

新聞稿

Press Release

PR022/24
21 April 2024

MTR Achieves Record-breaking Performance at the International Exhibition of Inventions Geneva Winning 21 awards including Seven Gold Medals Well Recognised for Building a Smart Railway

MTR Corporation is committed to applying innovative technology in building a "Smart Railway" and its research and development efforts were recognised internationally by winning a total of 21 awards, including 7 Gold Medals, 10 Silver Medals, and 4 Bronze Medals at the "49th International Exhibition of Inventions Geneva", setting a new record for the Corporation.

Projects that received Gold Medals include those related to "Smart Operations and Maintenance". Through enhanced monitoring of railway assets including infrastructure, trains and signaling systems, it assists maintenance teams in preventive inspection and maintenance. They also include projects to enhance customer service and incident handling, as well as innovative solutions for waste management and noise monitoring.

Among them, the "AI Sensors Fusion Technique in Train Bogie Maintenance" project utilises Artificial Intelligence (AI) techniques to develop a sophisticated algorithm. By collecting real-time vibration frequency data of train bogies, it effectively predicts anomalies in bogies, thereby strengthening monitoring and maintenance work. Meanwhile, a battery-powered sensor that can be connected to green energy also received a Gold Medal. The sensor can detect the location of the train in depot and signal of the signal light, and issue alerts to the forth coming train, further enhancing the safety and reliability of railway services.

Projects co-developed by MTR, local and mainland innovation and technology organisations also received good accomplishments. The "Revolutionising Emergency Communication" project, a collaboration between MTR and the "Hong Kong Applied Science and Technology Research Institute (ASTRI)" was awarded a Gold Medal. This project employs natural language processing (NLP) systems in radio communication, enabling real-time speech-to-text conversion, thus helping the Operations Control Centre to accurately understand the situation development and follow up during incident monitoring and handling. The "Analytic Pixelization for Structural Health Survey" project jointly developed by MTR and mainland organisation "Shanghai Tunnel Engineering Company Limited" also received a Gold Medal. Additionally, two projects in collaboration with Electrical and Mechanical Services Department and the Hong Kong University of Science and Technology respectively that make use of AI and Big data analytics for more efficient planning in railway operations were awarded with a Silver and Bronze Medal respectively.

-more-

"We are delighted with MTR's achievements at the 49th International Exhibition of Inventions of Geneva. It showcases our commitment and efforts to integrate innovative technology into railway operations and maintenance. These accomplishments have also received international recognition. I sincerely thank the team for their innovative thinking in taking forward various projects and working together to create a world-class quality railway service. The Corporation will accelerate the application of innovative technology, including AI etc., in building a technology-led and data driven "Smart Railway". Moreover, we have all along collaborated with tertiary institutions and research organisations to develop different innovative solutions, and we will continue to promote collaboration between industry, academia, and research institutions with their respective strengths to jointly build an innovation and technology ecosystem and drive the development of smart city in Hong Kong," said Dr Tony Lee, Operations and Innovation Director of MTR Corporation.

This year, MTR's award-winning inventions focus on different areas of building a "Smart Railway", including elevating the operations safety performance of station, train and signalling system, strengthening analysis and monitoring of bridge, tunnel or track condition, enhancing caring and inclusive journeys, and creating a better environment and community etc. MTR has applied various technologies in these projects, including AI, big data, visual analysis, IoT, and LiDAR to further enhance railway safety, maintenance efficiency and customer experience.

The 49th International Exhibition of Inventions Geneva took place from 17 to 21 April in Geneva, Switzerland. It is one of the largest international exhibitions for innovation and inventions with about 40 countries and regions participating and more than a thousand inventions showcased, including over 300 inventions from Hong Kong. The awards were selected by an international panel of experts.

-End-

About MTR Corporation

To Keep Cities Moving, MTR makes encounters happen and rendezvous for a more connected tomorrow. As a recognised world-class operator of sustainable rail transport services, we are a leader in safety, reliability, customer service and efficiency.

MTR has extensive end-to-end railway expertise with 45 years of railway projects experience from design to planning and construction through to commissioning, maintenance and operations. Going beyond railway delivery and operation, MTR also creates and manages dynamic communities around its network through seamless integration of rail, commercial and property development.

With more than 50,000 dedicated staff*, MTR carries over 10 million passenger journeys worldwide every weekday in Hong Kong, Mainland China, Australia, the United Kingdom and Sweden. Together, we Go Smart and Go Beyond.

For more information about MTR Corporation, please visit www.mtr.com.hk

*includes our subsidiaries, associates and joint ventures in Hong Kong and worldwide

Photo Captions:

1. MTR Corporation won a total of 21 awards, including 7 Gold Medals, 10 Silver Medals, and 4 Bronze Medals at the “49th International Exhibition of Inventions Geneva”. The Gold Medal-winning inventions include projects related to "Smart Operations and Maintenance", enhancements of customer service and incident handling, as well as innovative solutions for waste management and noise monitoring.



2. MTR showcased multiple innovative solutions at the “International Exhibition of Inventions of Geneva”, covering areas such as elevating the operations safety performance of station, train and signalling system, strengthening analysis and monitoring of bridge, tunnel or track condition, enhancing caring and inclusive journeys, and creating a better environment and community etc.

