

DIGITISED FOR THE FUTURE

Building on its decades-long track record, **ORANGE BEAM** continues to innovate, embrace new technologies and be an advocate for intentional disruption

ORANGE BEAM may not immediately strike one as the face of digitisation and all things tech for the building and construction industry. This is no startup or entrepreneur-led outfit that is looking to shake up the industry as it takes its first steps. On the contrary, ORANGE BEAM — with more than three decades of experience and RM14 billion worth of completed projects under its belt — is the epitome of experience and dependability.

An award-winning builder, ORANGE BEAM's track record extends to maritime infrastructure, high-rise and commercial developments, luxury residences, public buildings and infrastructure projects.

It is a pioneer in green and sustainable developments with more than RM2 billion worth of projects that conform to Malaysia's Green Building Index, US-based LEED certification and Singapore's Green Mark ratings. These include the low-energy office building for the Ministry of Energy, Water and Communications; the Diamond Building, the headquarters of the Energy Commission Malaysia in Putrajaya; as well as residential developments such as the D'Heron at The Lake in Putrajaya, the first energy-efficient building integrated photovoltaic (BIPV) residential development in the country.

Group CEO Datuk Faris Yahaya believes it is this track record that gives the company the legitimacy to be critical about the industry, and to be innovative in its approaches.

Since he assumed the helm of the company last year, Faris has laid out a bold plan to transform the company — charting a precise roadmap to grow the company and enable it to serve its stakeholders with the right level of technology, innovation and disruption.

"In this transformational journey, we aspire to be part of the point of intervention and the voice of the industry," he says.

Guided by its blueprint, ORANGE BEAM is looking at new ways to enhance its offerings, construction processes and even internal business processes. To that end, it is looking to disrupt the way it builds and develops in the future by combining its sector expertise with the right level of technologies to deliver highly technical and specialised projects and services to its customers. Its short-term plan looks at ORANGE BEAM leading the charge as the industry's tech advocate.

As part of its forward-looking stance, the company undertook a rebranding exercise and changed its name in January this year. "The name itself carries deep meaning. Orange is the colour of innovation and of the future, and a beam in a building is the bearer of the weight that represents our people, working together and having shared responsibility," says Faris.

He is under no illusions about the state of the industry. Referencing a McKinsey study, he points out that the industry is one of the least digitised sectors globally. In the US, construction comes in second to last, and in Europe it takes last place. Productivity growth in construction has only averaged about 1% annually over the last 20 years, compared with 3.6% in the manufacturing sector.

"Tech adoption is the answer to construction challenges. Every day, we are exposed to new technologies and their limitless impact on our industry. The adoption of new technologies can capture tremendous efficiencies for us," Faris says, citing a World Economic Forum report last year that found that the industry could save up to US\$1.7 trillion in construction, engineering and design costs globally

within the next decade with full-scale digitisation.

Although Malaysian contractors have changed the way they do business with the adoption of industrialised building systems (IBS) and building information modelling (BIM), this is just the tip of the iceberg.

"If we look beyond our shores people talk about the Internet of Things (IoT), blockchain, artificial intelligence (AI) and robotics. The question is, how can these technologies be applied in the local industry? How can they improve the way we do things?"

That said, he concedes that the building industry is not rushing to embrace digitisation. Faris attributes this to the nature of construction players.

"They have been so comfortable using certain methods that they are unwilling to change. Furthermore, the adoption of new technology means you have to spend, to incur capital and operating expenditure, and this will translate into lower margins," he says, adding that many companies are already experiencing "wafer-thin profit margins and a lack of capital investment".

"So, unless and until they can see tangible benefits, the adoption of technology in the sector will be quite challenging. But it is imperative that industry players adopt a longer-term outlook and that they understand and appreciate the benefits that come with adopting technology. Yes, it will definitely incur expenditure but we have to understand that, in the longer run, the investment will bring about benefits and there will be returns," he says.

INNOVATIVE AND FORWARD-THINKING

Faris points out that there are many readily available technologies that can provide a quick start in the adoption of technology, which can save construction time and cost and, at the same time, ensure worker safety.

ORANGE BEAM's construction and development operations have embarked on the adoption of AI project monitoring, which includes fixed time-lapse cameras or drones, and AI analytics. These will help project leads keep track of all project-related metrics such as team performance and task duration, identifying potential problems and taking corrective actions to ensure that a project is within scope, on budget and meets the specified deadlines.

In 2014, for example, the company used drones for land surveying, site logistics and site inspections for the raw water supply project for Petronas Refinery and Petrochemical Integrated Development Project in Pengerang, Johor. "Drones were also used during health-and-safety inductions and served as a virtual walk-around tool for our clients. When used in construction, the return on investment is greater, delivery is faster and the information is more accurate than using traditional methods such as human surveyors and manual on-site tracking," he says.

In addition, the company is adopting wearable augmented reality for quality inspection to enhance safety and for training purposes. It is also exploring the use of IoT sensors to measure real-time data and ensure swift action is taken to avoid costly mistakes.

The company has also embarked on the digitisation and automation of its internal business processes. These include human resource management and systems, enterprise resource planning, financial systems and business intelligence applications, property sales systems, and asset tracking system using RFID tags on machinery and equipment.

"The timing is right for us. While we look at digitising ourselves and disrupting our business, we feel we can also have an impact beyond Malaysian shores," says Faris.

He says the company's long-term plan also includes expansion to the Philippines and Vietnam. "So, it is a good opportunity for us to expand our presence beyond our shores and become an ambassador not just for the industry but also Malaysia. And the usage of technology can give us an edge."

COLLABORATIVE EFFORTS

Faris reckons that embracing technological disruption is imperative to the industry's survival. "We have to adapt, invent and innovate, or die. Our contractors may have transformed the way they do business with BIM, digital IBS and relevant technologies but we need the support of our industry players within the entire value chain to embrace technology as well," he adds.

Stakeholders such as the government and clients can also play a role. He points to one of ORANGE BEAM's current projects — the construction of Hospital Padang in Kedah, where the use of BIM and IBS was mandated, which resulted in the execution of a full-fledged IBS to manage costs and time more efficiently.

"We will also use BIM LOD 500 to accelerate the overall design-and-build process," says Faris of the RM187 million job, which is due for completion by the end of 2021.

The government, he suggests, could also step up its involvement by giving assistance, such as tax breaks to the early adopters of technology. "So, those who are brave and visionary enough to spend with a view to improving the industry in the longer run, should be compensated or rewarded with some form of assistance. Ultimately, to disrupt the industry, a large amount of collaboration will be necessary."

"IN THIS TRANSFORMATIONAL JOURNEY, WE ASPIRE TO BE PART OF THE POINT OF INTERVENTION AND THE VOICE OF THE INDUSTRY."

— Datuk Faris Yahaya

