

WEBINAR TALK ON SINGAPORE METRO: CURRENT LANDSCAPE, KEY CHALLENGES, AND FUTURE DIRECTIONS



Presented By:

Er. DR. DAVID NG CHEW CHIAT



1st OCT 2026, THURSDAY



4.00PM - 6.00PM

Registration Fees:

Student Members : Free

IEM Members : RM 15.00

IEM Non Members : RM 70.00

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BEM Approved CPD: 2
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SYNOPSIS

Singapore's rapid transit system is a cornerstone of its transportation network, providing efficient and reliable travel across the city-state. The Mass Rapid Transit (MRT) system spans over 229.7 kilometers with 166 stations, and the Light Rail Transit (LRT) system covers 28.8 kilometers. Currently the MRT Network consists of Six main lines, including the North-South Line, East-West Line, Circle Line, and Thomson-East Coast Line, operated by SMRT Trains and SBS Transit. Future expansion plans by the Land Transport Authority (LTA) includes expanding the rail network to 360 kilometers by the early 2030s, connecting eight in 10 households to within 10 minutes of a train station. New Lines: The Jurong Region Line and Cross Island Line are set to open in stages from 2027 and 2030, respectively. The major challenges include overcrowding during peak-hour exacerbated by population growth and urban development, aging infrastructures that require regular maintenance and upgrades to prevent infrastructure obsolescence and ensure reliability, and environmental concerns during construction of new lines, such as the Cross Island Line, poses environmental risks, including disruption to nature reserves. Future direction is to explore and deploy more sustainable design approach and construction methodology to ensure constraints due to environmental situations and technicality in constructing within congested underground space conditions can be overcome. This presentation will discuss the above current rapid transit landscape, key challenges and future directions of Singapore

SPEAKER'S PROFILE

From Singapore, Er David Ng is a Professional Engineer (Civil), Specialist Professional Engineer (Geotechnical), in Singapore. He has been involved in publication of more than 100 technical papers in the field of geotechnical and environmental engineering as well as metro and highway infrastructures projects in Singapore, Malaysia and India. He has more than 27 years of experience in management, planning, design and construction of major rails and roads infrastructure and transportation projects in Singapore, Malaysia and India. He is co-founder of One Smart Engineering Pte Ltd which has offices and operations in Singapore, Malaysia and India. Er David Ng is Council Member and Vice President of The Institution of Engineers Singapore (IES) and Chairman of Civil & Structural Technical Committee of IES. He is also Chairman of Asean Federation of Engineering Organisations (AFEO) - Structural Workgroup. Er David Ng is Adjunct Lecturer and Industry Expert of National University of Singapore (NUS) and Institution of Engineers Singapore Academy (IESA).