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CEO'S MESSAGE 行政總裁的話



We are entering an exciting time as Asia-Pacific is on the rise as a dominant player in the digital arena. Driven by the sophistication of digital products and services, the surging demand for data centres, indispensable IT infrastructure offers healthy growth in the years ahead. The feature story of this issue takes a closer look at the evolving development of data centres in our market, and JEC's role in shaping the smart cities as a turnkey solution provider.

數碼新時代帶來無可比擬的發展機遇，亦迎來了亞太區的崛起，力求在市場中佔一重要席位。隨著數碼產品及服務不斷推陳出新，市場對數據中心及相關的資訊科技基建之需求在未來將持續增加。今期的特寫故事介紹了怡和機器營運所在地區的數據中心發展，以及我們作為關鍵解決方案供應商的角色，為建設智能城市作出貢獻。

Kevin O'Brien
歐嘉榮

Capitalising on Asia's Data Centre Market Growth

把握亞洲數據中心市場增長機遇

Data centres play an increasingly important role in the shaping of smart cities in today's digital world, which characterised by broadband penetration and smartphone access.

在現今的數碼科技洪流，尤其寬頻網絡與智能手機的廣泛應用下，數據中心在智能城市建設中扮演日趨重要的角色。



As new technologies evolve to shape the way people work, live and play, the demand for data centre facilities grows as more and more organisations seek secure places where they can host mission critical applications, perform data analytics, store large amounts of data, and process and transmit digital services. As more businesses and the Internet of Things (IoT) collect and share user data to increase interconnectivity, as corporations continue to digitalise information, and as e-commerce complements bricks-and-mortar stores and cash payments, the insatiable demand for cloud technology and processing will continue to grow. This means on the one hand an increase in the number of data centres and on the other the need to upgrade existing facilities to increase their processing power.

Digital Boom across Asia Pacific Region

亞太區數碼發展新紀元

According to Structure Research, the Asia Pacific region's share of the global colocation data centre market will rise to 40% in the next two years, overtaking North America to become the largest market in the world. Among Asia Pacific regions, Hong Kong and Singapore are two of the preferred locations for data centre investments with their robust infrastructure, high connectivity and relative ease of doing business. Additional benefits of establishing data centres in these Asian tigers may be found in the support from their respective governments, the ready and uninterrupted availability of power, the know-how derived from their financial hub status and their leading-edge telecommunications infrastructure. Other less tangible but equally important factors in their favour are their stable political environments and the relative freedom from natural disasters.

隨着大眾的工作、生活和娛樂的方式跟隨科技發展而不斷演變，市場對數據中心設施的需求亦日漸增長，愈來愈多機構尋求高度保安的地方，以進行關鍵應用程式、執行數據分析、儲存大量數據，以及處理數碼傳輸服務。此外，因應愈來愈多企業及物聯網收集和共享用戶數據，提升互通度；加上資料數碼化更為普及、電子商務與實體店和現金支付方式互補，市場對數據儲存和處理的需求更為殷切，帶動更多數據中心落成；另一方面，也需要為現有的數據中心設施升級，從而提升處理能力。

根據獨立研究及顧問機構Structure Research預期，亞太區佔全球主機託管數據中心市場的比例將於未來兩年增加至40%，超越北美成為全球最大市場。其中，香港和新加坡憑藉穩健的基礎建設、高連接度及營商便利程度，突圍而出成為區內數據中心投資的兩大熱門地點。這些地區同時受惠於政府政策支持、完善穩定的電力供應、因金融業發展成熟而擁有的經驗，以及先進的電訊基礎建設；再者，穩定的政治環境及較少受自然災害影響等因素，均為數據中心的營運創造有利先決條件。

Asia Pacific Region's Share of Global Colocation Market

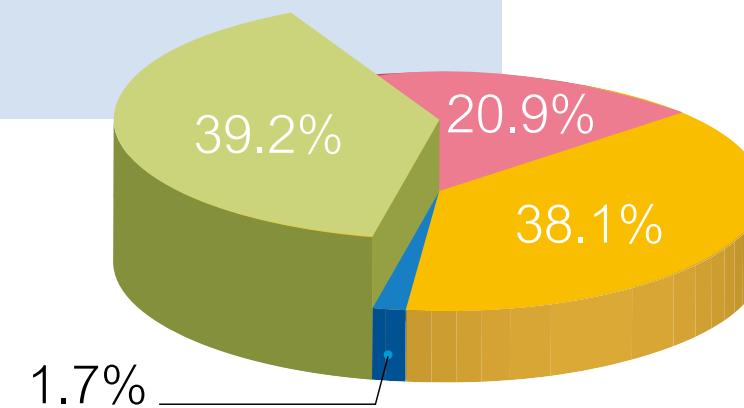
亞太區共享數據中心環球市場佔有率

Asia Pacific region's share of the global colocation data centre market will rise to **40%** by 2020, generating approx. US\$24 M revenue

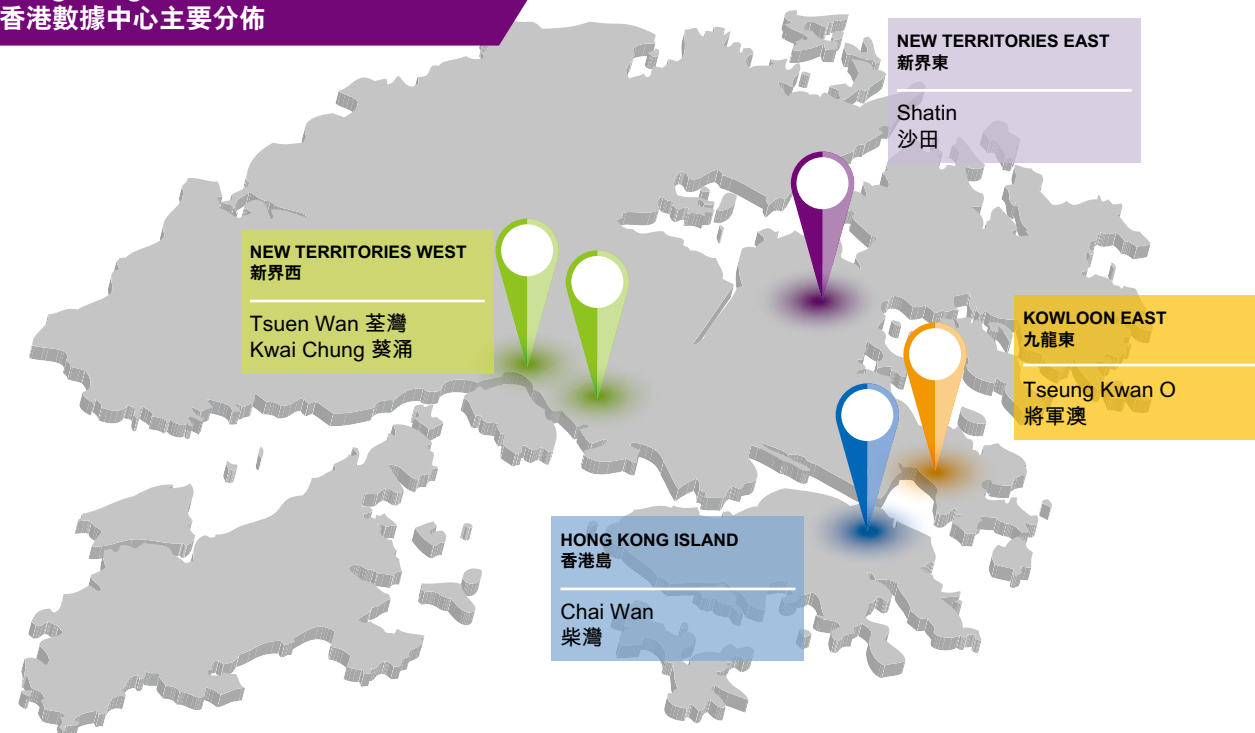
亞太區在全球數據中心市場佔有率增長，預計於2020年達 **40%**，帶來近2,400萬美元收益

- APAC 亞太地區
- EMEA 歐洲、中東、非洲
- North America 北美
- Latin America 拉丁美洲

Source 資料來源：Structure Research



Hong Kong Data Centre Distribution 香港數據中心主要分佈



Demand for data centres is expected to grow on average **16%** per annum in the next few years.

在未來幾年，香港數據中心的需求量預計會以平均每年 **16%** 的速度增長。

Source 資料來源：Structure Research

Hong Kong's stability, sophistication and IT savvy, coupled with the dynamism of its labour force, make it an ideal centre for the operation of data centres, which is a costly and complex business. Besides a strong infrastructure, security is of vital importance to ensure that both facilities and data are protected. Hong Kong's strategic location as a regional hub continues to fuel data centre growth, as multinational corporations looking to increase their presence in China and Asia relocate here, as well as Mainland China and regional companies seeking to expand into international markets. Demand for data centres in Hong Kong is expected to grow on average 16% per annum in the next few years, driven by the growth in cloud and internet industries. At the same time, increasing internet connections between Hong Kong and overseas - including the Mainland - is set to enhance the value of and spike the demand for data centres.

In Singapore, cloud providers continue to anchor demand for colocation space for data storage, while more traditional sectors, such as banking and finance, step up their activities. Overall fundamentals remain strong, as the push for data protection across the region sets to shift the demand equation in primary markets in the longer term.

數據中心是一項成本高昂而複雜的業務，但香港以成熟穩健的體制、先進的資訊科技發展，以及靈活的勞動力，成為營運數據中心的理想城市。除了完善的基礎建設外，保安度對於確保設施和數據受到周全保護也相當重要。適值不少跨國企業希望擴大在中國及亞洲的業務，加上中國內地和地區性企業尋求拓展國際市場，香港正好發揮其戰略地位，推動數據中心市場的增長。展望未來幾年，隨著雲端服務和互聯網市場不斷擴充，香港數據中心的需求量預計可達至平均每年16%的增長幅度。同時，香港及海外（包括中國內地）之間的互聯網絡不斷擴展，大大提升數據中心的價值和需求。

在新加坡，雲端服務供應商持續帶動數據儲存託管空間，以支援更多的傳統行業，如銀行及金融業對金融科技的需求。在整體基礎條件仍然相當優越的前提下，由區內對數據保護意識提高所帶來的市場需求影響將於一段時間後才會浮現。

Essential Components of an Efficient Data Centre 建設高效數據中心

The exponential growth of data centres in the region underscores the need for facilities that meet the stringent building requirements governing their construction, in areas such as power supply, air-conditioning, fire prevention and security. The construction of data centres needs to be carried out in accordance with stringent technical requirements for the storage of computer systems and associated components according to their tier standards. A rack system needs to be used to position the servers in a specific configuration to optimise cooling. The installation of an Uninterruptable Power Supply (UPS) system and back-up generators guarantee sufficient electricity and reliable power in case of a power outage. A UPS system is essential for ensuring that the quality of the systems remains constant after a power outage, so that sensitive electronic components are effectively protected. Air-conditioning systems need to provide the necessary cooling to prevent overheating of the computing equipment, while robust security systems that limit access to the virtual environment as well as to the physical building and fire safety systems are core components of the modern state-of-the-art data centre.

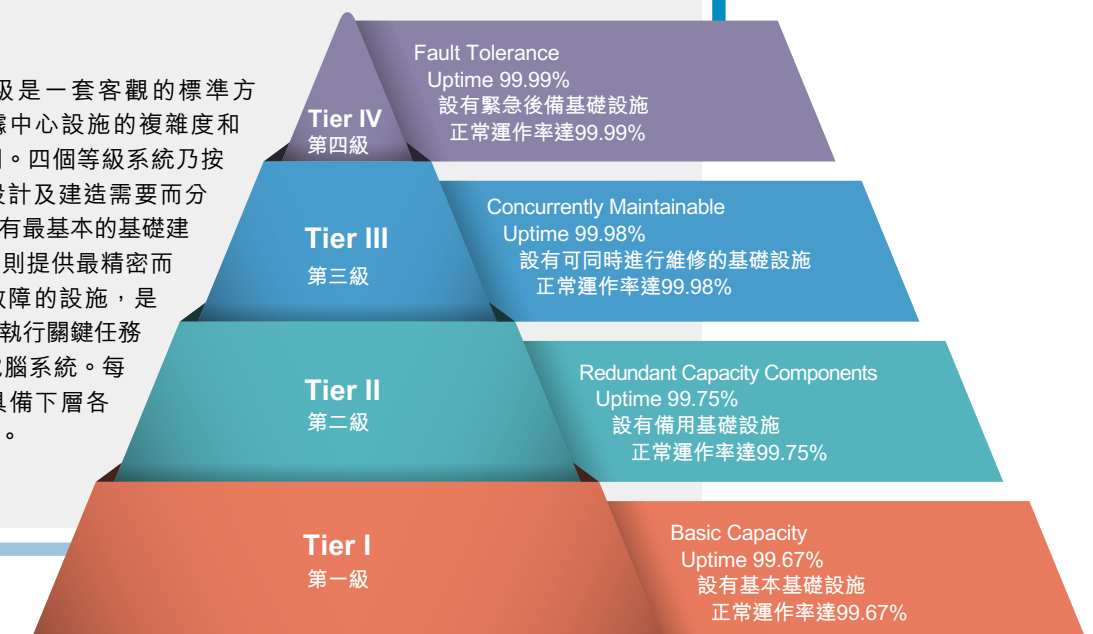
事實上，數據中心的設施須符合一連串嚴謹的建築要求，包括電力供應、空調，防火和保安，以滿足其特定要求。數據中心的建築工程須按照嚴格的技術要求進行，以符合其等級標準存放電腦系統及相關組件的規格。為優化冷卻系統，伺服器會裝設於機架系統中；此外，建築物亦須安裝無間斷供電系統及後備發電機，確保停電時有可靠的後備電源，各個系統仍可正常運作，保護精密細微的電子組件。至於空調系統則提供必要的冷卻功能，防止電腦設備過熱。此外，限制進出虛擬環境及建築物的保安系統及消防系統亦是現代先進的數據中心不可或缺的部分。



What is Data Centre Tiering? 甚麼是數據中心等級？

Data centre tiering is a standardised methodology to identify the complexity and uptime of the data centre infrastructure being utilised. The four-tier system classifies specific design and build requirements of each tier - Tier I has the simplest infrastructure, while Tier IV is the most robust and less prone to failure, enabling it to host mission critical servers and computer systems. Each tier includes the required components of all the tiers below it.

數據中心等級是一套客觀的標準方法，識別數據中心設施的複雜度和正常運作時間。四個等級系統乃按每級的特定設計及建造需要而分類。第一級設有最基本的基礎建設，而第四級則提供最精密而不容易出現故障的設施，是以多用作存放執行關鍵任務的伺服器及電腦系統。每個等級均須具備下層各級的所需條件。

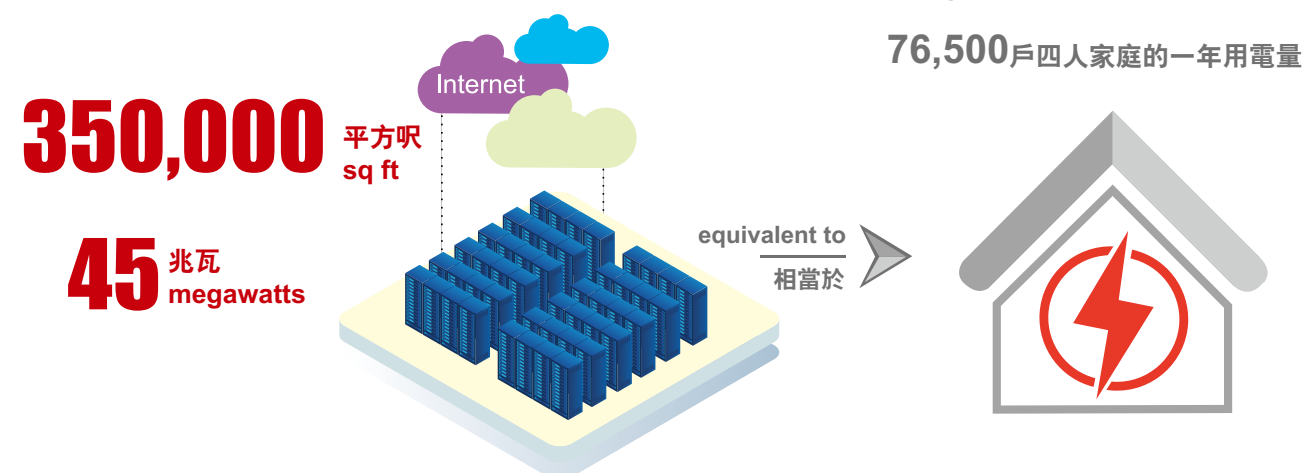


Empower IT Infrastructure for the Future 打造頂尖資訊科技基礎設施

JEC's expertise in building the infrastructure for data centres has been in much demand of late, with a strong project portfolio ranging from international banks and financial institutions, multinational corporations and telecommunications companies, as well as for government bodies. Chung Hing Engineers (CHE), a subsidiary of JEC and a leading engineering specialist contractor in the critical facilities sector with over 50 years of experience, offers turnkey solution covering design, build and maintenance for clients with mission critical sites and stringent requirements.

In the past three years alone, the Group has been instrumental in constructing over 350,000 sq ft, 45 megawatts in capacity of Tier III and IV data centre space. Projects typically consist of three core stages: design, building and maintenance. Detail designs are thoroughly developed prior to project implementation to minimise potential delays as well as possible hidden costs. The building stage consists of project management and the installation, implementation, testing and commissioning of a wide variety of facilities, ranging from UPS systems, building monitoring systems, chiller systems and raised floor systems to generators, wireless infrastructure and CCTV. Upon completion of the construction stage, ongoing support services ensure that the Group is able to meet the client's needs with comprehensive facility maintenance coverage. The experienced critical facilities maintenance team, currently serving hundreds of data centres and server rooms, is capable of timely execution and service guarantee during emergencies.

Over the past three years, JEC creates data centre space
怡和機器於過去三年開拓數據中心空間



JEC is well positioned to take on the lucrative opportunities presented by the tremendous demand in the burgeoning field of data centres. It is poised to expand its operations from Hong Kong to Singapore, as well as to other countries in the Asia Pacific region with the requisite infrastructure and the market potential. In this way, JEC stands not just to contribute to smart city development but also to a sustainable business model in Asia.

怡和機器的業務範圍之一亦包括數據中心基礎建設，隨着市場於此範疇的需求有增無減，集團累積不少項目經驗，包括國際銀行和金融機構、跨國企業及電訊公司，乃至政府機構。怡和機器旗下的中興工程具備超過50年的專業經驗，為業界的頂尖專業工程承建商，擅長於結合客戶的嚴格要求，提供涵蓋設計、建造及保養的關鍵解決方案。

於過去三年，怡和機器參與建設了350,000平方呎第三級及第四級數據中心，相當於45兆瓦的供電容量。一般而言，工程項目包括三個核心階段：設計、建造和保養。設計需要於施工前已作全盤準備，減省一切可能的工程延誤和額外成本。在建造階段，除了項目管理外，亦會安裝、實施、測試和調試多種系統，包括無間斷供電系統、樓宇監控系統、製冷系統，以至高架式地台系統、發電機、無線基礎建設及閉路電視。在建造階段完成後，集團保養經驗豐富的團隊，目前正為數百個數據中心及伺服器機房服務，持續支援及全面保養各種設施項目，即使在突發及緊急情況下，依然能夠及時執行任務，履行服務承諾。

怡和機器順應了數據中心迅速發展而衍生的龐大需求，把握這個潛力豐厚的發展機遇。除香港外，集團亦密切留意新加坡，以至亞太區其他具備基本條件及發展空間的新興市場，為區內智慧城市建設及商業模式注入可持續發展的新動力。



CLP Black Point Electro-Chlorination Plant Refurbishment 中電龍鼓灘電解氯化設施翻新工程

JEC secured a contract from CLP Power to refurbish and redesign the electro-chlorination plant for Black Point Power Station in Tuen Mun, Hong Kong. JEC will rearrange six existing modules of electrolyser cell, replace transformer rectifier units, upgrade associated inlet and dosing system, and refurbish existing chemical handling system for the electrolyser cells.

The refurbished electro-chlorination system will increase the output capacity of sodium hypochlorite by 44%, allowing a more efficient control of biofouling in power plant cooling system and facilitating operation of new power generation unit at the Power Station. The project has already commenced in February and will be completed by end 2019.

怡和機器獲得中華電力的合約，負責翻新及重新設計香港屯門龍鼓灘發電廠的電解氯化設施。怡和機器將重置現有的六組電解槽、更換變壓整流器、提升相關的加氯系統，以及改良電解槽的化學處理系統。

系統升級後可提升次氯酸鈉產量達44%，更有效地抑制冷卻水系統管道中的海洋生物滋生，以及支援廠內新發電機組的運作。項目已於今年2月展開，預計於年底完成。





Air Handling Units Upgrade for Hongkong Land Portfolio 置地物業空氣處理機組提升工程

JEC was awarded the contracts from Hongkong Land to upgrade air handling units (AHU) for Chater House, Exchange Square, Jardine House as well as Edinburgh Tower and Gloucester Tower of Landmark.

The project involves replacing the AHUs with multiple electronically commutated (EC) plug fans. An EC plug fan has a high-performance direct current (DC) motor which is at least 10% more efficient than a conventional alternating current (AC) motor in general. It incorporates voltage alternation within the motor, enabling speed variation in accordance with target room temperature for a more precise control and less energy consumption.

The design air flow rate of an AHU will be shared by several EC plug fans instead of a single fan. If one of the EC plug fans fails to operate, other fans can speed up to reach the required flow rate so that air-conditioning supply can remain unaffected.

To echo with the Government's five-year target to achieve a 5% electricity saving for government buildings by 2020, JEC has been working closely with clients from commercial sector to meet their energy saving target with latest technology and products.

怡和機器獲得置地公司合約，為遮打大廈、交易廣場、怡和大廈及置地廣場的公爵大廈和告羅士打大廈提升空氣處理機組的效能。

是次提升工程為客戶安裝配置電子整流風扇的空氣處理機組，每把電子整流風扇均配備高效能的直流電馬達，一般而言，直流電馬達較傳統交流電馬達的效能高出至少10%。同時，直流電馬達可自行變壓，根據目標溫度調節轉速，從而更精準地控制風扇，減少耗電。

此外，每把電子整流風扇亦可分擔空氣處理機組的設計風量，即使其中一把風扇出現故障，其他風扇可加速填補風量落差，使大廈的空調供應不受影響。

為響應政府承諾於2020年前將政府建築物的用電量減少5%的五年節能目標，怡和機器亦積極將最新技術及產品應用於商業機構，協助客戶達成省電目標。



The Forestias Comprehensive Development Project The Forestias 綜合發展項目

JEC Thailand was awarded the contract for supply, installation, testing and commissioning of air-conditioning and ventilation system, sanitary and fire protection system, as well as electrical and communication system for The Forestias Project.

The Forestias is a nature-integrated comprehensive development located at Bangna, Bangkok with a total area of 480,000 sqm. It includes forest landscape, office building, medical complex as well as a variety of community development including residences, community centre, a 6-star boutique hotel, and a 4-star business hotel and serviced apartment.

The project incorporates green building technology in its design and operation system that targets to achieve the Gold rating of Leadership in Energy and Environmental Design (LEED) for Core & Shell. It is expected to be completed in August 2019.

泰國怡和機器早前獲得The Forestias項目合約，負責供應、安裝、測試和調試空調及通風系統、衛生及消防系統，以及電氣和通訊系統。

The Forestias位於曼谷挽那區，佔地480,000平方米，是一個融合自然與社區的綜合發展項目，包括森林景觀、辦公大樓、醫療中心，並匯集住宅、社區中心、六星級精品酒店以及四星級商務酒店和服務式公寓。

此項目之設計及營運系統亦與綠色建築科技結合，以獲取能源與環境設計先鋒評級（LEED）——核心及外殼金級認證為目標。工程預計於今年8月完成。



RASA Phetchaburi Office & Commercial Building Project RASA碧武里辦公及商業大樓項目



JEC Thailand secured the contract to supply, install, test and commission the air-conditioning and ventilation system, sanitary and fire protection system, as well as electrical and communication system for RASA Phetchaburi Office and Commercial Building.

Located at Asok-Phetchaburi Intersection, Bangkok with a total area of 45,000 sqm, the project is a 29-storey office building with retail space, food court and 650 parking spaces. The project is expected to be completed in December 2020.

泰國怡和機器獲得合約，為RASA碧武里辦公及商業大樓供應、安裝、測試和調試空調及通風系統、衛生及消防系統，以及電氣和通訊系統。

大樓座落於曼谷阿速—碧武里分叉路口，佔地45,000平方米，樓高29層並設有商舖、美食廣場及650個車位。項目將於2020年12月完成。



WHA Tower Project 泰國WHA Tower項目

JEC Thailand won the contract from WHA Group, a fully-integrated logistics and industrial facilities solutions provider in Thailand to supply, install, test and commission the mechanical systems at WHA Tower, its new headquarters in Bangna, Bangkok. Located at Bangna Road, Samutprakarn with a total area of 49,732 sqm, the tower is a 25-storey building comprises of office area, green area, canteen and 470 parking spaces.



The project team will also apply Building Information Modelling (BIM) technology in this project, facilitating a streamlined approach to deliver installation works on schedule and at the lowest possible cost. The project is expected to be completed in November 2020.

泰 國怡和機器取得泰國一站式物流及工業設施供應商偉華集團的合約，為其位於曼谷挽那區的新總部大樓WHA Tower供應、安裝、測試和調試機械系統。大樓座落於北欖府挽那路，佔地 49,732平方米，樓高25層，設有辦公室、綠化空間、食堂及470個車位。

項目團隊透過應用建築信息模擬 (BIM) 技術，將施工流程化，從而提升施工效率及減省建築成本。項目預計於2020年11月完成。



New Office Building Project at Biopolis Business Park 新加坡啟奧生物醫藥園新大樓項目

JEC Singapore secured the ACMV contract for the new office building at Biopolis Business Park. The works include supply and installation of district cooling system pump room, chilled water air side equipment, piping and air distribution system, as well as mechanical ventilation system for the carpark.



Developed by Wilmar International Limited, a leading agribusiness group in Asia, the building comprises seven office floors with a laboratory on the third floor and two levels of basement carpark. The project is expected to be completed in November 2019.

新 加坡怡和機器獲得啟奧生物醫藥園新大樓項目的空調及機械通風系統合約，工程包括供應及安裝區域供冷系統泵房與相關送風設備、喉管、空調配風系統以及停車場的機械通風系統。

新大樓由亞洲農業綜合企業豐益國際所發展，樓高七層，另設實驗室於二樓全層及兩層地庫停車場。項目將於今年11月份完成。



The Woodleigh Residences Mixed-Use Development Project The Woodleigh Residences綜合發展項目

JEC Singapore won the ACMV contract for The Woodleigh Residences, a mixed-use development at Upper Serangoon Road. The team will supply and install central chilled water plant with air side equipment for shopping podium and community club, fan coil units for all 667 flats and its neighbourhood police centre, as well as mechanical ventilation systems for carpark and other essential facilities of the development.

The project is expected to be completed in February 2022.

新 加坡怡和機器獲得位於實龍岡路上段之綜合發展項目The Woodleigh Residences的空調及機械通風系統合約。團隊將供應及安裝購物中心和社區會所的製冷機組及送風設備、合共667個住宅單位和其毗鄰報案中心的風機盤管，以及停車場和其他重要設施的機械通風系統。

項目將於2022年2月份完成。



JEC Spring Dinner 2019

2019年度怡和機器周年晚宴

Themed Friday Night Fever, the JEC Spring Dinner 2019 was held on 8 March at KITEC with about 1,300 colleagues and guests gathered for a fun-filled night in reminiscence of the golden 1970s.

怡和機器2019年度周年晚宴於3月8日假九龍灣國際展覽中心舉行，約1,300名同事和嘉賓共聚一堂，在1970年代懷舊金曲的主題下，暢度周五狂熱夜。



JEC Group Briefing 2019

2019 年度集團簡報會

On 8 March, 180 staff from Hong Kong and regional offices gathered for the annual Group Briefing, during which Chief Executive Kevin O'Brien presented the business outlook and strategic directions for JEC's sustainable growth amid the digital age.

在3月8日的集團簡報會上，行政總裁歐嘉榮向180位香港及地區辦事處員工講述怡和機器的業務前瞻及策略方向，把握數碼時代下的可持續發展機遇。

JDI Celebrates 15th Anniversary

JDI 邁進15周年誌慶

Drumming up its 15th year celebration, Jardine Distribution, Inc. (JDI) kicked off the year with town hall meeting themed Quinceañera in Manila, during which President Edwin Hernandez outlined the status and plans for the year ahead. Specially designed team building activities were also arranged for the participants to revisit the journey JDI has gone through over the years, encouraging the team to scale new heights in years ahead.

Turning 15 in July, JDI has been incorporated under JEC after spinning off as a unit of Jardine Davies, Inc. since 2004.

為慶祝成立15周年紀念，Jardine Distribution, Inc. (JDI) 以成人禮為主題的年度員工大會作為序幕。活動於菲律賓首都馬尼拉舉行，由總裁Edwin Hernandez介紹公司的現況及來年計劃，以及一連串特別設計的團隊活動，回顧JDI多年來的歷程，勉勵團隊繼續創出佳績。

JDI原為Jardine Davies, Inc.一員，自2004年起成為怡和機器旗下公司，並將於今年七月迎接15周年紀念。



Stepping Up Efforts to Improve Safety & Health Performance

怡和機器積極提升安全及健康表現



As an organisation that values safety and health as its utmost priority, JEC aspires to seek continuous improvement, especially on the identification and prevention of safety hazards with an aim to achieve zero injuries.

To this end, JEC strives to foster the culture by measures such as providing necessary management tools and skills, as well as enhancing awareness on potential safety hazards by reporting safety lapses.

作為以安全與健康為首要考慮的機構，怡和機器不斷追求持續進步，尤其是在識別和預防安全危害方面，冀達到零傷亡的目標。

為此，怡和機器致力推行各項措施，培養安全文化，例如提供必要的管理工具和技術支援，以及實施提交安全漏洞報告制度，提高員工對潛在安全危害的意識。

In 2018, JEC and its joint ventures achieved a 12-month rolling accident rate of 1.51 per 1,000 JEC workers. However, JEC will not relax or be complacent about this. JEC is one of the first batch of companies in Hong Kong to sign up for Vision Zero, a worldwide campaign launched by International Social Security Association since 2017.

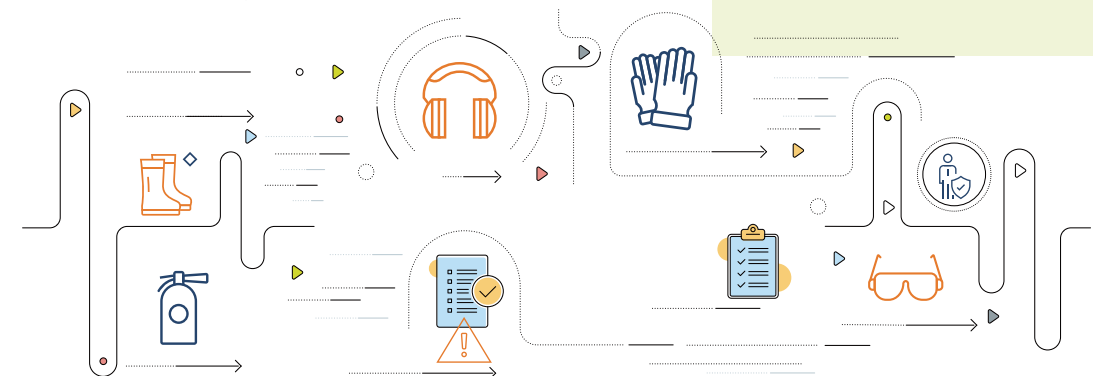
In recognition of the outstanding performance in safety and health, JEC was listed as one of the award-winning corporate organisations in the Occupational Safety and Health Excellence Awards in 2018. Organised by Occupational Safety and Health Council, the award aims to commend organisations for their active implementation of occupational safety and health initiatives and excellent performance over the years.

Zero injuries is not just a vision, but an ongoing initiative that requires collaborated efforts and commitment from management, employees as well as industry partners to maintain a safety and health culture as a socially responsible corporation.

2018年，怡和機器與其合資企業錄得在連續12個月內，每千名工人的意外率僅為1.51的安全統計數據。然而，我們並不能止步於此，只滿足於過往成績。為更進一步顯示決心，怡和機器成為香港首批簽署零傷亡願景的企業之一。零傷亡願景是一項由國際社會保障協會自2017年發起的全球運動。

在職業安全與健康方面，怡和機器成為2018卓越同行職安健大獎的得獎公司之一，傑出表現備受認同。卓越同行職安健大獎由職安健委員會頒發，旨在嘉許一眾成為楷模的公司，多年來一直與委員會攜手推廣職安健文化，並落實高標準的安全與健康工作措施。

零傷亡不只是一個願景，而是一項持續的倡議，需要管理層、員工和業界夥伴共同努力和承諾，保持怡和機器的職安健文化，貫徹履行社會責任企業的使命。





JEC Apprentice Awarded 2018 Outstanding Apprentice

怡和機器學徒獲選2018年傑出學徒

Cheung Chi Wing (top photo, back row, 1st from left), Air-conditioning Craft Apprentice from Maintenance & Renovation team was bestowed the 2018 Outstanding Apprentice by Hong Kong Vocational Training Council. He joined JEC in 2015 and completed his apprenticeship training in February this year. He was selected among 240 contestants from various sectors through a rigorous selection process.

Cheung Chi Wing was also given the opportunity to join a 7-day exchange tour to Abu Dhabi and Dubai along with other 15 outstanding apprentices in March. He visited local institutions, organisations and Masdar City, a planned low-carbon city in Abu Dhabi developed on the three pillars of economic, social and environmental sustainability, where the group explored pioneering transportation systems and sustainable building technologies.



▲ Masdar City
馬斯達爾城



▲ The group visited New York University Abu Dhabi.
交流團到訪紐約大學阿布扎比分校。

怡和機器保養及維修部冷氣學徒張志榮（最上圖，後排左一）在職業訓練局舉辦的2018年傑出學徒獎勵計劃中表現出色，從240多名來自不同專業領域的參加者中脫穎而出，獲選為傑出學徒。張志榮自2015年加入怡和機器，於今年2月完成學徒訓練。

此外，張志榮於三月時獲安排與其他15位傑出學徒，參加為期七天的交流團，前往阿布扎比及杜拜參觀當地機構、大學及阿布扎比低碳規劃城市馬斯達爾城。該城市以經濟、社區及環境可持續發展為基礎，交流團觀摩了領先創新的運輸系統和可持續發展建築技術。

JEC Granted as Happy Company 2019

怡和機器獲頒2019開心工作間標誌

JEC was recently granted the Happy Company logo in the 7th Happiness-at-Work Promotional Scheme, in recognition of its effort in building a happy workplace culture. Jointly organised by the Promoting Happiness Index Foundation and the Hong Kong Productivity Council, the scheme aims to encourage local companies' and organisations' creation of a happy workplace culture, improving the happiness level of Hong Kong people at work. Awardees must have implemented measures or activities in areas including Corporate Love, Corporate Insight, Corporate Fortitude and Corporate Engagement.



怡和機器早前在第七屆開心企業推廣計劃中獲頒發標誌，嘉許集團在營造快樂工作文化的努力。計劃由香港提升快樂指數基金和香港生產力促進局合辦，旨在鼓勵本港企業和機構承諾建立愉快的工作環境，提升員工的工作快樂水平。獲頒開心企業標誌的企業和機構，需要就企業關愛、企業智慧、企業韌力和企業動力的四大範疇中，推行相關政策和活動。

JDI's Solignum Bags Superbrands for Ten Consecutive Years

JDI旗下品牌Solignum連續十年膺超級品牌



Solignum, a leading wood preservative brand exclusively distributed by JDI, was once again awarded with Superbrands status in The Philippines. Being named Superbrands since 2009, Solignum was awarded an Emerald Trophy for the longest participation in Superbrands programme.

Solignum is a tried-and-tested timber expert brand of high-performance wood treatment products such as wood preservatives, soil termiticides, and timber decorative coatings.

JDI旗下獨家經銷的木材防腐劑品牌Solignum早前再度贏得菲律賓超級品牌美譽。Solignum自2009年起連續十年獲得此項殊榮，成為入選次數最多的品牌之一，更因而獲主辦機構頒發綠寶石獎，對其傑出表現予以肯定。

Solignum是專業護木品牌，提供一系列優質木材防腐劑、白蟻藥及木材裝飾塗料等產品，多年來備受用家推崇。



▲ JDI President Edwin Hernandez (front row, middle) and AVP for Construction Supplies Division Peachy Tiu (front row, left) received the trophy.
JDI總裁Edwin Hernandez（前排中）及建築產品部助理副總裁Peachy Tiu（前排左）接受獎座。

Transforming Learning Experience

培訓體驗新模式



E-learning



E-learning has been recognised as one of the popular learning modes these years as it fits with modern work styles, enabling learners to take modular training programmes at their own pace.

JEC has been offering a range of trainings for employees at different levels so as to equip them with the technical knowledge and soft skills required in their work. Recently, JEC has participated in the pilot launch of e-learning programmes by the Jardine Matheson Group ('the Group'). This new series of programmes utilises a mix of various learning modes including face to face modules, virtual training sessions as well as self-learning e-modules, to maximise effectiveness. Each programme will have around eight to ten modules covering various skills and mindsets for development.

The new series has four different programmes, namely Personal Effectiveness, Managing Self, Managing Others and Managing Managers. These programmes have been designed to be applicable to all employees within the Group, targeting employees at different levels performing different roles from personal contributors to the more complex work of experienced managers who are managing other managers.

電子學習近年成為廣泛流行的學習模式之一。此模式不但更切合現代工作方式所需，亦可讓學員按照自己的進度參與單元化培訓課程。

怡和機器一向為各階層的員工提供不同類型的培訓，以增進他們工作所需的技術知識和軟技巧。最近，怡和機器成為怡和集團（「集團」）新推出的電子培訓課程之首批用家，以促進員工的發展。此一系列的新課程採用了混合學習模式以提升效率，包括面對面單元、虛擬遙距培訓單元，以及電子自學單元。每個課程約有八至十個單元，涵蓋各種員工發展所需的技能和理念。

新系列設有四項不同的培訓課程，包括個人效能、自我管理、管理他人及管理經理層。課程專為擔任不同崗位及職級的員工設計，適用於怡和集團所有員工，包括獨立工作的員工，以至擔任更複雜工作的員工，如需管理其他經理的高級管理人員。

Supplemented with virtual sessions in between the e-learning modules, which learners may make use of the opportunity to clarify their understanding while trainers may reinforce key learning points. During these sessions, the interactions with the trainer and other learners will give more inspiration and confidence about the application of the skills. This mix of learning modes will let learners have the best of both worlds, while enjoying the benefits of learning whenever and wherever, yet still having the interpersonal touch through virtual sessions. The programme also provides a networking opportunity for learners from different companies of the Group to get to know each other, similar to the classroom sessions that had been offered.

When designing the key learning in this series, training professionals within the Group sat down together and determined the characteristics and required skill sets of the 4 different roles. Despite the diverse businesses, common skill sets were easily identified but the critical next step was to consider which ones are the key for success. The curriculum is the fruit of rounds of discussions and debates with consideration about the varying business needs of the different units; yet these skill sets also represent the 'DNA' of a Jardine Matheson employees would possess.

此外，課程在電子培訓單元之間加插虛擬遙距單元，參加者可藉此更明確理解課程內容，也讓培訓導師鞏固培訓核心內容。學員也可透過與培訓導師和其他學員的互動，得到更多技能應用的靈感和信心。這種混合學習模式，不單讓學員享受隨時隨地學習的好處，更可通過虛擬遙距單元，保持人際溝通，可謂兩全其美。這種培訓體驗也為來自集團不同崗位的員工提供交流機會，讓他們相互了解，相當接近課堂培訓形式的效果。

培訓系列的核心內容結合了來自集團不同業務的培訓專業人員之意見，逐步確立四大課程中各自的職能特點和所需培訓技能。儘管集團業務多元化，當中也有不少通用技能，然而最關鍵的，是找出其關鍵成功要素。此課程內容是多輪商討和辯論的成果，不但考慮到各種業務性質的特定需求，也代表了集團員工所共同擁有的「DNA」。



Walk Up Jardine House 2019

2019齊步上怡廈

JEC participated in the annual fundraising event Walk Up Jardine House on 28 April as one of the major sponsors. Ten JEC colleagues participated in the team relay race as two teams to conquer the 49-storey Jardine House, of which the men's team won the 2nd runner up in Jardine Matheson Group Category.

This year the event raised HK\$3.4 million for MINDSET, a registered charity established by the Jardine Matheson Group with an aim to promote the awareness about mental health.

怡和機器於4月28日參與了一年一度的齊步上怡廈活動。作為主要贊助商之一，怡和機器派出10位同事組成兩隊參加團體接力賽，挑戰樓高49層的怡和大廈，最終男子隊於怡和集團組別獲得季軍殊榮。

今年活動為思健籌得合共340萬港元善款。思健是由怡和集團成立的註冊慈善組織，以提倡精神健康為目標。



JEC Engaged in Flower Show 2019 Green Recycling Day

怡和機器參與2019香港花卉展覽環保回收日

To support government's green measures for environmental protection in its large-scale public events, JEC took part in LCSD's green recycling day upon the conclusion of the Hong Kong Flower Show 2019.

JEC volunteers assisted in separating and collecting flowers as well as other reusable or recyclable materials at Victoria Park on 25 March. About 28,000 plants were distributed to schools, environmental and non-government organisations for replanting, while 5,000 pots of the theme flower Chinese Hibiscus were given to public. Wilted plants collected were also delivered to Ngau Tam Mei Animal Waste Composting Plant operated by JEC for recycling into organic compost.

為響應政府的大型活動減廢措施，怡和機器在2019香港花卉展覽結束後，參與由康樂文化事務署舉辦的環保回收日。

3月25日，怡和機器義工前往花展會場維多利亞公園協助分類、回收展品及其他可重用或循環再造的物料。大會將約28,000盆植物送給學校、綠色團體及非政府機構重新種植，又派發逾5,000盆大紅花給市民大眾，而凋謝的植物則送往由怡和機器負責營運的牛潭尾動物廢料堆肥廠，轉化成有機肥料，循環再用。



JEC Singapore Brings Joy to Orphanage in Indonesia

新加坡怡和機器為印尼孤兒送歡樂

JEC Singapore and Bethesda Community came together to organise a corporate social responsibility activity for an orphanage in Batam, Indonesia. Held at the Radisson Golf & Convention Centre in Batam, the volunteer team spent two fruitful days with the children sharing love and care with games and performances.



新加坡怡和機器與恩群福音堂合辦企業社會責任活動，到印尼巴淡島為一班孤兒送上歡樂。活動於巴淡島高爾夫及會議中心麗筠酒店舉行，義工隊與孩子們一同玩遊戲及表演，共度了愉快的兩天。

JDI Reaches Out to Schools Affected by Super Typhoon Mangkhut

JDI向受超強颱風山竹破壞學校伸出援手

JDI recently made visits to schools devastated by super typhoon Mangkhut in 2018 in Northern Luzon areas and donated its elastomeric sealant, Sureseal for roof repairs.

JDI早前到訪呂宋島北部於2018年受超強颱風山竹破壞的學校，並捐贈彈性密封膠Sureseal，協助屋頂復修工程。



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