V O L 47 D E C 2019

### HONG KONG 香港工程師

# ENGINEER



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## Robotics Process Automation

saving costs, one mundane task at a time

Float and sink construction methodology for tunnel box structure





#### **Talent Cultivation for the Digitalization Journey of the AECO Industry**

Co-developed BIM Manager Training Course by BSI and HKU

Since 4 April 2016, BIM Level 2 is mandatory in a government project in UK. In 2017, the HKSAR Government decreed that BIM technology must be used in the design and construction of all major government capital works projects with a project estimate of more than HK\$30 million that were scheduled to start during or after 2018, and that the use of this technology in private construction projects should be promoted.

To ensure the healthy development of BIM in Hong Kong, the Construction Industry Council (CIC), has introduced the BIM Certification and Accreditation Schemes to ascertain the competency of BIM personnel and the quality of local BIM training courses. CIC held the BIM Certification and Accreditation Schemes Certificates Presentation Ceremony on 1 August 2019. Speaking at the ceremony, Ir Albert CHENG, Executive Director of the CIC mentioned that BIM is an essential tool for the construction industry in the future and hoped there will be wider adoption of BIM in Hong Kong.



Ir Dr. Richard PANG, Director - Industry Development of the CIC (right) presents the certificate to the representatives of BSI (middle) and HKU (left)

#### **CIC-accredited BIM Manager training**

CIC-accredited "Global BIM Manager Professional Training" jointly developed by British Standards Institution (BSI) and The University of Hong Kong (HKU), shares a global vision on talent cultivation for the digitalization journey of the AECO industry.

The course aims to deliver high-quality professional training from various perspectives and good practices from the globe, which includes what BIM is, setting client buy-in and supply-chain supported BIM strategy, understanding of the global and local BIM standards, technology trend, digital information management, setting up ISO compliant Common Data Environment (CDE), awareness of commercial and contractual aspects etc.

Through a series of reflective activities and workshops, the delegates were benefited through discussing within or cross the groups and sharing their practical experience on the understanding of information management and requirements using the digital twin through-life. Through the vivid five-day course, they were upskilled with the perceptions and capabilities of how to maximize the value of Project Information Model (PIM) and Asset Information Model (AIM) for the employer and supply chain as a manager on the use of asset data and information through-life to drive the organizational BIM adoption and digitalization journey.

Till now, the majority of delegates have reflected that in HK AECO industry, the professional capacity of practitioners was one of the most significant barriers of the industrial digitalization. The value of training is not only about 'What', but it is also about 'Why'; to genuinely pass on 'how to do' through establishing the practitioners' knowledge bases as good practices.



"Through this training, delegates can gain a better understanding of the global and local BIM standards (ISO 19650 and HK CIC BIM standards) and certification systems, laying a solid foundation for the company for the implementation

of the ISO BIM transition in the next phase. It also helps to differentiate the AECO industry and to maximize the value of sharing best practice globally," said Ir Dr Tang.

This training course is registered under VTC Reindustrialisation and Technology Training Programme (RTTP) and CIC Construction Innovation and Technology Fund (CITF). Delegates will be subsidized if they fulfill the related requirements.

#### Milestone in BIM's global journey



Dr Bew stated that "The establishment of this course – and the instrumental role it will play in embedding digitalised processes within Hong Kong's AEC sector - marks an important milestone in BIM's global journey."

Around the globe, BIM is delivering change – a step-change in the efficiency of delivering complex projects, in the operational performance of assets and in the social outcomes that are being generated. In short, it is transforming how our built environment serves the people and communities who use it.

"Today, as technology advances, so the positive impact that our digitalised approach towards the design, build and maintenance of our assets is able to make, increases." Dr Bew added.

The advent of the internet-of-things (IoT), advances in capturing techniques and networked sensors is providing an abundance of data about the environment around us. Through cloud-based platforms, we can connect, aggregate and fully exploit that data – BIM, IoT and GIS datasets - during project delivery, to provide insights and intelligence and support better decision making across the whole lifetime of an asset or portfolio of assets.

CDE is advancing - from static information models to the 'digital twin' - a virtual representation of the physical asset that brings in data from a wide variety of sources. Already streamlining performance and facilitating enhanced service provision in industries such as aerospace and manufacturing, in construction, the twin is enabling optimisation of both the operation and maintenance of assets as never before. Problems are foreseen and prevented and a seamless experience ensured for the end-user or customer.

The positive impacts unlocked through the development of the digital twin scale from project level right up to a national level – to cities and their systems. Digital twins can support the effective management and planning of infrastructure and the development of 'smart' environments fully attuned to their users' needs.





"Content is not provided by the Hong Kong Engineer."