

ORGANISED BY



IEM - CDL ACADEMY
TECHNICAL SYMPOSIUM 2026

FUTURE READY GREEN DATA CENTRES:

SUSTAINABLE AND HIGH PRODUCTIVITY ENGINEERING

The rapid growth of the digital economy is driving demand for data centres, creating new opportunities and challenges for the construction industry. As sustainability, efficiency and speed-to-market become increasingly important, innovative design, low-carbon materials and advanced construction methods are essential.

Jointly organised by IEM and YTL Cement, this one-day symposium brings together policymakers, project owners, consultants, architects, contractors and industry experts to explore sustainable data centre development. Through expert presentations, panel discussions, networking and a guided showcase tour, participants will gain practical insights into emerging trends, innovative technologies and collaborative solutions that support the delivery of future-ready, sustainable data centre infrastructure.

24 SEPTEMBER 2026

8:30AM – 6:30PM

HALL 8B, LEVEL 4,
KUALA LUMPUR
CONVENTION CENTRE



PROGRAM

Time	Activity
8:30am – 9:30am	Registration of Guests
9:30am – 9:35am	Speech by Ir. Ng Beng Hooi, IEM Organising Chairman
9:35am – 9:45am	Speech by Ir. Yau Chau Fong, IEM President
9:45 am – 9:55am	Speech by YTL Cement
9:55am – 10:15am	Opening by YB Dato Sri Alexander Nanta Linggi, Minister of Works (TBC)
10:15am – 10:35am	Giving of Token of Appreciation
10:35am – 11:00am	Session 1 : Emerging Trends and Opportunities in Sustainable Data Centre Construction
11:00am – 11:20am	Coffee Break
11:20am – 11:50am	Session 2 - The Importance of Low Carbon Materials and Design in Achieving Net-Zero Emissions
11:50am – 12:20pm	Q&A For Session 1 and 2
12:20pm – 1:40pm	Session 3: Sustainable Construction Solutions from the Perspective of the Manufacturers
1:40pm – 2:55pm	Lunch Break
2:55pm – 3:25pm	Session 4 : Data Centre Requirements
3:25pm – 3:55pm	Q&A For Session 4
3:55pm – 5:15pm	Session 5 : From Design to Application: Enhancing Productivity through Sustainable Construction
5:15pm – 5:20pm	Closing session
5:20pm – 6:30pm	Cocktail Closing Session at YTL Cement Booth and Tour of Data Centre Infrastructure Live Showcase at Exhibition Hall 1

SPEAKER LINEUP



YB DATO IR. HJ. YUSUF BIN HJ. ABD. WAHAB

Chairman, CIDB Malaysia

YB Dato Ir. Hj. Yusuf bin Hj. Abd. Wahab is a highly distinguished professional engineer and leader with over 34 years of extensive experience in the construction and infrastructure sectors. His technical foundation is underpinned by a Bachelor of Science in Civil Engineering from the University of Nebraska, Omaha, Nebraska, USA.

A registered Professional Engineer with a Practising Certificate (PEPC), he has held significant leadership roles, including serving as a Director at Jurutera Perunding Wahba Sdn Bhd. His expertise in technical engineering and strategic corporate management ensures the continued modernisation and excellence of Malaysia's built environment.

YB Dato Ir. Hj. Yusuf bin Hj. Abd. Wahab is currently the Chairman of CIDB, Malaysia and he has vast experience handling civil engineering infrastructure design and construction. Under his leadership, CIDB Malaysia has embraced digital transformation and has enhanced project management efficiency using BIM.



IR. ASSOCIATE PROFESSOR TS. DR. LEONG KAH HON

Deputy Dean Lee Kong Chian Faculty of Engineering and Science, UTAR

Ir. Associate Professor Ts. Dr. Leong Kah Hon is a Deputy Dean at the Lee Kong Chian Faculty of Engineering and Science, Universiti Tunku Abdul Rahman (UTAR). He obtained his Doctor of Philosophy (Civil and Environmental Engineering) from Universiti Malaya and professional qualifications from the Board of Engineers Malaysia and Malaysia Board of Technologists. He is also the Council Member and Vice Chairman (Perak Branch) for The Institution of Engineers Malaysia (IEM) session 2025/2026. His great contribution to the environment sustainability has awarded him the ASEAN Green Award (AGA) Country Winner and the Grand Winner Award from the ASEAN Academy of Engineering and Technology (AAET) in 2024. With extensive experience in guiding both PLCs and SMEs, Dr Leong specialises in developing comprehensive Sustainability Report and providing strategic advice on ESG journey management.



LEE MUN SAM

Chief Executive Officer, Eastern Pretech Solutions Sdn. Bhd.

With over 25 years of experience in civil and structural engineering, Lee Mun Sam has held multiple leadership roles across the construction and industrial sectors. He currently serves as the Chief Executive Officer of Eastern Pretech, where he has previously led key departments including Design, Projects, IT, and Commercial.

He also served as Director of Parmarine Malaysia Sdn Bhd, overseeing the regional supply of Prefabricated Bathroom Units (PBU) to Malaysia, Singapore, and Australasia. Prior to his current roles, Lee was the Deputy General Director and Country Head for Vietnam, where he managed operations in the oil & gas and industrial sectors across the Indochina region.



LIM TZE LIANG

General Manager (Technical), CDL Sdn. Bhd.

Lim Tze Liang is the General Manager (Technical) at CDL Sdn Bhd, the Construction Development Lab of YTL Cement Group. With over 20 years of experience in the ready-mixed concrete industry, he has extensive expertise in concrete technology, product development, quality management, and sustainable construction solutions. A Civil Engineering graduate from Universiti Teknologi Malaysia (UTM), he began his career with Buildcon Concrete and has held various technical leadership positions within YTL Cement Group. He currently leads CDL's research and innovation initiatives, supported by state-of-the-art cement and concrete testing facilities, driving the development of advanced and low-carbon concrete technologies. His work focuses on performance optimisation, material innovation, quality excellence, and supporting the industry's transition towards more sustainable and resilient construction practices.

SPEAKER LINEUP



JUNGIN PARK

General Manager, Dongnam Sdn. Bhd.

Park serves as Head of Overseas Business at Dongnam Co., Ltd. (Korea) and General Manager at Dongnam Sdn. Bhd. (Malaysia), roles he has held since 2018 following a career in business development across ASEAN markets with multinational companies. A graduate of The George Washington University (Washington, D.C.) in Economics and Philosophy, he brings analytical rigor and principled thinking to his work. In 2019, he spearheaded Dongnam's first overseas expansion, establishing Dongnam Sdn. Bhd. In Malaysia — overseeing the full process from market planning through factory establishment. His background also includes startup ventures in Korea and cross-border business operations across the region. Guided by the philosophy of approaching every discipline with a beginner's mind, he remains dedicated to creating value within Malaysia's construction ecosystem — introducing specialty materials and sustainable building solutions tailored to local market needs — viewing every setback as a stepping stone towards growth.



DATO' AR. IDR. CHEAH KAH LIP

Managing Director, Akitek Akiprima Sdn. Bhd.

Dato' Ar. IDR. Cheah Kah Lip is a distinguished Professional Architect and Interior Designer with over 30 years of visionary leadership in architecture and sustainable development. A tri-degree holder in Arts, Architecture, and Computer Science from Deakin University and the University of Melbourne, he brings profound technical, analytical, and design expertise to the built environment.

A registered Professional Architect with the Board of Architects Malaysia (LAM), he also serves as a GBI Facilitator and ASEAN Architect, holding esteemed memberships with RIBA, PAM, and MGBC. With an award-winning portfolio spanning Hyperscale Data Centres, Township master planning, high-rise commercial and residential developments, shopping malls, hotels, Institutions and educational campuses, he has successfully delivered projects of varying scale and complexity across the region. One of his landmark high-rise residential developments was honoured with the prestigious World Gold Award at the 2026 FIABCI World Prix d'Excellence Awards, one of the highest international accolades in real estate excellence.



IR. ALVIN ANG CHENG HIN

Managing Director, TY Lin International Sdn. Bhd.

Ir. Alvin Ang is the Managing Director of TY Lin International Sdn. Bhd., Malaysia with 27 years of professional experience in infrastructure and structural engineering. He graduated with a Bachelor of Civil Engineering (Hons.) from University of Leeds, United Kingdom and is a registered Professional Engineer in Malaysia. He is a member of The Institution of Engineers Malaysia (IEM) and Engineers Australia. Throughout his career, he has led numerous iconic projects involving MRT systems, long-span bridges, underground tunnels, high-rise developments and hyperscale data centres across Malaysia and the region.



JACK HABERMAN

Operations Manager, Leighton Contractors (Asia) Limited

Jack Haberman is the Operations Manager for Malaysia at Leighton Asia, bringing over 15 years of experience in delivering complex construction projects across Asia. He holds a Bachelor of Engineering (Hons.) in Geology and Geotechnics from the University of Portsmouth.

Based in Johor, Malaysia, Jack oversees operations in Malaysia while also managing data centre projects in Singapore. His career has progressed through key leadership roles, including Project Director, and Operations Manager, providing him with extensive expertise in engineering, construction management, and project delivery.

Having worked across Malaysia, Singapore, and Hong Kong, Jack is passionate about safety, sustainability, and building high-performing teams, with a strong commitment to collaborative project delivery and operational excellence.

SYNOPSIS

SESSION 1 **Emerging Trends and Opportunities in Sustainable Data Centre Construction**

YB Dato Ir. Hj. Yusuf bin Hj. Abd. Wahab

Malaysia's data centre sector is expanding rapidly, driven by rising digital infrastructure investment, cloud adoption, AI workloads, e-commerce, 5G connectivity and enterprise digitalisation. This seminar explores emerging trends and opportunities in sustainable data centre construction, with emphasis on delivering high-performance facilities faster, safer and with lower environmental impact. Key areas include the role of standards, quality assurance and construction best practices in ensuring reliability, resilience and compliance. The talk will also examine the use of Industrialised Building System (IBS) and modular construction to accelerate project delivery, improve build quality and reduce site dependency. BIM will be highlighted as a critical tool for integrated design, coordination, clash detection and lifecycle asset management. Sustainability considerations such as embodied carbon reduction, material efficiency and waste minimisation will be discussed, alongside the application of QLASSIC, MyCREST and SHASSIC to enhance quality, green performance and safety in Malaysia's data centre construction ecosystem.

SESSION 2 **The Importance of Low Carbon Materials and Design in Achieving Net-Zero Emissions**

Ir. Associate Professor Ts. Dr. Kelvin Leong Kah Hon

The construction sector plays a significant role in global carbon emissions, making the adoption of low-carbon materials and sustainable design essential in achieving net-zero emissions. Green building construction requires materials that reduce embodied carbon, improve resource efficiency, and support long-term environmental performance. Low carbon construction materials such as recycled steel, low-clinker cement, geopolymers, concrete, fly ash and slag-based concrete, recycled aggregates, sustainably sourced timber, bamboo, and carbon-sequestering concrete offer promising alternatives to conventional materials. These materials can reduce reliance on virgin resources, minimise construction waste, and lower greenhouse gas emissions throughout the building life cycle. In addition, passive design strategies, energy-efficient systems, and material optimisation further enhance building sustainability. By integrating low-carbon materials with thoughtful design approaches, the built environment can significantly contribute to climate action, resource conservation, and the transition towards resilient, sustainable, and net-zero buildings.

SESSION 3 **Sustainable Construction Solutions from the Perspective of the Manufacturers**

Lee Mun Sam

As the construction industry accelerates its transition towards a low-carbon and resource-efficient future, manufacturers play a pivotal role in driving sustainable transformation. This discussion will explore sustainable construction solutions from the manufacturers' perspective, highlighting how innovation, industrialised building systems (IBS), Design for Manufacturing and Assembly (DfMA), material optimisation, and digitalisation are reshaping the way buildings are delivered. The session will also examine the challenges and opportunities faced by manufacturers in balancing sustainability, quality, productivity, and cost competitiveness. Through practical insights and real-world experiences, the panel will share how collaboration across the value chain can enhance project outcomes, reduce environmental impact, and support the industry's journey towards a more resilient and sustainable built environment.

Sustainable Construction Solutions from the perspective of the manufacturers **Lim Tze Liang**

As the construction industry advances towards decarbonization and sustainable development, Portland Limestone Cement (PLC) is emerging as a practical low-carbon cement solution in Malaysia. This presentation explores PLC from a manufacturer's perspective, highlighting its role in reducing embodied carbon while maintaining concrete performance comparable to conventional Ordinary Portland Cement (OPC). The session will discuss the strength equivalency of PLC, its synergistic use with Supplementary Cementitious Materials (SCMs) such as fly ash and GGBS, and its contribution towards Environmental Product Declarations (EPD), SustainBuild Mark, and GreenRE certification requirements. Key durability considerations, including chloride penetration, carbonation, and sulphate resistance, will also be addressed to provide a balanced understanding of PLC applications. In addition, practical experiences in mix design optimization, admixture compatibility, and ready-mix concrete production will be shared to demonstrate how PLC can support more sustainable and resilient construction in Malaysia.

Built to Continue: A Practical Concrete Approach to Sustainable Data Centers **Jungin Park**

True sustainability in datacenters is not only about using less material or adopting new green technologies. It is about creating buildings that can continue to perform safely, efficiently, and reliably over time. When initial savings compromise durability, future repair, maintenance, downtime, and resource use may outweigh the benefits. From a concrete perspective, better design, careful execution, shrinkage-crack reduction, and carbonation control can help improve the long-term performance of data center structures. This presentation explores how building better from the start can reduce wear and tear, extend service life, and create more stable, safe, and sustainable infrastructure for future generations.

SYNOPSIS

SESSION 5 **From Design to Application Enhancing Productivity through Sustainable Construction** **Dato' Ar. IDr. Cheah Kah Lip**

As global demand for data centres continues to accelerate, delivering sustainable, resilient, and high-performing facilities requires close collaboration across all engineering and design disciplines from the earliest project stages. This session explores how integrated planning, constructability-focused design, and informed decision-making contribute to efficient project delivery, improved build quality, and long-term operational performance. Drawing on real project experience, the presentation highlights the importance of multidisciplinary coordination, modular construction, digital technologies, and sustainable design strategies in overcoming the technical and logistical challenges unique to data centre developments. Through practical case studies, participants will gain valuable insights into how early collaboration and integrated design can reduce project risks, enhance productivity, optimise lifecycle performance, and support the successful delivery of future-ready digital infrastructure.

Sustainable and Speed: Driving Data Centre Construction Efficiency with Precast Structures and BIM **Ir. Alvin Ang Cheng Hin**

This presentation explores how precast construction addresses the twin demands of sustainability and aggressive fast-track schedules in modern data centre project delivery. Unlike traditional residential or commercial developments, data centres require heavy-duty structural resilience alongside carbon-optimised and rapid speed-to-market. Accelerating these timelines sustainably requires a strategic shift toward adopting precast concrete elements, which significantly reduces on-site material wastage and optimises material efficiency while compressing the overall construction schedules. Building Information Modeling (BIM) framework is crucial to ensure structural precision prior to factory fabrication and enables advanced underground services modeling for seamless spatial coordination of complicated services and utilities routing around building footprint. By focusing on highly repeatable structural design, this session highlights how optimising structural grids, maximising off-site casting and streamlining on-site dry assembly to deliver robust and sustainable structural frames under demanding deadlines.

From Design to Application: Enhancing Productivity through Sustainable Construction **Jack Haberman**

This presentation explores the contractor's role in translating data centre designs into efficient, sustainable, and high-quality construction outcomes. It highlights the importance of early engagement with designers to ensure buildability, coordination, and informed planning from the outset. The session will discuss how contractors can influence sustainability through effective waste reduction strategies, responsible material sourcing, increased adoption of prefabrication, and efficient site management practices. It will also examine the impact of industrialised construction methods, particularly modular construction, on improving productivity, programme certainty, and construction quality. Finally, the presentation will address how contractors can meet the growing demand for faster delivery of future-ready data centres while maintaining the highest standards of safety, quality, and operational reliability through innovation, collaboration, and disciplined project execution.