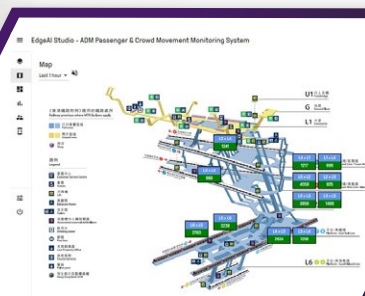臻善圈 **創意大獎** 得獎提案摘要
PROJECT SUMMARIES OF WIT
Innovative Project Award Winners

創研圈
R Team

運用客流監測系統以提高車站的運營效率和乘客安全
Passenger and Crowd Movement Monitoring System for Enhancing Station Operation Efficiency and Passenger Safety

從客流監測系統獲取的數據會實時上傳至雲端平台。
The data obtained by the Passenger and Crowd Movement Monitoring System will be uploaded to the cloud platform in real time.

我們可運用客流監測系統以獲取實時和精準的數據統計報告來進行分析。
With Passenger and Crowd Movement Monitoring System, we can obtain accurate data reports for real time analysis.

提案摘要

金鐘站因東鐵綫過海段開通而成為四綫交匯轉車站，為車站運作管理帶來大挑戰。由於有海量乘客在繁忙時間穿梭車站的不同樓層，站務人員須透過閉路電視或現場觀察以估算擠逼程度及乘客流量，既不準確，亦需要大量的人力資源和時間。

為提升監測客流的準確性及效率，我們運用了3D人流計算器設計了一個客流監測系統，將收集到的數據上傳至雲端平台。站務人員只要透過訪問雲端平台，便可取得不同樓層之間的實時乘客流量；這有助提升車站的營運效率，亦可藉著更適時有效的人流管理以保障乘客安全。

Project Summary

With the opening of the EAL Cross-Harbour Extension, Admiralty Station (ADM) has become a mega interchange station for four different lines. Station operation management has become increasingly challenging due to massive crowd movements between different floor levels during peak hours. Station operators currently rely on CCTV or on-site observations to estimate crowdedness and passenger flow, which is inaccurate and labor-intensive.

To enhance the accuracy and efficiency of crowd monitoring, a Passenger and Crowd Movement Monitoring System using a 3D people flow sensor has been designed. The obtained data will be uploaded to the cloud platform. Station operators can access the cloud platform to understand the real time passenger flow between different floors to improve the operational efficiency and passenger safety of the station.

臻善圈 **創意大獎** 得獎提案摘要
PROJECT SUMMARIES OF WIT
Innovative Project Award Winners

無限圈
Infinite Circle

於 Mode Selector 加設小工具，防止車長選擇錯誤的行車模式
Install an equipment at Mode Selector in order to prevent wrong driving mode is selected by Train Captain

臻善圈
最具創意提案獎
MOST
INNOVATIVE
PROJECT AWARD
★ ★ ★

當車長選擇關機(Shutdown)、待命(Standby)、半自動(CM)，或自動模式(Auto Mode)時，由於裝置於模式選擇器(Mode Selector)上的磁石與RM顯示器上的磁石異極相吸，所以不會顯示RM模式。

When the train captain chooses to shut down (Shutdown)/, standby (Standby)/, Coded Manual Mode (CM), or / Auto Mode (Auto Mode), since the magnet installed on the Mode Selector and the magnet on the RM display attract each other in opposite poles, RM Mode will not be displayed.

當車長選擇前行(Forward)或反向(Reverse)(即RM模式)時，由於裝置於模式選擇器(Mode Selector)上的磁石與RM顯示器上的磁石同極相拒，所以顯示為RM模式。

When the train captain chooses RM - Forward Mode/ or RM - Reverse Mode, since the magnet installed on the Mode Selector and the magnet on the RM display have the same poles and repel each other, it will be displayed as RM Mode.

提案摘要

- 過往曾經發生不少車長在需要在行車期間選用Coded Manual Mode（CM模式）時，錯誤選用Restricted Manual Mode限速手控模式（RM模式）行車的事件，導致發生未獲授權下使用限速手控模式（Unauthorized RM）行車事件。

- 錯誤選用RM模式，可導致列車駛越危險信號燈（Signal Passed at Danger），撞毀道岔（劏波口）、列車駛離路軌等，嚴重影響列車服務安全，以及引致不必要的延誤和設備損毀。

- 我們運用日常易見的磁石制作小工具──RM顯示器。

- 當列車車長選擇RM模式時，RM顯示器便會顯示為"RM"，讓列車車長察覺到自己選用了RM行車模式，從而大大降低錯誤選用RM模式行車的機會。除提升列車服務安全及品質外，亦提升了車長的專業形象。

- 我們運用思考工具──奔馳法（SCAMPER），透過細小的磁石，發揮出巨大的效用，以創意解決問題及帶來成效。

Project Summary

- In the past, many Train Captain mistakenly selected the Restricted Manual Mode (RM mode) when they needed to use the Coded Manual Mode (CM Mode) while driving, resulting in trains operating in Unauthorized RM mode.

- The consequences of incorrectly selecting the Restricted Manual Mode (RM mode) may cause the train to pass through the danger signal (Signal Passed at Danger), or even run through the point (point run through), resulting in the train leaving the track or other unexpected situations. Hence seriously affecting the safety of train services, leading to unnecessary service delays and equipment damage.

- We took everyday magnets and improved upon them to create a magnet-operated gadget - the RM monitor.

- When the train captain selects the RM Mode, the RM display will display "RM", allowing the train conductor to know that he has selected the RM mode, thus greatly reducing the chance of mistakenly selecting modes. In addition to improving the train service safety and quality, it also enhances the professional image of the train captain.

- We hope to use the Thinking Tool - SCAMPER to exert a huge effect through small magnets, thus embodying the purpose of solving problems creatively.

臻善圈 **創意大獎** 得獎提案摘要
PROJECT SUMMARIES OF WIT
Innovative Project Award Winners

求奇圈
Discovery Circle

於泳池假石山安裝自動噴灑器以減低野鴿聚集的滋擾
Installation of Automatic Sprinkler at Swimming Pool to Reduce Nuisance Caused by Feral Pigeons

提案以低成本、高效益的方法驅趕在泳池假石山聚集的野鴿，既能減少浪費水資源，亦達致可持續性的發展。

The proposal aims to drive away feral pigeons from gathering on the swimming pool's artificial rock mountain in a cost-effective and efficient manner, reducing water wastage and promoting sustainable development.

於假石山安裝抽水泵抽取已過濾的池水並接駁至自動噴灑器，令野鴿群有意識地避開飛來此處歇息及飲用池水。

Installing a water pump at the artificial rock mountain location to extract filtered pool water and connect it to automatic sprayers directs flocks of feral pigeons to consciously avoid the area for resting and drinking pool water.

提案摘要

室外游泳池的假石山頂部經常發現有野鴿群聚集，導致池中積聚不少鴿毛及鴿糞。為確保池水質素，客務處已安排額外人手加密清潔水池，惟野鴿群聚集的數目有增無減，對泳池的衛生狀況構成危機。

構思解決方案時，團員根據鴿子的高警覺性及害怕移動物體的特性，提議在假石山安裝抽水泵並接駁至自動噴灑器。噴灑器於日間噴出已過濾池水，使鴿群不敢靠近及逗留。此方案既可保障游泳池的水質安全，同時亦可大幅節省額外清洗的成本。

Project Summary

The top of artificial rock mountain at the outdoor swimming pool is often plagued by congregation of feral pigeons, causing many pigeon feathers and droppings to fall into the pool. To maintain the water quality, the Customer Service Centre has arranged additional manpower to clean the pool intensively. However, the increasing number of feral pigeon flocks poses a hygiene crisis for the pool.

Considering this, we proposed installing a water pump to extract filtered pool water and connect it to automatic sprayers on the artificial rock mountain top. By activating the sprayer during the daytime, based on the high reactiveness of pigeons and their fear of moving objects, it deters the pigeons from approaching and lingering, ensuring water safety and significantly reducing the cost of additional rock cleaning.

臻善圈 **創意大獎** 得獎提案摘要
PROJECT SUMMARIES OF WIT
Innovative Project Award Winners

WIT HQ

閃電圈
BOLT

以手機遊戲輔助安全關鍵程序的培訓
Gamification Training Tool in Safety Critical Procedure

Progress: 23.5 %
02:23 BUSBAR

先進的遊戲軟件可即時反饋學員的錯誤。
Advanced gaming software provides immediate feedback on any mistakes made by the trainees.
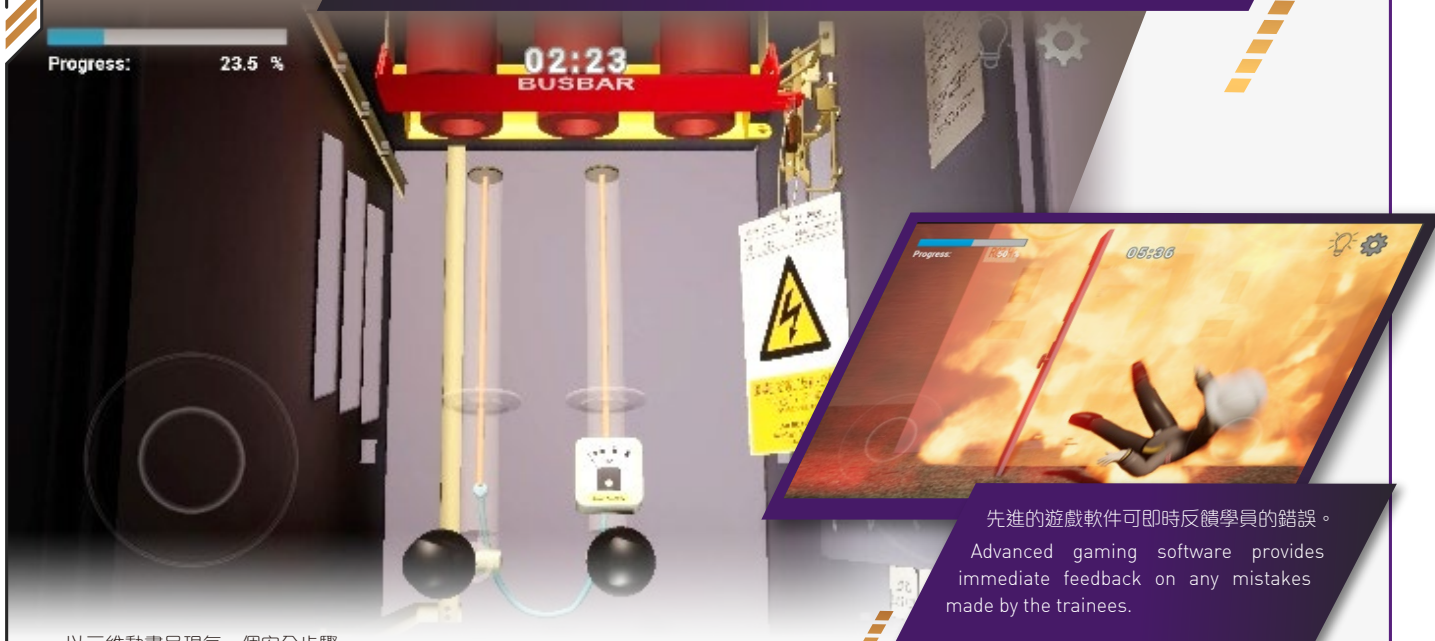
以三維動畫呈現每一個安全步驟。
3D animation visualizes each safety-critical step.

提案摘要

Z世代在接受傳統培訓時往往面臨挑戰，雖然他們在課堂的筆試表現出色，但難以學以致用。這種知識差距令他們構成安全關鍵程序中的重大風險，並危及人員安全。為應對這項挑戰，我們開發了一款專為他們「度身訂做」的手機遊戲（OTD PD Isolation Mini Game）。

此創新方法的賣點，是透過三維動畫將每一個安全步驟「視像化」，來增強他們對課堂的參與度及學習體驗，還有助顯著提升學員保留知識的能力。這款先進的遊戲可即時反饋學員的錯誤（根據內部調查，學員對安全意識的積極影響改善達到70.3%）。此外，它還促進"隨時隨地學習"的新學習文化，讓學員可以隨時存取培訓材料。

Project Summary

Generation Z individuals often struggle with traditional training methods. While they may perform well on paper exams conducted in a classroom setting, they struggle with retaining knowledge when it comes to practical application. This knowledge gap poses a significant risk in safety-critical procedures, endangering personnel. To address this challenge, we have developed a mobile game (OTD PD Isolation Mini Game) tailored to engage with Generation Z trainees.

This innovative approach elevates their learning experience and enhances their motivation to participate. The key feature of 3D animation visualizes each safety-critical step. This significantly improves trainees' knowledge retention. Advanced gaming software provides immediate feedback on any mistakes made by the trainees (according to an internal survey, the positive impact on safety mindset of trainees has improved with a new score of 70.3%). Moreover, it also facilitates the new learning culture of "learning any time anywhere," allowing trainees to access the training material at their convenience.