

DIGITISATION

06. 2019

ISSUE S1

EMINNOPORTAL

SMART

TECHNOLOGY

INNOVATION

機電傳聲

VoiceLink

機電工程署
EMSD



創科研討會暨

《網上創新科技協作平台合作備忘錄》簽署儀式

I&T Seminar cum Signing Ceremony of Memorandum of Co-operation for E&M InnoPortal

為配合今年4月推出的支持創新的政府採購政策，機電工程署（機電署）積極擔當「創新促成者」的角色，並致力推動香港創新科技產業的發展。機電署更與學術界、業界及其他政府部門互動合作，共同促進機電業多元化發展。機電署主辦的創科研討會暨《網上創新科技協作平台合作備忘錄》簽署儀式於6月11日舉行，由創新及科技局局長楊偉雄先生擔任主禮嘉賓。機電署透過與五所本地大學及七間科研機構簽署《網上創新科技協作平台合作備忘錄》（《合作備忘錄》），建立策略合作伙伴關係，成為機電創科聯盟。在研討會上，我們與參加者分享創科研發的成功個案，包括與衛生署合作的智能發燒偵測系統、與懲教署合作的智慧監獄系統、為運輸署試行的智能停車場，以及在機電署總部大樓試行的智能洗手間，另外也有由《合作備忘錄》簽署機構及初創企業簡介的創科項目及展覽等。活動吸引約360名來自45個政府部門、15個機電業協會及工作小組、11家機電機構，以及粵港兩地的嘉賓參與。

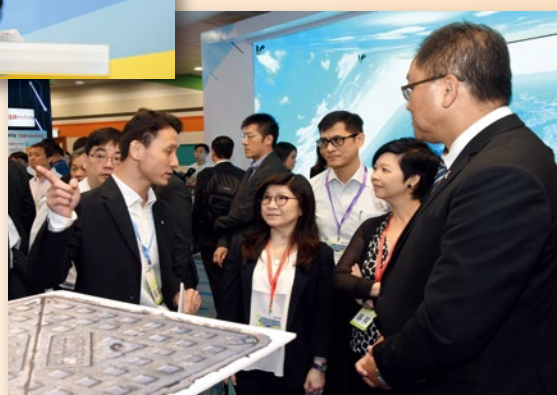
楊偉雄先生在簽署儀式上表示，機電署與學術及科研機構簽署《合作備忘錄》，絕對有助提升政府的創新能力。他希望政府部門和業界能充分利用機電署的網上創新科技協作平台，加強公私營協作，從而支持「本地研發、本地應用、本地受惠」，提升公共服務質素。



創新及科技局局長楊偉雄先生鼓勵各界支持「本地研發、本地應用、本地受惠」的創科理念。

The Secretary for Innovation and Technology, Mr. Nicholas Yang, encourages all to drive applied research and development that benefits the local community.

與會者對現場的創科展覽很感興趣。
The seminar participants show great interest in the I&T exhibition.



在新的採購政策下，各政府部門更可利用協作平台作為市場調查的工具，物色市場上的創科解決方案，以滿足要求。

另外，我們將於8月6日與環境局合辦「綠色創科日」。我們已邀請政務司司長張建宗先生出席主禮，並會邀請廣東省科學技術協會代表、大灣區科研機構代表、內地和

本地專家，一起探討如何利用創新科技達致可持續發展，以及分享大灣區在能源效益和可再生能源上的創科策略和發展。我們誠邀客戶部門和業界踴躍出席這項活動，詳情將於稍後公布。



在創新及科技局局長楊偉雄先生（後排右七）和機電署署長薛永恒先生（後排左七）見證下，機電署與五所本地大學、七間科研機構簽署《合作備忘錄》，以建立伙伴關係，加強科研合作。簽署《合作備忘錄》的本地大學包括香港城市大學、香港中文大學、香港理工大學、香港科技大學和香港大學，而科研機構則有汽車零部件研究及發展中心、香港應用科技研究院有限公司、香港數碼港管理有限公司、香港生產力促進局、香港科技園公司、物流及供應鏈多元技術研發中心和納米及先進材料研究院有限公司。

Witnessed by the Secretary for Innovation and Technology, Mr. Nicholas Yang (back row, 7th right), and the Director of Electrical and Mechanical Services, Mr. Alfred Sit (back row, 7th left), the EMSD signed a MoC for E&M InnoPortal with five local universities and seven technological research institutions to establish a partnership to strengthen collaboration on research and development. The local universities signing the MoC include City University of Hong Kong, the Chinese University of Hong Kong, the Hong Kong Polytechnic University, the Hong Kong University of Science and Technology and the University of Hong Kong. Technological research institutions, including the Automotive Parts and Accessory Systems R&D Centre, the Hong Kong Applied Science and Technology Research Institute Company Limited, the Hong Kong Cyberport Management Company Limited, the Hong Kong Productivity Council, the Hong Kong Science and Technology Parks Corporation, the Logistics and Supply Chain MultiTech R&D Centre and the Nano and Advanced Materials Institute Limited, are also on the list of signatories.



To tie in with the introduction of a pro-innovation government procurement policy in April this year, the Electrical and Mechanical Services Department (EMSD) actively plays the role of “Innovation Facilitator” and strives to promote innovation and technology (I&T) development in Hong Kong. The EMSD also partners with the academia, the trade and other government departments to jointly promote the diversified development of the E&M industry. Organised by the EMSD, the I&T Seminar cum Signing Ceremony of Memorandum of Co-operation (MoC) for E&M InnoPortal was held on 11 June and officiated by the Secretary for Innovation and Technology, Mr. Nicholas Yang. Through the signing of the MoC with five local universities and seven technological research institutions, we have established a strategic partnership and formed an E&M-I&T alliance. At the seminar, we shared with participants our I&T success stories, including the smart fever screening system jointly developed with the Department of Health, the smart prison system developed in partnership with the Correctional Services Department, the pilot trial of the smart parking system for the Transport Department, as well as the smart toilet being tested at the EMSD Headquarters Building. There were also pitching and exhibitions of I&T projects by the MoC signatories and start-ups. The event attracted around 360 guests from 45 client departments, 15 E&M associations and working groups, 11 E&M institutions, as well as from Guangdong and Hong Kong.

Speaking at the signing ceremony, Mr. Yang said that the MoC signed by the EMSD, academia and technological research institutions would definitely help enhance the Government’s ability to innovate. He hoped that government departments and the trade could make full use of the E&M InnoPortal to strengthen public-private collaboration with a view to delivering better public services and driving applied research and development that benefits the local community.

在研討會上，我們分別與衛生署(左)、懲教署(右)及運輸署(下)代表一起簡介創科研發項目，即智能發燒偵測系統、智慧監獄及智能停車場。

At the seminar, we together with representatives of the Department of Health (left), the Correctional Services Department (right) and the Transport Department (lower) introduce the development of I&T projects, namely the smart fever screening system, the smart prison and the smart parking system.

Under the new procurement policy, the E&M InnoPortal can also be used by various government departments as a tool for market survey and for identifying innovative solutions in the market to meet their requirements.

In addition, we will organise the Green I&T Day with the Environment Bureau on 6 August, with the Chief Secretary for Administration, Mr. Matthew Cheung, invited as our officiating guest. Representatives of the Guangdong Provincial Association for Science and Technology, technological research institutions in the Greater Bay Area, as well as Mainland and local experts will also be invited to jointly explore how to

use innovative technologies to achieve sustainable development, and share the I&T strategies and development of energy efficiency and renewable energy in the Greater Bay Area. We sincerely invite client departments and members of the trade to participate in the event. Details will be announced in due course.

6月11日創科研討會的相片已上載至以下網頁，歡迎瀏覽：<https://bit.ly/31Mpia3>

Photos of the I&T Seminar on 11 June have been uploaded to the website. Please visit: <https://bit.ly/31Mpia3>



我們向嘉賓介紹位於總部大樓的智能洗手間。
We introduce to the guests the smart toilet at our headquarters building.

促進創科發展

Promoting Innovation and Technology Development

為促進智慧城市發展，我們一直致力善用創新科技，並訂立機電數碼化的策略，以配合客戶需要。

創科數碼方案獲頒國際獎項

我們持續推行先導計劃，為客戶的機電設施提供數碼化工程方案，而這些創科方案更獲得國際殊榮。機電署於去年為屯門學童牙科診所加裝自行研發的數碼化空調、配電及能源管理系統設備，不但提升機電設施的運作效率，亦有助加強預防性維修保養。機電署憑藉這個創科方案，於今年5月獲英國屋宇裝備工程師學會頒發「最佳小型項目 / 協作數碼獎」，以表揚我們在應用數碼科技及數據分析以提升屋宇裝備效益的傑出成績。另外，我們與懲教署在智慧監獄創科方案下開發的「維生指標監察系統」和「移動及位置監察系統」，在第47屆日內瓦國際發明展榮獲金獎，證明我們的創科方案能有效提升懲教院所的管理效率。

創科項目切合客戶需要

為提高土地的使用效率，以及配合運輸署發展智能停車場的需要，我們以總部大樓作為試驗場地，於6月完成安裝「拼圖式升降橫移立體泊車系統」。這個嶄新的智能泊車系統，共有三層高，配合每層五格的設計，合共能提供13個泊車位，較原來泊車位數量增加一倍。這個系統不但採用全自動電腦系統控制機械式裝置，協助移動車輛到空置泊位，方便存取車輛，更配合智慧城市的發展，納入多個創新方案。舉例來說，我們可以透過內聯網預約訪客車位；車路入口亦裝設了車牌閱讀器，在核實車牌後，電子屏幕會顯示獲編配的泊車位置；使用者亦可在電腦及智能電話程式即時查看泊位空置情況，更可預約取車，要求系統預先把車輛移到地面。



機電署署長薛永恒先生(左二)遠赴英國倫敦出席英國屋宇裝備工程師學會舉行的頒獎典禮，領取「最佳小型項目 / 協作數碼獎」。

The Director of Electrical and Mechanical Services, Mr. Alfred Sit (2nd left), attended the award presentation ceremony of the CIBSE in London, the United Kingdom, to receive the Digital Award for the Best Small Project / Collaboration.

機電署與懲教署開發的智慧監獄系統在第47屆日內瓦國際發明展獲得金獎。圖為開發這套系統的機電署人員與懲教署代表(中)於頒獎禮後合照。

The smart prison system that we developed with the CSD won the Gold Medal in the 47th International Exhibition of Inventions of Geneva. Pictured are the EMSD officers who developed the system and the CSD representative (middle) after the award presentation ceremony.



藉着該先導計劃，我們就發展智能停車場向運輸署提供技術支援，以及與業界分享興建同類型泊車系統的經驗。

數碼轉型里程碑

我們自行研發的「建築信息模擬—資產管理」系統，是另一個數碼轉型的先導項目。該系統已應用於新建的西九龍政府合署，是數碼轉型發展的里程碑，意義重大，原因是該項目為首個根據機電署所制訂的「建築信息模擬—資產管理」系統

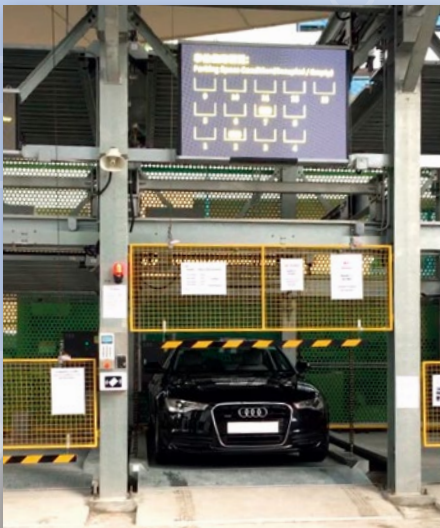
交付標準及指引，提供完整建築信息模擬模型和資產信息的項目。經採納客戶部門及業界意見，機電署《建築信息模擬—資產管理標準及指引》第二版已於2019年1月正式發布，並上載至機電署網站，歡迎大家掃描以下二維碼或點擊<https://bit.ly/2XrcNB0> 瀏覽。



發展物聯網數碼化工程

要把機電世界數碼化亦是一項十分龐大的工程。我們與渠務署防洪組率先推行物聯網技術應用的先導計劃，提供創新技術和具成本效益的方案，打造智慧渠務系統。我們在雨季和風季期間經常氾濫的沙田城門河、大埔林村河及大埔河河道附近的雨水泵房和橋樑，分別安裝了物聯網網站和感測器，把在感測器取得的河水水位高度資料，經物聯網網站傳送至位於機電署總部的政府物聯網，以評估物聯網技術的應用情況。無線物聯網通訊技術能快速監測已部署的工作，不但具成本效益，而且提供豐富數據，應用範圍廣泛，可作為大數據分析的基礎。我們會把收集得來的數據進行分析，再與渠務署共同商討進一步安排，以應用新的物聯網技術，在雨季和風季為市民的安全提供更佳保障。

客戶如對創科項目有興趣，請與我們的高級工程師林鑫駿先生聯絡(電話：2808 3879)。



To facilitate smart city development, we have been committed to leveraging I&T and have formulated a strategy of E&M digitisation to meet the needs of our clients.

I&T Digital Solutions Win International Awards

We continuously implement pilot projects to provide digitised engineering solutions for clients' E&M facilities. These I&T solutions have received international awards. Last year, the EMSD installed its self-developed digitised air-conditioning, electricity distribution and energy management system at the Tuen Mun School Dental Clinic. Not only does it enhance the operational efficiency of E&M facilities, but it also helps strengthen preventive maintenance. The EMSD received the Digital Award for the Best Small Project / Collaboration from the Chartered Institution of Building Services Engineers (CIBSE) with this I&T solution in May this year, in recognition of our outstanding achievements in applying digital technology and data analysis to improve the efficiency of building services. Besides, the Health Signs Monitoring System and Passage Surveillance System that we developed with the Correctional Services

Department (CSD) under the smart prison I&T solution won the Gold Medal at the 47th International Exhibition of Inventions of Geneva, demonstrating that our I&T solutions can effectively enhance the management efficiency of correctional institutions.

I&T Project that Meets Clients' Needs

To enhance the efficiency of land utilisation and meet the needs of the Transport Department (TD) to develop smart car parks, we made our headquarters building a testing ground and completed the installation of the Puzzle Parking System in June. This new smart parking system has three storeys in total. With a design of five-grid per storey, it offers a total of 13 parking spaces, doubling the original capacity. This system not only uses a fully automated computer system to control the mechanical installations in order to help move a vehicle to a vacant parking space, which facilitates the parking and retrieval of vehicles, but it also dovetails with smart city development and incorporates multiple innovative solutions. For instance, we can reserve parking spaces for visitors via the intranet; a licence plate reader is installed at the vehicle entrance, and the allocated parking location will be displayed on the electronic screen upon verification of the

高三層的新型智能「拼圖式升降橫移立體泊車系統」能增加一倍的泊車位數量。
The new three-storey smart Puzzle Parking System can double the original parking capacity.





今年六月，我們已於沙田城門河、大埔林村河和大埔河的橋樑完成安裝物聯網感測器。圖為裝設在南運路上用以監測林村河河水水位高度的物聯網感測器。

The installation of IoT sensors at bridges on Shing Mun River in Sha Tin, Lam Tsuen River and Tai Po River in Tai Po was completed in June this year. Pictured is an IoT sensor installed on Nam Wan Road to monitor the water level of Lam Tsuen River.

car plates; users can also view the parking spaces available in real-time via the computer and smartphone applications, make a booking for car retrieval and request the system to move the vehicle to ground level in advance.

By this pilot project, we provide technical support to the TD on the development of smart car parks, and share with the trade our experience for the construction of the same type of parking system.

Milestone in Digital Transformation

Our self-developed Building Information Modelling – Asset Management (BIM-AM) system is another pilot project of digital transformation. The application of the system in the newly built West Kowloon Government Offices (WKGO) is a milestone in the development of digital transformation and of significant importance, as it is the first project that provides complete BIM model and asset information according to the BIM-AM system's delivery standards and guidelines developed by the EMSD. After incorporating comments from client departments and the trade, version 2.0 of the BIM-AM Standards and Guidelines was officially released in January 2019

and uploaded to the EMSD website. You are welcome to scan the QR code or click on the link on page four to view the content.

Develop Digitisation of Internet of Things

The digitisation of the E&M world is also a huge project. The EMSD and the Flood Control Section of the Drainage Services Department (DSD) took the lead to introduce a pilot programme for the application of Internet of Things (IoT) to provide innovative technologies and cost-effective solutions, with a view to developing a smart drainage system. We have installed IoT base stations and sensors at the stormwater pumping stations and bridges respectively near rivers that are prone to flooding during rainy and typhoon seasons, such as Shing Mun River in Sha Tin, Lam Tsuen River and Tai Po River in Tai Po, so that information on the river water level collected from the sensors can be transmitted to the Government-wide IoT Network at the EMSD Headquarters via IoT base stations for assessment of the application of IoT technologies. Wireless IoT communication technologies can provide quick monitoring of the jobs

deployed, which are not only cost-effective, but also offer rich data with a wide range of applications to serve as the basis for big data analysis. We will analyse the collected data and discuss with the DSD on further arrangements to apply the new IoT technologies for better protection of public safety during rainy and typhoon seasons.

If you are interested in I&T projects, please contact Mr. Tommy Lam, Senior Engineer, at 2808 3879.

感謝客戶支持

Gratitude for Customers' Support

機電工程營運基金（營運基金）服務客戶二十多年來，一直耐心聆聽客戶的意見，細心了解客戶的需要，從而制訂有效的改善措施，並認真地落實推行，務求讓客戶享用優質服務，以達致「客戶為本」，並實踐「透過與不同持份者的伙伴關係，創造公眾價值及改善社會」的企業目標。去年，我們委託獨立市場研究公司進行兩年一度的客戶意見調查，在各客戶部門的支持下，我們在客戶滿意指數方面取得6.61分的歷史新高，令人鼓舞。

客戶踴躍回應

2018年10月至12月期間，研究公司為客戶意見調查發出共2 027份問卷，成功收回1 077份，回應率達53.1%；隨後又透過個別面談、小組討論、電話訪問等方式，細心聆聽逾百位客戶代表的意見。我們非常感謝客戶踴躍回應，以及在百忙中抽空提供寶貴意見，讓我們對客戶的需要更加了解，以便制訂改進服務質素和業務流程的措施，提供更到位的服務。

客戶滿意指數創新高

總結整體表現，客戶對營運基金的服務持續給予高度評價。以8分為滿分計算，客戶滿意指數為6.61分，整體服務競爭力指數為6.64分，兩者都創出歷年新高。

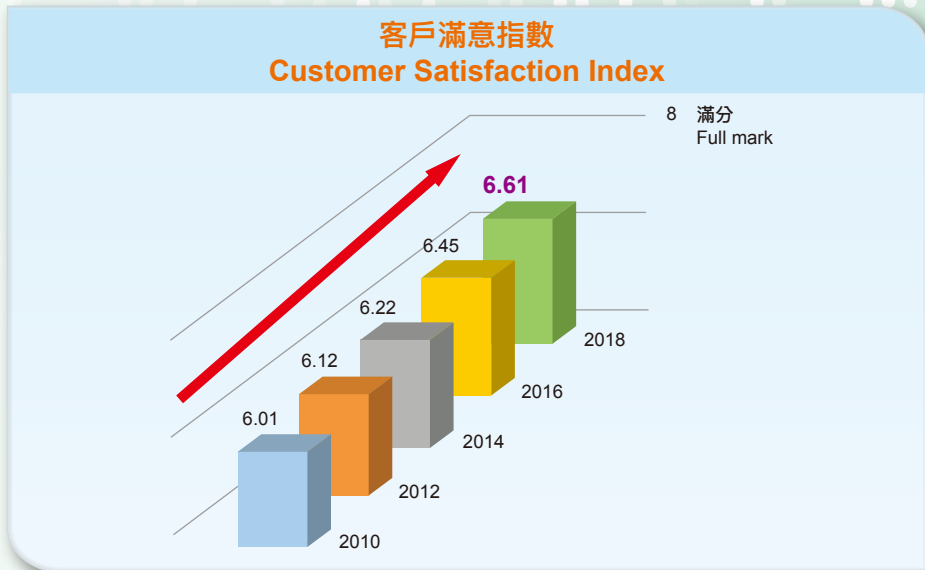
在個別項目的服務競爭力方面，客戶對營運基金服務的評分亦有顯著上升，成績令營運基金上下都十分鼓舞。我們會繼續努力，務求為客戶提供全面及物有所值的工程服務。

83%客戶首選營運基金

高達83%的回應客戶表示「每次都是」、「經常」或「時常」以營運基金為首選的服務供應商，高於上一次調查的79%。

建立長期合作關係

我們一直與時並進，積極引進新科技和提供具成本效益的方案，以協助客戶擴闊服務範疇和提升服務質素。此外，我們提供靈活、切合客戶不同需要的工程服務，致力擔任客戶最可靠、最可信賴的長期合作伙伴，而今年與我們簽署了十年服務水平協議的民航處和渠務署，就是我們的長期合作伙伴。我們與民航處續簽的協議，年期更首次由以往最長的五年增加至十年，足見我們的服務能配合客戶的長遠需要。



積極回應客戶意見

營運基金的整體「客戶滿意指數」和「服務競爭力指數」屢創新高，實有賴我們用心聆聽，重視客戶意見，從而制訂和落實針對性的策略和改善措施，促使客戶業務精益求精。因此，我們非常珍惜客戶的寶貴意見，並一直回應客戶的需求，積極作出各項改善工作，其中包括以下項目：

應用新科技

營運基金帶頭推動創新科技的發展。在是次意見調查中，我們首次把「創新能力」納入服務競爭力評分，並取得6.26分，此項目將成為日後量度我們創科表現的基準。營運基金會繼續致力為客戶引入新科技，以優化機電設施性能、提升操作及維修保養效率，並透過推廣網上創新科技協作平台，發掘更多具潛質的創科解決

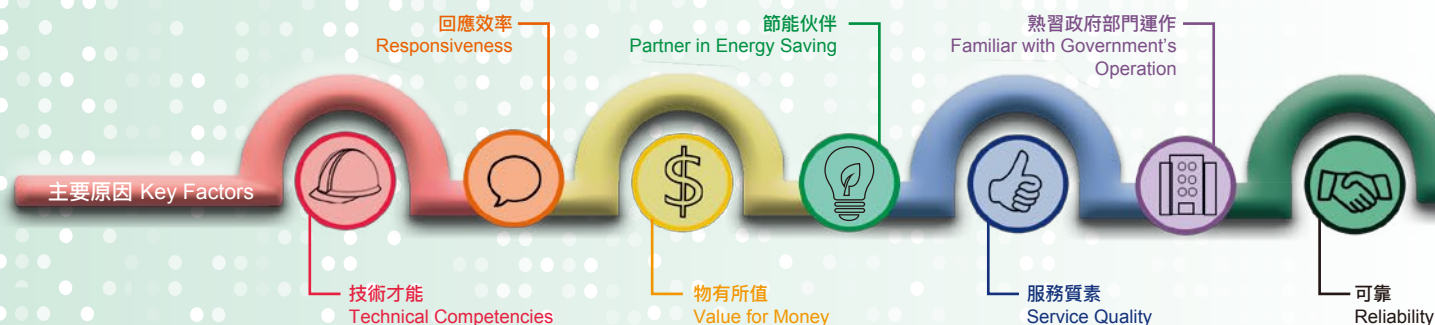
方案，以促進創新科技項目的研發和應用，滿足各客戶部門的創科需求。此外，營運基金亦會不斷豐富創新科技交流活動，例如在今年下半年及明年第一季舉行多項主題活動，以及加強員工培訓，使工程隊伍能夠與時並進，為客戶提供優質的創新科技項目與支援。

與客戶溝通

為加強與客戶的連繫，我們為去年新落成的客戶服務中心配備先進的綜合樓宇管理系統，並不斷提高系統的可用性和可靠性，讓中心員工掌握機電設施的實時運作狀態，向客戶提供實用的資訊。至於新建立的「顧客為本電子平台——工作管理」，我們也致力優化運作，讓客戶更容易掌握有關工作進度。

客戶持續選用營運基金工程服務的主要原因

Key Factors Driving Customers to Continue to Choose EMSTF Engineering Services



加強項目及承辦商管理

營運基金會持續優化現有的「電子合約管理系統」，並持續更新《工程行政手冊》和為員工提供培訓，以加強工程項目的管理，提高效率。

此外，我們利用網上「維修外判合約表現監察系統」，更有效地監督承辦商的工作進度、表現和質素。

提供工作時間表和準確價格估算

我們致力為客戶部門提供合適的工作時間表及準確的價格估算，以配合客戶的發展需要。我們有系統地收集有關保養、維修、改建、加建及改善工程服務的合約價格資料，建立數據庫及持續更新其數據，提供最新合約價格趨勢，協助同事在項目預算上做得更準確，並繼續優化切合客戶場地操作需要的工作時間表。

營運基金定當繼續努力，朝着「改進為策，客戶為本」的目標，不斷增值，協助客戶為市民提供更優質的公共服務。

如對客戶意見調查有任何查詢，歡迎致電 2808 3804 與我們的高級工程師周旭麒先生聯絡。

Serving for more than two decades, the Electrical and Mechanical Services Trading Fund (EMSTF) has listened attentively to clients' opinions to understand their needs, thereby formulating and implementing effective improvement measures to provide quality services for them. Our aim is to deliver customer-oriented services to achieve our corporate goal of "creating public value for community betterment through partnership with different stakeholders". Last year, we commissioned an independent market research company to conduct the biennial Customer Opinion Survey (COS). Thanks to client departments' support, our Customer Satisfaction Index scored a record high of 6.61, which is very encouraging.

Active Responses from Customers

Between October and December 2018, the research company issued 2 027 questionnaires for the COS, and successfully received 1 077 replies, representing a response rate of 53.1%. As a follow-up, views of more than 100 client representatives were collected through face-to-face meetings, group discussions or telephone interviews, etc. We are grateful to all clients for their active responses and sparing time in their

busy schedules to give us valuable opinions. Their feedback enables us to have a better understanding of their needs, and then work out measures to enhance our service quality and operational procedures, thus providing more closely-tailored services to our clients.

Record High Customer Satisfaction Index

Overall, our clients have consistently high regard for EMSTF services. On a scale of 8, our Customer Satisfaction Index scored 6.61, and our overall Service Competitiveness Index got 6.64, both reaching a record high level.

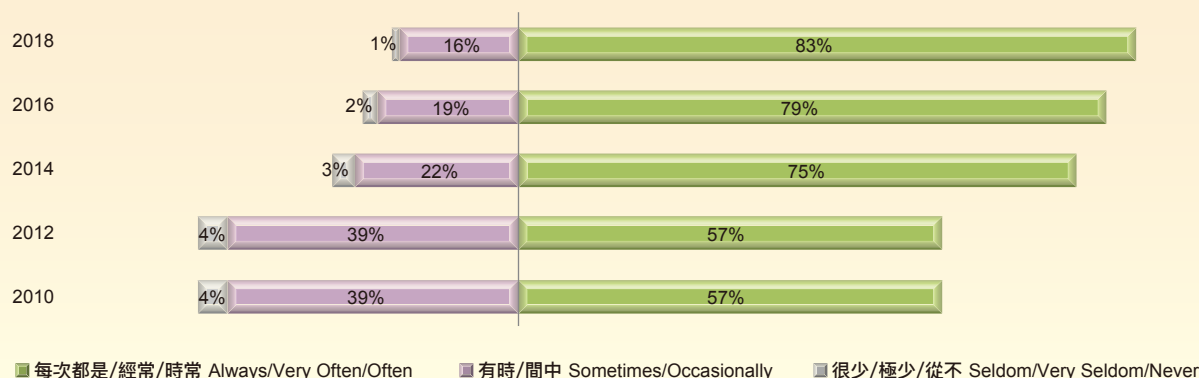
There is also significant improvement in individual aspects under Service Competitiveness, which is a great encouragement to all staff in the EMSTF. We will continue to make efforts to provide clients with comprehensive and value-for-money engineering services.

83% Customers Prefer EMSTF

Up to 83% of our client respondents indicated that they "always", "very often", or "often" considered the EMSTF as their preferred E&M service provider, which is higher than the score of 79% recorded in the last COS.

客戶以營運基金為首選機電服務供應商的百分比

Percentage of Customers Who Consider EMSTF as the Preferred E&M Service Provider





客戶持續選用營運基金服務
Customers continue to
choose EMSTF
Engineering Services

Building Long-term Partnership

We have been keeping abreast of the times and proactively introducing new technologies and cost-effective solutions to help clients broaden their service scope and enhance service quality. We are committed to providing flexible and tailored engineering services to meet clients' needs and playing the role of their most reliable and trusted long-term partner. This year, we signed a ten-year Service Level Agreement (SLA) respectively with our long-term partners, the Civil Aviation Department (CAD) and the Drainage Services Department. In particular, the service period of the SLA renewal with the CAD has been extended from five years (the longest in the past) to ten years for the first time. It best illustrates that our services can address clients' long-term requirements.

Proactively Responding to Customers' Opinions

The EMSTF's record highs for overall Customer Satisfaction Index and Service Competitiveness Index owe much to our willingness to listen carefully to and value clients' opinions, which enable us to formulate and implement strategic improvement measures to help enhance clients' services. Therefore, we really treasure the valuable feedback of our clients and have been making proactive enhancements to respond to their needs, which include the following:

Applying New Technologies

The EMSTF takes the lead in promoting the development of innovation and technology (I&T). For the first time in our COS, we added in the aspect of "Ability for Innovation" under Service Competitiveness and achieved a score of 6.26. This aspect will serve as a baseline to gauge our performance in I&T. The EMSTF is committed to introducing to clients the latest technologies to optimise performance of their E&M facilities as well as to enhance operation and maintenance efficiency. Through promotion of our online I&T collaboration platform, E&M InnoPortal, we will explore more potential I&T solutions, thus facilitating the development and application of I&T projects and meeting client departments' needs for I&T. Furthermore, we will continue to enrich the innovation-themed events, such as organising thematic programmes in the second half of this year and the first quarter of next year, and strengthen staff training to ensure that our engineering team keeps pace with the times and provides quality I&T solutions and support to our clients.

Communication with Customers

To strengthen the ties with clients, we have equipped the new Customer Service Centre, which was completed last year, with the advanced integrated Building Management System. We have also enhanced the applicability and reliability of the System, enabling the staff of the Centre to obtain real-time data on the operation of the E&M facilities and provide useful information to clients. Meanwhile, we are also enhancing the operation of the newly established Customer Centric e-Platform – Job Management, so as to allow clients to grasp the work progress more easily.

Enhancing Project and Contractor Management

The EMSTF will continue to optimise the existing Electronic Contract Administration System and update the Project Administration Handbook, as well as to provide training for our colleagues to strengthen the management of engineering projects and enhance its efficiency.

We have also made use of the web-based Performance Monitoring System for Maintenance Contract for more effective monitoring of the contractors' work progress, performance and quality.

Provision of Work Programme and Accurate Cost Estimate

We are committed to providing the best fit work programmes with accurate project estimates to meet the development needs of client departments. We have been systematically collecting the pricing for the maintenance, repair, alteration, addition and improvement services to build a database with continuous updates of its data to provide up-to-date contract price trend. It helps our colleagues work out more accurate project budgets. We also enhance work programmes tailored-made to the operation needs of clients' venues.

With the goal of making continuous improvements and fostering a customer-centric culture, the EMSTF will keep on adding values for our clients and helping them provide better quality public services.

For any enquiry about the COS, you are welcome to contact Mr. Yorkie Chow, Senior Engineer, at 2808 3804.

應用新科技
Applying New
Technologies

與客戶溝通
Communication
with
Customers

加強項目及
承辦商管理
Enhancing Project
and Contractor
Management

提供工作時間表和
準確價格估算
Provision of Work
Programme and
Accurate
Cost Estimate

Key Improvement Areas 重點改善範疇

協助客戶應付風季來臨

Assisting Customers to Prepare for the Upcoming Typhoon Season

隨着氣候變化加劇，極端天氣(如「天鴿」和「山竹」等超強颱風)頻現，對本港的威脅越趨嚴重。因應今年風季即將來臨，機電署與客戶緊密合作，不斷檢視應變計劃和行動安排，並採取一系列預防措施，以維護客戶的機電設施。颱風襲港期間，我們的緊急事故控制中心會全天候監察本港的機電設施，與各政府部門時刻保持聯繫，並協調內部工程團隊的工作。同事亦會緊守崗位，隨時候命，搶修受損設施以保障公眾安全，減低颱風對市民生活的影響。

公共運輸網絡及設施對市民出行極為重要。為確保渡輪碼頭設施遭颱風吹襲後能迅速修復，我們已預留庫存物料和充足人手進行緊急維修。目前，我們還與運輸署合作，研發更耐風浪的渡輪碼頭設備；其中在紅磡(南)渡輪碼頭的翻新工程，試驗把可升降登船橋的地板改用可揭式不鏽鋼板和網格纖維物料，以代替原有的木板，能大大減低海浪所造成的破壞。

超強颱風有可能對機電設施造成損毀，直接影響各類公共服務。風季將至，我們已加強保護沿岸及位處海平線以下的機電設施。舉例來說，我們與客戶攜手合作，為處於杏花邨的東區尤德夫人那打素醫院(東區醫院)海水泵房的電掣房加裝防水閘，並將相關的電氣掣櫃和發電機組升高，大大減低海水泵房運作受水浸影響的風險，以免最終影響醫院的運作。至於有



在超強颱風山竹吹襲下，位於杏花邨的東區醫院海水泵房外的水浸情況嚴重，最高水位幾可及膝。圖中可見當日午時，積水仍未退去。

Under the attack of Super Typhoon Mangkhut, the area outside the seawater pump house of PYNEH in Heng Fa Chuen is seriously flooded, with the highest water level almost up to the knees. Photo shows that the water has not yet subsided in the afternoon on the day of attack.

潛在水浸風險的機房位置，例如瑪麗醫院、大帽山發射站、西貢海灘、將軍澳海濱公園及行人隧道等，亦加裝了臨時或永久防水閘，進一步優化防洪設施。

此外，我們致力確保客戶部門獲得穩定的電力供應，以維持機電設施正常運作。其中一個例子是位於柴灣沿岸地區的政府物

料營運中心，我們預先核對其電掣房的電路圖，以備需要時盡快搶修，並計劃在電掣房安裝遙距監控系統以監察情況，以及為後備發電機組安裝遙距開關系統。除此之外，我們更對搬遷電掣房進行可行性研究，竭力消除水浸危機；我們亦就客戶於特別機電設備系統設置獨立發電機的方案進行分析和提供專業意見。

機電署已因應風季來臨做好各項準備及應變工作，以減低因機電設施遭風暴破壞而對客戶部門、社會和重要基礎設施造成的影響。



我們在紅磡(南)渡輪碼頭的可升降登船橋試用可揭式不鏽鋼板及網格纖維物料(左圖)。風暴來臨前，把可升降登船橋的不鏽鋼面移走(右圖)，留下堅固的網格纖維物料疏水，可減少被海浪衝擊造成的損毀。

The trial use of removable stainless steel planks and fibre mesh material (left) at the boarding gangways of the Hung Hom (South) Ferry Pier. Before typhoons arrive, remove the stainless steel surfaces of the boarding gangways (right) and keep the solid fibre mesh material for hydrophobic purposes to reduce the damages caused by storm surge.

As climate change intensifies, extreme weather (such as Super Typhoons Hato and Mangkhut) appears frequently and becomes more threatening to Hong Kong. In view of the upcoming typhoon season, the EMSD works closely with clients to continuously review contingency plans and operational arrangements, as well as take a series of precautionary measures to protect clients' E&M assets. Our Emergency Control Centre will monitor the city's E&M facilities round the clock, keep liaising with various government departments at all times and co-ordinate with our internal engineering teams on their work during typhoons. Meanwhile, our colleagues will stand fast in their positions and stand by to carry out emergency repair works for any damaged facilities so as to protect public safety and minimise the impact of typhoons on people's lives.

Public transport network and facilities are extremely important for the commuting of members of the public. To ensure that facilities at the ferry piers can be quickly repaired after typhoons, we have stocked up on stores and reserved sufficient manpower for emergency repair. Currently, we are also working with the Transport Department to develop ferry pier facilities which are more resistant to storm and wave attack. One of the examples is the renovation project at the Hung Hom (South) Ferry Pier, in which trials of replacing wood planks of the boarding gangways with removable stainless steels and fibre mesh material have been carried out, which can greatly reduce damages caused by storm surge.

Super typhoons may bring damage to E&M facilities and directly affect various public services. As the typhoon season approaches, we have strengthened the protection of E&M facilities located along the coast and below sea level. For instance, we have collaborated with our client to install flood protection gates at the switchroom of the seawater pump house of Pamela Youde Nethersole Eastern Hospital (PYNEH) located in Heng Fa Chuen, as well as elevate the associated electrical switchboard and electricity generating units. These will greatly reduce the risk of affecting the operation of the seawater pump house and ultimately the hospital's operation due to flooding. For plant rooms located in flood-prone areas, such as Queen Mary Hospital, Tai Mo Shan Radar Station, Sai Kung beaches, Tseung Kwan O Waterfront Park and pedestrian subways, etc., temporary or permanent



為防患未然，杏花邨海水泵房的電掣房已加裝防水閘，相關的電氣掣櫃和發電機組亦已升高，藉以減低嚴重水浸所造成的影響。

As precautionary measures, flood protection gates have been installed at the switchroom of the seawater pump house in Heng Fa Chuen, and the associated electrical switchboard and genset have been elevated as well, with a view to reducing the impact caused by severe flooding.



flood protection gates have been installed to further enhance the flood prevention facilities.

Furthermore, we are dedicated to ensuring that client departments are provided with stable power supply to maintain normal operation of their E&M facilities. An example of this is the Government Logistics Centre in the Chai Wan coastal area. We have reviewed the schematic diagramme of its switchroom in advance for prompt emergency diversion of the building power supply when necessary, and are planning to install a remote monitoring system to monitor the switchroom situation and a remote switch control for the emergency generator. Moreover, we have conducted a feasibility study on relocation of the switchroom to eliminate the risk of flooding, while we also provide analyses and offer professional advice on client's plan to install an independent generator for their critical E&M systems.

The EMSD has made preparations and carried out contingency work in response to the approach of typhoon season to lessen the impact on client departments, the community and major infrastructures caused by damaged E&M facilities due to typhoons.

如客戶有意進一步加強其防洪設施，請致電 3912 0605 與高級工程師程廣輝先生或與相關策略業務單位聯絡，以制訂合適方案。

If clients are interested in further enhancing their flood prevention facilities, please contact Mr. Ching Kwong-fai, Senior Engineer, at 3912 0605 or the relevant strategic business units to develop suitable solutions.

吸引青少年投身機電業

Attracting Youngsters to Join the E&M Trade

透過由扶貧委員會統籌的「友·導向」師友計劃，我們希望吸引青少年將來投身機電行業。機電署的參與團隊由同事自願組成，團隊成員以友師義工隊的形式與高中學生互動，並為參與該計劃的學生定期設計和舉辦不同類型的師友導向及培訓活動。在2018/19學年，我們先後安排學生參觀機電署、政府總部、海事處、民航處、北區醫院、消防處的設備維修中心、污水處理廠等，讓他們認識不同的機電工程設施和服務，以及了解機電署各客戶部門的工作。我們也分享職場經驗，以期引導他們訂立未來路向，做好生涯規劃。

自2016年起，機電署連續三年參與「友·導向」師友計劃。該計劃旨在推動師友文化，透過鼓勵企業及市民成為友師，給予青少年啟發和指導，幫助他們拓闊視野和規劃未來，以及勉勵他們為達成自己訂立的學業、培訓或事業發展目標作好準備。

Through the “Life Buddies” Mentoring Scheme co-ordinated by the Commission on Poverty, we hope to attract young people to join the E&M trade. The EMSD participating team is formed by our colleagues voluntarily. Being mentors, the volunteer team members interact with senior secondary students and regularly design and conduct various mentoring and training activities for participating students. In the 2018/19 academic year, we have organised visits to the EMSD, the Central Government Offices, the Marine Department, the Civil Aviation Department, the North District Hospital, the Fire Services Department's equipment maintenance centre, sewage treatment plant, etc., enabling students to have a better understanding of the E&M engineering facilities and services, as well as the work of our various client departments. We have also shared with students our work experience, so as to guide them in charting the way forward and doing life planning.



我們安排高中學生參觀不同的政府部門，以認識各部門的機電設施如何運作。

We organised visits to various government departments for senior secondary students so as to let them understand the operation of E&M facilities in these departments.

The EMSD has been joining the “Life Buddies” Mentoring Scheme for three consecutive years since 2016. The scheme aims to promote a mentoring culture by encouraging businesses and individuals to be mentors to inspire and guide the young generation, help them broaden their horizons and develop a vision for their future, and motivate them to make good preparation for pursuing their education, training or career goals.



今年5月，我們在機電署總部大樓舉行「友·導向」師友計劃結業禮，向參與的學生頒發證書，以作鼓勵。

The graduation ceremony of the “Life Buddies” Mentoring Scheme was held in the EMSD Headquarters Building in May this year. Each participating student was awarded a certificate as a token of encouragement.

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）或傳真（傳真號碼：2882 1574）方式通知我們。
如果您希望我們從郵寄名單中刪除您，或更新您的資料，請透過電郵（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 ccscd@emsd.gov.hk or 2882 1574, and we will add them to our list. In case you wish to remove you from our newsletter mailing list, or to update your information in the future, please e-mail to ccscd@emsd.gov.hk.

機電傳聲

出版：機電工程署 企業服務部

電話：(852) 2333 3762

傳真：(852) 2882 1574

網址：www.emsd.gov.hk

電郵：ccsd@emsd.gov.hk

VoiceLink

Published by : Corporate Services Division, Electrical and Mechanical Services Department

Telephone : (852) 2333 3762

Facsimile : (852) 2882 1574

Website : www.emsd.gov.hk

E-mail : ccscd@emsd.gov.hk

機電工程署
EMS D

