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# For IBS to be fully adopted, upskilling of workers is crucial

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Foreign labour for construction and property development may be difficult to obtain if more stringent regulations are formulated to ensure the health of labourers brought into the country. So is it time to look again at how the Industrialised Building System (IBS) can protect these industries from the spread of infection among workers in future pandemics and the shut-down of worksites?

The government believes IBS will benefit the country overall. Since 2008, it has been compulsory for all public projects worth above RM10 million to use IBS and achieve a minimum IBS score of 70. Private projects, on the other hand, have to use IBS for projects worth more than RM50 million, with a minimum score of 50. In 2019, 35% of private projects achieved scores above 80. However, the adoption of IBS in the private sector is still slow.

Savills (M) Sdn Bhd managing director Datuk Paul Khong believes IBS can help the property development and construction industries but training is needed.

"IBS requires skilled labour as well as appropriate training. The many advantages of IBS is that it reduces construction time, with significant cost savings by minimising delay in completion, labour requirements and controlling product quality. Costs reduction stems from mass production through economies of scale and repetitive usage of formwork, especially in high-rise and residential buildings.

"To promote IBS in the construction industry, the related government agencies need to play a bigger role in spreading awareness and laying down proper guidelines on finance and cost controls as well as the correct applications of the system," Khong adds.

While the benefits of IBS have been clearly put forward, the reality is that it can't overcome some limitations, according to CBRE | WTW group managing director Foo Gee Jen.

"Conventional IBS construction, even if it is precast, can save on labour input by only about a quarter. This is still insufficient to effectively elevate productivity and compensate for labour shortfalls.

"In this regard, a full-spectrum technological shift in the construction industry is needed. We understand that technology of that sort is already available in Malaysia — for example, the digital IBS facility owned by Gamuda with capabilities for designing via cloud technology, robotic manufacturing and seamless installation of homes. It is said to be able to reduce manual labour by two-thirds," Gee Jen adds.

Khong says, "Gamuda Bhd is one of the first companies in Malaysia to adopt IBS technology on a mass scale — it has a combined capacity of 10,000 housing units annually. With the utilisation of this fully automated system, high-rise buildings were completed in 24 months instead of 36; landed homes were built in 12 months instead of 24; and dependence on foreign manual labour was reduced by about 60%."

If construction methods need to be upgraded, then plans have to be put in place to ensure that the industry is not stalled for a significant span of time.

Master Builders Association of Malaysia president Foo Chek Lee says, "In the short term, both consultants and contractors have to be taught how to design and construct in IBS. Previously, there was an abundance of cheap labour. The situation is different now, and with the initiative by the Construction Industry Development Board Malaysia, the use of IBS is currently gaining momentum.

"For this to be sustainable, the present enforcement of the law on the compulsory use of IBS would be a good start. The investment in the setting up of IBS component production facilities will enable components to be made more readily available."

While the construction sector's processes and systems require upgrading and updating, property developers have a role to play too, but there are some challenges.

"The reality is that, currently, many developers are not capable of making the transition from conventional ways of construction to IBS. One of the reasons is that the initial cost is between 10% and 20% higher given volume is still low," says Real Estate and Housing Developers' Association Malaysia (Rehda) president Datuk Soam Heng Choon.

"We also need to consider the high cost to initially set



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up the factories and procure machineries. The whole supply chain, including the availability of professionals who are conversant in the design and supervision, will also need to be looked into to ensure that the process is seamless.

"IBS uses less manual labour, but workers that are knowledgeable in IBS are still much needed. At the moment, we lack workers with expertise in the field. There are also other issues to be addressed before IBS can be fully implemented by developers, such as the lack of IBS component suppliers and the sustainability of IBS equipment manufacturers," he explains.

One other aspect is whether homebuyers are willing to accept IBS buildings, especially as they are unable to make renovations easily, and accept alternative building materials, he adds.

CBRE | WTW's Gee Jen agrees that the initial cost of setting up an IBS system is high and only justifiable if economies of scale can be achieved.

"The government could take the first step to attract more developers to invest in IBS. For instance, it could mandate the use of IBS or even grant preferential rights to developers with proven IBS expertise to undertake large-scale affordable housing developments for them to leverage economies of scale," he says.

"Also, the government should introduce IBS learning in vocational education and provide incentives for upskilling or retraining the existing workforce for IBS. This helps to create a sustainable ecosystem whereby IBS could develop into a job generator for locals and ultimately reduce reliance on manual foreign labour in the construction industry."

That being said, Gee Jen acknowledges that there is still a long way to go before IBS is fully adopted. For instance, existing building regulations were drafted before IBS was well known and have not been updated to cater for the difference between IBS and conventional construction.

"Making IBS-constructed buildings comply with building regulations and certification requirements suited for conventional construction adds on to the cost of using IBS. This is further complicated by building regulations being drawn up and enforced by different states and local authorities instead of standardised national guidelines," he says.

While cost is one factor determining the use of IBS, de-

velopers are not averse to using it. However, clear direction and support will help.

"We do believe IBS can be one of the solutions to address labour shortages, but as long as the pertinent IBS issue of cost is not given its due consideration, it will take a longer time for the industry to embrace it fully," Rehda's Soam says.

"Given the push due to the Movement Control Order, which mandates fewer workers at the workplace and the practice of social distancing, we hope there will be an acceleration of the adoption of IBS. It is important that we upscale the workforce to embrace new technologies and adapt quickly.

"In the light of the pandemic and any other global or national events that could halt construction progress, developers and construction companies are highly reliant on the government and regulatory bodies to ensure that all industry players are given assistance during these difficult times," says Soam.