

SOUTHEAST • ASIA CONSTRUCTION

JULY - AUGUST 2026

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development in Phuket

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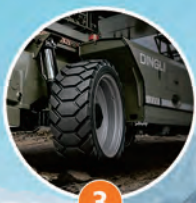
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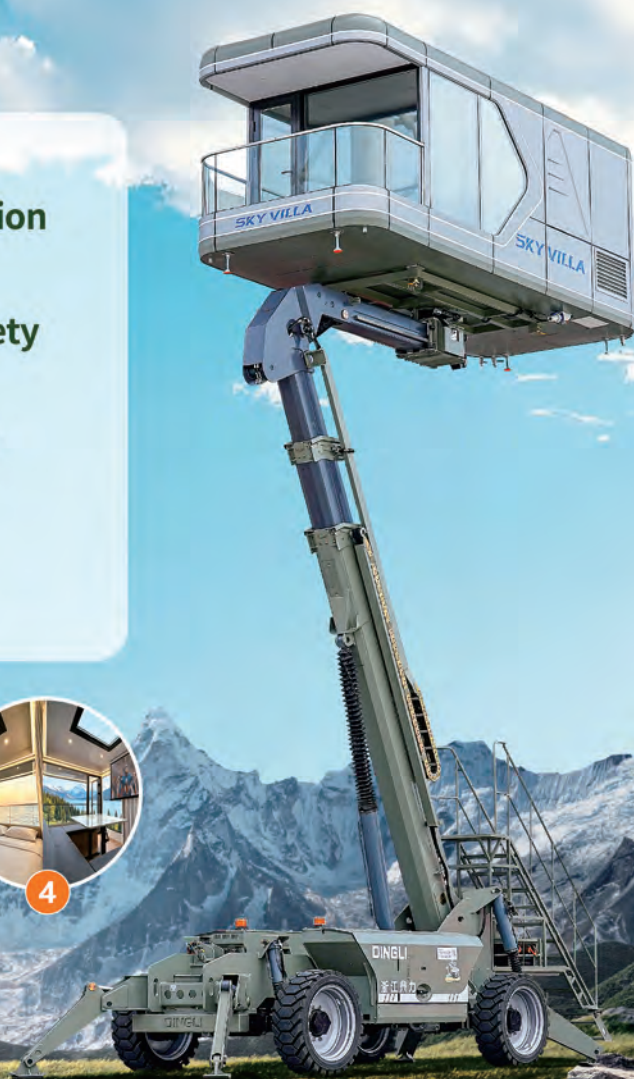
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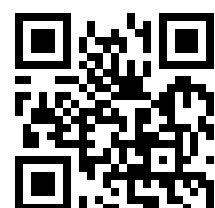
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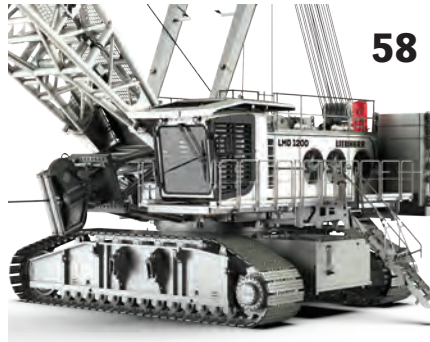
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Masterise Homes unveils One Central Saigon in HCMC

Masterise Homes, a member of Masterise Group, has unveiled One Central Saigon, a landmark mixed-use development in Ho Chi Minh City (HCMC), Vietnam. Located opposite Ben Thanh Market, the project comprises two towers above a retail and commercial podium on an 8,537 sq m site, with 19,990 sq m of commercial space across seven above-ground levels and six basement levels.

Set to be among the tallest twin towers in Vietnam and the region, One Central Saigon is a structurally complex undertaking that requires significant investment, precision and attention at every stage of execution, according to the developer. Its basement levels will connect directly to the Ben Thanh Metro Station via an underground link, integrating the project with the city's public transport network.

"We believe Vietnam has reached the moment where it is ready for a development of the calibre of One Central Saigon. The project has been present in Ho Chi Minh City for some time and has passed through several phases of development. Today, it is being introduced with a clearer vision," said Nguyen Thi Minh Phuong, managing director for southern region at Masterise Group.

The project brings together an international design and construction team, including Arquitectonica as design architect, HBA for interior design, B+H (a member of Surbana Jurong Group) as executive architect, and Turner for project management.

The architecture of One Central Saigon is inspired by 'Song Long Ngâm Ngọc' – twin dragons playing with a pearl – a Vietnamese cultural motif associated with strength, prosperity and wisdom, revealed Masterise Homes. The two towers rise and converge around a central point, creating a contemporary architectural expression of Vietnamese identity within the Ben Thanh district.

Together with Grade A+ offices, The Ritz-Carlton, Saigon (hotel), The Ritz-Carlton Residences, Saigon, the development forms a mixed-use ecosystem for luxury living, hospitality, retail, business, services and lifestyle experiences in the centre of HCMC. ■



Comprising two towers above a retail and commercial podium, One Central Saigon is a structurally complex project that requires significant investment, precision and attention at every stage of execution.



The mixed-use development offers 19,990 sq m of commercial space across seven above-ground levels and six basement levels.

OKP wins S\$165.3 mil contract for commuter infrastructure works across Singapore

Singapore's contractor OKP Holdings Limited has secured a 48-month contract worth approximately S\$165.3 million from the Land Transport Authority (LTA) for the design and construction of lift shafts and associated commuter infrastructure at pedestrian overhead bridges (POBs) across Singapore.

Under the contract, OKP's wholly-owned subsidiary, Or Kim Peow Contractors (Pte) Ltd, will undertake the design and construction of lift shafts at 30 existing POBs islandwide, as well as associated commuter infrastructure works. These include lift lobbies, link bridges, covered linkways and high covered linkways, roof covers to existing bridges, and other accessibility enhancements to improve connectivity for pedestrians and commuters.

The scope also includes enhancement works at certain existing POBs, addition and alteration works to existing lift

shafts, and the construction of a new covered POB with lift access and covered linkways across the Tampines Expressway. The 48-month contract commenced on 25 May 2026.

"By enhancing pedestrian connectivity and accessibility through upgraded commuter infrastructure, OKP is pleased to be able to contribute meaningfully to Singapore's vision of a greener, more liveable city," said Or Toh Wat, group managing director of OKP.

"As Singapore continues to advance its long-term transport and sustainability ambitions, infrastructure development must go hand in hand with responsible and sustainable construction practices. OKP remains committed to sustainable development and will leverage efficient and green construction practices to optimise resources, reduce waste and minimise environmental impact throughout the project life cycle." ■



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Multico Malaysia acquires eight JHC telehandlers

Malaysia's Multico Equipment Services Sdn Bhd has purchased eight JHC T4514 telehandlers. These machines were supplied by JHC China, one of the leading manufacturers of telehandlers for the global market.

Previously, Multico Malaysia invested in five units of the JHC T4514 and seven units of the JHC T4007. Due to its familiarity with the machines and the excellent support, the company has decided to continue its partnership with JHC.

The JHC T4007 telehandler can lift loads of up to 4 t to heights of up to 7 m, while the JHC T4514 can lift loads of up to 4.5 t to heights of up to 14 m. The machines are perfectly suited to sites where work at height is required. The JHC T4514's generous ground clearance, higher tonnage at the same lift height, and sharp turning radius make manoeuvrability easy on uneven terrain.

Moving forward, Multico Malaysia is planning further investments in 2026, including additional JHC T4514 and JHC T4018 units. The company is set to deploy its JHC machines on various construction projects across Malaysia.

Established in 1974, Multico Malaysia has been involved in the engineering equipment distribution business since its inception. The company is also an exclusive local distributor for numerous world-leading brands, including Bobcat, Doosan Portable Power, Hiab, Isoli, Morbark, Rubble Master and Tadano, among others.

Multico Malaysia is a member of the Multico Group, which is headquartered



ABOVE: JHC has officially handed over eight T4514 telehandlers to Multico Malaysia.

LEFT: The JHC T4514 telehandler can lift loads of up to 4.5 t to heights of up to 14 m. Multico Malaysia is set to deploy its JHC machines on construction projects across the country.

in Singapore. The group has a regional presence in Cambodia, Indonesia, Laos,

Malaysia, Myanmar, Taiwan, Thailand, Vietnam and the Philippines. ■

Construction starts on Aria Bay Ha Long Project in Vietnam

Construction of Aria Bay Ha Long in Ha Long city, Quang Ninh province, Vietnam, has officially commenced. The groundbreaking ceremony was held on 23 June 2026. BIM Group is the project investor, with Central Construction Joint Stock Company appointed as the general contractor.

According to Central, its scope of work includes structural works, basic architectural finishing, MEP provisions, and external transportation infrastructure.

Covering a total construction floor area of 253,933 sq m, Aria Bay Ha Long is positioned as a premium mixed-use development

integrating residential living, hospitality, entertainment and investment opportunities. The project has a land area of 19,600 sq m. It comprises two basement levels and two 41-storey towers, providing more than 2,300 apartments, said Central.

Situated on Peninsula 3 of Halong Marina, Aria Bay enjoys a seafront location with views of Ha Long Bay, a UNESCO World Natural Heritage Site. Central added that the project also forms part of the Marina Bayfront District, a master-planned waterfront destination envisioned to become an internationally recognised tourism and lifestyle hub. ■

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Hong Kong's Tung Chung Line Extension achieves tunnel breakthrough in West section

Construction of the Tung Chung Line Extension in Hong Kong has reached another milestone with the completion of the tunnel breakthrough in its West section. A ceremony marking this achievement was held on 22 June 2026.

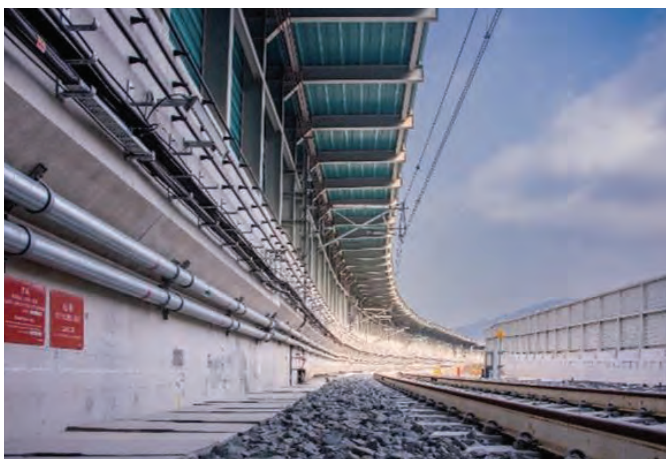
A tunnel boring machine (TBM) named 'Xihe' was deployed to construct the tunnels extending from the existing Tung Chung Station to the future Tung Chung West Station. The machine has now concluded "its mission" following the successful breakthrough of the two tunnels in both directions, and the project will move into the track-laying and electrical and mechanical installation phase, shared MTR Corporation.

The use of TBM Xihe, featuring a diameter of approximately 7.3 m and weighing about 1,000 t, to excavate the tunnels effectively minimised the impact on the surrounding community, said MTR. The machine also installed precast tunnel lining segments simultaneously during excavation, significantly enhancing construction efficiency and safety. The TBM was launched in early 2025 and completed the tunnel towards Tung Chung West Station in October the same year.

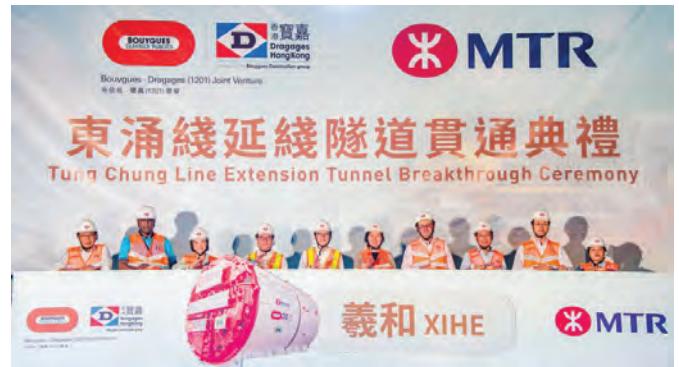
MTR further highlighted one of the project's challenges: overcoming space constraints at the Tung Chung West Station site by executing its first-ever in-place TBM U-turn operation. This innovative approach reduced the need for large-scale lifting and ground transportation before commencing excavation of the tunnel back towards Tung Chung Station.

"MTR is committed to building a community railway using a community-friendly approach. [TBM] Xihe has overcome complex and variable geological conditions, boring through mountains and beneath the sea to establish the underground railway corridor for the Tung Chung West section," explained Jeny Yeung, CEO of MTR Corporation. "This breakthrough fully demonstrates the professionalism and strong collaboration of the project team. It would not have been possible without the understanding and support of the local community."

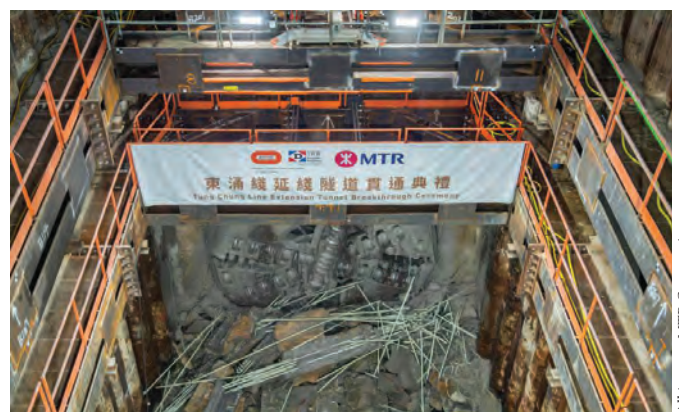
Ms Yeung added that the Tung Chung Line Extension project is expected to be completed in 2029, after which it will further enhance the transport network and connectivity in North Lantau.



Major track diversion works along the Tung Chung East section are also progressing well.



TOP AND ABOVE: The tunnelling breakthrough ceremony for the Tung Chung West section was held on 22 June 2026.



The major tunnelling works for the West section were carried out using a TBM named 'Xihe'.

According to MTR, major track diversion works at the Tung Chung East section are currently underway, with the Hong Kong-bound track expected to be diverted in the third quarter of this year, allowing trains to operate on the new track section. Subsequently, a section of the existing tracks will be removed to make way for the Tung Chung-bound track diversion works, including the remaining two critical turnout installations to be carried out later this year and next year. ■

All images: MTR Corporation



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LTA awards second civil contract for Singapore's Changi Southern Corridor

The Land Transport Authority (LTA) has awarded the second civil contract for the enhancement of road networks along Xilin Avenue, East Coast Parkway (ECP) and Tanah Merah Coast Road (TMCR), as part of Singapore's Changi Southern Corridor project, to a joint venture between CES_SDC Pte Ltd and KTC Civil Engineering & Construction Pte Ltd. Construction is expected to commence in the third quarter of 2026.

Valued at around S\$757 million, the contract covers the design and construction of new flyovers, tunnels and underpasses, as well as the widening of the existing Changi Airport Diversion Canal with new vehicular bridges and road improvement works along Xilin Avenue, ECP, TMCR and Changi Coast Walk. When completed, the enhancements will provide full and direct road connectivity to the future Changi Airport Terminal 5 (T5) from ECP, PIE and Xilin Avenue.

Apart from road infrastructure, new cycling paths will be built along Xilin Avenue and TMCR to boost connectivity between Tampines, East Coast and the future Changi East developments. In addition, the existing pedestrian underpass (ECP Underpass No. 10) between ECP and the ECP Service Road will be upgraded and extended to serve both pedestrians and cyclists. Together with the existing Park Connector Network, these improvements will strengthen first-and last-mile connectivity and offer more seamless, barrier-free journeys along the Xilin–Changi East corridor.

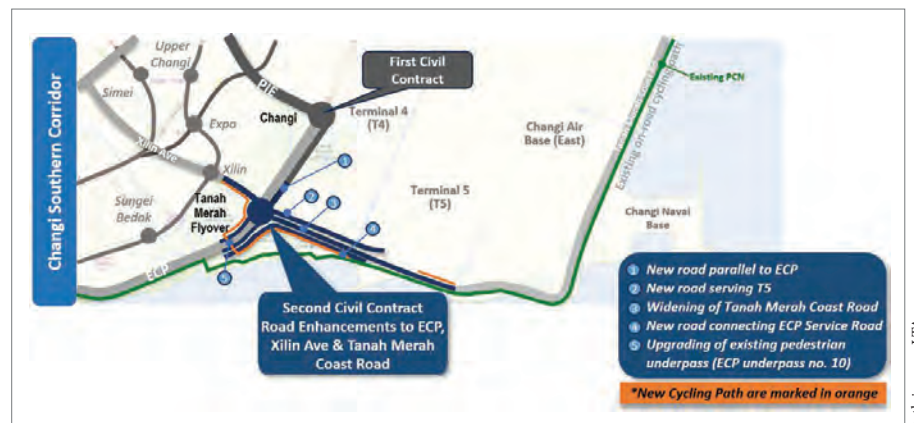
To facilitate these works, traffic diversion along the ECP, PIE and TMCR will be necessary due to site constraints and the construction sequencing required for the infrastructure works, said LTA. More details will be announced at a later date.

CES_SDC (formerly known as Sembcorp Design and Construction Pte Ltd) was involved in the construction of Marina South station on the Thomson-East Coast Line, and is currently working on the construction of two stations on the Jurong Region Line, as well as another station along the Cross Island Line-Punggol Extension.

KTC Civil Engineering & Construction previously constructed Tampines interchange station on the Downtown



The enhancement of road networks along Xilin Avenue, East Coast Parkway (ECP) and Tanah Merah Coast Road (TMCR), as part of the Changi Southern Corridor project. Construction is expected to commence in the third quarter of 2026.



Location map of Changi Southern Corridor. The first contract for the project was awarded in September 2024, with works commencing in the fourth quarter of the same year. After the second contract, LTA plans to call the remaining road civil infrastructure tender in the fourth quarter of 2026.

Line and Orchard Boulevard station on the Thomson-East Coast Line. The contractor is currently involved in the construction of Sungei Bedok station on the Thomson-East Coast Line and two stations on the Cross Island Line.

The first contract of the Changi Southern Corridor project was awarded in September 2024 and comprised enhancements to the existing interchange at PIE/ECP/Airport Boulevard. Works under this contract commenced in the fourth quarter of 2024.

After the second contract, LTA plans to call the remaining road civil infrastructure tender in the fourth quarter of 2026. The scope will include enhancements to the

road infrastructure networks fronting the entrance to the future Changi Airport T5 along TMCR, together with the construction and realignment of cycling paths and park connectors along TMCR. When completed, there will be 3.5 km of new cycling paths, providing pedestrians, cyclists and other active mobility users with safer and more comfortable journeys.

These enhancements for the Changi Southern Corridor will support key developments in Changi East, such as Changi Airport T5. They will boost multi-modal connectivity in the Changi region and support the growth and development of Changi's aviation sector. Works are expected to be completed by 2034. ■

Both images: LTA



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V3D Asia, Nuvah partner with SIRIM Academy to set Malaysia's first 3D construction printing standards

Japan-based technology company V3D Asia Ltd and its commercial arm, Nuvah Sdn Bhd, have joined forces with SIRIM Academy Sdn Bhd to develop Malaysia's first industry standards for 3D construction printing. This initiative represents a major step towards accelerating the safe, structured and scalable adoption of automated construction technologies across the country.

Operating under the philosophy of 'Designed in Japan, Built in Malaysia', V3D Asia is actively driving the localisation of 3D construction printing technology through its Southeast Asian headquarters in Kuala Lumpur. Together with Nuvah, the group aims to build a robust, home-grown construction ecosystem that reduces reliance on imported systems while positioning Malaysia as a future-ready hub for construction innovation.

"This collaboration marks an important milestone not only for V3D Group, but for the future of Malaysia's construction industry as a whole. Establishing clear industry standards is essential in accelerating the adoption of 3D printed construction technologies safely, responsibly, and at scale. When clear and credible standards exist, the entire construction ecosystem benefits – developers can build with greater confidence, regulators have a clear basis for approval, and buyers can trust what they are purchasing," said Kazuhiro Ono, chairman of V3D Group.

The collaboration will bring together key stakeholders from Malaysia's construction and regulatory ecosystem. As the primary industry partners on the drafting committee, V3D Asia and Nuvah will contribute their materials science expertise, engineering knowledge and real-world implementation insights to help shape the standards framework.

"The development of industry standards is a critical step in supporting the safe and structured adoption of emerging construction technologies in Malaysia. Through this collaboration with V3D Asia and Nuvah, SIRIM Academy brings its expertise in industry standard development, training and certification to support the establishment of a credible and practical framework



At the forefront of construction innovation, the V3D Asia team whose on-site expertise and commitment to advancing 3D printed construction technology drove the historic partnership with SIRIM Academy.

for 3D construction printing. We believe this initiative will strengthen industry confidence, encourage innovation and provide a clear pathway for conformity assessment and certification within the construction sector," said Dr Mohd Bakri bin Jali, covering CEO at SIRIM Academy.

The initiative comes at a pivotal moment as Malaysia's construction industry continues to face persistent challenges, including labour dependency, material wastage, rising costs and lengthy project timelines. A recognised framework for 3D concrete printing is expected to facilitate the safe implementation of the technology, improve construction efficiency, reduce waste and advance the country's push towards more sustainable and resilient urban development.

Integrated, end-to-end ecosystem

Unlike conventional construction technology providers, V3D Asia and Nuvah operate as an integrated, end-to-end ecosystem. V3D Asia serves as the construction technology arm specialising in 3D printing construction engineering and local manufacturing capabilities, while Nuvah functions as the real estate and commercial development arm focused

on delivering next-generation residential and commercial projects. Together, both entities form a localised supply chain that supports the long-term growth of 3D printed construction in Malaysia.

Beyond driving industry standards, Nuvah is also preparing to introduce Malaysia's first 3D printed luxury bungalow development, slated for launch in the fourth quarter of this year. Located within the Country Heights Damansara enclave, the ultra-luxury hillside project is currently accepting Expressions of Interest (EOI).

The development will introduce a 'quiet luxury' architectural concept that embraces organic, cascading forms inspired by nature. Leveraging the design flexibility of 3D printing construction technology, the project replaces traditional sharp-edged structures with fluid, curved monoliths that blend seamlessly with the surrounding topography.

Looking ahead, the collaboration is expected to play a key role in expanding the use of 3D concrete printing in Malaysia, bolstering industry confidence in next-generation construction methods and accelerating the country's transition towards more advanced and sustainable building practices. ■

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Singapore unveils five Living Lab projects to advance coastal protection

Singapore's national water agency PUB will begin the test-bedding of coastal protection measures under the Coastal Protection and Flood Management Research Programme (CFRP)'s Living Lab pillar, with a total funding of about S\$14 million awarded to five projects. These measures will be implemented at selected locations along Singapore's coastline from 2027.

The projects reflect close collaboration with industry partners, universities and government agencies to support Singapore's long-term coastal resilience efforts. By advancing solutions from research and pilot studies into real coastal environments, PUB aims to build on proven concepts with a view to deploying them at scale in the future.

Test-bedding locations are chosen based on technical, operational and environmental factors, including the suitability of site conditions. The results of the five Living Lab projects, which will be assessed over three years, will help determine whether they can be used for future coastal protection works. By test-bedding solutions developed through earlier research, PUB seeks to accelerate learning, refine designs and build confidence for potential future deployment, while supporting the growth of local industry capabilities and cross-sector knowledge transfer.

The Living Lab projects

1). XblocPlus – interlocking concrete armour blocks

Team members: National University of Singapore (NUS), Delta Marine Consultants Singapore, Woh Hup Engineering and Sentosa Development Corporation

This project builds on a proof-of-concept completed under PUB's Global Innovation Challenge in 2021. It explores the use of modular blocks known as XblocPlus, single-layer interlocking concrete armour units designed to protect shorelines from coastal erosion. The modular system has been successfully applied in more than 40 project locations across 30 countries globally, including in the Asia Pacific region.



Image: Delta Marine Consultants

Artist's impression of XblocPlus at Tanjong Rimau, Sentosa.



Image: NTU

Artist's impression of an eco-sand tube deployed along a coastline.

Tailored for Singapore's wave climate, XblocPlus offers a more compact, material-efficient and sustainable alternative to conventional armour rocks. The project will evaluate the long-term hydraulic and structural performance of XblocPlus modules at Tanjong Rimau, at the western end of Sentosa, complementing slope stabilisation works at the site by reducing wave-induced erosion at the slope toe, alongside cost and productivity benefits enabled by more efficient construction and monitoring techniques.

2). Eco-sand tube with innovative eco-material

Team members: Nanyang Technological University (NTU), Surbana Jurong, HSL Constructor and National Parks Board (NParks)



Image: NUS

Artist's impression of the watertight modular solution.

The eco-sand tube is one of the 17 ongoing Coastal Protection and Flood Resilience Institute (CFI) Singapore research projects and one of two that have been selected to progress to the test-bedding stage. This innovative measure utilises jute fibre, a biodegradable and natural alternative to synthetic geotextiles, combined with an innovative low-carbon eco-material to treat the sand infill. The eco-sand tubes will be used to form a bund-like barrier that will harden over time.

These tubes will be deployed at two locations with different coastal conditions: along the Changi coastline and on the seaward side of Yishun Dam under sandy and muddy conditions, respectively. Building on findings from earlier research, the test-bedding will evaluate the eco-sand tube's durability, performance and ability to trap sediments behind it, as well as its potential to promote marine biodiversity.

3). Watertight modular solutions

Team members: NUS, KTC Civil Engineering & Construction, Surbana Jurong and Housing & Development Board (HDB)

The watertight modular solution is the second CFI Singapore research project identified for the Living Lab pillar, and will be trialled at East Coast Park. It seeks to evaluate the watertightness of modular concrete and geotextile tube units – fabric tubes filled with cement-treated soil as infill material – that can be retrofitted onto existing coastal protection structures such as seawalls and rock revetments.

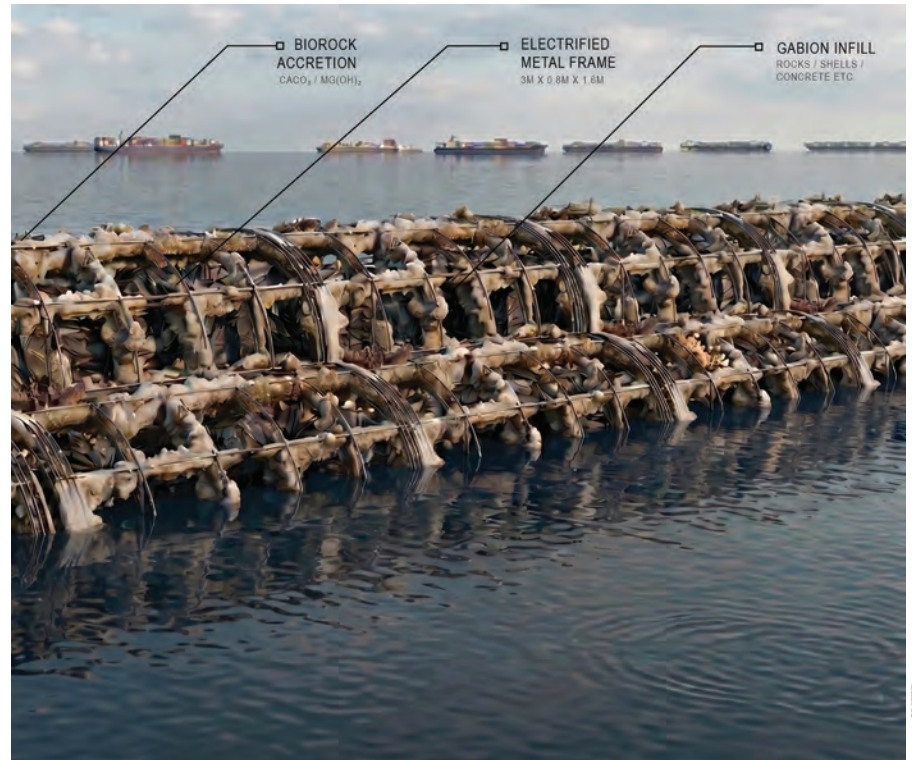
This helps overcome the challenge of seawater seepage through porous structures, including rock revetments. Additionally, the modular design enables coastal protection structures to be raised incrementally over time, supporting Singapore's long-term response to future sea-level rise.

4) Shellfish gabions – hybrid solution for coastal and ecological defence

Team members: Singapore University of Technology and Design (SUTD) and Mlion Corporation.

The project will be test-bedded at East Coast Park and builds on prior research exploring the use of recycled oyster shells at Changi Sailing Club by Dutch engineering consultancy firm Witteveen+Bos. This initiative draws on Mlion's expertise in biorock technology, which promotes coral reef growth, to measure and validate the effectiveness of the gabions in dissipating wave energy.

Mlion is a local small and medium



Artist's impression of shellfish gabions at low tide.

Image: SUTD



Artist's impression of the adaptive eco-friendly seawall.

Image: Kajima Corporation

enterprise (SME) with a regional footprint in providing engineering solutions, including sustainable infrastructure and materials innovation across Southeast Asia.

5). Adaptive eco-friendly seawall

Team members: Kajima Corporation, Samwoh Innovation Centre, Delta Marine Consultants Singapore, Oung Construction (S), Singapore Institute of Technology (SIT) and NUS

The adaptive seawall builds on Japanese construction company Kajima's project in Tokyo, which integrates eco-

friendly features such as grooves and tide pools to enhance marine biodiversity. This project will use precast concrete elements to simulate how coastal protection infrastructure can be built up progressively to respond to gradual sea-level rise.

In addition, the seawall panels will be constructed using low-carbon materials and equipped with smart sensors and self-healing mechanisms to reduce carbon emissions and maintenance costs. The eco-friendly seawall will be test-bedded at Changi Beach to assess its performance while monitoring biodiversity outcomes under local coastal conditions. ■



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Website: www.constructionindo.com

BCT Expo

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Website: www.bcindia.com

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Korea International Exhibition Centre (Kintex)

Goyang, South Korea

Website: www.k-consafetyexpo.com

International Construction Week & BuildXpo Malaysia

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Malaysia International Trade & Exhibition Centre

Kuala Lumpur, Malaysia

Website: <https://icw.my>

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Sands Expo and Convention Centre

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Shanghai New International Expo Centre

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Shanghai, China

Website: www.bauma-china.com

// Events outside Asia

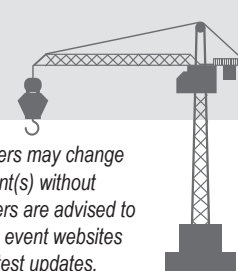
World of Concrete

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Malaysia's construction sector to take centre stage at MBAM OneBuild 2026

MBAM OneBuild is preparing for its 12th edition, taking place from 5 to 7 August 2026 at the Kuala Lumpur Convention Centre, Malaysia. The event will be held alongside OneWare, the fifth edition of Malaysia's international hardware technology exhibition.

Together, they are expected to draw more than 250 exhibitors across 400 exhibiting booths and attract approximately 10,000 trade visitors from 25 countries and regions. Both events will present a cross-sector platform connecting the full ecosystem of construction, infrastructure, hardware, machinery, engineering technologies and smart urban development solutions.

Organised under the theme 'Smart Cities Building Tomorrow,' the combined exhibition reflects the rapid transformation of Southeast Asia's built environment industry, where digitalisation, sustainability, industrialisation and smart infrastructure are reshaping the future of construction.

This year, MBAM OneBuild will feature several segments: construction, infrastructure, construction machinery & equipment, smart city, and digitalisation. The event will place strong emphasis on advanced digital construction technologies, including building information modelling (BIM), IoT-enabled infrastructure, energy-efficient and green building solutions, as well as intelligent mobility systems, reflecting the future direction of sustainable construction and smart urban development.

From digital construction to concrete

One of the highlights will be Digital Construction Day, a dedicated programme and exhibition zone organised in partnership with CIDB Digital, the digital arm of the Construction Industry Development Board (CIDB). This initiative will spotlight emerging digital solutions and smart construction practices, including BIM, IoT-enabled systems, digital project management, IBS technologies and sustainable construction methods. Through knowledge-sharing sessions and technology showcases, the programme aims to encourage collaboration among technology providers, contractors, consultants, developers and project stakeholders driving the industry's digital evolution.

Participating companies will have the opportunity to introduce their technologies and innovations directly to key industry stakeholders, strengthen brand visibility within Malaysia's construction ecosystem, generate high-value business leads, establish strategic partnerships, and expand market access across the ASEAN region.

Another main attraction will be BuildTalk, a three-day seminar series bringing together leading industry experts to discuss the future of industrialisation, digital construction, infrastructure modernisation, ESG integration and sustainable urban development. The programme is expected to address some of the industry's most pressing priorities, including productivity enhancement, workforce transformation, carbon reduction and resilient infrastructure planning.

In addition, the Concrete Clinic will allow visitors to experience live demonstrations of the latest breakthroughs in concrete technology and sustainable materials.

The Master Builders Association Malaysia (MBAM) will also host a dedicated ESG conference addressing sustainability



ALL IMAGES: MBAM OneBuild 2026 will feature several segments, including construction, infrastructure, construction machinery & equipment, smart city, and digitalisation.

strategies, governance frameworks, environmental responsibility and long-term resilience within the construction and infrastructure sectors.

Beyond technology and conferences, MBAM OneBuild 2026 will provide extensive business networking opportunities through hosted networking sessions, contractor engagement activities, supplier matching initiatives, machinery showcases and product demonstrations. Contractors, developers and procurement teams will be able to compare products and brands directly, discuss pricing and procurement strategies with suppliers, explore alternative solutions for cost optimisation, and identify technologies capable of improving operational efficiency and project performance.

MBAM OneBuild 2026 is organised by MBAM OneBuild Sdn Bhd, a subsidiary of MBAM. The event is endorsed by the Ministry of Works, the Ministry of Housing and Local Government (KPKT), and the Malaysia External Trade Development Corporation (MATRADE). It is also supported by the Malaysia Convention & Exhibition Bureau (MyCEB), CIDB, and more than 40 trade associations. ■

Website: www.mbamonebuild.com.my / www.oneware.com.my

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'One Show, Two Venues': bauma Shanghai 2026 announces major expansion

This year's bauma Shanghai will be held at two venues in Pudong: the Shanghai World Expo Exhibition and Convention Centre (SWEECC) from 23 to 26 November 2026, and the Shanghai New International Expo Centre (SNIEC) from 24 to 27 November 2026.

According to the event's organiser, Messe München, both venues adhere to the same exhibition concept and product portfolio, providing a broader platform for industry showcases, networking and business exchange. The addition of SWEECC will not only significantly increase exhibition capacity but also create more opportunities to present cutting-edge technologies and innovation-driven solutions.

At SWEECC, main highlights include dedicated exhibition zones for new energy technologies, intelligent equipment and digital solutions that will shape the future of construction machinery. These will be complemented by live demonstration areas, high-level forums and an extensive lineup of industry networking events.

"The expansion to two venues marks a defining milestone for bauma Shanghai. Beyond increasing scale, the new venue (SWEECC) creates a dedicated platform for next-generation construction solutions – bringing together global innovators, accelerating knowledge exchange and actively shaping the future of the industry," said Stefan Rummel, CEO of Messe München.

"Operating under a unified brand identity and show concept, both venues will integrate to deliver a more comprehensive, full-spectrum ecosystem platform that strengthens global collaboration across the entire construction machinery value chain," added Evan Sha, president for China and CEO of Messe München Shanghai.

'Returning to solid growth'

After a period of cyclical adjustment, China's construction machinery industry has returned to solid growth. According to the China Construction Machinery Association (CCMA), key enterprises recorded a 10.5% year-on-year increase in revenue in 2025, while maintaining a steady growth rate of 8.44% in the first quarter of 2026.



This year's bauma Shanghai will be expanded, taking place at the Shanghai World Expo Exhibition and Convention Centre (SWEECC) from 23 to 26 November 2026, and the Shanghai New International Expo Centre (SNIEC) from 24 to 27 November 2026.

Against this backdrop, demand from exhibitors has surged, with applications for booths from both domestic and international companies exceeding expectations, said Messe München. Major players – such as Komatsu, LiuGong and Sunward Intelligent – have already confirmed their return, and the organiser added that the new 'One Show, Two Venues' format has generated strong interest and active participation from leading brands in the sector.

"The construction machinery industry is rapidly moving towards intelligent, electrified, green and international development. Leveraging world-class trade fairs to foster technological innovation, global cooperation and cross-industry integration will effectively drive the industry to achieve high-quality growth," said Su Zimeng, chairman of CCMA.

The new venue's programme will open with the inaugural bauma Shanghai 2026 Construction Machinery Technology & Innovation Conference, co-organised with CCMA, at SWEECC on 23 November.

Integrated operations

To provide comprehensive support for

the dual-venue format, bauma Shanghai will strengthen its integrated operational framework in several key areas, including visitor promotion, inter-venue coordination and on-site services. The aim is to improve operational efficiency, attract high-quality trade visitors and enhance the overall experience for attendees.

Visitor promotion strategies will shift from broad-based outreach to more targeted engagement. Leveraging the bauma Network, the organiser will actively invite trade buyer delegations from Southeast Asia, the Middle East, Africa, Europe and the Americas. Within China, promotional efforts will also be expanded across the entire upstream and downstream industrial supply chain.

To ensure seamless access between the two venues, bauma Shanghai 2026 will implement a 'One Badge, Two Venues' policy. Complimentary shuttle bus services will run regularly between the two locations, supported by enhanced metro guidance and upgraded on-site wayfinding. Official digital tools, such as the WeChat Mini Program and 24/7 AI customer service, will further help visitors plan their routes efficiently. ■

Website: www.bauma-china.com



The Greater Sentosa Master Plan

A bold vision for Singapore's Sentosa island

Sentosa Development Corporation (SDC) has unveiled the next chapter of the Greater Sentosa Master Plan (GSMP) – a bold, long-term transformation that will integrate Sentosa with Brani and progressively expand the island over the next two decades.

Comprising Sentosa and the 120-ha Brani, Greater Sentosa is expected to provide new spaces for hotels, attractions and experiences while retaining the island's charm and natural elements. When completed, this large-scale development is projected to draw twice as many visitors as it does today.

"The GSMP is the greatest transformation in our history. We will stay true to the soul and identity of this island, while shaping the next generation of world-class experiences," said Thien Kwee Eng, chief executive officer of SDC.

Anchored on the vision of Sentosa as Singapore's 'Island Playground and Sanctuary in a Global City', the GSMP aims to bring together new iconic landmarks, rejuvenated beaches and coastlines, nature-centric growth, and enhanced connectivity.



TOP: Artist's impression of a bird's eye view of Greater Sentosa.

ABOVE: Artist's impression of the iconic attractions at Brani West.

A long-term transformation

The transformation will be implemented progressively, with developments scheduled to come on board from the early 2030s. This phased approach will allow SDC to offer new visitor experiences across Greater Sentosa while continuing to evolve the island in line with changing leisure, lifestyle and tourism needs.

A key part of this pipeline is Brani West, intended to be one of the largest sites for attractions development under the GSMP. Engagements with potential partners are underway, supporting the broader ambition to introduce new and refreshed experiences that reinforce Greater Sentosa's appeal.

Among the new iconic landmarks is Imbiah Canopy, a beacon and vantage point atop Mount Imbiah that will house attractions, food and beverage offerings, retail options, and sheltered event spaces. A treetop skywalk is planned to connect new nature-based experiences and trails, creating a comfortable walking route to Siloso Beach.

This will be complemented by the proposed Imbiah Lookout Walk, a sheltered elevated forest canopy walk that will link Sensoryscape to Imbiah Lookout and provide access to the surrounding Sentosa walking trails. New nature-based attractions will also encourage visitors to explore the secondary forests and heritage buildings at Mount Imbiah, with expanded nature and heritage trails planned in later phases to eventually connect to the Southern Ridges on the mainland.

Together with future plans to link forests across Brani, Serapong and Imbiah into a continuous green network, Greater Sentosa's ecological connectivity will be further strengthened.

Along the beachfront, Sensorium is envisioned as a new icon that will host a range of lifestyle and indoor attractions, including a multi-purpose venue for events and festival activations. The space will also reflect SDC's commitment to sustainability.

Rejuvenated beaches and coastlines

Siloso, Palawan and Tanjong beaches will be rejuvenated alongside the introduction of coastal protection measures. New experiences that showcase Sentosa's natural assets are also being explored, including coastal activities, beach clubs and a floating boardwalk connecting the islets.

Concepts under study include beach club experiences positioned around scenic sunrise and sunset views, as well as treetop dining, turning the island's beachfronts into more vibrant and flexible spaces for different occasions.



Artist's impression of the rejuvenated beaches featuring event spaces integrated with coastal protection measures.



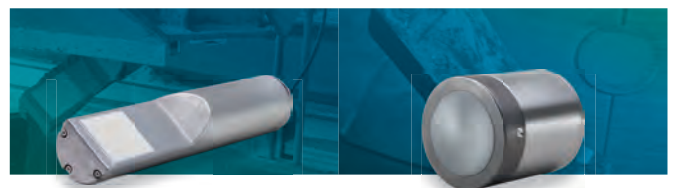
Official launch of the Greater Sentosa Master Plan at Vivo City on 3 July 2026.



Artist's impression of Imbiah Canopy.



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Greater connectivity

Connectivity to and within Greater Sentosa is expected to be transformed through enhanced land, air, sea and waterfront links. The Island Heart Transport Hub is envisioned as a major gateway and key arrival point to Sentosa, linking Sentosa and Brani while providing visitors with a convenient way to arrive, gather and continue their journey across the island.

A new People Mover System is intended to replace the existing Sentosa Express, creating a more seamless connection from the mainland to Island Heart and across the island. With increased carrying capacity, it is designed to accommodate anticipated growth in visitor numbers. This will complement the Singapore Cable Car, water taxi connections under exploration, and additional waterfront links being studied.

Nature centric

As Greater Sentosa grows, the GSMP will deepen Sentosa's identity as a nature-centric destination by embedding sustainability, climate resilience, thermal comfort and ecological considerations into its long-term planning. Building on initiatives such as Cooling Sentosa, future developments will adopt a more integrated approach, incorporating greenery, movement routes, green infrastructure and guest experiences to improve thermal comfort, strengthen ecological connectivity, and ensure new experiences align with Sentosa's natural setting.

Sensorscape, the first completed milestone of the GSMP, offers an early example of this approach. Beyond serving as a 350-m green connector between Resorts World Sentosa and the island's beaches, it combines immersive gardens, universal design, all-weather and shaded features, digital elements and ecological enhancements – including native plantings and a butterfly corridor – to demonstrate how infrastructure can support thermal comfort, deliver richer and more inclusive guest experiences, strengthen biodiversity, and improve visitor flow.

This integrated planning approach will guide future developments under the GSMP, with completed and planned environmental studies and nature group engagements informing climate-resilient design, ecological connectivity and the sensitive integration of new experiences with Sentosa's ridgelines, greenery, coastlines and heritage. Coastal protection measures will help build resilience against erosion and sea-level rise while creating opportunities for new waterfront offerings, including coastal trails and islet-hopping activities. ■



Artist's impression of Sensorium, which will host a range of lifestyle and indoor attractions.



Artist's impression of the Island Heart Transport Hub, a major gateway and key arrival point to Sentosa.



Artist's impression of the Island Heart Transport Hub as a new lifestyle and commercial node.

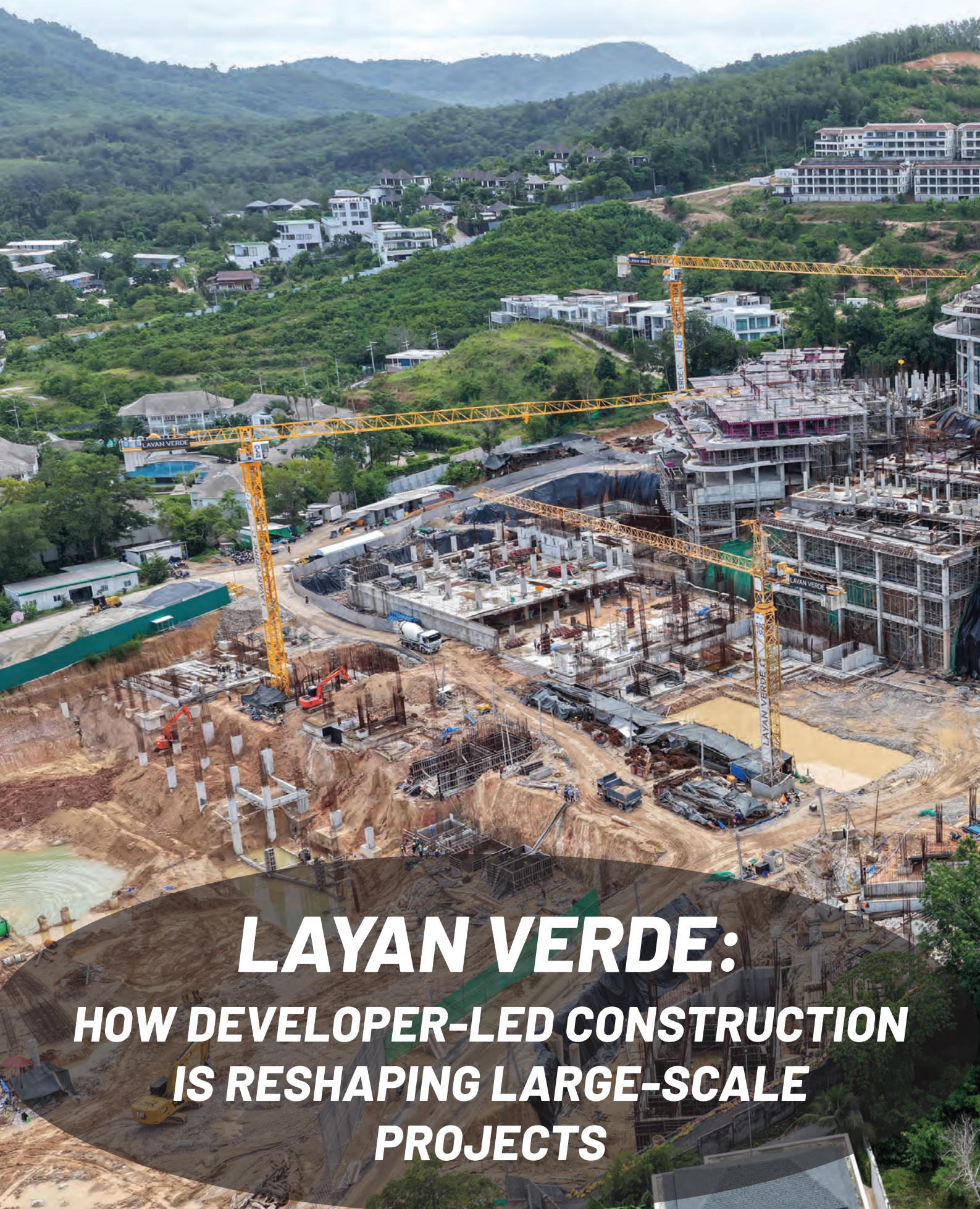
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LAYAN VERDE: **HOW DEVELOPER-LED CONSTRUCTION** **IS RESHAPING LARGE-SCALE** **PROJECTS**



The Layan Verde development in Phuket, Thailand, covers approximately 8 ha and comprises more than 15 buildings. Construction is scheduled for completion in 2029.

For decades, much of the construction industry in Southeast Asia has operated through fragmented coordination, experience-driven decision-making and limited digital integration. While this approach may still function on smaller developments, it is becoming increasingly difficult to sustain for modern large-scale projects, where speed, complexity, sustainability and coordination must all be managed simultaneously.

Thailand-based developer VillaCarte Group recognised this challenge early during the delivery of its flagship projects in Phuket – Layan Green Park and Layan Verde. Together, these projects feature more than 250,000 sq m of built-up area, combining hospitality, residential and infrastructure components within highly complex environments.

Layan Verde, in particular, stands out not only for its scale but also for the delivery model behind it – a developer-led, in-house construction and management approach designed to replace reactive construction practices with structured, data-driven execution.

A project that demands a different approach

Spanning approximately 8 ha, Layan Verde is a large-scale integrated resort development comprising more than 15 buildings and a total built-up area of over 200,000 sq m. The project brings together residential and hospitality components within a single environment, requiring the simultaneous coordination of multiple workstreams.

From a construction standpoint, the challenges are substantial. According to Arthur Karapetian, construction director at VillaCarte Group, the site involves extensive underground works and earthmoving operations exceeding 300,000 cu m, with elevation differences of up to 50 m across the site adding further complexity to logistics, access planning and structural coordination.

At peak activity, the project deploys a large fleet of heavy equipment, including six to eight tower cranes, multiple piling rigs, hydraulic hammers, and excavators working concurrently in different zones.

“As the in-house construction management team at VillaCarte recognised early in the project, conventional delivery models would not provide the level of control required for a development of this scale and complexity. We needed a system that connects design, procurement, construction, quality, cost control and scheduling into one coordinated delivery process,” said Mr Karapetian.

The real challenge: changing the way teams work

While technical complexity is visible, Mr Karapetian revealed that one of the most significant challenges was internal. “The construction market across much of Southeast Asia remains conservative, with digital adoption progressing relatively slowly compared with other industries,” he noted. “Many contractors still rely on fragmented workflows, manual coordination and experience-based decision-making rather than structured systems.”

Introducing platforms such as PlanRadar, BIM-based coordination, and performance tracking systems therefore required more than technical implementation – it required a shift in mindset, stressed Mr Karapetian. “Resistance during the early stages was expected, as many contractors were unfamiliar with structured digital workflows and initially viewed them as additional administration rather than operational tools,” he explained.

To address this, VillaCarte’s in-house team focused heavily on education, training and practical implementation. Contractors were



Artist's impression of Layan Verde. This large-scale project brings together residential and hospitality components within a single environment, requiring the simultaneous coordination of multiple workstreams.



ABOVE, BELOW AND BELOW LEFT: From a construction standpoint, the challenges are substantial. The site involves extensive underground works and earthmoving operations exceeding 300,000 cu m. Elevation differences of up to 50 m across the site add further complexity to logistics, access planning and structural coordination.





LEFT: Adopting a developer-led, in-house construction and management model, VillaCarte established an internal team to oversee design coordination, procurement, construction management, scheduling, cost control and QA/QC.

RIGHT: Mr Karapetian said the developer-led delivery approach ensures the project is actively managed rather than passively monitored, enabling greater control over delivery.



gradually integrated into unified workflows, including earned value-based quarterly performance tracking and digital QA/QC processes.

“Over time, these systems became embedded in daily operations. Today, all major contractors on the project operate within a shared digital coordination environment – something that was not common practice in the local market when the project began,” said Mr Karapetian, emphasising that “digital tools alone do not transform construction; disciplined implementation does. The real change happens when contractors, engineers and managers use the same system every day and make decisions based on reliable data.”

Developer-led delivery: taking control of complexity

A critical decision early in the project was to adopt a developer-led, in-house construction and management model. Instead of relying entirely on external consultants, VillaCarte established a dedicated internal team responsible for design coordination, procurement, construction management, scheduling, cost control and quality assurance/quality control (QA/QC).

This structure enables a significantly higher level of control over delivery. According to Mr Karapetian, key coordination issues are typically resolved within a 48-hour timeframe, allowing construction activities to progress without prolonged delays in decision-making.

“The objective was never simply to digitalise reporting, but to fundamentally change how construction decisions are made and executed on site,” he said. The team operates through structured workflows, standardised procedures and measurable performance indicators, ensuring alignment across multiple contractors and workstreams. The result is a delivery system where construction is actively managed rather than passively monitored.

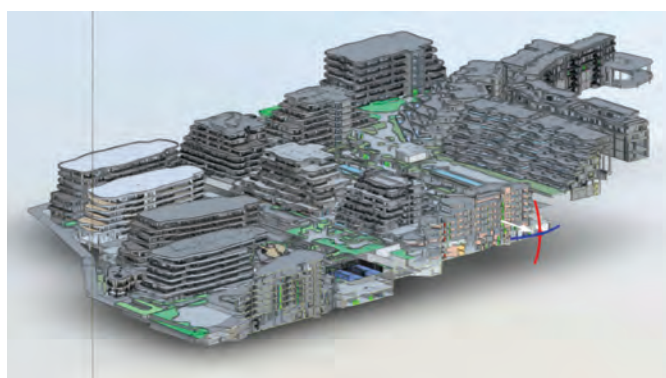
Digital transformation

Mr Karapetian explained that digitalisation forms an integral part of the project delivery system. BIM coordination provides a unified 3D environment for all disciplines, improving design alignment, clash detection and construction sequencing.

This is complemented by laser scanning using Faro systems, enabling accurate verification of as-built conditions and creating the foundation for digital twin workflows. The project already operates within a fully integrated 3D coordination environment, with further development towards 4D and 5D BIM integration – linking scheduling and cost control directly to model data – planned as the next stage of implementation.

The objective was never simply to digitalise reporting, but to fundamentally change how construction decisions are made and executed on site.

Arthur Karapetian, VillaCarte's construction director, on the developer-led delivery model.



ABOVE AND BELOW: Digitalisation forms an integral part of the project. It already operates within a fully integrated 3D coordination environment, with further development towards 4D and 5D BIM integration – linking scheduling and cost control directly to model data – planned as the next stage of implementation.



QA/QC processes are managed through PlanRadar, supported by the SiteView 360 framework for quality and performance control. QR-based tracking allows real-time visibility of inspections, approvals and defects at the unit level, promoting greater transparency and accountability among contractors.

“This combination of tools transforms construction management from reactive oversight into data-driven control,” said Mr Karapetian.



LEFT: Sustainability is another important consideration for Layan Verde. One of the key challenges is not only reducing resource consumption, but also integrating this large-scale development into Phuket's natural landscape in a way that preserves and enhances the character of the site.

BELOW: The project is also exploring new construction technologies, including the planned deployment of robotic painting systems to improve consistency in finishing quality, reduce material consumption and increase productivity.

Innovation on-site and sustainability

Alongside digital systems, the project is actively exploring new construction technologies. One example is the planned deployment of robotic painting systems, following VillaCarte's engagement with technology providers at industry events in Singapore. Scheduled for implementation later this year, the solution is expected to improve consistency in finishing quality, reduce material consumption and increase productivity.

"Compared with traditional manual methods, robotic systems can operate continuously while maintaining uniform application quality and reducing dependency on large labour teams for repetitive tasks," noted Mr Karapetian. "This reflects a broader transition towards automation and technology-driven construction processes – an area that remains relatively new within the regional market."

He further pointed out that the combination of structured processes and digital systems has resulted in stable and measurable performance outcomes. Schedule performance remains consistently at target levels, with SPI (schedule performance index) maintained at around 1.0 and not falling below 0.98 under internal methodology, while CPI (cost performance index) is approximately 1.06, demonstrating controlled cost efficiency.

In addition, defect levels have been greatly reduced through early-stage identification and coordinated workflows, minimising rework and improving overall construction quality.



On sustainability, Mr Karapetian said it was approached not as a marketing tool, but as a core project delivery principle. VillaCarte previously achieved EDGE Advanced certification for Layan Green Park Phase 1 – one of the first developments in Phuket to reach this level – with measured performance indicators including 47% energy savings, 25% water savings and 41% lower embodied energy in materials.

The developer is also exploring advanced bio-solar roof concepts, integrating photovoltaic systems with extensive green roof environments designed specifically for tropical climate conditions. These systems improve airflow

beneath solar panels, minimise heat accumulation, support biodiversity and enhance photovoltaic efficiency, while contributing to long-term environmental resilience.

For Layan Verde, one of the key sustainability challenges is not only reducing resource consumption, but also integrating a large-scale development into Phuket's natural landscape in a way that preserves and enhances the character of the site.

This experience established an operational benchmark for future developments and is now being integrated into Layan Verde through energy-efficient



ABOVE AND BELOW: **Layan Verde** under construction.





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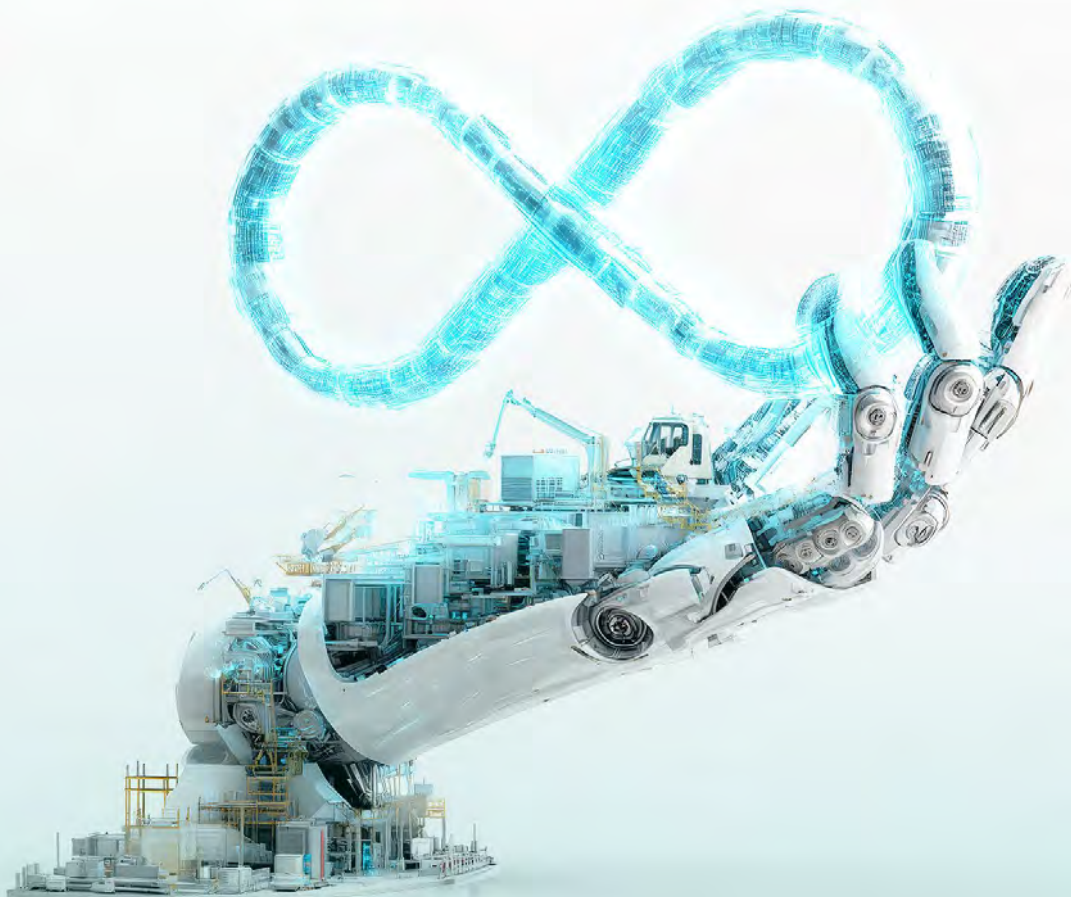
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“Projects such as Layan Verde demonstrate that when complexity is managed as one coordinated system – combining people, technology, engineering and disciplined execution – large-scale construction can be delivered with a level of control, consistency and predictability that traditional methods simply cannot provide.

design strategies, renewable energy infrastructure, water reuse systems, and operationally focused sustainability planning embedded directly into construction delivery.

Renewable energy integration has become a major part of the long-term operational strategy. Mr Karapetian shared that approximately 1,000 sq m of solar panels were installed in Layan Green Park Phase 1, increasing to approximately 1,500 sq m in Layan Green Park Phase 2, and more than 5,000 sq m is planned for Layan Verde.

Raising construction standards

The impact of this approach extends beyond a single development. Mr Karapetian highlighted that by implementing structured workflows, introducing digital systems and working closely with contractors to build capability, the project contributes to raising overall construction standards within the local market.

VillaCarte also actively participates in knowledge-sharing initiatives and developer-focused industry events, where practical experience and implementation strategies are shared with peers across the region.

“Companies that continue to rely on outdated delivery models will inevitably fall behind, as the industry moves towards system-driven construction,” said Mr Karapetian. “Large-scale construction projects today require a fundamentally different approach. Traditional methods



The VillaCarte team on site. The developer actively participates in knowledge-sharing initiatives and industry events, where practical experience and implementation strategies are shared with peers across the region.



ABOVE AND RIGHT: The project team conducts site inspections. With the developer-led delivery approach, key coordination issues are typically resolved within a 48-hour timeframe, allowing construction activities to progress without prolonged delays in decision-making.



ABOVE: During the early stages, VillaCarte focused heavily on education, training and practical implementation. Contractors were gradually integrated into unified workflows.

– fragmented coordination, reactive problem-solving and limited use of data – are no longer sufficient to manage the complexity of modern integrated developments.”

“The future lies in integrated delivery models that combine strong in-house management, digital systems, innovation and disciplined execution,” he concluded. “Projects such as Layan Verde demonstrate that when complexity is managed as one coordinated system — combining people, technology, engineering and disciplined execution — large-scale construction can be delivered with a level of control, consistency and predictability that traditional methods simply cannot provide.” ■



By implementing structured workflows, introducing digital systems and working closely with contractors to build capability, the project contributes to raising overall construction standards within the local market.

All images: VillaCarte Group

ASEAN ON THE RISE: NAVIGATING GROWTH AND MANAGING CONSTRUCTION RISK

INFRASTRUCTURE INVESTMENT, INDUSTRIAL EXPANSION AND RAPID DIGITAL DEVELOPMENT ARE RESHAPING THE ECONOMIC LANDSCAPE ACROSS ASEAN. VINCENT BANTON, HEAD OF CONSTRUCTION AND INFRASTRUCTURE FOR ASIA AT AON, EXPLAINS HOW THE NEXT PHASE OF GROWTH IS DEFINED NOT ONLY BY ITS SCALE BUT ALSO BY RISING COMPLEXITY IN FINANCING, CLIMATE EXPOSURE, SUPPLY CHAINS AND LONG-TERM OPERATIONAL RISK.

Construction activity continues to expand worldwide, with total output increasing from approximately US\$16 trillion in 2025 to US\$17 trillion in 2026 and expected to approach US\$22 trillion by 2030. According to Mr Banton, a significant portion of this growth is being driven by Asia, where Southeast Asia plays a critical role in infrastructure modernisation and industrial development. At the same time, estimated global natural disaster losses of US\$260 billion in 2025 reinforce the need for stronger resilience and disciplined risk structuring at the project level.

Momentum across markets

Singapore's construction market is being shaped by major investments in infrastructure, digitalisation and the energy transition, driving demand for sophisticated risk management and insurance solutions, shared Mr Banton. With limited land availability, development is concentrated in high-density, brownfield and mixed-use projects that require careful management of construction, delay, liability and contractual risks.

Singapore also remains a leading hub for data centres, cloud services and digital connectivity, he said. As facilities become larger and more complex, organisations require integrated solutions spanning construction, property, business interruption, cyber and technology risks.

Major transport, logistics and maritime projects, including port, airport and rail expansions, continue to reinforce Singapore's position as a regional hub. These projects involve significant operational, safety and delay exposures that demand strong stakeholder alignment and risk governance.

At the same time, investments in grid infrastructure, low-carbon technologies and climate resilience are creating new opportunities and challenges. Mr Banton emphasised that successful projects will depend on disciplined procurement, early risk identification and integrated insurance strategies that support long-term resilience and capital attraction.

In the Philippines, construction activity is being driven by transport infrastructure and renewable energy projects. Large-scale airport expansions, rail upgrades and renewable energy facilities are designed to improve national connectivity and energy security. However, Mr Banton noted that these projects are often located in regions exposed to typhoons, flooding and earthquakes, which amplify the importance of early-stage risk engineering and catastrophe modelling when structuring construction programmes.

Malaysia's construction momentum is increasingly shaped by digital infrastructure. One of the most visible examples is the rapid growth of data centre developments in Johor Bahru, fuelled by demand spillover from Singapore and wider regional adoption of cloud services. From an insurance and risk perspective, Mr Banton said these projects illustrate how construction, energy availability and data security risks are now tightly interconnected. Hyperscale facilities require high construction precision, resilient power infrastructure and stringent operational continuity planning once assets transition from build to live operations. He added that Aon has developed market-



Vincent Banton, head of construction and infrastructure for Asia at Aon.

leading innovative solutions for this rapid growth, such as the first-of-its-kind data centre lifecycle programme.

Meanwhile, Vietnam has emerged as one of Southeast Asia's most dynamic construction markets, supported by steady foreign direct investment and government-backed infrastructure expansion. Major port upgrades, high-speed rail networks and urban transit systems are being developed alongside large-scale industrial and energy projects. Mr Banton cautioned that this extensive construction pipeline heightens exposure to overseas contractor dependency, supply chain disruptions and interface risk among multiple project stakeholders, highlighting the need for coordinated risk management between contractors, lenders and insurers.

For Indonesia, Mr Banton said the country's construction sector is defined by its scale and geographic complexity. Investments cover mass transit systems, smelters, industrial parks, mining and power generation assets spread across a vast region. Large national infrastructure programmes continue to attract international capital, but project delivery is constrained by logistical challenges, local regulation and elevated exposure to flood and earthquake risks.

Thailand remains a relatively mature construction market, anchored by transport infrastructure upgrades, tourism-related developments and industrial facilities aligned with regional supply chains.



While project execution frameworks are well-established, rising construction costs and contractor risk are placing greater emphasis on contract clarity, noted Mr Banton. The country is also accelerating the development of its economic corridors and ramping up digital infrastructure investment to compete with regional hubs in Malaysia and Singapore.

In other markets such as Laos and Cambodia, construction activity is smaller in volume but still strategically significant. Hydropower projects and cross-border transport infrastructure are transforming regional connectivity. He said these developments often involve multinational sponsors through foreign direct investment and sovereign stakeholders, which can increase political risk, regulatory complexity and contractual exposure during both the construction phase and early operations.

Key challenges

Mr Banton further identified several risk themes shaping construction outcomes across Southeast Asia. A primary challenge is the rising complexity in project financing, with lenders and investors requiring greater certainty around delivery timelines, cost control and operational resilience. This makes insurance and risk structuring a core component of project viability rather than a back-end requirement.

Supply chain volatility also remains a pressure point. He explained that global logistics conditions have been unstable in recent months, as many large projects – particularly data centres and energy assets – rely on highly specialised equipment sourced internationally, which is in short supply and driving up costs. Delays in manufacturing and transport will materially affect construction schedules and lead to associated losses.

Another challenge is climate and natural catastrophe exposure. Much of Southeast Asia's construction pipeline overlaps with flood-prone, coastal or seismically active regions. This elevates potential loss severity during construction and underscores the importance of resilient design, site selection and effective risk management.

Finally, construction claims are becoming more complex. Projects involve multiple contractor interfaces and longer defect liability periods. Mr Banton pointed out that when incidents occur, disputes can extend well beyond project completion,

highlighting the value of clear, consistent policy wording, strong documentation and proactive loss prevention strategies.

Managing risks

Against this backdrop, Southeast Asian construction markets are moving towards more sophisticated, lifecycle-based approaches to risk management. According to Mr Banton, a growing number of developers and investors are now aligning construction risk strategies with long-term operational objectives, particularly for rapidly evolving digital and power infrastructure assets. This approach recognises that decisions made during design and construction have a direct impact on operational performance and resilience.

Improved use of data and analytics is also transforming construction risk. Aon focuses on enhancing project data, risk modelling and claims intelligence to support better decisions on risk retention, capacity allocation and programme structuring, shared Mr Banton. The company's analytic tools enable risk exposure analysis, loss modelling and scenario simulations, allowing risk managers to assess risk tolerance, compare insurance structures and make data-driven decisions on risk retention and transfer. He added that earlier collaboration between contractors, insurers and advisers throughout the project lifecycle can help clients address complex risks before losses occur.

Looking ahead, construction activity in Southeast Asia is expected to remain robust but increasingly selective, concluded Mr Banton. Projects that demonstrate strong governance, early risk clarity and integrated insurance strategies are more likely to attract capital and deliver sustainable outcomes. He asserted that digital infrastructure, power and industrial upgrades will continue to boost demand for specialised construction solutions, while the ability to balance speed with resilience will be critical. ■

About Aon

Aon is a global professional services firm specialising in two key areas: risk capital and human capital. The company provides actionable analytic insights, expert advice and localised solutions to help clients in more than 120 countries make better risk and people decisions that protect and grow their businesses.

Website: www.aon.com

CHEMGROUT GROUTING MACHINES HELP DELIVER CONSTRUCTION EFFICIENCY IN ASIA

ChemGrout grouting machines have been deployed on construction, infrastructure and repair projects across Asia, providing high-quality materials for various applications such as tunnelling, residential developments, precast and PPVC (prefabricated prefinished volumetric construction), soil stabilisation, and road construction, among others.

“These machines can help tackle labour shortages and address the constant need for improved productivity in the construction industry,” said Calvin Ang, executive director of Acme Equipment Pte Ltd, an authorised dealer for ChemGrout in Asia.

One of the models being used in the region is the ChemGrout CG-500 series, which supports high-volume production. It is suitable for a wide range of applications including tunnels, shafts, dams, plant maintenance and geotechnical works.

Highly versatile, the CG-500 series delivers a maximum output of 76 l/min and a maximum pressure of 18 bar. It offers



Calvin Ang, executive director of Acme Equipment Pte Ltd, at the recent Conexpo 2026 exhibition in Las Vegas. Based in Singapore, the company is an authorised dealer for ChemGrout in Asia.



ABOVE: The ChemGrout CG-500 series supports high-volume production. It is suitable for a wide range of applications including tunnels, shafts, dams, plant maintenance and geotechnical works.

LEFT: Acme has supplied ChemGrout machines to various construction, infrastructure and repair projects across Asia.

several power options: air, hydraulic, electric/hydraulic, gas/hydraulic, and diesel/hydraulic.

Two high-capacity 265-l mixing tanks, a pump, and a 57-l holding hopper are all mounted on a single skid for quick, easy setup and immediate operation. The holding hopper features an internal auger that keeps the material thoroughly mixed while supplying the pump.

The twin mixing tank design allows continuous pumping as each tank alternates in feeding the hopper. This non-stop pumping process maximises the batching of materials such as neat cement, sand/cement, and most commercial pre-bagged grouts.

In addition, the ChemGrout CG-550P/EHT is a skid-mounted, electrically powered machine. It has a 128-l mixing tank and the CG-050 grout pump. The mixer is equipped with baffles, bag breakers, and variable-speed, high-efficiency paddles that provide a rapid mixing cycle. The pump flow rate is up to 19 l/min, and the mixer speed is up to 200 rpm.

The holding hopper is connected directly to the suction side of the grout pump to provide continuous pumping. The grout pump is a 2-in, positive-displacement, pulsating piston pump.

A highlight of ChemGrout machines is the mixer, said Mr Ang. "It comes with variable speed control, which is perfect for mixing grout because we can break down the material into its finest form in the shortest possible time. The process is faster than with a traditional mixer."

The hopper allows continuous mixing and pumping, making work more productive as it requires less manpower, he added.

"ChemGrout machines also have a special 2-in piston pump, which significantly reduces wear and tear," explained Mr Ang, emphasising the importance of a durable pump that can handle a high volume of grout. "As the machines operate long hours every day, we cannot afford to have something that breaks down frequently."

Supporting Asia

Mr Ang pointed out that PPVC projects, like those in Singapore, are among the many opportunities for ChemGrout machines. Such projects require extensive grouting during installation, "and the volume of grout can be tremendous."



TOP RIGHT: PPVC projects present one of the many opportunities for ChemGrout in Asia.

ABOVE: Mr Ang said ChemGrout machines can help tackle labour shortages and address the constant need for improved productivity in the construction industry.

Headquartered in Singapore, Acme has supplied its machines and equipment to prominent projects across Asia, including the Padma Bridge in Bangladesh, the Malolos-Clark Railway Project in the Philippines, the Purple Line MRT extension in Thailand, as well as major railway and residential projects in Singapore, to name a few.

"Singapore is always a stable market because building projects are coming up every year," said Mr Ang, adding that many countries in the region are also starting to stabilise and "we can see a lot of projects happening – not just in Singapore, but throughout Asia." Sri Lanka, the Philippines and Vietnam are some of the promising markets for Acme.

Looking ahead, Mr Ang noted that "considering what's going on in the world, I think Asia will remain the fastest growing market for now." ■

Website: www.chemgrout.com / www.acme.com.sg

HOW LINTEC & LINNHOFF ADVANCES CIRCULARITY IN ASPHALT PRODUCTION TO BUILD BETTER, GREENER ROADS

As sustainability, cost efficiency and resource security rise to the top of infrastructure agendas worldwide, reclaimed asphalt pavement (RAP) is moving from a supplementary option to a core component of modern road construction. Governments, road authorities and contractors are increasingly recognising RAP as a practical pathway to circularity, reducing reliance on virgin materials while lowering emissions and production costs.

Although the environmental and economic case for RAP is clear, its successful implementation depends on far more than simply reintroducing reclaimed material into the asphalt mix. Achieving consistent quality, durability and performance requires the right plant technology, robust process control and a disciplined approach to material management throughout the production and paving process, according to Lintec & Linnhoff, a global asphalt and concrete plant manufacturer that has contributed to some of the world's most prominent projects.

RAP integration

RAP integration is a technology challenge as much as a material one, said the manufacturer. Asphalt plants must be specifically equipped to introduce recycled material safely and efficiently,

with the ability to control temperatures, material flow and mixing conditions accurately. The selection of recycling technology, whether cold recycling or hot recycling, depends on project requirements, desired RAP percentages and production capacity.

Lintec & Linnhoff revealed that, in practice, hot recycling systems are often preferred where higher RAP utilisation and consistent output are required. These systems allow reclaimed material to be heated indirectly and blended more precisely with virgin aggregates and binder, reducing the risk of premature binder ageing and maintaining asphalt performance.

Material handling is equally critical as RAP is inherently variable, with differences in aggregate grading, binder ageing and moisture content depending on its source. Dedicated storage areas, pre-treatment processes and clearly defined material management protocols are essential to minimise variability and ensure stable production. Without these controls, higher RAP percentages can compromise both quality and consistency.

Quality control

Laboratory testing and quality assurance are essential for a successful RAP application. Regular analysis of RAP materials allows producers to understand binder content, ageing levels



The mobile Lintec CDP1400M asphalt mixing plant powers Mexico's road modernisation, delivering high-output performance with up to 15% reclaimed asphalt pavement (RAP) for greener, more cost-effective construction.

and aggregate characteristics, forming the basis for accurate and repeatable mix designs, explained Lintec & Linnhoff.

During production, additional monitoring of temperatures, mixing times and emissions is required, particularly as RAP content increases. When these parameters are carefully managed, RAP asphalt can be produced to the same performance standards as conventional mixtures.

On-site, the transition to RAP does not require fundamental changes to paving or compaction practices. When produced correctly, RAP mixtures can be laid, compacted and assessed using the same methods applied to virgin asphalt, helping contractors adopt RAP without disrupting established workflows.

Global experience

Over the years Lintec & Linnhoff has implemented RAP solutions across Europe, Asia and the Americas. Its portfolio includes cold recycling systems as well as hot recycling solutions in parallel-flow and counter-flow configurations, enabling customers to tailor

recycling capability to their specific operational and regulatory requirements.

Rather than adopting a one-size-fits-all approach, Lintec & Linnhoff enables RAP integration through configurable recycling systems that can be adapted to specific project requirements. This includes adjusting RAP content, production capacity and plant configuration, as well as optimising heating, dosing and mixing parameters to suit material characteristics and local conditions. By combining modular system design with precise process control, operators can manage variability in reclaimed materials while maintaining consistent mix quality and production stability across a wide range of applications.

One example is in Anhui Province, China, where Lintec & Linnhoff hot recycling systems have been deployed extensively. In this region, a Lintec CSM4000HRC asphalt mixing plant has produced more than 2 mil t of RAP asphalt, demonstrating that high-volume recycling can be achieved reliably over extended periods when supported by appropriate technology and process control.



Advanced RAP technologies help improve sustainability while maintaining asphalt quality and performance.

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As material costs continue to rise and sustainability requirements tighten, RAP is expected to become an increasingly standard feature of asphalt production rather than a niche solution.

In Latin America, RAP adoption is accelerating as infrastructure investment expands alongside sustainability expectations. In Mexico, Lintec & Linnhoff has supported elements of the federal government's national road infrastructure programme, which includes large-scale road rehabilitation and new construction projects.

A key installation within this programme is the Lintec CDP14000M asphalt mixing plant, designed for high output, mobility and rapid installation. The plant is capable of integrating up to 15% RAP while maintaining stable production and consistent mix quality, helping reduce raw material consumption and environmental impact without compromising performance on major road projects.

Jeffrey Ma, chief technology officer at Lintec & Linnhoff, emphasised that the key to RAP success lies in treating recycling as a system-level capability rather than a simple add-on. "RAP is not just about adding recycled material into the mix. To achieve consistent quality and long-term performance, recycling must be engineered into the plant design, the control system and the operating process," he said. "When the right technologies and controls are in place, RAP can deliver significant environmental and economic benefits without compromising asphalt performance."

'Increasingly standard feature'

Lintec & Linnhoff further pointed out that, as material costs continue to rise and sustainability requirements tighten, RAP is set to become an increasingly standard feature of asphalt production rather than a niche solution. Road authorities are embedding recycled content into specifications, while contractors are seeking proven technologies that allow them to meet these requirements consistently and at scale.

By combining recycling technologies with automation, modular plant design and process intelligence, Lintec & Linnhoff supports this transition, helping producers and contractors integrate RAP responsibly and maintain the performance standards expected of modern road infrastructure.

In doing so, RAP becomes more than a sustainability initiative, delivering strategic capabilities that advance circular construction, improve resource resilience and shape the future of road building worldwide. ■

Website: www.lintec-linnhoff.com

SPAIN HIGHLIGHTS AUTONOMOUS, ROBOTICS, HYDROGEN AND ELECTRIC SOLUTIONS FOR GLOBAL CONSTRUCTION

At a recent press event in Zaragoza, Spain, organised by ANMOPYC (the Spanish association of manufacturers of construction, public works and mining machinery) in collaboration with ICEX (Spain's trade and investment agency), SEAC had the opportunity to learn about advanced innovations shaping the future of the global construction industry.

Here, the team from **Technological Institute of Aragon (ITA)**, a technology centre based in Zaragoza, provided insights into the research and development of an autonomous wheel loader, an autonomous dump truck, an electric hydrogen truck, a robotic 3D printer, as well as a hydrogen excavator and a hydrogen shredder. These technologies are being developed in collaboration with Spanish companies and partners across Europe.

Autonomous loader and truck

One of ITA's latest projects is an autonomous wheel loader, developed together with Turkish manufacturer Hidromek. Currently at the prototype stage, the machine is designed to operate in tunnels and hazardous environments, such as demolition sites where dust levels are high and visibility is low.

The technology enables unmanned operation in these challenging conditions, increasing jobsite safety and efficiency. It also reduces risks to workers, said María Teresa Lázaro, robotics R&D engineer at ITA.

The wheel loader is equipped with advanced sensors and cameras to carry out tasks autonomously. The machine can be monitored and controlled remotely via teleoperation, with the operator maintaining full oversight.

Ms Lázaro explained that adopting this autonomous technology allows repetitive, dangerous, or high-precision work to be performed with minimal human intervention, while freeing up workers' time for more valuable activities.

Another benefit is that autonomous machines can run continuously, optimising uptime and overall productivity, she pointed out, noting that they also help address the shortage of operators in the industry.



ITA has developed an autonomous wheel loader in collaboration with Turkish manufacturer Hidromek. Still a prototype, the machine is designed for operations in tunnels and hazardous environments, such as demolition sites where dust levels are high and visibility is low.

According to Ms Lázaro, the project took approximately two years, from design to the prototype stage. The machine has undergone several tests in tunnels and road construction, and ITA is considering additional trials.

In a separate project, ITA and Spanish construction company Urbyma have jointly developed an autonomous dump truck for transporting aggregates in quarries. The machine can be monitored and controlled remotely by an operator.



ABOVE: The autonomous wheel loader can be monitored and controlled remotely via teleoperation, with the operator maintaining full oversight.

LEFT: The ITA team at the SMOPYC exhibition in April 2026. Pictured from left are Jesús Ballestin, Isaac Nadal and María Teresa Lázaro.

This autonomous truck features advanced sensors, cameras and various other digital solutions to ensure high performance, especially in quarries and mines where logistics play a critical role, said Jesús Ballestin, an engineer at ITA.

He shared that the truck has been designed to work alongside other machines and equipment during aggregate transport, significantly improving operational efficiency.

Automating the work process with the autonomous truck not only enables more sustainable operations but also enhances worker safety by minimising exposure to potentially dangerous tasks in quarries and mines, emphasised Mr Ballestin.

He added that the truck was developed over approximately two years. It is currently at the prototype stage, with more than 100 hours of testing completed. The commercialisation timeline has yet to be determined.

Electric hydrogen truck and 3D printer

ITA also undertook the EH2T project, which involved retrofitting a 40-t diesel truck to provide a more sustainable alternative. It was first electrified, and subsequently fuel cells and auxiliary systems were integrated.

Isaac Nadal, technology coordinator at ITA, said the 'hybrid' truck will help lower carbon emissions and has been successfully tested on a national road in Spain.

According to ITA, the use of battery-electric trucks presents challenges for long-distance operations due to limited range, lengthy charging times, and the high battery mass that reduces payload. Therefore, hydrogen technology can offer greater range and faster refuelling.

The EH2T truck incorporates an electric motor that delivers the same performance as the original diesel engine, ensuring



ITA and Spanish construction company Urbyma have also jointly developed an autonomous dump truck for transporting aggregates in quarries. The machine has undergone more than 100 hours of testing.



The autonomous dump truck can work alongside other machines and equipment during aggregate transport, significantly improving operational efficiency.

there is no loss of operating performance.

The power supply system of the EH2T truck is structured on a high-voltage bus that receives power from two sources: a 140 kWh battery pack and two fuel cells with a combined output of 170 kW. These fuel cells are supplied by two hydrogen tanks with a combined capacity of 7 kg at 350 bar pressure.

Mr Nadal explained that the EH2T truck now serves as a mobile laboratory for ITA and will be used to collaborate with industry stakeholders, such as transport and mobility companies, industry regulators, and component, electronics and powertrain manufacturers.

In addition, ITA has been working on a robotic 3D printer for refurbishing and customising facades. This initiative is part of the wider 'Inperso' project, which aims to deliver inclusive, affordable, efficient and sustainable renovation solutions adaptable to various climate zones and building typologies, with a focus on residential and heritage buildings.

Developed by ITA along with Fundació CARTIF, Universitat Politècnica de València (IRP/UPV) and Vias y Construcciones SA, the 3D printer features a large-scale mechatronic system that includes a motorised global positioner on the X, Y and Z axes, an industrial robotic arm with an extrusion head for mortar, an optimised pumping and supply system, an industrial PC and ROS2-based control architecture, and a BIM-CAM software layer that automates the transition from the digital model to G-code for execution.

At present, the 3D printer is still at the prototype stage and is being tested on a real facade project in the Spanish city of Valencia, said Mr Nadal.



ITA's EH2T project involved retrofitting a 40-t diesel truck to provide a more sustainable alternative. It was first electrified, and subsequently fuel cells and auxiliary systems were integrated. This 'hybrid' truck has been successfully tested on a national road in Spain.



The EH2T truck incorporates an electric motor that delivers the same performance as the original diesel engine, ensuring there is no loss of operating performance. The vehicle now serves as a mobile laboratory for ITA and will be used to collaborate with industry stakeholders.



In another project, ITA has been working on a robotic 3D printer for refurbishing and customising facades.

H2MAC: hydrogen excavator and shredder

The development of zero-emission heavy equipment using hydrogen fuel cell – named 'H2MAC' – is among ITA's high-profile projects. It is being carried out in partnership with ANMOPYC, FHa (the Aragon Hydrogen Foundation), PowerCell Group, ZB Group, Mann+Hummel, Hidromek and the Tampere University, as a consortium.

The project focuses on developing an excavator (120 kW) and a shredder (240 kW) powered by hydrogen fuel cell powertrains, with the aim of achieving the same performance as their diesel-powered counterparts while offering a zero-emissions solution.



The 3D printer, shown here at the SMOPYC 2026 exhibition in Zaragoza, is currently at the prototype stage.

Commenced on 1 January 2024, the project is expected to conclude in June 2028. It has been extended by six months from its originally planned completion date in December 2027, said María García-Camprubí, the H2MAC project coordinator.

The budget for this major project is approximately €6.5 million, and the consortium has been awarded a grant of up to €5 million by Europe's Clean Hydrogen Partnership.

Ms García-Camprubí shared that during the final stage of development, the machine prototypes will be tested simultaneously under real working conditions for at least 1,000 hours at a quarry site in Arcos de la Frontera, south of Spain.

A main challenge of the project is ensuring that the excavator and shredder can operate in harsh environments, including high levels of vibration, heavy dust and extreme temperatures. The machines will also need a modular and scalable design to support the project's roadmap to market, added Ms García-Camprubí.

The machine prototypes are scheduled to be manufactured over the next half-year, with testing planned to begin by mid-next year. This trial period is anticipated to last a few months and seeks to demonstrate that the new powertrain can perform as well as the current diesel-powered system, making it a viable future replacement for diesel technology.

When fully completed, the H2MAC project is expected to establish a robust basis for the future development of off-road mobile machinery, from production lines to commercial products, as well as provide insights into the requirements for refuelling stations. This simultaneous demonstration will help build confidence in hydrogen fuel cell technology and the supply chain across the off-road industry, thus accelerating its adoption. ■

More details on the H2MAC project: <https://h2mac.eu>



TOP, ABOVE AND LEFT: María García-Camprubí, the H2MAC project coordinator, shares more details about ITA's high-profile initiative to develop an excavator and a shredder powered by hydrogen fuel cell powertrains. In the final stage, the machine prototypes will be tested simultaneously under real working conditions.

BELOW: The international media and buyer delegation at the SMOPYC 2026 exhibition, organised by ANMOPYC in collaboration with ICEX. The visit showcased advanced innovations shaping the future of the global construction industry.



GROVE GMK8700 ALL-TERRAIN CRANE MAKES WORLD DEBUT

Manitowoc has launched its strongest all-terrain crane, the GMK8700, expanding the Grove range from 50 t to 700 t. Built with an eight-axle carrier, this new 700 t-capacity crane meets growing demand for heavy-lift solutions across infrastructure, industrial, energy and other applications.

“We are incredibly proud to introduce the GMK8700, a testament to the engineering and manufacturing excellence of our team in Wilhelmshaven, Germany. This landmark model underscores our commitment to delivering high-performance solutions that help customers achieve greater return on invested capital,” said Andreas Cremer, vice president product management mobile cranes at Manitowoc.

Designed for the jobsite

Manitowoc’s Voice of the Customer (VOC) process was the foundation for the development of the GMK8700, ensuring it blends advanced engineering methods with real-world insights to address the needs of customers worldwide. Product versatility and on-site flexibility are major focuses, evidenced by two boom options: a 54 m and an 80 m version. Both feature the common Megaform design with interchangeable telescopic sections, so owners can switch setups for a wide variety of projects.

Transportability is another highlight. Depending on local regulations, the GMK8700 can travel with the boom carried over the front or mounted on a dolly behind the crane. The new carrier



The Grove GMK8700 all-terrain crane made its global debut at the recent Conexpo 2026 exhibition in Las Vegas, USA. Equipped with an eight-axle carrier, this new 700 t-capacity model meets growing demand for heavy-lift solutions across infrastructure, industrial, energy and other applications.



Two boom options are available on the GMK8700: a 54 m and an 80 m version. Both feature the common Megaform design with interchangeable telescopic sections, so owners can switch setups for a wide variety of projects.



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incorporates Manitowoc's MegaDrive system for smooth road travel and precise manoeuvrability.

Five axles are driven, and the carrier supports two axle groupings – one optimised for road travel and the other for jobsite mobility. Further transport benefits include the Megatrak suspension, a removable rear outrigger box and an adaptive electronic braking system, all of which contribute to simpler and more flexible logistics.

Grove Connect is available on the GMK8700, enabling fault code visibility and condition monitoring. This helps service teams plan maintenance more effectively, reducing unplanned downtime and resolving issues faster. The crane also groups key service points for easier access and quicker daily checks as well as routine maintenance. Parts commonality with other current generation Grove all-terrain cranes simplifies parts inventory and technician training for fleet owners.

Long lifting reach

The GMK8700's luffing jib can extend up to 107 m. It is quick and efficient to assemble, featuring a single back mast and optional boom extensions that enable customers to easily adjust the total system length for maximum flexibility.

The self-rigging MegaWingLift capacity-enhancing system can be installed without the need for an auxiliary crane, significantly reducing setup time – an important advantage on remote sites or in space-restricted environments. The GMK8700 offers up to 175 t of counterweight, comprised of slabs interchangeable with those of the GMK6400, GMK6400-1 and GMK6450-1 models.

For the first time on a Grove model, the counterweight incorporates Manitowoc's Variable Position Counterweight (VPC) technology. This allows operators to adjust the counterweight position to boost lifting capacity without requiring additional counterweights.

Operators also benefit from Manitowoc's CCS 2.0 crane control system, making its debut on the GMK8700. The system integrates with the on-board Grove Connect telematics platform and supports servicing through improved diagnostics, clearer information and more intuitive troubleshooting, so technicians can carry out service work efficiently. It also integrates seamlessly with MAXbase 2.0, the updated variable outrigger positioning system. Together, they deliver real-time lift capacity calculations, intuitive touchscreen operation



ABOVE: The GMK8700's luffing jib can extend up to 107 m. It is quick and efficient to assemble, featuring a single back mast and optional boom extensions that enable customers to easily adjust the total system length for maximum flexibility.

LEFT: The crane offers up to 175 t of counterweight, incorporating Manitowoc's Variable Position Counterweight (VPC) technology for the first time on a Grove model.

and optimised setup guidance. In addition, the crane includes dedicated operator displays for both the superstructure and

carrier, enhancing situational awareness and machine performance ■

Website: www.manitowoc.com

NEW **CAT** 707 WIDE BODY TRUCK FEATURES REBUILDABLE, COST- EFFECTIVE DESIGN





ABOVE: Featuring a maximum payload of 66 t, the new Cat 707 wide body truck offers high durability, with an integrated Cat powertrain that can be rebuilt.

LEFT: The versatile wide body design is available in standard or heavy-duty configurations, as well as 40- or 42-cu-m sizes to suit different material and jobsite conditions.



Built for long life and high uptime availability, Caterpillar's new Cat 707 wide body truck features a fully integrated Cat powertrain, including a Cat C13 engine, Cat automatic transmission and proprietary Cat axles. With its 66-t maximum payload, the versatile wide body design offers the choice of standard or heavy-duty configurations, as well as 40- or 42-cu-m sizes to suit the material and jobsite conditions.

"We have engineered our new wide body truck with a unique philosophy – it's built to be rebuilt, offering consistent mechanical availability and longevity through a second lifecycle, which can help lower operating costs," said Angel Gonzalez, global product specialist at Caterpillar.

"With its foundation of reliable operation and a cost-effective rebuild option, the new 707 wide body has been engineered, manufactured and field-tested using the latest technologies to ensure the truck is ready for work. This is the first Cat wide body truck model in a new product family that broadens the Cat hauling systems portfolio."

Durable performance

The 707 can be configured with the 400-kW Cat C13B engine to meet China Nonroad Stage IV emissions standards or the 358-kW C13, which emits equivalent to US EPA Tier 3. Both options include a standard engine brake set at a high rating. The truck's six-speed automatic transmission can be equipped with an optional integrated hydraulic retarder. For reliability, the 707 features proprietary Cat axles, integrated Cat powertrain controllers, and Cat wiring and electric harnesses.

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Three brake and retardation levels – integrated Cat engine brake, optional Cat hydraulic retarder, and parking and service brakes – provide excellent downhill loaded control for greater safety and faster hauling cycles. This new 707 offers ideal pass matches with Cat 986, 988 and 988 XE loaders and Cat 350, 374 and 395 excavators for improved productivity.

The truck's left-side operator seat placement and optional right-side instructor seat ensure easier operation and comfort for the operator and trainer. The cab features sturdy four-point mounting, while a standard falling object protective structure (FOPS) and an optional rollover protective structure (ROPS) enhance safety.

In addition, a reversing camera helps improve manoeuvring safety; automatic shifting with simple gear-selection transmission controls increases efficiency; and the truck's hoist system delivers fast, 20-second raise-and-lower cycle times to quickly unload material.

Low lifecycle costs

The fully integrated Cat powertrain components are mounted to a durable, reinforced chassis. When coupled with flexible Cat Customer Value Agreements (CVAs), customers can achieve higher uptime during the truck's service life,



Three brake and retardation levels – integrated Cat engine brake, optional Cat hydraulic retarder, and parking and service brakes – provide excellent downhill loaded control for greater safety and faster hauling cycles.

while maintaining reliable mechanical performance and longevity through a second lifecycle..

For safely shutting down the truck, a ground-level engine shut-off switch stops fuel to the engine when activated. Grouped service points help customers reduce maintenance time and costs. The 707 offers parts commonality with other Cat machines with common C13 engine,

CX31RT transmission and common cab.

What's more, the use of LED lights provides longer life and brighter illumination with less power consumption. They are also more resistant to vibration and water damage.

The Cat 707 is available in select regions with US EPA Tier 3 equivalent and China Nonroad Stage IV emissions standards. ■

Website: www.cat.com



The Cat 707 wide body truck operating with a Cat excavator.

Liebherr Nenzing marks 50th anniversary in style

As Liebherr Nenzing reaches its 50-year milestone, *SEAC* recently attended the celebrations to explore the company's latest solutions for global construction and deep foundation applications and reflect on five decades of development and innovation.

Since beginning production in 1976, Liebherr Nenzing in Austria has developed from a centre for maritime crane technology into a major international manufacturer of construction machines. Today, the company produces duty cycle crawler cranes and deep foundation equipment for demanding material handling and deep foundation applications, as well as crawler cranes for a wide range of lifting tasks. These machines are used on construction projects around the world.

From the 2000s onwards, the Nenzing site has gradually evolved from a production plant into a competence centre for innovative machine technologies, alternative drive systems, advanced control technology, and a wide range of digital solutions for the construction sites of the future.

The facility is also home to Liebherr-MCCtec GmbH, one of 11 divisional controlling companies in the Liebherr Group. The division operates four production sites and has over 50 sales and service branches worldwide.



To mark its 50th anniversary, Liebherr Nenzing organised a week of celebrations at the end of June 2026. It hosted customer days for approximately 1,200 guests from around the world, a dedicated day for school and university students, and a large open day for the local community. More than 25,000 visitors were expected, with access to product presentations, machine demonstrations and the company's latest technologies.



ABOVE: Liebherr Nenzing marked its 50th anniversary with a week of celebrations from 23 to 27 June 2026. The company hosted customer days, a dedicated day for school and university students, and a large open day for the local community.

LEFT: A variety of solutions for construction and deep foundation applications presented at the event, serving customers worldwide.

From production plant to innovation centre

The history of the factory began with the relocation of ship crane production from Ehingen, Germany, to Nenzing. Even in the early years, the high demand for maritime cranes led to strong growth. At the same time, Liebherr embraced technological innovation at an early stage and set new standards in the fields of electronic control systems and intelligent assistance systems.

Over the following decades, the product range was continuously extended. Liebherr first entered the duty cycle crawler crane market in the late 1970s, thereby laying the foundations for its current production of construction machines. The portfolio was then broadened to include piling and drilling rigs, crawler cranes and digital solutions.

Parallel to the development of the site, Liebherr Nenzing's international presence was systematically expanded. Another production site for large ship, offshore and mobile harbour cranes was founded in Rostock, Germany, in the 2000s. Moreover, additional international sales and service companies were established.

Within this international network, Liebherr Nenzing now plays a central coordinating role as the division's headquarters and has further consolidated its position as a centre of innovation.

Setting global standards

Technological innovation has also been a defining feature of the company for five decades. As early as the 1970s, Liebherr set new standards in the ship crane market with innovative solutions for synchronised crane movements, establishing itself early on as a technology leader in this field.

In 2007, Liebherr became the first crane manufacturer in the world to use carbon fibre technology in crane production, thereby opening up new possibilities for efficiency and performance.

With the Pactronic hybrid drive system and the world's first battery-powered drilling rig, the LB 16 unplugged, Liebherr has consistently advanced the development of sustainable, low-emission technologies. In recognition of this innovative strength, Liebherr was awarded, among other honours, the Austrian State Prize for Environmental and Energy Technology. In 2026, the company received the EcoVadis Platinum Medal, the highest ranking in the international sustainability rating system.



ABOVE: Liebherr executives at a press conference during the event.

BELOW: The Nenzing site has gradually evolved from a production plant into an international innovation and competence centre.



ABOVE: Duty cycle crawler cranes were added to Liebherr's portfolio in 1979.

FAR LEFT: Liebherr launched the world's first battery-powered drilling rig, the LB 16 unplugged, in 2019.

LEFT: At the event, Liebherr also showcased a wide range of digital solutions for the construction sites of the future.



LMD 1200 dragline machine

At the event, Liebherr officially launched its new dragline machine, the LMD 1200. It is specially developed for the extraction of raw materials in demanding mining applications.

Available globally, the LMD 1200 is suitable for wet mining (below the groundwater table) and dry mining. Its boom system can be flexibly configured depending on operating environments to achieve the best possible working performance.

The maximum lifting capacity of 30 t, with a working radius of 40 m, meets the requirements of large-scale mining applications. Thanks to its robust steel construction, the LMD 1200 is designed for continuous use in extreme weather conditions, offering reliability and durability.

The LMD 1200 is equipped with a 670 kW engine and two 500 kN winches, said Holger Streitz, managing director for technology and development at Liebherr-Werk Nenzing, during a press conference. He added that the machine, built for 24/7 operation and low operating costs, features a boom length of 35-50 m and a high turnover of up to 850 cu m/hr.

The dragline bucket is up to 12.25 cu m and the digging depth is up to 25 m. The Liebherr twin hydraulic motors automatically adjust the speed of the winches to match the required digging force, allowing even and efficient filling of the dragline bucket and significantly increasing handling capacity. Combined with the powerful swing gear, this results in shorter working cycles and greater productivity.

The LMD 1200's fairlead consists of a pivoting roller head with rope pulleys and guide rollers, as well as a bearing and an automatic positioning unit. This

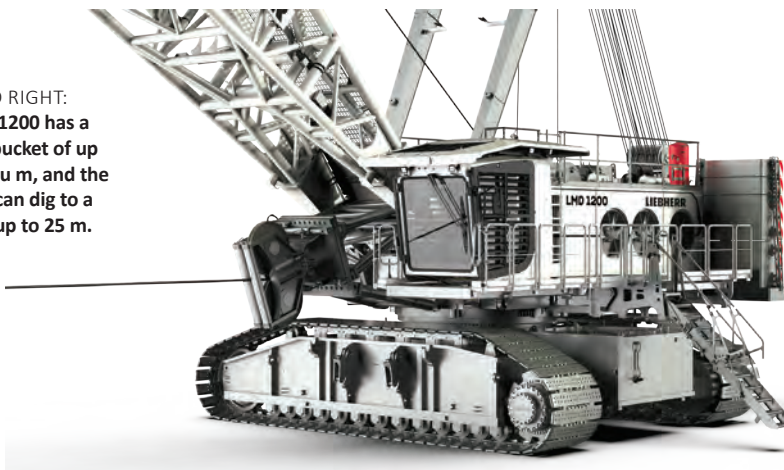
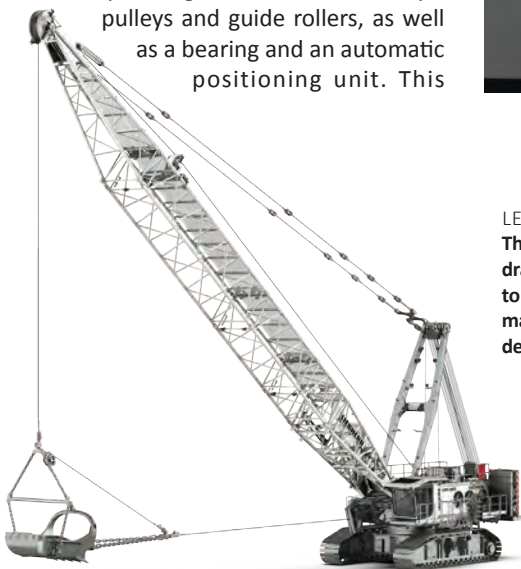


ABOVE: The new LMD 1200 dragline machine on display at Liebherr Nenzing's 50th anniversary event. Available globally, it is suitable for both wet and dry mining applications.

BELOW AND BELOW RIGHT: Featuring robust steel construction, the LMD 1200 is designed for continuous use in extreme weather conditions.



LEFT AND RIGHT: The LMD 1200 has a dragline bucket of up to 12.25 cu m, and the machine can dig to a depth of up to 25 m.



facilitates wear-reducing spooling of the drag rope onto the rope drum. The large rope diameter and standard grooving significantly extend the rope's service life. The new rope lock enables quick rope changes, minimising downtime.

Flexible mobility concept

Thanks to specially developed hydraulic components, the drivetrain is optimally designed and functionally harmonised. The combination of engine power and reduced hydraulic pressure delivers efficient operation while achieving both low fuel consumption and high handling capacity.

According to Liebherr, the integrated tank with a capacity of 1,000 l and an 8,270 l additional tank allow the LMD 1200 to run continuously for up to one week without refuelling. The core components of the machine include a high proportion of Liebherr's own developments, increasing parts availability and thus operational readiness.

The LMD 1200 has an operating weight of 360 t, and its mobility concept enables it to be driven and relocated within the mine with the boom lowered, reducing time and costs for users. Liebherr said the entire machine can be assembled or disassembled in just one week.

Driver comfort

For driver comfort, the spacious cabin features a noise-optimised design and a clear overview of the working area. Cameras on the machine extend the operator's field of vision and enable a safe all-round view, as well as monitoring of the rope winding on the winches.

The tinted safety glass provides sun protection, and the air-conditioning system ensures an ideal working climate. The orthopaedic driver's seat can be heated, cooled, or ventilated as needed. The cabin is also fitted with a second driver's seat for practical training of new operators.

Furthermore, an optimised lighting concept for the boom, cabin, and access ways to the machine enhances visibility during night use.

HS 8100.2 dual power

Liebherr's first electric duty cycle crawler crane, the HS 8100.2 dual power, was also a highlight at the event. Unveiled last year, this model offers various drive alternatives depending on jobsite conditions. The centrepiece of the machine is an integrated battery with which the entire drive system runs. The battery can be charged in different ways. With a power input of 125 A, the crane is operated entirely via the jobsite electricity supply.

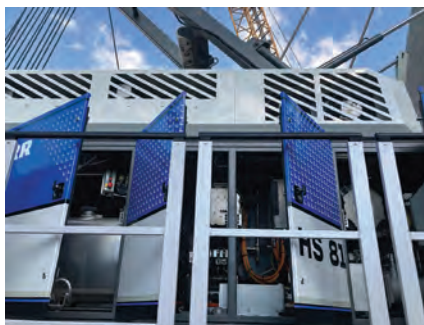
With 32 A or 64 A, part of the required energy comes from the mains supply, while the rest is delivered by an optional diesel generator that is completely integrated in the machine and does not require any extra space. The product name 'dual power' derives from this drive concept. If no charging infrastructure is available on the jobsite, the drive is powered entirely by the diesel generator. Thanks to the battery, the crane can also be autonomously assembled or disassembled, or travel over a distance of around 400 m.

All main components of the HS 8100.2 dual power are electric: travelling gear, swing drive, luffing winch and free-fall winches. The crane is easy to maintain and its electric drive system delivers zero emissions on the jobsite. In mains or dual power operation, the machine produces little or no exhaust fumes and is very quiet. It is suitable for projects in noise-sensitive and urban areas.

The HS 8100.2 dual power can be used for a wide range of applications – whether with a mechanical grab for deep foundation work, with a dragline for material handling or for lifting up to 100 t. The electric free-fall winches with a line pull of



Liebherr's first electric duty cycle crawler crane, the HS 8100.2 dual power, offers various drive alternatives depending on jobsite conditions. The centrepiece of the machine is an integrated battery with which the entire drive system runs.



ABOVE AND LEFT: The HS 8100.2 dual power is seen here at the Liebherr Nenzing facility. All main components of the machine are electric: travelling gear, swing drive, luffing winch and free-fall winches.

300 kN each ensure the necessary power on the jobsite. If these are lowered with friction, they recover energy to charge the battery.

Thanks to the all-electric drive concept in combination with this energy recovery, the power requirement could be reduced by up to 30% compared to the conventional version. This makes operation of the new model particularly efficient. The HS 8100.2 dual power has the same control concept as the entire HS series, making it easy for the operator to switch to the new device.

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Rope-suspended leader with H 10 hydraulic hammer

Liebherr has also introduced its rope-suspended leader combined with the H 10 hydraulic hammer, an efficient solution for driving free-standing piles, both vertically and at an inclination.

This rope-suspended leader with the H 10 hydraulic hammer enables piling applications to be carried out without the need for a specific piling rig, as it can be mounted on a wide variety of cranes, including duty cycle machines. Operators benefit from a significantly expanded range of applications: piles can be installed even at greater distances or behind obstacles, which is particularly advantageous in marine and port construction.

With a combined weight of 27 t, the leader and hammer can be easily placed over the pile, and work can begin immediately. The system is suitable for piles weighing up to 30 t, with a maximum diameter of 1,220 mm and an inclination of up to 1:3.

Thanks to its modular weight system, the H 10 hydraulic hammer is optimally adapted to various piling requirements. In accordance with its designation, the maximum piling weight is 10 t. The sound power level of four simultaneously operated Liebherr hydraulic hammers is the same as that of a single conventional hammer without noise reduction – a clear benefit for the environment and working comfort.

In addition to its noise-reducing design, the H 10 features an efficiency rate of 95%, meaning it transfers virtually all of the impact energy to the pile. The hammer model is also compatible with the Liebherr LRB and LRH series of piling rigs.

By utilising the carrier machines already available at the customer site, the rope-suspended leader with the hammer is a cost-effective solution that can be installed with minimal effort. Liebherr supplies a stand-alone control system for third-party machines, offering customers maximum flexibility and an efficient approach to demanding piling work.

LMC 80 mixing cutter

The new Liebherr LMC 80 mixing cutter can be used in all types of mixable soil to install load-bearing or sealing elements for ground improvement. The four cutting wheels are driven by a maximum torque of 2 x 80 kNm and achieve a maximum rotational speed of 30 rpm depending on ground conditions. The LRB 23 or LRB 355 piling and drilling rigs are used as carrier machines for the LMC 80.

Liebherr provides both the mixing cutter and the carrier machine for the application. Using an extension linkage, the LRB 23 piling and drilling rig can produce ground mixing elements to depths of up to 36 m, while the larger LRB 355 can reach depths of up to 40 m. Both versions can create panels with cross sections ranging from 2,800 mm by 500 mm to 1,000 mm, depending on site requirements and ground conditions.

For flexible use, the LMC 80 can be swivelled by 135 degrees around the mixing axis without moving the leader. The control system for the mixing cutter is integrated into the familiar operating concept of the carrier machine.

The verticality measurement displays information in real time on the operator's monitor if the mixing element deviates from the vertical. This ensures the highest level of precision during operation. Thanks to the LIPOS positioning system and advanced satellite technology, operators can align the LMC 80 with pinpoint accuracy. MyJobsite, the digital solution for deep foundation applications, enables relevant process, machine, jobsite and positioning data to be recorded, displayed, analysed, managed and evaluated.

The LMC 80 is mounted on the carrier machine whilst lying flat. This saves time and is particularly safe since no work is carried out



LEFT: Liebherr's rope-suspended leader with the H 10 hydraulic hammer is a cost-effective pile driving solution that can be mounted on a wide variety of cranes, including duty cycle machines, eliminating the need for a specific piling rig.

BELOW: The LMC 80 mixing cutter expands Liebherr's portfolio for soil mixing applications. The unit uses the LRB 23 or LRB 355 piling and drilling rigs as its carrier machines.



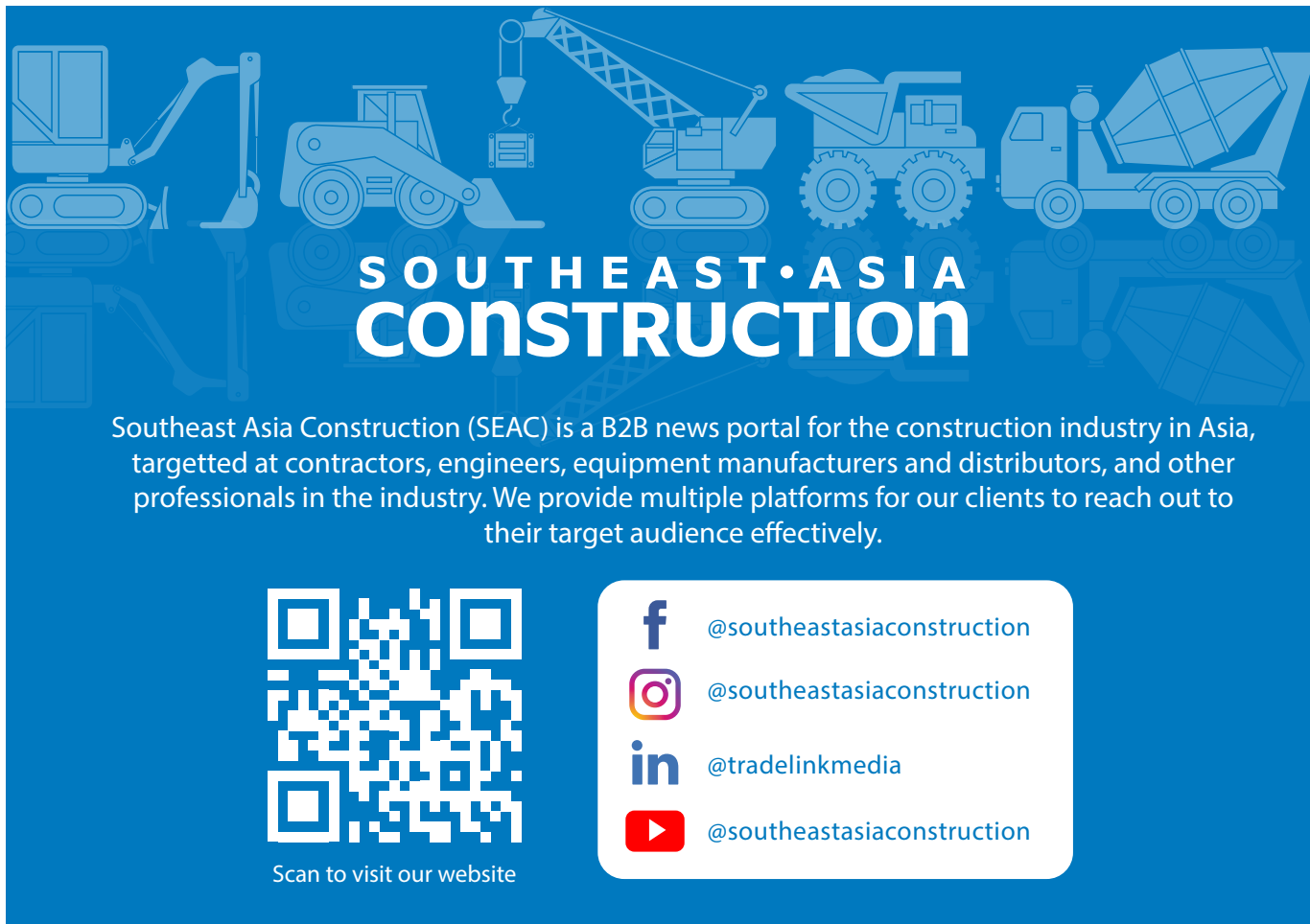
at height. The carrier machine's crowd winch lifts the mixing unit into the working position.

To convert the LRB 23 or LRB 355 for piling or drilling applications, the mixing tool is simply replaced with a rotary drive, hammer or vibrator. Customers require just one carrier machine to perform all common applications in deep foundation work and benefit from the all-round qualities of the LRB series.

From an economic point of view, cutter soil mixing with the LMC 80 has further advantages compared to other ground improvement methods. Only a few building materials need to be delivered, and no excavated material needs to be transported, since only the existing soil is mixed with the binding suspension.

Liebherr said the LMC 80 mixing cutter offers noise-reduced and low-vibration processes in line with market requirements and contributes to a more environment-friendly solution. ■

Website: www.liebherr.com



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