



The Association of Consulting Engineers of Hong Kong
香港顧問工程師協會

ACEHK ANNUAL SEMINAR 2023

ENGINEERING A SUSTAINABLE FUTURE: CARBON NEUTRALITY, ESG & SAFETY SOLUTION

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EVENT DETAILS

DATE: 5 OCTOBER 2023
(THURSDAY)

TIME: 9:00AM – 6:00PM

VENUE: MULTI-PURPOSE
HALL, CIC-ZERO CARBON
PARK, KOWLOON BAY

FORMAT: HYBRID EVENT
(PHYSICAL & ZOOM)



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Ir CF LEUNG

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Prof LO Hong-kam
Topic: Cross-disciplinary approaches for ESG Reporting and Sustainable Development

SAFETY SOLUTION SESSION

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Ir Roger WONG Yan-lok, JP
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INTRODUCTION

ACEHK



The Association of Consulting Engineers of Hong Kong
香港顧問工程師協會

The Association of Consulting Engineers of Hong Kong (ACEHK) is a non profit making association representing the consulting engineering profession in Hong Kong. As an industry group, the Association seeks to set and maintain standards of professional conduct and ethics of consulting engineers, promote the advancement of the profession of consulting engineering and uphold the professional interests, rights, powers and privileges of consulting engineers.

ACEHK places high importance on the business interests of its members and assist authorities, developers, bankers, funding agencies and others requiring engineering services to select consulting engineers. The Association is a member association of the International Federation of Consulting Engineers (FIDIC).

ACEHK is directed by a Council of elected representatives of its members, no member being allowed more than one representative at any time. The Council elects its Chairman, Vice Chairman and Officers, Hon Secretary and Hon Treasurer, each year and normally meets monthly.

ACEHK represents the industry on various external committees, principally the Government Works Bureaux and Works Departments, such as, Development Bureau, Housing Authority, Architectural Services Department, Buildings Department, Civil Engineering and Development Department, Electrical and Mechanical Services Department and Highways Department.

INTRODUCTION

LIST OF COUNCIL MEMBERS



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Binnies Hong Kong Limited



Ir Stephen MAK
Immediate Past Chairman
Meinhardt Infrastructure &
Environment Ltd.



Ir Stephen LAI
Vice Chairman
AECOM



Ir Ole WONG
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Council Member
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Ir Simon NG
Council Member
Mannings (Asia)
Consultants Limited



Ir Chris LEE
Co-opted Council Member
CM Wong & Associates Ltd.



Ir Victor CHEUNG
Co-opted Council Member
J.Roger Preston Limited

MESSAGE FROM CHAIRMAN, ACEHK



On behalf of the Association of Consulting Engineers of Hong Kong, it is my honor to welcome you to our ACEHK Annual Seminar 2023 themed “Engineering a Sustainable Future”.

For many years, ACEHK has advocated for advancing professional standards and ethics in consulting engineering. As the representative body in Hong Kong, we promote the profession through knowledge-sharing and thought leadership initiatives. This seminar, with its focus on Carbon Neutrality, ESG practices and Safety Solutions, demonstrates our commitment to cultivating sustainability, safety stewardship and innovation across all operations.

I trust that the program, curated by our dedicated Organizing Committee, will spark engaging discussions on strategies, case studies and partnership opportunities within these pivotal domains. Please take full advantage of this platform to network, exchange insights and promote collaborative progress.

I wish to thank our distinguished speakers, sponsors, and supporting organizations for your ongoing commitment to ACEHK and the issues we address. I also appreciate the efforts of our Organizing Committee in curating another insightful program.

Let us make the most of today’s exchange of ideas. Working together, I believe we can transform practices, raise standards industry-wide and build a more sustainable and safer future for all.

Thank you for joining us. I hope you find the seminar both thought-provoking and impactful.

Ir Andy KWOK
Chairman of ACEHK
Binnies Hong Kong Limited



MESSAGE

FROM CHAIRMAN OF THE ORGANISING COMMITTEE



The ACEHK Annual Seminar is a great forum where we all come together to gain insights from our keynote speaker, Ir Ricky Lau Chun Kit JP as well as our other distinguished speakers, panelists, and presenters, and to reinforce our dedication to drive positive changes through engineering. I also thank our generous sponsors and supporting organizations for making this seminar possible through their contributions.

To support our goal in advancing the profession of consulting engineering, this year's ACEHK Seminar focuses on three key aspects of sustainability: Carbon Neutrality, ESG and Safety Solutions. Through the sharing of expertise and thought-provoking discussions, I hope all our members enrich our understanding of the challenges and opportunities in engineering a sustainable future.

Of course, this seminar is just the beginning. Let us carry forward the knowledge, insights, and connections that we gain. Let us be the catalysts of change in our respective fields, championing sustainability, carbon neutrality, ESG practices, and safety solutions. Each of us has the power to make a difference, and it is through our collective efforts that we can engineer a sustainable future.

Thank you all again for your unwavering support, participation, and commitment to engineering a better world that benefits both our planet and future generations. With our shared vision and determination, I am confident that we can work together to create a world that is safe, sustainable, and prosperous for all.

It is my hope that you will find today's program thought-provoking and worthwhile.

Ir Stephen LAI
Vice Chairman of ACEHK
Chairman of the
Organising Committee
AECOM



ABOUT THE SEMINAR



This seminar aims to explore the critical aspects of engineering that contribute to building a sustainable and resilient future.

The seminar will delve into three key pillars: carbon neutrality, ESG considerations, and safety solutions. We will examine how engineers can lead the way in reducing carbon emissions, developing sustainable technologies, and transitioning to renewable energy sources. We will explore the importance of considering environmental, social, and governance factors in engineering projects to ensure sustainability, ethical practices, and positive social impact. Additionally, we will delve into the critical role of safety solutions in protecting human life, property, and the environment.

Through interactive sessions, expert presentations, and engaging discussions, attendees will gain valuable insights into the latest advancements, best practices, and case studies in engineering for a sustainable future. The seminar will also provide a platform for networking and collaboration among engineers, policymakers, businesses, and other stakeholders who are committed to driving positive change.

Join us as we embark on a journey to engineer a sustainable future, where carbon neutrality, ESG considerations, and safety solutions are at the forefront. Together, we can shape a world that prioritizes environmental stewardship, social responsibility, and the well-being of present and future generations.

KEYNOTE SPEAKER

Ir Ricky LAU Chun-kit, JP
Permanent Secretary
for Development (Works)
Development Bureau
The Government of the HKSAR



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BUSINESS ENVIRONMENT COUNCIL 商界環保協會



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發展局
Development Bureau
The Government of the Hong Kong Special Administrative Region of the People's Republic of China

HKCA
香港建造商會

HKIE THE HONG KONG INSTITUTION OF ENGINEERS
香港工程師學會

ice
Hong Kong

香港註冊承建商商會
THE HONG KONG REGISTERED CONTRACTORS ASSOCIATION

PROGRAMME

MORNING SESSION



OPENING

08:30 Registration

09:05 Welcome Speech **Ir Andy KWOK**, Chairman, ACEHK

09:10 Keynote Speech **Ir Ricky LAU Chun-kit, JP**,
Permanent Secretary for Development (Works),
Development Bureau

09:20 Certificates Presentation & Group Photo

CARBON NEUTRALITY SESSION

09:30 Moderator Introduction

09:35 Speaker 1 **Ir Prof CS POON**,
Head of Department of Civil and Environmental Engineering,
The Hong Kong Polytechnic University

10:00 Speaker 2 **Ir Barry SUM Pang-tuen**,
General Manager – New Territories (Projects),
MTR Corporation Ltd

10:25 Networking Break

10:45 Speaker 3 **Ir CF LEUNG**, Director – Operations, BEC

11:10 Q&A Discussion (1) **Moderator:**
Ir Simon NG, Council Member, ACEHK
Panelists:
Ir Prof CS POON,
Head of Department of Civil and Environmental Engineering,
The Hong Kong Polytechnic University
Ir Barry SUM Pang-tuen,
General Manager – New Territories (Projects), MTR Corporation Ltd
Ir CF LEUNG, Director – Operations, BEC

11:30 Certificates Presentation & Group Photo

11:45 Networking Lunch

PROGRAMME

AFTERNOON SESSION



ESG SESSION

13:30 Moderator Introduction

13:35 Speaker 4 **Ms Carolin FONG Suet-yuen**, Executive Director,
Urban Renewal Authority

14:00 Speaker 5 **Mr Peter LEE**, General Manager, Sustainability
Airport Authority Hong Kong

14:25 Speaker 6 **Prof LO Hong-kam**, Dean of Engineering, Chair Professor,
Department of Civil and Environmental Engineering
The Hong Kong University Of Science And Technology

14:50 Q&A Discussion (2) **Moderator:**
Ir Jason WONG, Council Member, ACEHK

Panelists:

Ms Carolin FONG Suet-yuen, Executive Director,
Urban Renewal Authority

Mr Peter LEE, General Manager, Sustainability
Airport Authority Hong Kong

Prof LO Hong-kam, Dean of Engineering, Chair Professor,
Department of Civil and Environmental Engineering
The Hong Kong University Of Science And Technology

15:10 Certificates Presentation & Group Photo

15:25 Networking Break

PROGRAMME

AFTERNOON SESSION



SAFETY SOLUTION SESSION

15:50 Moderator Introduction

15:55 Speaker 7 **Ir Thomas HO On-sing, JP**, Chairman, CIC

16:20 Speaker 8 **Ir Roger WONG Yan-lok, JP**,
Deputy Secretary for Development (Works),
Development Bureau

16:45 Speaker 9 **Ir Dr Taj ISHOLA**, Director,
Asia Infrastructure Solutions Limited

17:10 Q&A Discussion (3) **Moderator:**
Ir Ole WONG, Honorary Secretary, ACEHK

Panelists:

Ir Thomas HO On-sing, JP, Chairman, CIC

Ir Roger WONG Yan-lok, JP
Deputy Secretary for Development (Works),
Development Bureau

Ir Dr Taj ISHOLA, Director,
Asia Infrastructure Solutions Limited

17:30 Certificates Presentation & Group Photo

17:40 Closing Remarks **Ir Stephen LAI**, Vice Chairman, ACEHK

OPENING ADDRESS



Ir Ricky LAU Chun-kit, JP

**Permanent Secretary for Development (Works)
Development Bureau
The Government of the HKSAR**

In October 2021, Ir Ricky LAU was appointed as the Permanent Secretary for Development (Works) to oversee public works policy and infrastructure development.

Ir LAU was the Director of Civil Engineering and Development from October 2018 to October 2021, and was responsible for overseeing the strategic planning and the implementation of various reclamation, new development area and major infrastructure projects. He joined the Hong Kong Government in 1992 as an Assistant Engineer. Before joining the Civil Engineering and Development Department in 2015, he worked in the Highways Department and the Development Bureau.

BIOGRAPHY AND ABSTRACT

CARBON NEUTRALITY SESSION



Ir Prof C.S. POON

Head of
Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University

RESOURCES ENGINEERING TOWARDS CARBON NEUTRALITY: OPPORTUNITIES FOR WASTES TO CONSTRUCTION RESOURCES IN HONG KONG

Speaker Bio

Ir Prof. Chi-sun Poon obtained his PhD from Imperial College London. He joined The Hong Kong Polytechnic University (PolyU) as lecturer in 1992. Currently, he is the Michael Anson Professor in Civil Engineering, Chair Professor of Sustainable Construction Materials, Head of Department of Civil and Environmental Engineering (CEE) and Director of Research Centre for Resources Engineering towards Carbon Neutrality (RCRE) of PolyU. He is also one of the Directors of PolyU-NAMI 3D Concrete Robotic Printing Research Centre (RCC3D). He has been awarded the title of Changjiang Chair Professor by the Ministry of Education in 2017.

Presentation Abstract

To support the Hong Kong SAR Government's policy in achieving carbon neutrality in 2050 and minimizing waste required to be disposed of at landfills, and the Central Government initiatives in promoting the Greater Bay Area as a model of Resources Engineering towards Carbon Neutrality, The Hong Kong Polytechnic University has recently established the Resources Engineering towards Carbon Neutrality (RCRE). The research directions of RCRE range from waste management policy evaluation, life cycle environmental and cost assessments, and development of recycling technologies that turn waste into value added resources. This presentation will briefly introduce some of the research activities of RCRE and highlight the opportunities and challenges in the cement and concrete industry. In particular, the possible use of incineration bottom ash produced from waste to energy (WtE) facilities, concrete waste powder derived from recycling of concrete waste and glass powder generated from recycling of glass beverage bottles, for green cement and concrete applications will be highlighted.

BIOGRAPHY AND ABSTRACT

CARBON NEUTRALITY SESSION



Ir Barry SUM Pang-tuen

General Manager – New Territories (Projects)

MTR Corporation Ltd

EMBRACING SUSTAINABLE RAILWAY FOR OUR FUTURE

Speaker Bio

Barry is a seasoned engineer with vast experience of multi-disciplinary infrastructure project management. He spearheaded the start of detailed planning and design of the new railway extension projects under RDS-2014. He is now leading multi-disciplines project team to deliver new railway extension projects in New Territories.

Before joining the Corporation, Barry was a senior member of AECOM and responsible for the transportation business in Asia. He carried a significant role in overseeing all the major infrastructure projects in Asia for AECOM.

Presentation Abstract

In the course of strengthening the city's low-carbon transportation network, the MTR Corporation connects with the community with its caring, innovative, and sustainable railway services. The Corporation is committed to achieving carbon neutrality by embedding sustainability in its delivery of railway projects as far as practicable. While the Corporation MTR has been known for enhancing low-carbon transportation, we aspire for more. How about starting our carbon neutralisation journey from the beginning - the station design?

Riding on its successful experience in providing seamless connections for the community, we continue to integrate sustainability with all the implementation of our railway projects. We have showcased our multifaceted efforts to promote sustainable design and construction in both current and new projects. The Corporation would keep the city moving sustainably to address ever-evolving social and environmental needs

BIOGRAPHY AND ABSTRACT

CARBON NEUTRALITY SESSION



Ir CF LEUNG

Director – Operations

Business Environment Council Limited

HOW BUSINESS ENVIRONMENT COUNCIL NET-ZERO CARBON CHARTER SUPPORTS NET-ZERO TRANSITION AND COLLECTIVE ACTIONS OF BUSINESS SECTOR

Speaker Bio

Ir C F Leung is currently the Director – Operations of Business Environment Council Limited. CF has been spearheading the development of sustainable buildings by leading and providing advisory services on a large number of green building initiatives and delivering training to building professionals. In the field of circular economy, he provides waste management and audit services for existing buildings and community events. He has also involved in the preparation of the Waste Reduction Guidebook and the Practical Guides on Packing Reduction and Management.

Presentation Abstract

The impact of climate change is imminent. According to the latest 6th report from the Intergovernmental Panel on Climate Change (“IPCC”), unless all stakeholders work together to significantly reduce greenhouse gas emissions in the coming decades, the global warming levels will exceed the decarbonisation goals set by the Paris Agreement. Hong Kong has already released its “Hong Kong Climate Action Plan 2050” in 2021, which sets targets and strategies for tackling climate change and achieving carbon neutrality, among which how businesses achieve green transition is particularly important.

Business Environment Council (“BEC”) is an independent non-profit business membership organisation established by the Hong Kong business sector and has been driving sustainable development among businesses. In 2023, building on the achievements of the Low Carbon Charter announced in 2019, BEC launched the BEC Net-zero Carbon Charter, aiming to promote long-term decarbonisation journeys for businesses and organisations through setting targets and taking actions together. The BEC Net-zero Carbon Charter provides two categories of commitments for businesses and organisations to choose from based on their operational characteristics and set decarbonisation targets accordingly.

Under the Charter, there are different types of programmes, including the Power Up Coalition, Carbon Disclosure Program, and Hong Kong International Airport Carbon Capacity Building Program, etc, to support the decarbonisation process of different industries and promote their decarbonisation goals. The Charter also maintains connections with large-scale decarbonisation initiatives worldwide, bringing the latest discussions and recommendations on decarbonisation to Hong Kong and showcasing Hong Kong's best practice to the world.

BIOGRAPHY AND ABSTRACT

ESG SESSION



Ms Carolin FONG Suet-yuen

Executive Director

Urban Renewal Authority

ESG IN THE URBAN RENEWAL AUTHORITY

Speaker Bio

Ms Carolin Fong Suet-yuen is a professional architect. She was appointed as Executive Director of the URA with effect from October 2022. Before joining the URA, she was the Director of Estates of the Hong Kong Baptist University from 2019 to 2022, the Director and Head of Sustainability of DLN Architects (HK) Ltd. from 2009 to 2019, and an Assistant Professor in the Department of Architecture of the University of Hong Kong from 2007 to 2009. Ms Fong obtained her master's degree in Environmental Design in Architecture from the University of Cambridge. She is a Fellow of the Hong Kong Institute of Architects, Registered Architect and Authorized Person, and holds the qualification of the PRC Class 1 Registered Architect.

Presentation Abstract

ESG, CRS, and sustainability have been integral to URA's daily operations. We prioritize the interests of all stakeholders affected by our business activities, including redevelopment, rehabilitation, retrofitting, preservation, and revitalization. By intervening in the urban environment, we aim to combat climate change through proactive measures including promoting district ventilation and greeneries, and to enable habitants to consume less energy by improving connectivity within the district and properly designed buildings. Our corporate sustainability responsibility is exemplified in how we manage and attend to our stakeholders, including households and businesses displaced by our redevelopment or occupants affected by rehabilitation works.

In her presentation, Carolin will discuss how the operations of the URA, which include planning, acquisition, clearance, building design, construction, property management, rehabilitation, and corporate communications, strive to meet the public's expectations for environmental protection, social norms, and good governance. She will also elaborate on the URA Sustainability Framework, which is a self-developed assessment tool with measurable performance indicators for evaluating performance in five domains: 'Economy', 'Environment', 'Society', 'Process', and 'People' for our operations.

BIOGRAPHY AND ABSTRACT

ESG SESSION



Mr Peter LEE

General Manager, Sustainability

Airport Authority Hong Kong

AAHK'S JOURNEY TOWARDS TRANSFORMING INTO A SUSTAINABLE AIRPORT

Speaker Bio

Mr. Lee is the General Manager, Sustainability of the Airport Authority. He supports, guides and advises the Authority on the formulation and implementation of long-term sustainability strategies. He also leads and manages all environmental matters related to the planning and implementation of the Expansion of the Hong Kong International Airport into a Three-Runway System, which is to maintain Hong Kong as an international aviation hub at the heart of Asia Pacific region. Before joining the Airport Authority in June 2012, Mr. Lee has over 20 years' experience in environmental and engineering consultancy, leading and managing the EIA studies for a number of major infrastructure and urban development projects such as Kai Tak Development, Integrated Waste Management Facilities, Harbour Area Treatment Scheme Stage 2A, Deep Bay Link, and so on. Mr. Lee is a founding fellow of the Hong Kong Institute of Qualified Environmental Professionals and the Secretary General of the Marine Ecology Enhancement Fund and the Fisheries Enhancement Fund.

Presentation Abstract

Since pledging to become the World's Greenest Airport in 2012, Airport Authority Hong Kong (AAHK) has successfully integrated environmental, social and governance initiatives seamlessly into our business strategy and corporate culture. Our dedication to sustainability continues to be recognised by leading global ESG ratings agencies as well as industry bodies and we strive for leadership each year through the delivery of our wide and varied ESG programmes.

With much of our environmental footprint stemming from our airport business partners, we take an airport-wide approach to proactively engage them in a diverse range of environmental programmes including carbon and waste management. These programmes are tailored to the needs and priorities of our business partners and are designed to be easily accessible, useful, free to join where possible.

AAHK has also been investing in social initiatives to create a welcoming environment and strengthen the airport community bonding while promoting well-being and work-life balance. We remain committed to attracting top talent and creating more high-value and rewarding jobs at HKIA.

Central to the success of our initiatives is a multi-layered governance structure which prioritizes coordinating internal activity and external stakeholder participation, and enables collaboration and stewardship to be fostered within the airport.

BIOGRAPHY AND ABSTRACT

ESG SESSION



Prof LO Hong-kam

Dean of Engineering

Chair Professor of

Department of Civil and Environmental Engineering

The Hong Kong University Of Science And Technology

CROSS-DISCIPLINARY APPROACHES FOR ESG REPORTING AND SUSTAINABLE DEVELOPMENT

Speaker Bio

Professor Hong K. LO is Dean of Engineering, Chair Professor of Civil and Environmental Engineering and Director of GREAT Smart Cities Institute of the Hong Kong University of Science and Technology. His expertise includes smart cities, sustainability, dynamic traffic control, and public transportation analysis. He is Founding Editor-in-Chief of Transportmetrica B: Transport Dynamics and Managing Editor of the Journal of Intelligent Transportation Systems. Professor Lo was awarded the prestigious triennial World Conference on Transportation Research (WCTR) Prize. He is appointed as a Justice of the Peace (JP), and elected as Fellow of the Hong Kong Institution of Engineers (HKIE), Fellow of the Chartered Institute of Logistics and Transport (CILT), Fellow of the Hong Kong Institute of Highway and Transportation (IHT), and Fellow of the Hong Kong Society for Transportation Studies.

Presentation Abstract

ESG plays a pivotal role in driving long-term business sustainability for companies. Various frameworks and standards exist to facilitate ESG reporting. Nevertheless, companies face challenges in enhancing their ESG performance. This presentation will delve into the potential of enabling technologies to address these challenges and bolster companies' ability to monitor and improve their ESG performance. These technologies necessitate the integration of cross-disciplinary knowledge and collaboration between universities and industries. Lastly, the barriers impeding university-industry collaboration in ESG reporting technologies will be brought to light.

BIOGRAPHY AND ABSTRACT

SAFETY SOLUTION SESSION



Ir Thomas HO On-sing, JP
Chairman
Construction Industry Council

ENGINEERING A SUSTAINABLE FUTURE – SAFETY IS KEY

Speaker Bio

Ir Thomas HO is the Chairman of the Construction Industry Council (CIC). The mission of CIC is to CONNECT LEAD and EXCEL. He possesses over 40 years of experience in construction industry. He has been dedicated to spearheading project management and general management, safety initiatives, sustainable development and innovation excellence in the construction industry. He is recognised by the industry as the figurehead in promoting excellence in construction management, safety leadership, as well as sustainable and quality construction. After joining CIC, he promoted Mi-Infinity, ICDEs and insisted Design for Safety, High Productivity and Sustainability in the future of Construction. Livability and Well-being will be the ultimate game. In recognition of his advanced mindset in advocating innovative and green construction initiatives, Ir HO received the Outstanding Achievement Award from Hong Kong Institute of Construction Managers in 2018.

Presentation Abstract

The speaker will outline the current status of Safety performance in HK and suggest ways to achieve a better performance!!

He will also highlight some of the measures taken by other jurisdictions as a comparison !
Indeed the Safety Culture needs to be changed drastically in order to create a Sustainable future for the Industry!

He will also highlight some of the measures taken by other jurisdictions as a comparison !
Indeed the Safety Culture needs to be changed drastically in order to create a Sustainable future for the Industry!

BIOGRAPHY AND ABSTRACT

SAFETY SOLUTION SESSION



Ir Roger WONG Yan-lok, JP

Deputy Secretary for Development (Works)

Development Bureau

The Government of the HKSAR

CONSTRUCTION SAFETY – THE MOMENTOUSNESS OF FORESIGHT

Speaker Bio

In March 2022, Ir Roger WONG was appointed as Deputy Secretary for Development (Works) 2 to oversee public works policy and infrastructure development.

Ir WONG joined the Hong Kong Government in 1995 as an Assistant Engineer. Before joining the Development Bureau, he worked in the Highways Department, Civil Engineering and Development Department and Water Supplies Department and oversaw the strategic planning and implementation of various highway, new development area and water supply projects.

Presentation Abstract

The Government always accords the utmost priority on construction safety in public works projects and have adopted a multipronged strategy in uplifting construction safety. With the continuous enhancement of the safety management system over the years, there has been a remarkable reduction in the accident rate. However, we should not be complacent on the achievements made, as one accident is indeed too many for us.

Construction safety is not the responsibility of only one party. It is a shared commitment involving clients, consultants, contractors, subcontractors and workers. All parties, apart from shouldering their own duties on construction safety, should unanimously strive for the common goal of “Zero Accident” on construction sites.

To meet the “Zero Accident” goal, we need to make a paradigm shift in enhancing site safety from simply following traditional good practices. The speaker will share his insights, particularly in working closely with key stakeholders in the industry to enhance construction safety through the adoption of new technologies, Design for Safety, instigating changes in mind set to foster a caring culture for site personnel.

BIOGRAPHY AND ABSTRACT

SAFETY SOLUTION SESSION



Ir Dr Taj ISHOLA

Director

Asia Infrastructure Solutions Limited

DIGITAL TWINS AND MIC IN THE SMART SITE SAFETY SYSTEM ON TRUNK T2 AND CHA KWO LING TUNNEL PROJECT

Speaker Bio

Taj Ishola is a Director at Asia Infrastructure Solutions Limited. He has over 30 years' experience in the field of civil engineering particularly in the areas of planning, design, management and implementation of a variety of infrastructure projects. In Hong Kong, he has contributed to projects such as the Art Park at West Kowloon Cultural District, Tsuen Wan Drainage Tunnel, Improvement to Tung Chung Road, and Kap Shui Mun Bridge & Ma Wan Viaduct. Beyond Hong Kong, his project experience includes the Ukhua Khudag to Gashuun Sukhait Railway project in Mongolia, Laibin 'B' & Meizhou Wan Coal Fired Power Stations in China and First Freeway Widening, Taiwan. Currently, he is the Project Manager for Kai Tak Development Trunk Road T2 and Infrastructure at the South Apron.

Presentation Abstract

In recent years, the engineering industry has witnessed a growing emphasis on sustainability, carbon neutrality, environmental, social, and governance (ESG) factors, and enhanced safety practices. To address these challenges and pave the way for a sustainable future, innovative technologies have emerged as powerful tools. This presentation focuses on the integration of two technologies, Digital Twins and MiC, in the development of a Smart Site Safety System for the Trunk T2 and Cha Kwo Ling Tunnel Project.

The Trunk T2 and Cha Kwo Ling Tunnel Project, serves as a prime example of how advanced technological solutions can revolutionize site safety practices. Digital Twins, virtual replicas of physical assets, allow for real-time monitoring, analysis, and optimization of construction processes. By leveraging the power of Digital Twins, engineers can gain valuable insights into the project's safety performance, identify potential hazards, and proactively implement preventive measures.

Furthermore, the integration of MiC further enhances the safety system's effectiveness. By utilizing MiC principles, construction activities can be streamlined, minimizing workers' exposure to hazardous situations and enhancing overall project safety.

This presentation will delve into the key features and advantages of the Smart Site Safety System, supported by Digital Twins and MiC. It will showcase how real-time data from the construction site, captured through IoT sensors, is fed into the Digital Twin, enabling dynamic simulations, predictive analytics, and early detection of safety risks. The integration of MiC will be explored, highlighting its impact on site safety practices, worker well-being, and project sustainability.

ORGANISING COMMITTEE

LIST OF ORGANISING COMMITTEE



Ir Stephen LAI
Organising Committee Chairman
AECOM



Mr Louis AU
Organising Committee
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Ir Ivy KONG
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Ir Stephen MAK
Organising Committee
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Ir Francis YAU
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Aurecon Hong Kong Limited



Ir Derek YU
Organising Committee
AECOM

Leading the change towards a sustainable future



Preserving nature with Long Valley Nature Park

We collaborate closely with stakeholders to preserve natural ecosystems and enhance recreational and educational opportunities for communities.

The Long Valley Nature Park is divided into three management zones: biodiversity, agriculture and visitor areas, achieving a harmonious balance between urban development and ecological conservation.

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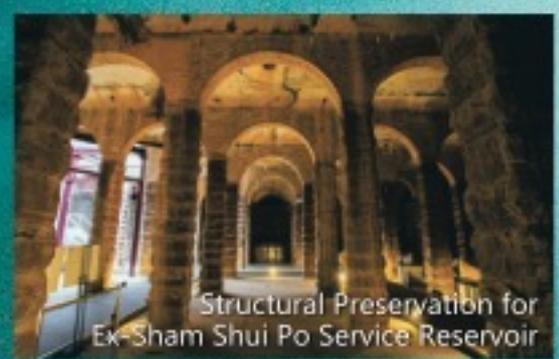
Yueh Long Barrage Scheme



Lok Ma Chau Ecological Enhancement



Tai Po Water Treatment Works



Structural Preservation for Ex-Sham Shui Po Service Reservoir



Happy Valley Underground Stormwater Storage Scheme

Inventing for a Sustainable Tomorrow

Since 1930, Binnies has played a key role in developing Hong Kong's infrastructure. Today, we continue to help our clients solve complex challenges through delivering a full range of resilient, reliable and intelligent solutions, creating new possibilities to improve people's lives.

Find out more at binnies.com



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Meinhardt China

With 1,200 staff in Hong Kong and China, our services cover all aspects of mechanical, electrical, civil and structural design for all types of construction projects, as well as project management and infrastructure such as bridges, tunnels, highways, ports, transportation, water services and waste management. We provide environmental consultancy across our projects and as standalone services. We also have a team of specialists providing services in all aspects of the façade of buildings and structures including curtain wall design, concrete repair and refurbishment.

Our clients include government bodies, agencies, private developers and end-users both in industrial and commercial enterprises.

Our award-winning projects have garnered recognition internationally and these awards serve to affirm our unrivalled reputation for innovative and inspiring engineering solutions.



Our Projects



Hong Kong Children's Hospital
(Civil & Structural)



Cross Bay Link, TKO
(Infrastructure & Environment)



Northwest Kowloon Long Span Footbridge
(Infrastructure & Environment)



Grand Central & Yue Man Square
(Mechanical & Electrical)



Hong Kong West Kowloon Station High Speed Rail
(Mechanical & Electrical)



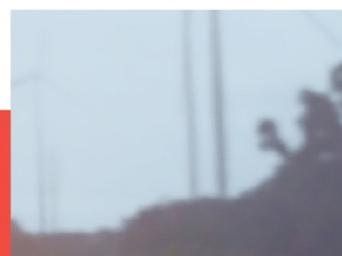
HKSTP Advanced Manufacturing Centre
(Civil & Structural)



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Established by Global Infrastructure Solutions Inc. (GISI) and founding members, AIS harnesses over 90 years of collective project experience in Asia. Operating globally with over 14,000 employees, we deliver impactful projects in more than 100 countries.

AIS boasts a strong and diversified team, holding a robust track record in the Asia region.

The company inherits its expertise from renowned firms such as Arcadis Design & Engineering, Hyder, Freeman Fox in Hong Kong, and Arcadis Consulting, EC Harris, Davis Langdon & Seah businesses in Singapore. From major infrastructure to residential, retail, commercial, healthcare, and data centre projects, AIS is committed to shaping the future of both built and natural environments.

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Kal Tak development - stage 4 infrastructure



Temporary Quarantine Camp at Penny's Bay (Phase IV)

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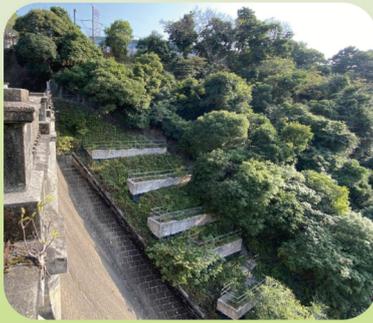
River revitalization
Enhancement of Existing River
Sections – Phase 1 –
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C M Wong & Associates Ltd is a Hong Kong based consulting engineer in providing a full range of professional services including feasibility studies, planning, design and supervision in relation to building and infrastructure projects. Our clients include various Hong Kong Government departments, institutions and major developers.

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NEOM THE LINE



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Greek Hellenic Metro



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*ENR: Engineering News Record



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Thank you for joining us today.

We hope you enjoyed the Annual Seminar.

See you next year!

