

樂訊 2019 Issue No.1

VOICE **OF** ATAL



Innovating Our Way to a Smart Hong Kong 銳意創新 打造智慧香港

Improve Energy Efficiency with Chiller Plant Energy Management Platform
製冷機組能源管理平台 提高能源效益

ATAL Wins the Highly Recognised Luban Prize 2018/19 for Construction in China
榮獲中國內地建造業最高榮譽 — 2018/19年度中國建設工程魯班獎



ATAL Engineering Group
安樂工程集團

Chairman's Message 集團主席的話



Innovation is one of ATAL's core values. We are delighted that the Group has won many new exciting projects and prestigious awards in the first half of 2019. Thanks to our colleagues for their creative deployment of Innovation and Technology (I&T).

Notable examples of our new projects using I&T include InnoCell at the Hong Kong Science Park, one of the Hong Kong's pioneering construction projects making use of Modular Integrated Construction (MiC); and the Fu Shan Public Mortuary reprovisioning project using Building Information Modelling (BIM) technology. In addition, our subsidiary, Anlev Elex, has created an innovative system, Automatic Hoisting Rope Breakage Laser Detector, for lift safety which is welcome by our clients.

ATAL's innovative projects have also won public recognition. The Cloud-based Chiller Plant Energy Management Platform has been awarded the Hong Kong ICT Awards 2019. Our smart facility management project for the Hong Kong Convention and Exhibition Centre using Internet-of-Things (IoT) technology, has earned the client's commendation for engineering excellence. These accolades are on top of other awards received in the past six months, including the prestigious Luban Prize in mainland China for our projects in the Hong Kong Jockey Club Conghua Racecourse and WF Central in Beijing. Congratulations to the teams!

I would also like to thank all parties who made the Central-Mid-Levels Escalator "Connect · Community · Culture" Drawing Competition a success. This is our first corporate community engagement event and has gained enthusiastic response with over 130 entries from more than 40 primary and secondary schools and the general public. We are grateful to the Transport Department, Electrical and Mechanical Services Department, Hong Kong Polytechnic University, the panel of judges, all the participants and stakeholders for their staunch support in our event.

Our innovation efforts are well aligned with the Government's smart city blueprint for Hong Kong. The Group will continue to invest and develop more "smart" projects with creative I&T solutions. We believe that innovation and technology are indeed the future for Hong Kong and ATAL.

創新是安樂工程的核心價值之一，集團一直致力在不同工程項目上發展及應用創新科技，成績斐然。於2019年上旬，集團已奪得多個創新科技的工程項目，且獲頒業界多項殊榮。其中矚目的創科項目包括香港科學園的「創新斗室」，這是香港其中首個採用嶄新組裝合成建築法（MiC）興建的建築項目；富山公眾殮房的重置項目亦應用了建築信息模擬（BIM）技術。較早前，由集團附屬公司安力電梯研發的鐳射鋼纜斷裂自動檢測系統，更得到不少客戶的青睞。

此外，集團在創科發展已得到客戶及業界的肯定，憑藉我們自行研發的製冷機組能源管理平台，榮獲2019年香港資訊及通訊科技獎。我們利用物聯網（IoT）技術為香港會議展覽中心提升智能設施管理，贏得客戶的讚賞。集團的香港賽馬會從化馬場項目及北京王府中環國際中心項目，更獲頒中國建築界最高榮譽「魯班獎」。

同時，集團關懷社區的發展，首次舉辦了社區聯繫活動——中環半山扶手電梯「連繫·社區·文化」繪畫比賽，得到全港學校和市民的踴躍支持，得到來自超過40間中、小學，共逾130份參賽作品。我們謹此衷心感謝運輸處、機電工程署、香港理工大學、各評審及參賽者，和參與機構及人士的全力支持。

安樂工程的創科發展配合香港政府的智慧城市發展藍圖，將會繼續投資及研發創科，把成果應用於工程上。我們相信創新及科技必然是香港和安樂工程未來發展的重要元素。

Ir Dr Otto Poon
潘樂陶博士工程師

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Innovating Our Way to a Smart Hong Kong

銳意創新 打造智慧香港

Innovation is more than a buzzword in business and government these days. It is a mindset that creates results - greater efficiency, better quality of life, greener environment and greater economic growth. The challenge is that it is easier said than done.

「創新」不僅是商界和政府的常用字，更是一種銳意帶來實際效益的思維。創新除了可提高工作效率，更能改善生活質素、綠化環境並帶來經濟增長，不過往往易說難行。

ATAL has pursued innovation for years, as recorded in its history of numerous ground-breaking engineering solutions for clients. Marking its 40th anniversary in 2017, ATAL embedded innovation in its corporate vision to underscore its importance to every ATAL employee and its value to the company's future.

Kevin Cheng, ATAL Engineering Group CEO, explains what innovation means at ATAL.

ATAL Innovation Strategy

"Our innovation strategy has two aspects: technology development and process improvement. Technology development involves deploying technologies to make buildings smarter and environment greener and help expedite smart city development. Process improvement covers workflow enhancements in both engineering and back-of-house operations, with an emphasis on uncompromised workplace safety," he says. "Innovation should not be confined to a small group of experts. It should be a culture that permeates the entire company so that everyone becomes part of our smart community," adds Kevin Cheng.

The Group has invested considerable resources in promoting innovation, such as organising the quarterly "InnoSmart" contest and the annual Chairman's Innovation Award to encourage staff to come up with innovative ideas for implementation. All these have successfully stimulated interest in innovation and helped staff at all levels to learn from each other.



安樂工程集團一向重視創新，多年來為客戶提供不同的創新方案。於2017年成立四十周年誌慶，集團把創新納入企業願景，彰顯創新對每位員工的重要性，以及對公司前景的價值。

集團行政總裁鄭小藝，為我們闡釋創新對安樂工程的意義。

集團的創新策略

「我們推動創新的策略依循兩個方向，分別是發展科技和改善工作流程。發展科技是指運用科技把建築物變得智能化及促進環保，並加快智慧城市的發展。改善工作流程則指工程和後勤支援的流程，同時著重工地安全。」他說。「創新不應局限於部分專家，而是一個融入整體公司的文化，令每位員工都成為公司智慧社群的一份子。」

安樂工程為提倡創新，已投入大量資源，例如每季舉辦「創意走多步」比賽和每年一度的「主席創意大獎」，鼓勵員工提出創意概念並付諸實行。這些活動成功地激發同事創意，有助各職級同事互相砥礪學習。

創新焦點：模組式建築法與智能人力管理系統

集團的創新工作聚焦於兩方面：模組式建築法與智能人力管理系統(IMS)。

模組式建築法是創新的建築方法，由廠房負責預製建築組件，待安裝飾面、裝置及配件完成，然後把組件送往工地，再裝嵌成整座建築物。這將大幅加快建造速度並提高生產力，更可減少工地意外。

在採用模組式建築法方面，香港不及日本和新加坡普遍。不過由於香港特區政府近年開始推動這種建築法，以及建築信息模擬技術(BIM)突飛猛進，這建築法的技術日趨成熟。BIM技術在設計概念階段便能把多個相關建築物系統，以非常準確的三維視像顯現，加快模組式建築法的發展。



Illustrative concept of InnoCell 創新斗室項目構想圖

Corporate Innovation Focus: Modular Construction and Intelligent Manpower Management System

At corporate level, ATAL's two current focus areas on innovation are Modular Construction and Intelligent Manpower Management System (IMS).

Modular Construction is an innovative construction method whereby free-standing integrated modules, complete with finishes, fixtures and fittings are manufactured in a prefabrication factory and then transported to the construction site for installation and commissioning. It greatly improves construction speed and productivity while reducing site accidents.

While Hong Kong lags behind other cities such as Japan and Singapore in adopting Modular Construction in a systematic manner, the Government has begun promoting it in recent years. The method has also achieved a boost. Thanks to the advancements in Building Information Modelling (BIM) technology that make highly precise 3D visualisations of multiple inter-related systems possible at the concept design stage, thus accelerating the development of "clash-free" Modular Construction.

IMS is a system for better managing site workers to improve safety and enhance manpower efficiency. IMS uses sensors and data analytics to track the number and location of site workers under different sub-contractors and to monitor the types of work they are carrying out for their safety and better deployment of manpower.



The prototype of InnoCell 創新斗室模擬單位構思

此外，集團開發了智能人力管理系統，更能有效管理工地工人，提升安全 and 人力資源效率。系統運用感應器和數據分析，追蹤不同分判商轄下工人的人數和位置，並監察工人的實時工作，提高安全性及簡化人手分配。

已開展的創新項目

為實現集團願景——「以創新及持續發展為原則，提供全面的機電工程服務，保持其領先的機電工程集團地



Fu Shan Public Mortuary rep provisioning project 富山公眾殮房重置工程

“Innovation should not be confined to a small group of experts. It should be a culture that permeates the entire company so that everyone becomes part of our smart community.”

Kevin Cheng, CEO



BIM model of Fu Shan Public Mortuary 富山公眾殮房的BIM模型

Innovation in Action

In line with its vision to grow as an innovative, leading and sustainable multi-disciplinary E&M engineering group, ATAL has stepped up its efforts to undertake various smart innovation projects in the public and private sectors.

An example is InnoCell, one of the first three Modular Integrated Construction (MiC) pilot projects in Hong Kong. As the building services sub-contractor of the project, ATAL is pioneering in the provision of air conditioning, electrical, fire and plumbing & drainage services for MiC and helping to create a showcase of smart living and startup co-creation. Developed by Hong Kong Science and Technology Parks Corporation and expected to complete in 2020, InnoCell will be a 17-storey building with around 500 residential units for local and overseas innovators based in the Hong Kong Science Park.

Another example is the Fu Shan Public Mortuary rep provisioning project where ATAL is helping the Government use BIM technology to build a new mortuary facility, encompassing electrical and mechanical services, building management, lift and escalator and extra-low voltage systems. The project is also the client's pilot project for trial adoption of BIM all the way from design to construction.

“BIM is an excellent platform for developing a wide range of applications for design, construction, ongoing operation and maintenance, such as building energy management and asset management,” explains Brian Cheng, Chief Executive of Building Services Engineering.

In another project that upgrades the Building Management System (BMS) for Hong

位，安樂工程已積極為公營及商界客戶推行各種創新項目。

集團最近參與科學園「創新斗室」項目，這是本港建築界率先試行組裝合成建築法的三個項目之一。安樂工程作為該項目的綜合機電分判商，配合這應用嶄新建築法的項目，提供空調、電氣、消防及給排水工程服務，可謂業內先驅，為客戶打造一個提供智能生活及匯聚初創企業的共創空間。「創新斗室」由香港科技園公司發展，樓高17層，提供約500個住宿單位予香港科學園內本地及海外創科人才入住，預計於2020年落成。

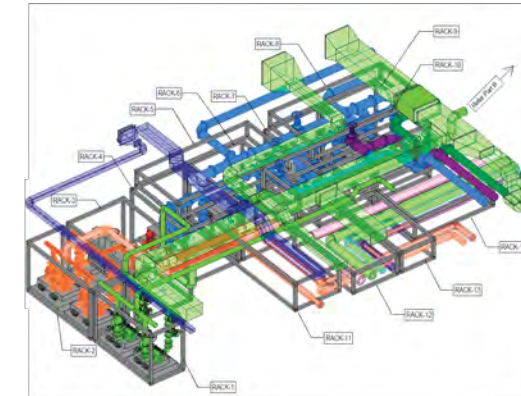
另一項目是富山公眾殮房重置工程，安樂工程為協助政府運用建築信息模擬技術去興建這個公眾殮房，負責機電、屋宇管理、升降機與自動梯和特低壓電系統等。這是政府由設計以至建造，全程運用建築信息模擬技術的試驗項目。

安樂工程首席屋宇裝備工程總監鄭偉能指出，「建築信息模擬技術是個極佳的平台，可發展多種應用在設計、建築、日常運作和維修保養上的方案，例如建築物能源管理及工程資產管理等。」

此外，安樂工程也為香港會議展覽中心（會展中心）



Chiller plant system 製冷機組系統



Modularisation of Chiller Plant 模組式設計的製冷系統

Kong Convention and Exhibition Centre (HKCEC), ATAL is helping the venue achieve smart facility management (FM). The key is to build an Internet-of-Things (IoT) infrastructure comprising around 700 IoT sensors for real-time monitoring and data analysis of temperature, humidity, indoor air quality and water leakage. Operating on a cloud-based platform, the new system will enable the client to obtain insights into the real-time performance of various building services facilities for prompt action, digitising the entire maintenance process for greater efficiency and effectiveness. The new smart FM platform will optimise operations, better manage risk and streamline workflow.

“One of our challenges is to replace and integrate the entire BMS without interfering with HKCEC's busy day-to-day operations,” says Dave Chan, Director of Information, Communications and Building Technologies. His team has made good progress since works began two years ago, winning the client's commendation.

ATAL also recently completed an energy management project on 28 Hennessy Road, using cloud technologies and big data analytics to optimise the building's air-conditioning system for greater energy efficiency. The solution has already reduced chiller plant energy consumption by about 12% for the building, which had been certified to BEAM-Plus Platinum certification for existing buildings well before the project. The client was satisfied with the result and has asked ATAL to implement the system at Three Pacific Place.

Aligned with Smart City Blueprint

ATAL's innovation efforts are aligned with the six priority areas outlined in the Government's Hong Kong Smart City Blueprint published in 2017, namely Smart

「創新不應局限於部分專家，而是一個融入整體公司的文化，令每位員工都成為公司智慧社群的一份子。」

行政總裁鄭小藝

提升屋宇設備管理系統，使會展中心的設施管理全面智能化，箇中關鍵是建造一個物聯網系統。工程團隊在整個中心安裝700多個物聯網感應器，監控溫度、濕度、室內空氣質素及漏水等實時狀況，並進行數據分析。物聯網系統採用雲端網絡運作，方便客戶取得各個裝備設施的實時表現數據，以便立即採取相應行動，換言之，工程將會把整個維修保養過程數碼化。這嶄新的設施管理平台可進一步提升有關設施的營運效率，大大加強風險管理和改善工作流程。

安樂工程資訊、通訊及屋宇科技總監陳志雄說：「我們要面對的挑戰之一，就是即使我們需更換及整合全套屋宇裝備管理系統，但工程期間不能影響會展中心繁



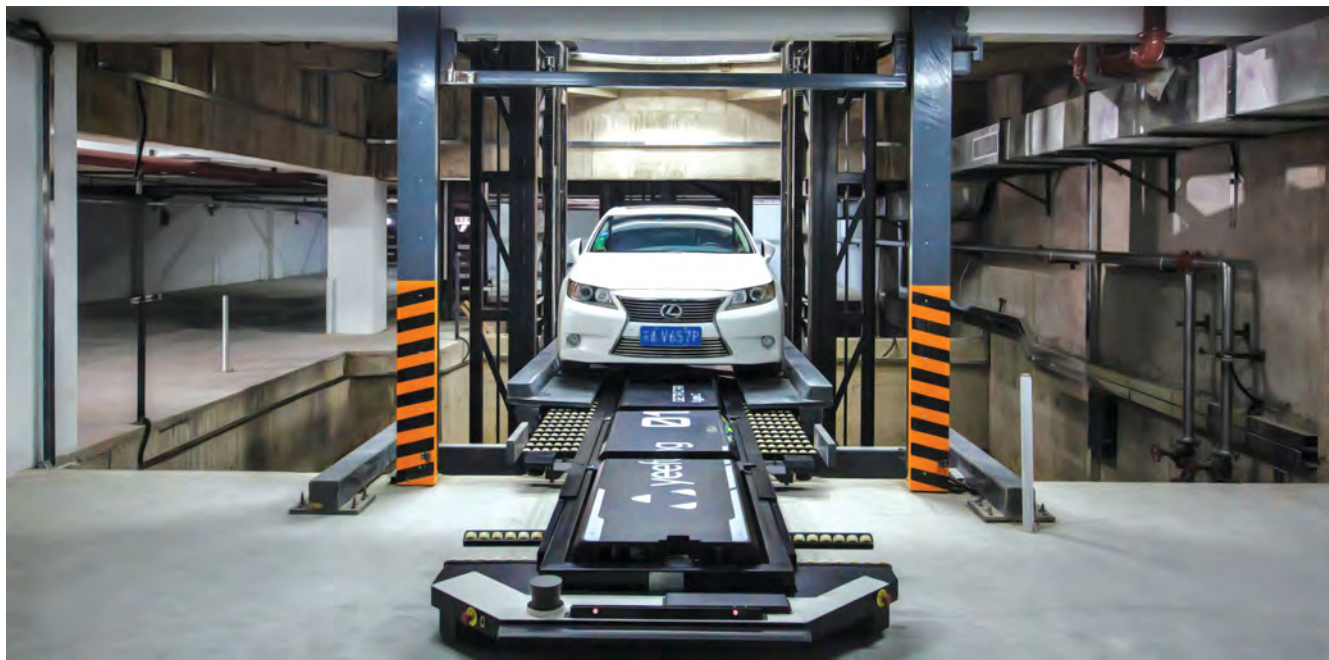
Mobility, Smart Living, Smart Environment, Smart People, Smart Government and Smart Economy.

The list of the Group's relevant projects is extensive, including various Information and Communication Technology (ICT) projects for smart government facilities and data centres, wastewater and organic waste treatment projects, a new generation of border control e-Channels, and smart vehicle examination centres. Other new technologies are also under development, such as smart parking system using automated guided vehicle technology.

Kevin firmly believes that innovation and technology are the future for ATAL and for Hong Kong.

"We must work on innovation strategically, rather than in a piecemeal fashion," he notes. "While not everyone can be a BIM Manager or Innovation Manager, we do encourage everyone in ATAL to engage with new technologies, like BIM and Design for Manufacture and Assembly (DfMA)."

In the meantime, ATAL continue to win innovation awards, such as the Hong Kong ICT Awards 2019 for its Cloud-based Chiller Plant Energy Management Platform. Last but not least, ATAL is also one of the few companies to be granted a Public Wireless Internet-of-Things Service (WIoT) licence by the Office of the Communications Authority to provide IoT services for public use. ATAL is proud to play a key role in the smart Hong Kong of the future through its continuing innovation.



忙的日常運作。」項目兩年前已開始動工，目前工作進展良好，並獲得客戶讚賞。

安樂工程也完成了軒尼詩道28號的能源管理項目，運用雲端網絡技術和大數據分析以優化大樓的空調系統，提高能源效益。事實上，大樓早已獲得「綠建環評」既有建築物鉑金級認證，經集團的節能方案落實後，大樓的製冷系統耗能量再減少12%。客戶對效果十分滿意，並已邀請安樂工程為太古廣場三座制定同一節能方案。

配合智慧城市藍圖

香港特區政府於2017年出的《香港智慧城市藍圖》，列出六大優先範疇，即「智慧出行」、「智慧生活」、「智慧環境」、「智慧市民」、「智慧政府」和「智慧經濟」，而安樂工程的創新工作配合這六大範疇。

集團的創新項目甚多，包括為配合智慧政府設施，參與各種資訊及通訊科技項目、數據中心、污水及有機廢物處理、新一代「e道」出入境檢查系統和智能驗車中心等。我們也積極研發智能泊車系統等技術。

行政總裁鄭小藝深信，集團以至香港發展的前景，都建基於創新與科技。

「我們必須策略性地推動創新，而不是零碎地推行。」他說。「我們不是要每位同事都變為建築信息模擬技術經理或創新經理，但公司鼓勵每人都要接觸新科技，例如建築信息模擬技術和簡化製造及裝配過程設計技術 (DfMA) 等。」

安樂工程的各種技術相繼贏得多個創新獎項，如集團的雲端製冷機組能源管理平台，榮獲2019年香港資訊及通訊科技獎。值得一提，安樂工程是全港少數獲通訊事務管理局發出無線物聯網牌照的公司之一，可提供物聯網服務予公眾使用。

集團將會不斷創新，致力為香港智慧城市的未來發展作出貢獻。

Improve Energy Efficiency with Chiller Plant Energy Management Platform 製冷機組能源管理平台 提高能源效益



Many organisations aspire to a smart and efficient way of achieving building energy optimisation. ATAL implemented the award-winning solution of "Cloud-based Chiller Plant Energy Management Platform" for 28 Hennessy Road, a Grade-A commercial tower. 28 Hennessy Road is operated to the highest environmental standards - Platinum rating in BEAM-Plus. 28 Hennessy Road, considered as energy-optimised building designed to top class specifications, has utilised ATAL's chiller plant optimisation platform to benefit from even greater energy savings.

Data Analytics for Real-time Energy Optimisation

ATAL's "Cloud-based Chiller Plant Energy Management Platform" was a Silver award-winning solution at the Hong Kong ICT Awards 2019 in Big Data and Open Data Applications of Smart Business Award. This platform is an all-in-one intelligent system leveraging big data analytics for achieving building energy efficiency and sustainable development. ATAL's Dynamic Optimisation is built upon the basis of mathematical modelling using actual operating data and the relevant weather data, ensuring energy performance of the whole chiller plant being optimised in real-time. The platform is designed to determine the optimal control settings under various cooling load and weather conditions. A system performance simulation model was developed based on the characteristics of the central chiller plant, the equipment and system models, for predicting the total power demand of the plant. With this plant model, the overall plant energy use corresponding to various possible combinations of the operating conditions can be holistically evaluated for comparison.

Automated FDD for Sensor Biases and Equipment Deterioration

Sensor fault detection is an essential function of the fault detection and diagnostics (FDD) algorithm because optimisation and energy analytics rely on properly functioning sensors to provide data that reflects the actual system performance. Without reliable sensors, the system would be unable to identify any abnormal operation and to actually optimise chiller plant performance. The data-driven approach adopted in the design of the system allows detection and evaluation of the severity of sensor biases and drifts. Also, deterioration of equipment plays a major role in contributing to energy waste. Based on historical data, the mathematical model for each chiller is developed. The developed model can be considered as the baseline model which is used to compare with the future model for performance deterioration detection. Once the new set of operating data is available, the current chiller model will be updated continuously. If the current performance of equipment deviates from the baseline performance model by more than a pre-set margin, an alarm message is issued.

Without the replacement of any equipment, the performance of the chiller plant in 28 Hennessy Road has been greatly improved. In addition, the platform assists in-house engineers with their regular maintenance work, including sensor fault detection and equipment performance evaluation. Apart from sensor biases, significant deviation of the actual chiller performance from the design was also detected. The performance of the chiller was largely improved after adjusting the internal chiller control settings. The platform is applicable to any buildings with a central air-conditioning system, which helps buildings achieve up to 30% energy savings on chiller plant operations with the use of the platform, depending on the building types and the buildings' current energy performance.

為了節約能源，不少機構都樂於採用配備人工智能的高效益方案。安樂工程最近為軒尼詩道28號的甲級商廈設計了一套節能方案——「雲端製冷機組能源管理平台」。縱使大廈已取得「綠建環評」最高的鉑金級別，但採用了安樂工程的管理平台之後，製冷機組的能源效益仍能進一步提升。

實時能源優化數據分析

「雲端製冷機組能源管理平台」結合大數據及人工智能分析，為建築物節省能源並達致可持續發展。技術已獲政府與業界肯定，贏得香港資訊及通訊科技獎的商業方案組別（大數據及開放數據應用）的銀獎。

管理平台的動態優化功能利用實時運作數據和天氣數據建立數學模型，確保整個製冷機組可實時調整，保持最佳效能。即使各機組的製冷負荷不一，以及天氣環境不斷轉變，管理平台亦能達致最佳運作狀態。系統會根據大廈的中央製冷機組、設備和系統特性，而建立系統效能模型，預測各機組的電力總需求，並評估不同運作組合的整體用電量，再加以比較及調整。

自動檢測和診斷感應器偏差及設備退化

能源管理必須配備準確的感應器以分析數據及評估冷卻系統的實際性能。若感應器的數據出現誤差，管理平台就不能偵測出異常情況，難以保持最佳運作效能。而我們的管理平台以數據作主導，提供偵測感應器故障功能，可以檢測故障和診斷感應器的數據誤差和偏差幅度，從而作出調整。

此外，機件設備退化亦會嚴重浪費能源。我們的平台會利用過往數據，為每個冷氣機組建立數學模型，並制定基線模型作參考，以比較機組過往與即時的效能，檢測損耗情況。

每當感應器收集到新的運作數據，平台及模型數值就會自動更新。一旦發現機件效能過份偏離基線模型數值及超過預設限度，平台便會發出警報提示。由於平台會因應感應器的準確度及機件損耗情況作調整，因此無需更換任何機件，大廈製冷機組的效能都可大為改善。

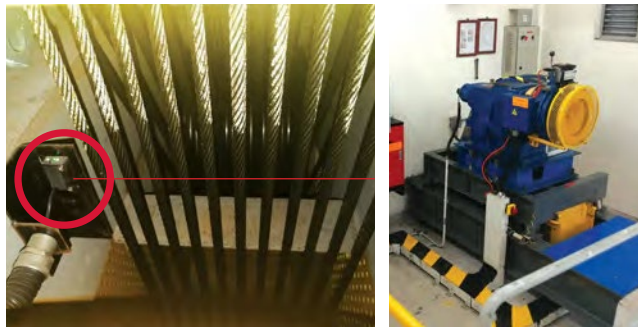
此外，管理平台還可支援冷卻系統工程師，協助他們定期維修，包括感應器故障檢測和性能評估。除感應器偏差外，平台還可檢測機組冷卻器的實際運作效能與原本設計的偏差。在調整冷卻系統後，冷卻機組的性能都大大提高。平台適用於任何備有中央冷氣系統的建築物，可為系統節省最高30%能源，而其效用會因應建築物類型和能源性能而有所不同。



Automatic Hoisting Rope Breakage Laser Detector for Lift Safety

鐳射鋼纜斷裂自動檢測系統 保障升降機安全

The “Automatic Hoisting Rope Breakage Laser Detector”, an innovative design of Anlev Elex, is developed to monitor the condition of hoisting ropes 24 hours a day. It ensures lift safety at all times prior to the periodic inspection. With the approval from the Electrical and Mechanical Services Department (EMSD), the detective system has been installed in public libraries, sports centres, and municipal services building, as well as many others. Major clients include the Hong Kong Jockey Club, primary and secondary schools.



安力電梯研發的「鐳射鋼纜斷裂自動檢測系統」能夠24小時監測鋼纜狀況，於每次升降機定期檢查前都能確保升降機安全。目前，這套系統已獲得機電工程署認可，於政府轄下的公共圖書館、體育館及市政大廈內使用。此外，香港賽馬會

及本地中、小學亦已採用。

Every lift installation is tailor-made designed and installed according to the required specifications of architect, various combination of control system and driving machine will be specifically chosen to optimise the operation efficiency of each premises. All print circuit board, components and designs are well prepared in advance after our engineer's site survey. As a result, installation and testing can be completed in one work day, with normal service of the lift resumes on the same day. The detective system is sensitive enough to detect breakage of one single wire within a single strand of the hoisting rope. Once a broken wire is detected, the lift will stop and park on the nearest landing floor, releasing passengers and halt until a thorough inspection by our technician. Immediate rope replacement will be arranged, and normal service of the lift will be resumed upon completion of the rectification work.

我們的工程師會根據每部升降機的個別需要度身訂造、設計及調整系統。經過現場檢查，然後進行設計並安裝大廈所需的電子元件及系統。整個系統的安裝及測試可於一日內完成，升降機同日可回復正常服務。

系統能夠偵測鋼纜內個別單枝的異常情況，監察範圍深入至鋼纜中最小的鋼絲。一旦檢測到異常情況，系統便會發出訊號令升降機慢駛，並在最近樓層停定，打開升降機門讓乘客安全離開。待工程團隊進行檢查及組件維修後，升降機便可恢復正常運作。

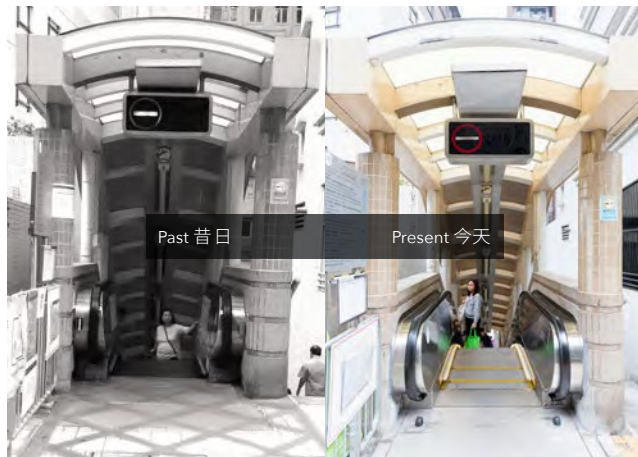
Refurbishment Works on Central-Mid-Levels Escalator and Walkway System in Good Progress

中環半山自動扶手電梯更新工程項目進度理想

The Central-Mid-Levels Escalator and Walkway System served the Central and Western District for more than 25 years. After years of operation, it has gradually deteriorated. Our Group's Anlev Elex commenced the replacement of the escalator and walkway system in March 2018. Phase 1 to 3 of the refurbishment works have been completed, making good progress.

The refurbishment works are carried out in 12 phases. Escalator sections from Conduit Road to Mosque Street and from Caine Road to Elgin Street have been upgraded with the most advanced energy-saving components and lighting systems. The new escalators are not only sturdy but also environmentally friendly and durable.

The engineering team is working on its Phase 4 project. The entire project is expected to be completed in 2022.



中環半山自動扶手電梯服務中西區逾25年，經長年累月不斷運作後，逐漸老化。集團旗下的安力電梯於2018年3月開始為自動扶梯更新，工程進度良好，第1至3期的計劃已順利完成，換上新機件的扶梯令人耳目一新。

更新工程分12期進行，現時由于德道至摩羅廟街路段、堅道至伊利近街路段工程已經完成，新扶手梯具備最先進的節能設施及照明系統，不但堅固耐用，而且環保安全。

工程團隊目前正進行第4期工程，預計全部工程於2022年竣工。

International Corporation Data Centre Project Awarded

喜獲國際集團委任建造數據中心

Riding the waves of innovation and technology, big data has become the most valuable asset. Hong Kong is a prime location for data centres in Asia Pacific, with a number of large-scale data centres being built in recent years. ATAL has recently secured a new data centre project.



在創科熱潮帶動下，大數據愈來愈重要。加上香港位於亞太區數據中心有利位置，因此在本地興建大型數據中心的需求日增。安樂工程最近獲得興建數據中心合約。

Sha Tin Data Centre

Other than purpose-built facilities, there are multiple ways to accommodate data centres, such as conversion from existing industrial buildings. At the end of 2018, we were awarded a contract from a renowned international colocation company. The contract of this Data Centre worths value over HK\$200 million is expected to be completed by the third quarter of 2019. This contract covers the design, supply, installation, testing and commissioning and preventative maintenance of electrical, fire services, HVAC, plumbing and drainage and Building Management System for a Tier-III data centre.

We will develop plant rooms of approximately 6,000 square metres, and particular floor being converted to a data hall of around 1,500 square metres in just 8 months.



沙田數據中心

除了興建新的建築物外，改建現有工業建築是另一個增設數據中心的方案。在2018年年底，我們獲得著名全球數據中心服務供應商委任改建其沙田數據中心第二期的合約，工程造價逾兩億元，我們預計大樓於今年第三季完成。該合約涵蓋設計、供應、安裝、測試和預防性維護設施的服務，我們還會提供電氣、消防、暖通空調、管道和排水系統和屋宇管理系統，以建成符合國際Tier-3標準的數據中心。我們會於8個月內完成興建約6,000平方米的機房和約1,500平方米的數據庫。

Sewage Treatment Projects in Hong Kong and Mainland China

中港兩地污水處理廠及淨水廠項目



ATAL recently secured two projects to undertake site overhaul of E&M installation for sewage treatment works on the Lantau and Stonecutters Islands.

Scheduled to run from February 2019 until 2022, the term contract on Lantau Island awarded from the Drainage Services Department (DSD) include the overhaul, maintenance, testing and commissioning of E&M installations at sewage treatment facilities and pumping stations.

Also, we are engaged in the inspection and maintenance works in Stonecutters Island Sewage Treatment Works. More than a hundred workers are deployed to handle over 60 sewage treatment plants and facilities.

In addition to conducting operations and regular inspections on these remote areas, special teams have been formed for monitoring and handling any emergency round-the-clock, even under adverse weather conditions. We are committed to ensure and deliver the best services for our client's full satisfaction.

Raising Water Safety by Biological Aerated Filter

At the Shenzhen Gongming Water Treatment Plant, ATAL was awarded to build a biological aerated filter for its renovation, which has a design capacity for processing 100,000 tons of sewage per day with level 4 environmental quality standards for surface water.

In mainland China, water quality standards have become much higher than before. With investment by Beijing Capital Company Limited, ATAL is engaged in the design, supply, installation and commissioning of the aerated biofilter which can remove ammonia nitrogen and total nitrogen in sewage. The advantage of this technology is its small size, high level of automation and better filtration. It is expected that, with this advanced technology, water safety and standard can be further raised.



安樂工程最近獲得兩項工程合約，為大嶼山及昂船洲的污水處理廠內的機電設備進行維修保養。

合約由渠務署批出，由今年2月至2022年期間，在大嶼山的污水處理廠及泵房的機電設備進行維修保養、測試及廠務工程。

此外，我們更會為昂船洲污水處理廠的機電設備檢驗、維修保養及測試。合共逾百名工程及技術人員參與項目，支援超過60個污水廠及設施的運作。

除了提供定期檢查及維修保養外，我們還特別安排了24小時值班及監察的工程團隊，全天候應對任何緊急維修或突發事故，而在惡劣天氣情況下亦會確保設施正常運作。

曝氣生物濾池 提升水質

安樂工程獲得深圳市公明淨水廠的改建曝氣生物濾池項目合約，生物濾池每天可處理10萬噸污水，水質可達到地表四類水標準要求。

在內地，水質標準及要求已日益提升。投資建造水廠的北京首都股份有限公司與安樂工程合作，由我們負責設計、供應、安裝及調試整個曝氣生物濾池，去除污水中的氨氮和總氮。相對於其他生物過濾法，曝氣生物濾池佔地較少，工序高度自動化，而且濾水效果更佳。我們期望憑藉此先進技術，能進一步提升用水安全和標準。

Award-winning "Cloud-based Chiller Plant Energy Management Platform"

「雲端製冷機組能源管理平台」喜獲政府獎項

ATAL is pleased to announce that our "Cloud-based Chiller Plant Energy Management Platform" won the Silver Award in Big Data and Open Data Applications of Smart Business Award at Hong Kong ICT Awards 2019.

The platform has proven successful in various Grade-A office buildings in Hong Kong, achieving consistent energy savings.

Governed by the physical principles in physics-guided machine-learning, it can enhance the accuracy, evolve as new data is accumulated and eliminate time-consuming calculation. This hybrid blend of physics and machine-learning approach reveals the actual performance of individual chiller plant equipment, including chillers, pumps and cooling towers. By utilising the recorded data, the representative models for real-

time plant optimisation can be developed to achieve overall optimal operation.

This award is a great encouragement to us all, we will constantly pursue better and more creative solutions to meet the needs of business and society.

安樂工程很榮幸我們的「雲端製冷機組能源管理平台」在香港資訊及通訊科技獎2019中，獲得商業方案獎（大數據及開放數據應用）的銀獎。

該系統已成功地在香港不少甲級商業大廈應用並達至持續節能效果，利用物理原理的物理指導機器學習，不但能提升數據準確度，亦能隨著系統累積的數據而改進，並減省人手運算的時間。結合物理和傳統機器學習的技術，系統能評估每個獨立製冷機組（包括冷卻器，泵和冷卻塔）的實際性能，再配合製冷機組的實時運作數據，為製冷機組達至最佳運作。

這個獎項對我們而言，是很大的鼓舞，我們會不斷追求卓越及更具創意的方案，以滿足業界和社會的需求。



ATAL Wins Gold Prize at Construction Industry Safety Award

獲頒建造業安全獎勵計劃金獎

Organised by the Labour Department, the Construction Industry Safety Award Scheme 2018/2019 marks its 20th anniversary this year. This scheme offers recognition to construction sector with good occupational safety and health (OSH) awareness and elevates its safety culture.

At the Award Presentation Ceremony in March, ATAL won the Gold Prize in the Building Site - Sub-contractor Category in this prestigious annual safety competition in the industry regarding the Hong Kong Science Park Expansion Stage 1 project. Not only did we build a sound safety management system, but we also collaborated with the main contractor to implement various safety measures and initiatives.

As a combined mechanical, electrical and



plumbing (MEP) sub-contractor in this project, ATAL provided a comprehensive range of services including E&M installation and Building Management System (BMS).

We regard this award as a booster to stay vigilant and keep adopting safe work

practices in workplaces at all times.

由勞工處主辦的「建造業安全獎勵計劃2018/2019」，20年來一直不遺餘力為業界提升職業安全意識及安全文化水平。

在3月的頒獎典禮上，安樂工程憑著香港科學園擴建第一期項目工程獲得業界享負盛名的「建造地盤——次承判商」金獎。我們不僅在工地建立良好安全管理制度，更與總承判商共同執行工地安全措施，因而脫穎而出。

安樂工程為香港科學園擴建項目工程的機電和管道系統承判商，負責安裝機電設施及樓宇管理系統等，提供全面性服務。

這個獎項促使我們需要時刻保持警覺，並在工地採用合適的安全措施。

Excellence Award for China Installation & Outstanding Constructor 勇奪中國安裝工程優質獎及工程企業領導人榮銜



With over 40 years of experience, ATAL's core expertise lies in building services such as electrical, fire services, plumbing and drainage, building and energy management systems which are, once again, gaining recognition in mainland China. ATAL Chief Executive Officer Kevin Cheng was awarded Outstanding Contributor and the WF Central

project also won the 2017-2018 Excellence Award for China Installation (Star of China Installation) in December 2018.

Founded in 1985, this award recognises good management and safety practices within the industry. We are delighted by the recognition given to ATAL for our high

standards in project design, management and engineering quality.

Boasting a remarkable installation completed by ATAL, WF Central is a new hub in Beijing and was developed as a local landmark of quality living. We will keep striving for excellence in all areas of operations in regards to quality and safety.

安樂工程的核心業務涵蓋電氣、消防、給排水、樓宇及能源管理系統等，憑藉40多年的經驗，集團再次在內地獲得認可。集團行政總裁鄭小藝於2018年12月獲頒工程企業領導人榮銜，而王府中環國際品牌中心項目亦奪得2017至2018年度中國安裝工程優質獎（中國安裝之星）。

中國安裝工程優質獎始於1985年，旨在表揚業內的良好管理和安全實踐。今次獲獎反映集團在設計、管理及工程質量方面，均獲得認可。王府中環國際品牌中心是安樂工程在國內的標誌性項目之一，大樓位於北京市中心的新樞紐，成為當地象徵優質生活的地標。我們將努力不懈，繼續在服務質素及安全上追求卓越表現。

ATAL Wins the Highly Recognised Luban Prize 2018/19 for Construction in China 榮獲中國內地建造業最高榮譽——2018/19年度中國建設工程魯班獎

Hard work pays off! ATAL is honoured to have received recognition with inclusion in a prestigious national award from mainland China.

The Hong Kong Jockey Club Conghua Racecourse which was officially opened in August 2018, won in the Luban Prize (National Quality Project) from China Construction Industry Association, a top honour in China's construction sector for the year 2018/19. Located in the Conghua District in Guangzhou, Conghua Racecourse is the first world-class racecourse and thoroughbred training centre in mainland China. ATAL is proud to be involved in the project by providing general E&M engineering sub-contracting services.

Another project, WF Central in Beijing, received the same recognition. Occupying a prime site of approximately 150,000 square metres on Wangfujing Street in Dongcheng District. We are pleased that we are awarded



in this program. We will take this as an added impetus to strive even further and to strengthen our brand in China in future.

安樂工程參與的項目榮獲內地著名的國家級獎項。於2018年8月開幕的香港賽馬會從化馬場最近獲取國內建造業最高榮譽——2018/19年度中國建築業協會的中國建設工程魯班獎（國家優質工程）。馬場位於廣

州從化區，是國內首個世界級賽馬場和馬匹訓練中心，我們很榮幸能負責當中的機電工程項目。

此外，位於北京的王府中環國際品牌中心同樣獲得殊榮。座落於東城區王府井大街的黃金地段，項目佔地約150,000平方米。我們很高興能夠獲得此榮譽大獎，為此我們將會更努力及積極投入國內發展。

DSD Awards ATAL for Good Housekeeping 安樂工程獲頒渠務署工地整潔獎

With the outstanding performance in keeping clean, tidy and environmental-friendly work sites, San Wai Sewage Treatment Works (Phase One) project won Grand Award under Construction Sites Safety and Housekeeping Award Scheme 2018.

This scheme was firstly launched by

Drainage Services Department (DSD) in 2004 with the aim of raising the housekeeping standard of DSD's construction sites, the partnering consultants and in-house site supervisory staff engaged in the same contract. The Award Presentation Ceremony was held in March to recognise the efforts of our team.

集團憑著新圍污水處理廠改善工程第一期項目，獲渠務署頒發2018年工地安全及整潔獎勵計劃「總冠軍大獎」，表揚團隊保持工地清潔、整理及致力保護環境的卓越表現。

該計劃自2004年推出，旨在嘉許在渠務署建築地盤的承建商及工程督導團隊。今年頒獎典禮已於3月舉行，表揚了團隊努力的成果。



Winner in Safety Video Competition in Lift and Escalator Works 升降機工作安全短片比賽 安樂工程奪冠

Please scan the QR code and watch the video.
觀看影片，請掃描二維碼：



Over the years, the Electrical and Mechanical Services Department (EMSD) has been working hard to enhance the work safety on lifts and escalators, thereby reducing the occurrence of accidents and ensuring the safety of engineers and workers engaging in lift and escalator works. Anlev Elex, a subsidiary of ATAL Engineering Group, is honoured to be awarded the winner of Organisation Category in Safety Video Competition in Lift and Escalator Works 2018/2019 by EMSD in March.

Holding the motto "Always Think Safety and Act Safely", we introduced various safety enhancement initiatives including Safety Guidelines for Accessing and Egressing Lift Car Top, Interruption of Car Moving Safety System, Motion Sensor App and Remote Alarm System, through conversation about Anlev Safety Hints between lift foreman and his subordinates in a short video. Innovative, tailor-made work practices and useful safety measures are shared in a humorous manner.

We hope the good practices and safety message can be disseminated to the widest possible audience in an effective way and be shared with peers among this sector for enhancing a safe working environment!

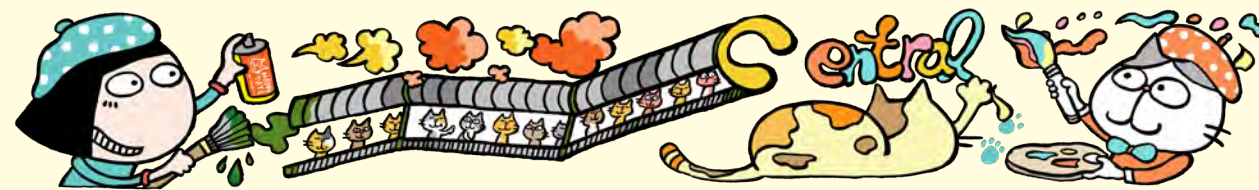
機電工程署多年來致力提高升降機及電梯工作安全，從而減少意外發生，並保障工程人員包括工程師及技工安全。我們很榮幸集團旗下的安力電梯能夠在機電工程署舉辦的「升降機 / 自動梯工作安全短片拍攝比賽2018/19」奪得機構組冠軍。

安力電梯一直重視安全，決心做到「坐言起行，實踐安全」。在比賽影片中，透過升降機維修主管及學徒的對話，以安力安全秘笈介紹進出升降機頂工作安全守則、截斷機廂運行系統、移動傳感器應用程式及升降機廂遙距警鈴，並以輕鬆幽默的手法分享公司為升降機維修員度身訂造的創新工作安全措施。

安力電梯希望這些良好作業模式透過有效和清晰的方式向大眾廣泛推廣，共同建立安全的工作環境。



Central-Mid-Levels Escalator “Connect • Community • Culture” Drawing Competition Awards Presentation Ceremony cum Exhibition 中環半山扶手電梯繪畫比賽頒獎典禮暨作品展覽



Please scan the QR code for the event highlights
請掃描以下二維碼瀏覽活動網頁



The Central-Mid-Levels Escalator and Walkway System not only serves residents and pedestrians daily but is also well known as a major tourist attraction. The escalator has been in operation for more than 25 years and in view of its ageing, Anlev Elex, a subsidiary of ATAL, was appointed by the Transport Department (TD) and Electrical and Mechanical Services Department (EMSD), to carry out refurbishment of the escalator system, commencing last year, to ensure the system is safe and reliable for the public.

Since the escalator is situated in a unique district with cultural diversity, we hope to engage the community in this refurbishment project through a cultural and artistic way. With the support from TD and EMSD, we organised the “Connect • Community • Culture”

Drawing Competition for public enrolment. Mandy Kwong (MandyCat), renowned local artist, was invited to design a set of murals which will be displayed along the escalator to record this drawing competition.

The competition drew an enthusiastic response, over 40 schools joined and more than 130 entries were received. The artworks were of a high calibre and level of creativity. An Awards Presentation Ceremony was held in April. It was honoured with the presence of Director of EMSD Alfred Sit Wing-hang, JP and Assistant Commissioner for Transport / Management and Paratransit of TD Candy Kwok.

Afterwards, honourable guests, award winners and their family members and

associates visited the Central-Mid-Levels Escalator to enjoy the artworks on display. The competition's winning artworks will be exhibited near the escalator from Wellington Street to Lyndhurst Terrace until 31 October 2019.

中環至半山自動扶梯系統除了是居民與行人每天必經的運輸系統外，更是著名的旅遊景點。自動扶梯運作了25年，難免老化。為了確保系統符合最新的安全標準，扶梯有迫切需要更新，安樂工程旗下附屬公司安力電梯取得運輸署及機電工程署合約，在2018年展開更新工程。

由於扶手電梯位於文藝色彩濃厚的中環半山區，我們希望透過文化與藝術，與當區居民聯繫互動，在運輸署及機電工程署的全力

支持下，舉辦了「連繫 • 社區 • 文化」繪畫比賽，向學生及公眾人士徵收畫作，紀錄他們對這自動扶梯及附近社區的情感和印象。同時，我們誠邀本地著名插畫家鄭詩韻（文地貓）為我們在自動扶梯上設計富有中半山特色的壁畫。

比賽反應熱烈，有40多間學校響應活動，我們收到逾130份作品。畫作各具特色，水準甚高，頒獎禮已於4月27日舉行，當日機電工程署署長薛永恒太平紳士及運輸署助理署長（管理及輔助客運）郭惠英亦應邀出席。頒獎禮後，一眾嘉賓、得獎者及家屬一同到自動扶梯欣賞展出的得獎畫作。有關得獎作品由當日至10月31日於中環至半山自動扶梯——威靈頓街至擺花街一段展出，歡迎公眾參觀。

Winning Artworks at a Glance 得獎作品

Primary School Category 小學組

Winner 冠軍
Li Wai Lam, Maersk 李維霖



First Runner-up 亞軍
Choi Yuk, Daniel 蔡旭



Second Runner-up 季軍
Jason Lo 魯芋遜



Secondary School Category 中學組

Winner 冠軍
Sze Cheuk Man 施卓汶



First Runner-up 亞軍
Lai Cheuk Ying, Jennifer 黎卓盈



Second Runner-up 季軍
Sze Cheuk Hei 施卓希

Public Category 公開組

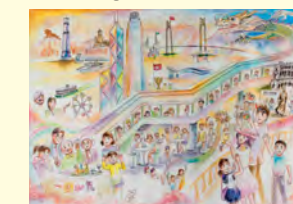
Winner 冠軍
Li Ka Ki 李珈淇



First Runner-up 亞軍
Yuen Fung Ying, Alice 阮鳳英



Second Runner-up 季軍
Mak Hung Wai 麥紅偉



Connecting with Mainland China Construction Leaders 與內地同業共建未來



With the goal of boosting innovation to the industry, ATAL was invited to attend “Building for the Future” business forum held in Guangzhou and Chongqing organised by Hong Kong Trade Development Council.

Our Chief Executive Officer Kevin Cheng delivered a speech about ATAL’s innovative solution in Guangzhou, the “Cloud-based Chiller Plant Energy Management Platform” at the forum, highlighting the importance and methodology of energy conservation.

The Group also focuses on wastewater treatment, promoting urban development. General Manager of Environmental Engineering (China) Roy Zhang was invited to the Chongqing Forum in May to share solutions on urban waste treatment.

They were pleased to exchange ideas and connect with mainland counterparts through this meaningful forum.

為促進行業創新，安樂工程獲邀參與由香港



貿易發展局舉辦的廣州及重慶「未來建設建設未來」論壇。

集團行政總裁鄭小藝於3月參與廣州的論壇，他分享由集團研發的「雲端製冷機組能源管理平台」的優點，以及講解節能方案和其重要性。此外，集團亦致力於污水工程，促進城市發展，環境工程（中國）總經理張琰在5月到重慶的論壇，分享城市廢物處理方案。此別具意義的論壇加強了集團與內地同業的聯繫與交流。

Innovative and Green Building Conference for Sustainable Development 綠色建築會議 推動可持續發展

In February, ATAL joined the Innovative and Green Building Conference at the Hong Kong Science Park. Organised by Hong Kong Green Building Council and Hong Kong Science and Technology Parks Corporation, the conference brought various professional parties together to discuss and share the latest innovations and technologies used in the built environment.

Our Director of Information, Communications and Building Technologies Dave Chan was invited to be the speaker to present the latest technology of ATAL. Also, he attended the panel discussion to share his views on machine learning for energy management. The “Cloud-based Chiller Plant Energy Management Platform”, developed by ATAL, based on a physics-guided machine-learning approach



reveals the actual performance of individual chiller plant equipment. Overall optimal operation can be achieved by recording the data and predicting cool load. We were glad to showcase ATAL’s latest products with industrial leaders in the exhibition booth. This conference was a success, offering inspiration to the audiences by providing an interactive platform to exchange ideas.

今年2月，安樂工程在香港科學園出席了由香港綠色建築議會及香港科技園舉辦的「創新及綠色建築論壇」，論壇讓各界專業人士討論及分享最新的建築創新方案與技術。

集團智能及綠色屋宇系統總監陳志雄獲邀上台發表公司的最新科技，及出席專題討論環節，分享他在能源管理上應用機器學習的見解。此外，我們在論壇帶來最新研發成果與業界交流。集團研發的「雲端製冷機組能源管理平台」利用物理主導的機器學習，加上製冷機組的實時數據來預測冷凍負荷，最終實現整體的最佳操作達至節能效果。

大會為業界帶來一個能夠互動及分享的平台，有助香港推動可持續發展建築。

Enhancing Good Housekeeping in Workplace 良好工地整理 提高安全意識

To promote the benefits of implementing good housekeeping in workplace, the “Good Workplace Housekeeping Competition and Sharing Forum” was held in February, organised by ATAL. Chief Executive Officer Kevin Cheng, Chief Executive of Environmental Engineering Raymond Chan, Chief Executive of Data Centre Infrastructure Victor Law, and Chief Executive of Building Services Engineering Brian Cheng were invited to be the adjudicators and share

their experiences and best practices with our sub-contractors and colleagues at the event.

The project for the expansion of Tai Po Water Treatment Works for the Water Supplies Department emerged as the winner. We hope these kinds of activities will cultivate a good corporate safety culture and enhance safety awareness amongst our workers and colleagues.

為推廣良好工地整理，安樂工程於2月舉辦「良好工地整理比賽暨分享會」，由行政總裁鄭小藝、首席環境工程總監陳海明、首席數據中心基建總監羅威德及首席屋宇裝備工程總監鄭偉能擔任評判，並向承判商和同事們分享經驗及心得。

恭喜水務署大埔濾水廠擴建項目的同事奪得比賽冠軍。我們希望能透過相關活動培養良好的安全企業文化，同時加強工友及同事的安全意識。



Cross Business Unit Safety Inspection Scheme for Workplace Safety 跨業務部門安全檢查計劃 提升工地安全

A constant focus on safety measures is important to help avoid site accidents. ATAL Cross Business Unit Safety Inspection Scheme was implemented to improve safety awareness at our construction sites.

From March to December, the heads of various business units different work sites to inspect and score safety initiatives. Through this program, different business units can share their experience and good practices with each other and cultivate “Think Safety and Work Safely” atmosphere in workplaces.

Our management visited the “Automation of Arrival Bags Delivery” work site at the Hong Kong International Airport in March. Since the work site is adjacent to the runway, workers are required to follow guidelines and prevent any interference to the airport’s operations.

By reporting and providing solutions to further improve the safety performance, we strive for building a good and safe working



environment and work practices in order to prevent accidents.

做足安全措施是避免工地意外發生的重要一環，安樂工程為了提高不同工地同事的安全意識，特別舉辦了跨業務部門檢查計劃。

今年3月至12月期間，集團不同業務部門的主管將到各個工地巡視，並按照不同範疇，進行檢查和評分，讓不同部門可分享親身



經驗及心得，並建立「留心安全，做好安全」的企業文化。

管理層在3月率先到香港國際機場為「抵港行李自動化運輸系統」進行安全檢查，了解到工地鄰近跑道，故此工友須嚴格遵守安全規則，避免對機場運作造成任何干擾。

在每次巡查後，業務部門主管會為工地記錄及提出改善建議，不但建立良好及安全的工作環境，更防止意外發生。

Performing in the Field with Teamwork 奔馳足球場上 盡展團隊精神

ATAL encourages a healthy work-life balance for colleagues, so we organise different sports activities for our staff and invite our partners or clients to join too.

The football tournament held is a popular one, in which ARUP, Hospital Authority, J. Roger Preston, NTT and Schneider Electric joined us at The University of Hong Kong Stanley Ho Sports Centre last December. After rounds of competitive yet friendly matches, Hospital Authority won the championship while ARUP became the first runner-up in the Cup. The Plate match was also exciting

with Schneider Electric and NTT tied in the game after overtime and sudden death period. Finally, Schneider Electric won the match according to the number of the cap of advanced players. ATAL became the winner in Shield, followed by J. Roger Preston. Each team fully demonstrated inspiring teamwork.

安樂工程鼓勵同事要有工作與生活平衡，因此不時為同事舉辦不同體育比賽，並邀請合作夥伴及客戶參與。

安樂工程舉辦的足球比賽便是其中之一，去

年12月誠邀了ARUP、醫院管理局、禮信工程、NTT及施耐德電氣在香港大學何鴻燊體育中心的球場上一同較量。

比賽氣氛激烈，來自醫院管理局的隊伍以較強實力，在盃賽賽事中與ARUP對壘，奪得冠軍。碟賽賽事亦同樣激烈，施耐德電氣與NTT相持不下，經歷加時、即時死亡階段也未分高下，最終以先進球員的出場次數來決勝負，由施耐德電氣贏得碟賽冠軍。在盾賽中，我們的隊伍奪得了冠軍，而禮信工程則獲取亞軍。各球員在比賽球場上奔馳，充分展現合作精神。



Bowling Tournament for Fun 保齡球比賽 與眾同樂

The Bowling Tournament was held in March at the South China Athletic Association. Our partner companies Cathay Pacific Airways, Equinix, Hong Kong Science and Technology Parks Corporation, HSBC, Nan Fung Group and WSP participated in the event.

Our Chief Executive Officer Kevin Cheng, cheered for the team whilst Chief Executive of Data Centre Infrastructure Law Wei Tak and Manager of Plumbing & Drainage in Building

Services Contracting Burnie Mok took part in the tournament. Congratulations to HSBC Team 1 and Team 2 who were the champion and the first runner-up respectively, while ATAL came the third. Our colleague Law Kwok Wai was the second runner-up in individual high game award.

3月於南華會舉行的「保齡球比賽及同樂日」中，我們誠邀合作夥伴國泰航空、Equinix、香港科技園、匯豐銀行、南豐

集團及WSP一同參與。

行政總裁鄭小藝到場為選手打氣，而首席數據中心基建總監羅威德及屋宇裝備工程承建給排水部經理莫永康更親身上陣。經過一輪競技後，恭喜匯豐銀行（隊一）、匯豐銀行（隊二）及安樂工程分別奪得冠、亞及季軍。同時，我們的同事羅國衛亦贏得個人單局最高成績的季軍。



Walk Up Jardine House 齊步上怡廈

Have fun and support mental health! ATAL participated in the annual fundraising event "Walk Up Jardine House". Our athletes took part in a relay race competition, raising funds for the Jardine Matheson Group's charity initiative "MINDSET".

This year, our Men's relay team got the first runner-up, just lost by a second. It took them 3 minutes and 48 seconds to climb 49-storey, some 600 feet high, showing the vitality, solidarity and determination of ATAL.

寓慈善於娛樂！安樂工程參加一年一度的籌款活動「齊步上怡廈」，派出運動健將參加接力賽，為怡

和集團旗下、推動精神健康的慈善組織「思健」籌款。

安樂工程男子團體今年以3分48秒的佳績，僅以一秒之差屈居亞軍。隊員成功挑戰登上樓高49層、600呎高的怡和大廈，盡顯安樂工程的活力、團結精神及堅毅。



Running for Rehabilitation Service 「公益慈善馬拉松」支持復康服務

Charity brings prosperity and happiness. To help raise funds, ATAL participated in the "2019 Community Chest Corporate Challenge" in January, which featured a 10km run and a half-marathon. All monies raised by our athletes will be allocated to enhance rehabilitation and aftercare

services supported by The Community Chest.

The run started at Sai Kung Pak Tam Chung Country Park, then proceeded up a hill to the top of the High Island Reservoir. Our Group Chairman Dr. Otto Poon and over 80 ATAL runners participated in this event. Finally,

ATAL attained the corporate team Gold Award of the 10km run.

樂善好施，助人為樂。今年1月，安樂工程參與「公益慈善馬拉松」籌款活動，活動包括10公里及半馬拉松賽事，所得善款將捐助公益金作復康及善導服務之用。

活動於西貢北潭涌郊野公園起步，沿途上山至萬宜水庫。集團主席潘樂陶博士與超過80名安樂工程同事一同參與。選手最後不負所望，在10公里賽事中獲得隊伍組別金獎。



CIC Happy Run 建造業開心跑



Cheers to our winners! Construction Industry Council's industry-wide event, "CIC Happy Run 2019" was held in January at the Hong Kong Institute of Construction Tai Po Training Ground.

Featuring a 10km race, a 3km Happy Run and a carnival, this annual event provides a good opportunity for construction practitioners to enjoy a fun day which promotes sport and healthy lifestyle.

ATAL Chief Executive Officer Kevin Cheng attended to motivate our runners. Chief Executive of Building Services Engineering Brian Cheng also joined this competition. We are proud of Choi Tat Ming who brought home a gold medal in the Senior Group of the 10km race.

由建造業議會舉辦，一年一度的業界盛事「建造業開心跑2019」於今年1月假建造業議會大埔訓練場舉行。

這項賽事包括10公里比賽、3公里開心跑及嘉年華，為建造業人士提供一個享受運動樂趣的機會，從中宣揚健康的生活方式。

集團行政總裁鄭小藝親身到場為選手打氣，當中首席屋宇裝備工程總監鄭偉能亦有參賽。最後，同事蔡達明在長青組10公里賽事中奪得冠軍。

Playing with the Spirit of the Team 發揮團隊精神 籃球賽創佳績

Seeking to foster a growing relationship with our peers in the industry, ATAL joined the CIC Basketball Competition in March.

During six gruelling matches, ATAL's basketball team worked to maximum effort. Group Chairman Dr. Otto Poon motivated our players in the finals with a courtside visit. Our basketball team played well, taking the lead throughout the match and finally securing the winner of the Plate Competition.

安樂工程於3月份獲邀參加「建造業議會籃球邀請賽」，希望藉此增進與業界同儕的友誼。

安樂籃球隊奮力應戰一連6場賽事，在碟組賽決賽中，集團主席潘樂陶博士更親身到場支持，為一眾球員打氣。大家全力以赴，在

賽事中一直以領先的分數勝出，最終贏得碟組賽冠軍。



Goals at the Inter-Hong 11-A-Side Football Tournament 11人足球比賽 踢出優異成績



ATAL is dedicated to helping staff maintain a positive work-life balance by encouraging staff to join various different sporting teams. We are excited to have joined the Inter-Hong Games Association this year, allowing teams

to participate in a series of ball games.

The "11-a-side football match" in April is the highlight of the year! Our well-trained football team made an all-out effort. Group

Chairman Dr. Otto Poon and Executive Director Victor Law came to cheer for the players. In the group stages the ATAL team finished as second runners-up. Everyone who participated had a great time and looks forward to the next event.

為推動工作與生活平衡的職場文化，安樂工程今年已加入行際康樂體育會，讓公司球隊有更多機會參與一系列不同的球類比賽。今年度首個重點活動必然是4月舉行的「11人足球比賽」，當日球賽氣氛激烈，安樂足球隊竭盡全力，發揮超高水平。集團主席潘樂陶博士及執行董事羅威德親身到場為同事打氣，最終我們不負眾望，在分組賽中取得小組季軍。

Inter-Departmental Basketball Competition 公司部門籃球賽

Team sports encourage colleagues to work together to achieve the same goal and improve morale. In order to enhance cohesion and communication within and

among departments, ARWA Club held the Inter-departmental Basketball Competition and 8 teams participated. Finally, Team Infrastructure and Healthcare Engineering (IHCE)

won the champion, followed by Team Building Services Contracting 2 (BSS2) and Team Sewage and Plumbing (SP). Team IHCE and Team BSS2 played an excellent game in the finals. All athletes spared no effort in these fierce battles and their hard work was appreciated, receiving the applause of the audience!

團隊運動能讓同事互相合作，一同達成共同目標，亦可激勵士氣。安樂康體會特意舉辦部門籃球賽，增加部門內部的凝聚力及加強部門間的聯繫。賽事共有8隊隊伍參加，最後由基建及醫療服務工程隊取得冠軍、屋宇裝備工程部二隊及環境工程隊分別取得亞軍及季軍。8場比賽氣氛緊張刺激，晉身決賽的兩隊精英更是打了一場精彩的賽事。



ARWA Club Lam Tsuen Tour with the Elderly 新春夢想成真許願團



ATAL encourages its employees to get involved in the community by volunteering. ARWA Club is keen to show our care for the elderly. This year in spring, it organised a New Year Tour. Our volunteers accompanied the elderly to make wishes in Lam Tsuen where everyone flocked to the tree to make

their wishes for the coming year. We enjoyed this festive event which was filled with joy and care. Afterwards they had afternoon tea and enjoyed the company of each other.

安樂工程一向致力鼓勵同事多參與社區活動，安樂康體會在年初籌辦了「新春夢想

成真許願團」，集團義工隊帶同一班長者到林村祈福，趁著農曆新年到許願樹前許下願望。我們不但感受到節日喜氣洋洋的氣氛，還能分享喜悅與關懷。活動過後，義工更與長者們一同食下午茶，彼此關心，樂也融融。



Tie-dye Class with Creativity 紮染工作坊

Art not only encourages creative thinking but also relieves stress. ARWA Club held two tie-dyeing classes in March. Colleagues were

able to create their own unique blue-tone T-shirts and bags with creativity. During the class, colleagues enjoyed the process with satisfaction in their work.

We are looking forward to organising more interest classes with different themes to share joy together.

藝術既能刺激創意思維，亦能舒緩壓力。安樂康體會於3月舉辦了一連兩場紮染班，讓同事發揮創意，製作出獨一無二的藍染短



袖領衫及布袋。過程中，同事們享受紮染的樂趣，亦十分滿意自己的作品。

我們希望將來能夠發掘更多不同興趣班的題材，舉辦更多活動，讓同事一同享受歡樂的時光。

Cuttlefish Fishing Night Tour 初夏涼風 夜釣墨魚

The ARWA Club organises different types of activities to strengthen bonds amongst colleagues who all have different hobbies. Our activities are not limited to big sports occasions, time to remember that it is the peak season for cuttlefish fishing from May.

The ARWA Club held a special cuttlefish fishing party, taking colleagues to actually fish for cuttlefish. Participants tasted delicacies and spent a joyful evening together.



安樂康體會除了定期舉辦球類訓練及比賽外，亦會安排各類型的活動，令擁有不同嗜好的同事也可聚首一堂，增進大家之間的聯繫。

適逢5月是釣墨魚旺季，康體會舉辦了「墨魚狂P」，讓大家結伴乘坐遊艇出海夜釣墨魚。當晚同事品嚐到不少美食，共度了一個愉快晚上。

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南京佳力圖機房環境技術股份有限公司

ATAL Engineering Group **安樂工程集團**

Group Headquarters 集團總部
13/F, Island Place Tower, 510 King's Road,
North Point, Hong Kong
香港北角英皇道510號港運大廈13樓

Tel : (852) 2561 8278

Fax : (852) 2565 7638

Email : info@atal.com

Website : www.atal.com

