

# Facilities Management and Strategic Asset Management via Data Analytics and AssetFuture (Two-Day Seminar cum Workshop) 4<sup>th</sup> Run

By Dr. Kang Kok Hin & Mr. Ho Chee kit



## Introduction

This program focuses on Artificial Intelligence or Fuzzy framework on Strategic FM services and Asset management in the form of data analytic, facilities cost management, green and smart building technologies that will produce voluminous amount of data, integration of active and passive designs for energy conservation management, and the realization of real time sustainability in building design for maintenance; as well as coordination and cooperation between disciplines in design, construction, project close out, project life cycle and whole life cost of Asset Management which is the essence of strategic Asset management and in collaboration with BIM and CAFM software application.

In the digital age of creating a better building and facilities management team, a difference has grown between creating smart buildings and truly intelligent facilities management strategies. These strategies differ by being intuitive versus smart and self-managed versus manual activities. If you are not sure about your facility's use of smart or intelligent facilities management practices, you need to ask yourself these questions.

## Objectives

- To understand the theory and fundamental principles of Data Analytic in the context of Strategic FM and Asset Management
- To understand energy management measures, Technologies and Internet of Things in facility management from data Analytic, life cycle modelling software and energy apps perspective
- To collect and collate green building technological data to enhance total building performance via the use of KPIs and use of simulation tools and techniques to predict total building performance
- To know Building & Asset management, operation, design for maintenance management and the various types of Maintenance strategies befitting the direction of "SMART" asset policies
- To apply Asset Management principle in the earlier life of project and determine the project value and risk assessment evaluations
- To facilitate an integrated design for maintainability & High Performance Building standards as a dynamic and iterative process
- To conduct cost-benefit analysis of options, explore innovative solutions to enhance sustainability and Value For Money (VFM) scores
- To understand the importance of sustainable FM evolving around asset management, and whole Life Cost of Asset that will enable value creation, risk management and Green productivity in the built environment

## Programme Details:

**Date** : 13 & 14 September 2021,  
(Monday & Tuesday)

**Time** : 9am – 6pm

**Venue** : IES Academy @ Jurong East

**CPD** : PDU (PEB) / PDU  
(CEng) / PDU (SCEM)

**Course Fee** : \$535.00 (IES Members)  
\$642.00 (Non Members)

*\*Certificate of Attendance will be issued to participants with **100%** attendance.*

### **IES Academy@Jurong East**

80 Jurong East Street 21, #04-10  
Devan Nair Institute for Employment  
and Employability, Singapore 609607

Contact Person: Jessie Tan (Ms)  
Tel: 6461 1250 | Main Line: 6463 9211  
E-mail: [jessie.tan@iesnet.org.sg](mailto:jessie.tan@iesnet.org.sg)

## **Target Audience**

Property Developers, Fund Managers, Architects, M&E engineers, C&S engineers, Quantity surveyors and Chartered Engineers/Valuers, Facilities managers, Plant and production Managers, Maintenance Personnel, Technical Practitioners, Contractors, System Operators, Asset Owners and Accounting Professionals, Project Managers who wish to explore the opportunities of introducing best practices in strategic cost and asset management with the objective of improving their productivity, effectiveness and efficiencies via the use of data analytics and cloud computing or equivalent.

## **Course Content**

### **Day 1:**

#### **- Fundamental Principle of FM Data Analytics**

FM Data analytics is the art and science of analysis, interpreting and evaluating meaningful information and patterns out of large quantities of data. Applying data analytics to the information generated by FM equipment and systems have been proven to be a highly effective way to reduce operating costs and improve facility operations, turning company data into commercially valuable information.

#### **- Configuration of data and information system**

Performance management is frequently defined as a process by which company manages its results and performance in line with its corporate goals and functional strategies. In Facility Management (FM), the objective of that process is to accomplish an integrated control system, where the corporate and functional strategies are transferred to all support processes, activities, tasks and personnel. However, not everything that can be counted counts, and not everything that counts, can be counted, the challenge is to select and maintain a manageable number of monitored KPIs, and how we can use the selected KPIs to reduce cost and increase maintainability and reliability of total building performance.

#### **- Understanding BIM - FM and Asset Management**

BIM (Building Information Modelling) is becoming increasingly important in Building and Construction industry. It can include 7 dimensions of data to support processes for different stakeholders. The great potential of BIM is to provide accurate, timely, and relevant information not just during design and construction for a single building, but also throughout the lifecycle of entire portfolio of facilities. The use of BIM technology in the operational phase is just beginning to take hold as building owners look for new ways to improve the effectiveness of facility operations.

#### **- The Impact of Data Analytics upon Building Performance**

This session will introduce real cases that utilize data analytics process to better improve the building performance. Such as the alarms monitoring system and analytics to incorporate Detect sensor values outside of alarm limits; automatically correlate equipment operating status with energy consumption across a specific period of time. This will help us better understand how access to data opens up new opportunities for providing value added services thereby integrating sustainability into our FM operation and management.

### **Day 2:**

#### **- Introduction to ISO55000**

Introduction the new standard ISO55001 : 2014 on Asset Management to allow participants to acquire basic level of understanding to manage asset lifecycle.

#### **- Asset Management Lifecycle**

This module discusses asset life cycle – from specification, acquisition and installation to disposal of assets. It covers both internal and external factors influencing asset life cycle taking into consideration of impact and requirements of different businesses.

#### **- Asset Related Risk**

This module will help participants identify measure and manage risk. It includes consideration of risks assessment and management, quality assurance, performance, monitoring and enhancement of assets.

#### **- Quality Asset Data and Information**

This module covers asset knowledge systems and procedures, use of IT as an asset management tool, selection and use of appropriate systems and procedures for data collection, dissemination, storage and maintenance.

## Trainer's Profile (Day 1)



### **Dr. Kang Kok Hin**

(Managing Director, MPF Consultants Pte Ltd) Dr. Kang earned his 1st class honours B. Eng (Mechanical Engineering) from Monash University of Australia (PSC scholarship). He also obtained his Master of Engineering degree and Doctor of Philosophy in Building Science from NUS. Professionally Dr. Kang is a Chartered Engineer in Australia and UK, Professional Engineer in Singapore; Corporate members of IFMA (USA)/BIFM (UK) in Facilities and Project management. He is a corporate member of ASHRAE (USA); ASME (USA); Fellow of Institute of Plant Engineers UK and Fellow of Asian Concrete Institute of Singapore. He founded the Institution of Facilities Management (IFM), Singapore and is currently its Honorary President. He sits in the "Spring Singapore Technical Committee" for Building and Maintenance Services as Committee Member. He also assisted Singapore Test Services in the R&D of advanced project management training. Dr. Kang is an Adjunct A/P, School of MAE Faculty, NTU; an concurrent Adjunct A/P of University Of Manchester UK for MSc (Project Management). He was also Adjunct A/P in 2010 – 2012 for the School of Facilities and Events Management/SUSS, and Chairman of the Program Advisory Committee (2010-2012).

Dr Kang started as a design and maintenance engineer with Singapore Public Works Department where he garnered the expertise in building design, operation and sustainable facilities/Infra-structure management, strategic project management with his 30 over years of experiences in General and International business Management & international FM; in the capacities of General Manager of IT Park Bangalore India; and Director of Wuxi Industrial Park China etc.; plus General Manager of CDL's 100% owned subsidiary company CBM etc. For industry participation, he lectures in Singapore Building Construction Authority (BCA) & BCA Academy on Green Mark FM certification, Construction Management productivity, Sustainable FM, Project Design/Planning/Control and FM Solutions. He also sits in the BCA Academy BIM-FM steering Committee. He has had several academic exchanges of Asset and Energy management with several Chinese universities and Industrial Parks, Retail malls, office/commercial, Institutions and industrial buildings on the importance of becoming green via the integration of data analytic, integrated maintenance planning with Artificial Intelligence, innovative technologies such as BIM-FM, strategic and sustainable FM approaches. He has also been reaching out to Institution of Engineer Malaysia and IKRAM (Malaysia Public Works Department).

## Trainer's Profile (Day 2)



### **Mr. Ho Chee Kit**

Mr Ho holds a Bachelor of Engineering (Electrical and Electronics) from Nanyang Technological University and a Master of Science (Power Engineering) from National University of Singapore.

He is currently the Senior Director for Cushman & Wakefield for Asset Services and Facilities Management. His career history also include more than 20 years' experience in design, planning , operating and maintaining institutional, government and defence facilities and infrastructures, office, residential, commercial and industrial properties. He is a certified Fire Safety Engineer (FSM), Singapore Certified Energy Manager (SCEM) and Certified Reliability Engineer (CRE).

## REGISTRATION FORM

### Facilities Management and Strategic Asset Management via Data Analytics and AssetFuture (Two-Day Seminar cum Workshop) 4<sup>th</sup> Run

Date of Course:	13 & 14 September 2021 (Monday - Tuesday)		
Course Time:	9.00am to 6.00pm		
Venue:	IES Academy@Jurong East 80 Jurong East Street 21 #04-10 Devan Nair Institute (e2i) S(609607)		
Course Fee:	\$535.00 (IES members); \$642.00 (Non-member)		
CPD Programme:	PDU (PEB) / PDU (SCEM) / PDU (CEng)		
Course Coordinator:	Jessie Tan (Ms) Tel: 6461 1250 Email: jessie.tan@iesnet.org.sg		
Closing Date:	3 September 2021 or till class is full (whichever comes first)		
<b>Participant's Details:</b>			
Name (As per NRIC):		NRIC/FIN:	
Company Name:			
Address:			
		Postal Code:	
Office No:		Mobile:	
		Gender:	Male / Female
Email:		Designation:	
Please indicate: (where applicable)	<input type="checkbox"/> IES Member No:		<input type="checkbox"/> PE / SCEM No:
	<input type="checkbox"/> Non Members	<input type="checkbox"/> Company Sponsored	<input type="checkbox"/> Meal Request - Vegetarian
<b>Contact Person (HR/Accounts Department)</b>			
Name:			
Contact No:		Designation:	
Email:			
Address (For mailing of invoice):			
Payment Nets/Cheque No:		Amount:	
<ul style="list-style-type: none"><li>➤ Cheque to be made payable to <b>IES ACADEMY PTE LTD</b></li><li>➤ Written notice via email to course coordinator is required for Cancellation or Withdrawal from Course, 7 working days prior to course date</li><li>➤ Course fees are inclusive of 7% GST, course materials and Halal refreshments</li><li>➤ Certificate of Attendance will be issued to paid participants with 100% Attendance</li><li>➤ No-Show of participant would not be accepted as reason for withdrawal or cancellation from course. Thus course fee is chargeable</li></ul>			
Acceptance of Terms & Conditions for Registration of IES Academy Courses / Events I have read, deemed understood and accept the Terms & Conditions of IES Academy courses and events.			
Name:			
Signature:		Date:	

## **TERMS & CONDITIONS FOR COURSE REGISTRATION**

### **Registration**

Any registration, whether online, fax or by email, will be based on a ***first-come-first-served basis*** and will only be confirmed upon receipt of full payment by **IES Academy Pte Ltd** unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

### **Closing Date & Payment**

The closing date of the event will be 1 week prior to event commencement date. Cheques should be crossed 'A/C payee only' and made payable to **IES ACADEMY PTE LTD**, with the ***Date of event, Title of The Event and participants' name indicated clearly on the back of the cheque***, and post to:

**Attn: Jessie Tan**  
**IES Academy@Jurong East**  
80 Jurong East Street 21 #04-10  
Devan Nair Institute for Employment & Employability  
Singapore 609607

### **Confirmation of Registration**

Confirmation of registration will be given at least one week before the commencement date of event via email. ***If you do not receive the said confirmation email, you are required to contact IES Academy at 6463 9211 during office hours.***

IESA reserves the right to allow only confirmed and paid registrants to attend the Event.

### **Withdrawals/Refunds of Fees**

- Written notice **at least 1 week in advance** before the commencement of the event
- Full course fee shall be refunded subjected to 4.5% transaction charge
- **NO** refund otherwise.
- No-show of participant would not be accepted as a valid reason for withdrawal/refund.
- One time replacement is allowed only if written notice is received by us at least 1 week before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees.

### **Cancellation/Postponement**

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IESA reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

### **Personal Data Protection Act**

By registration, you consent to the processing by Institution of Engineers, Singapore of personal data, including your sensitive personal data as defined in the Data Protection Act 2014 for the proper purposes of Institution of Engineers, Singapore (IES). You undertake to observe the provisions of the Data Protection Act 2014 in relation to any personal data you may hold and process as a Members of Institution of Engineers, Singapore, and you agree to indemnify Institution of Engineers, Singapore from liability for any claims or damages that may arise from the processing of this data. For more information kindly refer to [here](#).

### **Enquiries**

For further enquiries, please contact IESA general office at Tel: 6463 9211.