



Building Blocks for New Era Healthcare

P.3 CEO's Message 行政總裁的話

P.4 Feature Story 特寫

Building Blocks for New Era Healthcare
構建新時代醫療保健

P.10 News 簡訊

JEC Turns Food Waste into Energy in
O · PARK2 Project
怡和機器參與O · PARK2項目 化廚餘為能

JEC Takes Part in Upgrading
Shek Wu Hui Sewage Treatment Works
怡和機器參與石湖墟污水處理廠改善計劃

Krungsri Rama III Tower Project
泰國大城銀行總部拉瑪三世大廈項目

Power Upgrade for
Bumrungrad International Hospital
泰國康民醫院電力系統優化工程

P.13
District Cooling System Customer Station Works
區域供冷系統用戶換熱站工程

JDI Launches Online Store
JDI 開設網上商店

P.14
JEC Customer Cocktail Reception 2019
怡和機器2019年度客戶酒會

P.16 Environmental, Health & Safety 環境、健康與安全

2019 EHS Performance in Review and
Outlook
2019年環境、健康與安全表現回顧與展望



P.18 Training & Development 培訓及發展

Embracing Technology with Collaborative
Efforts
協力共迎科技新浪潮

P.20 Achievements 獎項成就

Trane Hong Kong Honoured with
The Association of Energy Engineers
Award 2019
特靈香港榮獲美國能源工程師學會
2019年度大獎

Safety Recognition for WENT
Landfill Power Generation Project
新界西堆填區沼氣發電項目獲安全嘉許狀

P.21 Community Care 關懷社區

Eco Tour to SENT Landfill and
WEEE · PARK
新界東南堆填區及WEEE · PARK綠色之旅

JEC Volunteers Enjoys Archery Fun with
Children
怡和機器義工與兒童共享射箭樂

JEC Shares Joy through Food Donation
怡和機器惜食傳福

P.22
JEC Thailand Jardine Jit Arsa 2019
泰國怡和機器Jardine Jit Arsa 2019

JDI Partners with Go Negosyo Foundation
JDI與Go Negosyo慈善基金會共襄善舉

JDI Continues Solignum University Journey
JDI延續Solignum University計劃

CEO'S MESSAGE 行政總裁的話

The exponential changes in technology continue to bring opportunities for the development of healthcare sector across Asia, as many countries and cities in the region are experiencing a demographic shift and socio-economic growth that advocate a more value-based health system. As an active player in the sector, JEC has been delivering world class healthcare facilities for public and private institutions across the region. This issue introduces how JEC helps communities tackle the challenges through our works in this sector.

Please enjoy your read. May I also take this opportunity to wish you a Merry Christmas and a Happy New Year!

科技發展日新月異，持續為亞洲的醫療保健行業發展帶來機遇。正值區內多個國家及城市正經歷人口結構變化和社會經濟增長，帶動了大眾對質素為本的醫療系統之需求。作為業界的積極參與者，怡和機器致力為區內的公共及私人醫療機構，提供世界級的醫療保健設施。今期雜誌會介紹怡和機器如何透過該領域的工程項目，協助社區應對挑戰。

希望大家喜歡今期的內容。在此，祝大家聖誕快樂及新年進步！

Kevin O'Brien
歐嘉榮



Building Blocks for New Era Healthcare 構建新時代醫療保健

Healthcare is one of the most thriving sectors in the Asia-Pacific region on account of both demographic changes and socio-economic growth. At the same time, advances in digital technology are driving innovative healthcare solutions and the establishment of smart hospitals, as well as developments in medical hardware; all these aim to deliver healthcare to the public in a less expensive, more efficient, and more accessible manner.

隨着人口變化和社會經濟增長，醫療保健成為亞太地區發展最蓬勃的行業之一。同時，數碼科技的不斷進步，也推動了創新醫療保健技術發展、智慧醫院的設立，以及醫療硬件的研發，為大眾帶來低成本、更高效率及更普及的支援。



In 2019, the healthcare market in the Asia-Pacific region is expected to grow by 7.2%.

亞太區的醫療保健市場2019年預計將有

7.2% creating high growth opportunities estimated at around US\$490 billion.

的增長，從而創造約4,900億美元的增長機遇。

Source 資料來源：Research and Markets

The healthcare sector in the Asia-Pacific region is expected to grow by 7.2% in 2019, supported by increased demand for technology, as well as conventional growth drivers, such as governmental policy support. These emerging trends are in turn creating high growth opportunities estimated at around US\$490 billion in 2019. In 2018, life expectancy at birth in the Asia-Pacific region averaged 75.1 years, a gain of almost six years since 2000. Within the region, places with higher GDP per capita such as Hong Kong and Singapore have a higher total life expectancy in excess of 80 years. One effect of greater life expectancy and higher living standards is that there is an increasing demand for premium healthcare services and enhanced coverage, in particular among the affluent elderly group.

The centre of innovation and engineering for medical technology and associated hardware is shifting towards Asia; and Singapore, for one, has made massive investments to attract biotechnology companies to its shores in a bid to create a new global hub. Taken together, all these factors mean exponential growth for healthcare development in the foreseeable future, and a concomitant need for improvements in universal healthcare systems and in particular the comprehensive upgrading of hardware facilities.

JEC is proactive in its support of healthcare sector developments, as it seeks to help communities in its operating regions, including Singapore, Thailand, Myanmar, and Hong Kong deal with various challenges.

因應醫療科技需求日增，加上常規增長因素如政策帶動下，亞太區的醫療保健行業於2019年預計可錄得7.2%增長，從而創造約4,900億美元的增長機遇。2018年亞太區平均初生嬰兒預期壽命為75.1歲，比2000年增加了接近6年壽命；而區內人均國民生產總值較高的國家如香港和新加坡，預期總平均壽命更超過80歲。更長的預期人均壽命和更高的生活水平都預視了社會，特別是富裕年長人士對優質醫療服務需求及覆蓋範圍將持續增長。

事實上，近年來的醫療科技及相關硬件之創新及工程中心，正在轉移至亞洲，一些國家如新加坡都加大投資力度，吸引生物科技公司前來發展，以建立新的全球樞紐。綜合以上因素，這意味着在可預見的未來，醫療保健行業的發展將急劇增長；隨之而來的，是對醫療保健系統，尤其是硬件設施的需求全面升級。

在此範疇上，怡和機器積極支持醫療保健行業發展，致力協助其業務所在地之社區，包括新加坡、泰國、緬甸，以及香港，應對各種挑戰。

Singapore 新加坡

The Singapore Government continuously works to shape the future of healthcare through innovation and digital technology. Supervised by the Ministry of Health, public hospitals account for more than four-fifths of the hospital beds in Singapore. Smart healthcare infrastructure has been developed to help public healthcare facilities harness technology as effectively as possible and make decisions driven by the data. Under this framework, hospitals and other facilities in the future will be able to make use of data to efficiently deploy its resources and other technologies to enhance service delivery.

新加坡政府近年持續透過創新和善用數碼科技，塑造醫療保健發展藍圖。在衛生部的監督下，公立醫院現時佔整體醫院床位逾五分之四，並積極開發智能醫療基建，以協助公共醫療設施有效駕馭最新科技，及進行數據主導的決策。在此框架下，未來的醫院和醫療設施將善用數據分析來有效地調配資源，並以其他科技提升服務質素。

The public health system consists of three clusters – SingHealth, National Healthcare Group and National University Health System. Almost all public construction work for hospitals, medical centres and related buildings are led by the Government. A 20-year Master Plan is in place to redevelop the Singapore General Hospital (SGH) Campus, a member of SingHealth. According to the Master Plan, 60% of the campus will be dedicated to patient care and 40% to research and education. The development of the SGH Campus has been divided into two phases. While many of the buildings in Phase 1 have already been completed or are under construction, a number of projects are yet to be undertaken. Phase 2 will see the redevelopment of the entire existing SGH complex, including the wards and inpatient services, as well as specialist services, the Singapore National Eye Centre and the National Neuroscience Institute.

For its part, JEC Singapore had recently completed the air-conditioning and mechanical ventilation (ACMV) works at the National Heart Centre, another member of SingHealth. The JEC Singapore project team is currently working on the ACMV works for the National Skin Centre of the National Healthcare Group that targets to achieve Green Mark Platinum certification for Healthcare Facilities (version 1.0), as well as mechanical and electrical facility management for Assisi Hospice.

With the current redevelopment work at SGH, JEC Singapore is poised to catch the opportune time for the development of the mooted projects. Under the Building Construction Authority's policy to incorporate Design for Manufacturing and Assembly (DfMA) in construction works, JEC Singapore is leveraging on the expertise of the technique, namely, the pre-fabricated common services racks, into the current National Skin Centre project. As with most government tenders that require contractors and vendors with relevant experience, the wider adoption of DfMA in government projects put JEC Singapore in good stead, being one the few contractors that are able to perform such works.

現時新加坡公共醫療系統由三個部分組成——新加坡保健服務（新保健）、國立保健集團，以及國立大學醫學組織。幾乎所有公共醫院、醫療中心和有關建築物的建築工程均由政府主導，當中包括一項長達20年之規劃，為新保健旗下的新加坡綜合醫院（SGH）進行重建，計劃中院址60%的面積將用於病人護理，40%用於研究和教育。整個重建計劃分為兩個階段，首階段的部分建築物經已完工，但仍有不少項目工程仍未展開；第二階段將重建整棟SGH綜合大樓，包括病房、門診服務、專科服務、新加坡國家眼科中心及國家神經科學研究所。

就新加坡怡和機器而言，其項目團隊為新保健另一成員機構國家心臟中心完成了空調及機械通風工程，並現正為國家皮膚中心進行此項工程，以取得醫療保健設施（1.0版本）的綠色標誌鉑金認證為目標。項目團隊同時亦為阿西西臨終關懷醫院進行機電設施管理。

隨着SGH重建計劃展開，新加坡怡和機器已準備好參與擬定工程項目。為適切配合新加坡建設局將可供製造和裝配設計（DfMA）納入建築工程的新政策，新加坡怡和機器利用在該領域的專長，將預製通用服務技術應用於最新的國家皮膚中心項目。由於大多數政府工程招標時要求承辦商和供應商具有相關經驗，新加坡怡和機器是少數政府認可DfMA技術承辦商之一，盡佔先機。



▶ Assisi Hospice, Singapore
新加坡阿西西臨終關懷醫院

Thailand and Myanmar 泰國及緬甸

As a rising healthcare centre among its neighbouring countries including Cambodia, Laos, Myanmar and Vietnam driven by strong growth over the past few years, Thailand has been actively strengthening its position in the region. The increase in demand for healthcare services in Thailand is essentially due to the change in demographics, including ageing population, continuing urbanisation and the growth of the middle classes. State hospitals are found across the country, albeit with limitations in some place. The Government's healthcare policy aims to increase the number of beds and new hospitals in second-tier cities across Thailand.

作為區內新崛起的醫療保健中心，泰國近年在周邊國家包括柬埔寨、老撾、緬甸及越南的強勁增長帶動下，進一步鞏固其在區內的地位。泰國醫療保健行業的增長，主要源於人口結構轉變，包括社會老化、持續城市化和中產階級之增長。雖然泰國全國都設有國立醫院，但部分地區仍有所不足，故政府醫療保健政策旨在增加二線城市的床位和新醫院的數量。



With its specialised knowledge and expertise in building management system and automated building system integration, hospital services and facilities management, JEC Thailand has built a solid portfolio in healthcare sector over the years. The project team has worked on more than 1,400 beds with a total floor area of over 3,500,000 sq ft in recent years, including leading public and private hospitals in the country such as Samitivej Sukhumvit Hospital (Photo 2), Siriraj Hospital (Photo 1) and Bumrungrad International Hospital, offering an array of works ranging from building automation system to mechanical and electrical system installation and upgrade works. JEC Thailand is also capable of providing integrated solutions such as supply, installation, testing and commissioning of air-conditioning, ventilation and building management systems, sanitary and fire protection system, as well as electrical and communication system, as in its recent project Technical Project Planning (TPP) Healthcare International Projects (Photo 3 and 4) provisionally slated for 2020, of which the chiller plant will incorporate the latest energy-saving features.

多年來，泰國怡和機器憑藉在整合式樓宇管理及自動化系統、醫院服務及設施管理方面的專業知識和專長，在醫療保健領域建立起雄厚實力，其中不少工程項目均為頂尖的公立和私立醫療機構，近年所處理的項目累計超過1,400張床位，總樓面面積逾3,500,000平方呎，包括Samitivej Sukhumvit醫院（圖2），Siriraj醫院（圖1）及Bumrungrad國際醫院，工程涵蓋樓宇自動化系統以至機電系統安裝和升級。泰國怡和機器同時擅於提供整合式解決方案，例如冷氣、通風和樓宇管理系統、衛生和消防保安系統，以及電氣和通訊系統的供應、安裝、測試和調試；如暫定於2020年進行的Technical Project Planning（TPP）國際醫療保健項目（圖3及4）中採用最新節能技術的水冷機組。

Adjacent to Thailand, Myanmar targets to strengthen the country's healthcare system and improve the well-being of its people with the National Health Plan from 2017 to 2021.

The Plan paves the way towards universal health coverage, aiming to extend accessibility to a basic essential package of health services to the entire population by 2020, while enhancing the country's financial stability. The basic package emphasises the critical role of primary health care and the delivery of essential services and interventions at township level and below, starting within the community. To this end, JEC Myanmar is working on its debut project by supply, installation, testing and commissioning of fire protection, air-conditioning, ventilation and building management systems for Myanmar Asia Royal Hospital Extension Project.



至於毗鄰泰國的緬甸，目標是透過落實2017年至2021年的《國家衛生計劃》，提升該國的醫療體系和改善人民的福祉。

該計劃為邁向全民醫療保健的重要一步，目標於2020年前為全民提供基本保健服務的同時，加強國家的財務穩定性。該基本方案着重基本醫療保障，從社區內部入手，在鄉鎮或其他地區提供基本保健和醫療介入服務。為此，緬甸怡和機器正在為首個項目——緬甸亞洲皇家醫院擴建項目提供消防、冷氣、通風及建築物管理系統的供應、安裝、測試和調試服務。

◀ Myanmar Asia Royal Hospital
緬甸亞洲皇家醫院

Hong Kong 香港

Hong Kong's healthcare system runs on a dual-track basis encompassing the public and the private sectors. It was ranked the most efficient in the world among the 56 economies covered by the Bloomberg Health Care Efficiency Index published in 2018. Notwithstanding this, it faces some formidable challenges, including an ageing population and a burgeoning middle-class, which has led to the creation of higher expectations and a surging demand for better services, calling a change to the current healthcare system.

For many decades, JEC has provided comprehensive solutions to healthcare institutions in Hong Kong, spanning design, supply and installation of building services (electrical and mechanical system, security and access control system, fire, HVAC and building furnishing elements) and clinical support facilities (pneumatic tube system, laundry equipment, patient hoist system and filtration system). Projects in recent years include provision of gondola units for building maintenance, integrated security systems and fire services system at Hong Kong Children's Hospital, award-winning energy-saving chiller unit at Tuen Mun Hospital, as well as laundry batch washing system for Butterfly Beach Laundry that optimises water and power consumption with latest technology.

香港的醫療體系以公立和私立雙軌運行，在2018年發布的《彭博醫療效率指數》所涵蓋的56個經濟體中，獲評為全球最高效率。儘管如此，香港仍面臨一些嚴峻挑戰，包括人口老化和中產階級的迅速崛起、公眾對醫療服務的期望日益增加，以及對高質素服務的殷切需求，為醫療系統帶來新一輪轉變。

數十年來，怡和機器一直致力為香港的醫療機構提供全面解決方案，當中涵蓋設計、供應和安裝各類建築物服務（機電系統、保安和出入管理系統、消防、空調及通風系統，及建築配件），以及診症設施（氣送管系統、洗衣設備、病人升降裝置及過濾系統）。當中較近期的項目包括為香港兒童醫院提供用於樓宇保養的吊船組件、整合式保安系統和消防系統、屯門醫院節能水冷裝置，以及於蝴蝶灘洗衣場利用先進技術的大型洗衣系統，減省水及電力消耗。

2018 Healthcare Efficiency Ranking 2018 醫療效率排名



Source : Bloomberg Health Care Efficiency Index
資料來源：彭博醫療效率指數

With the first 10-year Hospital Development Plan under Hospital Authority in full swing, and the second 10-year Plan in the pipeline which involves a total of 19 projects, JEC is well positioned to provide specialised technology and expertise for the growth opportunities in decades ahead.

Going forward, with its commitment to the region and its staff of skilled professionals, JEC will continue to support the healthcare industry in dealing with the challenges ahead by delivering world-class healthcare facilities in the Asia-Pacific region.

因應醫院管理局全力推進的第一個10年醫院發展計劃，以及正在籌備中的第二個10年醫院發展計劃內所涉及的19個項目，怡和機器已準備就緒，為醫療行業發展機遇提供專門技術和專業知識。

展望未來，怡和機器憑藉對所在地區的承諾及熟練的專業團隊，將繼續於亞太區提供世界級的醫療保健設施，協助社會應對未來的種種挑戰。



▲ Butterfly Beach Laundry, Hong Kong
香港蝴蝶灘洗衣場

JEC Turns Food Waste into Energy in O · PARK2 Project 怡和機器參與O · PARK2項目 化廚餘為能

JEC and its joint venture partners were recently awarded the contract from the Environmental Protection Department (EPD) to design, build and operate O · PARK2 (Organic Resources Recovery Centre Phase 2).

Located at Sha Ling in North District, O · PARK2 will adopt anaerobic digestion and composting technologies to treat food waste from nearby districts including Sheung Shui, Fanling, Yuen Long and Shatin. It has a capacity to treat 300 tonnes of food waste a day and produce 30,000m³ of biogas for power generation. In addition to providing energy and heat for its own facilities, the surplus biogas will be used for production of town gas or electricity to be fed into the power grids of the power companies.

Furthermore, O · PARK2 will produce about 10,000 tonnes of compost annually, of which some will be reserved for use by government departments, farmers and members of the public for free. It is expected to be commissioned in 2022.

怡和機器以合夥聯營方式獲得環境保護署的合約，負責O · PARK2有機資源回收中心二期的設計、建造和營運。

O · PARK2位於北區沙嶺，利用厭氧分解及堆肥等技術，每天可處理 300 公噸來自上水、粉嶺、元朗及沙田等附近地區的廚餘，同時亦可生產約 30,000 立方米生物氣作發電用途。除供應中心設施的電力及熱能需要外，剩餘的生物氣將用作生產煤氣，或發電後把電力輸送至電力公司。

此外，O · PARK2每年可生產約10,000公噸堆肥，並預留部分給政府部門、農戶和市民免費使用。中心預計於2022年啟用。



▲ Dr Samuel Chui, JP (2nd from left), Assistant Director of EPD and Kevin O'Brien (2nd from right), Chief Executive of JEC exchanged contract during the signing ceremony on 5 September. 環保署助理署長徐浩光博士（左二）及怡和機器行政總裁歐嘉榮（右二）於9月5日代表雙方簽署合約。

JEC Takes Part in Upgrading Shek Wu Hui Sewage Treatment Works 怡和機器參與石湖墟污水處理廠改善計劃

JEC Hong Kong was recently awarded a contract from Drainage Services Department for the Main Works Stage 1 of Shek Wu Hui Effluent Polishing Plant. Operating for more than 30 years, the project aims to increase the treatment capacity which is approaching its maximum design capacity of 93,000m³/day with modern technologies.

The works include installation works and testing and commissioning of the electrical and mechanical sludge treatment facilities (including sludge dewatering building, combined heat and power building, sludge digesters, biogas holding tanks etc.); ultraviolet system and associated pumping station and the associated systems. To enhance its environmental performance, JEC will also be the first to install thermal hydrolysis pre-treatment system and sidestream treatment facilities in Hong Kong.

The improvement scheme of Stage 1 will increase the treatment capacity by 35,000m³/day, and eventually increase to 190,000m³/day upon completion of all stages. The project has commenced in late October and is expected to be completed in 2024.

怡和機器早前獲得渠務署石湖墟淨水設施——主體工程第一階段——側流處理設施及污泥處理設施的機電工程合約，為經已運作超過30年的污水廠提升污水處理能力，並以嶄新技術解決廠房即將到達每日93,000立方米的設計處理能力上限的問題。

工程範圍包括污泥處理設施（包括污泥脫水大樓、熱電聯發電大樓、污泥消化器、生物氣貯存缸等）、紫外線消毒系統及其相關的泵房的機電安裝工程。其中怡和機器將引入環保技術，首次於香港安裝熱解預處理系統及側流處理設施。

此階段的工程將為處理廠增加每日35,000立方米的處理量；整體改善計劃工程完成後，污水廠每日處理量可達190,000立方米。項目已於2019年10月底展開，預計於2024年完成。



▲ (From left) JEC representatives Alex Law, General Manager of Electrical & Mechanical Contracting, Penn Yeung, Executive Director and Chief Operating Officer and Kevin O'Brien, Chief Executive attended the contract signing ceremony with Kelvin Lo, Director of Drainage Services and Walter Leung, Chief Engineer/ Sewerage Projects of DSD on 7 November. (左起) 怡和機器代表機電合約工程總經理羅志偉、執行董事兼營運總監楊志強及行政總裁歐嘉榮與渠務署署長盧國華及總工程師/污水處理梁泳源於11月7日出席簽約儀式。



Krungsri Rama III Tower Project 泰國大城銀行總部拉瑪三世大廈項目

JEC Thailand secured a contract to supply, install, test and commission sanitary & fire protection system, electrical & communication system, and air conditioning & ventilation system at Krungsri Rama III Tower, the headquarters of Bank of Ayudhya in Bangkok.

Located on Rama III Road with a total area of 82,000 sqm, the 22-storey tower comprises of 2 basements, auditorium, learning centre, as well as a pavilion in Thai style. The project is expected to be completed in February 2022.



泰 國怡和機器獲得合約，為大城銀行位於曼谷的總部拉瑪三世大廈供應、安裝、測試和調試衛生及消防系統、電氣及通訊系統，以及空調和通風系統。

大廈位於曼谷拉瑪三世路，佔地82,000平方米，樓高22層，並設有兩層地庫、演講廳、教學中心和一座泰式亭台。工程預計於2022年2月完成。



Power Upgrade for Bumrungrad International Hospital 泰國康民醫院電力系統優化工程

JEC Thailand secured a contract to upgrade the generator room in Bumrungrad International Hospital in Bangkok, the first non-US hospital to earn an Excellence designation from the Global Healthcare Accreditation (GHA) Program. The project team will supply and install 2 new generator sets to increase current power capacity from 2,000 kVA to 2,500 kVA and replace the existing transformer. The project is expected to be completed in May 2020.



泰 國怡和機器獲得合約，為曼谷康民醫院優化發電機房設施。康民醫院是首間美國本土以外榮獲全球醫療衛生認證（GHA）卓越級別的醫療機構，是次泰國項目團隊負責供應及安裝兩組新發電機，將發電量由目前的2,000 kVA提升至2,500 kVA，並更換現有的變壓器。工程預計於2020年5月完成。



District Cooling System Customer Station Works 區域供冷系統用戶換熱站工程

JEC Singapore has secured a contract for supply, installing and commissioning of the district cooling system (DCS) customer station works for Razer Inc, a global computer gaming hardware company. The project connects the interface between DCS and the cooling system of the 7-storey integrated office building of Razer Inc at One-North Development. The works include a range of facilities including plate heat exchanger, building management system and interfacing cable. The project is expected to be completed in 2020.



新 加坡怡和機器獲得電子遊戲周邊設備國際企業雷蛇之合約，為其位於緯壹科技城、樓高7層之辦公大樓供應、安裝及調試區域供冷系統用戶換熱站。此項工程將區域供冷系統與大樓的供冷系統接駁，並安裝相關設施包括板式熱交換器、樓宇管理系統及電纜接口。項目預計將於2020年完成。



JDI Launches Online Store JDI 開設網上商店

JDI made another step in going digital as it officially launched its online store. An array of construction supplies products is available on the platform including Solignum wood preservatives, BASF waterproofing products, Woodshine furniture polish and many more construction and home pest products. "We are very happy with the positive response from the market as we see our followers and sales has been increasing ever since its launch", shared Jazzcer Macabanti, Brand Assistant and person in-charge of Digital Sales.

JDI早前推出官方網上商店，售賣旗下全線建築產品包括 Solignum木材防護劑、BASF防水塗料，Woodshine傢俬光蠟及其他建築及家居防蟲產品等，進一步實踐業務數碼化。品牌助理兼數碼營銷負責人Jazzcer Macabanti表示：「我們很高興市場對網店反應良好，追蹤人數及營業額一直增加。」



<https://www.lazada.com.ph/shop/jardine-distribution-inc/>



JEC Customer Cocktail Reception 2019 怡和機器2019年度客戶酒會

The JEC Customer Cocktail Reception was held at the Owners Box of Happy Valley Racecourse, Hong Kong on 17 October. Themed "Think Sustainably • Act Responsibly", more than 220 guests and JEC staff mingled at the annual occasion.

怡和機器周年客戶酒會於10月17日假香港跑馬地馬場馬主廂房圓滿舉行，本年度以「Think Sustainably • Act Responsibly」為主題，雲集超過220名賓客及同事共聚，場面熱鬧。



2019 EHS Performance in Review and Outlook

2019年環境、健康與安全表現回顧與展望

Most of JEC's business unavoidably involves work at construction sites, which remains a high risk area with chronic shortage of skilled labour particularly in Hong Kong. While risks cannot be completely eliminated, JEC strives to raise safety level substantially above standard and to better equip the staff to tackle the challenges.

In 2018, JEC attained Group Safety Index of 1.51/1,000, slightly above the set target of 1.5. As an organisation that places safety at utmost priority and seeks continuous improvement, we saw rooms for improvement, especially on the identification and prevention of safety hazards, notably with material handling process which was the major issue in 2018. To this end, a set of relevant measures were taken to tackle the issue.

For 2019, we recorded a great improvement in the number of cases and safety index. Yet, we cannot be complacent; we must strengthen our vigilance and provision of necessary management tools and skills to pursue a culture of zero injury.

JEC values occupational safety and is committed to ensure the risks at workplace are properly managed through compliance with local legislation, observing in-house safety rules, enhancement of reporting system, as well as health and safety awareness training for staff and workers.

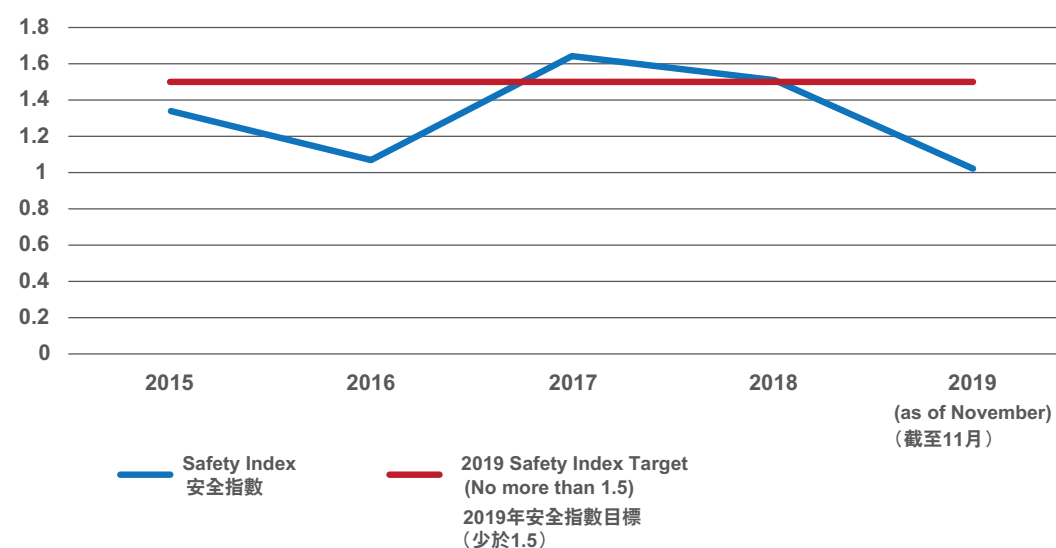
怡和機器不少業務都涉及風險較高的建築工地作業，同時更要面對技術人手長期短缺的問題，這情形尤以香港為甚。儘管工地風險難以完全消除，怡和機器一直以優於標準的安全水平為目標，並為員工提供所需裝備以應對挑戰。

在2018年，怡和機器集團的安全指數為1.51/1,000，略高於預設為1.5之目標。作為一間置安全於首位並不斷追求進步的機構，我們注意到在識別和預防安全隱患，尤其是材料處理過程方面仍有進步空間，並作出了相關的改善措施，對症下藥。

經過一年的努力，2019年度的相關事故和安全指數均錄得顯著改善。但是，我們不能安於現狀，必須繼續加強警惕，提供必要的管理工具及技術，以零傷亡為最終目標。

怡和機器重視職業安全，同時致力於減低工作場所的風險，包括遵守法規、內部安全規則、改善通報機制，以及加強對員工和工人的健康和安全意識培訓。

JEC Group Safety Index (2015 - 2019)
怡和機器集團安全指數 (2015至2019年)



JEC

Shaping a Safety Culture with
INNOVATION!

JEC EHS Week 2019
2019 環保、健康及安全週

Date: 8 – 12 July 2019
日期：2019年7月8至12日

Theme: Innovate for Safety
主題：安全・創新

Programme 節目表

8 – 10/7 (Mon - Wed)	Management Site Visit & Experience Sharing with Subcontractors 管理層視察工地及與分包商分享經驗
8 & 10/7 (Mon & Wed)	Green Lunch & Learn: Eco-Enzyme Workshop 綠色午餐學習會：製作環保酵素
9 – 10/7 (Tue - Wed)	Safety Experience Training 安全體驗訓練
11/7 (Thu)	Management Workshop 管理層工作坊
12/7 (Fri)	Subcontractors Forum & Exhibition 分包商聚會及展覽
8/7 – 30/8 (Mon - Sat)	Health Screening 健康檢查

Other Activities 其他活動

June – July	"Build a Safe Future of Work" Advocacy Contest 「安全創未來」宣傳創作比賽
July – August	Food Donation 食物大募集

Stay tuned for more activity details!
更多活動詳情，請密切留意稍後公佈！



Apart from safety, JEC has also put a considerable effort in environmental aspect to achieve sustainable development. The company is committed to and remains fully compliant with environmental legislations across operating locations.

Themed "Innovate for Safety", the annual group-wide Environmental, Health & Safety (EHS) Week this year organised a range of activities to drive continuous improvement in safety performance and sustainable safety culture through innovation. This year, Ir Cheng Ting-ning, Albert, Executive Director of Construction Industry Council was invited as the guest speaker of Management Safety Workshop. He shared his insights and experience in promoting "DfMA x Safety", a latest technology that can reduce installation work at job sites, at the same time providing a safer working environment for staff.

It takes everyone's support and joint effort in fostering a strong EHS culture. With our experience, knowledge and concerted efforts, JEC is committed to go an extra mile as a socially responsible corporation.

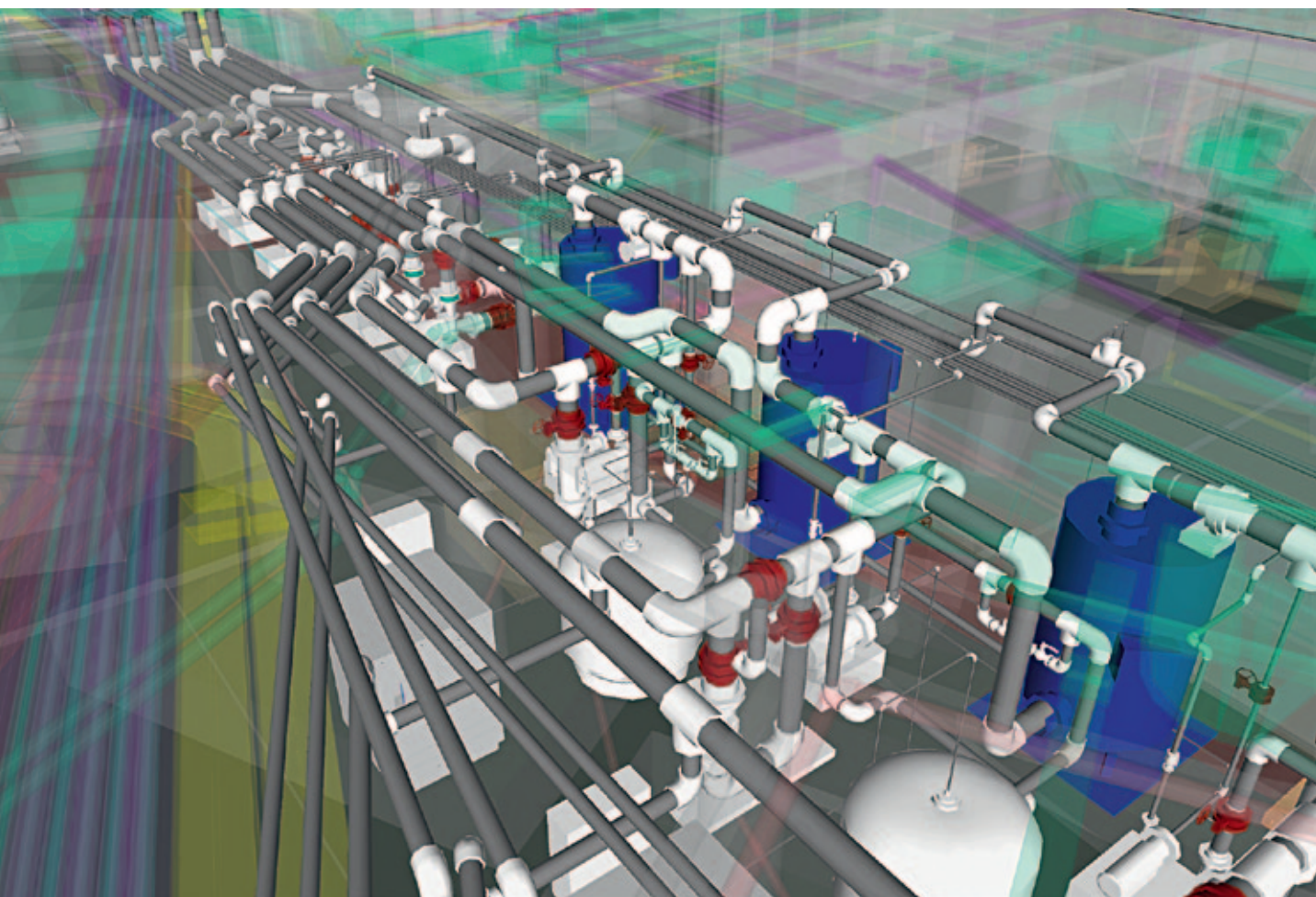
除了安全外，怡和機器亦在環境方面投入相當資源，以實現可持續發展，並恪守各個運營地區的環境法規。

此外，今年集團的環境、健康及安全周以「安全創新」為主題，舉辦了一系列活動，透過創新不斷改善安全表現，並實現可持續的安全文化。今年，建造業議會執行總監鄭定寧應邀擔任安全管理工作坊的講者，分享推廣「DfMA x 安全」的觀點和經驗；DfMA是一項能夠減少工地現場安裝工作的最新技術，可有效地為員工提供更安全的工作環境。

要持續發展環境、健康及安全文化，有賴每位工作人員的支持和共同實踐。怡和機器將繼續憑藉經驗、知識和同心協力，做到精益求精，擔當負責任企業的角色。

Embracing Technology with Collaborative Efforts

協力共迎科技新浪潮



Building Information Modeling (BIM) has been widely adopted by the industry to facilitate the sharing of information about a facility in various aspects, including the dimensions, elevations, sections, capacity, properties, etc; enabling various professionals involved in the different project phases to access to a single shared model and enhancing data accuracy.

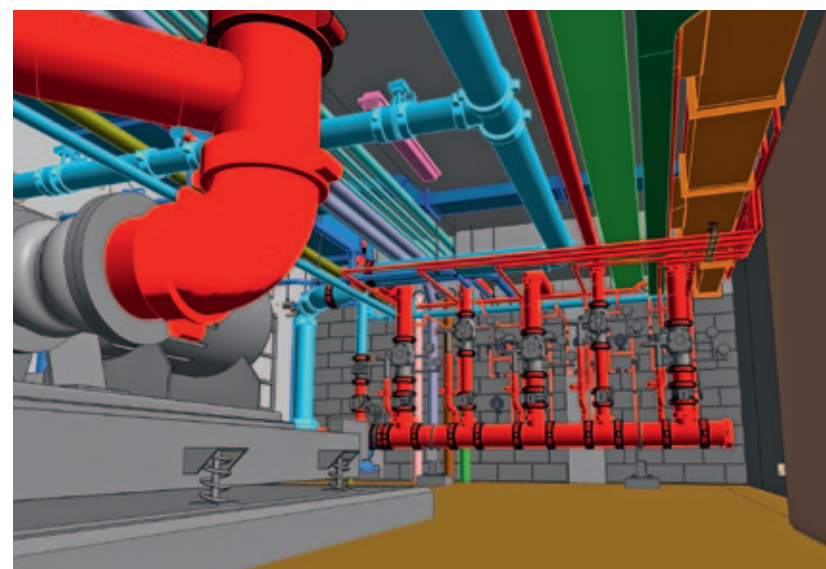
JEC is also keen on deploying the technology to better serve its customers. Back in 2013, JEC Thailand began moving its staff away from the traditional 2D drawing; and became one of the first few contractors adopting BIM technology in local projects. To centralise relevant resources and specialise the expertise, a BIM Centre was established as a pioneer of the adoption of the technology within JEC. There were only 3 members in the initial setup of this BIM Centre, now the team had expanded to 17 members.

近年，建築信息模型（BIM）廣受業界採用，藉此幫助工程項目各方面的資訊分享，包括尺寸、高度、截面、容量和特性等，令參與不同項目階段的專業人員都在單一共同平台交流訊息，增加數據的準確度。

怡和機器亦積極利用BIM技術，為客戶帶來更優質的服務。早在2013年，泰國怡和機器已開始棄用傳統平面繪圖，成為當地最早採用BIM技術的承建商之一。此外，為集中相關資源及步向專業化，泰國怡和機器成立了BIM中心，成為集團內採用相關技術的先驅。BIM中心的團隊亦由最初的3人增至現時的17人。

The JEC Thailand BIM Centre produces shop drawings for their site projects that relieves drawing workload on-site; it also builds up an internal cross-geographic BIM library for resources sharing across JEC offices. It does not only serve as a drawing production centre but also a learning centre. Two engineers from JEC China office in Shenzhen were sent to the BIM Centre in 2014 for training; now the China team has grown to a team of 8 members, providing strong support to operations in Hong Kong and Mainland China.

In Hong Kong, to stay ahead of the development, more than a hundred staff were sent for BIM-related training in the past years. To facilitate exchange of knowledge, a BIM Corner has been set up in Hong Kong head office so that BIM users can gather to share their skills and techniques. Expert members of the Mainland China team were invited to hold topical sharing with our Hong Kong colleagues, passing on their experiences in real-life application. During project work, Hong Kong colleagues can also connect with JEC Thailand, China office to seek expert advice on BIM aspects through the latest office systems.



Moving along with the government's BIM Roadmap, JEC Singapore now has over 10 dedicated professionals working on BIM. Similar to the JEC Thailand office, the team were constantly trained to enhance their skillset to continue to support the growing needs of BIM. The technology is now in use for all projects and the team continues to grow in order to keep up with the demand.

With the collaborative resources available from the Thailand, China, Singapore and Hong Kong offices, JEC is able to leverage on the technology, helping our customers to design, build, operate and maintain their facilities at world class standard.

泰國怡和機器的BIM中心為工地項目製作施工圖，以減輕工地繪圖的工作量；BIM中心同時成為跨地域的內部BIM資料庫，與集團各地的辦事處實現資源共享，不僅成為工程繪圖集中點，也是一個學習中心。在2014年，來自中國深圳辦事處的兩名工程師，獲派往BIM中心接受培訓；現在，中國團隊已擁有8名成員，為香港和中國內地的業務提供有力支援。

香港在過去幾年亦加速發展步伐，安排超過100名員工參與有關BIM的培訓課程。而為促進知識交流，香港總部亦設立了BIM專區，讓相關員工可更緊密交流技術。此外，中國內地團隊的專員亦受邀與香港的同事進行專題分享，講解他們的實戰經驗。香港同事在使用技術期間亦可即時與泰國與深圳辦事處聯繫，透過最新的辦公室系統尋求各方面的專家意見。



新加坡方面，緊隨著當地政府的BIM發展藍圖，新加坡怡和機器現已有超過10名BIM專業人員；與泰國團隊相似，員工也定期接受培訓，獲取更多的相關技能。如今，新加坡團體已將BIM技術應用至全部工程項目，其團隊亦不斷壯大，應付日漸增長的需求。

憑藉泰國、中國內地、新加坡及香港辦事處的資源協作，怡和機器的團隊可更善用科技，協助客戶設計、建造、營運及維持世界級水平的設施。

Trane Hong Kong Honoured with The Association of Energy Engineers Award 2019

特靈香港榮獲美國能源工程師學會2019年度大獎

JEC's joint venture partner Trane Hong Kong (TYS) was awarded the Innovative Energy Project of the Year Award for the Asia-Pacific Region by the Association of Energy Engineers® in September. An advocate of the Government's climate action plan, TYS pioneered in adopting the leading green technology from the US in its new generation chiller, coupled with energy-saving refrigerant and energy simulation software that achieves superior performance in energy efficiency. The remarkable energy saving and carbon emission reduction by the chiller have been well proven in buildings such as hospitals, clubhouses, commercial buildings and institute complexes, saving up to 2,837 MWh per year which represents the reduction of 1,986,500 kg CO₂/year (equivalent to planting 86,370 trees).



▲ Frankie Chan (middle), Managing Director of TYS receives the award on behalf of the company.
特靈香港董事總經理陳偉平（中）代表公司接受獎項。

怡和機器之合資伙伴特靈香港於9月榮獲美國能源工程師學會的亞太區創新能源項目2019年度大獎，以表揚其產品在環保節能方面出色的表現。特靈香港一直致力響應政府的氣候行動，率先引進美國的領先綠色科技，將新一代環保雪種及精密的模擬節能軟件，研發成為超高效能冷水機組。此機組已先後應用於醫院、會所、商廈及大學綜合大樓等建築物，均錄得卓越的節能和減排效果，每年的總節電量可達 2,837 MWh，即可減少 1,986,500 公斤二氧化碳排放，相當於種植 86,370 棵樹。

Safety Recognition for WENT Landfill Power Generation Project

新界西堆填區沼氣發電項目獲安全嘉許狀

JEC and its sub-contractors were recently presented a certificate of appreciation by CLP Power in recognition of zero incident and outstanding safety performance in WENT Landfill Power Generation Project.

怡和機器新界西堆填區沼氣發電項目團隊及分判商早前獲中電頒發獎狀，表揚其零事故及傑出安全表現。



Eco Tour to SENT Landfill and WEEE•PARK

新界東南堆填區及WEEE•PARK綠色之旅

JEC volunteers led 30 residents from Shek Pai Wan Estate to an Eco Tour organised by Business Environment Council on 7 September. The group first visited the South East New Territories (SENT) Landfill in Tseun Kwan O to learn how technology alleviates the increasing construction waste disposal. They also visited WEEE•PARK in Tuen Mun, where they were introduced to the recycling and treatment processes of disposed electrical and electronic equipment refurbished into items for families in need, promoting a caring and greener community.



怡和機器義工於9月7日帶領30位石排灣邨的居民參加由商界環保協會舉辦的一日遊，參觀將軍澳新界東南堆填區，了解如何借助科技，處理日益增加的棄置建築廢料。他們隨後亦參觀了位於屯門的廢電器電子產品處理及回收設施WEEE•PARK，透過回收四電一腦，將仍可運作的電器修復成再生電器，轉贈予有需要人士。參加者對此運作方式留下深刻印象，均認為可做到兼顧環保和關愛社區。



JEC Volunteers Enjoy Archery Fun with Children

怡和機器義工與兒童共享射箭樂

JEC Caring Team members led about 20 children from the Hong Kong Children and Youth Services for a sporty weekend with archery fun on 26 October in Ma On Shan. The group learned the basics of Archery Tag® and teamed up for a contest under the instruction of professional trainers.

怡和機器愛心大使於10月26日帶領約20名來自香港青少年服務處的小朋友，前往馬鞍山體驗射箭樂。參加者在專業導師的指導下，學習攻防箭®的基本技巧，並分隊作賽，度過一個健康周末。



JEC Shares Joy through Food Donation

怡和機器惜食傳福

Collaborating with Food Angel, the food assistance organisation operated by Bo Charity Foundation, JEC collected 3 boxes of surplus food and about 110 mooncakes from Hong Kong offices this summer and Mid-Autumn Festival respectively. The food was then donated to the underprivileged to share joy and love with people in need.

怡和機器於今年夏季及中秋佳節，從香港辦事處員工募集三箱食物和約110個月餅，並透過由小寶慈善基金會營運的食物援助機構惜食堂轉贈弱勢社群，貫徹我們回饋社會、分享愛心的精神。



JEC Thailand Jardine Jit Arsa 2019

泰國怡和機器Jardine Jit Arsa 2019

JEC Thailand organised its 7th annual corporate social responsibility activity Jardine Jit Arsa in August in Nakhonnayok Province of Thailand. More than 80 volunteers installed reverse osmosis system and fans, and cleaned the restrooms at Wat Ploi Krachang Si School. The group also renovated playground facilities and donated sports equipment to the students.

泰國怡和機器8月於那空那育府舉行第7屆企業社會責任活動Jardine Jit Arsa，由超過80位義工為Wat Ploi Krachang Si學校安裝逆滲透濾水系統、風扇及清潔洗手間，並翻新操場設施和捐贈運動器材。



JDI Partners with Go Negosyo Foundation

JDI與Go Negosyo慈善基金會共襄善舉

JDI has recently partnered with charity Go Negosyo Foundation in assisting farmers from the war-torn region of Marawi City in Southern Mindanao. JDI provided ADV Maize Doble corn seeds and other farm inputs to several farmer groups for agricultural rehabilitation. Some 20 farms were selected as demonstration farms and had the first harvest in October. The initiative will be extended to another 200 farmers and their families, improving their livelihood by changing community-based farm into commercial farming.



JDI早前夥拍Go Negosyo 基金會，攜手援助棉蘭老島南部城市馬拉維受戰火影響生計的農戶，為他們提供ADV Maize Doble粟米種子及其他耕作所需，協助復耕，其中約20戶獲選示範農場已於十月份第一次收成。此項目將繼續惠及200多個農戶及其家庭，讓這些社區農場轉型為商業耕作，改善長遠生計。

JDI Continues Solignum University Journey

JDI延續Solignum University計劃

Partnered with Koppers Performance Chemicals, JDI launched Solignum University since 2011 to educate architecture and engineering students in understanding the technical features of wood as a building material, the value of wood preservation and Solignum's termite solutions. Another series of activities were conducted at 3 leading technical institutes in the Philippines in September and October.

JDI自2011年起與Koppers Performance Chemicals 合作，開展Solignum University 計劃，讓建築和工程系的學生了解木材作為建築材料的技術特點、護木的重要性以及Solignum的滅蟻方案。JDI於9月及10月先後於菲律賓三間頂尖的技术學院，舉行最新系列的Solignum University活動。



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