an Internal Audit and Risk Management Office, which reports functionally to the Audit Committee and administratively to the Executive Director. The Office is committed to assisting the Audit Committee to safeguard and promote healthy corporate governance of HKPC.

The Audit Committee is chaired by a Council member and currently has seven members. It met four times during the year in review.

主席

黃志光

委員會成員

張益麟 郭敏宜 梁廣泉 潘偉賢 楊嘉燕

蔡淑嫻, JP 畢堅文

截至 2018 年 3 月 31 日

Chairman

Mr Patrick Wong Chi-kwong

Members

Mr Alan Cheung
Ms Mandy Kwok Man-yee
Mr Leung Kwong-chuen
Mr Paul Poon Wai-yin
Ms Karmen Yeung Ka-yin
Ms Annie Choi Suk-han, JP
Mr Mohamed D. Butt

As at 31 March 2018

財務委員會

財務委員會負責監督本局的財務表現,確保資金 的運用恰當。委員會審批本局有關採購、大樓管 理、固定資產管理、服務收費率及投資策略和指 引等政策及守則的修改。

委員會提交給理事會審議本局的三年財政預算、 年度計劃及預算,以及主要開支項目的編配調動。委員會並就本局的財務政策及對本局有重大 財務影響的事宜向理事會提出意見。

財務委員會由一位理事會成員擔任主席,現有七位成員。在本年度內,委員會召開了三次會議。

Finance Committee

The Finance Committee monitors the financial performance of HKPC and ensures that funds made available are properly accounted for. The Committee approves changes to HKPC's policies and practices relating to procurement, building management, fixed asset management, charging levels of HKPC's services and investment strategy and guidelines.

The Committee recommends HKPC's three-year forecast, an annual programme and estimates and the transfer of funds between major heads of expenditure, for consideration by the Council. The Committee also advises the Council on matters relating to HKPC's financial policies and matters that have a significant financial impact on HKPC.

The Finance Committee is chaired by a Council member and currently has seven members. It met three times during the year in review.

主席

馮英偉

畢堅文

委員會成員

查逸超 , JP 周博軒 史立德 , BBS, MH, JP 楊嘉燕 歐錫熊 , JP 夏國鋒

Chairman

Mr Wilson Fung Ying-wai

Members

Prof John Chai Yat-chiu, JP Mr Felix Chow Bok-hin Dr Allen Shi Lop-tak, BBS, MH, JP Ms Karmen Yeung Ka-yin Mr Andrew Au Sik-hung, JP Mr Bryan Ha Kwok-fung Mr Mohamed D. Butt

截至 2018 年 3 月 31 日



企業管治 Corporate Governance

職員事務委員會

職員事務委員會負責審批總經理級的委任。委員會監督職員人手情況,並在需要時向理事會提出意見。委員會主要就人力資源發展政策向理事會提供意見。委員會還負責監察員工的服務條件,確保能夠聘請及挽留人才,並於必要時向理事會提出修改建議。委員會可作為理事會與員工之間有關薪俸條件的溝通渠道,尤其在雙方磋商後仍無法取得共識時,發揮其協調作用。

職員事務委員會由一位理事會成員擔任主席,現 時共有十位成員。在本年度內,委員會召開了三 次會議。

主席

陳祖恒

委員會成員

郭敏宜 李秀頌恩 梁廣泉 李凱

黄志光

尤曾家麗, GBS, JP

李寶儀, JP 夏國鋒

畢堅文

Staffing Committee

The Staffing Committee approves the appointment of General Managers. The Committee monitors the staffing situation and recommends changes to the Council where appropriate. It advises the Council on human resources development policies. The Committee also monitors HKPC's general terms and conditions of service, to ensure that these are adequate to recruit and retain competent staff, and recommends changes to the Council where necessary. The Committee provides a channel between the Council and staff members for the communication of grievances about general terms and conditions of service, in situations where they cannot be resolved by consultation.

The Staffing Committee is chaired by a Council member and currently has ten members. It met three times during the year in review.

Chairman

Mr Sunny Tan

Members

Ms Mandy Kwok Man-yee
Ms Amy Lee Sau-king
Ms Juan Leung Chung-yan
Mr Leung Kwong-chuen
Mr Li Hoi
Mr Patrick Wong Chi-kwong
Mrs Carrie Yau Tsang Ka-lai, GBS, JP
Miss Mabel Li Po-yi, JP
Mr Bryan Ha Kwok-fung
Mr Mohamed D. Butt

截至 2018 年 3 月 31 日

As at 31 March 2018



企業管治

Corporate Governance

業務發展委員會

業務發展委員會檢討生產力局的業務情況、審批 對生產力局服務範疇作出的重大改動、探討新的 業務發展機會。委員會提交本局的三年策略計劃 給理事會審批,以及就生產力局在工業轉型下應 擔當的角色及業務發展向理事會提出建議。此 外,委員會亦監督生產力局附屬公司的表現。

業務發展委員會由一位理事會成員擔任主席,現 時共有六位成員。在本年度內,委員會召開了三 次會議。

主席

于健安, JP

委員會成員

張益麟 周博軒 潘偉賢 譚嘉因, MH 夏國鋒

畢堅文 截至 2018 年 3 月 31 日

內部監控及風險管理

理事會非常重視維持高水準的企業管治、提高本 身的透明度,並向公眾問責,而外部和內部審計 系統正可實踐此宗旨。

外部審計

理事會委任安永會計師事務所為外聘核數師,為 本局財務報告進行審計。

除了審查財務報告之外,外聘核數師在加強生產 力局的內部監控方面也發揮重要作用。如有需 要,外聘核數師會在審計程序開始前,在管理層 避席下與審計委員會討論審計的性質和範疇,以 及查詢任何事項。外聘核數師致管理層的所有管 理建議書以及生產力局管理層的所有回應,均交 由審計委員會審閱。

Business Development Committee

The Business Development Committee reviews the business activities of HKPC, explores new business opportunities, and recommends the three-year strategic plan of HKPC to the Council. The Committee also monitors the performance of HKPC's subsidiary companies.

The Business Development Committee is chaired by a Council member and currently has six members. It met three times during the year in review.

Chairman

Mr Emil Yu Chen-on, JP

Members

Mr Alan Cheung Mr Felix Chow Bok-hin Mr Paul Poon Wai-yin Prof Tam Kar-yan, MH Mr Bryan Ha Kwok-fung Mr Mohamed D. Butt

As at 31 March 2018

Internal Control and Risk Management

The Council considers it is highly important to maintain a high standard of corporate governance and enhance the organisation's transparency and accountability to the public. The external and internal audit systems are instrumental in this regard.

External Audit

The Council has appointed Ernst & Young as the external auditor, to conduct an audit of its financial statements.

The external audit plays an important role in reviewing the financial statements as well as strengthening the internal controls of HKPC. Before an audit commences, the external auditor discusses the nature and scope of the audit with the Audit Committee, if necessary, together with any matters the external auditor may wish to discuss in the absence of management. Any management letter from the external auditor and HKPC management's response will be reviewed by the Audit Committee.



企業管治 Corporate Governance

內部審計及風險管理

內部審計及風險管理辦公室由生產力局理事會審計委員會督導,協助處理生產力局的風險管理工作。

辦公室致力尋找及評估潛在的營運風險,並提出 相應的內部監控措施,以符合企業管治的要求。 辦公室也制定和執行生產力局的審計政策和策 略,以保障其資產,確保符合有關法律、法規, 提高營運效率及效益,務求令文件紀錄準確可 靠。

該辦公室直接向審計委員會匯報,並須在每次審計委員會會議上,就生產力局不同運作的監管和 合規情況,向委員會報告其審計結果。

在本年度,內部審計及風險管理辦公室審核了生產力局的七項運作,涉及生產力局的不同範疇。 各項審計工作推行前,均經過審計委員會審批。

內部監控

為確保內部監控制度持之有效,管理層在本年報 期內執行了以下工作:

- 檢討內部監控制度的成效,並透過檢視內部 審計報告的內容,向理事會報告審查結果和 建議;
- 制定年度計劃和預算時,審視各部門的 資源;
- 經常審視業務、外部環境和重大風險,作為 制定年度計劃和預算的重要部份;及
- 連同審計委員會主席會見外聘核數師,並報告於審計委員會會議上所討論的各項監控弱點,以及財務報告的效益和符合規章的情況。

透明度

根據《香港生產力促進局條例》的規定,生產力局的年報連同財務報告及核數師報告,均須呈交立法會。為提高透明度,生產力局最高兩級行政人員的薪酬,詳列於獨立核數師報告的第45頁第16點。

各理事會及委員會成員的出席紀錄詳列於第 70 頁。

自 2009 年 11 月起,理事會及委員會的會議紀錄 均以不具名方式刊載於生產力局網站(不包括涉 及敏感或機密商業資料的討論事項以及審計委員 會會議紀錄)。

Internal Audit

The Council's Internal Audit and Risk Management Office ("ARO") is directed by the Audit Committee of HKPC, to assist the management team with the Council's risk management function.

ARO proactively identifies and examines any area of risk in HKPC operations, and proposes appropriate internal control measure in line with the mandates for corporate governance. ARO also formulates and executes an overall audit policy and strategy for the Council to safeguard its assets, ensure compliance with relevant laws and regulations, promote operational efficiency and effectiveness, and ensure the accuracy and reliability of its records

The Office reports directly to the Chairman of the Audit Committee. At every Audit Committee meeting, the Office reports to the Committee its findings on the auditing of control sufficiency and the compliance situation for different HKPC operations.

In the year under review, the ARO reported the audit results of seven operations spanning various aspects of HKPC. The audit job plans were reviewed and agreed by the Audit Committee in advance.

Internal Control

To ensure an effective system of internal control is in place, HKPC management has also performed the following tasks during the reporting period:

- Reviewed the effectiveness of the system of internal control and reported to the Council through a review of the findings and recommendations, as set out in the reports of the internal audit;
- Reviewed the resources for all divisions during the annual Programme and Estimates exercise:
- Conducted frequent reviews of the business, external environment and significant risks as part of the annual Programme and Estimates exercise; and
- Met with external auditors together with the Audit Committee Chairman to report on any control weaknesses and the effectiveness of financial reporting and compliance, as discussed during the meeting of the Audit Committee.

Transparency

In accordance with the requirements of the HKPC Ordinance, HKPC's Annual Report, with the statement of accounts and the auditor's report, is tabled at the Legislative Council each year. To enhance transparency, the annual emoluments of all senior executives in the top two tiers of HKPC management are disclosed under Note 16 to the financial statements on page 45 of the full audited accounts.

The attendance of Members in Council and Committees is detailed on page 70.

Since November 2009, the minutes of the Council and Committees (except discussion items containing commercially sensitive or confidential information and the minutes of the Audit Committee) have been made available on a non-attributable basis on the HKPC website.



企業管治

Corporate Governance

此外,理事會採用「兩層式」利益申報制度,各成員必須在上任時及之後,每年申報所擁有的獨資或合資的公司,或出任董事的公司:除此之外,各成員還須披露有報酬的聘任、職位、行業、專業工作或職業,以及在各家上市和私人公司的持股量(如持有量佔公司已發行股本的 1% 或以上)。

公眾可要求查閱各項利益申報登記。此外,成員如意識到未來的議題中,有任何事項可能涉及利益衝突,必須在該議題正式商議前盡快向主席(或理事會)披露。

為進一步加強企業管治,生產力局已參照廉政公署《公共機構成員行為守則範本》制定理事會成員的行為守則,目的是確保成員在履行職務時明白及遵守生產力局的價值及行為準則,在履行職務時保障持份者的利益。

行為守則為成員提供一套基本準則,以供判斷行為是否恰當,並在遇到常見情況時(例如接受利益、款待及可預見的利益衝突等),作出適當決策。守則涵蓋防止賄賂、利益衝突、濫用職權、保密資料及欠債等五個主要範疇。

舉報

理事會推行了舉報政策,為公眾提供舉報渠道和指引。若有人懷疑生產力局或任何員工出現違規、行為失當或舞弊的情況,可通過書信或專用電郵地址 (whistleblowing@hkpc.org) 直接向審計委員會主席舉報,只有獲得審計委員會主席指定的授權者,才可查閱有關電子郵件或書信。

審計委員會主席會檢視有關投訴,並決定處理方法,例如提名合適的專員或成立特別委員會,獨 立調查事件。 Separately, the Council adopted a two-tier reporting system for declarations of interest by Council Members, who are required to disclose upon first appointment and annually thereafter, any proprietorships, partnerships or directorships of companies. They are also required to disclose remunerated employments, offices, trades, professions or vocations as well as shareholdings in companies, public or private (amounting to 1% or more of the company's issued share capital).

The register of declarations is made available for public inspection upon request. Furthermore, Members are required, as soon as practicable after they have become aware of it, to disclose to the Chairman (or the Council) their interest in any matter under consideration by the Council prior to the discussion.

To further enhance governance, a Code of Conduct based on the Independent Commission for Against Corruption's "Sample of Code of Conduct for Members of Public Bodies" is applicable to all Council Members. The objective of the Code is to communicate HKPC's values and standards of behaviour to which Members should adhere in the discharge of their duties.

It also provides a framework for determining appropriate actions and making appropriate decisions for situations which Members have commonly encountered, such as advantages and entertainment offered, conflict of interest foreseen, and so on. Specifically, the Code of Conduct includes five major categories: Prevention of Bribery, Conflict of Interest, Misuse of Official Position, Confidentiality of Information, and Indebtedness.

Whistleblowing

The Council has a whistleblowing policy to provide the wider public with reporting channels and guidance on whistleblowing. Persons who have legitimate concerns regarding any irregularity, misconduct or malpractice by the Council or any staff member may raise the matter directly through mail or a dedicated email address (whistleblowing@hkpc.org) to the Audit Committee (AC) Chairman of the Council. Only persons who are designated by the AC Chairman will have access to such emails or correspondence.

The AC Chairman will review each complaint and decide how it should be addressed. This may involve nominating an appropriate investigating officer or setting up of a special committee to conduct an independent investigation into the matter.



企業管治 Corporate Governance

工作安全及保安管理

生產力局非常重視職業安全及機構保安,致力為 員工及持份者提供安全健康的工作環境。

本局正推行國際標準職業健康及安全管理體系 OHSAS18001,更有系統地識別和管理安全及健 康風險。

2018年3月,生產力局通過了OHSAS 18001的 持續監督審核,證明其職業健康及安全管理體系 有效而可靠,保障本局人員及資產的安全。

內部溝通及關愛員工

生產力局積極建立愉快的工作環境,並特別重視 員工意見和內部溝通,鼓勵所有部門和職級的同 事透過不同的溝通渠道,表達意見。

為建立管理層和員工之間的夥伴關係,生產力局透過定期的業務檢討會議、總裁圓桌會議和總裁簡報會等各種溝通方式,鼓勵各職級和各部門的員工一同商討業務和機構事宜。

勞資協商會扮演建議和諮詢的角色,成員包括兩位管理層和 11 位由不同職級的同事甄選的員工代表,它定期為管理層和員工提供正規的溝通、諮詢機會。

Safety and Security Governance

Safety and security remain a priority of the Council. HKPC is committed to providing and preserving an inherently safe and healthy work environment for all staff and stakeholders.

The HKPC has been developing, implementing and maintaining an occupational health and safety (OHS) management system in full compliance with the OHSAS 18001 international standards, to systematically identify and manage safety and health risks.

In March 2018, HKPC passed the surveillance audit of OHSAS 18001, demonstrating the effectiveness, efficiency and reliability of its OHS management system in protecting its people and property from harm.

Internal Communications and Staff Engagement

HKPC strives to create a happy workplace and pays special attention to staff opinions, by encouraging colleagues from all departments and ranks to express their views through various communications platforms set up to boost internal engagement.

Communication platforms such as business review meetings, round table chat sessions with the Executive Director and Town Hall meetings facilitate HKPC employees of all ranks and divisions to regularly discuss business and organisational issues.

With two management representatives and 11 employee representatives from six job grades elected by staff members, the Joint Consultative Committee serves as an advisory and consultative body to provide regular and formal opportunities for communications and consultation between management and employees.



企業管治

Corporate Governance

理事會及常務委員會會議出席紀錄

Council and Standing Committee Meeting Attendance Record

4/2017 - 3/2018		理事會 Council	職員事務 SC	業務發展 BDC	財務 FC	審計 AC
		Ocarion				AU
林宣武先生,GBS,JP	Mr Willy Lin Sun-mo, GBS, JP	3/3				
黄志光先生	Mr Patrick Wong Chi-kwong	3/3	3/3			4/4
查逸超教授,JP	Prof John Chai Yat-chiu, JP	3/3			3/3	
張益麟先生	Mr Alan Cheung	3/3		3/3		4/4
周博軒先生	Mr Felix Chow Bok-hin	3/3		2/3	2/3	
馮英偉先生	Mr Wilson Fung Ying-wai	3/3			3/3	
郭敏宜女士	Ms Mandy Kwok Man-yee	3/3	2/3			4/4
李國本博士 (至 31/12/2017)	Dr Delman Lee (till 31/12/2017)	2/2		2/2		
梁廣泉先生	Mr Leung Kwong-chuen	3/3	3/3			4/4
吳宏斌博士,BBS,MH (至 31/12/2017)	Dr Dennis Ng Wang-pun, BBS, MH (till 31/12/2017)	2/2			2/2	3/3
潘偉賢先生 (由 1/1/2018)	Mr Paul Poon Wai-yin (from 1/1/2018)	1/1		1/1		1/1
史立德博士,BBS,MH,JP (由 1/1/2018)	Dr Allen Shi Lop-tak, BBS, MH, JP (from 1/1/2018)	0/1			0/1	
譚嘉因教授,MH	Prof Tam Kar-yan, MH	3/3		3/3		
陳祖恒先生	Mr Sunny Tan	3/3	3/3			
尤曾家麗女士,GBS,JP	Mrs Carrie Yau Tsang Ka-lai, GBS, JP	3/3	2/3			
楊嘉燕女士	Ms Karmen Yeung Ka-yin	3/3			3/3	4/4
于健安先生,JP	Mr Emil Yu Chen-on, JP	2/3		3/3		
林錦儀女士 (至 31/12/2017)	Miss Lam Kam-yi (till 31/12/2017)	2/2	2/2			
李秀琼女士	Ms Amy Lee Sau-king	3/3	3/3			
梁頌恩女士 (由 1/1/2018)	Ms Juan Leung Chung-yan (from 1/1/2018)	1/1	1/1			
李凱先生	Mr Li Hoi	2/3	2/3			
創新及科技局常任秘書長或 其候補委員	Permanent Secretary for Innovation and Technology or his alternative members	3/3				
創新科技署署長或其候補委員	Commissioner for Innovation and Technology or her alternative members	3/3	3/3	3/3	2/3	4/4
工業貿易署署長或其候補委員	Director-General of Trade and Industry or her alternative members	2/3				
政府經濟顧問或其候補委員	Government Economist or his alternative members	3/3			3/3	
勞工處副處長或其候補委員	Deputy Commissioner for Labour or her alternative members	3/3	3/3			
香港生產力促進局總裁	Executive Director of HKPC		3/3	3/3	3/3	4/4

職員事務 - 職員事務委員會,業務發展 - 業務發展委員會,財務 - 財務委員會,審計 - 審計委員會

SC - Staffing Committee, BDC - Business Development Committee, FC - Finance Committee, AC - Audit Committee



主要效績指標 Key Performance Measures

		2013/14	2014/15	2015/16	2016/17	2017/18
服務提供 Service Delive	ry					
顧問項目數目 Number of consult	ancy projects	964	970	917	948	699
培訓課程學員人數 Number of training	ourse participants	4,564	3,041	4,248	4,198	6,196
展覽 / 考察團 / 會讓 Number of people study missions/con	attended exhibitions/	6,474	3,969	2,221	4,293	4,425
財務(港幣百萬 Financial Resu						
顧問項目收入 Income from const	ultancy projects	260.3	265.4	307.7	342.4	362.6
培訓課程收入 Income from traini	ng courses	17.4	12.9	8.9	9.4	8.0
展覽 / 考察團 / 會讓 Income from exhib conferences	集收入 itions/study missions/	7.2	9.4	4.8	9.4	8.1
製造支援項目收入 Income from manu	facturing support projects	26.3	26.0	23.6	25.2	26.7
效益 Effectiveness						
市場推廣 Marketing effort	生產力局為行業協會舉辦的活動 / 聯繫活動 / 免費研討會參加者人數 Number of people attended events/networking activities for industry associations/free seminars	24,341	23,531	20,620	22,093	24,187
客戶滿意度 Customer satisfaction	客戶滿意度指數 Customer satisfaction index	9.01	8.9	8.92	8.99	8.99



管理層

Senior Management

畢堅文先生於 2017 年加入生產力局,他具有逾 30 年管理跨國企業 大規模轉型項目的豐富經驗,涵蓋私營和公共企業。畢先生曾任職通 用電氣逾(GE)20 年,具有精闢的管理和業務經驗,主責的業務範 疇涵蓋基建、工業和消費市場等領域,在行業和客戶拓展方面資歷 深厚,在業務上助客戶屢創高峰,往績彪炳。畢先生對企業及市場 亦具有敏鋭的洞察力。

加入生產力局之前,畢先生在通用電氣擔任多個管理要職,包括 GE 運輸亞太區總裁兼首席執行官(專責策略制定和業務拓展)、GE 照 明亞洲區及安防亞太區總裁兼首席執行官等。

畢先生畢業於美國明尼蘇達州的威諾納州立大學,獲工商管理學士學位。此外,他還持有凱洛格 - 香港科大行政人員工商管理碩士 (EMBA) 學位。

Mohamed D. Butt joined HKPC in December 2017, he has over 30 years' experience managing large transformational projects in collaboration with private and public sectors, spanning a wide range of multi-national businesses. He boasts rich business insights with a remarkable track record of enabling customer success from his over 20 years' experience with General Electric (GE), and brings to HKPC a wealth of leadership experience, together with deep industry and customer knowledge in infrastructure, industrial and consumer sectors.

Prior to joining HKPC, Mohamed held various senior management positions, including President & CEO of GE's Transportation Business in the Asia Pacific region, providing strategic leadership and expanding the business footprint. Before this role, he also served as President & CEO of GE Lighting Asia and GE Security Asia respectively.

張梓昌博士於 1996 年加入生產力局,他具有超過 25 年研究及發展、管理及顧問經驗,他負責多個業務範圍,包括科技研究及發展、汽車工業、智能電子、機械人和自動化、醫療器材、環境管理、智能物料、製造技術和測試服務等領域。

張博士在加入生產力局前居於澳洲,在澳洲科學與工業研究組織 (CSIRO) 擔任高層研究職位。張博士畢業於澳洲蒙納殊大學,獲工程學學士(榮譽)學位和理學士學位,其後獲蒙納殊大學博士學位。

Dr Lawrence Cheung joined HKPC in 1996, he has more than 25 years' experience in research and development, consultancy and business. He manages a broad business portfolio on technological research and development as well as consultancy services in automotive, smart electronics, robotics and automation, medical devices, environmental management, smart materials and manufacturing technology, and testing services.

Prior to joining HKPC, Lawrence lived in Australia, holding a senior research post at the Commonwealth Scientific and Industrial



Mohamed graduated from Winona State University, Minnesota, U.S., with a Bachelor of Science degree in Business Administration. He also received his Master in Business Administration from Kellogg School of Management and the Hong Kong University of Science and Technology.



Research Organisation (CSIRO) of Australia. He obtained Bachelor of Engineering (with honours) and Bachelor of Science degrees from Monash University in Australia. His doctorate degree was also from Monash University.







老少聰先生於 1997 年加入生產力局,他具有 30 年管理及資訊科技顧問經驗,涵蓋業務策略研究、方案評估、可行分析、流程改造、系統整合、服務創新、供應鏈管理等範圍。他多年來負責的主要客戶有上市公司、製造商、零售商、銀行、電訊公司、公營機構及不同的政府部門。

老先生在加入生產力局之前,曾在國際著名資訊科技顧問公司工作 逾十年,具備資訊科技專業人員認證(項目總監)。他持有英國倫 敦大學理學碩士學位及帝國學院文憑。

Gordon Lo joined HKPC in 1997, he has more than 30 years' experience in business management and IT consulting. His portfolio spans strategic planning, solution evaluation, feasibility studies, process improvement, system integration, service innovation and supply chain management. Major clients include listed companies, manufacturers, retailers, banks, telecom companies, NGOs and various Government departments.

Prior to joining HKPC, Gordon worked in international IT companies for more than 10 years. He is a Certified Professional IT Project Director (CPIT[PD]). He obtained a Diploma from Imperial College, London, and a Master of Science degree from the University of London.



黎少斌先生於 2018 年加入生產力局,在此之前,他在通用電氣公司工作了 22 年。他加入通用電氣時是一名信息科技部的管理培訓生。他在完成兩年的管理培訓生計劃後加入內部審計和財務部門,在多個國家(美國、大中華、新加坡、日本、澳洲、瑞士等)和業務部門(塑料、醫療、金融、電力、航空、交通運輸等)負責不同的職務。

他之後負責商務和業務管理的工作,在多個業務部門和行業(鐵路、礦業、再生能源、船舶、能量儲存、火力發電等)擔任區域或全球的管理工作。黎先生具有領導大規模的業務部門推動工業 4.0 轉型和開發數碼產品的豐富經驗。

黎先生持有香港大學電腦工程學學士學位和電腦科學碩士學位。

Mr Edmond Lai joined HKPC in 2018, he worked in General Electric (GE) for 22 years. He started in GE as a management trainee in the Information Technology department. After finishing the two-year management trainee programme, he switched to the internal audit and finance function, and had several assignments in various countries (United States, Greater China, Singapore, Japan, Australia, Switzerland, etc.) and business units (plastics, healthcare, capital, power, aviation, transportation, etc.).

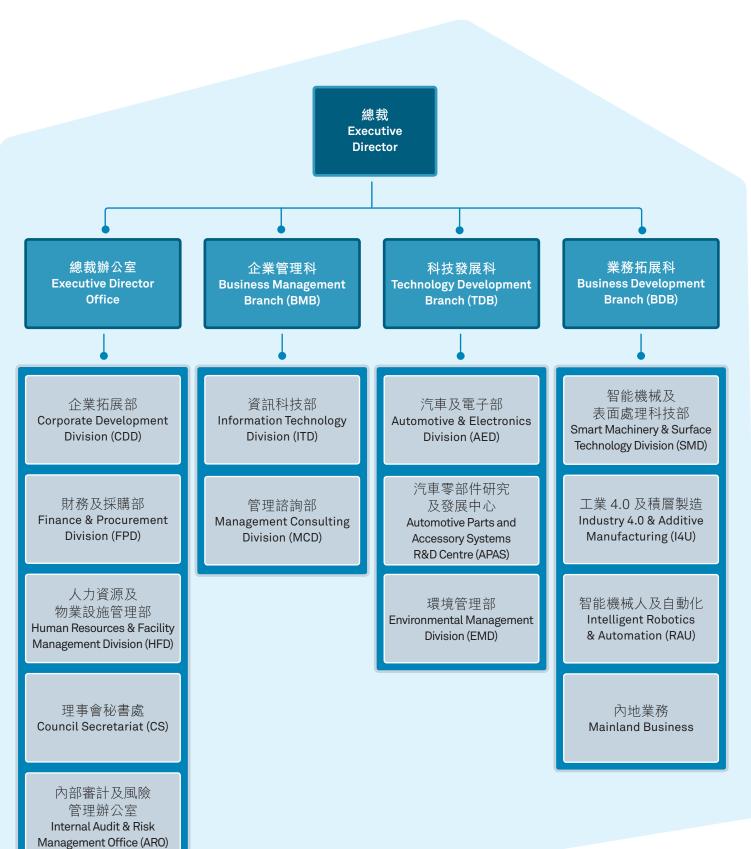
Edmond also worked in commercial and business management roles, progressively taking bigger regional or global profit & loss responsibility in various business units for different industries (rail, mining, renewable energy, marine, energy storage, thermal power generation, etc.). He has hands-on experience in leading a sizeable organisation in i4.0 transformation and digital products development.

Edmond obtained Bachelor of Engineering (Computer Engineering) and Master of Philosophy (Computer Science) degrees from the University of Hong Kong.



組織架構

Organisation Structure





附屬公司 Subsidiaries

生產力(控股)有限公司及珠三角的獨資企業

生產力(控股)有限公司成立於 2003 年 7 月 28 日,為珠三角區內港資企業提供跨越價值鏈的綜合支援,協助企業提升生產力。

為了達成上述目標,生產力(控股)有限公司於 2004年在珠三角成立了生產力(東莞)諮詢有限 公司及生產力(深圳)諮詢有限公司等兩家獨資 企業。

生產力(控股)有限公司

董事局

林宣武 (董事局主席)、畢堅文、蔡淑嫻、陳祖恆、 黃志光、于健安。

生產力(東莞)諮詢有限公司

董事局

老少聰(董事局主席)、畢堅文、張梓昌、林芷 君、譚錫榮、任永權。

生產力(深圳)諮詢有限公司

董事局

老少聰(董事局主席)、張梓昌、林芷君、譚錫 榮、任永權。

截至 2018 年 3 月 31 日

Productivity (Holdings) Limited and Wholly Foreign Owned Enterprises in the PRD

The Productivity (Holdings) Limited was established on 28 July 2003, with the objective of promoting productivity excellence through the provision of integrated support across the value chain of Hong Kong firms operating in the Pearl River Delta (PRD).

This objective is achieved through two Wholly Foreign Owned Enterprises (WFOEs) in the PRD – Productivity (Dongguan) Consulting Co. Ltd., and Productivity (Shenzhen) Consulting Co. Ltd. incorporated in 2004.

Productivity (Holdings) Limited

Board of Directors

Mr Willy Lin (Chairman of the Board), Mr Mohamed D. Butt, Ms Annie Choi, Mr Sunny Tan, Mr Patrick Wong and Mr Emil Yu.

Productivity (Dongguan) Consulting Co. Ltd.

Board of Directors

Mr Gordon Lo (Chairman of the Board), Mr Mohamed D. Butt, Dr Lawrence Cheung, Ms Vivian Lin, Mr Alfonso Tam and Mr Patrick Yen.

Productivity (Shenzhen) Consulting Co. Ltd.

Board of Directors

Mr Gordon Lo (Chairman of the Board), Dr Lawrence Cheung, Ms Vivian Lin, Mr Alfonso Tam and Mr Patrick Yen.

As of 31 March 2018



附屬公司

Subsidiaries

生產力科技(控股)有限公司

生產力科技(控股)有限公司在2004年9月1日成立,以協助生產力局將具有市場潛力的專利、技術及項目成果轉化為商品。該公司致力發展新一代以科技為本的技術,為研發成果提供直接有效的商品化渠道,令科研成果化為產品。

本年度,共舉辦了8次推廣活動,向行業介紹生產力局17項可供商品化的研發成果。這些活動吸引了37家公司參加,並在活動之後繼續與有意合作的企業聯繫,將技術方案引進相關行業,使更多行業受惠於生產力局的研發項目。

董事局

林宣武 (董事局主席)、畢堅文、蔡淑嫻、潘偉賢、 黃志光。

HKPC Technology (Holdings) Co. Ltd.

HKPC Technology (Holdings) Co. Ltd. (HKPCT) was established on 1 September 2004 as a vehicle for the commercialisation of HKPC's patents, technologies and project deliverables with market potential. The Company aims to develop a new technology-based generation through providing a more direct and effective avenue to turn R&D deliverables into products.

During the year, eight marketing events were held to promote 17 technologies developed by HKPC that are ready for commercialisation with industry. The events drew participants from 37 companies. Indications of interest were followed up to transfer the technology solutions to industry, so that more sectors could benefit from HKPC's development effort.

Board of Directors

Mr Willy Lin (Chairman of the Board), Mr Mohamed D. Butt, Ms Annie Choi, Mr Paul Poon and Mr Patrick Wong.



財務報告

Financial Review

香港生產力促進局及其附屬公司 截至 2018 年 3 月 31 日止的全年 綜合賬目由外聘核數師「安永會 計師事務所」審計,並獲發無保 留審計意見書。綜合財務狀況表、 綜合收支賬目及綜合全面收益表 載於後頁。 The consolidated accounts for the year ended 31 March 2018 of Hong Kong Productivity Council and its subsidiaries have been audited by the external auditor (Ernst & Young) with a clean audit opinion. Extracts of the Consolidated Statement of Financial Position, Consolidated Income and Expenditure Account and Consolidated Statement of Comprehensive Income are set out in the following pages.



財務報告

Financial Review

綜合財務狀況表

2018年3月31日

Consolidated Statement of Financial Position

31 March 2018

		2018	2017
		港幣千元	港幣千元
		HK\$'000	HK\$'000
非流動資產 NON-CURRENT ASSETS	December of the land of the land	004 000	407.000
物業、廠房和設備	Property, plant and equipment	221,399	197,328
無形資產	Intangible assets	8,524	7,146
聯營公司權益 ————————————————————————————————————	Interest in an associate	1,553	1,545
非流動資產合計	Total non-current assets	231,476	206,019
流動資產 CURRENT ASSETS			
應收賬款、預付款項及按金	Accounts receivable, prepayments and deposits	69,107	61,049
現金、銀行存款及定期存款	Cash, bank balances, and fixed deposits	344,724	310,444
流動資產合計	Total current assets	413,831	371,493
流動負債 CURRENT LIABILITIES			
應付賬款及應計費用	Accounts payable and accruals	246,678	229,717
應付聯營公司款項	Amount due to an associate	811	733
應付税項	Tax payable	307	179
流動負債合計	Total current liabilities	247,796	230,629
流動資產淨值 NET CURRENT ASSETS		166,035	140,864
淨資產	Net assets	397,511	346,883
總資金 TOTAL FUNDS			
生產力局應佔資本資助金及儲備	Capital subvention fund and reserves		
	attributable to the Council	395,832	345,515
非控股股東權益	Non-controlling interests	1,679	1,368
總資金	Total funds	397,511	346,883



財務報告

Financial Review

綜合收支賬目 截至2018年3月31日止年度

Consolidated Income and Expenditure Account

Year ended 31 March 2018

		2018	2017
		港幣千元	港幣千元
		HK\$'000	HK\$'000
收入INCOME			
經常性活動的政府資助	Government subvention for recurrent activities	223,294	218,908
服務收入	Service income	481,679	455,819
其他收入	Other income	11,198	11,172
應佔聯營公司利潤	Share of profit of an associate	8	33
		746 470	605.000
		716,179	685,932
支出 EXPENDITURE			
職員薪俸	Staff emoluments	(348,846)	(360,426)
其他支出	Other expenses	(317,412)	(301,555)
除税前盈餘 SURPLUS BEFORE TAX		49,921	23,951
所得税	Income tax expense	(248)	(467)
		49,673	23,484
從資本資助金轉入	Transfer from capital subvention fund	14,649	19,324
年內盈餘 SURPLUS FOR THE YEAR		64,322	42,808
歸屬於 Attributable to:			
生產力局	The Council	64,167	42,552
非控股股東權益	Non-controlling interests	155	256
		64,322	42,808

65,277

41,960



財務報告

Financial Review

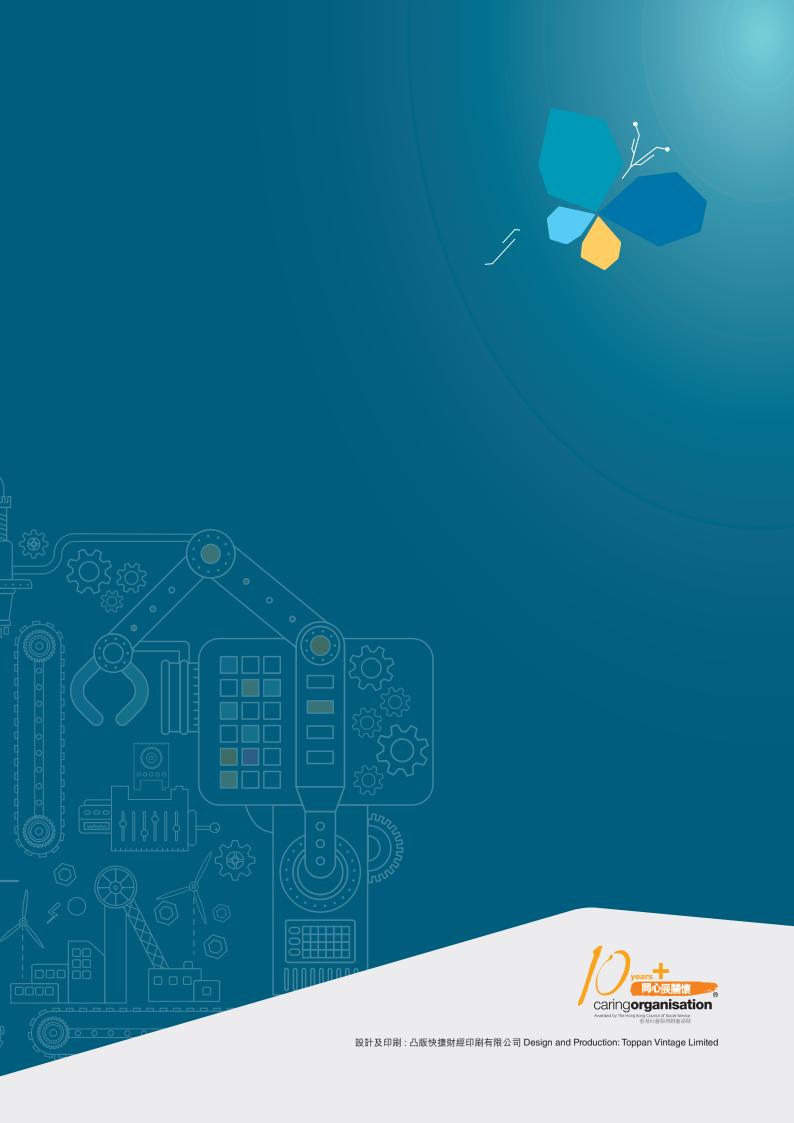
綜合全面收益表

截至 2018 年 3 月 31 日止年度

Consolidated Statement of Comprehensive Income

Year ended 31 March 2018

		2018 港幣千元 HK\$'000	2017 港幣千元 HK \$ '000
年內盈餘 SURPLUS FOR THE YEAR		64,322	42,808
其他全面收益 / 虧損 OTHER COMPREH	ENSIVE INCOME/(LOSS)		
可能於其後重新歸類至收支賬目的其他全			
INCOME AND EXPENDITURE ACCOUNT	OSS) THAT MAY BE RECLASSIFIED TO IT IN SUBSEQUENT PERIODS:		
換算中華人民共和國(「中國」)業務 賬目的匯兑差異	Exchange differences on translation of financial statements of operations in the People's Republic of China ("PRC")	1,174	(848)
年內註銷海外業務的重新分類調整	Reclassification adjustment for a foreign operation deregistered during the year	(219)	
年內其他全面收益(税後) OTHER COMI	PREHENSIVE INCOME FOR THE YEAR, NET OF TAX	955	(848)
年內全面收益額 TOTAL COMPREHENS	IVE INCOME FOR THE YEAR	65,277	41,960
歸屬於 Attributable to:			
生產力局 非控股股東權益	The Council Non-controlling interests	64,966 311	41,782 178





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