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Making IBS matter in construction sector

INDUSTRIALISED building systems (IBS) have been positioned as a game-changer for Malaysian construction, presenting a technological solution to the sector's current dependence on affordable foreign labour.

However, the uptake of the construction approach has been sluggish despite concerted efforts from regulatory bodies such as the Construction Industry Development Board (CIDB) Malaysia and Master Builders Association Malaysia (MBAM) to promote the technique.

This is particularly apparent in the private sector, with just 14% of private projects worth RM10 mil and above achieving IBS scores greater than 50, while 69.5% of public projects worth RM10 mil and above have achieved IBS scores greater than 70.

"Is the industry ready for IBS? Is the current environment of the construction industry, including the legislative and regulating provisions, and taxation supportive

for the industry to practise IBS? Frankly, the answer is 'no'," says Rehda Institute chairman Datuk Jeffrey Ng.

Legal and standards issues

Ng's statement underscores how much more the IBS ecosystem has to grow, with the Uniform Building By-Laws 1984 (UBBL) and IBS component standardisation seen as key sticking points for adopters.

The UBBL outline a set of standardised building regulations for local authorities as well as building professionals.

These include architectural, structural, constructional, health and safety, and fire protection requirements, along with guidelines for building approval and occupation.

The UBBL were originally devised to address building-related mishaps due to non-standardisation, resulting in the collapse of flats and outbreak of fires in Kuala Lumpur in the early 1970s.

However, they are seen as overly restrictive in terms of IBS

adoption, with undue emphasis on material compliance instead of performance-based specifications.

"The by-laws must be totally revamped for IBS to be successful. It is currently impossible, for example, to submit building plans for a house without a room layout, though this is practised overseas," says Rehda Institute trustee Datuk Ng Seing Liong.

Such open-ended units allow purchasers to customise their floor layouts while saving renovation costs.

The UBBL also require submission of building plans in their entirety, disallowing design-and-build approaches where a project is progressively conceptualised and constructed.

Both open-ended units and design-and-build procurement methods work well with IBS due to its theoretical standardisation of component dimensions.

Unfortunately, this standardisation is more a guideline than a rule within the domestic sector, due to the absence of an enforced

benchmark for IBS components.

Currently, component standardisation is governed by Malaysian Standard (MS) 1064: Guide to Modular Coordination in Buildings, issued by the Department of Standards Malaysia (DSM).

In MS 1064, dimensions for modular components ranging from staircases and doors to reinforced concrete slabs are specified, along with preferred sizes to simplify procurement.

However, MS 1064 compliance is in no way mandatory for an IBS project, with adherence to its guidelines simply affording the project a higher IBS score.

This has the effect of indirectly encouraging the customisation of IBS components, leading to the proliferation of non-standardised components.

In the long run, this will prevent economies of scale from bringing the cost of IBS adoption down, as standardised components will still be in short supply.

Giving in to demand

However, perhaps the largest challenge IBS is facing can be seen in the demand side of the equation, with end-users unaware of the approach and developers indifferent.

"We have the capabilities. There are now 242 registered IBS manufacturers and nearly 1,000 installers of IBS systems," says Malaysian Institute of Architects committee member Abu Zarim Abu Bakar.

"However, most of these manufacturers are operating at less than 50% capacity. There simply aren't enough IBS projects around," he laments.

This comes despite the inclusion of a RM500 mil IBS promotion fund in Budget 2016 providing soft loans to developers and contractors in category G5 and below.

High capital costs, including import duties on IBS machinery, are often cited as barriers to IBS adoption by small and medium-sized construction players.

To-date, only RM60 mil of the fund has been disbursed.

Increased private uptake is critical in upgrading the productivity of the domestic construction industry, with the private sector accounting for RM95.89 bil (77%) out of a total RM124.96 bil in construction contracts last year.

To accelerate this adoption, the government has ruled that private projects worth RM50 mil and above will need to achieve a minimum IBS score of 50 out of 100. The policy will apply to projects under 10 local councils in the Klang Valley from next year, with subsequent enforcement in other states.

Education on the part of end-users is also necessary to facilitate the spread of IBS, as there will be no impetus for developers to adopt the system without demand from consumers.

Drywall, for example, is a recognised IBS technique requiring less time and manpower to complete, which is commonly employed in residential construction overseas.

- **Industrialised** building systems may be the future of construction but the uptake has been sluggish

- **Uniform Building Bylaws** need to refocus on performance-based specifications rather than material compliance



by Aliff Yusri



Top: The construction sector is not yet ready for widespread IBS adoption, says Jeffrey

Above: For IBS to succeed, the UBBL must be completely revamped, says Seing Liong



Below: Just 14% of private projects worth RM10 mil and above achieve IBS scores of 50 or more



Current incentives leave existing IBS practitioners and early adopters unaccounted for