

# 機電工程 營運基金報告

## ELECTRICAL AND MECHANICAL SERVICES TRADING FUND REPORT



### 抱負 VISION

致力提供優質機電工程服務，精益求精，以提升市民的生活質素。  
To improve the quality of life for our community through continuous enhancement of our electrical and mechanical engineering services.



### 使命 MISSION

#### 客戶 CUSTOMER

提供優質的工程方案，以滿足客戶的需要。  
Providing quality engineering solutions to satisfy our customers' needs.

#### 員工 STAFF

建立一支卓越的員工隊伍，並維持和諧的工作環境。  
Developing a competent workforce and maintaining a harmonious environment.

#### 部門 ORGANISATION

掌握科技發展和流程改善，以提供更佳服務。  
Keeping pace with technology development and process improvement for service enhancement.



### 信念 VALUES

#### 誠信 INTEGRITY

我們秉持誠信，維持良好道德操守。  
We uphold honesty and integrity to embrace an ethical culture.

#### 出色服務 SERVICE EXCELLENCE

我們提供安全可靠、高效率、具成本效益和優質的服務。  
We provide safe, reliable, efficient, cost-effective and quality services.

#### 關懷 CARING

我們關懷員工、客戶和市民大眾，並重視環保。  
We care for our staff, customers, community and the environment.

#### 以客為本 CUSTOMER FOCUS

為滿足客戶的各種需要，我們盡心竭力，積極提供工程方案，以贏取客戶的信任和支持。  
We focus on the needs of our customers and provide engineering solutions in a proactive and responsible manner to win their trust and support.

#### 承擔 COMMITMENT

我們言行一致，信守承諾。  
We do what we promise.



# 常務委員會 Executive Board

## 主席 CHAIRMAN



**韓志強太平紳士**  
**Mr Hon Chi-keung, JP**

發展局常任秘書長(工務)  
Permanent Secretary for  
Development (Works)

## 成員 MEMBERS



**周紹喜太平紳士**  
**Mr Chau Siu-hei,**  
**Francis, JP**

發展局副秘書長(工務)3  
Deputy Secretary for  
Development (Works)3



**薛永恒太平紳士**  
**Mr Sit Wing-hang,**  
**Alfred, JP**

機電工程營運基金總經理  
(機電工程署署長)  
General Manager, EMSTF  
(Director of Electrical and  
Mechanical Services)

## 秘書 SECRETARY



**戴德謙太平紳士**  
**Mr Tai Tak-him, JP**

機電工程署副署長/營運服務  
Deputy Director/Trading  
Services, EMSD



**羅肇嫻女士**  
**Ms Lo Siu-han, Cynthia**

機電工程署主任秘書  
Departmental Secretary, EMSD

\* 發展局副秘書長(工務)2 麥成章太平紳士出任常務委員會成員至2017年4月11日  
Mr Mak Shing-cheung, Vincent, JP, Deputy Secretary for Development (Works)2 was the board member up to 11 April 2017

\* 陳帆太平紳士出任機電工程署署長至2017年6月30日  
Mr Chan Fan, Frank, JP was Director of Electrical and Mechanical Services up to 30 June 2017

# 管理委員會 Management Board



## 主席 CHAIRMAN

- 1 薛永恒太平紳士**  
**Mr Sit Wing-hang, Alfred, JP**  
機電工程營運基金總經理(機電工程署署長)  
General Manager, EMSTF  
(Director of Electrical and Mechanical Services)

## 成員 MEMBERS

- 2 戴德謙太平紳士**  
**Mr Tai Tak-him, JP**  
機電工程署副署長/營運服務  
Deputy Director/Trading Services, EMSD
- 3 王錫章太平紳士**  
**Mr Wong Sek-cheung, JP**  
機電工程署助理署長/1  
Assistant Director/1, EMSD
- 4 張遠芳太平紳士**  
**Mr Cheung Yuen-fong, JP**  
機電工程署助理署長/2  
Assistant Director/2, EMSD
- 5 陳志偉先生**  
**Mr Chan Chi-wai, Richard**  
機電工程署助理署長/3  
Assistant Director/3, EMSD
- 6 李碧雲女士**  
**Ms Li Pik-wan, Clara**  
機電工程署財政經理  
Finance Manager, EMSD
- 7 王文剛先生**  
**Mr Wong Man-kong**  
機電工程署員工關係主任  
Staff Relations Officer, EMSD

## 秘書 SECRETARY

- 8 羅肇嫻女士**  
**Ms Lo Siu-han, Cynthia**  
機電工程署主任秘書  
Departmental Secretary, EMSD

\* 陳帆太平紳士出任機電工程署署長至2017年6月30日  
Mr Chan Fan, Frank, JP was Director of Electrical and Mechanical Services up to 30 June 2017

\* 張國輝太平紳士出任機電工程署助理署長/3至2017年7月22日  
Mr Cheung Kwok-fai, JP was Assistant Director/3 up to 22 July 2017

\* 周厚強先生出任署理機電工程署助理署長/3至2017年10月8日  
Mr Chow Hau-keung, Vincent was Acting Assistant Director/3 up to 8 October 2017



# 業務回顧 與前瞻

## Operations Review and Outlook



戴德謙太平紳士  
Mr Tai Tak-him, JP

機電工程署副署長 /  
營運服務  
Deputy Director/  
Trading Services, EMSTF

機電工程營運基金於2017/18年度續有穩定表現，總收入為65.11億港元（2016/17年度：62.03億港元），收入回報率為9.6%（2016/17年度：5.3%）。收入回報率上升，是由於大型基建項目及資產更新工程帶動服務需求，但我們以微利營運的方針則未有改變。

2017/18 was another year of steady performance for the Electrical and Mechanical Services Trading Fund, with total revenue at HK\$6,511 million (2016/17: HK\$6,203 million) and return on revenue at 9.6% (2016/17: 5.3%). The higher return on revenue was attributable to increased service demand from major infrastructure projects and asset replacement works, though our slim-profit operating principle has remained unchanged.

### 完成首個五年策略計劃

2017/18是營運基金首個五年策略計劃的最後一年，計劃的目標是「透過與客戶的伙伴關係，創造公眾價值利惠市民」。我們並以五個策略落實計劃，引領營運基金的中期發展。首個五年計劃對營運基金近年在提升優質服務、運作效率、員工發展、關懷文化和可持續發展方面的表現都有極大幫助。舉個例，我們在最近一輪的2016年客戶意見調查中，以8分為滿分計，獲得歷來最高的6.45分客戶滿意指數，證明策略計劃的方向正確。

年內我們一邊開始檢討首個五年策略計劃的成果，同時也着手制訂第二個五年策略計劃，並充分考慮員工對首個五年計劃的意見與經驗。正如以往本欄提過，我們對計劃之下達成的多個里程碑深感高興，像新的「顧客為本電子平台」流動網上工作管理系統，和取代舊有資訊服務中心的全新「客戶服務中心」，在設施和規模方面都大有提升。這些新設施都會大幅提升營運基金的工作流程管理，也有助員工在客戶查詢相關工作進度時，提供即時回應。

上述的新硬件，再配合我們近年推出各種更有效遙距監察、和更精準調控客戶機電系統的新科技方案，已見實質成效，也促使我們在制訂第二個策略計劃時，以數碼化、創新和科技為重點。

### 第二個策略計劃：機電2.0

經過連番討論，並以「同行·共創」方式讓員工參與，我們已於2018年4月推出第二個策略計劃。新計劃的目標是為社會創造更大的公眾價值，讓營運基金朝着機電2.0的時代進發。我們會以三個策略去落實計劃，包括提供數碼化機電服務及創新方案，配合發展智慧城市和應對氣候變化的政策；培育掌握專門技術及數碼化作業，並具備國際視野的卓越團隊；及擁抱科技並與行業團隊同行，成為一所樂於嘗試新科技、推動機電服務數碼化的機構。

### CONCLUDING THE FIRST STRATEGIC PLAN

2017/18 was the final year of the EMSTF's first Five-year Strategic Plan. With its goal to "create public value for community betterment through partnership with our clients", we deployed five strategies to guide EMSTF's medium-term development. The plan proved valuable in enhancing EMSTF's service excellence, operational efficiency, staff development and caring culture as well as sustainability performance in the past few years. Our latest Customer Opinion Survey in 2016, for example, returned a record high Customer Satisfaction Index of 6.45 out of 8, indicating that the plan was on the right track.

As we critically reviewed the results of the first strategic plan, we also spent much of 2017/18 formulating our second Five-year Strategic Plan, taking into account staff input and experience gained from the first plan. As reported in these columns before, we were delighted with the milestones achieved under the first plan, such as the new Customer Centric-ePlatform (CCeP), a mobile online job management system, and the new Customer Service Centre which has upgraded, expanded and replaced the former Information Service Centre. They will significantly enhance EMSTF's work flow management and real-time response to customer enquiries on job status updates.

These hardware deliverables, together with the introduction of various new technology solutions for more effective remote monitoring and finer control of clients' E&M systems in the past few years, have already yielded positive results and paved the way for our emphasis on digitisation, innovation and technology as we formulated the second strategic plan.

### THE SECOND STRATEGIC PLAN: E&M 2.0

After much deliberation and extensive staff engagement using a "co-own" and "co-create" approach, our second strategic plan was launched in April 2018. The new plan aims to maximise public value for the community, and enable EMSTF to move towards a new era of E&M 2.0. We shall deploy three strategies to implement the plan, namely: providing digitised E&M services and innovative solutions in tandem with smart city development and policies in response to climate change; establishing an excellent work team with global perspectives, professional expertise and best practices for digitisation; and embracing technology and collaborating with trade partners to develop into an organisation that is willing to leverage innovative technology and promote the digitisation of E&M services.



## 業務回顧與前瞻 Operations Review and Outlook

上述策略要達到的成果，是讓客戶能透過機電數碼化提高機電資產的表現，讓我們的員工進一步發展為本港機電業的領軍團隊，並促使營運基金成為一個具備協作精神和ICAT—即創新、同心協力、靈活應變及具透明度—這四項組織特質的機構。假如說營運基金首個二十年的特點，是奮力求存、提高競爭力和持續改善，那我們的第二個策略計劃就應揭開新篇章，以數碼化、創新及科技為基礎，為營運基金在優質服務、員工發展和機構文化轉變方面拓闊領域。

新策略也會讓我們團隊更能應對諸如氣候變化和日益激烈的競爭等的全球性挑戰，和更充分掌握各種機遇，例如智慧城市發展與粵港澳大灣區等。

### 營運基金架構重組

另一重要發展是營運基金架構重組，相關的籌備和員工參與工作大部分於2017/18年度及2018/19上半年度進行。重組的目的，是理順各個部別的分工，以達致最佳的協同效益、讓各種工程策劃和機電服務更以客為本、及根據第二個策略計劃為營運基金在數碼化和科技方面的未來發展鋪路。

在新架構下，現時的「機場及車輛工程部」將改名為「邊境及運輸工程部」，負責所有關於運輸工程及邊境設施的工程策劃與維修保養工作，客戶部門包括運輸署、路政署、香港海關及入境事務處等。

「運輸、保安及中央工程部」將會接手現時「機場及車輛工程部」的車輛工程服務，另由於主要客戶將為紀律部隊，故將改名為「保安及車輛工程部」。至於「工程策劃部」的所有工程項目和資源，則會重新部署到負責相關客戶部門的其他部別，讓他們的客戶服務更聚焦。

有見數碼化、創新及科技(創科)對營運基金的未來發展十分重要，我們成立了一個新的「數碼科技部」，下設「創新辦公室」，「資訊科技策略支援分部」、「建築信息模擬分部」和三個工程科技發展分部。這個新部別會負責推動營運基金的數碼化、把握各種創科業務的機會、及帶動營運基金轉型成為在營運各方面都能充分利用創科技術的靈活機構。

The intended outcomes of these strategies are to help clients optimise their E&M asset performance via digitisation, upgrade our workforce into a leader of Hong Kong's E&M trade, and transform our organisation into one that embraces collaboration and our "ICAT" characteristics, namely Innovative, Connected, Agile and Transparent. If the first 20 years of EMSTF were characterised by the quest for survival, increasing competitiveness and continuous improvement, then our second strategic plan should open a new chapter with broader horizons for EMSTF in client service excellence, staff development and organisational culture change, all riding on the platform of digitisation, innovation and technology.

The new strategies will also enable us to respond to global challenges such as climate change and increasing competition, and capture opportunities such as those arising from smart city development as well as the Guangdong-Hong Kong-Macao Greater Bay Area.

### RESTRUCTURING EMSTF

Another major development is the re-organisation of EMSTF. Much of the planning and staff engagement were conducted in 2017/18 and the first half of 2018/19. The exercise aims to streamline the allocation of work among our various Divisions for better synergy, sharper customer focus in both project and engineering service delivery, and pave the way for the future advancement of EMSTF in digitisation and technology in accordance with the second strategic plan.

Under the new structure, the existing Airport and Vehicle Engineering Division (AVED) will be renamed as the Boundary Crossing Facilities and Transport Services Division. It will take over all projects and O&M work for transport and border related departments including Transport Department, Highways Department, Customs and Excise Department and Immigration Department.

The Transport, Security and Central Services Division will take over the vehicle engineering services from AVED and be renamed the Security and Vehicle Services Division, as its key clients will be the disciplined forces. As to the Projects Division, all its projects and resources will be re-allocated to those Divisions serving the relevant client departments, to sharpen their customer focus.

In view of the importance of digitisation, innovation and technology (I&T) to EMSTF's future development, we will set up a new Digitalisation and Technology Division which comprises the Inno-Office, the IT Strategic Support Sub-division, the BIM Sub-division and the three Technology Development Sub-divisions. The new Division will be responsible for driving the digitisation of EMSTF, capturing various I&T business opportunities and spearheading EMSTF's transformation into an agile organisation that can fully leverage I&T in all aspects of its operation.

### 七大部別

營運基金的新架構將由2018年10月1日起生效，屆時我們將分成七個部別，分別是：邊境及運輸工程部、保安及車輛工程部、綜合工程部、衛生工程部、市政工程部、數碼科技部及企業服務部。

在員工參與過程中，無論管理層或其他各級員工，都有充分渠道和機會表達建議及意見反饋，新架構也得到員工全面支持。我們會確保新舊架構順利過渡，對客戶的正常運作和公眾服務不會做成影響。

### 支援初創企業及創科發展

創科界的初創企業與營運基金未來發展息息相關，值得一談。我們新設的創新科技協作平台E&M InnoPortal已於2018年3月開始試用，並於2018年6月正式啟用，部分客戶可能已曾使用該平台提供的服務。這是個全新網站，目的是就政府部門與公營機構在創科方面的服務需求，與有能力研發及提供該種產品或服務的初創企業進行配對。

同時，我們更多走一步，以機電工程署總部大樓作為試用場地，讓部分初創企業為其產品原型進行試驗，並核實試驗數據，以加快產品的開發過程。我們除了身為機電工程服務的提供者，也很高興發揮了促進者的角色，幫助初創企業成長並推動本港創科發展。

初創企業對機電行業也會帶來正面影響。儘管初創企業的創科意念和產品對客戶可能極有價值，但因為初創企業缺乏往績可供參考，政府根據傳統做法的採購及招標過程對初創企業頗為不利。我們未來的挑戰，是如何協助初創企業，讓它們既能參與政府的採購招標，但又不損現有招標程序的嚴謹公正。屆時公營界別及市民大眾就可同時得享經驗豐富、歷史悠久的機電服務供應商提供的服務，也可享用初創企業新意思十足的創科服務。

### THE SEVEN DIVISIONS

When the new organisational structure takes effect on 1 October 2018, EMSTF will have seven Divisions, namely the Boundary Crossing Facilities and Transport Services Division, Security and Vehicle Services Division, General Engineering Services Division, Health Sector Division, Municipal Sector Division, Digitalisation and Technology Division and Corporate Services Division.

Management and staff at all levels have had ample channels and opportunities to give input and feedback during our engagement process, and the new structure has their full support. We shall also ensure the transition is smooth with no disruption to clients' normal operation and services to the public.

### SUPPORTING START-UPS AND I&T DEVELOPMENT

The role of I&T start-ups merits some discussion as it is directly relevant to our future development. Our clients may have already used the services of our E&M InnoPortal, a new website put on trial since March 2018 and formally launched in June 2018, dedicated to matching the I&T needs of government departments and public bodies with those start-ups which can develop and provide such products and solutions.

At the same time, we have gone the extra mile to make available the EMSD Headquarters Building as a testing ground for selected start-ups to test their product prototypes and verify trial data so as to expedite their product development process. In addition to being an E&M engineering service provider, we are delighted to play a facilitator's role to help start-ups grow and contribute to Hong Kong's I&T development.

Start-ups can bring positive changes to the E&M industry too. Traditionally, start-ups are disadvantaged in the government procurement and tender process due to the lack of job reference, though their I&T ideas and products could potentially be of great value to client departments. The future challenge is how to facilitate start-ups to participate in the procurement process without compromising the integrity of the existing procedures, so that the public sector can secure both the services of experienced, established E&M service providers and the creativity and I&T capabilities of start-ups.

## 業務回顧與前瞻 Operations Review and Outlook

### 機電業前路

香港正邁向智慧城市發展，機電行業也應與時並進，反思自身的角色。市面上很多機電服務提供者仍守着傳統模式，只滿足於銷售和安裝機電系統，忽略了售後跟進和為客戶進行長遠的資產管理。初創企業在這方面可以發揮填補作用嗎？眼下創科發展愈來愈重要，機電業又該如何回應？營運基金期待能與機電行業和初創企業攜手協作，找出雙贏方案以解決這些問題，並讓機電業朝着價值鏈的高端發展。

要討論香港的創科發展，不可不連同粵港澳大灣區一併考慮。大灣區是新科技和成功創科企業的匯萃中心，可供香港好好運用。營運基金的業務雖然專注香港，但我們的團隊未來也應透過與大灣區的機電及初創企業雙向交流，拓闊眼界視野。營運基金更可擔當推廣者的角色，協助本港機電業界在大灣區找尋協作機會。

回望過去，我有幸負責督導第一個策略計劃的執行工作，也在2017/18年度參與了第二個策略計劃的制訂及初步落實工作。至2022/23年度，營運基金應已實現了新五年計劃內大部分我們今天展望的願景，成為一個更靈活、數碼化、創新及高效的機構，為客戶提供優質服務，為社會創造公眾價值。

近年我常鼓勵同事突破框框思考，加強靈活性，為一個由創科主導且前人無法想像的未來作好準備。今日世界充滿不確定變數，也常被科技顛覆。要迎接這些挑戰，最佳辦法可能就是不斷學習。在客戶支持下，營運基金團隊定能堅毅努力，迎難而上。

### THE E&M INDUSTRY GOING FORWARD

As Hong Kong moves towards smart city development, the E&M industry should also keep up with the times and reflect on its role. Many service providers in the market still adhere to the traditional business model of simply selling and installing E&M systems, paying little attention to subsequent follow-up and long-term asset management for clients. Can start-ups play a role to bridge the gap? As I&T gets increasingly important, how should the E&M industry respond? We at EMSTF look forward to collaborating with the industry and start-ups to find win-win solutions to address these issues and take the industry further up the value chain.

No discussion of I&T development in Hong Kong is complete without considering the Guangdong-Hong Kong-Macao Greater Bay Area, a hub of new technologies and successful I&T enterprises that we can leverage. Whilst EMSTF services are focused in Hong Kong, there is no reason why our people should not broaden their horizons via two-way exchange with E&M players and start-ups in the Greater Bay Area in future. Moreover, EMSTF will also act as promotor to help our E&M trade to explore collaboration opportunities in the Greater Bay Area.

Looking back, I am indeed privileged to have overseen the implementation of the first strategic plan and taken part in the formulation of the second strategic plan in 2017/18 and its initial implementation. By 2022/23, EMSTF should have achieved much of what we envision today to become a more agile, digitised, innovative and effective organisation providing excellent service to clients and great public value to the community.

In recent years I have always encouraged EMSTF colleagues to think out of the box, be flexible and get ready for a future driven by innovation and technologies unimagined before. We all face today a world of uncertainty and frequent disruptions by technology. Perhaps the only way to rise to these challenges is to keep on learning. With support from our clients, our people will no doubt continue to persevere and forge ahead.

### 感恩謝忱

客戶多年來對我們不離不棄，大力支持，我們深表謝意。營運基金的成功，實有賴常務委員會和各個政策局的指導和支持，我們衷心致謝。而全體員工專心致志，表現出色，各個承辦商提供種種支援與服務，我們非常感恩。多年來我們也得到機電業界及其各行業公會、大學、學者、專業團體與培訓機構的寶貴意見和支援，我謹致謝忱。

祝願機電工程營運基金前景璀璨，迎接碩果豐盛的未來。

### APPRECIATION AND GRATITUDE

Our heart-felt gratitude goes to all our clients for their unfailing support over the years. The success of EMSTF owes much to the guidance and support of the Executive Board and policy bureaux, and we extend our sincere thanks to them. We must thank all our staff for their excellent work and dedication, and our contractors for their support and services. Our deep appreciation also goes to the E&M industry and its trade associations, the universities and academics, professional bodies and training institutes that have given us sound advice and valuable support all along.

I wish the EMSTF a bright future and many more successful decades to come.



**戴德謙**  
機電工程署副署長 / 營運服務



**Tai Tak-him**  
Deputy Director/Trading Services, EMSD

## 營運服務 Trading Services

### 城市活繽紛 DYNAMIC CITY LIFE

香港是一個充滿活力的城市，設施完善，為各行各業人士提供各種便利，帶來生活樂趣。各政府部門致力確保這些重要設施順利運作，而我們的角色，是支援各個為公眾提供市政及文娛康樂服務的客戶部門，使其運作暢順無縫。

街市對市民的日常生活非常重要，年內我們繼續與食物及環境衛生署(食環署)合作，為公共街市及熟食中心進行升降機及自動梯更換工程。一如以往，我們的同事評估更換工程可能會對攤檔運作造成的影響，並努力為攤檔東主排難解紛，把投訴轉化為讚賞。

我們也加大力度，在街市的升降機及自動梯應用綜合樓宇管理系統的硬件，遙距監控這些設施的運作狀況，並提高其可用率和可靠度。我們亦正為各客戶部門草擬一套有關機電裝置的綜合樓宇管理系統標準，以方便客戶部門日後進行這方面的工作。

為保障持份者的利益，我們加緊工作，確保維多利亞公園2018年農曆年宵市場獲得穩定的電力供應。我們與各承辦商適時溝通，提醒他們只可使用可靠的新器材，而在為期七天的年宵市場開放期間，我們的員工也全程候命支援。至於其他地區的年宵市場，我們亦採取了類似措施，確保電力供應源源不絕，讓攤檔得以順利營運，市民也能盡享節日歡樂。

As a vibrant city equipped with well-developed facilities, Hong Kong offers many conveniences and pleasures to people from all walks of life, with various government departments working to ensure that these valued facilities operate smoothly. Our role is to support the seamless operation of client departments which provide municipal, cultural and leisure services to the public.

Markets are an important part of our daily lives. This year we continued to work together with the Food and Environmental Hygiene Department (FEHD) on the lift and escalator replacement programme at public markets and cooked food centres. As in past years, our staff assessed the potential disruption to the operation of stalls and worked hard to address stall owners' concerns and difficulties, turning complaints into compliments.

We have also put in great efforts in applying integrated Building Management System (iBMS) hardware to lifts and escalators in markets to remotely monitor their operating status and enhance their availability and reliability. Besides, we are drafting a set of iBMS standards for E&M installations for all client departments to facilitate this aspect of work in the future.

With stakeholders' interests in mind, we stepped up efforts to ensure a reliable power supply for the 2018 Victoria Park Lunar New Year Fair. We communicated with contractors timely to ensure that they used only new and reliable equipment, and our staff were on standby throughout the seven-day fair period for provision of support. Similar measures were taken at other fair venues to ensure an uninterrupted power supply for booth operations and people's enjoyment of festivities.



我們監察「幻彩詠香江」的機電設備運作，並進行更新及維修保養工程，讓市民及旅客欣賞到精彩的燈光匯演。

We oversee the operation of E&M equipment for A Symphony of Lights and conduct upgrade and maintenance works, in order to provide spectacular light shows for citizens and tourists.



我們的團隊也積極協助康樂及文化事務署在香港大會堂落實後備空調方案。由於大會堂的空調系統是利用海水進行冷卻，但輸送海水的管道卻深藏地底，若輸水管道的任何損壞，都需要很長時間進行路面工程才能修理好管道，期間空調供應也必中斷。我們的方案，是在大會堂低座的天台安裝兩台遙距風冷式冷凝器，並接駁至中央系統。當海水供應中斷或不足時，這個後備系統便能迅速替代現有的冷凝器，使空調供應盡快恢復，並讓工程人員有充足時間維修損壞的海水管線。

Similarly, our team has proactively helped the Leisure and Cultural Services Department implement a back-up air-conditioning solution at Hong Kong City Hall. As the venue's air-conditioning system uses seawater from deep-buried underground pipelines for cooling, any pipeline damage will result in suspension of air-conditioning supply, and require prolonged roadworks before pipeline repair is possible. Our solution was to install two remote air-cooled condensers on the rooftop of the Low Block of City Hall and connect them to the central unit. If the seawater supply is interrupted or insufficient, the standby units will quickly take over the existing condensers to promptly resume air-conditioning supply, allowing ample time for the damaged seawater pipelines to be repaired.

另一方面，我們亦致力確保對緊急事故作出迅速應變。以2018年2月在大埔發生導致19人死亡的巴士車禍為例，我們支援食環署火葬場運作的團隊特別作出額外安排，讓家屬可趕及在農曆新年前為先人火化。早前，我們的火化工程組憑藉多個自行研發的創新方案，例如遙控鏟灰車和條碼流程控制系統，於2017年9月榮獲2017年公務員優質服務獎勵計劃的「特別嘉許(創新意念)」獎，這些方案顯著提高了食環署火化服務的效率和可靠性。

On the other hand, we also strive to ensure prompt response to emergency incidents. Take the bus crash in Tai Po in February 2018, which claimed 19 lives, as an example. Our team supporting the crematoria operations of the FEHD put in extra efforts to ensure prompt provision of services where required in time before the Chinese New Year, assisting the FEHD in serving the needs of the deceased and their families. Earlier in September 2017, our cremation engineering team received the Civil Service Outstanding Service Award 2017 Special Citation (Innovation) for its innovative in-house developed solutions, such as the Mobile Ash Collector and Barcode Verification Control System, which significantly boosted the efficiency and reliability of cremation services for the FEHD.

除了為其他政府部門提供恒常的機電服務，例如為香港郵政中央郵件中心的機械揀信系統提供維修保養服務，以及為「幻彩詠香江」提供操作及維修保養服務和進行改良工程之外，我們亦會協助客戶進行重要的特殊項目，最新的例子是將於2018年年底左右展開的香港居民換領身份證計劃。

Apart from provision of ongoing E&M services for other government departments, such as maintaining the Mechanised Letter Sorting System at Hongkong Post's Central Mail Centre and conducting O&M and upgrade works for A Symphony of Lights, we also work with clients on major special projects. The latest example is the replacement exercise of Hong Kong Identity Cards (HKICs) for Hong Kong residents, which will commence around the end of 2018.



我們的同事為遠距冷凝系統進行檢查，以確保系統運作正常，為大會堂提供後備空調。

Our colleagues inspect a remote condensing system to ensure its normal operation as back-up air-conditioning for the City Hall.

## 營運服務 Trading Services

新的香港身份證是一張智能卡，為持有人(即香港居民)提供數碼個人身份，使其能以單一的數碼身份作為認證，在網上跟政府和商業機構進行交易，此舉也是香港智慧城市發展的一環。由於入境事務處現時的人事登記處各個辦事處的工作量已經飽和，政府須在私人樓宇另覓地點設立換證中心，以供進行換證工作。

年內，我們的同事一直與政府產業署合作，就九個換證中心的選址進行可行性研究，訂定承辦商須符合的各項屋宇裝備要求，以及監察其工程進度。我們的目標是確保在整個換證計劃期間，這些換證中心都有高效可靠的電力及空調供應，並配備消防裝置，以及供工作人員和市民使用的相關設施。

展望來年，我們的重點是機電系統數碼化，並會成立區域控制中心，以提升各個市政及康樂場地的機電系統表現，從而提升效率。

As part of Hong Kong's smart city development, the new HKIC will be a smart card that provides an electronic identity for its holder, i.e. a Hong Kong resident, allowing the holder to use a single digital identity as authentication to conduct government and commercial transactions online. As the existing Registration of Persons Offices of the Immigration Department are already operating at full capacity, new replacement centres in private premises must be made available for the replacement exercise.

During the year, our colleagues have been working with the Government Property Agency to conduct feasibility studies on the premises identified for use as the nine HKIC replacement centres, specify various building services requirements for contractors, and monitor their works progress. Our aim is to ensure that these replacement centres are equipped with an efficient and reliable supply of electricity, air-conditioning, fire services, and related facilities for workers and visitors throughout the replacement exercise.

Going into next year, we will focus on further digitalisation of E&M systems. To optimise the performance of systems at various municipal and recreational venues, we will also set up regional control centres for enhancement of efficiency.



我們為香港郵政中央郵件中心的機械揀信系統進行定期檢查及維修工程。

We conduct regular checking and maintenance for the Mechanised Letter Sorting System at Hongkong Post's Central Mail Centre.



## 改善通風系統 獲頒嘉許獎 Improvement of Ventilation System Wins The Ombudsman's Award

市政工程部工程師何志明先生榮獲2017年申訴專員嘉許獎(公職人員獎)，表揚他在處理問題及投訴時的專業表現。  
Mr Ivan Ho Chi-ming, an engineer at Municipal Sector Division, wins The Ombudsman's Award 2017 for Officers of Public Organisations, in recognition of his professionalism in handling issues and complaints.

市政工程部工程師何志明先生本着提供優質服務的精神，把投訴轉化為讚賞，並榮獲2017年申訴專員嘉許獎(公職人員獎)。

投訴人是黃泥涌熟食中心一個熟食檔的檔主，因不滿攤檔的通風系統而向申訴專員公署投訴，公署隨後聯絡機電工程營運基金跟進。何先生馬上到現場視察並向投訴人了解情況，發現該攤檔廚房所使用的烹調方式有重大改變，即由製作小食改為烹煮中式小炒，以致通風系統不敷應付，廚房變得非常悶熱，引發投訴。

何先生的團隊為通風系統進行數次清洗，但基於清洗時間有限，只獲得短期改善效果。團隊建議徹底清洗整個除油器，但由於拆除、清洗和重新安裝除油器的工序需要頗長的時間，而該攤檔每天營業20小時，由清晨五時至翌日凌晨一時，實難撥出時間進行徹底清洗。

何先生說：「經我們向檔主詳細解釋和多次游說後，他終於願意合作，答應於兩個晚上提早休息，讓我們有足夠時間完成清洗工作。」工作過程非常順利，廚房的溫度大有改善，檔主也很滿意。

為縮短清洗時間，團隊事先製備了一套新的備用除油器以供更換，免卻即場清洗程序和節省時間。

由於每個通風系統的種類和尺寸都不同，新的除油器必須度身訂做。儘管如此，如其他場地有需要，團隊都可隨時提供解決方案。

如何總結今次的經驗？何先生說：「最重要是與投訴人有良好溝通，找出問題根源，然後積極解決。」



True to the spirit of service excellence, Mr Ivan Ho Chi-ming, an engineer at our Municipal Sector Division, turned a complaint into a compliment and won The Ombudsman's Award 2017 for Officers of Public Organisations.

The complainant, a cooked food stall owner at Wong Nai Chung Cooked Food Centre, was unhappy with his stall's ventilation system and approached the Office of The Ombudsman, which in turn contacted the EMSTF. Mr Ho promptly visited the site, talked to the complainant and found that the problem stemmed from a significant change in the cooking style of the kitchen from preparation of light refreshment to Chinese cuisine. Thus, the ventilation system was no longer adequate and the kitchen was very hot, which triggered the complaint in the first place.

Within the limited maintenance window, though the ventilation system had been cleaned several times, the improvement proved short-lived. Therefore, Mr Ho's team proposed a thorough cleansing of the oil eliminator, but dismantling, cleaning and re-installing would take considerable time which the stall, open 20 hours a day from 5:00 a.m. to 1:00 a.m., could ill afford.

"After much explanation and persuasion, the owner was willing to co-operate by closing the stall earlier for two nights, giving us enough time to complete the cleansing work," said Mr Ho. The work went smoothly with the temperature in the kitchen reduced finally, and the owner was happy with it.

To facilitate the cleansing operation, the team then made available a new set of spare oil eliminator for replacement so as to minimise the on-site cleansing and thus save time.

As each ventilation system is different in type and size, the new oil eliminator must be tailor-made. But the team is ready to roll out the solution to other venues as necessary.

"Communicate well with the complainant, discover the root cause of the problem, and tackle it proactively," Mr Ho concluded the key learning experience in this case.

## 營運服務 Trading Services

### 安康大都會 A SAFE AND HEALTHY METROPOLIS

健康與保安是每個社會的基本需要，我們很高興能支援香港在這兩方面的公共服務。

營運基金與醫院管理局(醫管局)新簽訂的五年合約已於2017/18年度展開，範圍涵蓋醫管局轄下大部分醫院及診所的機電、空調、屋宇裝備系統及生物醫療設備。年內，我們亦取得數份新合約，為醫管局轄下另外三家醫院的機電系統和生物醫療設備，提供操作及維修保養服務，以及為醫管局各醫院的低風險醫療及非醫療儀器，提供操作及維修保養服務，使我們為醫管局提供的服務更加全面。

2017/18年度其中一個里程碑是天水圍醫院全面投入運作，我們的團隊開始負責其機電及相關系統的操作及維修保養服務。天水圍醫院配備最先進的醫療設施和能源效益設計，旨在為新界西北居民帶來更優質的公共醫療服務。

香港兒童醫院將於2018年稍後啟用，我們已為院內各種機電系統及生物醫療設備進行測試及校驗。因應該醫院的啟用，我們也增添了公務員人手，而此舉正是我們廣泛提升員工能力的舉措之一。這支更強大的團隊，能讓我們更有效地支援醫管局，應付因人口不斷老化及增長而日趨殷切的醫療需求，例如協助醫管局翻新現有醫院和設計新醫院。

Health and security are basic needs of every community. We are happy to play a role in supporting the public services for Hong Kong in both areas.

Our new five-year contract with the Hospital Authority (HA) commenced in 2017/18, covering O&M services for E&M, air-conditioning, building services systems and biomedical equipment in most of the HA hospitals and clinics. During the year, we also secured several new contracts to provide O&M services for E&M systems and biomedical equipment at another three HA hospitals, as well as O&M services for low-risk medical and non-medical items at HA hospitals, making our services to the client more comprehensive.

One of the milestones in 2017/18 was the full operation of the Tin Shui Wai Hospital, with our team taking up the O&M services for its E&M and related systems. Equipped with the latest medical facilities and energy-saving features, the hospital aims to enhance public healthcare services in the northwest New Territories.

In view of the opening of the Hong Kong Children's Hospital later in 2018, for which we have completed testing and commissioning of various E&M systems and biomedical equipment, we have expanded our civil service team as part of a broader capacity-building effort. This larger and stronger team will enable us to better support the HA in coping with the pressing healthcare needs of the ageing and growing population, such as assisting the HA in retrofitting existing hospitals and designing new ones.



為達致最佳的能源管理，我們為公共衛生檢測中心更換了更高效能的製冷機並為大樓內的機電設備進行數碼轉型工作，以便傳輸數據進行分析。

To achieve better energy management, we replaced the chillers at the Public Health Laboratory Centre with more energy-efficient models, and implemented digital transformation of E&M installation in the building to facilitate data transfer for further analysis.

另一項值得注意的項目，是我們為衛生署轄下的公共衛生檢測中心進行的數碼轉型工作。這項工作於年內展開，需時數年完成，其目的是把該中心現有的製冷機和照明系統更換為更具能源效益的型號，藉以減低能源消耗量。相關的系統更新後，我們將利用綜合樓宇管理系統收集數據和進行大數據分析，以優化該中心機電系統的表現。此外，我們正協助該中心採用「建築信息模擬—資產管理」，務求更有效地管理建築物的維修保養工作。該中心的數碼化經驗，將為其他客戶部門起示範作用。

年內，我們亦拓展企業社會責任的版圖，並涉足樂齡科技領域。我們參與香港社會服務聯會(社聯)於2017年6月舉辦的全港首屆樂齡科技博覽暨高峰會，設置展覽攤位展出改善長者生活質素的工程項目。此外，我們亦與社聯合辦「樂齡科技顯愛心2017」，鼓勵青少年和公眾人士提出意念創新的智能家居及生活項目，同時推廣居家安老及社區關愛文化。我們在2018年會繼續支持樂齡科技博覽暨高峰會。

我們的高層管理人員亦參加了由社聯率領的台灣和日本考察團，了解當地的樂齡科技應用情況，以期協助本港的非政府機構引進樂齡產品，並提供所需技術支援。

繼去年為消防處採購新的「概念救護車」後，已有三輛新救護車交付並開始試用。新救護車的設計，是把病人車廂與駕駛室完全分隔，以擴大病人車廂的空間，而設於車外的儲物空間則可讓救護人員更方便地存取所需設備。新設計的病人車廂內配備中置但可左右移動的救護牀快拆裝置，讓救護人員在車內行動時更加自如。此外，其中一輛救護車的電動救護牀更配備電動油壓式操作及氣壓避震功能，救護牀可調校至不同高度，不但有助救護工作，更使病人倍感舒適。此外，一輛全新的「輔助醫療裝備車」已投

Also of note is the digital transformation of the Department of Health's Public Health Laboratory Centre (PHLC). The exercise, which began during the year and will take several years to complete, aims to reduce energy consumption by replacing the existing chillers and lighting systems with more energy-efficient models. With these in place, we will implement integrated Building Management System (iBMS) for data collection and big data analysis so as to optimise the building's E&M system performance. In addition, we are currently facilitating the PHLC to adopt Building Information Modelling for Asset Management for enhancing the management of building maintenance. The digitisation template of the PHLC will serve as a role model for other client departments.

We also broadened our spectrum of corporate social responsibility by embarking upon gerontechnology in the year. We participated in Hong Kong's first Gerontech and Innovation Expo cum Summit organised by the Hong Kong Council of Social Service (HKCSS) in June 2017, where we set up booths to showcase our engineering projects for improving the living quality of the elderly. Besides, we co-organised the Gerontech Youth Challenge 2017 with the HKCSS to encourage youngsters and the public to come up with innovative ideas on smart home and living particulars for the elderly, and to promote ageing in place as well as community caring culture. We will continue to support the event in 2018.

Our senior management also took part in visits to Taiwan and Japan led by the HKCSS to study gerontechnology applications, with a view to facilitating Hong Kong's non-governmental organisations to introduce gerontech products and rendering necessary technical support.

Further to the procurement of new "concept ambulances" for the Fire Services Department (FSD) last year, three new ambulances have been delivered and put into operation for trial. The new vehicles are designed with a totally separated patient compartment and external access storage. The former enlarges the patient compartment and the latter allows access to equipment more effectively. The newly designed patient compartment is equipped with a snap-on middle-mounted stretcher device which is adjustable transversely to facilitate movements of ambulancemen. Besides, one of the vehicles is equipped with an electro-hydraulic lifting cum air suspension platform, where the multi-height level adjustable stretcher not only facilitates treatment but also provides greater comfort. Also in



我們為天水圍醫院內的機電設備，例如手術室照明系統及醫療設施，提供維修保養服務。

We provide maintenance services for such E&M equipment as operating theatre lighting systems and medical facilities at the Tin Shui Wai Hospital.

為改善運作安全，新型的「概念救護車」繫上特定的黃色，讓它與周遭環境產生較大的色差對比，容易被其他的道路使用者察覺。

For operational safety enhancement, the new "concept ambulance" has been changed to specific bright yellow which provides a sharp contrast with its surroundings, making it more visible to other road users.





## 營運服務 Trading Services



我們的專業人員為大赤沙消防局的製冷機進行定期檢查，以供應穩定的空調予該場地。

Our professional staff conduct regular inspection of the chiller at Tai Chik Sha Fire Station to provide stable air-conditioning for the venue.

入服務，加強了消防處現時的救護車服務。為了道路安全起見，上述四輛新車均已按照EN1789標準，全部髹上令人耳目一新的鮮黃色，使其在路上更為顯眼。

與此同時，多項新邊境管制基建工程正進行最後準備工作。年內的重要里程碑之一，是為駐守即將啟用的廣深港高速鐵路香港段（廣深港高鐵）、港珠澳大橋和蓮塘/香園圍口岸的各個紀律部隊，安裝和測試機電及電子系統及設施。我們亦正協助多個紀律部隊採購家具及設備，這些家具及設備必須於有關基建設施開通前的緊迫時限內，全部完成測試及備妥。

我們的團隊亦一直與負責邊境管制職務的客戶合作，研發各種智能方案，以提升其運作效率。舉例來說，我們為香港海關安裝了一套智能過境系統，在現有的車牌號碼識別系統上應用無線射頻識別技術，使系統在監控過境車輛時能更準確地識別車牌資料。

懲教署以密集人手進行的工序（例如押送囚犯和夜間巡視囚室等），如可透過運用智能科技而減少工作量，該署便可受惠。我們正支援懲教署制訂「智能監獄方案」，尋找適用且有助益的科技供懲教所採用，

operation is a new "Paramedic Equipment Tender", which augments the FSD's existing ambulance services. All the four new vehicles have been painted in refreshingly bright sulphur yellow according to EN1789 standards to enhance their conspicuousness for road safety purpose.

Meanwhile, final preparations are underway for new border control infrastructure works. An important milestone during the year was the installation and testing of E&M and electronic systems and facilities for various disciplined services at the Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL), the Hong Kong-Zhuhai-Macao Bridge (HZMB) and the Liantang/Heung Yuen Wai Boundary Control Point, all scheduled to open soon. We are also helping a number of disciplined forces procure furniture and equipment, all of which must be tested and made available in a tight timeframe prior to the opening of the infrastructure.

Our team has been working with clients with border control responsibilities to develop smart solutions for enhancement of their operational efficiency. A case in point was the installation of a smart crossing system for the Customs and Excise Department, which applied radio frequency identification technology to the existing licence plate number recognition system for greater recognition accuracy in monitoring cross-boundary vehicles.

The Correctional Services Department stands to benefit if its labour-intensive work, such as movement of inmates under staff escort and cell patrol at night, can be reduced with smart technology. We are supporting the client in developing "smart prison protocol" and identifying suitable enabling technologies for application in

以期提升其運作效率，同時加強保安和提高安全。就此，我們一直與數家本地初創企業和一間首屈一指的資訊和通訊科技公司合作，進行多項概念驗證試驗，以制訂關於實時囚犯健康監測，以及適時干預違禁活動和囚犯自殺行為的工程方案。

另一方面，我們的團隊協助消防處轄下的消防及救護學院設計、採購及安裝多個實物原大的飛機、火車和船舶實景模型，作模擬火警和訓練之用，並憑此項目而與消防處和建築署一同獲頒2017年公務員優質服務獎勵計劃的「部門合作獎」銀獎，實在令人欣喜。此外，我們亦擔當關鍵角色，協助香港警務處把八鄉的前消防訓練學校改建為「少年警訊永久活動中心暨青少年綜合訓練營」，並在緊迫的時限內完成有關工作。該設施已於2017年8月由行政長官正式揭幕。培育年輕新血，對香港的持續進步非常重要，我們很高興能為此盡一分力。

展望未來，我們在公共醫療和保安方面的工作重點，是透過數碼化工程、綜合樓宇管理系統和大數據分析，提高市民的生活質素，同時為本港的老龄化人口提供支援，並滿足本港持續的機電及節能需求。此外，由於廣深港高鐵和港珠澳大橋等大型新基建啟用在即，我們也期待為這些重要設施日後的營運工作提供支援。

correctional institutions, with a view to improving their operational efficiency and enhancing security and safety at the same time. In this regard, we have been collaborating with some local start-ups and a leading information and communication technology practitioner on a number of proof-of-concept trials to develop engineering solutions on real-time health monitoring, and timely intervention in illicit activities and suicidal behaviour of inmates.

On a different note, we are delighted that the team which helped FSD's Fire and Ambulance Services Academy design, procure and install various life-size mock-ups of ships, trains and aircraft for fire simulation and training has won the Silver Prize of Partnership Award under the Civil Service Outstanding Service Award Scheme 2017 for the project in tandem with the FSD and the Architectural Services Department. We also played a key role in reprovisioning the former Fire Services Training School in Pat Heung into the Junior Police Call Permanent Activity Centre and Integrated Youth Training Camp for the Hong Kong Police Force, completing the project on a tight schedule. The facility was officially opened by the Chief Executive in August 2017. Nurturing young talent is vital to the continuous progress of Hong Kong, and we are glad to play a part.

Going forward, our focus in public health and security will be on enhancing people's quality of life through digitalisation, iBMS and big data analytics, as well as supporting the city's ageing population and addressing its ongoing E&M and energy-saving needs. Furthermore, as major new infrastructure such as the XRL and the HZMB will soon open, we look forward to supporting the future operation of these key facilities.



我們為懲教署位於西九龍法院大樓內的羈留室設置新的電子鎖，以提升安全及保安。

A brand new electric lock is installed at the cell of West Kowloon Law Courts Building for the Correctional Services Department so as to enhance security and safety.

## 營運服務 Trading Services

### 在超強颱風下搶修登船舷梯

#### Emergency Repairs for Gangways During Super Typhoon

區域經理梁光耀先生無懼颱風天鴿的挑戰，帶領一眾手足戰勝風雨，順利在上班時間前修補渡輪碼頭的登船舷梯，使渡輪服務得以回復正常。

In the face of the challenge posed by typhoon Hato, Mr Leung Kwong-yiu, a regional manager, fearlessly led his team to overcome the storm and worked diligently to repair the piers' boarding gangways, thus resuming ferry services before morning commuting hours.

對運輸、保安及中央工程處區域經理梁光耀先生來說，2017年8月23日是難忘的一天。那天凌晨3時，香港天文台宣布由於超強颱風天鴿逼近本港，將於兩小時內發出八號烈風或暴風信號。梁先生隨即展開當天的工作。

身為運輸、保安及中央工程處緊急事故應變小組的負責人，梁先生馬上召集組員在機電署總部候命。天文台在清晨5時20分發出八號信號的時候，團隊已整裝待發，可隨時出動迎接忙碌的一天。及至早上9時10分，天文台再發出十號颶風信號。

在之後的十多小時內，緊急事故應變小組應運輸署的要求搶修多個損毀的機電設施，例如交通燈、水浸的行人隧道內的水泵和照明設備等。然而，最大的挑戰是要為運輸署轄下六個分別位於中環、北角、尖沙咀、紅磡、東涌和梅窩的碼頭搶修登船舷梯，這是因為天鴿帶來的嚴重風暴潮，導致登船舷梯許多木板移位。

梁先生表示：「碼頭地點非常分散，而登船舷梯的搶修工作須在很短時間內冒着惡劣天氣完成。至關重要的是，我們要確保當天文台改發三號強風信號時，碼頭能恢復正常服務，特別是往返那些只有渡輪接達香港其他地方的地區。」

緊急事故應變小組分為三個小隊，由當天下午3時至晚上11時，馬不停蹄地把這六個碼頭的登船舷梯修妥，令渡輪順利恢復正常服務。

梁先生補充說：「天鴿的經驗證明，部別之間和部門與其他政府部門之間的合作均非常重要，今次也是因為大家能通力合作，才能克服挑戰。此外，我們已協助運輸署檢視登船舷梯的物料和安裝方法，希望提高舷梯日後抵禦颱風的能力。」

Mr Leung Kwong-yiu, a regional manager at our Transport, Security and Central Services Division (TSCSD), will never forget the day 23 August 2017. The day began for him at 3 a.m., when the Hong Kong Observatory announced that a gale or storm signal No. 8 would be issued within two hours as super typhoon Hato came close to Hong Kong.

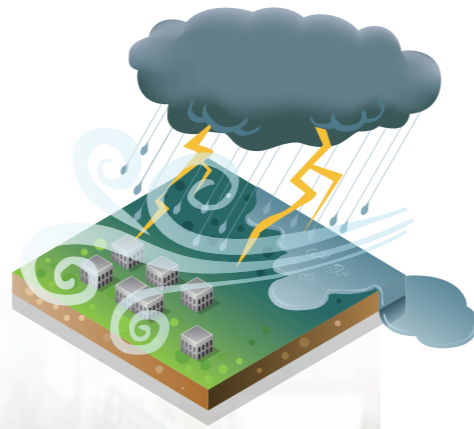
As the Head of the TSCSD's Emergency Response Team (ERT), Mr Leung marshalled his team at EMSD Headquarters in the early hours. When the No. 8 signal was issued at 5:20 a.m., followed by a hurricane signal No. 10 at 9:10 a.m., the team was ready for a busy day.

In the coming hours, the ERT was called out to repair damaged E&M facilities for the Transport Department (TD), such as traffic lights, and pumps and lighting in flooded pedestrian subways. Yet the top challenge was repairing damaged boarding gangways at six TD ferry piers in Central, North Point, Tsim Sha Tsui, Hung Hom, Tung Chung and Mui Wo respectively, where many wooden planks were displaced by the severe storm surge accompanying Hato.

"The locations were widely dispersed, and the gangways had to be repaired in a very short time under severe weather conditions. It was important that normal ferry services could resume once the typhoon signal came down to No. 3, especially for locations where ferry is the only link with the rest of Hong Kong," Mr Leung said.

Three ERT sub-teams worked from 3 p.m. till 11 p.m. to repair all six gangways and enable ferry services to resume smoothly.

"The Hato experience shows the value of inter-divisional and inter-departmental collaboration, as we helped each other to overcome the challenge. We have also helped the TD review gangway materials and mounting methods for better protection against future typhoons," Mr Leung added.



### 暢達旅程 A SMOOTH JOURNEY

香港公共交通的速度和效率備受旅客讚賞，更是數以百萬計居民每日賴以往返目的地的系統。機電工程營運基金擔當重要角色，除了為相關部門提供服務，維修保養各項機電設施，以支援本港的交通系統及基建外，亦不時實施創新的工程方案，以提升有關系統及基建的效率和可持續性。

將於2018年稍後時間啟用的港珠澳大橋，是最令人期待的運輸基建項目之一。我們的團隊除了為大橋口岸過境的檢測及清關建造多個機電系統和設施外，亦準備就緒，待大橋投入運作後負責有關系統的操作及維修保養。

大老山隧道將於2018年7月由私人營運商交回政府，我們正忙於籌備接管監察該隧道的操作及維修保養服務的工作，並同時為監察全港六條新建行車隧道的操作及維修保養服務作好準備。

位於機電署總部，並為擁有6 000多部車輛的政府車隊提供維修保養服務的汽車工場，年內也有重大突破。繼去年成功推出專為大型客貨車而設的車輛預約系統試行計劃後，我們已把計劃擴展至電單車。車輛預約系統整體成效卓著，參加試行計劃的車隊的車輛可用率增加了4.4%。此外，參加計劃的大多數客貨車的檢修工作均能於預約日當天完成，車輛無需停留工場一晚，大大提升了政府車隊的效率。

Visitors often admire the speed and efficiency of public transport in Hong Kong, which is relied upon by millions of residents each and every day for commuting. EMSTF plays a key role not only in providing services to relevant departments for the maintenance of various E&M facilities to support the city's transport systems and infrastructure, but also in implementing innovative engineering solutions from time to time to enhance their efficiency and sustainability.

One of the most exciting developments in transport infrastructure is the Hong Kong-Zhuhai-Macao Bridge (HZMB), which is scheduled to open later in 2018. Apart from building various E&M systems and facilities for boundary-crossing checks and clearance, our team is also prepared to take up the O&M services for the systems once the HZMB commences operation.

Concurrently, we have been preparing to take over the responsibility of monitoring the O&M services of the Tate's Cairn Tunnel, which will be returned to the Government in July 2018 from the private operator. Our team is also getting ready to monitor the O&M services for six new vehicular tunnels throughout the territory.

Back in EMSD Headquarters, our vehicle depot, which maintains a government fleet of 6 000-plus vehicles, made major strides in 2017/18. Further to a successful pilot of the Advance Vehicle Booking System (AVBS) for large vans in the previous year, we have extended the scheme to cover also motorcycles. The overall results of the AVBS are impressive, with a 4.4% increase in the vehicle availability of fleets participating in the pilot scheme. In addition, most of the participating vans could have their servicing completed on the appointment day without the need to be kept overnight, greatly enhancing the efficiency of the government fleet.



我們的員工正在監察和檢查青沙管制區的電子繳費系統，以確保運作正常。

Our staff are monitoring and inspecting the e-payment system for Tsing Sha Control Area to ensure its normal operation.



## 營運服務 Trading Services

我們加強了總部汽車工場的Wi-Fi系統，讓員工可於工場任何位置使用流動裝置，取得有關保養或維修工作進度的實時資料，以便同事快捷準確地與客戶溝通。維修管理系統及工場的工作流程邁向數碼化，以及把車輛預約系統擴展至更多類型的車輛及其他汽車工場，定能進一步提高政府車隊的可用率和效率。

年內，我們協助運輸署採購全港首批五軸重型拖車，以加強其救援常於交通意外後阻塞路面的重型壞車的能力。新拖車配備旋轉起重臂及額外車軸，可在有限空間快速吊起重達24公噸的壞車或被堵塞的車輛，而其拖拉力更高達70公噸，十分適合用來移走壞貨櫃車、吊臂車及其他重型特別用途車輛。首批七輛五軸重型拖車已完成測試，並已交予運輸署使用。

We have also strengthened the Wi-Fi system at our vehicle depot so that staff can make use of mobile devices to access real-time information on the progress of maintenance or repair work anywhere in the depot, facilitating prompt and accurate communication with clients. The migration of both the maintenance management system and workshop workflow towards digitisation, together with the expansion of the AVBS to more vehicle types and other vehicle depots, will definitely further enhance the availability and efficiency of the government fleet.

During the year, we assisted the Transport Department (TD) in procuring Hong Kong's first five-axle heavy recovery vehicles to strengthen its capability in recovering broken-down heavy vehicles obstructing the roads, typically after traffic accidents. Equipped with a swirl boom and an extra axle, the new vehicles can swiftly lift up a damaged or stuck vehicle of up to 24 tonnes in a limited space and have a towing capacity of up to 70 tonnes, making them ideal for recovering broken-down container trucks, crane trucks and other heavy special-purpose vehicles. The first batch of seven recovery vehicles has already been tested and handed over to TD for operation.



同事透過工場的Wi-Fi系統接收實時數據，了解車輛的機件狀況，以進行維修保養工作。

Colleagues receive real-time data through the Wi-Fi system at our depot to find out the conditions of the vehicle's components for carrying out maintenance work.

我們為運輸署採購全港首批五軸重型拖車，其額外的負載能力可迅速移走重型壞車，使交通盡快恢復正常。

The extra loading capacity of Hong Kong's first five-axle heavy recovery vehicles we procured for the Transport Department can swiftly recover broken-down heavy vehicles so that normal traffic can be restored as soon as possible.



我們協助路政署為中環至半山自動扶梯系統進行大型更新工程，藉此增加其可用率和可靠性。

We assist the Highways Department in the large-scale refurbishment of the Central-Mid-Levels Escalator and Walkway System to enhance its availability and reliability.

上述工程未必為市民所見，但我們為路政署進行的中環至半山自動扶梯系統更新工程，卻是備受注目的項目，與每天使用該系統的市民息息相關。系統全長800米，由德輔道中貫穿九條街道至干德道，是全球最長的室外有蓋自動扶梯系統，亦是著名的旅遊景點。整個系統的更新工程已於2018年3月展開，分12期進行，涉及更換16條自動扶梯及三條行人道。更新工程預期於2022年完成，屆時將會大大提升系統的可用率和自動扶梯服務的可靠性。

另外，市民較易察覺到的新一代行人天橋升降機的維修保養工作，亦已由我們接手。新的升降機配備更多百葉窗以取代冷氣機，提供更佳的通風效果，以配合政府推動環保、節能和低碳作業的政策。

海上交通方面，在2017年6月於橫瀾島站完成第11個（亦即最後一個）雷達系統的修復工作後，我們為海事處第三代船隻航行監察服務系統（航監系統）第二期工程進行的更換及升級工程亦接近竣工。

While these works might not be visible to the public, our refurbishment of the Central-Mid-Levels Escalator and Walkway System for the Highways Department is a highly conspicuous project and touches the local community on a daily basis. Spanning nine streets from Des Voeux Road Central to Conduit Road, this 800-metre escalator system is the world's longest outdoor covered escalator system and a renowned tourist attraction. Refurbishment of the entire system, which involves replacement of 16 escalators and three walkways, already commenced in March 2018 and will be carried out in 12 phases. The refurbishment work, which is expected for completion in 2022, will greatly enhance the availability and reliability of the escalator service.

Also visible to the public is a new generation of lifts on pedestrian footbridges, for which maintenance has been taken over by us. The new lifts are fitted with more louvres instead of air-conditioners for better ventilation in order to dovetail with the government policy of promoting environment-friendly, energy-saving and low carbon practices.

Turning to sea transport, our replacement and upgrading works for Phase II of the third-generation Vessel Traffic Services (VTS) System for the Marine Department (MD) were close to completion when we finished the 11th (also the last) radar system renovation at Waglan Island Station in June 2017.



我們負責維修保養新一代的行人天橋升降機。這些新式升降機配備百葉窗，以取代傳統冷氣機，配合政府的環保政策。

We are responsible for maintenance of the new generation of lifts on pedestrian footbridges. In line with the Government's green policy, these new models of lifts are fitted with louvres to replace traditional air-conditioners.

## 營運服務 Trading Services

這個橫跨數年的項目的最後一環，是為設於馬灣海上交通控制站的全新後備航監系統，以及位於偏遠地點的雷達及無線電通訊站進行測試和校驗，預計全部工作可於2018年完成。新航監系統具備最先進的電子及資訊科技和設備，大大有助海事處提升本港水域船隻航行的安全和效率，也能加強該處的環保作業。

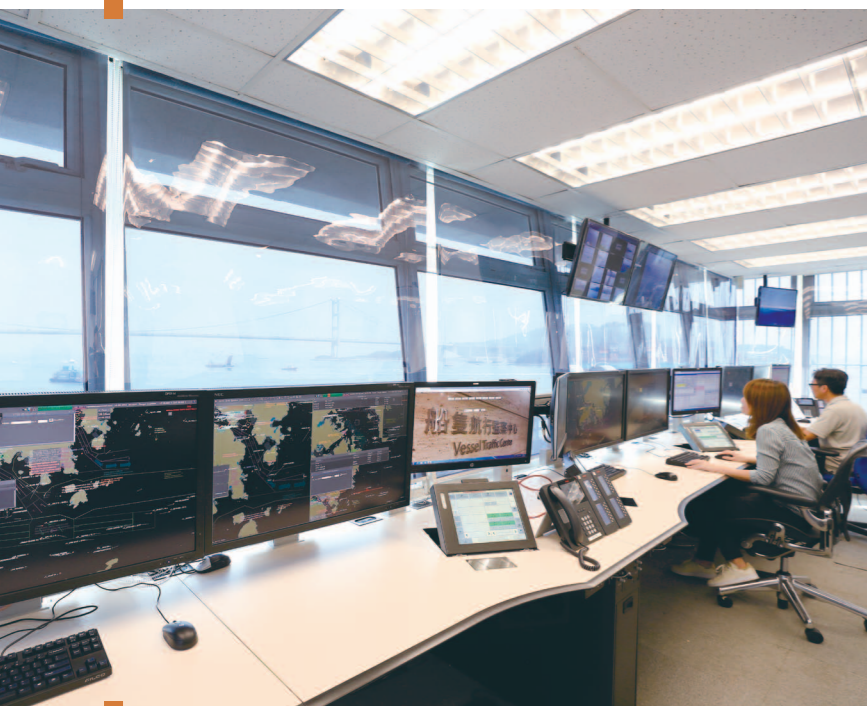
至於航空交通，我們繼續為香港機場管理局(機管局)就香港國際機場的助航燈系統、一般抽水系統和污水處理裝置提供操作及維修保養服務，也為駐守機場和東涌的政府部門提供各種機電設施的支援服務。由於機場不斷擴展，我們會投放更多資源於高壓電力工程的培訓和其他提升員工能力的工作，使助航燈系統及其他機場服務得以受惠。此外，我們或會與機管局探討把新科技應用於機場系統的可行性。

隨着中港兩地經濟未來進一步融合，對口岸過境機電設施的需求亦會與日俱增。營運基金具有相當優勢，可把握機遇和應用嶄新科技，為客戶提供先進的口岸管制及清關方案。鑑於本港交通系統及基建的需求持續上升，我們必須支援客戶推行系統數碼轉型，以提升營運效率。

The final step of this multi-year project will be testing and commissioning of the new fallback VTS System at the Ma Wan Marine Traffic Control Station, as well as that of the radar and radio stations in remote locations, all scheduled for completion in 2018. With state-of-the-art electronics and information technology and equipment, the new VTS System has greatly facilitated MD in improving the safety and efficiency of vessel traffic in Hong Kong waters and enhanced its environmental practices.

On air transport, we continue to provide O&M services for the Airfield Ground Lighting (AGL) System, General Pumping System and Sewage Treatment Plants at the Hong Kong International Airport for Airport Authority Hong Kong (AA), while also supporting various E&M facilities of government departments stationed at the airport and in Tung Chung. As the airport continues to expand, more resources will be devoted to training on high-voltage electrical works and other capacity-building work that will benefit the AGL System and other airport services. We may also explore with AA the potential application of new technologies to airport systems.

As the economic integration between Hong Kong and the Mainland will grow further in the future, so will the demand for boundary-crossing E&M facilities. We are well positioned to capture the opportunities and deploy new technologies to provide state-of-the-art boundary control and clearance solutions for clients. Given the ever-increasing demand for transport systems and infrastructure in the city, it is imperative that we support our clients in the digital transformation of systems to achieve higher operational efficiency.



我們為海事處馬灣海上交通控制站的第三代船隻航行監察服務系統進行更換、升級及測試，該系統可與上環船隻航行監察中心一同運作，從而提升香港水域船舶交通的安全及效率。

We have replaced, upgraded and tested the third-generation Vessel Traffic Services System for Marine Department's Ma Wan Marine Traffic Control Station, which can operate with the Vessel Traffic Centre in Sheung Wan, thereby improving the safety and efficiency of vessel traffic in Hong Kong waters.



## 新預約系統提升車隊可用率 New Booking System Boosts Fleet Availability

車輛工程分部區域經理譚志恒先生及其團隊在機電署總部大樓的汽車工場推行全新的車輛預約系統試行計劃，以提高維修效率。

Mr Tam Chi-hang, a regional manager of the Vehicle Engineering Sub-division, and his team launched the new AVBS pilot scheme at the vehicle depot of the EMSD Headquarters Building to enhance maintenance efficiency.



營運基金車輛工程分部區域經理譚志恒先生說：「要解決問題，與客戶溝通至關重要。」譚先生帶領同事於2016年7月在機電署總部工場推出全新的車輛預約系統試行計劃，革新了營運基金車輛維修保養的工作流程。

"When it comes to trouble shooting, having communication with clients is vital," said Mr Tam Chi-hang, a regional manager of EMSTF's Vehicle Engineering Sub-division. Mr Tam led the launch of the new AVBS pilot scheme at the EMSD Headquarters depot in July 2016, which has revolutionised EMSTF's vehicle maintenance work process.

計劃推行前，客戶車輛經常未能在約定時間抵達工場進行預防性維修保養，嚴重影響工場的時間表，令遲到的車輛往往需要停泊在工場一晚甚或數天，工場人員方能為有關車輛進行維修保養。滯留的車輛使工場變得擠迫，更不必要地減低客戶車隊的可用率。

Before the implementation of the AVBS, client vehicles often failed to show up at the appointed time for preventive maintenance (PM), seriously affecting the depot's schedule, such that vehicles arriving late often had to remain on site overnight or even for several days before the depot crew could work on them. The backlog of vehicles led to congestion at the depot, unnecessarily reducing the availability of our clients' fleets.

為了解決這個問題，譚先生及團隊在與客戶詳細討論後，研訂了車輛預約系統試行計劃。根據該計劃，工場人員會預先提醒司機其車輛進行預防性維修保養的預約時間，而司機也承諾會按時抵達。當車輛於預約時間到達時，工場人員已準備好所需的零件及材料和預留泊位，使有關維修保養工作能於數小時內迅速完成，車輛也可即日離開工場，投入服務。

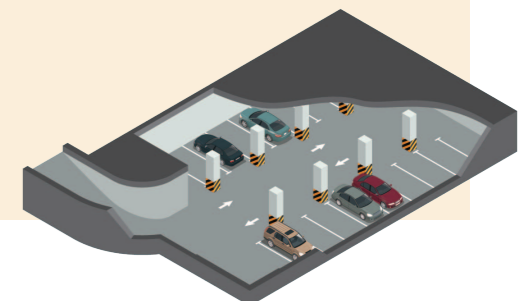
To tackle the problem, Mr Tam and his team have developed the pilot AVBS after extensive discussions with clients. Under the scheme, depot staff alert vehicle drivers to their PM appointments in advance, and drivers undertake to show up as scheduled. When the vehicles arrive at the appointed time, depot staff already have the necessary parts and materials ready and parking spaces reserved, so that PM work can be promptly completed within a few hours and the vehicles can be released for operation on the same day.

有賴客戶的合作和同事的努力，試行計劃的成績相當理想，尤其對警車和救護車等大型車輛而言。截至2017年年初，客戶車隊的整體可用率上升了4.4%。

Thanks to clients' co-operation and our colleagues' hard work, the results of the scheme are impressive, particularly for large vehicles such as police vans and ambulances. As at early 2017, the overall client fleet availability increased by 4.4%.

譚先生補充說：「這項計劃將會擴展至其他類型的車輛，而我們的車輛接待處亦會遷至工場的樓層並進行擴建，以加強與客戶溝通及提升服務質素。」

"The scheme will now be rolled out to other vehicle types. Our vehicle reception office will also be relocated to the workshop floor and expanded to enhance communication with and services provided to our clients," Mr Tam added.



## 營運服務 Trading Services

### 聚焦創新科技 FOCUS ON INNOVATION AND TECHNOLOGY

營運基金近年一直積極應用新科技，協助客戶提升營運效率和節能。行政長官於2017年《施政報告》中提出以創新及科技(創科)為重點，營運基金隨即作出配合，於2018年2月成立創新辦公室，專責領導機電署的創科工作，並於3月1日開始試行網上創科協作平台「E&M InnoPortal」。

創新辦公室的主要角色之一是發揮橋樑作用，為物色特定創科方案的政府部門及公營機構，與能開發和提供該等產品及服務的初創企業進行配對。我們除了以機電署總部大樓作為初創企業產品的試驗場地外，亦以創新辦公室作為機電署所有創科協作和措施的首個接觸點。

我們在2017年12月於機電署總部舉行「創新科技日」，有12間來自香港科學園的初創企業展示其產品意念或原型，吸引逾200名來自機電署、政府部門及公營機構的參加者出席，他們對於進一步討論和協作很感興趣。

政府建築物是應用創科的重要場地，能為社會樹立良好榜樣，以提倡樓宇智能維修保養及環保作業方式。繼機電署總部大樓榮獲「綠建環評既有建築」最終白金級證書和「綠建環評社區」白金級證書後，我們再接再厲，着力協助其他客戶部門獲取「綠建環評」證書。

The EMSTF has been actively deploying new technologies in recent years to help clients enhance operational efficiency and save energy. In line with the Chief Executive's focus on innovation and technology (I&T) in her 2017 Policy Address, we promptly set up a dedicated Inno-Office in February 2018 to spearhead EMSD's I&T efforts and soft-launched an online I&T collaboration platform "E&M InnoPortal" on 1 March.

A key role of our Inno-Office is to be a matchmaker, bridging government departments and public bodies seeking specific I&T solutions with start-ups that can develop and provide those products and services. We have also made the Inno-Office EMSD's first point of contact for all I&T collaborations and initiatives, in addition to making available our headquarters building as a venue for start-ups' product pilots.

An Innovative Technology Day was held in December 2017 at EMSD Headquarters where 12 start-ups from the Hong Kong Science Park showcased their product ideas or prototypes. Over 200 participants from EMSD, government departments and public bodies attended the event, showing great interest in further discussion and collaboration.

Government buildings are important venues for I&T application, as they can set a good example for the community in smart building maintenance and environment-friendly operations. Further to the success of the EMSD Headquarters Building in obtaining the Final Platinum Rating Certification under BEAM Plus Existing Buildings and the Platinum Rating Certification under BEAM Plus Neighbourhood, we have moved on to assist other clients in obtaining BEAM Plus certification too.



我們持續監察醫管局大樓的能源使用，引入先進的節能科技，例如安裝發光二極管照明裝置，並強化環境及能源管理措施，最終成功為大樓取得「綠建環評既有建築2.0版自選評估計劃」能源使用範疇的卓越評級。

We have been monitoring the HA Building's energy use, introducing the latest energy-saving technologies such as application of LED lighting system, and stepping up environmental and energy management measures. With these efforts, we successfully assisted the building in achieving an Excellent grade for Energy Use under the BEAM Plus Existing Buildings (V2.0) Selective Scheme.



醫院管理局(醫管局)大樓便是一例。我們為大樓提供技術支援，使其成為首幢在「綠建環評既有建築2.0版自選評估計劃」能源使用範疇榮獲卓越評級的政府建築物，是營運基金在協助政府建築物節能方面的里程碑。同樣，在我們的技術支援下，建築署的建築中心亦於該計劃的能源使用範疇取得卓越評級。

我們現正進行差距分析，探討建築中心取得「綠建環評既有建築2.0版綜合評估計劃」證書的潛力。建築物必須符合該計劃全部六個範疇的規定，方能獲頒證書，難度更高。

在2017/18年度完結時，共有17幢政府建築物已安裝綜合樓宇管理系統。該系統連接至各主要場地的優化中央控制及監察系統和流動技術，有助我們改善為政府建築物提供的操作及維修保養服務。年內，我們更為機電署總部、土瓜灣政府合署和粉嶺法院大樓安裝配備能源管理功能的綜合樓宇管理系統。憑藉營運基金團隊對運用綜合樓宇管理系統的豐富經驗，我們將研究為客戶成立區域數碼控制中心的可行性。這些控制中心可進行大數據分析，協助建築物羣改善運作表現。

由於創新科技系統有助提升人力效率及向公眾所提供服務的質素，負責邊境管制的客戶部門亦能從有關方案中受惠。舉例來說，我們正為全新的「智能體溫檢查系統」進行測試，以供衛生署轄下的港口衛生處使用。該系統結合熱能顯像和人工智能科技，既能實時準確地識別發燒旅客，亦能應用大數據分析，以改善各邊境管制站的健康檢查措施。

A case in point is the Hospital Authority (HA) Building which, with our technical support, became the first government building to earn the Excellent grade for Energy Use under the BEAM Plus Existing Buildings (V2.0) Selective Scheme, a milestone in our efforts to help government buildings save energy. Likewise, with our technical support, the APB Centre of the Architectural Services Department (ArchSD) also obtained the Excellent grade for Energy Use under the Selective Scheme.

We are now conducting a gap analysis to explore the potential of the APB Centre in obtaining certification under the BEAM Plus Existing Buildings (V2.0) Comprehensive Scheme, which is a more ambitious goal as the requirements of all six aspects under the Scheme must be fulfilled in order to be certified.

At the end of 2017/18, the integrated Building Management System (iBMS) was installed in a total of 17 government buildings. Connected to upgraded Central Control and Monitoring Systems at critical venues as well as mobile technologies, iBMS will enable us to improve our O&M services for government buildings. During the year, iBMS with energy management function was also installed at EMSD Headquarters, To Kwa Wan Government Offices and Fanling Law Courts Building. With rich iBMS experience, we shall look into the feasibility of setting up regional digital control centres for clients. Such centres will generate big data analytics to facilitate groups of buildings to improve their operational performance.

Client departments with boundary control responsibilities can also benefit from innovative technology solutions, as these systems can help increase manpower efficiency and enhance the quality of service provided to the public. For instance, combining thermal imaging with artificial intelligence, the new Smart Fever Screening System being tested for the Port Health Office of the Department of Health can accurately identify febrile travellers in a real-time manner, and will also enable big data analysis for improving health screening measures at boundary control points.



我們的同事正在檢查首個安裝於彩虹斧山道行人天橋的「智能調光照明控制系統」。

Our colleagues are conducting inspection of the Smart Footbridge Lighting Dimming Control System, first installed at the footbridge at Hammer Hill Road, Choi Hung.



## 營運服務 Trading Services

為客戶節能是我們創科工作的另一個重要範疇，而這方面的工作更於2017年9月為我們帶來兩項國際殊榮。營運基金的衛生工程團隊聯同醫管局獲美國能源工程師學會頒發亞太區「區域能源項目獎」，以表揚我們與醫管局自2015年起，合力把公立醫院共38台老化的傳統製冷機組更換為高效率的型號。有關項目為醫管局每年節省約1 300萬度電。

機電署同時奪得美國能源工程師學會亞太區「區域能源管理機構獎」，以表揚部門多年來在能源管理項目方面的整體傑出表現。

此外，由我們的衛生工程團隊自行研發的「流動製冷系統」，更取得為期八年的香港專利。當醫療場地的主要製冷機組發生故障時，該系統可於數小時內開始為整個場地提供緊急空調供應。我們希望與業界分享有關設計，推動更廣泛使用該系統。

營運基金的各個團隊，利用為協助政府部門於2015/16至2020/21年度內實現節能5%而預留的特別撥款，一直協助客戶申請資助，並為其提供技術支援，以推行能源管理措施。所進行的項目種類非常廣泛，由更換製冷機組、優化中央控制及監察系統和照明系統，以至為全部政府建築物進行全面的能源改善工程。建業中心便是能源改善工程的例子之一。我們在該座建築物安裝了製冷量達1 400千瓦的高效製冷機組，又為冷水循環系統升級，加裝變速驅動泵，以進一步提升節能效果。

Saving energy for clients is another key aspect of our I&T work. Our efforts in this area won two prestigious international awards in September 2017. Our health sector team and HA jointly received from the Association of Energy Engineers (AEE) the Regional Energy Project of the Year Award for the Asia-Pacific region, in recognition of our joint efforts in replacing a total of 38 aged conventional chillers in public hospitals with highly energy-efficient chillers since 2015. An annual electricity consumption of around 13 million kWh has been saved for HA.

The other award was the AEE Regional Institutional Energy Management Award for the Asia-Pacific region to commend EMSD's overall outstanding performance in energy management programmes throughout the years.

On a related note, our health sector team's in-house developed Mobile Chiller System, which can start providing emergency air-conditioning to the entire healthcare venues within a few hours in the event of breakdowns of the main chillers, has obtained an eight-year Hong Kong patent. We hope to share the design with the trade to promote its wider adoption.

With a special funding earmarked to help government departments achieve 5% energy saving from 2015/16 to 2020/21, various teams of EMSTF have been assisting clients in fund bidding and providing technical support to implement their energy management opportunities. The nature of projects undertaken is extensive, ranging from replacement of chillers, upgrading of Central Control and Monitoring Systems and lighting systems, to comprehensive energy improvement works for all government buildings. An example of the latter is the APB Centre where a high efficiency chiller plant with a cooling capacity of 1 400 kW was installed and the chilled water circulation system was upgraded with variable speed drive pumps to further enhance energy saving.



我們在香港天文台總部外的花園安裝了配備太陽能板的柱燈，利用可再生能源發電，以達致零碳排放的目標。

Bollard lights equipped with solar panels have been installed at the garden outside the Hong Kong Observatory Headquarters for generating electricity with renewable energy to achieve zero carbon emission.

機電署總部大樓的學習資源中心安裝了「智能風機盤控制器」。這個控制器屬於具潛力的初創節能項目，可透過調節電壓，控制冷氣機風機的馬達速度，以提高能源效益。

A Fan Coil Unit Energy Saver is installed in the Learning Resources Centre at EMSD Headquarters. As part of a potential energy saving start-up project, this energy saver can enhance energy efficiency by adjusting the voltage to control the motor speed of the fan in an air-conditioning system.



另一項有關節能的工作，是我們於年內大量採購了約700部具有變頻功能的窗口式冷氣機，供各客戶場地作更換之用。是次採購促使供應商加快把更具能源效益的冷氣機型號進口香港，供應予消費市場，從而改變市場的供應情況，有利環保。

A related effort was our bulk purchase of about 700 window-type room air-conditioners with frequency inverter control for replacement at various client venues. This has in turn prompted the supplier to expedite the import of these more energy-efficient models into Hong Kong for the consumer market, thereby changing the supply to be in favour of environmental protection.

我們亦正籌備多類具備創科元素的節能或營運效率改善項目。營運基金各個團隊正研究不同項目構思，例如為民航處的火警偵測系統進行遠程監察、為香港天文台位處偏遠地區的較小型雷達站安裝可再生能源應用設備以達致零碳排放，以及為小蠔灣政府維修廠裝設控制照明和空調系統的流動應用程式。此外，我們已就於18個公園安裝太陽能街燈，為建築署展開可行性研究。待項目完成後，新的太陽能街燈可讓市民於日常生活中更近距離接觸可再生能源。

In the pipeline too is a variety of energy saving or operational efficiency enhancement projects with I&T elements. Our teams are exploring different project ideas such as remote monitoring of fire detection systems for the Civil Aviation Department, renewable energy applications at smaller outlying radar stations of the Hong Kong Observatory to achieve zero carbon emission, and mobile applications for the control of lighting and air-conditioning systems at the Siu Ho Wan Government Maintenance Depot. We have also started a feasibility study for ArchSD on the installation of solar lamp poles in 18 parks. On completion, the new lamp posts will bring renewable energy closer to people's everyday life.

創科是促進香港經濟多元發展和提升競爭力的關鍵。在創新辦公室及營運基金各團隊的共同努力下，我們將繼續與客戶攜手在創科路上跨步向前。

I&T is important in helping Hong Kong diversify its economy and become more competitive. With the concerted efforts of our Inno-Office and various teams of EMSTF, we shall continue to progress together with our clients on the I&T journey.



我們協助建築署的建業中心取得「綠建環評室內建築1.0版」白金級評級。文樓一樓的綠化牆壁為員工提供舒適的工作環境，有助促進可持續發展。

We assisted ArchSD's APB Centre in attaining the Platinum Rating under BEAM Plus Interiors (V1.0). The green wall on the 1/F of Main Block provides a cosy working environment for staff, facilitating the promotion of sustainable development.



## 營運服務 Trading Services

我們的高級工程師陳賀賢先生(左四)及其團隊研發出一套「建築信息模擬—資產管理」系統，榮獲多個創新獎項。此系統將應用於不同的建築物，例如香港兒童醫院。

Our senior engineer, Mr Steve Chan Hor-yin (4th left) and his team developed the BIM-AM system which won a number of innovation awards. The system will be implemented in different buildings such as Hong Kong Children's Hospital.

### 「建築信息模擬—資產管理」 系統即將全面實施

#### BIM-AM Ready for Full Implementation



營運基金工程策劃部高級工程師陳賀賢先生自2014年起參與「建築信息模擬—資產管理」研發項目以來，有重拾年青的感覺。他說：「與年青工程師團隊一同在未知的領域探索新科技，使人既興奮又充滿活力，令我回想起年輕時對探索和應用新科技以進行設計工作的熱情和幹勁。這豈不是專業工程師所追求最浪漫的事嗎？」

他帶領的年青工程師團隊，在應用「建築信息模擬—資產管理」系統以提高建築物機電系統的操作及維修保養服務的效率方面開創先河，於建築及工程領域贏得多項本地及國際殊榮，成就廣獲認同。

團隊成功研發並在機電署總部應用「建築信息模擬—資產管理」系統，更因此而獲建造業議會及香港工程師學會等機構頒發創新獎項。陳先生也多次獲邀在本港及海外就該系統發表演講，其中最矚目的是2016年由電機電子工程師學會主辦的自動化科學及工程國際會議和2017年的歐特克大學拉斯維加斯會議(兩會均在美國舉行)。

機電署在2017年為「建築信息模擬—資產管理」系統取得八年香港專利，並出版《建築信息模擬—資產管理系統的標準和指引》，利便業界採用該技術進行樓宇維修保養。同時，市場對該技術的興趣日增。

陳先生說：「我們下一步將會為整座機電署總部大樓、香港兒童醫院、天水圍醫院和西九龍政府合署建造完整的『建築信息模擬—資產管理』模型，而後三幢大樓均為新建建築物。這代表該技術會由先導計劃的階段，進展至全面應用於建築物。我們正計劃把『建築信息模擬—資產管理』結合大數據分析、物聯網和5G無線通訊，以進一步發揮該技術在資產數碼化方面的潛力。」

Ever since taking on the Building Information Modelling — Asset Management (BIM-AM) R&D project in 2014, Mr Steve Chan Hor-yin, a senior engineer of our Project Division, has felt youthful again. "Exploring new technology in uncharted territory with a team of young engineers is exciting and energising. It recalls me of my passion and enthusiasm in exploring and applying new technology to carry out design work when I was young. It is the most romantic thing pursued by a professional engineer, isn't it?" he said.

His young engineering team has received awards and recognition locally and internationally from the construction and engineering sectors for its pioneering work in applying BIM-AM to boost the efficiency of O&M services for the E&M systems of buildings.

The team's successful pilot in developing and applying BIM-AM System to EMSD Headquarters has won innovation awards from such organisations as the Construction Industry Council and the Hong Kong Institution of Engineers. Mr Chan was also invited to speak on BIM-AM locally and overseas, most notably at the International Conference on Automation Science and Engineering hosted by the Institute of Electrical and Electronics Engineers in 2016 and the Autodesk University Las Vegas Conference 2017 in the United States.

The EMSD obtained an eight-year Hong Kong patent for BIM-AM in 2017 and issued the BIM-AM Standards and Guidelines, with a view to facilitating the adoption of BIM-AM by the trade in building maintenance. Meanwhile, market interest in the technology has continued to surge.

"The next steps are to build a full BIM-AM model for the entire EMSD Headquarters Building, Hong Kong Children's Hospital, Tin Shui Wai Hospital and West Kowloon Government Offices, with the latter three being new buildings," said Mr Chan. "This means BIM-AM will proceed from a pilot stage to full implementation in buildings. To further leverage on the potential of BIM-AM in asset digitisation, we are planning to integrate BIM-AM with big data analytics, Internet of Things and 5G wireless communication."

### 為醫管局大樓取得「綠建環評」卓越評級 BEAM-Plus Excellent Grade Attained for Hospital Authority Building

我們的工程師趙偉略先生(右)和一級監工伍裕賢先生(左)協助醫院管理局大樓取得「綠建環評既有建築2.0版自選評估計劃」能源使用範疇的卓越評級。

Mr Vincent Chiu Wai-leuk, an engineer (right), and Mr Ng Yu-yin, a works supervisor I (left), assisted HA in earning an Excellent grade for Energy Use under the BEAM Plus Existing Buildings (V2.0) Selective Scheme for the HA Building.



2017年，醫管局大樓成為首幢在「綠建環評既有建築2.0版自選評估計劃」能源使用範疇榮獲卓越評級的政府建築物，是營運基金持續支援該大樓節能工作的里程碑。

帶領團隊協助醫管局大樓取得證書的衛生工程部工程師趙偉略先生表示，最大的挑戰是要使醫管局的非技術人員相信參加計劃所帶來的可持續發展效益。

他又說：「大樓落成至今已21年，在工作開展初期，要確定需更換的資產以節省最多能源，確有難度。」

經過精心策劃，有關工程在2015年展開，當中包括更換製冷機組和照明系統、為機電系統加裝變速驅動器和感應器，以及進行大量報告和文件規定。我們的努力得到回報，醫管局大樓2016年的用電量較2012年下降18%，更於「綠建環評」評審中以高達90%的得分獲得卓越評級。

一級監工伍裕賢先生是項目團隊的重要成員，致力協助醫管局大樓取得「綠建環評」證書。伍先生自醫管局大樓於1997年啟用以來，一直駐守該處，對其機電系統瞭如指掌，更具備數十年的豐富經驗。他與大樓的行政單位和技術人員緊密合作，促進日常溝通，並監督各項更換工程和節能測量工作。

趙先生及伍先生感謝醫管局大樓管理層的大力支持，以及員工的理解和合作，使這項工作取得成功。趙先生說：「良好規劃、客戶支持、對客戶機電系統的深入了解，以及傑出的團隊合作，都是今次成功的關鍵。」

伍先生補充說：「這個項目不但鞏固了我們與醫管局的緊密伙關係，更提供絕佳機會，讓我們培訓年輕同事，實在一舉兩得。」

In 2017, the HA Building became the first government building to earn an Excellent grade for Energy Use under the BEAM Plus Existing Buildings (V2.0) Selective Scheme, a milestone in EMSTF's continued efforts to help the HA Building save energy.

Engineer of the Health Sector Division, Mr Vincent Chiu Wai-leuk, who led the team that helped the HA Building obtain the certification, noted that the biggest challenge was to convince HA non-technical staff of the sustainability benefits of participating in the Scheme.

"As the building has been in service for 21 years, it was initially difficult too to identify the assets for replacement in order to maximise energy saving," he added.

After meticulous planning, work began in 2015. This included replacing chillers and lighting systems, installing variable speed drives and sensors on E&M systems, and meeting extensive reporting and documentation requirements. The hard work paid off as the HA Building's electricity consumption dropped by 18% in 2016 compared to 2012. The HA Building attained an extremely high score of 90% in the BEAM Plus assessment to earn the Excellent grade.

Mr Ng Yu-yin, a works supervisor I, was a key member of the project team striving to achieve HA Building certification. Having stationed at the HA Building since it opened in 1997, Mr Ng has superb knowledge of the Building's E&M systems and decades of experience. He worked closely with the administration unit and technical staff of the Building to facilitate day-to-day communication and oversee replacement works and energy-saving measurements.

Both Mr Chiu and Mr Ng appreciated the strong support from the HA Building's management, as the exercise would not have been successful without the understanding and co-operation from the client's staff. "Good planning, support from client, in-depth knowledge of the client's E&M systems and excellent teamwork were the key to success," Mr Chiu said.

"The project reinforced our strong partnership with HA and gave us an excellent opportunity to train up our younger colleagues," Mr Ng added.

# 企業管理 Corporate Stewardship

機電工程營運基金已於2017/18年度完成首個五年策略計劃。憑藉在「提供優質服務」及「建立員工才能與關懷文化」等各項策略下取得的成果，我們正朝着正確方向，邁向落實「透過與客戶的伙伴關係，創造公眾價值利惠市民」的企業目標。為保持這良好勢頭，營運基金在首個策略計劃所奠定的穩固基礎上，制訂了第二個五年策略計劃，以數碼化和創新及科技(創科)為主題，往「機電2.0服務新里程」的方向邁進。營運基金已準備就緒，按照第二個五年策略計劃所訂明的三大策略、五個策略目標及八個策略行動推行工作。

The year 2017/18 was the closing year of EMSTF's first five-year strategic plan. With accomplishments made under various strategies such as "delivering excellent service" and "building capacity and caring culture", we are on the right track to achieving our corporate goal of "creating public value for community betterment through partnership with our clients". Continuing with the momentum and building on the solid foundation laid down by the first strategic plan, EMSTF has formulated its second five-year strategic plan, with the main theme being digitisation as well as innovation and technology (I&T) to move towards E&M 2.0 — a new era of E&M services. The EMSTF is fully geared up for action in accordance with the three strategies, five strategic goals and eight strategic tasks stated in the second five-year strategic plan.



我們在制訂營運基金第二個五年策略計劃的過程中推出專門網站，鼓勵客戶及其他持份者積極參與討論。

In formulating EMSTF's second five-year strategic plan, a special website was launched to engage clients and other stakeholders in active discussion.

我們在2018/19年度落實第二個五年策略計劃前，現先於下文載述營運基金在2017/18年度的工作重點，以及年內用以監察營運基金表現的關鍵績效指標。

Before embarking on the second five-year strategic plan in 2018/19, EMSTF has set out as follows the highlights of its work in 2017/18 and a set of Key Performance Indicators (KPI) for monitoring the performance of EMSTF during the year.

## 提供優質服務

分階段推出的「顧客為本電子平台」，是2017/18年度在提升客戶服務和滿意度方面的里程碑，旨在向客戶提供有關工作進度的實時資訊。「顧客為本電子平台—工作管理」軟件也於2017年11月起在44個客戶場地/營運設施進行實地測試，我們隨後更為前線員工及各策略業務單位的用戶代表舉行多場簡報會，務求讓員工參與其中和收集意見，以改善平台運作。

## Deliver Excellent Service

Rolled out by phases with the aim to provide clients with real-time information on job progress, our Customer Centric e-Platform (CCeP) was a milestone in enhancing customer service and satisfaction in 2017/18. Field-testing of the CCeP-Job Management (CCeP-JM) software also began at 44 client venues/operations in November 2017, followed by numerous briefing sessions for our frontline staff and user representatives from the Strategic Business Units (SBUs), both to engage staff and solicit feedback for fine-tuning of the platform.

截至2018年3月底，在合共290個客戶場地/營運設施當中，達82%已推出「顧客為本電子平台」，客戶對平台的反應正面。客戶服務中心經全面革新後，亦已於2018年6月試用，大大提高了處理客戶查詢的能力。「顧客為本電子平台」將配合客戶服務中心，為客戶提供全新體驗，讓其獲取有關工作進度的實時更新，以便更有效監察工程項目，並且更加安心。

As at end March 2018, the rate of CCeP roll-out reached 82% out of a total of 290 client venues/operations, with positive feedback received. Complementing the fully revamped Customer Service Centre which was soft-launched in June 2018 with greatly improved capabilities to handle customer enquiries, the CCeP will offer clients a whole new experience in obtaining real-time updates on job progress for better works monitoring and extra peace of mind.

## 關鍵績效指標成績及表現承諾

## KPI Results and Performance Pledges

項目 Item	關鍵績效指標(單位) <sup>1</sup> Key Performance Indicators (Unit) <sup>1</sup>	目標 Target	成績 Results
1.	收入回報率(%) <sup>2</sup> Return on Revenue (%) <sup>2</sup>	4.0	9.6
2.	新業務及業務增長(百萬元) New Business and Growth of Business (\$M)	474.9	526.6
3.	客戶滿意指數[以8分為滿分計] Customer Satisfaction Index (CSI) [on an 8-point scale]	6.3	6.45 <sup>3</sup>
4.	年內續訂的服務水平協議(%) Percentage of Service Level Agreement (SLA) Renewed during the Year (%)	95	99.84
5.	每月電話調查客戶滿意度(%) Percentage of Satisfaction Level Based on Monthly Customer Feedback (%)	98	99.95
6.	營運基金員工的訓練日數(每名員工接受訓練的日數) Training Days of EMSTF Staff (no. of training days per staff)	4.5	5.27
7.	員工滿意度指數[以10分為滿分計] Staff Satisfaction Rating [on a 10-point scale]	6.8	6.8 <sup>4</sup>
8.	員工建議計劃的建議書(份) Awards for Staff Suggestion Scheme Proposal (no.)	75	107
9.	達到服務水平協議所訂的表現目標(%) Percentage of SLA Service Performance Target Compliance (%)	99	99.99
10.	每千名營運基金員工須呈報的累積意外宗數(每千人計算) Accumulated Reportable Accident per 1 000 EMSTF Staff (no. per 1 000 staff)	5.0 <sup>5</sup>	2.51
11.	違反法例次數(宗) Statutory Non-compliance (no.)	0	0
12.	耗電量(千瓦小時)[機電署總部大樓、企業數據中心及各策略業務單位場地] Electricity Consumption (kWh) [EMSD Headquarters Building, Corporate Data Centre and all SBUs Venues]	10 838 767 <sup>6</sup>	9 817 693 <sup>7</sup>

<sup>1</sup> 除第7、第8及第12項適用於機電工程署整個部門外，表內各項目只適用於機電工程營運基金。

<sup>2</sup> 機電工程營運基金的收入回報率乃按照稅前狀況計算。

<sup>3</sup> 數字為2016年的調查結果。下一次調查將於2018年進行，客戶滿意指數目標為6.6。

<sup>4</sup> 數字為2016年的調查結果。下一次調查將於2019年進行，平均績效指數目標為7.0。

<sup>5</sup> 此為警戒水平，並非目標。

<sup>6</sup> 2013/14財政年度的基線耗電量(扣除客戶使用量)。

<sup>7</sup> 2017/18財政年度經調整後的耗電量(扣除客戶使用量)。

<sup>1</sup> All items apply to EMSTF only, except items 7, 8 and 12 which apply to EMSD as a whole.

<sup>2</sup> EMSTF's return on revenue (ROR) was calculated on before-tax position.

<sup>3</sup> Result from the survey conducted in 2016. The next survey will be conducted in 2018 with target CSI at 6.6.

<sup>4</sup> Result from the survey conducted in 2016. The next survey will be conducted in 2019 with target mean performance rating at 7.0.

<sup>5</sup> This is an alert level, not a target.

<sup>6</sup> Baseline electricity consumption (exclude client usage) as of FY2013/14.

<sup>7</sup> Normalised electricity consumption (exclude client usage) as of FY2017/18.



機電署總部大樓四樓的客戶服務中心，經全面翻新後已全面投入服務，能更迅速有效地處理客戶查詢，加強與客戶聯繫。

The newly revamped Customer Service Centre on 4/F of EMSD Headquarters is now fully operational. Client enquiries are now handled more promptly and effectively, further strengthening our client relations.



## 企業管理 Corporate Stewardship

品質及職安健乃營運基金卓越服務的基石。我們的年度活動「品質及安全日」已於2017年11月在香港科學館順利舉行，藉以表揚員工在推動部門的持續改善文化方面作出的貢獻。這項活動更提供機會，讓員工了解「最佳改善個案獎」、「最佳職安健改善個案獎」及「最佳環保個案獎」各得獎團隊的最佳做法。

早於2017年5月，營運基金舉辦了到訪日本的四天海外考察團，目的是學習該國在品質和安全管理方面的最佳做法。考察團共有13名成員，當中包括上述獎項的得獎者，他們造訪知名的製造公司和科技機構，以深入了解如何利用品質管理及新科技創造競爭優勢，並學習日本在風險、危機和資產管理方面的最佳做法。

Quality as well as occupational health and safety (OHS) are the cornerstones of EMSTF's excellent service. Our annual Quality and Safety Day was successfully held at the Hong Kong Science Museum in November 2017 to recognise staff's contribution in promoting the culture of continuous improvement for the Department. The event also provided an opportunity for staff to learn about the best practices from the winning teams of the Best Improvement Project Awards, Best OHS Enhancement Project Awards and Best Green Project Awards.

Earlier in May 2017, a four-day overseas study mission to Japan was organised to learn about the country's best practices in quality and safety management, with a total of 13 members comprising winners of the above-mentioned awards. The mission visited renowned manufacturing companies and technology organisations to gain insights on how to utilise quality management and new technologies in creating competitive advantage, as well as to learn from Japan's best practices in risk, crisis and asset management.



「最佳改善個案獎」和「最佳職安健改善個案獎」得獎團隊的同事參加了在2017年5月舉行的日本考察團，造訪當地著名企業，探究其創新、品質管理及知識管理方面的發展，並於回港後與同事分享考察成果。

Colleagues from the winning teams of the Best Improvement Project Awards and Best OHS Enhancement Project Awards visited renowned companies during their Japan Study Trip in May 2017 for a closer look at their development in innovation, quality and knowledge management, followed by a sharing session with fellow colleagues upon return.

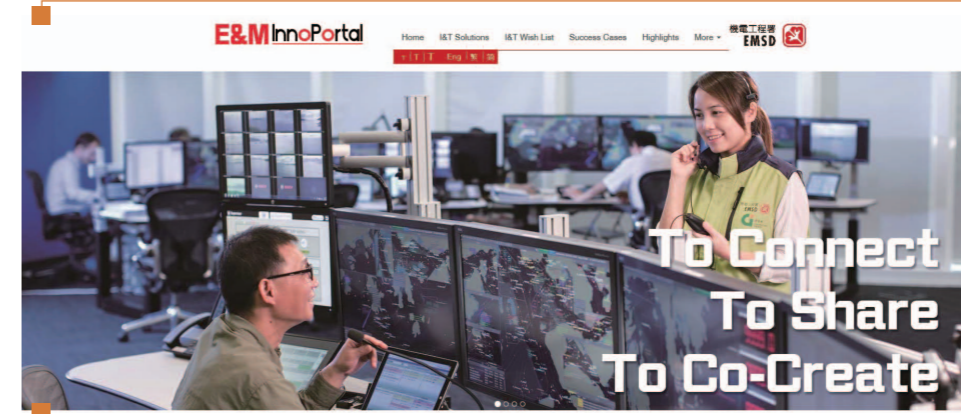
我們與香港科技園公司於2017年12月合辦首個「創新科技日」，讓初創企業展示最新的研發成果，以推動創科發展。

Our first Innovative Technology Day, co-organised with the Hong Kong Science and Technology Parks Corporation in December 2017 showcased latest research projects from start-ups to foster I&T development.



營運基金的另一里程碑是於2018年2月成立創新辦公室。這支企業支援團隊專責推動機電署的創科活動，並支援各策略業務單位、初創企業及大學於機電署總部大樓試行其創科項目。營運基金本着推動創科的精神，於2017年12月與香港科技園公司首次合辦「創新科技日」，並計劃於2018年6月再次舉辦該活動，以展示初創企業和學術界的創科項目，使有關項目能與有興趣的政府部門及公營機構進行配對。

Another milestone was the setting up of EMSTF's Inno-Office in February 2018, a dedicated corporate support team to drive the Department's I&T initiatives. It also supports SBUs, start-ups and universities in the trial implementation of their I&T projects at the EMSD Headquarters Building. It was in this spirit that EMSTF held its first Innovative Technology Day with the Hong Kong Science and Technology Parks Corporation in December 2017, with a second one planned for June 2018, to showcase I&T projects from start-ups and the academia for potential matching with interested government departments and public bodies.



機電署的「網上創新科技協作平台」E&M InnoPortal於2018年2月推出，為大學及初創企業的創科方案提供平台，促成它們與有相應需要的政府部門和公營機構進行配對。

EMSD's E&M InnoPortal, launched in February 2018, is an on-line I&T collaborative platform to match start-ups and universities offering the suitable I&T solutions with government departments and public bodies having corresponding needs.

創新辦公室成立後，迅即於2018年2月試推「網上創新科技協作平台」（E&M InnoPortal）。這個網上平台旨在促使初創企業及大學把其創科項目與公營機構的潛在用戶或合作伙伴進行配對。此外，我們將會以總部大樓作為多個創科項目（例如智能燈柱及多層停車場系統）的試驗場地，並為初創企業及大學選定的創科項目進行測試和數據驗證。我們亦正成立創新小隊及創新沙盒，兩者均按營運基金第二個策略計劃，為機電服務數碼化和推動創科發展鋪路。

The E&M InnoPortal, an online platform to facilitate the matching of I&T projects by start-ups and universities with potential users or collaboration partners from the public sector, was promptly soft-launched by the Inno-Office in February 2018. Besides, our headquarters building will be made as a testing ground for several I&T projects, such as smart lampposts and a multi-deck carpark system, as well as for the trial and data validation of selected I&T projects by start-ups and universities. InnoTeams and InnoSandboxes are also being set up — both paving the way for the digitisation of our E&M services and the promotion of I&T development in accordance with our second strategic plan.

我們在2017年公務員優質服務獎勵計劃中奪得兩個獎項，可謂營運基金於年內提供優質服務的最佳證明。有關獎項包括以「共建精英搖籃」項目獲得「部門合作獎」銀獎，表揚我們為建設新的消防及救護學院所作的傑出貢獻，以及以「市民為心，先人為敬」項目奪得「隊伍獎（專門服務）」特別嘉許（創新意念），表揚我們的優秀火葬工程服務。

Perhaps the best testimony to EMSTF's service excellence during the year was our winning of two awards in the Civil Service Outstanding Service Award Scheme 2017, namely Silver Prize of the Partnership Award for the "Team Up for the Cradle of Elites" project in recognition of our outstanding work in the new Fire and Ambulance Services Academy, and Special Citation (Innovation) of the Team Award (Specialised Service) for the "Caring for the Public, Respecting the Departed" initiative to recognise our excellent cremation engineering services.

### 2017年公務員事務局局長嘉許狀頒發典禮 The Secretary for the Civil Service's Commendation Award Presentation Ceremony 2017



機電署四位同事榮獲2017年公務員事務局局長嘉許狀計劃的嘉許獎，並於頒獎禮上與行政長官林鄭月娥女士（右四）、公務員事務局局長羅智光先生（右五）及機電署高層管理人員合照。

Four EMSD colleagues received commendation awards at the Secretary for the Civil Service's Commendation Award Presentation Ceremony 2017. Picture shows the awardees with the Chief Executive, Mrs Carrie Lam (4th right), the Secretary for the Civil Service, Mr Joshua Law (5th right), and the senior management of EMSD.

## 企業管理 Corporate Stewardship

2018年是機電署成立70周年，我們將於今年稍後推出一系列慶祝活動，邀請營運基金客戶及其他持份者參與。新一輪的客戶意見調查也將於2018年稍後時間展開，以客戶滿意指數最高8分計，我們的目標是取得6.6分。

### 成為業界典範

機電署作為香港機電業推廣工作小組(工作小組)的召集人，在2017/18年度繼續致力為機電業供應更多優秀人才。有關工作包括參加「機電業博覽2018」，為業界招募年青人入行，以及推行「為業界培訓人才」項目，我們更承諾透過技術員訓練計劃，在2016至2020年間每年培訓100名新的見習技術員。我們亦已在適當情況下，藉着這些活動和項目，向業界及公眾推廣把創科(例如「建築信息模擬—資產管理」技術)應用於機電工作。

The year 2018 marks the 70th anniversary of EMSD and a series of celebration activities will be held later in the year to engage EMSTF clients and other stakeholders. The next Customer Opinion Survey will also commence later in 2018, with a target Customer Satisfaction Index of 6.6 on a scale of 8.

### Become a Trade Model

As the convener of the Hong Kong Electrical and Mechanical Trade Promotion Working Group (Working Group), EMSD continued its ongoing efforts in enhancing the supply of quality talents for the E&M trade in 2017/18. Such efforts included participation in the E&M Trades Expo 2018 to recruit young people to the trade, as well as our "Train for the Trade" initiative for which we pledged to train 100 new technician trainees per year from 2016 to 2020 via our Technician Training Scheme. Where appropriate, the application of I&T (such as Building Information Modelling-Asset Management technology) in E&M works was promoted to the trade and the public too through these events and initiatives.



我們於2017年9月舉辦首次「機電·啟航」迎新典禮，歡迎機電署及其他機電機構500多位年輕的見習技術員，並邀得政務司司長張建宗先生擔任主禮嘉賓。資深工程人員更於台上與見習技術員分享經驗。

The Chief Secretary for Administration, Mr Matthew Cheung, was invited to officiate at our first "E&M GO!" Orientation Ceremony held in September 2017 to welcome over 500 young technician trainees from EMSD and other E&M organisations. Experienced engineering personnel also shared their insights with trainees on stage.



2017年9月，工作小組主辦一個名為「機電·啟航」迎新典禮的全新活動，邀得政務司司長擔任主禮嘉賓，機電業界人士及商界領袖也踴躍參與。迎新典禮邀請了來自工作小組的成員機構及機電署「合作培訓技術員先導計劃」的各個伙伴政府部門、公用事業和企業的數百名新見習技術員及其家屬參加，祝願新學員在機電業揚帆啟航，前途似錦。

The "E&M GO! 2017" Orientation Ceremony, a new event hosted by the Working Group, was held in September 2017, with the Chief Secretary for Administration as the officiating guest. Well attended by professional and business leaders of the E&M trade, the ceremony welcomed hundreds of new technician trainees from EMSD and our partnering departments, utilities and companies under our Pilot Cooperative Apprentice Training Scheme as well as their families. These new trainees were wished a bright future ahead.



部門的「品質及安全日2017」旨在表揚同事在提升服務質素及安全管理方面的貢獻。

Our Quality and Safety Day 2017 was held to recognise the contribution of our colleagues in enhancing the quality of service and safety management.



為協助承辦商維持高水平的工作表現，我們每年均舉辦承辦商研討會，讓機電承辦商及其工程人員就合約和誠信管理、工地安全、工程人員行為、壓力管理及其他職安健議題等，分享經驗和最佳做法，而年內的兩場承辦商研討會已於2017年4月和10月舉行。營運基金除了參加「建造業安全周嘉年華2017」以推廣工作安全外，亦參與由發展局及建造業議會合辦的「公德地盤嘉許計劃」。

To help contractors upkeep high standards in their work, two sessions of our annual Contractors Forum were held in April and October 2017 for E&M contractors and their engineers and workers to share their experiences and best practices in such areas as contract and integrity management, site safety, workers' behaviour, stress management and other OHS issues. Apart from participating in the Construction Safety Week Carnival 2017 to promote safety at work, EMSTF also took part in the Considerate Contractors Site Award Scheme organised by the Development Bureau and the Construction Industry Council.

對內而言，我們於2017年10月舉辦「健康及安全周」，邀請嘉賓講者主講職安健講座，並安排員工訪問外間機構，令同事獲益良多。2017/18年度為機電工程署全體員工舉辦的伸展運動比賽，亦廣受同事歡迎。

Internally, staff were benefitted from OHS talks by guest speakers and visits to external organisations during the Health and Safety Week in October 2017. The stretching exercise competition organised for all EMSD staff in 2017/18 was also well received by colleagues.

### 建立員工才能與關懷文化

繼機電署2016年員工滿意度調查的整體員工滿意度指數創下6.8分(以10分為滿分計)的歷史新高後，我們正籌備於2019年年初進行下一次調查，目標是整體員工滿意度指數取得7.0分或以上(以平均表現得分計)。這項調查乃重要渠道，讓高層管理人員了解員工對營運基金工作環境和文化的意見，並評估自2016年調查後實施的各項改善措施的成效。

### Build Capacity and Caring Culture

Further to the EMSD Staff Satisfaction Survey 2016 which achieved a record high score of 6.8 out of 10 in overall staff satisfaction rating, we are preparing for the next Survey which is scheduled for early 2019, with the target of achieving a mean performance score of 7.0 or above in overall satisfaction. The Survey is an important exercise for the senior management to solicit staff feedback on EMSTF's work environment and culture, as well as to measure the effectiveness of the various improvement measures implemented since the 2016 Survey.

## 企業管理 Corporate Stewardship

團隊建立工作坊有助提升員工在團隊合作、互動和溝通方面的技巧。

Team building workshops are instrumental in helping our staff improve their skills in teamwork, interaction and communication.

同事參與「身心靈綠洲」工作坊，有助加深對身心和精神健康的認識，以及保持工作與生活平衡。

Our staff participated in Oasis of Body-mind-spirit workshops which helped them raise their awareness of physical, psychological and mental health and maintain work-life balance.



建立員工才能對他們的全面發展非常重要。在2017/18年度，我們舉辦了2 700多個員工培訓及發展活動，提供超過23 000日的各類培訓項目，涵蓋機電業新科技以至管理發展和軟技術等多個範疇。此外，值得一提的是，機電署兩位見習技術員代表香港參加2017阿布扎比世界技能大賽，其中一位更在「電氣安裝」項目中獲得優異獎，屬世界級比賽中的重大成就。機電署參賽隊伍的傑出表現，有助公眾更深入認識香港的高水平職業培訓。

Capacity building is important to all-rounded staff development. During 2017/18, over 2 700 staff training and development activities were held, providing over 23 000 days of wide-ranging training programmes from new technologies in the E&M trade to management development and soft skills. It is also worth noting that two EMSD technician trainees represented Hong Kong to join the WorldSkills Abu Dhabi 2017, and one of them won a Medallion for Excellence in Electrical Installations, a major achievement in a world-class competition. The outstanding performance of the EMSD team has helped raise public awareness of the high standards of vocational training in Hong Kong.

我們繼續委託香港家庭福利會為機電署所有員工(包括借調至其他部門的人員)提供次數不限的輔導服務，該服務其後改由香港基督教服務處提供。自2017年12月起，我們為員工新增了專用電話熱線。年內，上述機構為我們的員工舉辦了六場簡介會，推廣工作與生活平衡，以及身體及精神健康。如有需要，輔導員還會為特定員工羣組安排羣組危機介入輔導環節。

We continued to commission the Hong Kong Family Welfare Society and subsequently the Hong Kong Christian Service to provide counselling services of unlimited consultations to all EMSD staff, including those seconded to other departments. A new designated telephone hotline was added from December 2017 onwards. Six briefings for staff were held during the year to promote work-life balance as well as physical and mental health. Counsellors were also available to arrange group crisis intervention sessions for specific staff groups where necessary.



在榮休聯歡會上，高層管理人員向退休同事頒發感謝狀，退休同事也樂意地分享他們多年來的工作經驗。

Retiring colleagues were presented with Certificates of Appreciation by the senior management at a farewell party. They happily shared their working experience with fellow colleagues.



表揚傑出員工是我們關懷文化的重要部分。對於機電署四名職員在2017年獲頒公務員事務局局長嘉許狀，使他們多年來持續的卓越表現得到認同，我們十分高興。

Staff recognition is a key part of our caring culture. We are delighted that four EMSD staff members received commendations from the Secretary for the Civil Service's Commendation Awards in 2017 in recognition of their sustained excellent performance over the years.

至於內部方面，長期服務機電署的員工會獲頒長期優良服務獎狀，而工作表現卓越的同事則會獲頒署長嘉許狀。署長及高層管理人員會出席頒獎禮，親自向員工頒發獎狀和嘉許狀。此外，我們更不時為即將退休的同事舉行榮休聯歡會，由署長及高層管理人員主持和頒發感謝狀，讓這些同事在歡樂氣氛中與同儕分享經驗，並接受後者的祝福。

Internally, staff members with long service are awarded the Long and Meritorious Service Certificates while colleagues with excellent performance at work are recognised by the Director's Commendation. The certificates and commendations are delivered at a presentation ceremony attended by the Director and the senior management. We also hold farewell parties for retiring colleagues from time to time. Hosted by the Director and the senior management, these farewell parties are joyous occasions where retiring colleagues share their experience with fellows and receive wishes from the latter. Each retiree is presented with a Certificate of Appreciation.



**用心服務 同心共創**  
Caring Serving Co-creating

機電署70周年的標誌和標語是由全體員工從多個方案中挑選出來的，有關的標誌和標語選舉活動於2017年第三和第四季舉行。

The EMSD 70th Anniversary logo and slogan were selected by all colleagues from various proposals in the logo and slogan selection exercise conducted in the third and fourth quarters in 2017.

部門為慶祝成立70周年，按專業設計多個標誌和標語，現誠邀各同事挑選出你最喜愛的70周年標誌和標語。投票結果將會作為部門採納合適的70周年標誌和標語的考慮因素。

選舉只限機電署員工參加。截止日期：10月9日

詳情請向辦事處查詢。查詢電話：2558 0387。



繼上年度邀請員工參與新制服的設計及試穿活動後，部門工作服工作小組已收集和 analysed 員工意見，並完成隨後的諮詢及採購工作，新制服將於2018年年底推出。

Further to engaging staff on the design and trial wearing of the new uniforms in the previous year, the Department's Uniform Working Group collected and analysed staff feedback and completed the subsequent consultation and procurement. The new uniforms will be launched by end 2018.

## 企業管理 Corporate Stewardship



機電署70周年紀念，高層管理人員齊切生日蛋糕慶祝。

The senior management cut a birthday cake to celebrate EMSD's 70th anniversary.

年內，我們着手為2018年機電署成立70周年籌備慶祝活動，藉此機會鼓勵全體員工參與其中。我們透過2017年9月舉辦的機電署70周年標誌及標語選舉活動，邀請員工就各擬議選項發表意見和投票。機電署成立70周年的一連串慶祝活動獲員工積極參與，更加強了他們對部門的歸屬感。

During the year, we leveraged the opportunity of preparing for the celebration activities of EMSD's 70th anniversary in 2018 to engage all staff via an EMSD 70th anniversary logo and slogan selection exercise in September 2017, in which staff members were invited to comment on and vote for the proposed options. The series of celebration activities for the 70th anniversary of EMSD has been met with active staff participation and has fostered their sense of belonging to the Department.

### 優化知識管理

營運基金在知識管理方面的目標是培養學習文化。年內，我們繼續推廣「知識地圖」、「睿智小組」、「知識群體網站」、「滙智論壇」和「智庫」中的「事故分享」。這些工具全都十分實用，有助同事掌握和分享知識，支援他們不同領域的工作。

### Enhance Knowledge Management

The goal of knowledge management in EMSTF is to foster a learning culture. During the year, our work in promoting Knowledge Maps, Interest Groups, Knowledge Communities Portal, Forums, and Incident Sharing under Knowledge Hubs has continued. These are all useful tools to help colleagues grasp and share knowledge to support their work in diverse areas.



機電署的內聯網網站EMSDHome已轉移至SharePoint平台，提供全新的版面設計、網格布局、動態橫額和各種易用的功能，讓同事更方便掌握部門資訊。

Our intranet portal EMSDHome has been migrated to the SharePoint platform with new layout, grid structure, dynamic banner and more user-friendly features facilitating staff to grasp handy departmental information.

我們在2017年7月推出以SharePoint為本的線上平台，讓員工能共同撰寫《政策手冊》等內部企業刊物。刊物文檔使用「維基」模式，方便編輯團隊共同編輯內容和有效地控制版本以供審批，令撰寫和更新文檔更便捷高效。

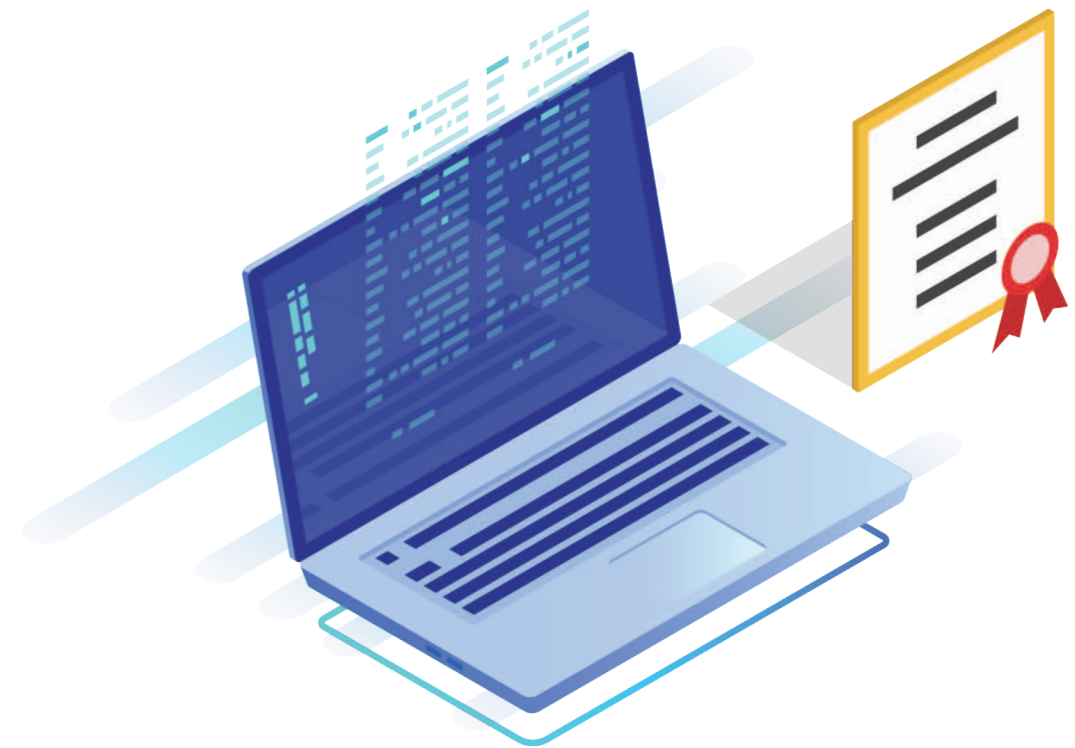
We launched new SharePoint-based online platforms in July 2017, enabling staff to co-author internal corporate publications such as Policy Manual. With the documents in "wiki-version", editorial teams can co-edit the contents with effective versioning control for approval, boosting the convenience and efficiency of document authorship and updating.

年內，營運基金所有部別的內聯網網站已轉移至SharePoint平台，而部門內聯網網站EMSDHome亦在2018年3月在這個新平台上推出。我們發揮了SharePoint的最大效益，建立了多個新主題的內聯網子網站，例如就不同議題（包括新策略計劃、機電署70周年及營運基金架構檢討），設立意見箱徵求員工看法，使溝通更快捷方便。

During the year, all EMSTF divisional intranet homepages were migrated to the SharePoint platform, while the intranet portal EMSDHome for use by all staff was also launched at the new platform in March 2018. Making best use of SharePoint features, we created new thematic intranet sub-sites hosting suggestion boxes to solicit staff views on diverse topics, including the new strategic plan, EMSD 70th anniversary and EMSTF organisation review, making staff communication faster and easier.

為進一步提升使用電腦設施的資訊安全水平，我們協助營運基金各個部別的系统軟件開始轉用微軟視窗10，亦同時把部門大量的網絡設備和網絡管理系統，也進行了升級工程。

To further strengthen information security in relation to the use of computing facilities, we helped all EMSTF Divisions migrate their system software to Microsoft Windows 10 and upgraded a large number of departmental network devices as well as the Department's network management system.



## 企業管理 Corporate Stewardship

在資訊科技保安方面的工作，我們取得豐碩的進展，並完全符合保安局和政府資訊科技總監辦公室為加強數據保安而訂定的嚴格要求。營運基金各個部別通力合作，在2017年7月1日前加密了大部分系統的「限閱靜態數據」，並在2018年1月1日前加密了所有「儲存在流動裝置和可移除媒體上的限閱數據」，及加強銷毀保密資料的能力。此外，我們會迅速落實其他系統的升級計劃。

我們出版了《安全使用USB儲存裝置使用者手冊》，提醒所有員工應為USB儲存裝置加密以確保安全。我們在SharePoint平台上建立了中央登錄冊，以更有效地控制和監察USB儲存裝置的使用情況。我們也按照政府資訊科技總監辦公室的最新指引，檢視和更新了部門一系列資訊科技保安文件，並已向全體員工發布有關文件。

Much progress was made in IT security towards full compliance with tightened requirements by the Security Bureau and the Office of the Government Chief Information Officer (OGCIO). Working with all Divisions, we strengthened the protection of restricted data at rest by 1 July 2017, encrypted all restricted data stored on mobile devices and removable media by 1 January 2018 and enhanced our capability for destruction of classified information. Upgrading plans to ensure compliance with the latest security requirements for a handful of systems were also swift put on-stream for implementation.

A "User Instruction for Secure Use of USB Storage Devices" was published to alert all staff to adopt encryption in USB storage devices to ensure best-in-class information security. A central registry was created and maintained for effective control and monitoring of the use of USB storage devices. A whole range of departmental IT security documents was fully reviewed and updated according to the latest OGCIO guidelines and promulgated to all staff.



機電青少年大使參觀「機電·夢飛翔」展覽館，並與環境局局長黃錦星先生互相交流。展覽館以互動展品和活動介紹機電安全、能源效益、智慧城市發展，以及機電署各種服務。

E&M young ambassadors visit the EMSD Gallery and meet the Secretary for the Environment, Mr Wong Kam-sing. The Gallery features interactive exhibits and activities on E&M safety, energy efficiency, smart city development and EMSD's services.



### 持續發展綠色作業

啟德發展區區域供冷系統的冷凍水已於2017年5月接駁到機電署總部大樓的空調系統，標誌着我們「綠色作業」策略的另一里程碑。機電署總部大樓隨之成為香港首幢與區域供冷系統連接的既有建築物，能源效益表現也因而大幅提升。

年內，我們繼續施行各項計劃，確保營運基金的運作，均以環保及可持續發展的方式進行，並節省水、電和紙張等天然資源。我們也為營運基金不同職系員工舉行多場簡報會，介紹有效的採購、盤點和存貨控制做法，盡量減少因存貨積壓和流轉緩慢而造成的浪費。與此同時，物料採購及管理工作小組已發揮顯著作用，不但幫助各策略業務單位加快存貨流轉，而且與各策略業務單位緊密協調有關大批採購配件的安排，大幅節省成本。

在2017/18年度，我們首次按照「全球報告倡議組織標準」擬備機電署的《社會及環保報告》，使我們的可持續發展報告更符合國際做法。此外，我們亦為負責的同事舉辦簡報會和培訓班，讓他們熟習「全球報告倡議組織標準」。

位於機電署總部大樓教育徑的「機電·夢飛翔」展覽館經全面革新後，已於年內重新開放，供市民在辦公時間內免費參觀。展覽館展示機電署的各項服務、能源效益事宜，以及香港機電業的資料，內容豐富，信息易明，深受學生和訪客歡迎。

### Sustain Green Operation

Our "green operation" strategy reached another milestone in May 2017 when the air-conditioning system in the EMSD Headquarters Building was connected to the chilled water supply from the District Cooling System (DCS) at Kai Tak Development. This made the EMSD Headquarters Building the first existing building in Hong Kong to be connected to the DCS, greatly boosting our energy efficiency performance.

Various programmes to operate all EMSTF activities in a green and sustainable manner and to save natural resources like water, electricity and paper have continued during the year. We also organised various briefing sessions for EMSTF officers of different grades on effective procurement, stocktaking and stock control practices to minimise wastage from overstocking and slow-moving stock. At the same time, the Working Group on Stores and Procurement Management has proved to be a useful forum to help SBUs reduce slow-moving stock. Close co-ordination with SBUs on arrangements for spare parts bulk purchases has also led to substantial cost savings.

The year 2017/18 was our first year to prepare EMSD's annual Social and Environmental Report in accordance with the Global Reporting Initiative (GRI) Standards, so as to better align our sustainability reporting with international practices. Briefing and training sessions were held for the responsible colleagues to familiarise themselves with the GRI Standards.

During the year, the fully revamped EMSD Gallery in the Education Path at the EMSD Headquarters Building was opened to the public for free access during opening hours. It continues to be popular with students and visitors as it contains rich and user-friendly information about EMSD's services, energy efficiency matters and the E&M industry in Hong Kong.