

REIMAGINING DELIVERY FOR TOMORROW'S HONG KONG RAILWAY

ABSTRACT Hong Kong's transport network, with railway as the backbone, stands as a global benchmark for reliability and efficiency. MTR has consistently delivered an on-time performance of 99.9% for over 5 million patronage every day and is regarded as one of the world's leading railway operators.

MTR is currently delivering a wave of railway extensions designed to make existing links more efficient, shape future communities and support the city's long-term economic growth. In this paper, MTR shares its experience in delivering these transformative projects under brown field constraints, offering insights into how resilience can be embedded not just in assets, but in the way they are built.

Key projects such as Kwu Tung Station – the first station to be constructed atop an operating railway tunnel - and Hung Shui Kiu Station – the first station to be built directly adjacent to an operating railway viaduct in HK - demonstrates MTR's strategic transition from traditional contract-focused models to a collaborative product-oriented approach. This new approach, further supported by the extensive use of modular construction techniques such as Design for Manufacture and Assembly (DfMA) and Modular Integrated Construction (MiC), has enhanced productivity while upholding safety and quality and redefined how complex urban infrastructure is built.

As a low-carbon mass transit operator, MTR is committed to combating climate change by minimising greenhouse gas emissions and advancing sustainability throughout our projects. All new stations are targeting BEAM Plus Gold or above certification and incorporating low-carbon design principles. This approach aligns with and contributes to the railway infrastructure with Hong Kong Government's target of reaching Carbon Neutrality by 2050.

MTR's experience provides evidence for embedding adaptability, sustainable practice, and wider community value whilst making Hong Kong's evolving public transport system not just robust, but future-ready.