



### **Introduction to BIM For Civil and Structural Engineers Series – Overview and the Malaysian Roadmap (2<sup>nd</sup> session)**

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The Introduction to BIM for Civil and Structural Engineers Series - Overview and the Malaysian Roadmap (2<sup>nd</sup> session) was organised by the Civil & Structural Engineering Technical Division of The Institute Engineering of Malaysia on 25th January 2018. The technical talk was chaired by Ir. Yasotta Chetty and attended by 38 participants.

The 1<sup>st</sup> part of the talk was presented by Ir. Mohd Faiz Shapiai. Ir. Mohd Faiz Shapiai is a qualified applicator in Revit Architecture and Structure. He has been involved in RMK 9 and 10 building projects for the Ministry of Education and the Ministry of Higher Education. The 2<sup>nd</sup> part of the talk was given by Mr. Isrin Ismail. Mr. Isrin Ismail expertise is in BIM. He has 12 years of experience in engineering, construction and facility management. He conducts BIM training to the industry and academia

The 1<sup>st</sup> part of the talk started with the introduction of BIM which is a process for creating and managing information on a construction project across the project lifecycle. Ministry of Works (JKR) role is focusing on formulating BIM policy direction. They also create awareness and develop a competent human capital for implementing BIM.

JKR has been benefiting from the implementing of BIM. According to Ir. Mohd Faiz Shapiai, BIM may help the construction industry through cost control, reduce number of requests for information, changes during construction, project quality, improved understanding of design intent and most important is to reduce conflict during construction (up to 68%). Although BIM is beneficial to the construction industry, the implementation is difficult due to the mentality of industry to convert convention working process to BIM. The adoption becomes more challenging when industry players are required to invest in expensive infrastructures and human capital training while implementing BIM.

The 2<sup>nd</sup> part of the talk was regarding BIM in civil & structure (C&S) construction. Mr. Isrin Ismail explained that Malaysia is moving towards BIM level 2 by Year 2020. The reason of implementing BIM is due to the lack of productivity in the construction industry compared to the manufacturing industries. The difference is up to 1.7 times. Hence, emerged an idea from the construction industry to learn from the manufacturing industries. In the Industry 4.0, production will be based on intelligent production, which incorporate internet of things (IoT), cloud technology and big data. BIM will be an effective tool to achieve this objective. Data and information of the project can be easily shared among the stakeholders to understand the project better. Applying BIM may eliminate up to 40% unbudgeted change during construction. The cost estimation time can be greatly reduced till 80% and the accuracy of the cost is said to be within 3%. A 10% contract value can be saved due to proper design coordination and clash detection. Mr. Isrin Ismail also stressed that project time can be cut up to 7%.

Before starting to implement BIM, Mr. Isrin Ismail encourages engineers to study on their contract requirements and focus on design coordination. One will also need to identify the strength and weakness of their team members. A good workflow and proper collaboration with other project stakeholders is the key to success in the BIM adoption.

The talk ended with questions and answers session. To appreciate the contribution of Ir. Mohd Faiz Shapiai and Mr. Isrin Ismail for sharing their knowledge in BIM, Ir. Dr. Ng Soon Ching, the chairman of Civil & Structural Engineering Technical Division presented both the speakers a token of appreciation.



*Ir. Dr. Ng Soon Ching presented a token of appreciation to Ir. Mohd Faiz Shapiai*



*Ir. Dr. Ng Soon Ching presented a token of appreciation to Mr. Isrin Ismail*