

# 共創智慧監獄

## Co-creating a Smart Prison with Innovative Technology

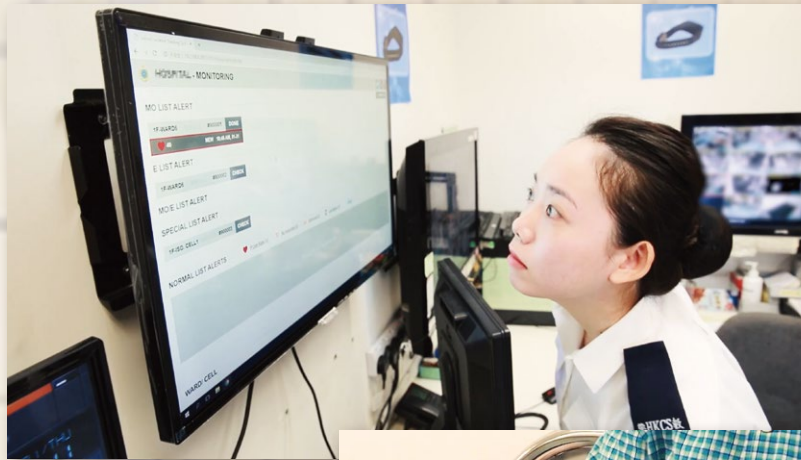
**為**配合懲教署積極發展智慧監獄系統的計劃，機電署主動為客戶部門尋找和配對創新科技解決方案，自去年年中起開展了三個概念性的試驗計劃，以提升監獄的管理效率及保安水平，當中包括應用多項創新科技(例如人工智能、物聯網、藍牙低功耗技術、機械人等)設計和安裝最先進的系統及器材，以期把香港打造成为更安全的智慧城市。

懲教署對監察系統和保安設備素有嚴格要求，就此，我們因應實際環境，在設計過程中構想多個潛在事故的場景。經過多月的反覆測試及不斷改進產品設計和電腦演算法，囚倉監察系統的發展已初見成效，其中影像分析監察系統主要透過智能閉路電視偵測在囚人士的違規或自殘行為，現已率先於壁屋監獄四個囚倉進行試驗；以及為羅湖懲教所引入智慧手帶以配合物聯網的應用，並安裝維生指標和移動及位置監察系統，協助前線人員監察在囚人士的身體狀況和追蹤其活動位置。

我們除了優化管理硬件之外，亦致力推動工序創新，例如緝毒機械臂系統可取代以人手檢查在囚人士的排泄物是否藏有毒品，該系統現正於荔枝角收押所進行初步測試。

這些新設施的試驗計劃完成後，我們將與懲教署進行成效評估，並會研究把這些創新科技方案推廣至其他懲教院所。

In line with the Correctional Services Department's (CSD) plan to actively develop the smart prison system, the EMSD takes the initiative in sourcing and matching innovative technology solutions for client departments, and commenced three conceptual trial schemes since mid-2018 to enhance the efficiency of prison management and the level of security. These include the design and installation of state-of-the-art systems and equipment through the application of various innovative technologies, such as artificial intelligence, Internet of Things (IoT), bluetooth low-energy consumption technology and robotics, etc., with a view to building Hong Kong into a safer smart city.



維生指標監察系統如偵測到在囚人士心跳率異常，會發出警號通知懲教人員。

The Health Signs Monitoring System will deliver a warning to alert the CSD officers if it detects any abnormalities in the heart rates of persons in custody.



智慧手帶可監察在囚人士的心跳率、血含氧量等維生指標，以及他們所處的位置。

Smart wristbands can monitor such health signs as the heart rates and blood oxygen levels of persons in custody as well as their locations.

The CSD has strict requirements on their monitoring systems and security equipment. In this connection, we have conceived various scenarios of potential incidents in the design process having regard to the actual environment. After several months of repeated testing and continuous improvement to the product design and computer algorithm, we start to see some initial results in the development of the dormitory monitoring system, including the Video Analytic Monitoring System, which mainly detects irregularities or self-harm behaviours of persons in custody through smart closed-circuit televisions and is being tested in four dormitories of Pik Uk Prison; as well as the introduction of smart wristbands at the Lo Wu Correctional Institution (LWCI) to tie in with the application of IoT. The LWCI is also installed with Health Signs Monitoring and Passage Surveillance Systems, which help frontline staff monitor the health conditions of persons in custody and track their locations of movement.

Besides optimising the management hardware, we are also dedicated to promoting process innovation. For example, the Drug-detection Robotic Arm System, which is currently undergoing a preliminary test at the Lai Chi Kok Reception Centre, can replace the manual inspection of drug products in the excreta of persons in custody.

Upon completion of the trial schemes for these new facilities, we will evaluate their effectiveness with the CSD and explore extension of such innovative technology solutions to other correctional institutions.

我們樂意與客戶分享用於提升保安的先進科技，如欲查詢詳情，請致電 2808 3384 與高級工程師簡偉光先生聯絡。

We are happy to share with clients the advanced technologies used to enhance security. For details, please contact Mr. Raymond Kan, Senior Engineer, at 2808 3384.