



## GREEN SERIES

BY BRIAN CHUNG

# Wiser choice of green

> Green construction and buildings reduce capital costs, benefit widely

**S**USTAINABILITY has become a concern across all sectors – including technology and construction. From renewable energy to a cashless society, the current climate issues that have caused turmoil and unrest, even taken lives, have spurred innovations and stimulated initiatives to preserve the planet by adopting responsible practices.

While many conscientious minds have moved on to greener methods of working within their work environments and lifestyles, there are always those hesitant or slow in adopting change.

One sector going through this “shift” and moving into “green gear” is the construction industry. Malaysia Green Building Confederation (MGBC) board member CK Tang shares his professional views and industry insights.

### INITIATIVES AND ISSUES AT POINT

“The construction industry has been going through a struggle in the area of green development. When it comes to buildings and property, price and location is always the focus. “Tang made this statement during a presentation delivered at the International Urban Sustainability and Green Building Conference (IUSGBC). He puts the resistance and reluctance to consider (for the man on the street) or take on (for the property developer) sustainable and more green methods of construction, to the lack of awareness and understanding. He underlines the little emphasis put on sustainability in these three common circumstances:

- 1) When people talk about choosing a property, the usual points in question are on location, price and aesthetics. The emphasis on these three factors often relegates the sustainability of a building (its impact on the environment). Matters pertaining to energy efficiency and green building features are thought of as just a bonus feature.
- 2) Those who are interested in green development when it comes to commercial buildings are usually conglomerates and multinational firms. This scenario often gives people the perception that “going green” is only affordable to major-league establishments. Small companies often neglect or may not have the budget and time to think about the “DNA of the building” other than the aforementioned factors.
- 3) There are too many green tools and certification bodies in the market confusing both professionals and developers. Professionals view the amount of green tools in the market as an additional burden, as they are unsure which standards to follow and what are the essential or necessary green methods to take on.

According to Tang, “The irony is that there is awareness among Malaysian developers and architects on sustainable development; local authorities have

also showed their interest in the idea of developing green buildings in their neighbourhoods (as compared to the general attitude some 15 years ago). Yet, the enthusiasm has not translated into action and initiatives have not been taken up as the property market is still dominated by location, price and aesthetics.”

### MISCONCEPTIONS, CAPABILITIES AND GETTING TO THE CORE

On the issue that green buildings are thought to be expensive, Tang opines: “Green is expensive when the standard design is slapped on with green features; with each feature as an additional cost. It is expensive because we dare not take the risk, especially engineers and specialists. Most would prefer to stay within tried and successful formulas rather than improve or improvise.”

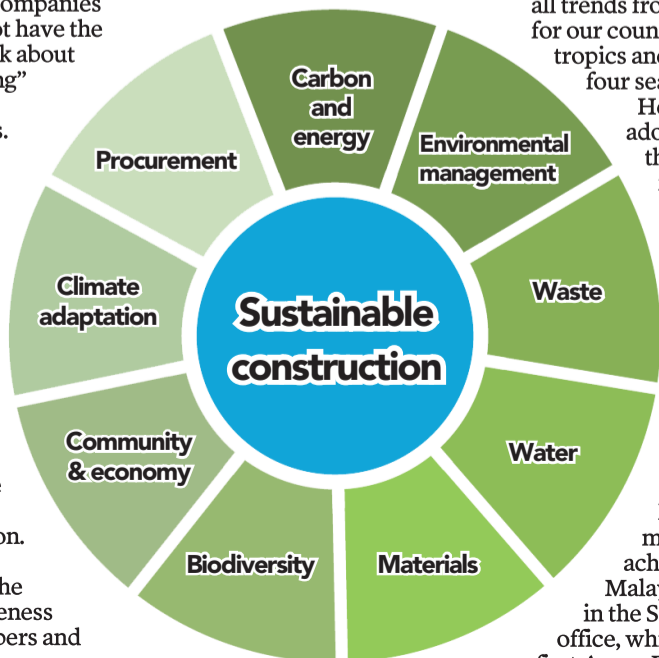
He adds that many developers tend to just add on green features to the standard design of their buildings instead of implementing sustainable methods and elements of construction into the blueprint from the beginning.

Tang declares that this risk-averse attitude towards sustainable development, coupled with the reliance on pre-existing designs are the culprits that give the perception that green buildings are expensive.

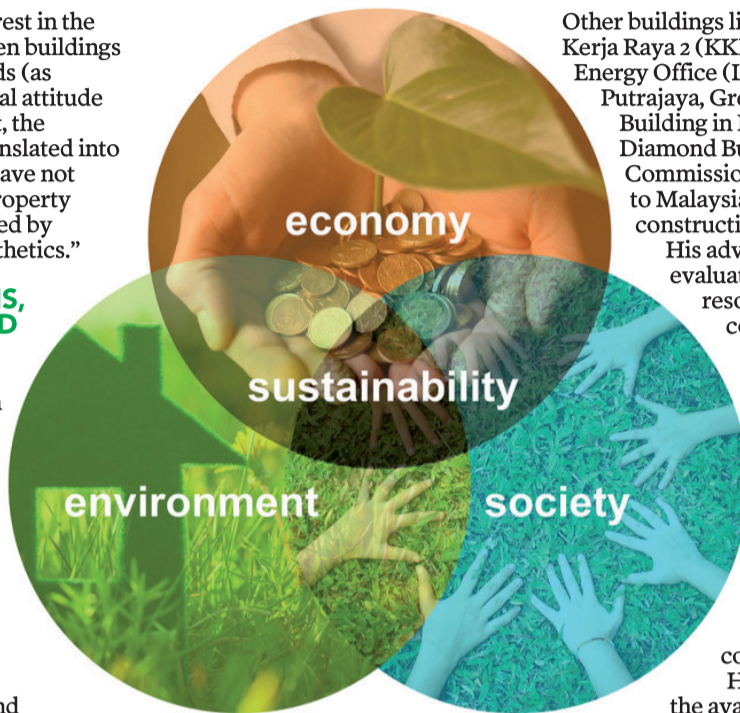
Besides this, the idea of adopting trends and technology from other countries bring us to another perception, of the country’s incapacity to innovate and come up with new and sustainable building methods.

Tang feels Malaysians have the tendency to doubt their capabilities and achievements in setting trends that lead in innovation. This meek attitude (some call Asian culture) has often “led some companies to blindly adopting Western trends and technology without weighing in their local context”.

Tang circumscribes the dilemma with the following thought.



PHOTOS/SURVEYMONKEY-ASSETS



PHOTOS/WWW.DFAB.CH

“The question is this: Is green expensive because professionals are not being paid to be hard working? Or is green expensive because professionals are not taking the risks to up-selling themselves?”

“Before we blame the developers for anything, we may need to blame ourselves for not up-selling ourselves. This is a problem because the green issue is about power play in the industry, as organisations are fighting one another and reinventing the same wheel of blaming each other. Some of these man hours in placing the blame on each other could have been used to innovate and implement new ideas. We not only need to make green more affordable but also more exciting,” Tang shares.

### SUGGESTIONS AND SOLUTIONS

At the presentation, Tang offered some solutions and advice to developers and architects.

He says the first thing that people need to be aware of is of their surrounding. “Bear in mind the local area, the DNA and characteristics of the land intended for development before adopting foreign trends. Not all trends from the West are suitable for our country as Malaysia is in the tropics and not a country with four seasons.”

He urges developers to adopt trends and solutions that are appropriate and feasible to our climate, our environs, our building and development rules and regulations, as well as our culture.

The next issue he addressed is the perception that Malaysia is lagging behind in terms of taking sustainable steps. As it turns out, Malaysia does have the means, expertise and achievements. He cites Malaysia’s green exploits as in the Securities Commission office, which won Malaysia its first Asean Energy Award for Energy Efficient Building in 2001.

Other buildings like Kompleks Kerja Raya 2 (KKR2), the Low Energy Office (LEO) building in Putrajaya, Green Energy Building in Bangi and the Diamond Building (Energy Commission) are testaments to Malaysia’s capabilities in constructing green buildings.

His advice: “Start evaluating the available resources within the country before adopting any technology and trends from abroad.”

Tang also urges developers and those in the construction industry to be innovative and move out of their comfort zones.

He talks of some of the available resources industry players could refer

to.

Innovative software Cost@Work enables developers and architects to determine the right design and materials for their construction work. The programme analyses factors like the type of walls, glazing tiles, direction of the buildings, etc. with information on sustainability benefits and net savings. This software addresses a common practice in the industry that causes problems, which Tang believes is the issuing of separate budgets by the quantity surveyor and the mechanical and engineering departments on the installation of lighting and air-conditioners.

Guidelines for energy efficient building construction for tropical climate locales are available in books like *Building Energy Efficiency Guidelines for Active Design* and *Building Energy Efficiency Guidelines for Passive Design*. These books are written by Malaysians and published in Malaysia and have been used by professionals in other countries, in practice and training/teaching architects. Tang feels these books prove that Malaysia does not have to look to the west for every sustainable trend.

### POOLING TOGETHER FOR CHANGE

However, Tang reckons that there is a need for industry players in the construction line to collaborate, discuss and find new ways to benefit from green development.

As sustainability is defined as “meeting the needs of the present without compromising the ability of future generations to meet theirs”, it has been established and acknowledged across the globe that sustainability affects and involves people, the planet and profits – hence, the vox populi that it is founded on three pillars – economic, environmental and social, “which means sustainable development will not be sustainable if it does not benefit all the respective parties in the construction industry,” Tang adds.

“However, we cannot just solely rely on tax incentives and levies to encourage all parties to go green. Rather, we need to come together to make green development a must and desirable proposition – having

our own solution to suit our country and climate, while simultaneously adopting the necessary trends. We cannot always rely on the government to come up with solutions and directives; we need to take the initiative to make sustainable development a trend,” he prompts.

### GREEN COSTS, GREENER PROFITS

- Upfront investment in green building makes properties more valuable, with an average expected increase in value of 4%. By virtue of lowered maintenance and energy costs the return on investment from green building is rapid: green retrofit projects are generally expected to pay for itself in just seven years.

- Green buildings reduce day-to-day costs year over year. LEED (Leadership in Energy and Environmental Design) buildings report almost 20% lower maintenance costs than typical commercial buildings, and green building retrofit projects typically decrease operation costs by almost 10% in just one year.

- Between 2015 and 2018, LEED-certified buildings in the United States are estimated to have US\$1.2 billion in energy savings, US\$149.5 million in water savings, US\$715.2 million in maintenance savings and US\$54.2 million in waste savings.

### Green buildings use natural resources efficiently, lowering both utility bills and impact on the environment.

- Buildings are positioned to have an enormous impact on the environment and climate change. At 41% of total US energy consumption, buildings out-consume the industrial (30%) and transport (29%) sectors.

- Buildings use about 14 % of all potable water (15 trillion gallons per year), but water-efficiency efforts in green buildings are expected to reduce water use by 15% and save more than 10% in operating costs. Retrofitting one out of every 100 American homes with water-efficient fixtures could avoid about 80,000 tonnes of greenhouse gas emissions, which is the equivalent of removing 15,000 cars from the road for one year.

- Standard building practices use and waste millions of tonnes of materials each year; green building uses fewer resources and minimises waste. LEED projects are responsible for diverting more than 80 million tonnes of waste from landfills, and by 2030 that number is expected to grow to 540 million tonnes.

\*\* Box info retrieved from US Green Building Council website. More interesting information on World Green Building Council website.

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