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- **Malaysia** is moving towards enhancing and rebooting its infrastructure performance so as to be more efficient
- **Digital** transformation is key to enhancing businesses



by Sharina Ahmad

The construction industry plays a vital role in Malaysia's economy and is expected to grow this year despite lingering uncertainties concerning mega infrastructure projects, intense competition and potential consolidation.

Against this backdrop, solution provider Trimble Solutions (SEA) Pte Ltd is optimistic of gaining traction, specifically in the steel industry, in the adoption of its end-to-end digital modernisation.

"End-to-end modernisation, or a holistic approach to tackling system upgrades, completely redefines how a company thinks about information technology.

"Just like many other industries, digital transformation is key to enhancing businesses in the age of the digital economy," its structure division sales director Ungku Ibrahim Ahmad tells **FocusM1**.

"One prime example is the fourth industrial revolution (IR 4.0) where Malaysia is pushing hard for modernisation in core industries such as construction, which is the cornerstone of a country's growth and progress," he adds.

The message is clear, he says, as the government has allocated the National Policy on IR 4.0 or Industry4WRD Readiness Assessment (Industry4WRD-RA) blueprint RM5 bil in Budget 2019.

The amount is to support the transition and migration of industries to IR 4.0 and the Construction Industry Development Board is to organise an IR 4.0 roadmap by 2020.

Industry4WRD-RA is a comprehensive programme to help firms assess their capabilities and readiness to adopt IR 4.0 technologies and processes.

Breaking silos

Malaysia is moving towards enhancing and rebooting its infrastructure performance to be more efficient, as only then can the focus be shifted to the building system and structure, says Ibrahim.

"To deliver the desired business performance, businesses need to break the operational silos to achieve an effective results-driven operation.

"Communication is important and we are here to break the silo. At Trimble, we share the same motivations. More industry players are recognising the value



More industry players are recognising the value of digital construction in improving overall efficiency, productivity and competitiveness

Digital solutions for construction sector



Communication is important and we are here to break the silo, says Ibrahim

of digital construction as the key to improving their overall efficiency, productivity and competitiveness.

"Our goal is to educate and empower the entire chain of stakeholders - from architects to engineers, contractors and owners - to successfully realise the full benefits of technology and automation in construction," Ibrahim explains.

The unique lifecycle approach, called the Trimble constructible process, together with the Tekla family of products, operates seamlessly to ensure that construction players have best-of-class solutions at their fingertips, he adds.

Tekla software solutions for advanced building information modelling (BIM), structural engineering and steel fabrication management are produced by Trimble.

Tekla software is at the core of the design and construction workflow, building on the free flow of information, constructible models and collaboration.

Ibrahim reveals that Eversendai Corp Bhd is one of its

Changing perception of construction industry

"BACK in 1996, during Tun Dr Mahathir Mohamad's first term as prime minister, he launched the Multimedia Super Corridor project. It is a special economic zone and high-technology business district in central-southern Selangor.

"We need to change the perception that construction is about dirty, dangerous sites with hundreds of people clambering around sky-high scaffolds. Today it's about harnessing technology to plan a full development virtually, testing every scenario that may affect construction and operation, and building with components manufactured offsite to ensure quality and minimise disruption," says Trimble Solutions (SEA) Pte Ltd structure division sales director Ungku Ibrahim Ahmad.

He adds that the steel industry compares to the in-situ concrete industry; both will create a social problem as they need more people.

"With Industrialised Building System (IBS), you can have better planning and you don't have to worry about the weather at all.

"Simple example: If you need a column but the supplier sent the beam first, the workers can't do anything. They have to wait for the right one to be delivered," he explains.

However, Ibrahim is confident that, moving forward, the steel industry is not about saving the cost of the materials but more on the overall process.

"There are certain things that were hidden before. It's about the workflow and how you communicate and how the information is stored.

"We are at the front line compared to other players due to our constructible process. So far, no other software or application company provides a full-life cycle," he asserts.

Founded in 1978, Trimble is headquartered in Sunnyvale, California, and has spread its footprint to more than 150 countries catering to different scale and needs.

clientele and has been using the solution for most of its projects.

Operational innovation and solution expansion

Modernisation is the key for all industries and companies as it breaks down silos to create cross-functional information technology, and this will benefit

them in terms of quicker deployments, he says.

"When you work in a silo, you will just think of your part. In today's world, you can't do that because everyone is involved and is part of the team. Everything has a cost and whatever we do is hoped to benefit everybody," he argues.

To expand the solution, the group recently launched Tekla PowerFab - a complete and connected steel fabrication management information system that enables unprecedented visibility for all project parties, both internal and external.

"Tekla PowerFab offers real-time information to all project parties which in turn will aid collaboration across various project teams throughout the structural steel workflow.

"Moreover, the new software aids in the automation of the fabrication management process by combining Tekla EPM with Tekla Structures and Trimble Connect for clear visibility of components status at every level of fabrication," says the Singapore-based company.

The latest expansion of the company's steel fabrication software portfolio enhances its key offerings to customers.

Growth prospects

According to the Malaysian Iron and Steel Industry Federation (MISIF), world steel demand is expected to increase from 1.59 billion tonnes in 2017 to 1.63 billion tonnes this year, with targetable regional export opportunities in Southeast Asia.

It says that on the local front, the industry trend also appears to be encouraging as Malaysia's apparent steel consumption (ASC) is projected to grow from 9.4 million tonnes in 2017 to 12.4 million tonnes in 2025, at a compound annual growth rate (CAGR) of 3.5%.

The reduction of production capacity in China and the closure of outdated induction furnaces to rationalise its steel industry since 2016 have led to an improvement in steel prices across the globe.

As a solution provider, Trimble Solutions, says Ibrahim, will enable the industry to pick up even more by modernising their applications efficiently using new technology and innovation.

"Tekla Structure already supports the industrialised building system (IBS) and BIM due to the industrialised process by providing for a smoother and cleaner project structure.

"Everything is done in the factory and delivery can be scheduled. To enhance this, Tekla structure software can be used to track the progress at the factory and plan the logistics; for instance how many lorries do you need to carry the materials. It will reduce the extent of human error," he says.

He notes that with the newly launched software, the company will be approaching existing Tekla Structure steel detailing users on add-on value for them.

"So we will start from there as it makes more sense for an existing customer who has been using Tekla Structure. Even though Tekla PowerFab can be a standalone, it could be tough for a new user to adopt Tekla PowerFab," Ibrahim explains.

Tekla Structure helps architects, engineers, contractors, building managers and property owners with engineering and fabrication management for structural steel, precast and cast-in-place concrete. **FocusM1**