

# DIGITALISATION IN BUILT ENVIRONMENT

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The world is changing fast. The global megatrends are triggering the construction industry with increasing population, higher demand in affordable housing, transportation and utility infrastructure. With a tidal shift in how the industry faces the challenges by building solid digital foundation through collaborative endeavour, the construction industry pursues its revolution, the 4<sup>th</sup> Industry Revolution. The revolution is not only limited to construction industry, it is a transformation with automation, data exchanges, Cloud, Big Data, AI, *Internet of Things* (IoT) and (semi-)autonomous industrial techniques to realise smart industry and manufacturing goals in the intersection of people, new technologies and innovation.

The Industry 4.0 is driven by digital transformation, embracing technologies and the potential data transaction in order to improve the industry performance. The digital awakening in the Built Environment allows integration of technologies in other industries which create interoperability, virtualisations, decentralisation, Real-Time capability, service orientation and modularity. The introduction of Industrialised Building System (IBS), establishment of Building Information Modelling (BIM), integration of Augmented Reality (AR) and Virtual Reality (VR), assimilation of Unmanned Aerial Vehicle (UAV) has given a different interpretation of Built Environment to the public.

Digitalisation in Built Environment has optimised the construction performance. IBS no longer manufactures specific components but it is now able to assemble modular units off site. BIM is now not limited to Dimensional modelling only but the model can now be presented in different platforms which can be integrated with various digital devices. AR and VR are not only privileged for game design, but the concept is implemented in Built Environment education and training purposes too. Digitalisation will change almost everything, which enables the industry to leapfrog to the latest, proven innovative method.

The Malaysian construction industry is moving forward, albeit in a slower pace. Digitalisation concept has just been accepted in the country. The Malaysian construction industry is in a transition period, transforming from analogue technology to digital integration. However, the readiness of the stakeholders in terms of financial, business model, organisation planning, operation and maintenance as well as top management's commitment are hindering the digitalisation adoption. Still, the age of digital is upon us, we either accept the megatrend to move forward or risk being left behind.

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