



## HOW TO WIN ON THE WORLD STAGE

**GEARING UP FOR THE GLOBAL STAGE**

**AUSTRALIA LOOKS AT MANUFACTURED  
TIMBER AS GREEN BUILDING MATERIAL**

**Tan Sri A K Nathan Elumalay,**  
Group Managing Director,  
Eversendai Corporation Berhad

# CONTENTS

## NEWS & EVENTS

- 6** CCCS – Built with IBS,  
Inspired by Sarawak Cultures
- 10** IKEA’s “Safety, Safety, Safety” Mantra
- 14** Rofizlan Ahmad,  
the Man Behind myBIM Centre
- 16** USM Sweeps Top Prizes at Competition  
to Reimagine MRT Stations
- 17** Universiti Malaysia Pahang  
Wins BIM Marathon Competition
- 18** Construction Industry  
Must Leverage on Big Data
- 20** Sime Darby Receives  
Highest QCLASSIC Score for 2017
- 22** Welcome, Newly Appointed  
Works Minister, YB Tuan Baru Bian
- 23** Towards Instilling  
Safety Culture in Construction  
Captains of Industry Roundtable Discussion 2018



- 24** Tan Sri A K Nathan:  
How to Win on the World Stage



- 32** Gearing up for the Global Stage  
Interview with Tan Sri Ahmad  
Tajuddin Ali and Dato’ Ahmad ‘Asri

## 2 EDITORIAL

The International Challenge

## 3 GLOBAL NEWS

Reports from  
Around the World

### CAREERS



#### 38 Changing Mindsets with Visual Technology



### GOING GLOBAL



#### 44 Australia Looks at Manufactured Timber as Green Building Material



#### 46 INDUSTRY TRENDS

Updates from the  
Construction Industry

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# Competing on the WORLD STAGE

Just a few short years ago, our industry players, whether they were contractors, developers or professionals, had a choice – they could choose to play big in the international marketplace, or they could choose to play in the comfort of their own backyard.

Unfortunately, today our own backyard can no longer be considered a safe sanctuary. Global players have arrived in droves to reap the benefit from the booming construction sector on our own soil.

As such, being International can no longer be an option. The only way for our players to make it in this industry is to take up the challenge of globalisation and strive to be at par with international players.

Although it may be quite challenging for local companies to compete with big players in terms of costs, our players certainly can offer good value for money, innovativeness and a high standard of project delivery.

In this issue of HEIGHTS, we capture the success story of Eversendai, a Malaysian company, which has become among the strongest global players in construction. We also feature the story of PCSS Consultancy Sdn Bhd, which specialises in design through Building Information Modelling (BIM) and had won international projects.

Their success stories are something we must all emulate, so that we can all win at the global stage. We look forward to sharing with you more

success stories in the following issues, so that you will be inspired to take the necessary steps to be a global player.

Meanwhile, do enjoy your read!

**Dato' Ir Ahmad 'Asri Abdul Hamid** Chief Executive of CIDB Malaysia



# Worldwide Construction Markets Heating Up

As economies around the world continue to recover, construction is heading into a boom stage. A recent Turner and Townsend survey found that half of the 46 markets studied were seeing significant growth, while only two markets surveyed seemed to be slowing down. Of the markets, Amsterdam, San Francisco and Seattle lead the charge, with Dublin, Melbourne, Munich, Sydney and Tokyo still coming on strong. Regionally, South America, Africa and Asia are seeing strong growth. The survey also made note that 67% of those surveyed were having a hard time finding skilled labour, which may lead to higher construction costs as labour rates rise to the increased demand. This reflects the 90% of contracting firms in the US experiencing labour shortages and 50% that expect the problem to continue in the next six months.

## Expo 2020 Dubai Construction Currently On-Time

One aspect of construction that plagues contractors are delays in the project that throw the overall timetable off. Though many contractors pad their timetables to ensure the project is still completed on-time despite delays, this common problem seems to be absent on the extensive world's fair project being undertaken in Dubai, according to an update by UAE officials to expo organisers in Paris recently. The extensive construction project is currently on track for completion a full year early in October of 2019, leaving plenty of time for any delays or setbacks that may pop up. For a project that is 18 months into construction over a 34-month timetable, that progress signals exceptional management of the site, contractors and supply chain. "To date, we've completed more than 16 million working hours and the results speak for themselves," stated Expo executive director Najeeb Al Ali at the Paris meeting, in his speech.



GLOBAL

GLOBAL  
NEWS

UAE





## Digital Planning for Road Construction Goes Live

When it comes to road construction, many factors impact planning and execution. Weather, logistics and cost pressures tie to growing planning and documentation requirements. The spread of digitisation is moving that part of the process along. Lukas Glaser, a German construction company, is using their business process outsourcing software in its first real-world trial on the K2081 road project. Used previously as a pilot project, the software was used to plan the project digitally, allowing it to be controlled with a real-time model to optimise logistical concerns. The company could pre-determine the materials needed for the project while connected assets in the trucks and mixing plant ensured the work continues steadily through the process. The company could better forecast for material usage and the construction progress as a whole. This is just one of the many ways digitisation is essentially giving birth to a more agile, flexible, economical construction industry.

GERMANY

■ GLOBAL NEWS

KENYA

## Kenya Sourcing Internationally for 500,000 Homes

The rapid growth of Africa's population is leading to a housing shortage, one which Kenya plans to respond to in a fast, effective way by building an astonishing and ambitious half-million new affordable homes within the next five years. But to meet such lofty goals, the government is actively seeking out international construction firms to work with a range of local craftsman and contractors to get the job done. "An affordable home in this case is a two-bedroomed house of about 65 square metres with minimum finishes and including all infrastructure and amenities," stated Architectural Association of Kenya VP Gad Opiyo in a recent article. It's expected that the process will be kicked off in November 2018 at the Big 5 Construct East Africa conference. Speculation is rampant that investment in Kenyan construction interests will see strong growth based on this development in the East African country.

## Construction of Europe's Biggest Casino Resort Starts

Planned as the crowning jewel in Cyprus' plan to become a luxury tourist destination, the City of Dreams Mediterranean casino resort represents the largest single investment project in the island country's history. Estimated at EUR 550 million (RM2.58 billion), the project has a three-year construction period before going live in 2021. The previously bankrupt EU member state has been seeing steady 3.5% growth in the past five years since the financial crisis, and the new resort is anticipated to bring an additional 300,000 visitors and EUR 700 million (RM3.28 billion) to the country's economy every year, while boosting the economy with an expected 6,500 new jobs. Smart investors and developers may look for opportunities around the area to provide additional dining, entertainment and lodging options as well as worker housing, renovations of existing residential and commercial property and similar updates across the spectrum near the new casino and resort.



Photo credit: reviewjournal.com

### CYPRUS

## GLOBAL NEWS

## Cat Releases New 814K Wheeled Dozer

Caterpillar has released its new forward-focused 814K wheeled dozer from its construction division. Featuring a new cab, more efficient power unit and transmission drive, and a more centralised service station configuration, it's been developed for the heavy civil construction and grading work for large commercial and infrastructure projects. The new cab has been designed with an air-suspended seat and features that isolate it from the machine's vibrations, helping reduce operator fatigue, improving comfort and reducing in-cab noise levels by 7 dB, to 71 dB. The Vital Information Management System (VIMS) provides the operator with easy access to a range of machine sensors and data. The VIMS data allows the creation of automatic productivity reports, identifies training opportunities, shows machine data logging of parameters and diagnostic codes, as well as monitoring of machine health. Designed to meet the most demanding mining applications, this new Cat should perform admirably in construction.

### USA





# CCCS – Built with IBS, Inspired by Sarawak Cultures

*CIDB Convention Centre Sarawak takes Sarawak construction to new heights in terms of ecological sustainable construction*



Introducing the latest and iconic construction jewel that is the CIDB Convention Centre Sarawak (CCCS). Commissioned by CIDB Malaysia and drawing inspiration from the rich diversity of Sarawak culture, the CCCS achieved an Industrialised Building System (IBS) score of 78.00. It features a well thought-out semi-open concept that is ecologically sustainable and cost-efficient. IBS is a modern construction method where building components are manufactured in a controlled environment, then installed at the construction site.

CCCS formally opened its doors on 27<sup>th</sup> April 2018 and is CIDB's second convention centre after the CIDB Convention Centre in Jalan Cheras, Kuala Lumpur.

HEIGHTS caught up with three key people who conscientiously worked on the unique building from planning to construction – En Mohd Merzan Hashim, Director of CIDB Sarawak and CCCS architects Arkiskape Sdn Bhd's Ar Haji Sumardi Ghazalee and Irwan Iswandi Mohamed.

"The idea for CCCS was first conceptualised several years after realising that there is a need and demand for a convention centre, as there are too few in Kuching. In addition to carrying out CIDB events, it can also host external events such as large meetings, seminars, exhibitions and international events. It is even a good venue for weddings and receptions," said En Merzan while showing the facilities of the building.

It boasts a main hall that can accommodate up to 1,000 people for dining and features a bistro, seminar

rooms, meeting rooms and most importantly, a large parking area.

CCCS is part of the first phase of the CIDB Sarawak Complex, and this RM30 million structure incorporates hostels and sports and recreation facilities. However, the unique centrepiece building was built at less than RM10 million. The planning and design stage alone took about three years, while construction was done in two.

Sibu-born architect Irwan Iswandi Mohamed, who hailed from



the environmental design and architecture school from the University of Tasmania, gave a lot of thought to the approach of the building design element.

“The brief was to come up with an iconic building that is different from other convention centres as well as to use IBS. Simultaneously, En Merzan had also asked us to look at the cost-efficient building concept used by the Barefoot College in Rajasthan, India. This means we have to incorporate strong sustainable elements into the CCCS as well.”

“After hours upon hours of research, discussions and brainstorming sessions, we came up with several designs. However, due to a tight

budget, we finally settled on a simple and straightforward design that is ecologically sustainable and cost-effective, and incorporates the natural elements found in the surroundings,” added Irwan.

The result? An ellipse or circular-shaped building that is modern, open-walled and with capillary effect. Ellipse-shaped buildings can better deflect or withstand strong winds and heavy rains more efficiently, a growing concern in Kuching due to climate change.

Natural wind provides ventilation in the corridors and immediate space and natural lighting is maximised to save cost, more efficient and low in maintenance. The building is also

partially built directly above a pond, which acts as a natural cooling system.

One of the biggest challenges in realising the design of CCCS is the shape of the building itself. Square and rectangular buildings are just easier to build. Especially when IBS has set designs for components. But the project had a good and cooperative contractor that took part in the brainstorming sessions. A Kuching-based IBS manufacturer tailor-made half-slabs for CCCS and unique louvres for the convention centre’s skin from another company.

Keeping the cost low was challenging. But Irwan highlighted that having a supportive client (CIDB) and



Architects Hj Sumardi (left) and Irwan Iswandi Mohamed (right) show the design concept of CCCS to CIDB Sarawak Director Merzan Hashim



Tan Sri Ahmad Tajuddin shows the surrounding areas of CCCS to Dato' Sri Fadillah Yusof

cooperative contractor helped tremendously in realising the building aspirations. This is the reason the planning stage (research and brainstorming) took a few years. The actual drawing only took a few months.

Laughingly, Irwan shared that one of the reasons they were selected was precisely because they were specialists in limited-budget projects. "It has been a long journey, but it has been worth it," he said.

Ar Haji Sumardi, Arkiskape's Managing Director shared, "To be honest, we weren't completely sure how well our approach would work

out. But I can tell you that we are very glad and proud today because it has worked very well. I think this is the most cost-efficient convention centre."

Some unique features of the convention centre are the skin, corridors and circulation inside the building. Unlike other structures, the skin is built on the outside and is not made of solid material such as bricks. It was made of UPVC panel that depicts Dayak sowing and harvesting motifs as well as puakumbu.

Other Sarawak culture-inspired elements, such as the ellipse shape, were inspired by the Bidayuh Baruk,

while the roof is reminiscent of the "terendak" found in the Melanau culture. The balconies and corridors look at Malay influence, and the stilts and columns exemplify the shades of rumah Orang Ulu.

The CCCS is located within the 60-acre CIDB Sarawak Complex in Kuching. It is slated to be a sought-after convention centre that will not only host many a great event, but also stand tall as a manifestation of ecological sustainability and proud culture.





Natural wind provides ventilation in the corridors and natural lighting is maximised



The CCCS is located within the 60-acre CIDB Sarawak Complex in Kuching

# IKEA's “Safety, Safety, Safety” Mantra

*With committed construction partner Kajima, Ikea Penang scores big in IBS and Safety & Health*



**IKEA** Penang has good reasons to be proud of itself. The upcoming store, expected to open its doors in the first quarter of 2019, achieved an outstanding Industrialised Building System (IBS) score of 92.3 out of 100. It is the highest score recorded to date.

Simultaneously, IKEA Penang had also bagged a 5-star Safety and Health Assessment System in Construction (SHASSIC) rating. This achievement is in line with two goals of the Construction Industry Transformation Programme (CITP) 2016–2020, which are to more than double the construction industry's productivity levels and increase the levels of safety and health (S&H) in Malaysia.

A working visit to IKEA Penang was organised by CIDB on 3<sup>rd</sup> May 2018, where Dato' Ir Ahmad 'Asri Abdul Hamid, Chief Executive of CIDB presented both certificates of achievements to Eiichi Suzuki, Project Director of KAJIMA (Malaysia) Sdn Bhd, its main design and build contractor.

According to Eiichi, this high score and rating could only be achieved

with the cooperation of a like-minded client and construction partner – Ikano Pvt Ltd (owner of IKEA Malaysia).

IKEA has very clear ideas on what it wants for its building – IBS that will accelerate the construction timeline, higher quality of construction, a safer working environment on-site, as well as cost savings with repeated use of



standardised IBS components. It was made as a tender requirement and the selected contractor had to fulfil IKEA's way of working in accordance to its IWAY Standard, the organisation's minimum requirements for environmental and social & working conditions when purchasing products, materials and services.

Gary Spence, Project Director of IKEA Southeast Asia stressed, "The three most important things for us on site are safety, safety, safety. It is our motto. IWAY Standard is not just implemented in the IKEA stores alone, but also at the construction sites. We have a culture of caring, where we want workers to go home safely."

"By maintaining a high level of standard and S&H, we get quality, commitment and productivity. So surely, safety and quality, hand in hand, work together."

The IKEA Penang construction project used 6,800 IBS components. The number of workers used was no more than 70 – a testament that the use of UBS significantly reduces the number of workforce and therefore enhances productivity.

The delivery and installation of components were far-ranging. The components used fell under: precast concrete framing, panel and box system, steel formwork system, steel framing system, blockwork system and prefabricated staircases. The IBS components were supplied by Eastern Pretech (Malaysia) Sdn Bhd,

a company that has worked on all four of Malaysia's IKEA stores, including IKEA Penang.

According to Mr Eiichi Suzuki, Project Director of Kajima (M) Sdn Bhd, "IKEA Penang is our largest IBS project to date, and S&H is easier to manage in an IBS-construction site as it promotes a safer working environment. It has always been our company policy to take S&H matters very seriously."

Established in 1989 in Kuala Lumpur, Kajima is an international Japanese design and build construction company. Their core business is designing and building industrial buildings such as factories and commercial buildings such as shopping complexes.



Eiichi Suzuki, Project Director of Kajima (M) Sdn Bhd (centre) receiving the SHASSIC five-star certificate from CIDB Chief Executive Dato' Ir Ahmad 'Asri Abdul Hamid

CIDB Senior Officers receiving a briefing on the IKEA Penang project



The company has a stringent health and safety management policy that states that “safety is a barometer indicating the capabilities and consciousness of a corporation.”

Each year, the company prepares a health and safety plan listing health and safety goals along with priority issues to be implemented. As early as financial year 31<sup>st</sup> March 2007, the health and safety goal is to “Eliminate all deaths, serious injury or major accidents.”

Various S&H activities are organised and implemented at the construction site. There are the regular site toolbox safety talks, safety committee meetings, Good Safety Recognition as well as CIDB SHASSIC audits and IWAY audits carried out to ensure everything is on track.

“Our on-site daily toolbox sessions address not only S&H matters, but also a run through of tasks to be achieved on the day. Each trade is clearly marked by using maps and colour labels. After the toolbox is carried out, a pre-task toolbox follows. Subcontractors will carry out their own briefing sessions with their respective teams. Workers are briefed on a number of tasks as well

as the potential hazards to look out for,” explained Mr Suzuki.

On communication with foreign workers, Kajima overcomes language barriers by identifying those who can speak either English or Bahasa Malaysia, to make them leaders. Every morning before work commences, these leaders will speak to their team members to pass on all relevant information such as safety matters, tasks to be achieved on the day and so on.

In mid-March 2018, the workers had the 500,000 Hours IIF (Incident & Injury Free) Ceremony Celebration and a fire drill. The next IIF milestone of 1 million hours without lost time injury was held in May 2018.

Walking about the construction site, it is clear that S&H of the workers and its surroundings is an agenda of utmost importance. It is no surprise that the IKEA Penang construction achieved the 5-star SHASSIC rating. SHASSIC rates the safety and health performance in construction.

The Kajima team is already on the mindset to get CIDB’s Quality Assessment System in Construction (QLASSIC) carried out upon completion of the building. QLASSIC is a system or method to measure and

evaluate the workmanship quality of a building construction work based on Construction Industry Standard (CIS 7:2006). It is expected that the QLASSIC score will add another feather to IKEA Penang’s cap.







The IKEA Penang project posts priority on safety



The IKEA Penang project safety team poses for a photo with CIDB Senior Officers during the site briefing

# Rofizlan Ahmad, the Man Behind myBIM Centre

**R**ofizlan Ahmad has one major aim to achieve. The CEO of CIDB E-Construct Services Sdn Bhd wants myBIM Centre to be the premier national provider of construction development solutions in Malaysia.

Civil engineer by training, Rofizlan spent years with CIDB, winning several Service Excellence Awards along the way. His contribution to spur the industry to aggressively employ IBS had seen him work tenaciously through many initiatives, including the preparation of Cabinet Papers on IBS, assisting the Minister of Works in preparing answers to parliament members, as well as guiding the unit towards an analysis of the IBS Roadmap programme, which he also helped to draft.

In fact, he has developed two blueprints for the Malaysian government in modernising the Malaysian construction industry – IBS Roadmap 2003–2010 and IBS Roadmap 2011–2015.

“When you coordinate and execute such programmes, it naturally sharpens your intermediary skills, which now comes in handy with this job,” said the new CEO who has been

in office for only a little more than a year.

Indeed, one of Rofizlan’s key responsibilities was providing advisory services related to information technology, particularly involving myBIM Centre, to government and industry players.

E-Construct Sdn Bhd assists the construction community in the area of information technology and communications to improve their contribution and competitiveness for both local and international scenes.

“We provide a gateway to the multinational business services that form business to business development and operations; in software development packages and services; in providing fully integrated ICT solutions such as web portals, software, apps, consultations and training,” he explained in a recent interview.

From his office at the myBIM Centre on the 11th floor of Menara Sunway Putra, Rofizlan monitors the hive of ongoing activity. The state-of-the-art myBIM Centre, besides being a centre of reference for Building Information Modelling, also provides BIM training and provides facilities with the latest BIM technology on a pay-as-you-use basis and other services such as a showcase area, a BIM lab, a seminar

room and an impressive BIM studio, all open for hire at affordable rates. BIM is a complex multiphase process that gathers input from team members to model the components and tools that will be used during the construction process to create a unique perspective of the building process.

“BIM has the potential to avoid mistakes if a genuine planning effort between team members is carefully reviewed and shared. BIM software can break down and provide a better understanding of the construction project, that can be implemented by contractors and subcontractors,” he said.

In the pipeline are plans to establish more such affordable BIM training centres around the country, including in East Malaysia. Institutes of higher learning, mainly universities in strategic locations, are the choice spots for future myBIM Centres due to existing facilities, conducive academic environment and a ready supply of learners.

“When used appropriately, BIM can reduce construction time, costs and even claims. BIM helps streamline your entire project, from estimating to safety planning to implementation. In fact, BIM alone can boost a company’s efficiency manifold.”





Rofizlan Ahmad ,  
CEO of CIDB E-Construct Services Sdn Bhd

USM students swept the top three prizes at the Open Ideas Competition for Students held in conjunction with International Construction Week 2018

# USM Sweeps Top Prizes at Competition to Reimagine MRT Stations

Universiti Sains Malaysia (USM) students swept the top three prizes at the prestigious MSSA/CIDB Open Ideas Competition for Students (OIC 2018) that was held in conjunction with International Construction Week 2018.

The competition pitted varsity students to “reimagine MRT stations,” and the winning design called “Recharge Transit” took home the top prize of RM10,000 cash and the MSSA Challenge Trophy.

The second prize of RM7,000 cash went to the team that looked into the “Reinterpretation of Papan Cantik,” and the third prize of RM5,000 went to “Tenun.”

All the victorious students hailed from the USM School of Housing, Building

and Planning (HBP) and School of Civil Engineering, in the only design competition in Malaysia that combines Architectural and Civil Engineering students in one team.

Director General of Public Works Department, who is also President of the Malaysian Structural Steel Association (MSSA), Dato’ Sri Ir Dr Roslan bin Md Taha said, “The element that stood out and was incorporated well by students was energy efficiency. For instance, natural light was used as much as possible, and this minimised the use of fuel and other energy resources, which made their designs very sustainable.”

Associate Professor Ir Dr Chong Kok Keong, who represented USM’s School of Civil Engineering, said the clean sweep was unexpected.

“We always encourage our students to do their best while they also learn something. I am amazed with their

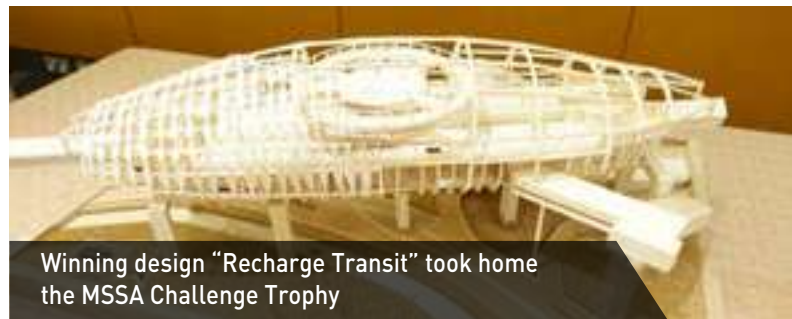
designs and the way their ideas were realised practically.”

The competition saw the participation of 218 students and 18 supervisors from seven universities from all over the country.

Speaking for his teammates, Kelvin Ah Kian of USM HBP said that they studied the MRT Pusat Bandar Damansara and looked into a design that contributed to the community.

The lesson they learnt the most from the competition was “teamwork,” in coordinating their schedules in the limited time they had to complete the project.

Two consolation prizes of RM3,000 each went to University Malaya and Universiti Islam Antarabangsa. All cash prizes were sponsored by various construction firms and CIDB Malaysia.



Winning design “Recharge Transit” took home the MSSA Challenge Trophy



# Universiti Malaysia Pahang Wins BIM Marathon Competition



Universiti Malaysia Pahang wins the BIM Marathon competition

**U**niversiti Malaysia Pahang came out tops in CIDB's Intersociety BIM Marathon competition, bagging RM7,000 in cash prize and a trophy.

First runner-up Politeknik Ungku Omar won a cash prize of RM5,000 and a trophy while second runner-up Politeknik Port Dickson went home with RM3,000 and a trophy.

"Being a BIM modeller is something that I will definitely pursue in the future," said Nuratikah Asri, a team member from the winning Universiti Malaysia Pahang.

The participants were part of pioneer batches taking BIM as an elective subject in their respective higher learning institutes.

CIDB organised the Intersociety BIM Marathon for the first time in conjunction with BIM Day 2018 which was held as part of International Construction Week 2018.

The competition was part of CIDB's awareness programme, intended to promote BIM methods and concepts, the latest technology that would elevate the students' knowledge, especially students in Architecture, Engineering and Construction (AEC).

Nine public universities participated in this competition in which participants were required to produce a 3D BIM model consisting of three disciplines of engineering – Architecture, Structure and MEP (Mechanical, Electrical & Plumbing) – using the latest BIM software technology available at the MyBIM

Centre Studio and Lab at the Sunway Putra Tower.

The BIM model was to be developed in a non-stop 66-hour period from 19<sup>th</sup> to 22<sup>nd</sup> March 2018 at myBIM Centre Studio and Lab.

Participants were not allowed to leave or stop until the time was up. Thankfully, all participants were able to complete their models within the stipulated period.

The competition also received the recognition of Malaysia Books of Records as the longest BIM Modelling competition. CIDB hopes to repeat this event in the future, with more participation from the higher learning institutions.



Industry experts discuss the uses of Big Data in the construction industry

# Construction Industry Must Leverage on Big Data

Construction industry players in Malaysia must embrace changing technologies to compete in the new marketplace by leveraging on big data analytics to increase productivity within the sector. The call was made by the Minister of Works Tuan Baru Bian at the **Statistics, Indices in Construction and Automation (SICA) Forum 2018** which was held recently.



The theme of this year's Forum, **"Building a Big Data Community for Construction in Malaysia,"** aimed to promote adoption of data-driven policies and business practices.

The forum offered discussions on the theme of "Leveraging Big Data in the Construction Industry: Risk and Opportunity Management, Lessons Learnt from Multi-Field Players" and "What's Trending in Malaysia's Construction Industry? Identifying Construction Trends with Data Analytics," which highlighted issues and solutions with regards to Big Data.

In his Keynote Address at the SICA Forum 2018, **Minister of Works Tuan Baru Bian** highlighted that the topics discussed at the forum were important because they have ramifications for the future direction of the Malaysian construction sector. The ability to harness insights through big data analytics is set to be an industry game changer. His speech was read by the Deputy Minister of Works Encik Anuar Tahir.

Tuan Baru Bian underscored the fact that raising the productivity level of the construction industry is

a high priority for the government, in line with the Construction Industry Transformation Programme (CITP) 2016–2020.

"Digitisation, integration and automation of construction methods and practices are key areas of focus under the Productivity strategic thrust of the CITP, which seeks to double the productivity levels of the construction sector, with matching higher wages by 2020," he said.

Malaysia targets to increase its gross domestic product per worker to RM62,000 in 2020, from RM22,464 per worker in 2011. In 2017, the construction industry saw a productivity level of RM40,242 per worker.

To this end, CIDB hopes to facilitate the creation of a comprehensive big data ecosystem within the Malaysian construction sector to propel the industry forward and enable it to thrive on a global stage beyond 2020.

"By fostering a big data community, our efforts are in line with the CITP's goal of uplifting the construction industry into one that is modern, highly productive



Deputy Minister of Works, Anuar Tahir, officiates the SICA 2018 forum

and sustainable. In particular, digitisation, integration and automation of construction practices through modern technologies such as Building Information Modelling (BIM) and Industrialised Building Systems (IBS) are key areas of focus under the CITP," said Tan Sri Dr Ir Ahmad Tajuddin Ali, Chairman of CIDB.

"With access to credible data, industry players can become more efficient and effective when implementing their business decisions, deciding their cost estimations, and above all, improving productivity and profitability across the entire value chain," concluded Tan Sri Dr Ir Ahmad Tajuddin Ali.

SICA Forum is an annual event for industry players that has been organised by CIDB since 2015. It is a platform to promote data- and information-driven decision-making to enhance construction industry productivity.



Tan Sri Tajuddin accompanying Anuar for a short tour of construction-related software on display

High QLASSIC scorers get a photo opportunity with the Minister



# Sime Darby Receives

## Highest QLASSIC Score for 2017

**Thirty-seven projects receive QLASSIC recognition; Bank Pembangunan Malaysia Berhad (BPMB) to incorporate QLASSIC as a requirement in its financed projects**

**P**roperty developer, Sime Darby Property, was recognised as the recipient of the highest QLASSIC Score for 2017. Its residential project Azalea, 2/Phase NU6B2 in Nilai Impian, Negeri Sembilan, received a QLASSIC score of 86. Sime Darby received its recognition trophy at the recent QLASSIC Day 2018.

QLASSIC Day is an annual event that celebrates industry players who have achieved excellent QLASSIC scores in their building construction projects. Now in its fifth edition, QLASSIC Day is part of CIDB's initiative to uplift the local construction sector by recognising excellence in workmanship quality in construction. A total of 37 projects that scored a QLASSIC mark of 80% and above were celebrated at the awards ceremony.

QLASSIC is an acronym for the Quality Assessment System in Construction, a method to measure and evaluate the workmanship quality of a building's construction work. The assessment is done based on Construction Industry Standard (CIS) 7:2014, and it enables the quality of workmanship between construction projects to be objectively compared through a scoring system.

The Construction Industry Development Board (CIDB) Malaysia has called upon industry players to adopt a quality-centric mindset and submit their projects to be assessed through QLASSIC to gauge the quality of workmanship and inspire public confidence in the quality of their construction works.

QLASSIC Day 2018 was officiated by Tuan Baru Bian, the Minister of Works. Also present were Tan Sri Dr Ir Ahmad Tajuddin Ali, Chairman of CIDB, and Dato' Ir Ahmad 'Asri bin Abdul Hamid, Chief Executive of CIDB.

This year's QLASSIC Day was significant as it witnessed the signing

of a Memorandum of Understanding (MoU) between CIDB and Bank Pembangunan Malaysia Berhad (BPMB) which would further nudge the industry towards adopting QLASSIC standards. BPMB's ultimate goal under this MoU is to have future infrastructure projects financed by the bank to undergo QLASSIC assessment progressively. CIDB will conduct QLASSIC assessments on these projects and provide QLASSIC trainings to enhance knowledge amongst BPMB staff.

"It is imperative for the construction industry to place great importance on quality standards. The industry, both private or public sectors must view quality as a prerequisite for industry players to operate and develop. The year-on-year increase in QLASSIC adoption by the industry is indeed a positive indication of the emphasis placed by the industry in providing workmanship quality of the highest standards, and we believe that there is still room for improvement and growth," said Minister of Works Tuan Baru Bian.





Works Minister, YB Tuan Baru Bian presents his opening speech



CIDB Chief Executive and BPMP CFO sign an MoU, witnessed by the Minister of Works, and Chairmen of both organisations

QCLASSIC is a system and method to assess and evaluate the quality of workmanship of building projects based on the Construction Industry Standard (CIS) 7. It was established as a means to objectively compare the quality of workmanship between construction projects through a scoring system.

Under the Quality, Safety and Professionalism strategic thrust of the Construction Industry Transformation Programme (CITP) 2016–2020, one of the key outcomes is to achieve more than 50% of public projects to exceed the acceptable QCLASSIC score of 70%.

“As outlined in the CITP, we have identified quality, safety and professionalism as primary prerequisites to develop Malaysia’s

construction industry into a responsible, world-class sector. Through the industry’s commitment towards this end, we are confident that we can achieve our CITP aspirations of a construction sector that is focused on safety and quality standards,” said Tan Sri Dr Ir Ahmad Tajuddin Ali, Chairman of CIDB.

A total of 341 projects were assessed with QCLASSIC in 2017, as compared to 311 projects in 2016 and 270 projects in 2015. Last year, the average score of projects assessed was 72%. Since 2007, the total number of projects assessed with QCLASSIC stands at 1,857.

In conjunction with QCLASSIC Day, CIDB had also organised a Captains of Industry Roundtable Discussion on Quality in Construction. The roundtable provided a unique

opportunity for leaders to share experiences and expertise relating to quality in construction, as well as to explore ideas that CIDB and the industry players can improve on.

Topics covered at the roundtable included “Learning from Best Practice QCLASSIC Implementation in Construction Projects” by Prof Madya Sr Dr Fadzil @ Padzil bin Hassan, Associate Professor of Universiti Teknologi MARA; “Quality Assurance & Quality Control in Construction” by En Mohammad Nazri bin Abdul Rani, Principal & Managing Partner of Global Halal Certification Private Limited, Certification; as well as “Proposed QCLASSIC Contract Documents for QCLASSIC Private Development Projects” by Mr Joshua Kang Wee Leng, Director of Canaan Building Inspection Sdn Bhd.



**The Best QCLASSIC Achievement Award 2018 – Non-Residential Category D (Project Value > RM100 Mil)**  
Award presented to Mr Lau Beng Long, Sunway Medical Centre Sdn Bhd



**The Best of the Best QCLASSIC Achievement Award 2018**  
Award presented to Nor Azahar bin Md Husain, Head of Sustainability and Quality Management, Sime Darby Property

# Welcome, Newly Appointed Works Minister, YB Tuan Baru Bian

YB Tuan Baru Bian with Deputy Minister of Works, YB Tuan Haji Mohd Anuar Mohd Tahir (second from right), Secretary General Dato' Sri Zohari Haji Akob (second from left), Tan Sri Dr Ir Ahmad Tajuddin Ali (far right) and Dato' Ir Ahmad 'Asri Abdul Hamid (far left)

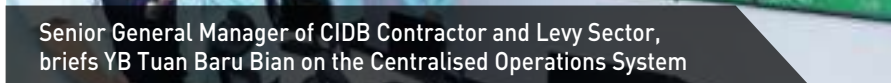
The Construction Industry Development Board is proud to welcome the newly appointed Works Minister Yang Berhormat Tuan Baru Bian, who took the time to visit the organisation on his third day in office, on 5<sup>th</sup> July 2018.

During the visit, which was hosted at the myBIM Centre, Sunway Tower Kuala Lumpur, Tuan Baru Bian received a comprehensive briefing from CIDB Chief Executive Dato' Ir Ahmad 'Asri Abdul Hamid, about CIDB and its functions under the CIDB Act 1994 (Act 520), and the Construction Industry Transformation Programme (CITP).

Tuan Baru Bian was also taken for a tour of the MyBIM Centre. In an interview with CIDB TV, the new minister said he looked forward to working closely together with CIDB toward the transformation of the construction industry as a whole. Also present during the visit were the new Deputy Minister of Works Encik Anuar Tahir and CIDB



YB Tuan Baru Bian signs the visitor book



Senior General Manager of CIDB Contractor and Levy Sector, briefs YB Tuan Baru Bian on the Centralised Operations System



Construction Research Institute Malaysia (CREAM) CEO Ir Dr Zuhairi Abd Hamid shows the Minister a model of the D3 housing concept

Chairman Tan Sri Dr Ir Ahmad Tajuddin Ali.

Baru Bian, 59, created history when he became the first leader of the Lun Bawang community, from the northern region of Sarawak, to be appointed as a Cabinet minister.

The Parti Keadilan Rakyat (PKR) Sarawak chairman said he is honoured to have been appointed as

Minister of Works and recognised the heavy responsibility attached to the portfolio.

"I will endeavour to do my best to ensure that the Works Ministry is efficient, transparent and accountable in all its dealings. I humbly ask for your prayers as I embark on this new job," he said in a recent press statement to announce his appointment.



# Towards Instilling Safety Culture in Construction

## Captains of Industry Roundtable Discussion 2018

In conjunction with ICW 2018, 46 construction industry leaders and stakeholder agencies gathered in a roundtable discussion to share their expertise in formulating a safety culture within the industry, including how this responsibility could be shared among all.



Mr Nic Rigby from HSE UK presents his findings at the roundtable



Dato' Sri Zohari Haji Akob, Ministry of Works Secretary General, shares a few thoughts with CIDB Chief Executive, Dato' Ir Ahmad 'Asri Abdul Hamid



Public Works Department Director General Dato' Sri Ir Dr Roslan Taha (right) and president of Master Builders Association, Foo Chek Lee, listen intently to the presentations



Former DOSH Director General, Dato' Ir Mohtar Musri provides some input

The Director General of Department of Safety and Health (DOSH), Tuan Haji Omar Mat Piah, informed the participants that the Occupational Safety and Health Act 1994 is currently undergoing amendments to make the Guidelines on Occupational Safety and Health in Construction Industry (Management) – OSHCIM – mandatory. He said that when the guideline becomes law, the responsibility in ensuring safety and health in construction will be extended to project owners, designers and all other parties involved in a project. The OSHCIM guideline carries the same fundamental concept as the Construction Design Management guideline that is being practiced in the United Kingdom.

Mr Nic Rigby, the Principal Inspector of Health and Safety, Health & Safety Executive (HSE) UK, who presented his findings on the safety aspects of the construction industry in Malaysia, said that the current fatality rate in Malaysia –

ten times higher than the UK – is unacceptable. He reported that typically, all the responsibility for risk is passed down to contractors, who then pass it to subcontractors, who then pass it all the way down the supply chain until it rests on the unskilled construction workers themselves. The risk is not being shared equally among those who created that risk.

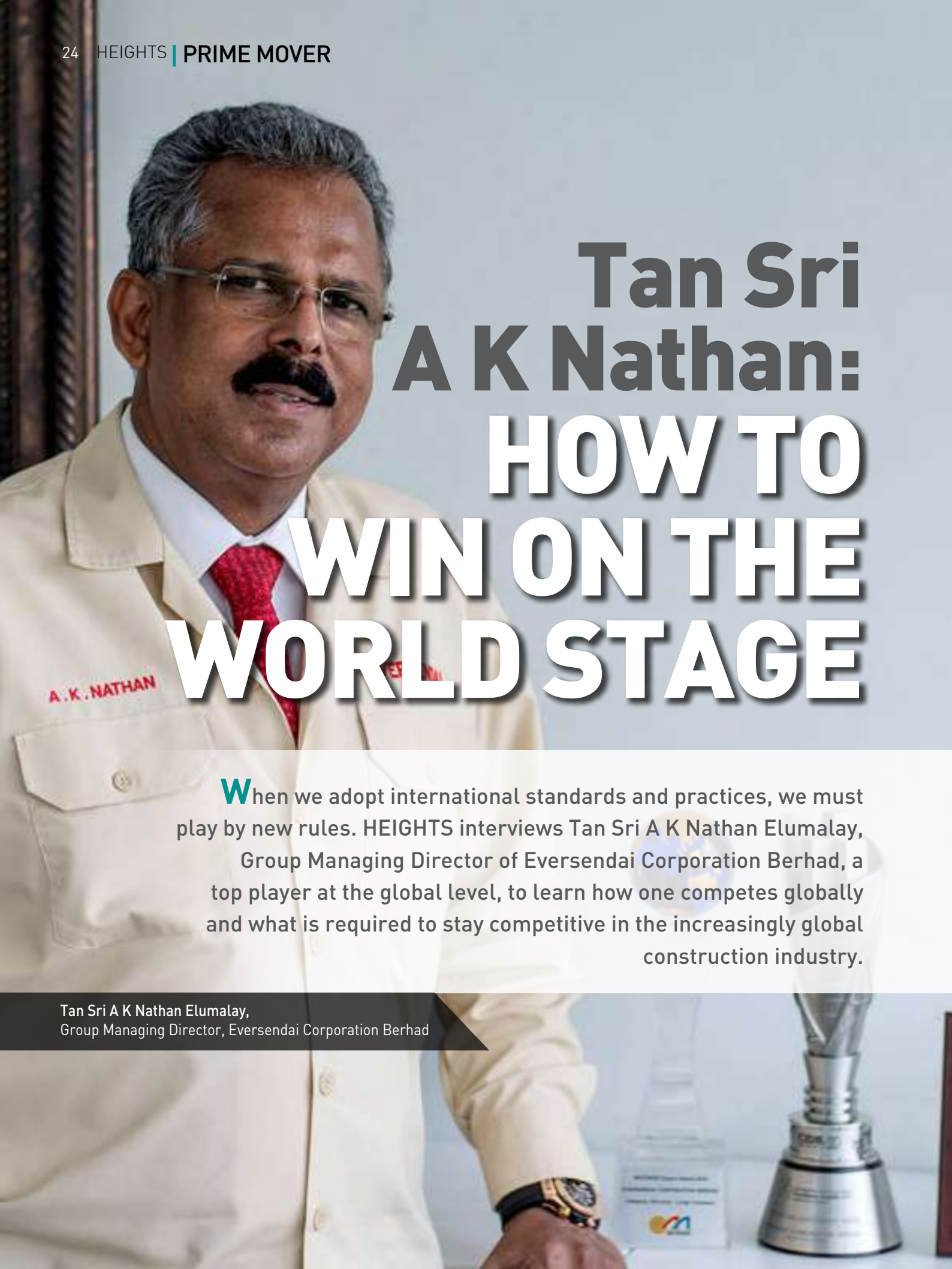
“Parties who created the risk must bear the responsibility for the risk. As such, improving the safety record of the construction industry requires effort from all parties and responsibility should not be pushed around or left to contractors,” he emphasised.

Rigby said there needs to be a change in mindset within the industry towards self-regulation, as the consequences will be borne by the industry players themselves under the amended law. He explained that safety efforts should begin at the design stage, with the

client, consultant and contractor working closely together. When enough time is spent at the planning stage, the entire process will be well-controlled, and there will not be any extra cost incurred because the project fees remain the same.

Some of the key points mentioned during the discussions include learnings from past accident investigations, and how study committee findings should be stored at a centralised agency, so that the accumulation of expertise could be available to continuously improve safety practices.

During the roundtable, CIDB Chief Executive Dato' Ahmad 'Asri presented on initiatives under the CITP to enhance safety in construction. The session was chaired by then-Minister of Works Dato' Sri Haji Fadillah Haji Yusof and attended by Secretary General Dato' Sri Zohari bin Haji Akob. Also present was the Chairman of CIDB, Tan Sri Dr Ir Ahmad Tajuddin Ali.

A portrait of Tan Sri A K Nathan, a middle-aged man with grey hair, a mustache, and glasses. He is wearing a light-colored, button-down shirt with a red tie. The name 'A. K. NATHAN' is embroidered on the left chest of his shirt. The background is a plain, light-colored wall.

# Tan Sri A K Nathan: HOW TO WIN ON THE WORLD STAGE

**W**hen we adopt international standards and practices, we must play by new rules. HEIGHTS interviews Tan Sri A K Nathan Elumalay, Group Managing Director of Eversendai Corporation Berhad, a top player at the global level, to learn how one competes globally and what is required to stay competitive in the increasingly global construction industry.

Tan Sri A K Nathan Elumalay,  
Group Managing Director, Eversendai Corporation Berhad



**E**versendai has come a long way since the days of being a modest structural steel fabricator in Malaysia. Now recognised as a leading integrated structural steel contractor globally, Eversendai is one of the most sought-after players in the world, providing specialist engineering and construction services to mega projects in the Middle East, India and Southeast Asia.

Armed with thirty-four years of experience in undertaking turnkey contracts and delivering projects for high-rise buildings, power plants, oil and gas (O&G) upstream and downstream including process and industrial plants as well as infrastructure and composite structures, Group Managing Director, Tan Sri A K Nathan attributes the unparalleled success of Eversendai to principles of Japanese work culture that he inculcates in his organisation.

"Eversendai is a by-product of the Look East policy spearheaded by Tun Dr Mahathir Mohamad in the 1980s. By virtue of working with the Japanese companies, I was able to instil and incorporate basic principles of Japanese culture in Eversendai which I feel are fundamentally important in any organisation – never to compromise on safety and quality of workmanship and to deliver on time. If a project is executed and delivered on time without compromising on safety and quality, satisfied clients will always come back with repeat orders," Tan Sri A K Nathan emphasises.

## Enviably Reputation

Such basic principles ring true, and Eversendai had indeed developed such an enviable reputation for their quality and commitment to their

projects in the domestic market then that they were invited to undertake the Singapore Indoor Stadium project in 1988 – a project that helped Eversendai to position itself for the international market.

Tan Sri A K Nathan moved to Singapore to work on the indoor stadium project, after which he began to undertake and execute more landmark projects on the island including his first high-rise building – Hitachi Tower – in 1990. By maintaining his base in Singapore, he worked on projects in the Philippines, Thailand and Hong Kong as well.

While the Group Managing Director feels that the Singapore Indoor Stadium project was a turning point in his life, the biggest decisive change in his life was in 1996 when he was given the opportunity to undertake the Burj Al Arab luxury hotel project in Dubai. The Burj Al Arab project – the third tallest hotel in the world – propelled Eversendai to grow even further and eventually positioned itself as one of the leading and sought-after structural steel contractors and one of the largest steel shipment contractors in the world.

Eversendai established its first steel fabrication factory in Dubai in 2003 and subsequently, more factories in Sharjah, Qatar, Malaysia, India, Thailand over the years, and a waterfront fabrication facility in Ras Al Khaimah which the group considers as its "crown jewel." All in all, the group has a dedicated workforce of 15,000 people operating in 10 different countries in 15 offices with 7 steel fabrication factories across the Middle East and Southeast Asia with an annual capacity of 220,000 tonnes.

With state-of-the-art steel fabrication facilities, Eversendai went on to construct some of the world's most iconic landmark structures – mega projects that they were invited to bid and tender. "Most of the time, we were invited to bid and tender for projects, after which we got the jobs on negotiated basis. The reason why we were preferred was mainly

because of our reputation in delivering projects without compromising on our commitments to specifications, safety, quality and schedule. We deliver without giving any nonsense. We also establish good relationships with our clients and project consultants, for I have always believed that business is about relationships. In fact, most of my clients have become good friends," says the Group Managing Director.

## International Challenges

Having achieved great heights of success with mega projects in the Middle East, one would assume that Tan Sri A K Nathan had always wanted to do business internationally, but truth be told, he was initially reluctant to undertake the Burj Al Arab project in Dubai.

"I was quite comfortable in my home turf and like any Malaysian, the thought of moving to a foreign country to do business brought fear and hesitation. I guess it's normal for us to have such doubts. But they were constantly on my back about the Dubai project, so to get them off my back, I agreed to have a look at the drawings," Tan Sri A K Nathan confides.

"When I saw the drawings, I realised that the Burj Al Arab project was a highly technical and complex project which got me excited. I booked my flight to Dubai immediately and I flew economy class in those days. The flight wasn't full, so I had four seats to myself. I spread the drawings on the seats and reviewed them. By the time I landed in Dubai, I had ideas on how to build the structure which I presented to the client the next day, and the client was very impressed. Eventually, we got the job on a negotiated basis."

The rest was history. After Burj Al Arab, Eversendai continued to build many exciting and challenging structures as one good project led to another. However, Tan Sri A K Nathan acknowledges that nothing came easily as running a construction business in the international arena presented a myriad of challenges such as

different cultures and business norms, expectations, contract terms, pricing and so on. In fact, the early stages of the Burj Al Arab project were tough, and almost brought him to tears.

"In the 1990s, Dubai was still developing, it's not like the modern Dubai we see today. The company registration process was very slow which put me in a tight situation as I had to employ fifty people for the project, but I didn't have a company yet. Thankfully, everything came in at the right time and I had managed to bring the team in."

Apart from business procedural challenges, the team had to deal with environment issues where temperatures rose to fifty degrees Celsius during the summer. He shares, "Imagine: steel and concrete expand in the heat, which could pose problems if you don't know how to deal with the situation. The Burj Al Arab project was very challenging, not only in terms of structure design but with the environment as well. Fortunately, the project was executed in the way that I had envisaged and planned."

## Modernisation

The challenges that Eversendai had faced in working on these structural projects have helped Tan Sri A K Nathan to build and develop a team of strong technical capabilities and innovativeness to use modern construction methodology that enables them to construct, execute and deliver any kind of project – a strong asset that clients appreciate and value, and for which they are willing to pay premium price.

Modernisation in construction methodology and systems and internationalisation of standards and practices are some of the initiatives that the Construction Industry Transformation Programme [CITP] has been promoting, but Tan Sri A K Nathan finds that these initiatives still have some way to be fully adopted.

"Malaysian construction companies have the infrastructure and capabilities and they are aware that modernisation is important, but they have been rather slow in adapting to changes. As a result, some companies ventured overseas, but many have failed. They should be willing to think out-of-the-box, change mindsets, adopt new technology, use computerised designs, innovative tools and methodology to execute and deliver projects without compromising on safety and quality, rather than sticking to conventional construction methods."

## Evaluation and Due Diligence

The Group Managing Director also observes that the number of Malaysian construction companies competing globally has reduced, due to availability

of projects in the domestic market. While construction work is aplenty in Malaysia, he advises that companies should expand and develop their businesses globally so as not to depend on one single client or market. Stepping into the international market, on the other hand, requires evaluation, due diligence and consideration of other factors such as contractual terms, logistics, pricing, culture, business practices and environment.

"Do your evaluation first, to understand how to go about competing globally. There is no point being aggressive in bidding for the job and later finding yourself under-priced because many factors were not considered earlier. Obtain good financial support and banking facilities, as international projects are huge projects. Business basics must be set right – don't go in blindly without realising and mitigating the risks."

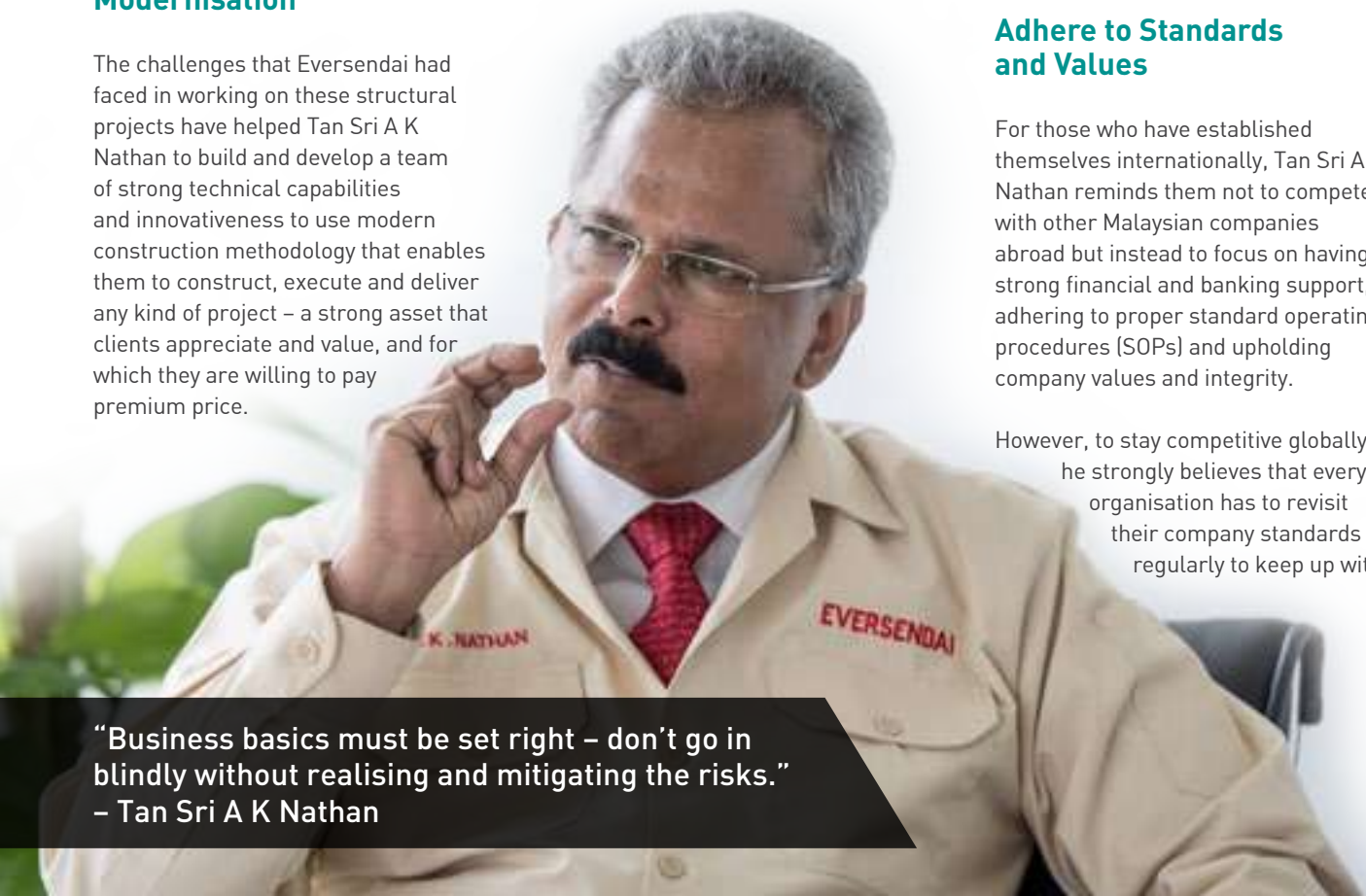
He also urges these companies to build, develop and equip their teams with innovative technical capabilities so that they will not have to rely on large pools of sub-contractors that might not be available overseas, unlike in Malaysia.

## Adhere to Standards and Values

For those who have established themselves internationally, Tan Sri A K Nathan reminds them not to compete with other Malaysian companies abroad but instead to focus on having strong financial and banking support, adhering to proper standard operating procedures (SOPs) and upholding company values and integrity.

However, to stay competitive globally, he strongly believes that every organisation has to revisit their company standards regularly to keep up with

**"Business basics must be set right – don't go in blindly without realising and mitigating the risks."  
– Tan Sri A K Nathan**







Mall of the Emirates

fast-growing changes in the economy and technology. He reinforces, "From my experience, I revisit our SOPs, analyse and re-strategise every now and then to further strengthen Eversendai. I've realised that setting up company standards and building the company to have a good track record is one thing, but maintaining them in the face of challenges and changes is another. If we do not maintain our values and keep our standards intact, then everything that we have established will slide down without us realising it."

### Invest in Human Capital

To maintain company standards and values in this fast-growing world, Malaysian construction companies need to invest in human capital, i.e., to build and develop a team of staff who abide by principles and are committed to deliver work in line with project requirements in order to ensure sustainability of the business.

"Reliable, competent staff with integrity are of utmost importance in any organisation. I focus on human relationships; I nurture and take care of my staff. As long as they perform

diligently and have the desire to grow and develop, I'm willing to teach and give them the opportunities to progress. Eversendai has many loyal staff, some have worked for us for ten to twenty years. The longest-serving employee has been with the company for thirty-four years!" says the Group Managing Director with a smile. "As long as you have hands-on management, strong company fundamentals and values, capable and quality staff working as a team, be humble and keep your feet on the ground, then it's not difficult to face challenges when doing business globally".



Burj Al Arab, Dubai



Burj Khalifa, Dubai





Aryan Liftboat



Abudhabi International Airport, Abu Dhabi





Capital Market Authority (CMA)  
Tower Kingdom of Saudi Arabia



Capital Gate Tower Abu Dhabi



Qatar National Museum





**“You won’t compromise on your values, if you have passion.”**  
– Tan Sri A K Nathan

Eversendai has certainly faced challenges in every project, and every project has stories to tell, but Tan Sri A K Nathan says that there are too many to mention – however, the ones that are memorable to him are the Petronas Twin Towers in Kuala Lumpur, Burj Al Arab and Burj Khalifa in Dubai, Hamad International Airport in Qatar, and Capital Market Authority Tower in Saudi Arabia, to name a few. Despite the technical challenges, they were able to construct and deliver the projects due to their strong in-house engineering team, which Eversendai is very proud of.

“I’m very passionate about what I do, in Eversendai and its people.

I’m very much hands-on and I still do random checks on the quality of our jobs. My staff finds that I’m most critical about our performance. When one undertakes a project, one should not focus only on money. Yes, I want to make profits as well, for I’m answerable to the shareholders. But how can we deliver our jobs without compromising on safety, quality and values? Therefore, passion is very important for a contractor or anyone who is responsible to undertake the job. If you don’t have the passion, you won’t have the drive, energy and the desire to perform better. You won’t compromise on your values, if you have passion. Unfortunately, passion is a rare thing in the construction business

nowadays – for too many, it’s all about how much money can be made.”

With that strong passion and the desire to do better, Tan Sri is poised to lead Eversendai to a great future. He insists that this is just the beginning.

“I’m a visionary leader and I believe our business will flourish far more as we progress. For now, my focus is to strengthen and ensure sustainability of the business and to develop human capital as part of succession planning. I want to leave a legacy,” he concludes.



# Gearing up for the Global Stage

In an increasingly globalised age, Malaysian construction players are facing stiff competition from international contractors on local shores as well as abroad. HEIGHTS reached out to CIDB chairman Tan Sri Ahmad Tajuddin Ali, chief executive Dato' Ahmad Asri Abdul Hamid, and the board's Policy and Corporate Sector's senior general manager for their insight on the challenges Malaysian contractors face and the initiatives CIDB is undertaking to turn our local firms into global champions.

"In today's global markets, you don't have to go abroad to experience international competition. Sooner or later the world comes to you."

It's a truism uttered by organisational theorists Christopher Bartlett and Samantha Goshal in "Going Global: Lessons from Late Movers," their 2000 study of 12 emerging multinational companies.

## The Case for Change

On the international front, Malaysian contractors have been competing against established global giants from Europe, UK, US, Japan, and China for decades.

It's a battle that local construction firms have been waging for a long time. Though Malaysian firms have participated in international projects for decades, few companies have been considered the world's best contractors. In fact, only one

Malaysian firm – Gamuda Berhad – has cracked Engineering News Record's annual list of Top 225 International Contractors. It placed 166th in 2009 and 210th in 2011.

On our home turf, the competition has stiffened in recent years. For some background context, Malaysia has already signed and implemented 7 bilateral free trade agreements (FTAs) with Japan, Pakistan, India, New Zealand, Chile, Australia and Turkey. While at the ASEAN level, Malaysia has 6 regional FTAs with the ASEAN Free Trade Agreement (AFTA), China, Korea, Japan, Australia, New Zealand and India.

While FTAs have allowed our nation's businesses to expand beyond our borders, they've also reduced the trade barriers that buoyed the success of local champions.

CIDB chairman Tan Sri Ahmad Tajuddin certainly concurred, "Malaysia is a part of the global economy. Opportunities in the construction sector are also open to foreign players and the opportunities for our contractors can be limited if all our construction jobs are won by foreign firms."

In 2015, Malaysian firms secured a hefty RM115 billion or 81% while foreign contractors clinched RM29 billion or 19% of total construction projects. The next year, foreign contractors' share nearly doubled to RM85 billion or 37%. On the other hand, local players' projects were valued at RM145, or 63%. They were closing in on us.

For CIDB chief executive Dato' Ahmad 'Asri Abdul Hamid, the stiff competition leads to an oversupply of contractors and limited demand in terms of projects. "If you look at the construction volume in the



Malaysian market, it's about RM200 billion per year on average. And yet we currently have at least 87,000 registered contractors in Malaysia. If you talk about the supply in relation to the demand, the Malaysian market is limited in terms of opportunities."

He continued, "It has to do with the sustainability of the business. They have to venture abroad, if they want to be sustainable."

If Malaysian players are content to rest on their laurels in the domestic construction market and are afraid to venture into foreign markets, they risk losing jobs to competitive foreign firms. To compete against international contenders effectively, they'll have to venture into the global market and up their domestic game or they'll be edged out before long. And CIDB has just the strategy for upping the ante.

Aside from winning job opportunities within the country, as the chairman put it, the intention of the Internationalisation thrust is to "make sure that Malaysian firms are able to go overseas and win job opportunities globally."

As he reiterated, Internationalisation is not just one of the strategic thrusts, "It's also an outcome of the other thrusts: quality, safety, professionalism, productivity, and so on. If our companies have got those traits, then the chances of them becoming competitive locally and internationally will increase. It's all tied together."

Under this thrust, each initiative aims to address specific challenges local contractors face in Malaysia and abroad.

### **Money Makes the World Go Round**

Most small and medium-sized enterprises and even large firms have limited access to enablers to support their international expansion efforts. As overseas construction



**Tan Sri Ahmad Tajuddin Ali, CIDB Chairman**



**Dato' Ahmad 'Asri Abdul Hamid, CIDB Chief Executive**

projects are costly and risky, international and local lenders and banks are usually wary of financing projects by contractors with a lack of international experience or a weak track record.

Tan Sri Ahmad Tajuddin emphasised, "You have to build your stature and credibility in the marketplace for bankers to trust you. They'll be looking at your track record. You don't build this overnight. If the bankers don't believe you, you don't get your financing. The bankers will believe the track record."

SMEs often face many difficulties in meeting the banks' loan risk assessment criteria and planning project finance requirements accurately. An inaccurate estimate leads to a high risk of cost overruns in the project which affects the firm's track record negatively.

To resolve this issue, one of the initiatives aims to strengthen access to financing for Malaysian champions venturing abroad. When asked how CIDB accomplished this, he answered, "In fact, under this initiative, we played a part as the technical evaluation committee for Services Export Grants which is a government fund allocated by MATRADE. So far, the fund has been approved for four companies which are undertaking seven projects around the region including India, Myanmar, Indonesia, and Timor Leste," he revealed.

### **Stronger Together**

Another initiative sets out to enhance the export of construction services and help Malaysian firms secure overseas projects by addressing the challenges local firms face when they enter new markets. One of the reasons Malaysian SMEs can't compete against construction giants from Europe, China, and other parts of the world is their size. Under this initiative, CIDB facilitates consortia formation.



By joining forces, contractors will be able to spread their financial risks and complement each other in terms of technology, skills, and capabilities.

Dato' Asri elaborated, "A lot of Malaysian mid-tier companies don't have the financial as well as the technical capacity on their own, but they have their individual strengths. What we want to do is to bring them together so that they have this complementarity in terms of strength and skills and be more competitive together."

In fact, a Malaysian consortium was behind the revitalisation of one of the world's most recognisable landmarks, the Battersea Power Station. Designed by Sir Giles Gilbert Scott in 1930, the iconic four-chimney building owes much of its fame to an appearance on the cover of English rock band Pink Floyd's 1977 album *Animals*. The power station, which generated one-fifth of London's electricity for half a century, has also been used as sets

for the films *The Dark Knight* and *The King's Speech* as well as concert sites for Elton John and Sting.

Decommissioned and in disrepair, for many years, the site cycled through many developers' plans for revival, including converting it into a theme park, football stadium, urban park, eco dome, hotel and retail site.

Beating out many international bidders including English football club Chelsea, the Malaysian consortium comprising property developer SP Setia, Sime Darby Property, and Employees' Provident Fund purchased the 42-acre site for £400 million in 2012. January 2018 saw asset management group Permodalan Nasional Berhad and EPF acquiring Phase 2 of the regeneration project for £1.6 billion.

Aside from Battersea Power Station, several Malaysian success stories might partially be attributed to their shared strengths as part of consortia formed. In December 2017, the Bach Dang-Salcon joint venture secured

a RM77.1 million construction contract to repair and rehabilitate the Haiphong water supply system in Vietnam.

According to Tan Sri Ahmad Tajuddin, "By 2017, four consortia had been formed to bid for projects overseas. Three Malaysian consortia have submitted their bidding proposals for four road packages worth RM6.5 billion in India in December 2017."

As a measure of this initiative's success, CIDB aims to have Malaysian companies and/or consortia win RM8 billion worth of overseas projects by 2020. The board also intends to assist approximately 10 SMEs and 2 mid-tier firms with their efforts to go abroad every year.

Aside from facilitating consortia formation, according to Dato' Asri, the board also plays the role of a matchmaker. "We organise business matching sessions every year during the International Construction Week in collaboration with MATRADE."



**"We are promoting Malaysian construction services and materials to Malaysian developers who are engaged in big developments overseas."**  
– Dato' Ahmad ' Asri

In 2016, Malaysian companies won overseas projects worth a total of RM1.71 billion including RM794 million worth of contracts won by contractors via ten projects in Cambodia, India, Qatar, and Thailand. In 2017, six Malaysian construction firms won seventeen projects worth RM3.14 billion in total.

Tan Sri Ahmad Tajuddin enthused, "One of the best examples to me is Eversendai. They specialise in steel erection and structural works. They've been winning jobs around the world."

Indeed, over the past thirty years, Eversendai has completed more than 300 projects in Malaysia, Dubai, Abu Dhabi, Qatar, Saudi Arabia, Oman, Azerbaijan, India, Hong Kong, Philippines, Indonesia, Thailand, Singapore and India. In 2017 alone, the integrated steel structural turnkey contractor was awarded nine projects worth RM683 million including T-Hub Phase 2 in India, KAFD Iconic Station in Saudi Arabia, and the Al Habtoor Residences in UAE.

By that measure, it would seem Malaysian firms' positions in foreign markets are growing stronger by the minute.

In a bid to provide easy access to information on Malaysian construction firms and construction-related services, a one-stop integrated source for construction service providers will be established by this year and updated annually.

### The Right Information

As the timeless adage goes, knowledge is power. As a player enters foreign, unfamiliar terrain for the first time, having the right information is a primary concern. From industry size to presence of competitors to tax rates and more, the breadth of information Malaysian firms require is nearly endless.

For example, in India, the tax regime varies from state to state. On the other hand, the Maldives does not tax building materials imported during the construction period.

In countries like Libya and Cambodia where the locals have less confidence in their currencies, capital requirement is high.

Changes in a country's foreign policy stance may affect capital requirements over time. For instance, since China became a member of the World Trade Organization in 2001, foreign contractors need at least US\$2 million in paid-up capital to enter the country. Clearly, Malaysian firms wishing to venture into foreign markets must do their homework.

In gathering market intelligence, CIDB plays a significant role in helping Malaysian firms overcome the information barrier.

"We publish country reports for the industry's consumption," Dato' Asri Abdul Hamid described, "We also regularly organise opportunity seminars to share more in-depth information on doing business in a particular country."

## CIDB-Led Construction Mission to the UK

Newly introduced as a part of the CITP, the latest initiative involves elevating the use of construction resources in local and overseas projects. Whereas the initiative discussed above aspires to help Malaysian players secure overseas projects, this initiative is focused on increasing the export of other construction services such as engineering and architectural consultancy. It is also intended to heighten the use of Malaysian construction materials in international projects.

One way of accomplishing this objective is for Malaysian developers who have leading stakes in overseas developments to pave the way for other Malaysian firms.

Recently, CIDB led a construction mission to the UK with the objective of promoting Malaysian construction services and materials to Malaysian developers who are engaged in big developments there, particularly the Battersea Power Station Development Company (BPSDC).

"Our main objective is to facilitate Malaysian construction industry players to undertake, execute projects and render services, through projects owned by Malaysian investors in the United Kingdom," explained Sr Sariah Abd Karib, CIDB's Senior General Manager for the Policy and Corporate Sector.

She said, the mission which was organised from April 23<sup>rd</sup> to 27<sup>th</sup> included 37 delegates from 28

companies involved in various construction-related professional services such as architecture, engineering, project management quantity surveying and Building Information Modelling (BIM) consultancy. Building material suppliers and manufacturers also form part of the delegation."

Aside from the Battersea project, the delegation also visited projects owned by Malaysian developers EcoWorld, IJM, and YTL.

The CIDB effort has been met with great warmth on both ends. She described, "The developers are very forthcoming and very eager to explore ways they can work together with Malaysian service providers and materials suppliers for their



projects. Some of the delegates have already entered into serious business discussion and negotiations with the developers."

Among Malaysia's suppliers and consultants who have supplied to BPSDC is Kingres Tiles. The Malaysian manufacturer has supplied more than 14,000 square metres of floor tiles for the Winter Gardens in the Battersea project's Phase 1, Circus West.

Another Malaysian company, PCSS Consultancy was involved with the Battersea project in 2015, by providing a 4D BIM visual scheduling and project management software, Synchro. It allowed the construction to be rehearsed prior to the actual work, solving much of the construction complications.

Moving forward, CIDB is proposing that the BPSDC invite the Malaysian consultants and suppliers who have pre-qualified to tender in phases 4 to 7. In addition, as part of the overall effort to increase the use of Malaysian resources in government-funded projects, CIDB proposes that BPSDC increase the requirement for usage of Malaysian resources to a minimum of 30%. Sariah explained, "This can be done by allowing for Malaysian equivalent products to be specified in the tender documents."

Secondly, BPSDC can also facilitate collaboration between pre-qualified Malaysian consultants and pre-qualified UK based consultants.

She shared, "In return, CIDB will play its part in facilitating the formation of Malaysian consortium

with various disciplines especially in niche expertises (e.g. electrical systems, BIM modelling, etc.) when necessary."

Inspired by the UK mission, CIDB is now planning to approach other Malaysian companies with big developments overseas particularly in the UK and Australia to pave the way for utilisation of more Malaysian construction-related services and materials.

Over on the local front, CIDB is also engaging with top foreign developers who are leading major projects in Malaysia such as Forest City, the Melaka Gateway and the Tun Razak Exchange in an effort to encourage them to utilise more local resources in these projects.



Rob Ticknell (right), CEO of BPSDC, shows the expansion plan of the Battersea Project



CIDB Senior General Manager Sr Sariah Abd Karib leads a discussion on action steps, following the UK Mission



Datuk Johan Ariffin, Chairman of BPSDC, welcoming the delegation led by CIDB



Mark Andrew Lahiff, CEO of IJM Land UK, gives a presentation on the Royal Mint London Project



Bird's eye view of the Battersea Power Station project



The Malaysian Construction Industry delegation poses for a group photo in front of the Battersea Power Station

# Changing Mindsets with BIM



Andy Tiong, Senior Project  
Planning Consultant, PCSS Consultancy

**Andy Tiong**, senior project planning consultant at PCSS Consultancy, believes that visual technology helps to drive improvements and confidence in project planning. **HEIGHTS** caught up with the senior project planning consultant to find out about his journey in creating a path for project planners to embrace Building Information Modelling (BIM) and how technology changes mindsets.



One of the best ways to drive the message home is through visual content, and Andy Tiong has been a strong advocate for visual content to be used in the construction industry, especially in project planning.

“Seeing is believing. By using the right visual technology, the client is able to understand and simulate how the construction will look like, say, in forty months’ or sixty months’ time, without having to construct on-ground first. We integrate the construction model and project schedule using Synchro 4D software, a project planning tool that enables clients to enhance their construction processes and to execute their projects. More importantly, the 4D planning tool helps people to believe in project planning,” says the senior project planning consultant.

Armed with a passion to bring improvements in project planning in the construction industry, Andy was first exposed to production planning when he was working in the Research and Development centre for gearbox design in Liverpool, United Kingdom. Using Just-in-Time (JIT) methodology,

he found production planning similar to project planning and after a year and a half, he excelled in the latter.

Born and raised in Kuching, Sarawak and graduating from Liverpool John Moores University, Andy could have remained in Liverpool for better career prospects but had to return home to oversee a family construction project. However, he didn’t want to do just that as he also wanted to share his knowledge and expertise on project planning with local companies in Sarawak.

With that, Andy conducted free project planning classes to engineers and soon after, he worked for PCSS Consultancy, a project management service provider based in Kuching, and together they provided commercial training to Oil & Gas (O&G) companies. Not wanting to rest on his laurels, he learnt in-depth about Primavera P6 software, a recognised standard for project management software designed to plan, manage and execute large-scale, highly sophisticated and multi-faceted projects. He familiarised himself with the full functions of the software to help him as a planning consultant, undertook specialist exams and eventually became an expert in Primavera.

However, he felt that using Primavera software alone was not effective as he had to explain to clients how the

construction will look like based on the schedule, sequences of work and drawings – on a PowerPoint presentation. At that time, most companies were using PowerPoint presentations, but content was not easily changeable, revisions were time-consuming, and decisions could not be made immediately.

“Having PowerPoint is good, but we still needed to do a lot of supplementary work to explain to the client as not everyone was able to interpret the project schedule well. That’s when we started to explore a new tool that could combine 4D modelling and project schedules in a video format. We felt that technology would help us to improve ourselves in project planning and to provide better services to the clients,” Andy notes.

He adds, “You’d be surprised to learn that not many people believe in project planning. In the construction industry, many assume that project planning is used for reporting purposes only or as a form of communication between the contractors and the clients. Project planning is not regarded as a benchmark to guide one’s work. With that, we felt that we needed to change the mindset of the industry including those of the large contractors.”

### Changing mindsets

Eager to start using BIM in project planning, Andy and his team explored various software available in the market. They finally chose the Synchro 4D software which manages projects more interactively through





**“Our role as project planning consultants is to ensure that the tool can achieve and provide what the clients want.” – Andy Tiong**

a simulation build of the project after it integrates the schedule with Computer-Aided Design (CAD) objects. The unique aspect of this 4D digital construction platform is that it is intuitive, simple to learn and doesn't replace the conventional planning process of using Primavera P6 software but complements the existing process instead.

That said, the team faced many challenges in the early stages of introducing Synchro 4D to clients, simply because Primavera P6 project planners were not familiar with this technology and had assumed that the 4D platform was going to replace Primavera which they had been using for many years. “Convincing top management about Synchro 4D is one thing but persuading middle and lower management to use the tool in project planning is another. So, we showed

them what they could do with the tool – they can integrate the construction model and schedule, and when they drag the schedule timeline, the model changes on the video,” shares the Sarawakian consultant.

“Seeing is believing. The client can't visualise the model just by reading the project schedule but by watching the video, it's very easy to believe how effective the 4D tool is. This is where we assist middle and lower management to believe in the tool and its process, not because their top management wants it. We bring people into the process and coach them to feel comfortable with the tool. It's tough to change mindsets but that's the way to go in order to provide solutions to their problems.”

However, planning consultants must be conversant with the tool first in order

to persuade the client to use the 4D technology, and that requirement is highly desirable in junior consultants as well especially those who wish to move to a senior role. “To become a senior consultant, the junior consultant must know the full functions of the tool first. The relevant experience in using the tool will come when they are attached to a project. Our role as project planning consultants is to ensure that the tool can achieve and provide what the clients want, therefore we need to be very good with the tool first before providing solutions to the clients,” he advises.

### Multi-industry experience

Unlike project planners who typically remain in one industry throughout their careers, Andy's career path was slightly different in that he had the privilege to work in multi-industries.



He clarifies, "Construction planners don't work in O&G industry and vice versa, as the practice in one industry differs from another. But I was lucky to alternate between construction and O&G industries with PCSS working on projects such as the Borneo Convention Centre in Kuching and the Shapadu off-shore fabrication production in Shah Alam. At that time, not many companies in Kuching were using Primavera in project planning. Thus, we had the opportunity to use the software for the Borneo Convention Centre project, whereas the Shapadu project required production and project planning, which were areas I happened to have skills and experience in."

Apart from being able to work in multiple industries, Andy shares that PCSS consultants are not attached to the client's site full-time throughout the project except the initial six months during which the consultants mentor, train and coach the client's planners on the planning software and tools. After the initial period is over, the consultants visit the client on a monthly basis and gradually reduce the visits to

every three months. With this practice, the consultants can manage multiple client portfolios – gaining necessary experience from various industries – and the clients are able to save costs without having to engage the consultants full-time throughout the project.

He hardly spends time in the office nowadays as he focuses on pre-sales – conducting Synchro 4D demos at clients' sites, understanding their requirements and providing potential solutions for the client. He shares, "When I first became a project consultant, I used to be based in the client's office, writing procedures and processes for the client. My time is now spent on 'knowledge-sharing,' setting up project frameworks for consultants and travelling within the South-East Asia region, namely, Malaysia, Vietnam, Singapore, Indonesia and Brunei."

The Sarawakian consultant doesn't have a team reporting to him but works closely with a support team and he notes that his leadership style changes depending on the team that he works

with. "I think my leadership style is democratic leadership – I encourage people to voice out their ideas for I might not be able to see the situation as they see it. But democratic leadership can be time-consuming especially during challenging situations which require urgent decision-making. That's when I change my leadership style to transactional leadership," Andy asserts.

## Human relations management

Andy and the PCSS team have certainly made a significant positive impact in the construction industry, creating a path for project planners to embrace visual technology. Despite the achievements and successes, there are no shortages of challenges as well, and the biggest challenge for a project planner is human relations management. "We are engineers managing projects and we don't manage people. But we need to work with people to get their buy-in, so that we can proceed with our job. This is because it's the people who are



impacted by our tools and processes. Planners might feel challenged with a new tool or management may not believe in project planning,” admits the senior project planning consultant.

“Therefore, the solution for such challenges is to introduce Synchro 4D planning that translates our project schedule into a visualisation model which facilitates people to see and believe in the tool. The 4D model helps them to detect errors in the schedule and makes the necessary changes accordingly. It also acts like a benchmark for people to evaluate work on-site based on the 4D simulation. All of this creates easy communication among various parties in the project.”

While the 4D platform helps to ease challenges, project consultants invariably receive negative comments from clients when things go awry. When that happens, Andy recommends consultants to not give up but have self-discipline, self-belief and a mentor to guide and motivate them. For him, gaining knowledge about the software and tools motivates him, and being the first person in South-East Asia to have exposure to 4D planning gives him plenty of motivation to go beyond the challenges faced in the industry.

## Passion for Project Planning

With a wide smile, Andy beams and says that one of his greatest achievements is this interview with HEIGHTS. He further explains, “The other achievement is being

part of the PCSS brand and company culture that drives discipline and the continuous need to improve ourselves. As a result of this culture, we became an accidental front-liner in project planning. We never aimed to be the best project planner in Malaysia but because of our constant drive to improve ourselves, our principals are impressed with our project planning skills, experience and expertise which incidentally, have helped us to embark on international projects and to expand to international markets.

“I’m also fortunate to have Philip Palmer as a mentor who is also a well-known project planner in Southeast Asia and Australia and a partner in PCSS. Philip has mentored me in project planning and the soft skills part of the job as well.”

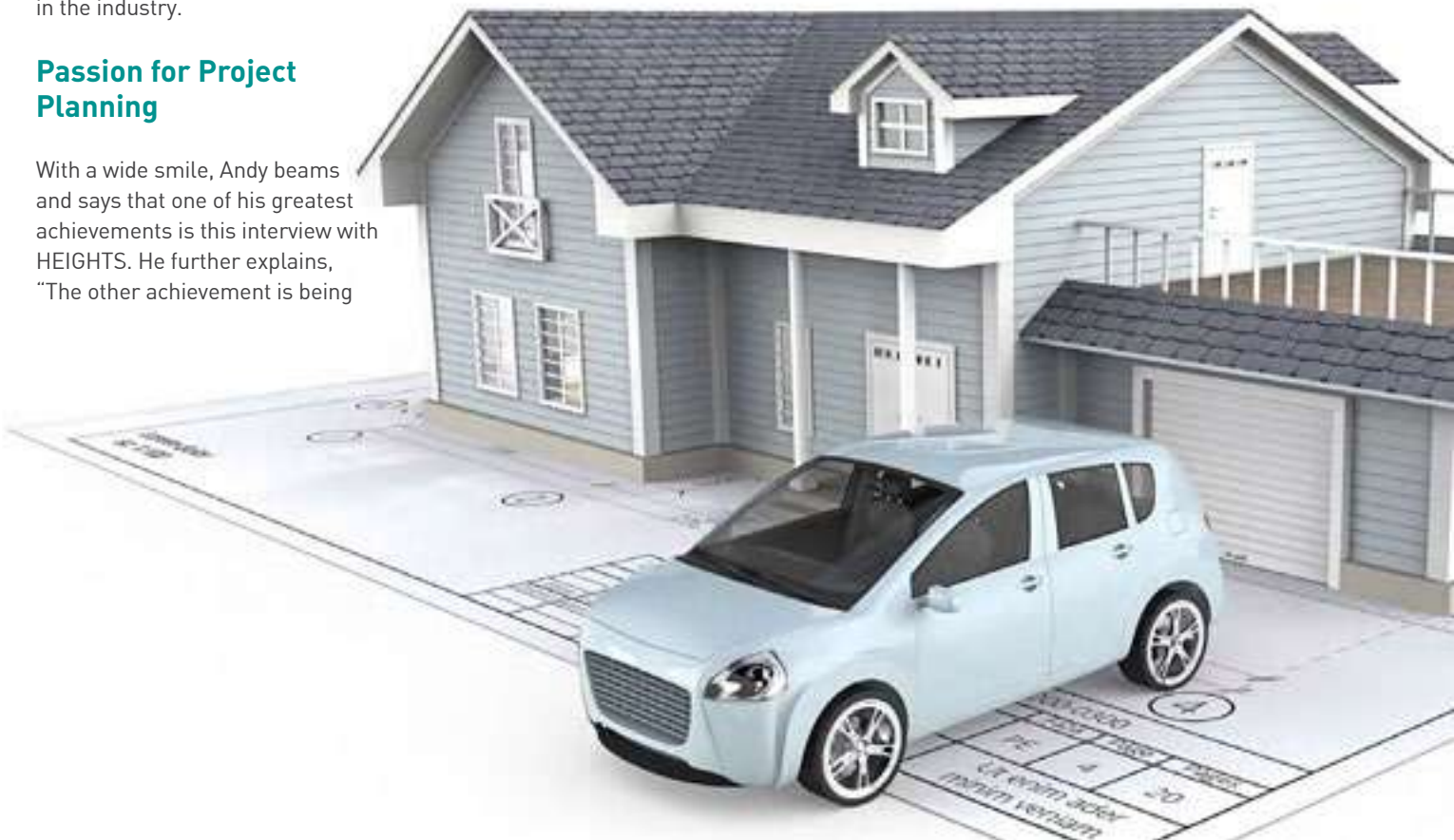
With such passion for this field, Andy admits that there is no clear demarcation between his professional and personal life. “You know, when people are so much into their work, but they are not happy? I’m a happy man because I have a great passion for this field. I enjoy what I’m doing. During my downtime, I keep up to date with the latest technology. I want to be ahead

of myself, so that I know that the next new thing could be a new technology revolution,” he laughs.

## Advice for future project planning consultants

For those who wish to go into the project planning consultancy field, Andy prescribes a different approach from the conventional career path. “Planners do not need to know everything in civil, mechanical and electrical work. That’s what the client wants but the reality is no one knows everything. It’s all about business management, learning how to work in different disciplines and communicating with different teams. It’s similar to a conductor in an orchestra – the conductor doesn’t need to know how to play every single musical instrument in the orchestra as long as he knows how to sync the tunes from each instrument,” says Andy.

For his role as a solution provider, Andy strives to drive improvements, maturity and confidence in project planning in South-East Asia, advocating visual technology for the construction industry.







“It’s similar to a conductor in an orchestra – the conductor doesn’t need to know how to play every single musical instrument in the orchestra as long as he knows how to sync the tunes from each instrument.” – Andy Tiong

# Australia Looks at Manufactured Timber as Green Building Material



Forte 10-storey CLT apartment tower, Docklands, Victoria  
Photo credit: Victoria Harbour

**A** material used in construction for centuries is making a comeback, as developers and builders take timber to new heights. They are not using conventional wood, but manufactured, engineered materials collectively known as mass timber.



Among them is cross-laminated timber (CLT) – layers of wood, glued together under high pressure, with the grain of each perpendicular to the one before. CLT is not a new building material – its growing popularity in Australia is the result of recent changes to building regulations, which are in turn the result of lengthy performance testing and industry consultation.

In May last year, Australia's National Construction Code was changed so timber products could be used in buildings up to 25 metres high, without developers having to go through costly additional processes such as getting fire engineering approval each time.

Now, midrise buildings can be made of timber products, as long as sprinklers are installed in buildings over three storeys, and fire-resistant plasterboard covers all exposed wood.

Another driving force behind timber is the growing interest in environmentally-friendly and sustainable products. Advocates of mass timber are quick to point to the material's green credentials, arguing it is a good insulator, which keeps down heating and cooling costs, and it is a store of carbon – unlike concrete and steel, which emit carbon during their production.

In Australia, the new material has already made its presence felt. The best-known example is Lendlease's 10-storey CLT apartment tower, Forte, in Docklands, Victoria. NSW will soon be home to the largest CLT-built project in the country, with a residential complex with 101 units over three apartment buildings. The Macarthur Gardens project, built by Strongbuild, will have three towers of six, seven and eight storeys, for an affordable housing development.

Also in Sydney, retirement village operator Aveo is moving ahead at Norwest on a 449-unit project,

with 10 buildings from four to nine storeys. The dwellings will be made with CLT.

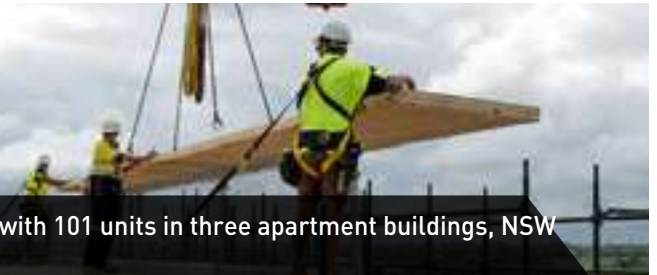
Lendlease is investing further into this trend, setting up its own factory in Sydney with plans to create \$1 billion of prefabricated components required for the next wave of buildings over the next five years.

New Zealand timber company, XLam, has opened Australia's first and sole CLT manufacturing plant in the Albury-Wodonga region. A high tech sustainable timber facility, it is slated to produce 60,000 m<sup>3</sup> of CLT each year. However, there will still be opportunities for CLT, glulam, prefabricated flooring and other advanced engineered timber products for imports, as these products are not manufactured in Australia.

As demand increases for inner-city dwellings, more developers will turn to timber, for a quicker, less-disruptive option for high-rise structures.



**The Gardens Macarthur, largest CLT-built project in Australia with 101 units in three apartment buildings, NSW**  
Photo credit: [blog.strongbuild.com.au](http://blog.strongbuild.com.au)



**Aveo retirement village, Norwest, Sydney**  
Photo credit: Taylor Thomson Whitting ([www.ttw.com.au](http://www.ttw.com.au))



**Aveo retirement village, Norwest, Sydney**  
Photo credit: Light Practice



## ■ INDUSTRY TRENDS



## Robots Will Continue to Make Inroads into Construction Projects

**R**epetitive tasks such as laying bricks are starting to become automated. Shipments of industrial robots are expected to increase by 1.8 times over the next four years, and a look at other industries suggests that this is just the beginning. Look for other repetitive tasks, like driving nails at set distances, to be automated in the future. Self-driving vehicles that work within project areas are also gaining an increasing presence. While this is bad news for people who do things like masonry as their livelihoods, it's good news for robot makers and construction managers who wish to lower labour costs and bring more standardisation to their projects.

## Modular Construction is Booming

**M**odular construction has moved beyond the construction of manufactured housing into the world of large projects. With this method, structures are made off-site and then brought into position by truck. Once there, they are secured to the ground, and if needed, connected to other modules to make complete buildings. This method does not have to be associated with compromises in quality. In fact, when good standards are adhered to, it can produce superior results. For construction project operators, the benefit is simple: Modular construction can bring about a 65-percent increase in project completion speed. In a world where everyone wants everything immediately, this is a great selling point. It also allows construction companies to do more jobs in the same amount of time. With this sort of win-win situation, there's no doubt that modular construction will continue to grow at high speed.



## Green Construction Will Remain Strong

**E**nvironmental friendliness is becoming even more important as time goes on, and this extends to the construction industry. Sustainable lumber sourcing, energy efficiency, low indoor pollution levels, and everything else “green” will remain in high demand in developed and developing regions. One program that gets plenty of attention is LEED, which certifies buildings that are sufficiently environmentally friendly. Certification by this global group can increase the value of a building and bring more customers to the associated construction companies. It is predicted that there will be almost 65 percent more requests for LEED-certified and other green buildings this year. To get a project recognised as green, both construction managers and contractors must pass certification requirements. These go beyond which materials are used and also cover which methods are practised. Therefore, those without experience in this area will likely need some fresh training to become properly familiar with eco-friendly construction methods, waste reduction, and more. As might be expected, this demand will be concentrated in specific regions. Many green methods are more expensive than standard ones, so calls for it can be expected to come mostly from the wealthier parts of the world. As green practices become more common, the costs will likely lower and lead to increased demand elsewhere.

## Safety is in the Spotlight

**H**igh-profile façade fires and other disasters have brought safety into the spotlight. Various nations have implemented new regulations to reduce the risk of fire, especially where the façade is concerned, and may require builders to work with fire and life safety teams to get permits. Building codes around the world are also being updated to mandate the use of materials with specified levels of fire resistance. Safer facade materials are therefore in high demand, and not only because of laws, customer demand, or the desire to prevent loss of life. Insurers are also responding to the new focus on facade materials, and they are charging builders more to cover projects that don’t use materials that are sufficiently fire-resistant. The buyers of buildings are also finding that their insurance costs are partly determined by this factor. With demand coming from all ends, a worldwide shift in allowable construction materials is inevitable.



## INDUSTRY - TRENDS



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