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# INNOFUTURE

VOICE LINK  
機電傳聲

機電工程署  
EMSD



# 創新方案屢獲殊榮

## Award-winning Innovative Solutions

**機**電工程署(機電署)持續為客戶提供創新機電工程方案，與客戶共同為社會創造最大的公眾價值。我們開發的創新方案，在公務員優質服務獎勵計劃中榮獲多個獎項；此外，機電署作為敢於創新的機構之一，更獲其他專業團體嘉許表揚。

### 公務員優質服務獎勵計劃

機電署在2019年公務員優質服務獎勵計劃中獲得五個獎項，包括「非一般創新訓練」項目奪得「隊伍獎(內部支援)」金獎和特別嘉許獎(創科應用)；「智慧監獄」項目奪得「部門合作獎」優異獎；「顧客為本電子平台」項目奪得「隊伍獎(內部支援)」優異獎；以及「治未病 化被動為主動」項目奪得「隊伍獎(一般服務)」特別嘉許獎(創科應用)。

### 金獎：非一般創新訓練

為培育具國際視野的年輕專業團隊，機電署的培訓策略從年青人的角度出發，針對他們喜歡「新」的特質，投放資源全面提升培訓設施，興建以創新科技為主軸的互動學習中心，並在訓練課程中加入創科及數碼元素。我們除了安排學員到大灣區進行培訓交流外，亦鼓勵他們參加「世界技能大賽」，藉此提升技能、建立自信和擴闊視野。此外，我們優化技術員訓練計劃，又與業界共同培訓新入職年青學員，為機電業吸納生力軍。以上種種措施讓機電署得以憑藉「非一般創新訓練」項目，在2019年公務員優質服務獎勵計劃中奪得「隊伍獎(內部支援)」金獎和特別嘉許獎(創科應用)。

The Electrical and Mechanical Services Department (EMSD) has been providing innovative electrical and mechanical (E&M) engineering solutions to our clients and working with them to maximise public value for the society. The innovative solutions we developed have received several awards in the Civil Service Outstanding Service Award Scheme, and the EMSD, as one of the innovative institutions, was also commended by other professional organisation.

### Civil Service Outstanding Service Award Scheme

The EMSD won five awards in the Civil Service Outstanding Service Award Scheme 2019, including a Gold Prize in Team Award (Internal Support) and a Special Citation Award (Application of Innovation and Technology) for the “Training Beyond Innovation” project; a Meritorious Award in Inter-departmental Partnership Award for the “Smart Prison” project; a Meritorious Award in Team Award (Internal Support) for the “Customer Centric e-Platform” (CCeP) project; and a Special Citation Award (Application of Innovation and Technology) in Team Award (General Service) for the “From Reactive to Proactive Maintenance” project.

### Gold Prize: Training Beyond Innovation

To cultivate young professional teams with international vision, the EMSD's training strategy is formulated from the perspectives of young people. Targeted at their preference for “new” elements, we have invested resources in comprehensively upgrading our training facilities by building an Interactive Learning Centre (ILC) based mainly on innovative technologies, and added innovation and technology (I&T) and digitised elements to our training scheme. Apart from arranging for technician trainees to participate in training and exchange in the Greater Bay Area, we also encourage them to take part in the WorldSkills Competition so as to improve their skills, build up their confidence and widen their horizons. In addition, we have enhanced our Technician Training Scheme and trained newly recruited trainees in collaboration with the trade, thereby attracting new blood to the E&M trade. All the above measures have enabled the EMSD to win a Gold Prize in Team Award (Internal Support) and a Special Citation Award (Application of Innovation and Technology) in the Civil Service Outstanding Service Award Scheme 2019 with its “Training Beyond Innovation” project.



公務員事務局局長羅智光先生(右七)和機電署署長薛永恒先生(右六)與公務員優質服務獎勵計劃的機電署得獎團隊合照。

Pictured are Secretary for the Civil Service, Mr. Joshua Law (7th right), Director of Electrical and Mechanical Services, Mr. Alfred Sit (6th right), and the EMSD winning teams of the Civil Service Outstanding Service Award Scheme.



公務員敘用委員會主席劉惠蘭女士（右一）在2019年公務員優質服務獎勵計劃頒獎典禮上頒發「隊伍獎（內部支援）」金獎予機電署得獎團隊。  
Chairman of the Public Service Commission, Mrs. Rita Lau Ng Wai-lan (1st right), presents the EMSD winning team the Gold Prize in Team Award (Internal Support) at the prize presentation ceremony of Civil Service Outstanding Service Award Scheme 2019.



「非一般創新訓練」措施大大提升了學員的學習興趣，並取得理想成效。2018年，我們的創科培訓課程持續增加，而學員人數在短短三年間已上升超過六成。另外，我們鼓勵學員以賽促學，還安排出線的學員與國家隊一起集訓，其中兩名學員在今年8月於俄羅斯喀山舉行的「世界技能大賽2019」中贏得優異獎，足證他們的技術已達國際一流水平。此舉有助學員開闊視野，更使他們信心大增。

Our “Training Beyond Innovation” measures have greatly enhanced trainees’ learning interest and achieved satisfactory results. In 2018, the number of our I&T training sessions continued to increase, while the number of technician trainees has gone up by more than 60% in just three years. Besides, we encourage our trainees to enhance their skills through competitions, and finalists have been arranged to receive joint trainings with the China national team. In August this year, two trainees from the EMSD won Medallions for Excellence in the WorldSkills Competition 2019 held in Kazan, Russia, which proves that their skills are among the best in the world. Not only were their horizons broadened, but their confidence was also significantly boosted.

我們樂意與客戶部門分享相關的培訓經驗。今年7月至10月期間，香港廉政公署、消防處及渠務署（土地排水部）的代表團先後參觀我們總部大樓的創科設施，探討應用創新技術提升模擬訓練和設施自動化的可能性。他們親身體驗互動學習中心所展示的新一代訓練設施方案，對虛擬實境和擴增實境的培訓設施深感興趣。

We are happy to share with client departments our relevant experience in training. Between July and October this year, representatives from the Hong Kong Independent Commission Against Corruption, Fire Services Department and Drainage Services Department (Land Drainage Division) visited the I&T facilities in our headquarters building, and explored the feasibility of applying innovative technologies to enhance simulation training and facility automation. They personally experienced the new generation training solutions displayed in the ILC and showed great interest in the virtual reality and augmented reality training facilities.



互動學習中心的訓練設施加入創科及數碼元素，能引發學員的學習興趣和提升培訓效能。歡迎掃描二維碼或登入網址 [http://bit.ly/emsd\\_iloc](http://bit.ly/emsd_iloc)，瀏覽互動學習中心的360度相片，了解中心的創新設施。

Equipped with I&T and digitised elements, training facilities at the ILC can arouse trainees’ learning interest and improve training effectiveness. Please scan the QR code or visit [http://bit.ly/emsd\\_iloc](http://bit.ly/emsd_iloc) to view the 360-degree photos of the ILC and learn more about its innovative facilities.



## 優異獎和特別嘉許獎

榮獲優異獎的「智慧監獄」項目涵蓋我們與懲教署合作研發的多個創科項目，旨在提升懲教院所的營運效率，當中包括協助懲教署職員監察在囚人士的身體狀況和追蹤其活動位置的「維生指標監察系統」和「移動及位置監察系統」。另一個獲頒優異獎的「顧客為本電子平台」項目，結合工作管理系統及手機應用程式，除了提高委派工作的效率外，前線同事亦可迅速跟進維修要求和更有效匯報進度。該平台每月可收集近二萬個工作通知記錄，以便進行商業智能數據分析。由機電署自行研發的遙距監控和地理資訊系統則獲得特別嘉許獎，本着「治未病 化被動為主動」的理念，該系統能偵察運作異常的設施，在初期主動介入，進行預防性維修，以減少交通燈、隧道及天橋的機電設施出現突發故障，並在惡劣天氣時掌握各區設施的損毀狀況，加快修復。

## 機電署獲嘉許

今年12月，機電署獲香港工業專業評審局頒發「智慧學習型機構榮譽獎」，藉以表揚部門持續透過創新科技培訓人才、建立優良的學習和管治文化、推動行業發展，使部門成為首個獲頒此獎項的政府部門。

此外，機電署積極透過各種管理工具，在營運上不斷求進，多年來取得多項國際管理體系認證，包括早前取得的 ISO 37001 反賄賂管理體系認證。今年，機電署又獲香港品質保證局嘉許為「多元體系管理機構」和「整全體系管理機構」，對部門不斷提升服務水平的工作予以肯定。

## Meritorious Awards and Special Citation Award

The Meritorious Award-winning “Smart Prison” project comprises several I&T projects we co-developed with the Correctional Services Department (CSD) to enhance the operational efficiency of correctional institutions, including, among others, the Health Signs Monitoring and Passage Surveillance Systems which help CSD staff monitor the health conditions of persons in custody and track their locations of movement. The CCeP project, which too won a Meritorious Award, combines the job

management system with mobile applications to speed up job assignment, while frontline staff can quickly follow up on maintenance requests and report on job progress more effectively. This e-Platform can collect around 20 000 job notification records every month for business intelligence data analysis. With the idea of “From Reactive to Proactive Maintenance”, the remote monitoring and geographic information system was developed by the EMSD and received the Special Citation Award. The system can identify facilities with abnormal operation so that preventive maintenance can be carried out at an early stage to reduce sudden failures of traffic lights and E&M facilities of tunnels and footbridges. The system can also identify damages to facilities in various districts under bad weather conditions to speed up repair.

## EMSD Wins Recognition

This December, the EMSD was awarded the Learning Organisation Honorary Award by the Professional Validation Council of Hong Kong Industries (PVCHK) in recognition of our continuous efforts in training talents through innovative technology, establishing an excellent learning and management culture, as well as promoting industry development, making us the first government department to receive this Award.



機電署助理署長/3陳志偉先生(中)與「智慧學習型機構榮譽獎」頒獎嘉賓合攝，包括香港工業專業評審局榮譽主席劉建華博士(左一)、香港理工大學副校長(科研發展)衛炳江教授(左二)、中聯辦經濟部副部長兼貿易處負責人劉亞軍先生(右二)和香港工業專業評審局榮譽主席劉志偉先生(右一)。

Pictured is Assistant Director/3 of the EMSD, Mr. Richard Chan (middle), with the Learning Organisation Honorary Award presenting guests, including President Emeritus of the PVCHK, Dr. Kevin Lau Kin-wah (1st left), Vice President (Research Development) of the Hong Kong Polytechnic University, Professor Alexander Wai Ping-kong (2nd left), Deputy Director-General of the Economic Affairs Department and Head of the Commerce Office of the Liaison Office of the Central People's Government in the HKSAR, Mr. Liu Yajun (2nd right) and President Emeritus of the PVCHK, Mr. Bernard Lau Chi-wai (1st right).



Moreover, the EMSD actively strives for continuous operational improvement through various management tools, and has obtained several certifications of international management systems over the years, including the ISO 37001 Anti-bribery Management Systems Certification received earlier this year. Besides, we were commended this year by the Hong Kong Quality Assurance Agency (HKQAA) as the Outstanding Organisation with Comprehensive Management Systems and the Outstanding Organisation with Holistic Management Systems, which serve as recognition of our efforts in continuously enhancing our service standard.

機電署副署長/規管服務彭耀雄先生(左)及機電署助理署長/3陳志偉先生(右)代表機電署接受香港品質保證局主席盧偉國博士頒發的「多元體系管理機構」和「整全體系管理機構」獎項。

Deputy Director/Regulatory Services of the EMSD, Mr. Eric Pang (left), and Assistant Director/3 of the EMSD, Mr. Richard Chan (right), receive on behalf of the EMSD the Outstanding Organisation with Comprehensive Management Systems and the Outstanding Organisation with Holistic Management Systems awards from Dr. Hon. Lo Wai-kwok, Chairman of the HKQAA.



# 區域供冷系統入選C40刊物《城市100》

## District Cooling System Featured in Cities100, a C40 Publication

由機電署提交、以「香港區域供冷系統」為題的項目，獲2019年C40城市氣候領導聯盟(C40)表揚，成功入選C40刊物《城市100》的100個氣候行動方案，肯定了我們在應對氣候變化危機、實現可持續發展，以及確保市民享有更優質生活方面發揮的示範作用。C40全球市長峰會及其指導委員會會議於本年10月在丹麥哥本哈根舉行，匯集了全球城市決策者、商界領袖、科學家及其他持份者，分享應對氣候危機的對策，包括減碳行動。

「香港區域供冷系統」闡述啟德發展計劃區域供冷系統項目的效益(例如海水冷卻系統的能效比傳統氣冷式空調系統提升高達35%、應對氣候變化、減低碳排放和污染、增加綠化空間等)和服務收費機制，以及為其他新發展區(例如東涌新市鎮和古洞北等)規劃的區域供冷系統。此外，區域供冷系統項目更成功入選本屆C40彭博慈善基金會頒獎典禮「綠色科技」組別最後三強，成績令人鼓舞。是次頒獎典禮的大會主題為「我們想要的未來」，旨在向於氣候行動中發揮領導作用的城市給予認可，並通過展示他們的成功項目，啟發其他城市。

客戶如欲了解更多關於區域供冷系統的資訊，歡迎致電 3757 6244 與我們的高級工程師盧潔瑩女士聯絡。

If you would like to know more about the DCS, please contact Ms. Denise Lo, Senior Engineer, at 3757 6244.

The project titled "District Cooling System (DCS) in Hong Kong" submitted by the EMSD was recognised by the C40 Cities Climate Leadership Group (C40) in 2019 and successfully featured in its publication, Cities100, as one of the 100 solutions for climate actions, recognising the example we set in tackling climate change crisis, achieving sustainable development and ensuring a better quality of life for the people in Hong Kong. The C40 World Mayors Summit and the C40 Steering Committee meeting were held in October this year in Copenhagen, Denmark, bringing together global decision makers for cities, business executives, scientists and other stakeholders to share their strategies to tackle the climate crisis, including decarbonisation actions.

C40  
CITIES

### HONG KONG:

Keeping cool with seawater district cooling system



機電署的區域供冷系統項目入選C40刊物《城市100》的氣候行動方案，有關刊物可於<https://www.cities100report.com> 瀏覽和下載。

The EMSD's DCS project was featured in the C40 publication, Cities100, as a solution for climate actions. Please visit <https://www.cities100report.com> to view and download the publication.

"DCS in Hong Kong" presents the benefits (e.g. sea water cooling systems achieve a higher energy efficiency of up to 35% than standard air cooling systems, tackling climate change, reducing carbon emissions and pollution, increasing green spaces, etc.) and the service charging mechanism of the DCS project at the Kai Tak Development, as well as DCS planned for other new development areas (such as Tung Chung New Town and Kwu Tung North). Furthermore, it was encouraging that the DCS project was shortlisted among the three finalists in the Green Technologies category of the 2019 C40 Cities Bloomberg Philanthropies Awards. Under the theme "The Future We Want", the awards ceremony this year aims at recognising cities which play a leading role in climate actions, and inspiring other cities by showcasing awardees' success stories.

THE  
FUTURE  
WE WANT  
GREEN  
TECHNOLOGIES  
FINALISTS





# 合作無間 贏得客戶信賴

## Close Collaboration Wins Client's Trust

**機**電署早於1989年協助海事處設立香港首個船隻航行監察服務系統(航監系統)，至今一直為該系統提供升級服務和維修保養支援。我們剛退休的高級工程師彭國強先生自1998年起負責第二代和第三代航監系統的升級工程，成功優化系統的性能，贏得客戶的信賴和讚賞。

多年來，我們與客戶合作無間，透過持續提供優質服務，讓其深深體會到機電署「以客為本」的服務宗旨。海事主任/訓練梁永順先生表示：「十分感謝彭先生對航監系統升級項目的貢獻。彭先生與團隊積極引進創新科技，並鑽研解決方案和技術特性，以滿足我們對新產品功能的要求。」舉例而言，第二代航監系統引進了船隻自動識別系統及船隻航行監察服務模擬器，其後更提升至全數碼化的第三代航監系統。即使遇到突發事件，我們也能迅速應變，例如2018年超強颱風「山竹」襲港期間，部分微波通訊系統被毀，彭先生與團隊安排緊急維修，又重新配置備用設施，使航監系統得以維持正常通訊和服務。

兩代航監系統要達至無縫交接，實是極大挑戰，高級海事主任/訓練謝榮松先生為此向機電署團隊衷心致謝。他說：「有賴彭先生及其團隊卓越的專業知識和項目管理技能，以及部門之間互相信任和緊密協調，系統升級項目最終得以圓滿完成。」



高級海事主任/訓練謝榮松先生(右)和海事主任/訓練梁永順先生(左)與機電署前高級工程師彭國強先生(中)於船隻航行監察服務模擬器訓練室合照。他們多年來合作無間，建立了深厚的友誼。  
Pictured are Senior Marine Officer/Training, Mr. Tse Wing-chung (right), Marine Officer/Training, Mr. Leung Wing-shun (left), and former Senior Engineer of the EMSD, Mr. Sunny Pang (middle), at the VTS simulator training room. Their close collaboration over the years has forged a strong friendship.

**T**he EMSD assisted the Marine Department (MD) to set up the first Vessel Traffic Services (VTS) System in Hong Kong in 1989, and has all along been providing upgrade services and maintenance support for the system. Mr. Sunny Pang, who has just retired from his position as Senior Engineer with the EMSD, had been responsible for the upgrading works for the second and third generations of the VTS System since 1998. His efforts in successfully enhancing the system's performance have won client's trust and appreciation.

Over the years, we have been working closely with the MD and continuously offering quality services, which have made client deeply aware of the EMSD's customer-oriented service objective. "We greatly appreciate Mr. Pang's contribution to the upgrading works of the VTS System. Mr. Pang and his team actively introduced innovative technologies and studied various solutions and technical features to meet our requirements for new product functions," said Mr. Leung Wing-shun, Marine Officer/Training. For instance, the Automatic Identification System and the VTS simulators were introduced to the second generation of the VTS System, which was later upgraded to the third generation of a fully digitised VTS System. Also, we were able to respond quickly even in the event of an emergency. For example, during the strike of super typhoon Mangkhut in Hong Kong in 2018, part of the microwave communications system was damaged. Mr. Pang and his team arranged emergency repair and reconfigured the back-up facilities to maintain normal communications and services of the VTS System.

It was indeed a great challenge to achieve a seamless migration from the old generation of VTS System to the new one, for which Mr. Tse Wing-chung, Senior Marine Officer/Training, expressed his sincere gratitude to the EMSD team. "The successful completion of the VTS System's upgrading works relies very much on Mr. Pang and his team's excellent expertise and project management skills, as well as the mutual trust and close co-ordination between the MD and the EMSD," he said.



除了在專業技術層面提供服務外，彭先生還與客戶協作，安排「友·導向」師友計劃的中學生參觀船隻航行監察中心，由海事主任講解海事處的工作和航監系統，幫助學生擴闊視野。  
In addition to providing services on a professional and technical level, Mr. Pang also collaborated with client to arrange for secondary students of the "Life Buddies" Mentoring Scheme to visit the Vessel Traffic Centre. Students can broaden their exposure with introduction to the work of the MD and the VTS System briefed by marine officers.

# 機電署流動應用程式 EMSD Mobile Apps



**機**電署於今年12月推出流動應用程式，讓市民隨時隨地利用智能電話功能使用各項電子服務，以及獲取機電署的最新資訊，為生活帶來便利。

The EMSD launched mobile applications (apps) in December this year, which enable members of the public to access various electronic services and obtain latest updates from the EMSD anytime, anywhere with functions on their smart phones, bringing convenience to their life.



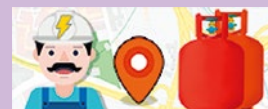
## 機電署資訊 EMSD News

**慳電計：**利用流動電話的相機，拍攝家電產品的能源標籤圖像，配合文字辨識功能，可即時顯示和比較不同產品型號的能源效益表現，以及估算每年電費，方便市民選擇更節能的家庭電器。



**Energy Saver:** By capturing the image of the energy labels on the household electrical appliances with the camera on your mobile phone, coupled with the optical character recognition feature, the app can instantly show and compare the energy performance of different product models, and estimate the annual electricity charges, facilitating the selection of more energy-saving household electrical appliances by members of the public.

**機電地圖：**利用智能電話在谷歌地圖上的現時定位或指定位置，即時搜尋附近註冊電業承辦商及瓶裝石油氣分銷商的聯絡資料，方便市民致電商戶要求上門服務。



**E&M Finder:** With current location on smart phones or specified location, members of the public can instantly search on Google Map for the contact information of Registered Electrical Contractors and LPG Cylinder Distributors nearby so that the public can call and request for on-site services.

**機電行業通：**為註冊電業工程人員、註冊升降機/自動梯工程師、註冊升降機/自動梯工程人員而設的流動應用程式。



**E&M Trade App:** It is a mobile application designed for Registered Electrical Workers, Registered Lifts/Escalators Engineers and Registered Lifts/Escalators Workers.

請掃描右面二維碼、瀏覽機電署網頁 ([https://www.emsd.gov.hk/m/tc/about\\_us/mobile\\_apps](https://www.emsd.gov.hk/m/tc/about_us/mobile_apps))或於App Store / Google Play 下載「E&M Connect」及「機電行業通」流動應用程式。另外，上述網頁亦載有「E&M Connect」的宣傳短片，歡迎大家觀看。

Please scan the QR code on the right, visit the EMSD website ([https://www.emsd.gov.hk/en/about\\_us/mobile\\_apps](https://www.emsd.gov.hk/en/about_us/mobile_apps)) or download E&M Connect and E&M Trade App at App Store / Google Play. You are also welcome to view the promotional video of E&M Connect at the above website.





# 機電嘉年華2020

## E&M Carnival 2020

由機電署與14間機構合辦的「機電嘉年華2020」將於明年2月22至23日在長沙灣遊樂場舉行。嘉年華節目內容豐富，包括遊戲及展覽攤位、親子工作坊、團體表演等，讓市民在輕鬆的氣氛下加深認識機電安全、節能環保和科技應用，歡迎大家參與。

另外，「機電嘉年華2020」網上問答比賽由即日起至2020年1月31日舉行，歡迎大家掃描右面二維碼或登入網址 <https://www.emsd.gov.hk/minisites/carnival2020> 參加，答對有關機電安全和能源效益的問題，更有機會贏取豐富獎品。

The E&M Carnival 2020, which is jointly organised by the EMSD and 14 organisations, will be held on 22 and 23 February 2020 at the Cheung Sha Wan Playground. The Carnival features various activities, including games and exhibition booths, parent-child workshops and group performances, etc., through which members of the public can learn more about E&M safety, energy saving and environmental protection as well as technology application in a relaxing ambience. You are most welcome to join.

Meanwhile, the E&M Carnival 2020 online quiz is running until 31 January 2020. Simply scan the QR code on the right or visit the website at <https://www.emsd.gov.hk/minisites/carnival2020> to take part in the quiz, and you may win attractive prizes if you answer the questions on E&M safety and energy efficiency correctly.



您的寶貴意見對我們非常重要！如大家對《機電傳聲》有任何意見或回應，請隨時聯絡我們，讓我們不斷改進。如果您的同事有興趣收取本通訊及加入郵寄名單，歡迎以電郵（[ccsd@emsd.gov.hk](mailto:ccsd@emsd.gov.hk)）或傳真（傳真號碼：2882 1574）方式通知我們。如果您希望我們更新您的資料，或從郵寄名單中刪除您，請透過電郵（[ccsd@emsd.gov.hk](mailto:ccsd@emsd.gov.hk)）與我們聯絡。

Your opinion is very important to our continuous improvement in VoiceLink! If you have any comments or feedback for the newsletter, please do not hesitate to let us know anytime. If your colleagues are interested in receiving our newsletter and want to subscribe it, feel free to e-mail or fax us at [ccsd@emsd.gov.hk](mailto:ccsd@emsd.gov.hk) or 2882 1574, and we will add them to our list. In case you wish to update your information, or to remove you from our newsletter mailing list in the future, please e-mail to [ccsd@emsd.gov.hk](mailto:ccsd@emsd.gov.hk).

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