

Seminar on

Engineering Transformation Journey – Driving Innovations in the Built Environment

By
Er Dr Johnny Wong

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Abstract

Since its inception in 1960, the Housing & Development Board (HDB) has consistently been at the forefront of construction productivity. Through its scale, HDB has been able to set new industry standards and grow the local precast ecosystem. To further reduce reliance on foreign construction manpower for its development works, it is crucial for HDB to continue driving new ideas and innovations through its research efforts, work with local industry players to build up new capabilities and tech solutions, and raise construction productivity.

Beyond the construction of new flats, the maintenance of buildings is also becoming a paramount task as HDB's large building stock and related infrastructure continue to age. This has prompted HDB to develop new tools that will enhance the productivity of maintenance and facilities management. Some of the Smart Integrated Digital Design (IDD) initiatives that Dr Johnny Wong will be highlighting include the use of Building Information Modelling (BIM), the development of the Integrated Building Information System, 3D Concrete Printing, New Prefabricated Prefinished Volumetric Construction (PPVC) concepts, Smart Cranes, and the use of Drones and advanced Visual Analytics.

Besides driving the research efforts in HDB, Dr Johnny Wong is also the Chief Technology Officer for the Ministry of National Development (MND). As part of the sharing, Dr Johnny Wong will share how MND has been driving R&D for the built environment through the cities of tomorrow program.

Biography

As the Group Director of Building & Research Institute (BRI), a research set-up under the Housing & Development Board (HDB) of Singapore, Dr Wong is responsible for leading HDB's efforts in spearheading innovative and cost effective solutions to create a better living environment and achieve greater sustainability. Some of the key initiatives that he has spearheaded include the formulation of the HDB Smart Town framework, deployment of solar energy systems in public housing, advanced prefabrication technology and setting of up multi-disciplinary design arm of HDB to advance design innovation and integration of advanced building technologies. Dr Wong was also instrumental in the formation of a comprehensive framework to guide the development of Punggol Eco-Town. Additionally, Dr Wong serves as the Chief Technology Officer / Senior Director (R&D) in the Ministry of National Development, where he works to fulfil the Ministry's broader goals in driving technology R&D for the Built Environment. He is also a Board Member of the Professional Engineers Board.

Dr Wong graduated with a first-class honours degree in Bachelor of Engineering in 1993 from the University of Sheffield, United Kingdom, and obtained a Ph.D in Civil & Structural Engineering from the same University in 1997.

With notable contributions to his field of work as a Professional Engineer, Dr Wong has been conferred several awards including the Henry-Boot Award, Laverick-Webster-Hewitt Award, the Institute of Civil Engineers Award and Public Administration Medal (Silver), in recognition of his contributions to the Construction Industry as well as the Public Sector. In driving Singapore's Smart Nation agenda, Dr Wong co-chairs an inter-agency working committee to spearhead Smart town efforts, which aims to leverage smart technologies to make HDB towns and estates more liveable, efficient, and sustainable.

Date : Monday, 4 November 2019
Time : 3:30 pm – 4:30 pm (*Registration starts at 3:15 pm*)
Venue : CEE Seminar Room A, Block N1, Level B1, N1-B1b-06
Nanyang Technological University

Please register by Friday, 18 October 2019.

Free Admission and Limited Seats!

