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SOUTHEAST ASIA BUILDING

November / December 2022

THE TALL STRUCTURES ISSUE

Skyscrapers and Tall Buildings

ON THE COVER: City Gate / Singapore

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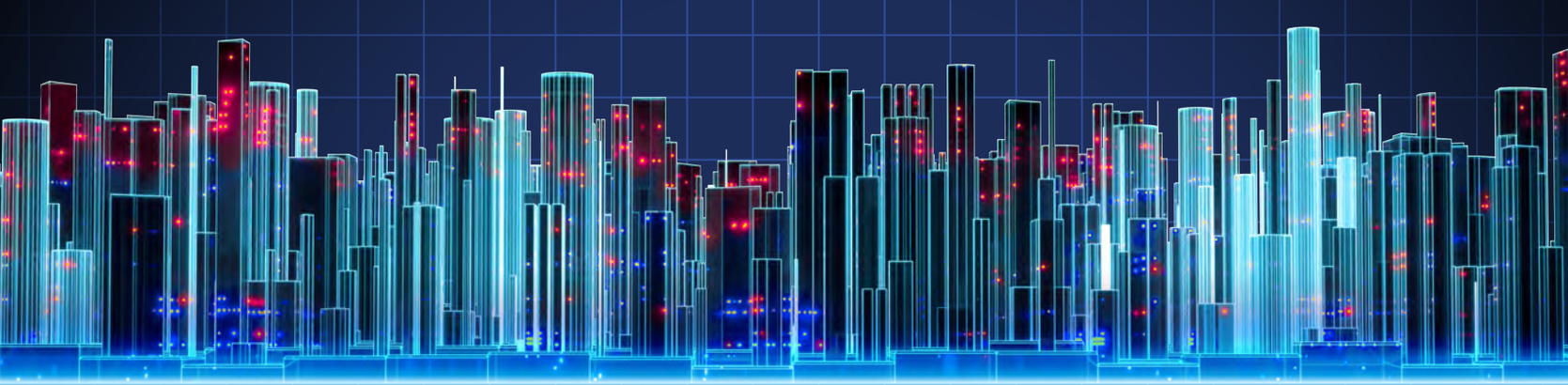

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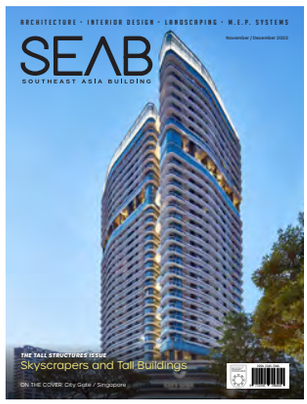

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Welcome to Nov/Dec issue!

Dear readers, I hope all of you are doing great. We have finally come to the last issue of 2022. Times flies so fast! This year, we attended many events and exhibitions on site and we had a really good time catching up with old friends and contacts face to face. The building and construction sector is set to boom again with the post-Covid recovery.

In this issue, we look at the design of tall buildings and the challenges that come with it. Inside, you will find several tall building projects, which 'stand out' due to their height, form and beauty.

You will also find the winners of the 2022 Aga Khan Award for Architecture and an interview with renowned architectural firm Skidmore, Owings & Merrill inside. We look at the firm's strong presence in the Asia Pacific region, its expansion plans, ongoing projects and the impact of digitalisation on its practice.

In the PDF copy, we bring you a show review of BEX Asia 2022 featuring latest trends in architecture, construction, technology and sustainable products. Don't forget to read or download the PDF.

We hope you enjoy reading the issue! We will be back next year with more interesting topics for you to read. For those who are in the field of interior design, we have included Interior Design in our 2023 editorial calendar. This means we will now also showcase interior design projects covering residential, office, institutional and many more.

If you have any comments or feedback, please drop me an email at seab@tradelinkmedia.com.sg

Take care!

Amita Natverlal

JANUARY/FEBRUARY 2023 (SUSTAINABILITY) ISSUE

FEATURES:

- Adaptive Reuse
- Commercial Interior Design
- Playgrounds & Landscaping

Industry Partners of SEAB

Asscociation of Myanmar Architects

Bangladesh Green Building Council

Design Council – Sri Lanka

Emirates Green Building Council

Foundation for Futuristic Cities

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Green Building Council Indonesia

Green Building Council Italia

Green Building Council Mauritius

Green Building Council Namibia

Green Building Council Sri Lanka

Hong Kong Green Building Council

Interior Design Confederation of Singapore

Jordan Green Building Council

Qatar Green Building Council

Philippine Green Building Council

Singapore Green Building Council

Society of Interior Designers (Singapore)

The Hong Kong Institute of Architects

Vietnam Green Building Council

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85 years 1937-2022

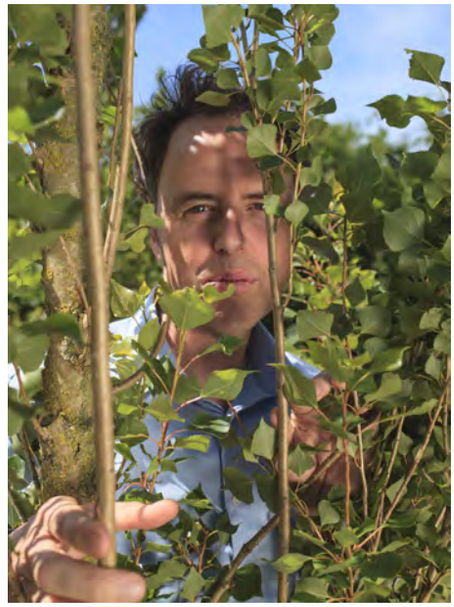
Landscape Architect Adriaan Geuze from the Netherlands is the 2022 recipient of the Sir Geoffrey Jellicoe Award

Gwangju, Korea – The IFLA President, James Hayter, announced the IFLA Sir Geoffrey Jellicoe Award 2022 winner during the 58th IFLA World Congress in Gwangju, Korea during an Award Ceremony that took place on August 31, 2022.

The jury unanimously agreed that "Adriaan Geuze is one of the most significant landscape architects in the world today." Through the broad range of built projects worldwide, his firm's works have achieved a balance of concept and practice that have changed the relationship between cities, nature, and people, and creatively transformed the relationship between urban life and urban ecology. Adriaan Geuze's outstanding contributions to the promotion of the profession in conceptual and practical respects represent the best values of the IFLA world community.

Adriaan Geuze is the founder and director of West 8, which focuses on landscape architecture, urban design, and infrastructure projects. Under Geuze's leadership, West 8 has completed more than two hundred projects, in over 60 countries spanning four continents. It has created innovative designs based on a critical approach to landscape architecture, planning, and innovation in the public realm, which have inspired many designers from different disciplines. Geuze has stretched the boundaries of landscape architecture. From an academic perspective, Geuze has made important contributions to the education of generations of landscape architects in courses taught across the world. Beyond his professional and academic accomplishments, Geuze also takes prominent and active positions within societal debates on landscape and design. All of these contribute to making Geuze one of the foremost and most inspiring landscape architects worldwide.

Adriaan Geuze has a master's degree in landscape architecture from the Agricultural University of Wageningen. He is a registered landscape architect with the Dutch Architect's register and an Honorary Member of the Dutch

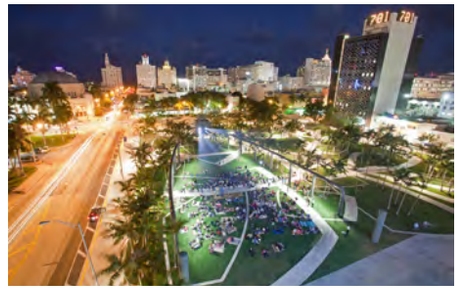


Adriaan Geuze. Portrait: © Maaike Engels

Association for Garden and Landscape Architecture (NVTL). Geuze is also an international member of the American Society of Landscape Architects (ASLA) and Registered with the Ontario Association of Landscape Architects (OALA) in Canada.

West 8, which Geuze leads describes its design philosophy as: "The philosophy of West 8 is deeply rooted in a systemic approach to life sciences compared to narrative: engineer meets poet. This 21st century approach allows West 8 to interweave function, engineering, sustainability, symbolism, expression and both the vulnerability and the euphoria of mass culture. Landscape, infrastructure, nature, and historical legacy coalesce to form vital constituents of our cities. Across all of West 8's work, the analysis of the unseen logics – ecology, infrastructure, water and soil conditions, building programs and people – has enabled the designs to be at the forefront of sustainability, ecological sensitivity and resiliency. All these designs breath timelessness, local culture and the desire to occupy, play and explore. Public Space, has become a dominant subject for the field of Landscape Architecture profession, and today demands a proactive attitude:

Xinhua Park, Shanghai Waterfront. Photo: © Wang Zilu



Soundscape Park. Photo: © Robin Hill

Governors Island – The Hills. Photo: © Timothy Schenck Photography

to engineer softscape and shade against the hardscape; to speak out for the public and free spaces against the commercialisation of the urban realm; to veto against traffic dominated streetscapes and to campaign for pedestrian-friendly cities in their place and, above all, create an inclusive and welcoming environment for all user groups to engage."

With the announcement of the 2022 award, Adriaan Geuze, joins Iraqi Jala Makhzoumi, Chinese Landscape Architect Kogjian Yu, American landscape architects Kathryn Gustafson and Anne Whiston Spirn, and Dutch landscape architect and planner Dirk Sijmons who were the most recent recipients of the award in 2021, 2020, 2019, 2018 and 2017 respectively.

Indonesian Minister of Communication & IT inauguarated the Purwadhika Digital Technology School at the Nongsa Digital Park, Batam

Photo Courtesy by Sinar Mas Land.

Batam – Sinar Mas Land through the Nongsa Digital Park is strengthening its position as a digital economy area that will serve as the bridge for various digital and technology companies in Indonesia and Singapore. This is manifested by the opening of the third branch of Purwadhika Digital Technology School in Nonga Digital Park, Batam as a learning centre that will trigger the rise of a digital talent pool in the area.

The inauguration of the Purwadhika Digital Technology School campus was held at Nongsa Digital Park, Batam on Friday (14/10) by Johnny G. Plate (Minister of Communication and Informatics of the Republic of Indonesia), accompanied by Purwa Hartono (CEO & Founder of Purwadhika Digital Technology School), and witnessed by Irawan Harahap (Chief Digital Tech Ecosystem & Development Sinar Mas Land), Mike Wiluan (President Director of Citramas Group), Stephanie Foo (Representative of Singapore Economic Development), and Enoh Suharto Pranoto (Deputy II of the Batam Business Agency). Its most recent campus is located in Nongsa Digital Park, a visionary project built by the collaboration of Citramas Group and Sinar Mas Land through a joint venture company, PT Citra Sinar Mas Global.

Nongsa Digital Park sits in a special economic area that focuses on the digital-based creative economy in Batam. Nongsa Digital Park has hosted 1,000 digital workers from 100 multinational companies such as Glints, R/GA, and WebImp. This area is also equipped with facilities and infrastructure that support the talent development according to expertise relevant to the current needs of the creative and digital technology industries. It will help Indonesia and Singapore to grow and complement each other in the digital economy sector.

Playpoint receives seven awards at the LIAS Gala Dinner & Awards

Singapore – Playpoint (Singapore) Pte Ltd is delighted to announce that the company received 7 awards at the LIAS Gala Dinner & Awards Ceremony held on 1 September 2022 at the Shangri-La Hotel Singapore.

In addition, the Como Adventure Playground, created by Playpoint, won the Best of Category and Gold Award at the Award Ceremony. The COMO Adventure Grove is a new playground that is inspired by forest canopies, jungle trails and Singapore's diverse flora. Located at the new Gallop extension of Singapore Botanic Gardens, the playground is a biophilic wonderland designed to inspire curiosity and encourage exploration in children.

Commenting on the awards, Mr Jason Sim, Managing Director, Playpoint (Singapore) Pte Ltd, said: LIAS believes that great playground design enables a unique development and stronger bonds within communities, so these accolades are a testament to our commitment to continuously push the boundaries of playscape designs. Thank you for the wonderful evening and validating our passion to build a happier, healthier world."

The LIAS Gala Dinner & Awards Ceremony was organised by Landscape Industry Association (Singapore). Mohamad Faishal Ibrahim, Minister of State for Home Affairs and for National Development attended the event as the Guest of Honour.

The team from Playpoint receiving their award from Mohamad Faishal Ibrahim, Minister of State for Home Affairs and for National Development. Photo credit: Playpoint

Hilton Singapore Orchard introduces 'Smart Oasis' function space for purposeful meetings and events

Singapore – Hilton Singapore Orchard introduces the Smart Oasis, a unique meeting space located on Level 5 of the hotel that comprises seven function rooms and two breakout areas designed for inspiring events.

Perfectly timed to support the recovery of Singapore's Meetings, Incentives, Conventions and Events (MICE) industry, Hilton Singapore Orchard, the largest Hilton Hotel in Asia Pacific, is one of Asia's best new destinations for MICE in the heart of Orchard Road.

Boasting 16 highly versatile event spaces spanning over 2,400 square metres, along with two pillarless ballrooms and 1,080 refurbished rooms and suites, Hilton Singapore Orchard is the newest of Singapore's three largest hotel and MICE facilities in terms of keys and events capabilities. Its premier address, extensive room inventory, exceptional 790 square metres Executive Lounge and collection of world-class dining destinations makes Hilton Singapore Orchard the ideal venue for business and social gatherings as the world rebalances post-Covid and the region reopens.

Cedric Nubul, General Manager, Hilton Singapore Orchard, says, "Along with the new Smart Oasis, our state-of-the-art MICE facilities and talented team are innovating new ways for groups to connect, collaborate and celebrate. Deemed as one of the best new meeting venues in Asia, we aspire to set a new benchmark for delivering events experiences that are sustainable, low on waste and high on impact, value and creativity."

SINGAPORE INTERIOR DESIGNERS DIRECTORY

INAUGURAL EDITION 2023 - 2024

Launching Singapore's 1st Interior Designers Directory (SIDD) Featuring Accredited Designers

In partnership with Society of Interior Designers Singapore (SIDS), the first edition of Singapore Interior Designers Directory (SIDD) will be published in 2023 and we are inviting Singapore-based designers and building material suppliers / service providers to participate in this special project.

Directory will include:

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10 Design completes Haisco Plaza

Hong Kong – Designed by international architecture practice 10 Design (part of Egis Group), Haisco Plaza is officially open, welcoming leading tech-firm tenants in Chengdu, China.

Situated in the Singapore-Sichuan Hi-Tech Innovation Park (SSCIP), a 1,034 hectares innovation platform jointly invested by Singapore and Sichuan Province of China, the Haisco Plaza development presents a unique opportunity to create a new commercial and retail community for the TMT (technology, media, telecom) industry. The Innovation Park is already home to a number of high-tech giants including Haisco Pharmaceutical, OPPO, FOUNDER, and Kuaishou.

Managing Principal, Barry Shapiro commented: "The overall masterplan for this integrated mixed-use campus places social interaction at the heart of the design. Our vision is to create a truly inclusive, human-scaled space for all tenants and visitors to enjoy. The integrated communal spaces weave throughout the development to create opportunities for social interaction, commercial viability and amenities to create a strong sense of community for the future tenants."

Design Principal Nick Cordingley led the competition win in 2016 while Design Principal Scott Findley oversaw the delivery of the design vision. Haisco Plaza is planned as a vibrant destination for its surrounding working and residential community with convenient access to an adjacent metro station. It is a unique development created to attract innovation-centric and knowledge-intensive enterprises.

Photo credit: Arch-Exist Photography

Changi Airport Terminal 5 – A Resilient and Sustainable Airport – resumes work

Singapore – First announced in 2013, Changi Airport's Terminal 5 (T5) is a project undertaken by the Ministry of Transport (MOT), the Civil Aviation Authority of Singapore (CAAS) and Changi Airport Group (CAG).

Due to the Covid-19 pandemic, the T5 project was paused for two years. During this time, MOT, CAAS and CAG re-assessed the trajectory of aviation growth, and reviewed T5's design to make it more modular, and to enhance its resilience and sustainability.

Photo credit: Changi Airport Group

Following Singapore's reopening, air travel demand has recovered strongly at Changi Airport. Beyond the immediate recovery, the long-term prospects for aviation also remain bright. In particular, the International Air Transport Association has projected that the Asia-Pacific would be the fastest-growing region for air travel over the next two decades.

To secure Singapore's capacity to ride on the long-term growth of aviation, work on the T5 project has resumed. CAG is re-mobilising the design and engineering consultants to refine the T5 design. Construction is expected to commence in about two years, for T5 to be operational around the mid-2030s.

T5 will be located within the 1,080-hectare Changi East development that is almost as big as the land area of today's Changi Airport. It will be able to handle about 50 million passengers per year, and will be designed with the flexibility to be built in two phases, in line with traffic growth.

Design revealed for 8 Shenton Way – Singapore's tallest skyscraper

Singapore – On 27 October 2022, Skidmore, Owings & Merrill (SOM) revealed the design for 8 Shenton Way, a new 63-storey mixed-use tower that is set to become the Singapore's tallest skyscraper.

Soaring to a height of 305 metres, 8 Shenton Way will be located at the intersection of Singapore's Central Business District and Marina Bay, Tanjong Pagar neighbourhood and the emerging Greater Southern Waterfront. The tower will comprise of expansive public spaces, offices, retail, hotel, and luxury residences and offer unparalleled panoramic views south-facing of the South China Sea. The residences will occupy the highest levels of the tower, enjoying the most impressive views.

"8 Shenton Way will be the newest landmark on the Singapore's skyline – truly a next generation tower for the city," said SOM Partner Mustafa Abadan. "Designed specifically with the tropical climate of Singapore in mind, this building will be one of the first post-pandemic mixed-use towers in the world incorporating health and wellness as its primary design drivers. By seeking to achieve the city's newest and most rigorous sustainability standards, our design will establish a new paradigm for resilient and elegant high-rise design in Singapore and beyond."

The design of 8 Shenton Way is inspired by bamboo forest and the biophilic elements found in nature. The building will reuse part of the existing foundation and infrastructure onsite to minimize material use and embodied carbon during construction. The facade will be built of energy efficient glazing, and recyclable aggregates will be used in its concrete structure, manufactured through a low carbon process, while segregating waste and using Singapore Green Building Council-certified materials where available.

The development will integrate dynamic live, work, and play elements, while elevating luxury in Singapore's downtown. A public performance and events space with retail, seating, and bike racks will activate the street. Landscaping will extend from the street into the building, creating a seamless green corridor for pedestrians. On the second floor, an open-air green space with restaurants offers room to gather, surrounded by a biodiverse landscape with plants chosen specifically to attract birds and butterflies. In total, the design includes more than 10,000 square metres of elevated, public green space – exceeding the footprint of the entire site.

From left to right: Shilpa Patel, Project Manager; Mustafa Abadan, Design Partner; and Nicolas Medrano, Design Principal, of SOM at the unveiling of 8 Shenton Way design in Singapore.

Artist Impression of 8 Shenton Way. Image credit: SOM/Bezier

The building facade is characterized by natural materials – champagne-coloured terracotta and bamboo along the walls of the sky gardens – with curved edges that create bay windows on nearly every floor, offering vast sightlines of the city and the sea. In the lobby, wood, stone, and terracotta finishes flank artwork and a reflecting pool, with a multi-floor atrium framing the space above. Landscaped sky gardens located throughout the height of the tower create a place of respite, building occupants ample room for an outdoor escape in the sky. There are seven terraces altogether, including one for the hotel floors and three for the residential levels, carved out of the building every five to six floors bringing light, air, and natural ventilation to prioritize wellbeing.

From the zero-waste manufacture of terracotta to the use of engineered bamboo, the design seeks to minimise both embodied and operational carbon. Targeting Building Construction Authority of Singapore (BCA) Green Mark Platinum Certification – equivalent to a 55 percent energy reduction compared to the benchmark – 8 Shenton Way is seeking the highest sustainability certification in the region.

"Emerging from the pandemic, this moment presents a rare and exciting opportunity for architects to explore new approaches to health-driven placemaking," said SOM Design Principal Nic Medrano. "Singapore is an incredible canvas to do this, with its excellent quality of life, abundance of greenspace and diversity of cultures. Our design weaves together nature, heritage, connections to transit, luxury living, health workplaces, and lively public spaces into a thriving hub for the community."

8 Shenton Way is owned and being developed by Perennial Holdings Private Limited and its consortium of investors. SOM is serving as Architectural Design Consultant and with DCA Architects of Singapore serving as Architect of 8 Shenton Way. The project is anticipated for completion in 2028.

Seoul welcomes the city's first MGallery Hotel

Seoul, South Korea – Accor has unveiled a captivating boutique hotel in Seoul with the opening of Hotel Naru Seoul – MGallery Ambassador. Designed to highlight an array of unique stories, South Korea's first hotel in the MGallery Hotel Collection celebrates a perfect harmony of contemporary Korean design with the iconic Han River.

The Mapo-gu district has been a centre for transportation and commerce since the Chosun dynasty and continues this role today. The vibrant district is located on the northern banks of the iconic Han River, in close proximity to Incheon International Airport and the central business district. Several universities, government buildings, office towers, cultural sites, green spaces, and local dining destinations are located here, ensuring a vibrant mix of character.

Photo credit: Hotel Naru Seoul MGallery Ambassador

Named after the original name of the area, Maponaru, the 196-key Hotel Naru Seoul – MGallery Ambassador reflects the spirit of the neighbourhood through its design aesthetic and guest offerings. Artists, poets, and painters have been drawn to Maponaru's charming nature for generations. The natural beauty and artful roots of Korean culture serves as inspiration for this captivating hotel. Featuring a modern exterior, shadow glass panels look out across the Seoul skyline connecting guests with the sweeping views of the river and allowing natural daylight to flow inside. Biophilic-inspired interiors create an intimate connection between guests and nature. The atmosphere is peaceful and calm. The Green Building certified hotel has been engineered to leave a minimal carbon footprint.

GCU Consultants appointed to design Jotun's state-of-the-art Southeast Asia R&D facility

Selangor, Malaysia – GCU Consultants Sdn Bhd (an Aurecon Malaysia Group company) has been appointed by Jotun Paints Malaysia Sdn Bhd to design and project manage its state-of-the-art Southeast Asia research and development (R&D) facility in Selangor, Malaysia. Slated for completion in 2025, the development will bring together staff from Jotun's regional offices and R&D facilities across Malaysia, under one roof, to enhance collaboration and innovation. Jotun has 40 production facilities in 23 countries, with 67 companies in 47 countries, and is represented in more than 100 countries around the world. The new facility will offer an innovative working environment with collaborative and open spaces designed to embrace more flexible ways of working, while being adaptable to foster in-person and virtual interactions.

Aurecon will provide Jotun an integrated range of services, comprising design, architectural, civil, structural, mechanical, electrical, specialised consulting (e.g. hazard and operability study), as well as end-to-end project and construction management. The team will further leverage digital tools and its digital engineering expertise across the Aurecon network to facilitate a digital-enabled and user-centric approach in bringing this facility to life. As part of Jotun's commitment to sustainability, the facility will be built with high quality, environmentally friendly materials, to achieve a baseline LEED Silver certification. The team will also incorporate solar power and climatic considerations including type of finishes and orientation into the building's design, as well as adopt procurement processes that help to reduce its carbon footprint.

SGBC and Malaysian built environment organisations sign MOU to collaborate on green building development

Singapore – At the International Built Environment Week 2022, the Singapore Green Building Council signed a Memorandum of Understanding (MOU) with three Malaysian built environment organisations to strengthen collaborative efforts for green building solutions, innovations and best practices between both countries.

The four-party MOU between GreenRE Sdn Bhd, the Real Estate and Housing Developers's Association Malaysia (REHDA), the Real Estate Developers' Association of Singapore (REDAS) and the Singapore Green Building Council (SGBC), was inked in the witness of Singapore Minister for National Development & Minister-in-charge of Social Services Integration, Mr. Desmond Lee, as well as Mr Kelvin Wong, CEO of the Singapore Building and Construction Authority (BCA) on 6 September 2022.

The MOU will deepen collaboration between organisations from both sides of the Causeway and is anchored on information exchange, organising of joint learning, research and development activities, facilitating of Singapore-Malaysia business collaborations as well as promoting products certified by the Singapore Green Building Product (SGBP) certification scheme and GreenRE building certification for developments in Malaysia.

Datuk Mustaza Mohamad, Head of the GreenRE Management Committee, said, "GreenRE was set up to drive sustainability in Malaysia's real estate sector through a topical centric rating system. As a collaborative organisation, GreenRE aims to synergise efforts to advance the green building agenda in Malaysia. I am confident that this MOU will foster a productive exchange of ideas that will guide us to emulate the Singapore model for driving the green building agenda."

"REHDA Malaysia, along with our members, recognise our important nation-building role and we strive to provide quality, affordable homes to all Malaysians," said Datuk Tong Nguen Khoong, President of REHDA. "We are committed to adopt environmentally-friendly and green features that are sustainable for the benefit of our future generations. It is with this spirit in mind that we welcome the signing of the MOU today. We believe that the collaboration between all four entities will further enrich the progress of the housing and property industry in the respective nations, and we look forward to mutual learning and sharing with our MOU partners."

Mr Chia Ngiang Hong, President of REDAS, said: "Demand for environmentally sustainable practices and green real estate solutions is expected to grow rapidly. The path to carbon neutrality is a long-haul process and green solutions are generally capital intensive. It is encouraging to see major green real estate players from Malaysia and Singapore coming together to make the commitment and pivot to business practices of adopting green building solutions and innovations to address sustainability challenges. This MOU is a step in the right direction to connect cross-border stakeholders and strengthen collaborative efforts towards this end. I am confident that this significant milestone will also open up new opportunities for mutually beneficial collaboration."

Photo credit: Singapore Green Building Council

"The threat of climate change cuts across national and geographic boundaries, which is why we must all work closer together to effect positive climate action," said Ar. Tang Kok Thye, President of the SGBC. "With this collaborative framework in place, green building expertise from both countries can be more meaningfully exchanged to achieve greater sustainable outcomes for Singapore's and Malaysia's built environment sectors. The MOU will also create greater business opportunity for local enterprises, strengthening business ties with our Malaysian counterparts."

Besides firming the ties between Singapore and Malaysia's green real estate players, the MOU will also facilitate Singapore developers with projects in Malaysia to leverage the Singapore green building ecosystem of proven and certified green building solutions for their Malaysian developments, specifically products certified by the SGBP certification scheme.

As an industry-recognised certification scheme that assesses products and materials on their sustainability performance, the SGBP advances the built environment to one that is greener and more carbon-efficient while facilitating sustainable procurement. A new logo for the SGBP was also unveiled during the MOU signing event, which will be progressively used by the 4200 SGBP-certified products as affirmative visualisation of their certified environmental performance. The SGBP will continue to be the go-to industry benchmark for readily identifying proven green building solutions to meet built environment ambitions.

The SGBC Pavilion at BEX Asia 2022, the tradeshow component of IBEW 2022, showcased a specially-curated selection of green building solutions by SGBC Members, many of which are SGBP-certified. These innovations include architectural products to mechanical & engineering solutions as well as smart technology, materials that are able to help advance the building and construction sector towards greater environmental sustainability.

SIDS announces launch of new incubation centre to help new interior design firms

Singapore – The Society of Interior Designers Singapore (SIDS) is setting up an Interior Design Incubation Centre to nurture local talent and help start-ups establish a firm foundation when they enter the interior design industry.

Minister in the Prime Minister's Office and Second Minister for Finance and National Development Ms Indranee Rajah announced this at SIDS' annual Singapore Interior Design Awards (SIDA) at the Sands Expo and Convention Centre, on 23 September 2022.

Minister in the Prime Minister's Office and Second Minister for Finance and National Development Ms Indranee Rajah. Photo credit: SIDS

New centre to help provide opportunities for industry entrants

The 8,500 square feet centre, which will be located at Grantral Mall @ Macpherson, is a collaboration between SIDS and property developer Elegant Group. It hopes to provide better opportunities and more shared resources for those entering the interior design industry. It is expected to be ready in May 2023.

The centre, which is estimated to cost about $2 million, will function as both a co-working space as well as a resource and research and development centre. It will allow interior designers to access shared resources like building material libraries, R&D test labs, meeting rooms and computer labs. Interior designers will have to join SIDS as members.

SIDS newly-elected president Tung Ching Yew will be personally spearheading the project.

Mr Tung is the founder and managing director of the Singapore-based design firm SODA, which has won numerous awards both locally and internationally.

"This centre will help those like my then 23-year-old self better navigate the obstacles one may face as a start-up. The centre will allow for the sharing of both resources and expertise and considerably cut both cost and bandwidth for start-ups," said Mr Tung Ching Yew.

More than half of the centre's space will be set aside for training and workshop purposes. SIDS will curate training courses, seminars and mentorship programmes to support ID start-ups.

Said Mr Goh Boon Peng, Group MD of Elegant Group: "We are honoured to be part of this meaningful initiative. We share SIDS vision to grow the expertise and professionalism of the interior design sector. This centre will set the bar for what is expected for new interior design firms."

The centre follows SIDS' push to get Singapore's IDs to place more emphasis on certification and embracing a life-long learning mentality.

The Singapore Interior Design Accreditation Scheme, announced last year, was developed to elevate the Singapore interior design profession through defining core skill sets and competencies to bridge the gap between education and practice. It aims to ensure high standards and professionalism in the local interior design industry and validate the industry at the global stage.

The scheme places interior designers in three categories based on their expertise and qualifications. Under the scheme, designers can also pick up new skills and certification to move up in their classification.

SIDS President Tung Ching Yew. Photo credit: SIDS

Asia Pacific Space Designers Association (APSDA) President Prof. Keat Ong. Photo credit: SIDS

Members of the public enjoying the Ruffled Ice installation at i Light 2022. Photo credit: SIDS

Over 400 entries for SIDA 2022

The evening saw winners chosen from over 400 entries for this year's SIDA, including the prestigious Best Design Firm and Best of the Best awards.

SIDA is one of the most prestigious design awards in the region with this year's award drawing over 400 entries from 10 countries.

Singapore designer Mike Lim was the big winner of the night, picking up the Best of the Best and Lifetime Achievement Award 2022.

Works like his Ruffled Ice installation at i Light Singapore 2022 and the 8 Tampines Grande Office Lobby earned Lim, the Principal Designer of DP Design the Best of the Best gong.

Ruffled Ice draws attention to the excessive use of plastic packaging in today's society. The installation turns trash into visualisations of melting icebergs and ice caverns by using plastic waste sculpted from redundant packaging materials. Mr Lim's amazing body of work, in a career that spanned over 30 years, earned him the prestigious Lifetime Achievement Award.

His projects include: the retail component of Changi Airport Terminal 2, Paragon Shopping Centre, Our Tampines Hub, The Dubai Mall (Dubai, United Arab Emirates), Emaar Square Mall (Istanbul, Turkey), Perennial International Specialist Medical Centre (Chengdu, China), Project Keiko (Kobe, Japan) and Cinemaxx Junior (Jakarta, Indonesia).

Geila Daughtrey of Rockett Studio. Photo credit: SIDS

The Dulux Colour Award went to Geila Daughtrey of Rockett Studio for work at Bedrock Origin, a restaurant at Oasia Resort Sentosa.

The beautifully restored heritage building that houses the restaurant was once Southeast Asia's first Malay artillery barracks and dates back to 1940.

Ms Daughtrey and her team wanted to create a restaurant that felt bright, fresh and breezy, to celebrate the resort's island location, and to evoke the feeling of dining outside in the shade of the veranda.

They chose a dusty seagrass tone as the main colour for the restaurant, to create a calm and serene environment. They then selected earthy timbers and buttery-soft leathers to curate a palette of materials that worked in harmony together and that did not steal attention away from the building's original colonial architecture.

Singapore-based 932 Design took the Best Design Firm Award 2022. The firm has won numerous awards all over the world, including Europe and the United States.

It bases its design principle on an admiration for delicately complex craftsmanship, behind what looks deceptively simple, yet luxurious.

It was lauded for its work on projects at Highline Residences and Balmoral Tower.

932 Design. Photo credit: SIDS

Ditch the Door Wedge:
Here's Why Fire Doors Must Be Unobstructed

Text and photos from dormakaba.

Typically triangle-shaped and made of wood or rubber, door wedges are an inexpensive and ubiquitous ways to maintain an unobstructed people flow. Sometimes, a door wedge can even be an object such as a piece of wood or cardboard. However, in case of a fire, the seemingly innocent door wedge can cause a devastating personal and financial harm.

Why are fire doors necessary?

Every year, despite the use of fire detection systems and smoke detectors, hundreds of thousands of fires wreak havoc on buildings worldwide with devastating consequences. This is why preventive fire safety is so important when planning a building: effective protection saves lives. It's not just fire-resistant doors themselves that play a decisive role, but the door components used to build them. These have to balance building code requirements with functionality and convenience.

In the last decades, the regulations for fireproofing properties have been tightened in both advanced and emerging economies. While fires are not always preventable, there are many effective ways to reduce their risks. A fire door, which aligns with the fire resistance regulations, is amongst the essential solutions that can minimise the consequences of a fire.

Fire doors function by containing a fire in one room and slowing down the spread of smoke or flames. As fires need oxygen to keep burning, properly functioning fire doors deny the oxygen flow for the flames to grow. Hence, as it can be a matter of minutes for flames to engulf a property without fire doors, they are vital to a building's safety strategy.

dormakaba is consistently innovating to refine our fire protection technologies in order to safeguard lives and assets. In the event of a fire, our automatic swing doors, enhanced with the new Inverse Function, operates by pulling in fresh air and redirecting smoke.

Fire doors are certified for safety based on compatible, fire-tested materials and components. Ensuring the door is properly fitted with certified hardware ensures certification remains valid and keeps the door safe.

Not only do these dormakaba's FRX and FPP technologies allow our door closers to comply with standards worldwide, they are also able to meet the highest possible fire rating requirements of up to 4 hours, as tested on uninsulated metal doors to EN1634-1 and SS332:2018.

During a fire, the surface temperature of a door, even the unexposed side, will rise reaching high levels very quickly. dormakaba's patented Fire Protection Plate (FPP) ensures that the door closer body is not affected by this intense heat, eliminating the potential for damage to the fire barrier and reducing the risk of fire and smoke spread through the building. The FRX design, on the other hand, is optimised with a unique hydraulic fluid to offer significantly higher fire resistance.

Cheap door wedges can come with a high price tag

Since fire doors become moot tools when fixed with a wedge that prevents them from ever closing, the inexpensive door wedges can result in high financial and personal costs in case of a fire. Wedged doors are known to cause a "chimney effect" and accelerate the spread.

From a legal perspective, if a facility wedges a fire door open, potentially putting lives at risk,

As an alternative to door wedges, hold-open systems suspend the function of a locking device in a controlled manner, and reliably close permanently open doors in the case of fire.

they could suffer penalties, including high fines and even a prison sentence. Likewise, wedged doors can invalidate insurance.

In 2011, a tragedy as such hit Rosepark Nursing Home in Glasgow, UK. After the blazes took the lives of 14 residents, an inquiry concluded that the disaster was preventable in the facility. Some of the rooms where residents slept had wedged doors, which caused the fires to spread quickly.

"When we inspect care homes we rarely turn up to find there's no fire alarm or fire doors etc; it's how they're managing and dealing with it," said Nick Coombe of London Fire Brigade.

With a team filled with GAI-certified members, dormakaba is able to efficiently deliver to the required specifications and provide excellence in knowledge, products, solutions and services.

Door must reduce fire risks, not increase them

Nevertheless, it's still possible to remain compliant with fire regulations while still facilitating convenient access. Fire doors can be equipped with electrically powered hold-open devices, allowing them to remain open without the need of an external wedge, and automatically close in an emergency.

Depending on the model of the fire door, they might have these systems pre-installed, but it's also possible to retrofit them with battery-operated solutions. An inbuilt smoke detector, ideally connected to the building's central system, can activate the door closer as soon as the alarm goes off.

Given the potentially dire consequences of wedging the fire doors, facility managers must ensure their doors reduce fire risks instead of increasing them. They can achieve this by not only by aligning their doors with fire regulations, but by educating their peers about the dangers of the seemingly innocent door wedges.

Winners of the 2022 Aga Khan Award for Architecture announced

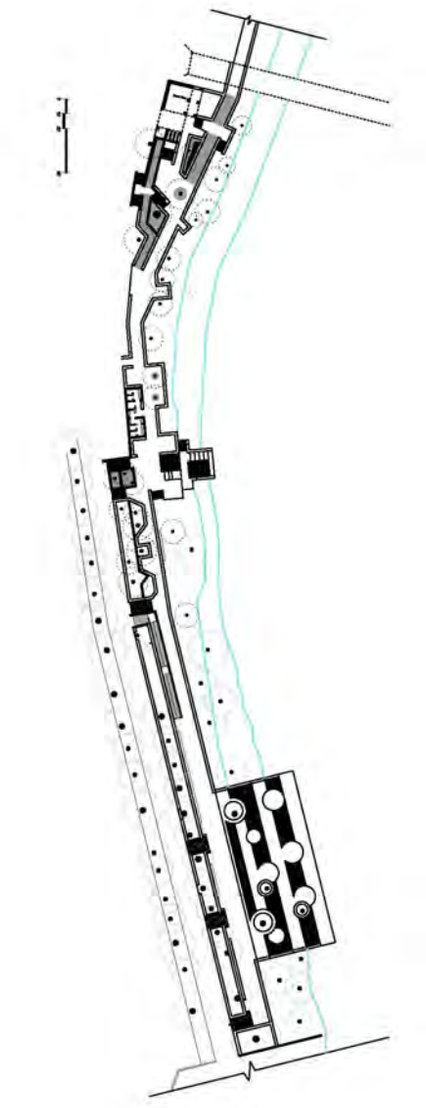
The winners of the 2022 Aga Khan Award for Architecture (AKAA) were announced recently. The six Award winners, who will share the $1 million award, one of the largest in architecture, show promise for communities, innovation and care for the environment.

BANGLADESH

■ Urban River Spaces, Jhenaidah

Through consistent community participation and appropriation, extensive involvement of women and marginalised groups, and a local workforce, the seemingly simple undertaking of cleaning up the access to the Nabaganga river in Jhenaidah led to a thoughtful and minimal landscaping project with local materials and construction techniques, thus transforming a derelict informal dump site into an attractive and accessible multifunctional space that is valued by Jhenaidah's diverse communities. As such, the project managed to reverse the ecological degradation and health hazards of the river and its banks, and induce effective ecological improvement of the river, in one of the most riverine countries on earth. [Extract, Jury Citation]

Aerial view of the large public ghat along the Nabaganga river in the city of Jhenaidah. Credit and Copyright: © Aga Khan Trust for Culture / Asif Salman (photographer)

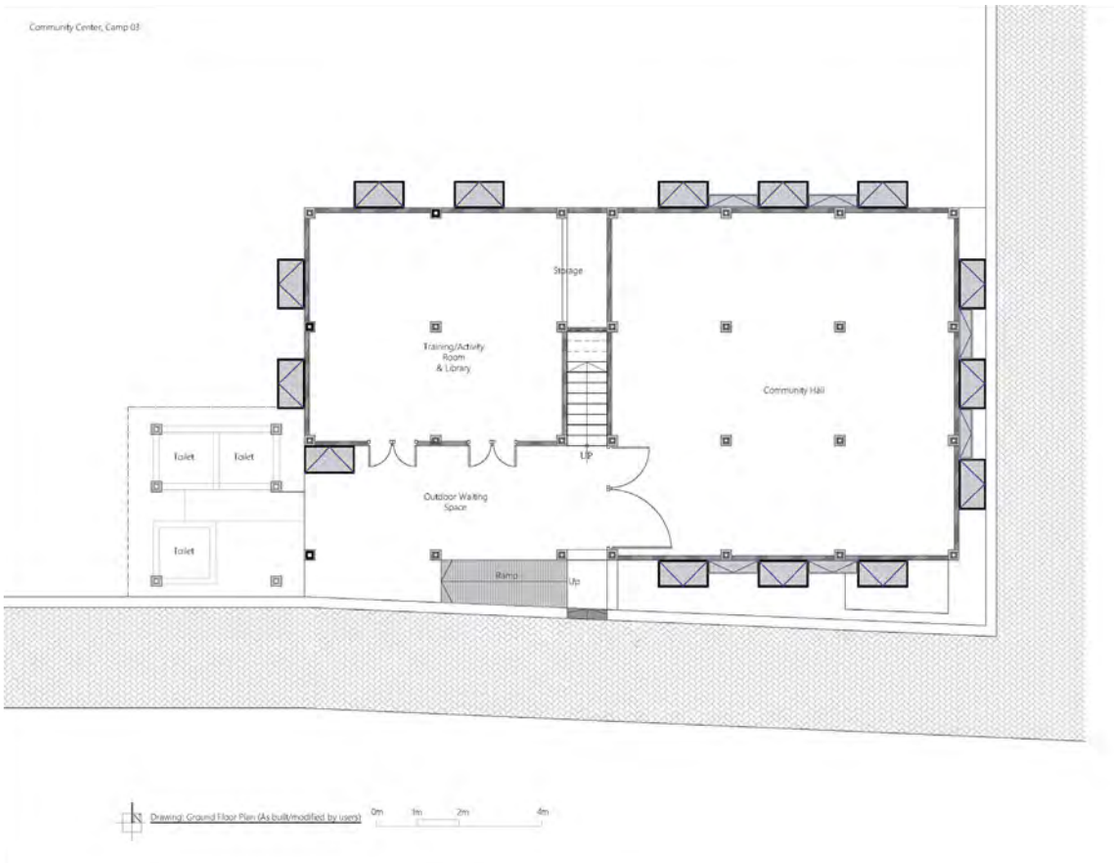


Plan of the public ghat. Image: Courtesy of architect

Community Spaces in Rohingya Refugee Response, Cox's Bazar

The six temporary community spaces of the Rohingya Refugee Response programme provide a dignified, sensitive and ingenious response to emergency needs related to the major influx of Rohingya refugees into Bangladeshi host communities, with particular attention to the safety of women and girls. The concept and design of the six spaces are the result of appropriate planning, solid partnerships and inclusive processes involving the diverse refugee and host communities, such as defining spatial and functional needs. [Extract, Jury Citation]

Aerial view of the Shantikhana Women Friendly Space in Camp 4ext. The construction started before the design was finalised, allowing the local Rohingya workers to express their artisanal skills and artistic freedom. Credit and Copyright: © Aga Khan Trust for Culture / Asif Salman (photographer)



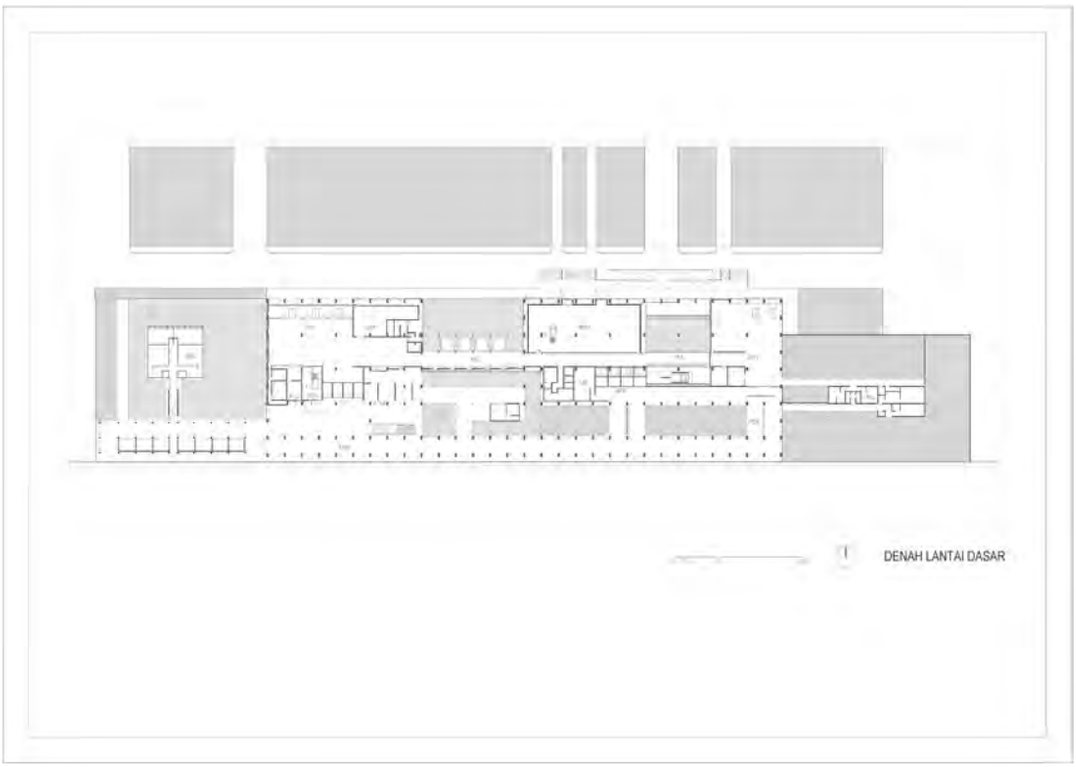
Community Centre in Camp 03. Image: Courtesy of architect

INDONESIA

■ Banyuwangi International airport, Blimbingsari, East Java

Arising from a sea of a paddy fields, the building extends the language of the landscape into a concentrated event that coalesces architecture, functionality and setting in a seamless yet discernible disposition. Modern and efficient in all aspects, but at home in its place, Banyuwangi International Airport may be a game-changer in airport architecture, especially considering that the Indonesian government is set to build some 300 airports in the near future. [Extract, Jury Citation]

General view of the domestic airport that serves more than 1,100 passengers per day. Credit and Copyright: © Aga Khan Trust for Culture / Mario Wibowo (photographer)



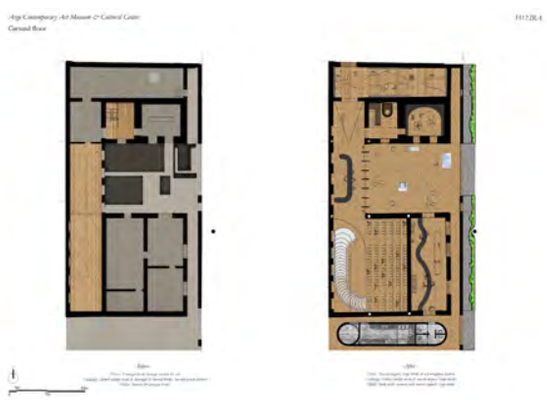
**Ground floor plan.
Image: Courtesy of architect**

IRAN

Argo Contemporary Art Museum and Cultural Centre, Tehran

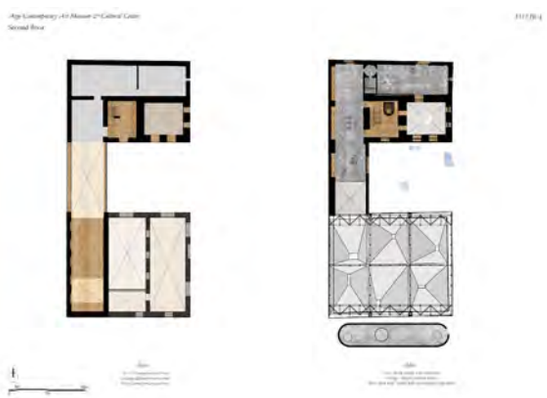
In the dense urban neighbourhood that is Tehran's historical centre, this untypical reuse and conservation project has transformed the Argo Factory – a former brewery whose activities were moved 10 years before the Iranian Revolution, for pollution reasons, to a site outside the city – into a private museum for contemporary art. From the ruins of the original building, the existing brewery was renovated and new surfaces built with a subtle approach and design. A variety of spaces for exhibitions, talks and films were developed over four levels, and a new artist residence was built adjacent to the museum. [Extract, Jury Citation]

Clearly a highlight, the freestanding staircase experience of the tall, light-filled main gallery distinguishes it from the rest of the more compact gallery spaces. Credit and Copyright: © Aga Khan Trust for Culture / Deed Studio (photographer)



Ground floor plan. Image: Courtesy of architect

First floor plan. Image: Courtesy of architect



Second floor. Image: Courtesy of architect

Roof plan. Image: Courtesy of architect

LEBANON

■ Renovation of Niemeyer Guest House, Tripoli

The renovation of the Niemeyer Guest House is an inspiring tale of architecture's capacity for repair, at a time of dizzying, entangled crisis around the world, and in Lebanon in particular, as the country faces unprecedented political, socio-economic and environmental collapse. Located on the outskirts of Tripoli – one of the oldest and most beautiful port cities, once renowned for its craft but today ravaged by extreme poverty, migration and lack of public space – the rehabilitation of the Guest House is part of the Rachid Karami International Fair (RKIF), the unfinished masterpiece of the architect Oscar Niemeyer. [Extract, Jury Citation]

The introverted building is centred around an open central atrium planted with local reed species. Credit and Copyright: © Aga Khan Trust for Culture / Cemal Emden (photographer)

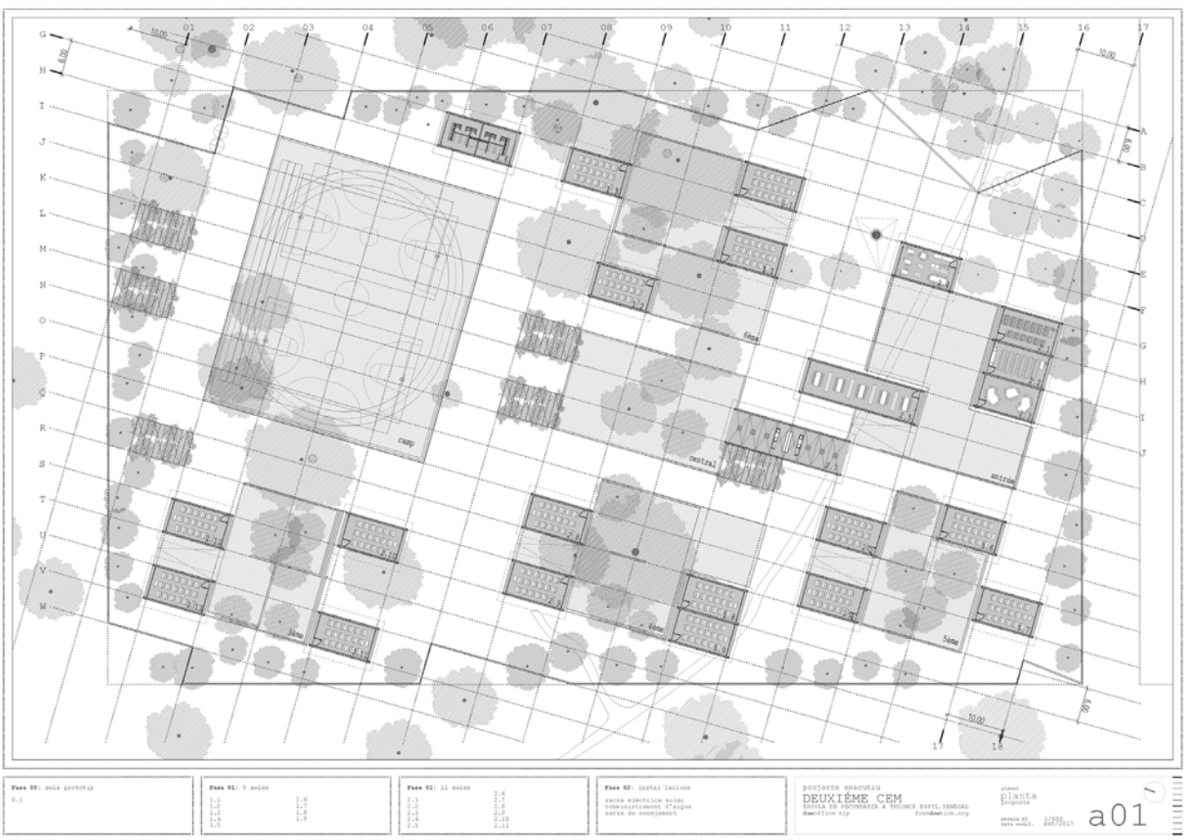
Site plan. Image: Courtesy of architect

SENEGAL

■ Kamanar Secondary School, Thionck Essyl

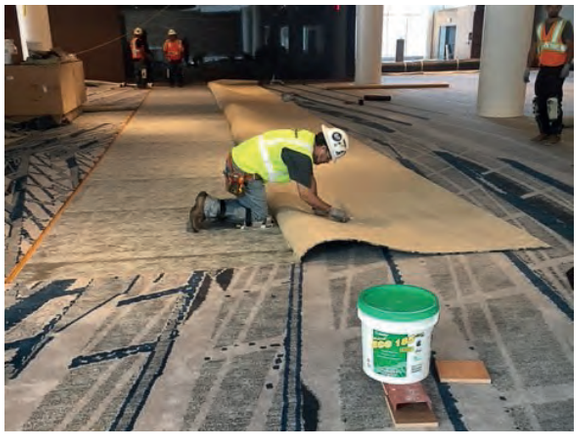
A campus replete with infrastructure, buildings, landscapes and furnishings, the Kamanar Secondary School is unique in that it addresses the multiple scales of urbanism, landscape, architecture and building technologies with equal commitment and virtuosity. The site's topography and flora are the key founding conditions of this project, prompting the introduction of a grid of classroom pods organised around pre-existing tree canopies, adopting their shade as social spaces that serve the students and teachers alike. [Extract, Jury Citation]

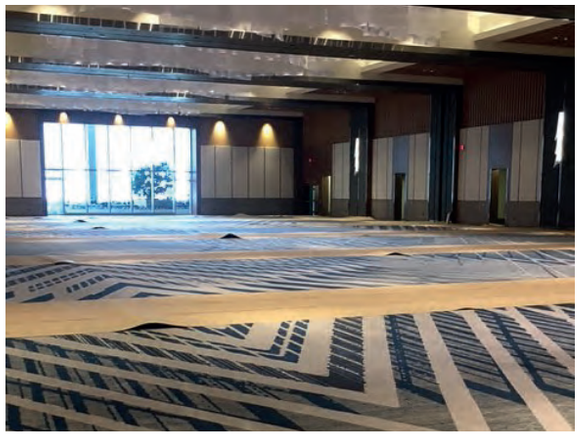
The school's classrooms are slightly sloped towards the blackboard to allow the students at the back to see properly. Credit and Copyright: © Aga Khan Trust for Culture / Amir Anoushfar (photographer)



Site plan. Image: Courtesy of architect

Intercontinental Los Angeles Downtown Hotel





In these pictures: Shaw and Alarwool carpet floorings have been installed respectively with ULTRA BOND ECO 810 and ULTRA BOND ECO 185. The first product is solely sold on the American market.

Installation of carpet in the tallest skyscraper in the city and in the whole of California.

The Wilshire Grand Center is a luxury, mixed-use skyscraper in the heart of Los Angeles. It has been constructed on the same site as the old hotel, which was demolished in 2012. Work on the skyscraper started on the 15th of February, 2014 with a 20-hour pour of 16,500 cubic metres of concrete to form the foundation for the structure.

With its ornamental spire, 73 floors (plus 5 more below ground level) and a maximum height of 335.3 metres, it is the tallest building in the city and in the whole of California. The skyscraper was completed this summer and now houses the 900-room InterContinental Los Angeles Downtown Hotel, more than 37,000 square metres of office space, various restaurants, shopping and commercial areas and a garage with 1,089 parking spaces on the lower floors. Mapei played an important role in the installation of carpet flooring in the hotel. To ensure the work was carried out to perfection in compliance with eco-sustainable criteria, and that the flooring remains durable over the years, different products were used to prepare the surfaces and bond the floorings.

Preparation and waterproofing of the surfaces

All the floors in the hotel were treated with ECO PRIM GRIP, a low odour, ready-to-use bonding promoter with very low emission of volatile organic compounds (VOC).

Once the surfaces had been treated, they were smoothed over and levelled with NOVOPLAN 2 PLUS, a self-levelling, rapid-hardening smoothing and levelling compound for new and existing substrates, to make them suitable for resilient and textile flooring in areas requiring good resistance to loads and the levels of traffic typically found in offices and public areas.

MAPECEM QUICKPATCH ready-mixed, ready-to-use mortar, which is used to make controlled-shrinkage, rapid-setting and drying screeds, was used to repair the concrete surfaces, while PLANIPREP SC controlled shrinkage, rapid-setting, fibre-reinforced cementitious mortar, was used as a final smoothing and levelling layer to guarantee the substrates were perfectly smooth and flat.

To alleviate the problem of moisture in certain areas of the cast concrete, the surfaces were treated with PLANISEAL VS before installing 450 square metres of vinyl flooring by Altro. This is a two-component, alkali-resistant epoxy product specifically developed to form a protective barrier against rising damp before installing floor coverings. PLANISEAL VS eliminates the waiting time for uncured concrete to dry out and enables installation of floor coverings to

be anticipated. Apart from ECO PRIM GRIP, all these products are available on the American market.

Installation of the floor coverings

Once the preparation work on the substrates had been completed, two types of floor covering were installed in the hotel.

Around 800 square metres of Shaw self-laying carpet tiles were installed using ULTRA BOND ECO 810 adhesive. Apart from guaranteeing rapid drying times, ULTRA BOND ECO 810 may be used for both "wet installation", to bond carpet permanently in place, or left to dry and remain permanently tacky, if you wish to remove the carpet tiles and then reposition them to carry out maintenance work. The special formulation of ULTRA BOND ECO 810 provides excellent resistance to moisture, which means flooring may also be installed on the surface of concrete before it is fully cured, as in this case. This product is available on the American market.

Most of the work went into the installation of almost 10,000 square metres of Axminster carpet which had been imported by the Spanish company Alarwool. The flooring installers used ULTRA BOND ECO 185, an adhesive in water dispersion with high initial tack and very low emission of volatile organic compounds (VOC).

Thanks to its characteristics, ULTRA BOND ECO 185 ensures rapid, secure installation of carpet.

The logistics for the work was conditioned by the very tight delivery schedule and the versatile, reliable products supplied by Mapei was one of the decisive factors in guaranteeing completion of the work within the specified timeframe and preparing the hotel for its grand opening in the summer of 2017.

Mapei Products

Preparation and waterproofing of the surfaces: Planiseal VS*, Eco Prim Grip, Novoplan 2 Plus*, Planiprep SC*, Mapecem Quickpatch*, Planiseal VS*
Installation of carpet: Ultrabond Eco 185

* Products available on the American market

Ultrabond Eco 185

PROJECT DETAILS

Project Name: InterContinental Los Angeles Downtown Hotel
Project Location: Los Angeles, California, USA
Period of Construction: 2014-2017
Period of Mapei Intervention: 2017
Intervention by Mapei: Preparation and waterproofing of substrates, installation of carpet
Client: Hanjin Group
Main Contractor: Turner Construction
Works Director: Jeremy Manuel
Project: AC Martin Partners
Flooring Contractor: Tangram Interiors (Santa Fe Springs, CA)
Mapei Distributor: Big D
Mapei Coordinator: Lisa Fyke (Mapei Corp.)
Photos: Provided by Mapei

City Gate


4.5m
CITY GATE

As nations modernise and globalise, aspirations are encapsulated in skyscrapers, as they signify a nation's progress. Situated along the "Golden Mile" of Singapore, City Gate replaces the previous Keypoint Tower, which punctuates a stretch of skyscrapers lining Beach Road that fronted Kallang Basin in the 1960s and 1970s prior to land reclamations and extension of the Central Business District (CBD).

The development leverages its unique connection between metropolitan Central Business District (CBD) and cultural district of Kampong Glam, to revitalise the culturally rich district, creating an urbanised heritage site. The relationship between the commercial, residential and social facets is strengthened, offering a new community space for people to gather and live within.

Two interconnected residential towers share a core above a five-storey commercial podium, rehabilitating the previously commercial area with live-in residents. 16 sky terraces and two lushly landscaped communal floors punctuate and lighten the 25-storey tower massing allowing residents reprieve amidst city living. Sky terraces alternate between the towers to maximise city and seafront views through a green screen. The development's silhouette is split into three components – the podium retail mall, lower residential floors and upper residential floors. This lightens the overall structure, sets it apart from surrounding towers and creates its distinct identity.

"Motion in Nature"

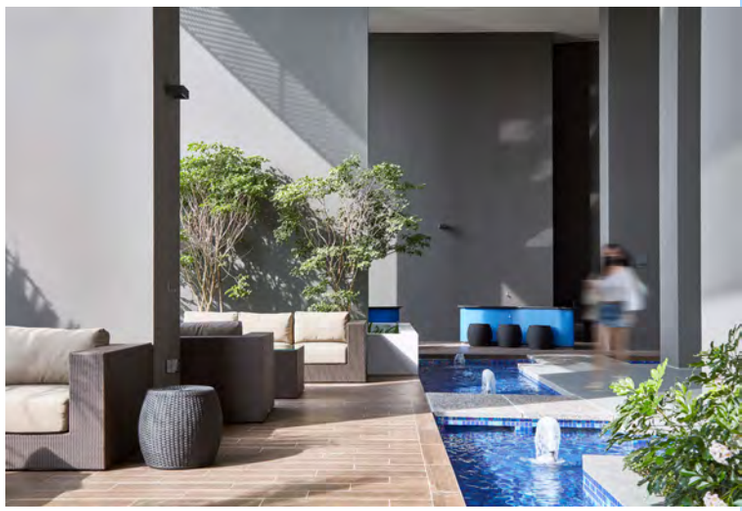
Building upon the rejuvenation plans for an attractive, lushly landscaped, green environment, the podium's façade "breathes and moves" to match the expression of the tower. It celebrates "Motion in Nature" through smooth sensuous fluid lines. The wave-like modular façade of the podium ebbs and flows with a free-flowing rhythm, responding to functional needs of shops. Waves create texture, revealing openings for dining and retail outlets, and carefully rounding its edges at the corners to reduce its bulk, in careful consideration of surrounding neighbours. Kept at five storeys, the façade elements of the retail mall, reflect the finer grain of its shophouse neighbours. The walkway on the ground level allows people to continue their heritage walks, connecting the cultural district to the CBD. The development serves as a visual reminder of Singapore's progressive cityscape, layering "new history" to the district.

Sustainable contemporary tropical living

Sustainable construction principles were adopted, to ensure that progressive development is not at the expense of the future. Precast, modular and prefabricated elements were created offsite to reduce waste generation, ensuring efficient transportation of sub-assemblies to site.

With multiple high-rise buildings and little natural landscape in its vicinity, City Gate stands out for its myriad green spaces and lush landscape at levels six and 24, featuring a large variety of plant species along extensive water features, providing an urban oasis for residents. Naturally ventilated corridors at all residential floors encapsulate the essence of contemporary tropical living. The final massing with naturalistic flowing lines appears slender while dynamic – a great departure from the rectilinear glass and concrete aesthetic of the cityscape.

City Gate recently won the Award of Excellence in the Best Tall Mixed-Use Building category at the 2022 Council on Tall Buildings and Urban Habitat (CTBUH) Awards.



PROJECT DETAILS

Project Name: City Gate
Project Location: Singapore
Developer: Bayfront Ventures Pte Ltd
Architect: SAA Architects Pte Ltd
Gross Area: 36,345 square metres
Height: 135 metres
Floors: 30 storeys
Completion: 2018
Award: Award of Excellence, Best Tall Mixed-Use Building category, 2022 Council on Tall Buildings and Urban Habitat (CTBUH) Awards
Photo Credit: Finbarr Fallon

The development serves as a visual reminder of Singapore's progressive cityscape, layering "new history" to the district.

DaiyaGate Ikebukuro


Seibu Group
Seibu Group

The "Great Tree" idea was conceived from the novel approach of constructing a deck and building astride the railroad tracks.

Like a great tree astride Ikebukuro's transit hub, a unique gateway is born that serves both as a landmark and the reconnection of a community once divided by the railway lines.

Called the DaiyaGate Ikebukuro, the gateway is a 100-metres tall high-rise building that straddles the railroad. An office building designed with a symbolic exterior and built with a deck overlooking the railway to serve as an urban gathering place, it is destined to become a new Ikebukuro landmark.

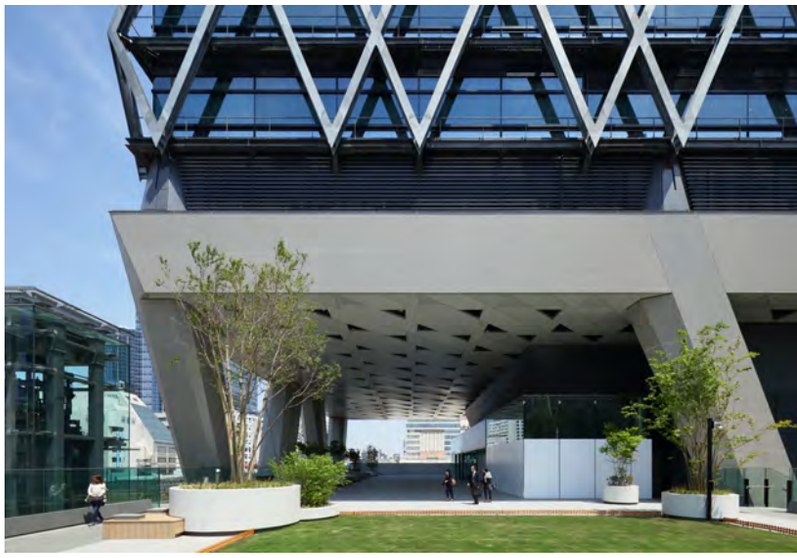
"Straddling" is the concept that runs through the entire project. First, by straddling the railroad, it was possible to create offices with a typical floor plate of 2,100 square metres, the largest in the Ikebukuro area. Next, in order to achieve the necessary straddling span, sturdy V-shaped columns were adopted for the building's podium. Then, in order to achieve column-less office floors over the intermediate seismic isolation layer an external braced frame was adopted creating a symbolic facade reminiscent of a rail network diagram.

The large platform over the rail lines is known as the Daiya Deck. It has an area for watching the trains that come and go at Ikebukuro Station. Benches are placed under the overhang of the building, providing space for relaxation and shelter from the rain and heat of summer. The deck can also function as a temporary emergency haven for those stranded in the city. In addition, the pedestrian network from Ikebukuro station to the Minami-ikebukuro area will be enhanced when the Ikebukuro Station East-West passageway, currently being planned by Toshima Ward, is connected to Daiya Deck.

The 'Great Tree' idea

The "Great Tree" idea was conceived from the novel approach of constructing a deck and building astride the railroad tracks. A great tree is visible from afar, offering with its shade and stalwart trunk a place of rest and refuge, and for those who climb up it, fine vistas. Moreover, the architecture firm Nikken Sekkei Ltd sought a composition in which the structure itself would form the design.

The podium representing the "trunk" of the tree is composed of massive V-shaped columns of a scale substantial enough to match the trains that pass through them. The exterior skin of the upper floors – the "branches" and "leaves" – is composed of slender members, expressing the lightness and airiness of



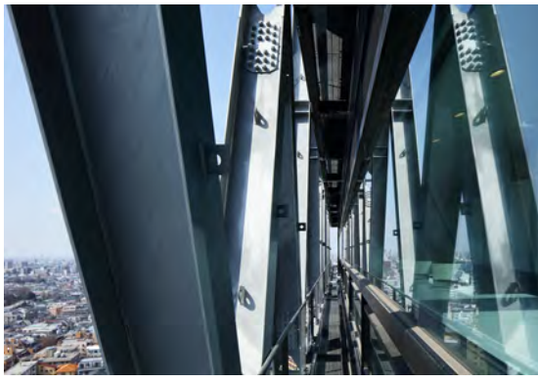
the brace frame while offering extensive vistas from within.

Nikken Sekkei studied the brace frame patterns for both their structural rationality and as a design motif recalling the train time-table theme, and refined the structure of the 15 storeys dedicated to offices into an elegant design. On and around the deck, the architect placed greenery intended to evoke the lush forests that once spread over the Musashino plains along Seibu's Tamagawa Line, and carefully crafted pleasant and refreshing outdoor spaces.

The building finds a place in people's hearts as a symbol "tree" of Ikebukuro.

PROJECT DETAILS

Project Name: DaiyaGate Ikebukuro
Location: Tokyo, Japan
Client: Seibu Railway Co., Ltd.
Architect: Nikken Sekkei Ltd
Gross Floor Area: 49,662 square metres
Height: 99.98 metres
Completion: February 2019
Photo Credit: SS



Chongqing Gaoke Group Ltd Office Project

Photo credit: Arch-Exist

Photo credit: Arch-Exist

Completed in 2022, Aedas-designed Chongqing Gaoke Group Ltd Office Project utilises a simple elegant form. It is derived from the northern light, which creates the twisting shape of the 180 metres tall tower to form expressive double-curved surfaces on the building façades. Vertical lines accentuate the minimalistic form and through the effect of reflection and refraction from the glass create a design statement that celebrates light as the major tool to define architecture.

Stands at the north of Xingfu Plaza, the project is located in Jiangbei District of Chongqing. The surrounding environment has already been developed in a spacious plot, and one big challenge for the designer is to interpret planning concept of "solar", into an iconic landmark well-integrated in the existing community context.

"As an open public space, the tower has all the credits to be a city icon, especially the significant twisting of the façade is remarkable." Inspired by the dancing aurora, Aedas Global Design Principal Ken Wai and his team, has introduced an impressive façade design through bottom-to-top connections between northern and eastern sides.

The 'dance of light' is characterised by the juxtaposition of rectilinear forms and tower façades with double curves. Such curvaceous façade expression offers ever-changing perspectives around the development. When the sun rises, the curved façade shines, and the tower becomes the building of light. The podium roof extends a coherent statement of sliding twist from top to bottom, echoing with the geometry of the tower and maintaining a consistent architectural style.

To achieve a very smooth transition of the glass façade, the design uses double-curved cold form glass instead of the usual or more common faceted method. The maximum twisting angle is up to 8.8 degrees per floor surpassing the existing super high-rise tower in the world by nearly 1.5 times (CTBUB Journal, 2016 Issue 3). It is expected to be one of the "The Most Twisting Towers in the world". Innovative façade technology from façade engineer RFR empowers the precise execution of such challenging design. The area of the hyperbolic curtain wall is about 8,000 square metres, and the number of hyperbolic curtain wall panels is as many as 1,709.

The unique twisting results in a high double-curvature ratio, which poses a major challenge for the overall façade system. The team and RFR joined hands to leverage the cold bend glass technique and BIM on complex geometry façade for a magical solution. Such innovation is to adapt to the changing geometric parameters and dimensions while fulfilling requirements on safety, waterproof and thermal performances. It also ensures a consistent façade construction in line with BIM simulations. The system of cold bend glass on the 3D frame façade component enables a maximum of 86mm in glass deviation between floors, realising a record-breaking design in China. From overall geometry analysis, façade component modelling & clash-checking, LOD400 detail component modelling, automotive data exporting and auditing, 3D BIM has been utilised throughout the entire façade design process. Through value engineering, a portion of the hyperbolic

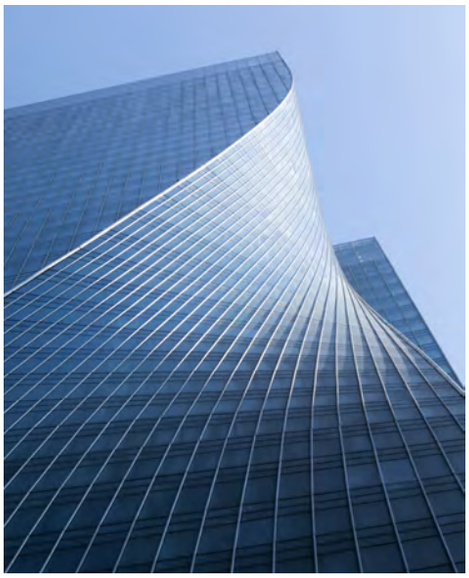


Photo credit: Arch-Exist

When the sun rises, the curved façade shines, and the tower becomes the building of light.

glass with flat glass is successfully replaced that achieved savings in construction costs.

The architectural form uses twisted curved glass, leading each glass is different in size and degree of twist. With a unique twisted façade and integration with landscape, the view of the tower varies from different angles.

"The façade is not only an outlook expression, but also a way of protection that sculpts interior spaces," explained Ken. His delicate design has been articulated for the top of the tower, by conveying the conceptual "Valley of Light" through the transparent glass façade and lightings, to make a coherent statement. Such concept differentiates the crown of this tower from other office spaces. The plant room, BMU and other facilities are centralised inside the "Valley" on the top of the building, achieving functional unity without undermining the visual aesthetic.

"As for the master layout, we have put thorough consideration to the surrounding environment and the building volume. The tower is located on the left side of the mall, minimising the towering effect on the adjacent parts of the development, and establishing interactive connections in between. The tower sets back northwards, to connect podium and the mall at the south. A variety of public space for the civic leisure has thus been created. The underpass to its west leads easy access to the existing shopping centre, as a sensible approach to improve commercial value of underground space," said Ken.

Photo credit: Arch-Exist

PROJECT DETAILS

Project Name: Chongqing Gaoke Group Ltd Office Project
Project Location: Chongqing, China
Client: Chongqing Gaoke Group Co., Ltd.
Design and Project Architect: Aedas
Gross Area: 61,368 square metres
Height: 180 metres
Completion: 2022
Photo Credit: Arch-Exist

One Barangaroo

Photo credit: One Barangaroo, Sydney © Tom Roe

In 2013, WilkinsonEyre won an international design competition for the new Crown Hotel in Sydney. The brief was to create a high-quality, landmark design on the spectacular harbour site to capture the vibrancy of the city and create a strong new destination on the waterfront.

The concept takes its inspiration from nature, and an elegant, curved geometry. The tower's form emanates from three petals that twist and rise together, and its sculptural shape maximises the opportunity for accommodation to make the most of the views of Sydney's famous bridge and harbour.

Many of the city's most well-known buildings are situated along the waterfront, Jørn Utzon's Sydney Opera House being the most famous. The hotel is a little further along on the Barangaroo waterfront in East Darling Harbour. Central to the design of the hotel is the idea that it should be a sculptural form contrasting with the more orthogonal geometry of the tall buildings in the central business district.

The geometry of the tower is complex and was derived using parametric 3D modelling. It accommodates a 60-degree twist in the outer skin with helical columns on the perimeter while maintaining a vertical core structure. The challenges that this creates for the internal layout are addressed by the setting out of residential villas (duplexes) and apartments in the tower as a spiral, whilst the majority of the hotel rooms are stacked vertically in their own wing.

A four-storey podium with perimeter terraces is overlaid with a veil of marble sections reminiscent of Gothic stone tracery, providing some shade to the terraces beneath and a visual lightness to the podium. At the lower levels, the design responds to its waterfront location and public realm with four entrances making strong connections and encouraging movement through the structure. Guests arrive from the city side through a dramatic, triple height porte-cochère enclosed by glass blades and verdant planting framing the main entrances to the hotel and residences.

The undulating soffit of the entrance guides the eye in towards the reception as it transitions seamlessly to the lobby ceiling. Feature lighting on the planting, sculptures and water bounce shadows upward, creating a changing light throughout the day. Upon entering the lobby, a spiral staircase curves up to the fourth floor creating spatial drama. The geometry of the stair is tuned to allow light to filter down from the top, creating a visual connection between levels.

Careful integration of the hotel's public areas with its immediate surroundings brings the vibrancy of this popular waterfront area into the heart of the building as Sydney siders enjoy the wealth of bars, cafes and restaurants on offer.

The building plays an important role in the transformation of Barangaroo into the first carbon neutral precinct as well as a world class destination. In support of the Barangaroo zero waste strategy and a wider commitment to the Climate Positive Development Program, the design exceeds current standards for energy performance and plugs into the development's local district heating and waste systems.

During the build of One Barangaroo, Crown have significantly contributed to the clean-up and remediation of the waterfront and over 300 trees have been planted within the grounds. The building has created over 2,000 jobs for New South Wales and celebrates local craftmanship with hundreds of original works by Australian artists on display.

Photo credit: One Barangaroo, Sydney © Tom Roe

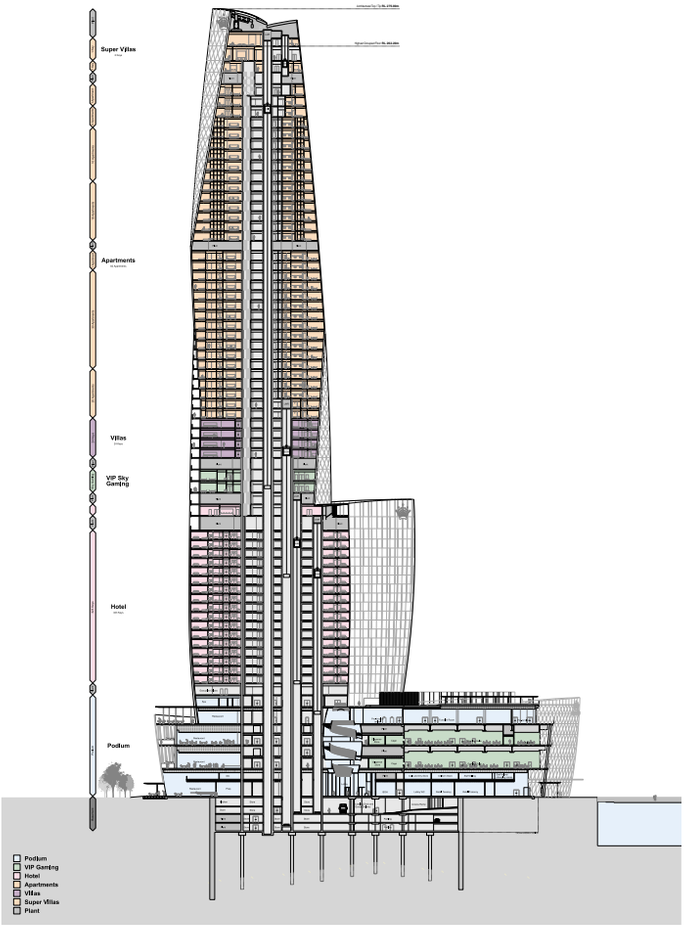
Photo credit: One Barangaroo, Sydney © Tom Roe

Photo credit: One Barangaroo, Sydney © Tom Roe

The building plays an important role in the transformation of Barangaroo into the first carbon neutral precinct as well as a world class destination.

PROJECT DETAILS

Project Name: One Barangaroo
Project Location: Sydney, Australia
Developer: Crown Resorts
Architect: WilkinsonEyre
Gross Internal Area: 146,500 square metres
Height: 275 metres
Floors: 71 storeys
Completion: July 2021



Key section. Image credit: WilkinsonEyre

Photo credit: One Barangaroo, Sydney © Tom Roe

Guohua Financial Tower

Photo: © Octopus

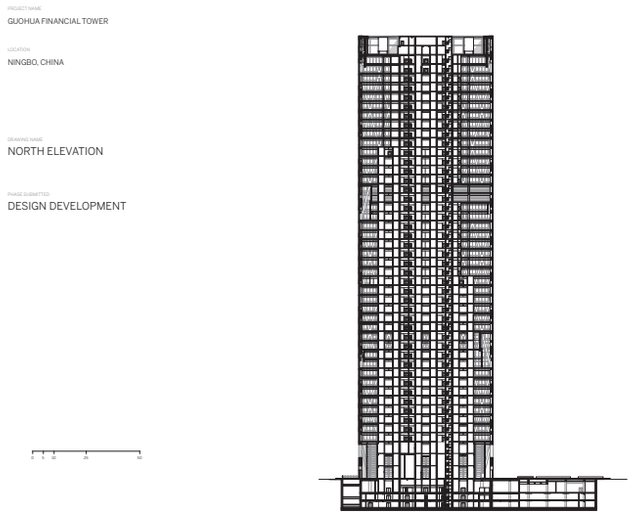
Photo: © Seth Powers

Guohua Financial Tower is a 45-storey office high-rise and adjacent four-storey mixed-use podium in Ningbo, China. As a model of simplicity, sustainability, and urban connectivity, the complex propels the evolution of a dynamic central business district in the port city.

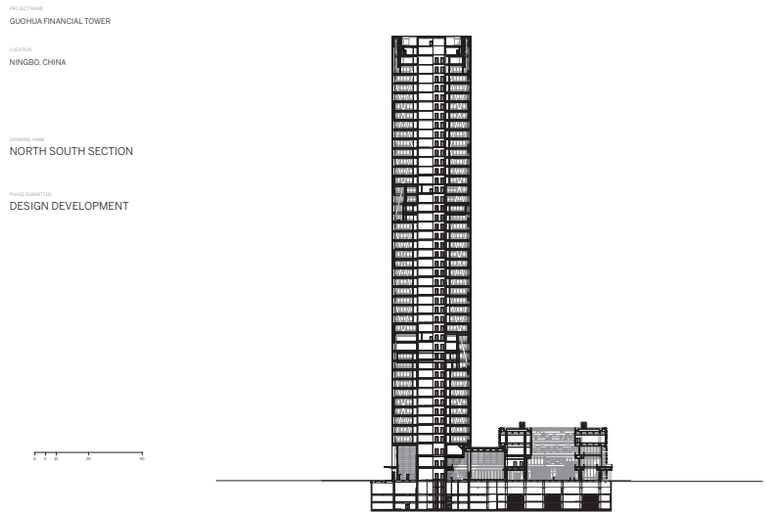
Situated along a prominent east-west boulevard in East New Town, the site's new public spaces are organised to draw tenants and visitors from all directions. A plaza features highly visible public art, and the low-rise building's primary functional spaces are lifted to create an inviting open-air courtyard whose light-filled terraces, waterfalls, and serene reflecting pool demand attention. A spacious glass atrium directly connects the retail court to the office tower's lobby, which enjoys an equally strong and welcoming 360-degree presence.

Guohua Financial Tower's skyscraper is highly efficient in plan and execution.

Guohua Financial Tower's skyscraper is highly efficient in plan and execution. A visible steel-and-concrete diagrid creates a memorable diamond pattern for the facade; it also reduces



Cross section credit: SOM



Cross section credit: SOM

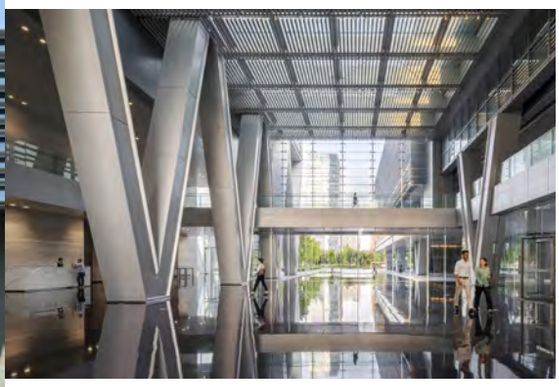


Photo: © Seth Powers

Photo: © Seth Powers

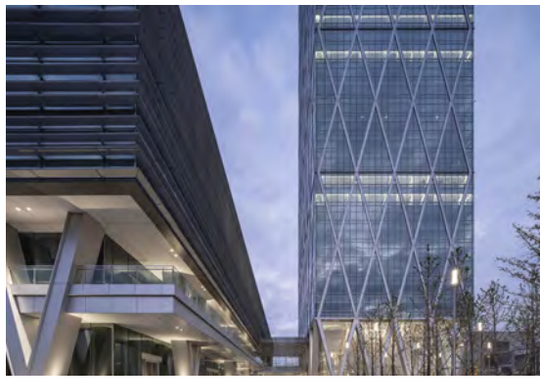


Photo: © Ningbo Huakai Properties, Ltd.

structural stress on the building's core, enabling it to occupy less space at the middle and upper floors and allowing office plans to be open and flexible throughout.

Underscoring the entire project's commitment to sustainable workspace, the tower contains two multistory sky gardens. Here, natural and mechanical systems interact in an innovative fashion, as living walls provide natural filtration for the air circulating throughout the building. These vegetated surfaces also figure into a circuit that filters rainwater for irrigating landscaping and replenishing the plaza's reflecting pool. The high-performance design of Guohua Financial Tower targets both LEED® Gold and China's Three Star certifications.

PROJECT DETAILS

Project Name: Guohua Financial Tower
Project Location: Ningbo, China
Client: Ningbo Huakai Properties Ltd
Architect: Skidmore, Owings & Merrill (SOM)
Size:
Site Area: 14,733 square metres
Building Height: 206 metres
Number of Storeys: 45
Building Gross Area: 110,498 square metres
Design Finish Year: 2014
Completion: 2020

Photo: © Seth Powers

Asia Financial Center & AIIB Headquarters

View from south-east. Photo: © CreatAR Images

View from north-east. Photo: © CreatAR Images

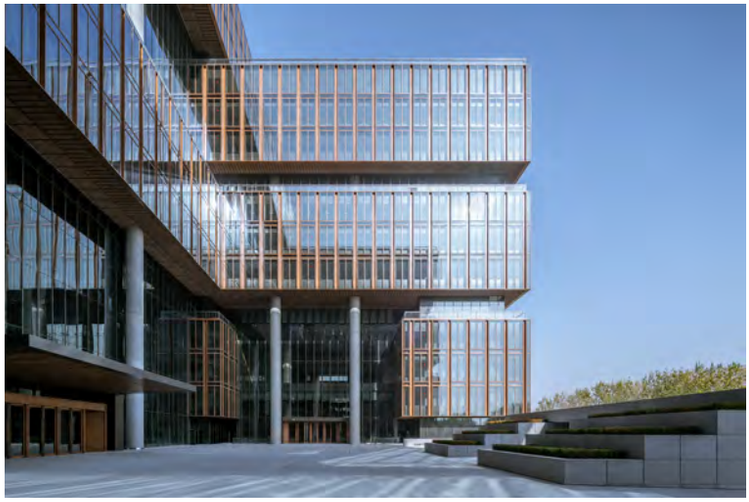
Asian Infrastructure Investment Bank, AIIB, is the first multilateral development bank with head office in China. This financial institution, with its 103 member states, has now moved into its new head office at a prominent location in Beijing. After winning the international competition in September 2015, the architects gmp von Gerkan, Marg and Partners and their partner practice Architectural Design and Research Institute of Tsinghua University Co. Ltd. (THAD) have completed the 83-metre-high symmetrical building with its stacked meandering building volumes. It marks the end of the north-south axis through Beijing's Olympic Park and is located in the direct vicinity of iconic buildings such as the National Stadium and the National Convention Center. All offices are grouped around a total of nine open courtyards that allow light into the building. Its centre features a building-high atrium around which open spaces are arranged in a continuous manner offering many interconnecting views.

In its exterior shape, the building adopts principles of the typical Beijing courtyard house, while its construction has elements that are reminiscent of traditional Chinese timber buildings. The stacked meandering three-storey building volumes create a complex and open interior landscape that makes connections and emphasises the transparency of the AIIB and the sense of community of the over 100 nations.

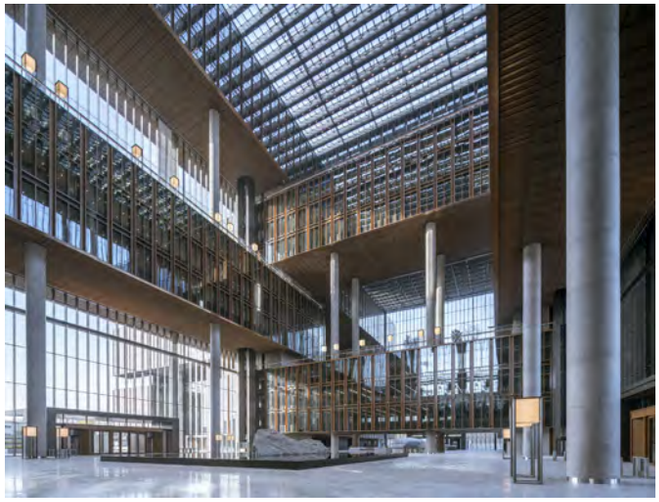
The first floor and the first subfloor contain shared functions such as canteens, cafés and shops, as well as a conference hall for 1,500 delegates. The top 15 floors accommodate offices in the form of modular work environments. Intermediate floors and open terraces are formed by the offset arrangement of the meandering parts of the building, offering many internal vistas and thus emphasising the sense of community. At the same time, this structure makes orientation in the building straightforward.

Open sky decks with varied thematic planting symbolise the "gardens of the world": three of the nine courtyards have been laid out in accordance with traditional Chinese garden design and, in addition, trees from Asian member states have been planted. These "oases" in the Beijing metropolis serve as informal, open meeting areas and can also be used for celebrations. Wooden elements, and lamps reminiscent of traditional Chinese lanterns, have been used to create an intimate atmosphere.

Its centre features a building-high atrium around which open spaces are arranged in a continuous manner offering many interconnecting views.



Main entrance. Photo: © CreatAR Images



View into the central atrium. Photo: © CreatAR Images

Seen from the outside, the meandering building volumes make up a transparent glass cube that is structured and subdivided by the four external courtyard spaces. On each side of the building, in the middle, is a courtyard, thereby providing access to the building from all directions. The three-storey elements that make up the whole building are expressed in the facade and are further highlighted by lighting that picks out the lower edges. The internal shimmering lanterns round off the harmonious lighting effect.

During the short design and construction period of only four years, the building was able to achieve the best possible standards in terms of ecology. This is evidenced by the award of the national 3-star certificate, the top certification level for ecologically sustainable buildings in China, as well as that of the Platinum LEED certificate.

PROJECT DETAILS

Project Name: Asia Financial Center & AIIB Headquarters
Project Location: Beijing, China
Client: Beijing Investment Group Co. Ltd.
Architect: Architekten von Gerkan, Marg und Partner (gmp)
Partner Practice Detailed Design: Architectural Design and Research Institute of Tsinghua University Co. Ltd. (THAD)
Gross Floor Area: 389,972 square metres (above ground: 256,872 square metres, under ground: 133,100 square metres)
Height: 83 metres
Completion: 2019

Perspective longitudinal section. Photo: © gmp Architekten

Peter Brannan. Headshot: © Vivien Liu | Studio UNIT

Nicholas Medrona. Headshot: © Vivien Liu | Studio UNIT

"Good Design Requires A Deep Understanding of the Natural Systems That Shape Our Environment," says Peter Brannan and Nic Medrano from Skidmore, Owings & Merrill

Peter Brannan, Asia Regional Practice Leader, Skidmore, Owings & Merrill (SOM) and Nic Medrano, Senior Associate Principal at Skidmore, Owings & Merrill (SOM), Hong Kong tell us about the firm's strong presence in the Asia Pacific region, its expansion plans, ongoing projects and the impact of digitalization on its practice.

SOM Hong Kong Office. Image: © Studio-UNIT

SEAB: SOM has a strong presence in the Asia Pacific region. What factors have contributed to the company's success?
Peter Brannan: We have a long history in the region – over 30 years working across many different countries, cultures, and contexts. Our work benefits from more than 86 years of in-house knowledge and expertise across architecture, structural engineering, urban planning, and interiors. Since our founding in 1936, SOM has worked with a global perspective. This curiosity and interest in working globally is something we have sustained for decades, and we're always striving to address the next frontiers of innovation, be it structurally or environmentally driven.

SEAB: What kind of projects have SOM undertaken in the APAC region?
Nic Medrano: We pride ourselves on being truly interdisciplinary, which allows us to work across a broad range of typologies, from master plans, transit-oriented developments, and large scale mixed use developments, to projects at a more personal scale—residential, hospitality, workplace. We have designed civic spaces across the region, from Changi International Airport Terminal 2 in Singapore to Tokyo Midtown in Japan. Currently, our design for One Bangkok, the largest private development in the history of Thailand, is under construction. Our work has transformed cities all over the world, as witnessed with the Burj Khalifa in Dubai, One World Trade Center in New York City, and Jin Mao Tower in Shanghai.

SEAB: Do you have any design strategies for projects in Asia Pacific?
Nic Medrano: Our design process always begins with contextual understanding and a study of local culture and techniques. We want our projects to reflect their place and identity. A unique challenge of working in the Asia Pacific region in particular is that this region is full of maturing, hyper-dense cities. We are often finding ways to enrich and complement urban fabrics, which in many ways, are already vibrant and interconnected.

The region is also on the front lines of climate change. Hundreds of millions of people experience increasingly extreme weather and living conditions every year... therefore our mission must be to confront these issues from a design perspective. Good design requires a deep understanding of the natural systems that shape our environment. More specifically, we envision how our cities can contribute to healing nature rather than taking from it. From "sponge city" concepts, to 15-minute city designs, smart density, advanced modes of

Guoco Tower in Singapore — a project by SOM. Photo: © Studio Periphery

NEX Towerin Manila — a project by SOM. Photo: © Studio Periphery

transportation, and implementing new design and construction technologies to reduce carbon footprints, these are just a few of many approaches we are taking. Carbon reducing materials like bio-brick, timber and alternative types of sustainable concrete will become essential elements of a sustainable and prosperous future.

SEAB: How have digitalization, climate change and sustainability shaped SOM's practice in Asia Pacific?
Nic Medrano: We have found that our clients here have an advanced understanding of digitalization tools and emerging technologies, so these partnerships are incredibly rewarding in that we're constantly moving ideas forward with respect to biophilic design strategies, user-responsive workplaces, and so forth. Climate change and sustainability are driving factors in our project work. Our high performance design team is constantly looking for ways to push the boundaries of what is possible when it comes to advancing local building codes and standards.

SEAB: What challenges do you face working in the APAC region?
Peter Brannan: This is a large, diverse region, and every locale calls for a different process and approach to design. Our ability to work successfully across Asia Pacific is in part due to the longstanding history and knowledge we have of the region, and our interdisciplinary expertise, which allows for flexibility and innovation. Our expansion of the Hong Kong studio will continue to benefit our work in the region. By growing our local team and leadership, we are making a commitment to the region that allows us to work on more projects, explore more ideas, and strengthen our relationships with clients and stakeholders. We also aim to guide governments forward as building codes and local regulations need to adapt to a more sustainable approach to building.

SEAB: Can you tell us about your expansion plans for the APAC region?
Peter Brannan: We are very optimistic about growth in the region – as economies and cities mature, we are seeing many new challenges and opportunities for increased work in healthcare, transportation, and education. Our team is growing to meet these challenges, bringing a broader range of resources, capabilities and knowledge to better serve our clients and the communities we work with.

SEAB: What projects are you currently working on in Asia Pacific?
Peter Brannan: We are working on a wide range of transformative projects across the region; in the Philippines, construction is underway for Aurelia, a luxury residential project, and in the Ayala Triangle, one of the densest mixed use developments in the country. In Thailand, the One City Centre is part of our larger master plan and the One Bangkok tower also

SOM Hong Kong Office. Image: © Studio-UNIT

SOM Hong Kong Office. Image: © Studio-UNIT

recently topped out. In Singapore we are working on Elementum, a bio-pharmaceutical laboratory and we are also completing a series of master plans in Vietnam, as well as here in Hong Kong. We are also excited to be working on a series of yet-to-be-announced large-scale mixed-use and TOD projects that will transform their respective cities in the next few years.

SEAB: What is the future of architecture in Asia Pacific and what innovative design strategies can we see from SOM?

Nic Medrano: SOM is constantly exploring new methods for advancing our design practice. We are researching and testing the applications for a zero-carbon bio brick made with carbon consuming bacteria, and concrete made with algae, to replace traditional building materials such as concrete and steel. Timber construction is slowly making its way into our designs as building codes become more accepting of the material. Our Urban Sequoia research also takes cues from natural processes and ecosystems and proposes "forests" of buildings that create a new carbon-removal economy and a resilient future for our cities. Due to the concentration of density in this region, it is a hyperactive and exciting environment to innovate within. From a design standpoint, the future of the Asia Pacific region is sustainable and climate-responsive, experimental, bespoke and technology-driven.

Kati ter Horst joins Aliaxis as Divisional CEO EMEA and Excom member

Brussels, Belgium – "I am thrilled to welcome Kati who is such a highly experienced and internationally recognized professional. She will lead the execution of our Growth with Purpose strategy in the EMEA region. She has a strong track record in strategic developments and will bring her energy to drive growth and profitability throughout Europe, Middle East and Africa," said Aliaxis CEO Eric Olsen.

Kati ter Horst, commented: "I am excited to join Aliaxis, even more as I feel strongly connected to its purpose which is to bring solutions to the world's water challenges and accelerate the transition to clean energy. I am very much looking forward to driving sustainable growth for the company in EMEA."

Over the last 25 years, Kati has had an international career at Stora Enso, a leading global renewable solutions provider in packaging, biomaterials, wooden construction and paper. Since 2014, she was leading the Paper Division as Executive Vice President, and a member of the Group Leadership Team of Stora Enso.

Kati ter Horst. Photo: © Aliaxis

Danfoss announces intent to acquire German compressor manufacturer BOCK GmbH to strengthen expertise in CO2 and natural refrigerants technology

Frickenhausen / Nordborg – Danfoss recently announced the intent to acquire compressor manufacturer BOCK GmbH, headquartered in Frickenhausen, Baden-Württemberg, Germany, from NORD Holding GmbH.

Dr. Marcus Albrecht, BOCK CEO (left) and Kristian Strand, President Commercial Compressors, Danfoss (right) celebrate the start of a new journey. Photo credit: Danfoss

With over 50 years of history and assets under management of € 2.5 billion, NORD Holding is one of the leading private equity asset management companies in Germany.

Developing compressors for the natural refrigerant CO2 since 1993, BOCK is a global technology leader in the field of environmentally friendly, economical compressors.

By acquiring BOCK GmbH, Danfoss takes a proactive approach to further the development and use of low-GWP refrigerants to help abate global warming and to ensure the competitiveness of the industry.

With the acquisition, Danfoss adds the world's largest portfolio of semi-hermetic compressors for natural refrigerants such as CO2 (R744), hydrocarbons, and other low-GWP refrigerants to its already strong portfolio of oil-free centrifugal compressors, inverter-scroll, reciprocating and screw compressors, and condensing units.

With an existing workforce of around 350 compressor specialists worldwide and four manufacturing sites in Frickenhausen, Germany, Stribo, Czech Republic, Bangalore, India, and Suzhou, China, BOCK GmbH has built a strong reputation as a high-end, quality compressor manufacturer serving mobile and stationary refrigeration systems in transport, bus, retails, logistics, storage, and food processing.

The intent to acquire BOCK GmbH comes with a firm commitment to invest in the business, paving the way for green growth, and a more sustainable, energy efficient and decarbonized future. Danfoss is confirming its pledge to speed up the green transition by broadening its scope of sustainable technologies.

The new compressor business from BOCK GmbH will be managed by Danfoss Commercial Compressors, part of Danfoss Climate Solutions.

GeoSlam Technology deployed on large-scale urbanisation project in Bengaluru

Nottingham, UK – GeoSLAM's handheld LiDAR technology has been utilised to document informal settlements in one of India's largest cities, Bengaluru, as part of a large-scale urbanisation project.

With new phases of urbanisation and expansion of the city limits planned by the Bengaluru local government, geospatial mapping services company, Nakshatech, surveyed the area and digitally mapped the informal settlements.

Nakshatech used GeoSLAM's ZEB Horizon handheld scanner due to its potential to map the complex maze of around 500 residential buildings as well as lanes which were narrow and difficult to access.

Scanning informal settlements. Photo credit: GeoSLAM

With around 16 percent of Bengaluru's population living in informal settlements, the intricate streets are frequently bustling with people, adding another complex challenge for the surveyors.

The ZEB Horizon's walk-and-scan method of data collection allowed the team to move around the informal settlements freely. The handheld scanner captures 300,000 points per second providing the surveyors with a high quality point cloud, and with an accuracy of up to 6mm they were able to extract the accurate measurements needed to create their report.

Over the course of the three day project, Nakshatech collected data from more than 40 different areas of the settlements, automatically processing each dataset in GeoSLAM's software.

Once compiled, orthophotos were created using the point cloud in GeoSLAM Draw, allowing the team to extract further information such as encroaching settlements.

As the home to the largest number of high-growth companies in the country, and regarded as the 'Silicon Valley' of India, Bengaluru's growth is only expected to continue, increasing the importance of highly accurate digital replicas of the city's informal settlements, to progress its urbanisation plans.

ZEB Horizon. Photo credit: GeoSLAM

Emerson Renewable Technologies support China's carbon reduction goals

Pittsburgh, USA – Emerson, a global technology and software company, will provide integrated wind automation solutions and services to Taiyuan Heavy Industry Co., Ltd. (TYHI) for three greenfield wind farms located in Shanxi Province, China, a region experiencing high growth in its renewable generation base. Emerson's wind turbine control software and expertise combined with TYHI wind turbines will deliver green energy to over 35 million residents located in Beijing and other Northern China cities.

Decreasing the global carbon footprint to address climate change is critical for a more sustainable world. China is accelerating its use of renewable energy sources to reduce dependency on fossil fuels to less than 20 percent by 2060. To help address this goal, the China wind market is expected to grow with a cumulative grid-connected wind capacity of 689 gigawatts by the end of 2030, accounting for 67 percent of the global share.

"Wind energy is an essential component of making a net zero future a reality. Our innovative wind expertise and comprehensive portfolio of wind solutions are backed by five decades of delivering value to global wind turbine owners, operators and manufacturers," said Bob Yeager, President of Emerson's power and water business. "The result is

our ability to help our customers provide the lowest-cost source of clean energy, taking an important step toward a more sustainable world."

Emerson's wind turbine controls and SCADA software will enable the reliable and efficient operation of three greenfield wind farms capable of generating 300 megawatts of clean energy from over 40 wind turbines supplied by TYHI. Emerson's expanded renewable capabilities and expertise were amplified by the acquisition of Mita-Teknik, a global leader in wind generation solutions with expertise in control design of over 750 wind turbine models and an install base of more than 60,000 systems worldwide.

The collaboration with TYHI to deliver clean wind energy to local communities is one step in advancing China's sustainability journey. This project is an example of Emerson's "Greening By" environmental sustainability strategy that is described in Emerson's 2021 ESG report as helping critical industries leverage the power of automation and novel solutions to deliver the low-carbon energy system transition.

Emerson's wind experts will work with TYHI on the development and execution of automation projects to reduce project risk and maintain the schedule. The team will also provide services to support startup and commissioning, as well as surveillance, alarm management and diagnostic reporting services when the sites are in operation.

The wind farms are scheduled for commercial operation in 2023.

YellowScan announces a new partner in Vietnam, Dat Hop

Montpellier, France & Ho Chi Minh City, Vietnam – YellowScan, a global leader and designer of next generation manned and unmanned LiDAR solutions, announced the newest addition to its ever-growing YellowScan Global Partners Network, Dat Hop Co. Ltd.

Established in 2003, with more than 19 years of experience, Dat Hop is known as one of the leading companies in supplying products and solutions for Geospatial industry and Hydrographic survey solutions in Vietnam. They specialize in Topographic surveying, Land Surveying, Laser scanning, Mobile mapping, Photogrammetry, Monitoring, GIS collection and integration. Dat Hop also has experience in working with a wide range of customers including Private Companies and Government Agencies in many industries such as: Surveying and Mapping, Construction, Agriculture, Infrastructure.

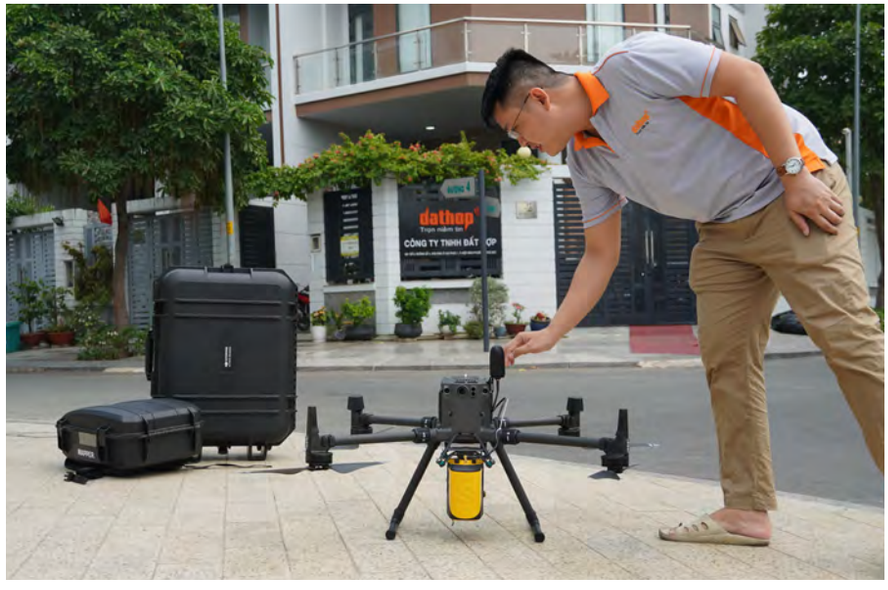


Photo provided by YellowScan.

"Dat Hop has invested in UAV Solution and LiDAR YellowScan equipment in order to update and enhance technologies in the Vietnamese geospatial industry. The potential YellowScan UAV LiDAR solutions can provide our customers is high with latest technologies and efficient surveying methods. We are confident that this new collaboration between Dat Hop and YellowScan will provide positive results and success for everyone," stated Tran Van Long, CEO of Dat Hop Co., Ltd.

"We are very excited to announce a new addition to our expanding network in the APAC region. I'm proud to say that Dat Hop (Vietnam) is a complete package in itself! They have the expertise, a wide network of people working together on the ground and the resources to tap private and government sectors. They are Vietnam's pioneer in Aerial surveying solutions and one of the leading companies in geospatial industry. Dat Hop has the full potential to represent YellowScan in the Vietnamese market," commented Teresa Hong, Business Development Manager Asia-Pacific, YellowScan.

Refreshed built environment industry transformation map announced at IBEW 2022

Minister Desmond Lee officiating IBEW 2022. Photo credit: International Built Environment Week 2022

Singapore – During the opening ceremony of the International Built Environment Week (IBEW) 2022 on 6 September 2022 at Marina Bay Sands, Mr Desmond Lee, Minister for National Development and Minister-in-charge of Social Services Integration, announced a refreshed Built Environment Industry Transformation Map.

The Construction ITM and Real Estate (Facilities Management) ITM, previously launched as two separate ITMs in 2017 and 2018 respectively, have been amalgamated into one Built Environment ITM to transform the Built Environment (BE) sector through the three key stages of a building's life cycle – from planning and design, construction, to operations and maintenance.

"Building on the progress of the ongoing transformation, the Built Environment ITM is a timely refresh, as it recognises the need for greater collaboration amongst BE stakeholders as well as the shifts that have been made in technological advancements, sustainability efforts and longer-term structural trends," said Mr Liam Wee Sin, Future Economy Council (FEC) Urban Systems (US) Cluster Co-Chair.

Integrated Planning and Design (IPD) to foster greater collaboration

One of the key transformation areas is on Integrated Planning and Design (IPD), where stronger collaboration across the building life cycle can optimise resources. This will build on our existing efforts for Integrated Digital Delivery (IDD), which allows project stakeholders to collaborate with one another through digital platforms. Design considerations for the building's entire life cycle, including Facilities Management (FM), are factored in at the design stage, enabled by digitalisation, Common Data Environment (CDE) standards and progressive procurement.

Under the refreshed BE ITM, BCA expects to increase the IDD adoption rate by Gross Floor Area (GFA) for new developments from 34 percent today to 70 percent by 2025. The BE ITM also encourages the industry to move towards collaborative contracting where contracting parties, including the builder and facilities management firm, work together towards shared project goals at the start of the project. Seven Government Procuring Agencies have identified nine upcoming projects to pilot collaborative contracting. Contract Management consultants such as Turner & Townsend, WT Partnership, AECOM and Threesixty are also supporting this effort by providing advisory services to private sector clients.

Advanced Manufacturing and Assembly (AMA) to increase use of automation

The second key transformation area is through Advanced Manufacturing and Assembly (AMA), to enhance the efficiency of the supply chain and construction process by mainstreaming Design for Manufacturing and Assembly (DfMA). This has helped firms reduce their reliance on foreign manpower and raise productivity. Moving forward, BCA targets to increase the DfMA adoption rate by GFA from 44 percent today to 70

The Tapestry – BE Transformation Awards 2022 (Residential Category) winner. Photo credit: International Built Environment Week 2022

PSA Liveable City – BE Transformation Awards 2022 (Commercial / Mixed Development Category) winner. Photo credit: International Built Environment Week 2022

Eunoia Junior College – BE Transformation Award 2022 (Institutional Category) winner. Photo credit: International Built Environment Week 2022

JTC's 1&7 North Coast – BE Transformation Awards 2022 (Industrial Category) winner. Photo credit: International Built Environment Week 2022

percent by 2025. Under AMA, more off-site production will be done in a factory environment with greater adoption of automation. By improving the quality of work and working environments, including at the construction site, the industry hopes to attract and retain talent in the sector. The shift from a project-based building approach to a modular, product-based one also enables industry firms to reap greater economies of scale.

At the same time, BCA is also working with stakeholders to establish new Integrated Construction Parks (ICPs) across Singapore. In ICPs, construction facilities such as aggregate terminals, aggregate storage yards, Ready-Mix Concrete (RMC) batching plants and precast plants will be co-located for greater synergy across the entire supply chain. The first ICP in Jurong Port will progressively begin its operations later this year.

Sustainable Urban Systems (SUS) to accelerate decarbonisation efforts

The third key transformation area, Sustainable Urban Systems (SUS), will facilitate the ramping up of decarbonisation efforts in the industry for a more sustainable and liveable Built Environment. SUS aims to achieve low emissions buildings and districts with efficient building management enabled by Integrated, Aggregated and Smart FM.

Under SUS, BCA will continue with existing efforts to meet its "80-80-80 in 2030" targets set under the latest edition of the Singapore Green Building Masterplan. BCA will also aim for a more ambitious target of 80 percent of public buildings adopting Smart FM by 2030, and set a new target for 40 percent of private buildings by GFA to adopt Smart FM by 2030. Announced earlier this year, the $30 million Integrated Facilities Management (IFM) and Aggregated Facilities Management (AFM) Grant for firms which wish to adopt IFM/AFM will be open for applications from 6 September 2022. To date, about 10 companies have expressed interest in applying for the grant.

Inaugural Built Environment Transformation Award

Lastly, in recognition of projects that have embodied the transformation goals of the ITM, the newly launched Built Environment Transformation Award recognises firms and industry practitioners who have honed their capabilities to build projects that exemplify productivity, digitalisation and sustainability. This year's winners include The Tapestry, PSA Liveable City, Eunoia Junior College as well as JTC's 1 and 7 North Coast developments in Woodlands North Coast.

Armstrong Fluid Technology showcases pumping and HVAC equipment

At BEX Asia 2022, Armstrong Fluid Technology showcased its range of solutions comprising mainly of innovative and energy-efficient fluid flow and control equipment for HVAC and water-based process application.

It was the company's first time participation at BEX Asia 2022 with the aim to create more brand awareness for its products. Commenting on their participation, Westley Foong, Asia Pacific Regional Marketing Manager, at Armstrong Fluid Technology said: "We hope to increase brand awareness and establish new contacts in the local and regional market at the show."

Armstrong Fluid Technology has a distributor in almost every country.

Throughout its 80-year history, Armstrong has introduced ground-breaking innovations that elevated industry practice and substantially improved the quality and performance of pumping and HVAC installations.

Westley Foong (extreme right) and his colleagues at BEX Asia 2022. Photo credit: Armstrong Fluid Technology

Armstrong's booth was located within the SGBC (Singapore Green Building Council) pavilion. Photo credit: Armstrong Fluid Technology

Armstrong's booth. Photo credit: Armstrong Fluid Technology

Armstrong's Design Envelope Pumps are a complete solution for heating and cooling systems. The integration of a perfectly matched Vertical In-Line pump, motor, and intelligent Variable Speed controller creates an innovative, high-value pumping solution. Design Envelope pumps reduce pumping costs through variable speed, demand-based operation – consuming only the energy required, based on current system demand. Design Envelope pumps meet 2017 IE3 legislation and comply with 2015 Minimum Efficiency Index (M.E.I) legislation.

For more information, visit www.armstrongfluidtechnology.com.

Schindler showcases a future proof vertical mobility technology

Photo credit: Schindler Lifts (Singapore) Pte. Ltd.

At BEX Asia 2022, Schindler Lifts (Singapore) Pte. Ltd. presented the Schindler's BuilT-In state-of-the-art building transit solutions.

Jardine Schindler's BuilT-In is a Building Transit Integrator specially designed to meet all of a modern-day buildings' present and future needs.

BuilT-In sits at the core of a building's mobility system to streamline operations and information flows across multiple applications, from facial recognition to security access systems and robot services. The unique solutions are made to enhance the passengers' experience on seamless mobility, as well as offers building management with a peace of mind. Check BuilT-In complete offers below.

BuilT-In Facial Recognition and QR Code

BuilT-In is designed to work with several facial recognition (FR) engines that can be integrated with access systems to conform to a building's unique design and tenant/visitor mobility requirements, while enabling security management and controlling access to restricted areas. FR/QR access solutions powered by BuilT-In includes:

- Turnstiles
- PORT terminals
- Office doors

BuilT-In Robot Service Connection

BuilT-In provides a comprehensive connection with robot server that enable robots performing tasks such as delivery, cleaning or patrolling, to easily navigate busy building environments, bringing to life an automated working or living environment. The integration of robotic connection with our BuilT-In is one of Schindler's pioneering technologies. It enhances building automation and user experience, while offering contactless solution. From maximising traffic performance to fulfilling visitors and tenants' needs, we partner with selected robotic company to elevate your journey.

BuilT-In Visitor Management System

BuilT-In Visitor Management System seamlessly manages and controls the access rights, and in real-time tracks the movements, of tenant or visitors from the moment they enter the building until they leave the premises.

- All-in-one data management platform (for example Integration with 3rd party systems)
- Facial/QR enrolment
- Comprehensive usage reports
- Real-time surveillance

BuilT-In External API

The capability to integrate with various innovative applications to provide seamless and personalised vertical transportation. Schindler provides a cloud-based API to expedite on-site implementation and optimise third-party system integration.

Schindler's experts are ready to assist you in creating a sustainable future for buildings and mobility. The BuilT-In solutions multipurpose capability enables the company to provide support for any new or custom integrations.

"Schindler is proud to present a series of transit solutions that are customizable and unique. BuilT-In purpose-built solutions can streamline layers of communication which will harmonise and integrate the collaboration with third party technology suppliers," said Mr Michael Li, Managing Director, Schindler Lifts (Singapore) Pte. Ltd.

For more information, visit www.schindler.sg.

Wieland Electric offers smart solutions for building planners and architects

Wieland Electric, a world market leader in electrical connections has been focusing on safe and innovative technologies since its founding.

The company focuses on two main areas, Building and Industry. Its Building Solutions focus on decentralized power distribution and pluggable connections in all kinds of application. From building technology, lighting technology, Horticulture and EV charging.

Its Industry Solutions works on functional safety for machine building, industrial networking (IIoT and VPN), and Wind power.

At BEX Asia 2022, Wieland exhibited its pluggable installations for buildings and for lighting and power. "Our solutions are fast, easy, flexible and safe than traditional methods," said Christopher Pragash, Building Solutions Specialist, Wieland Electric Singapore Pte Ltd.

Headquartered in Germany, Wieland has an office in Singapore, which serves as the head office for Asia Pacific. Founded here in Singapore seven years ago, Wieland has completed many projects in Singapore and in Asia Pacific.

Hello Building offers solutions for pluggable building installation and decentralized room automation. For over 40 years, Wieland has been offering smart solutions with its connector systems, whether for lighting and power installation, decentralized room automation, modular construction and more. Its modular gesis® system meets all these requirements and is impressively easy to use. gesis® ensures that schedules and project flows can be calculated accurately and guarantees standardized quality in planning and execution. Also, gesis® is the standardized interface for all building installation and automation jobs. The mechanical coding reliably prevents mismating. Pluggable components minimize assembly times thanks to a well-conceived interface technology and a diversified connection technology with prefabricated cable sets.

The Wieland Electric team at BEX Asia 2022. Photo credit: Wieland Electric

Hello Light offers solutions for the electrical connections of luminaires. For over 40 years, with its connector systems, the company has been offering smart products and customized concepts for light technology and consistently improving them.

At the heart of Wieland's modular system lies its gesis® and RST® pluggable connectors and device connectors, supplemented by distribution elements, cable assemblies, and accessories. Thanks to standardized interfaces you can create perfectly modular luminaires and lighting concepts and also reduce the effort involved in the initial installation significantly with plug & play. Subsequent extensions, changes, and replacements of individual components or even entire luminaires can easily be achieved at any time.

For more information, visit www.wieland-electric.com/en/.

OpenSpace records a project site in the fastest and simplest way

OpenSpace provides 360° construction photo documentation software using cutting-edge AI, computer vision and data visualisation to efficiently record a project site in the fastest and simplest way.

OpenSpace Solutions include OpenSpace Capture and ClearSight™ Progress Tracking.

OpenSpace Capture is the leading hands-free, 360-degree fully automated project site capture solution on the market. With OpenSpace Vision Engine, your images are typically mapped and published on average in 15 minutes. Further, with OpenSpace simple but sophisticated analytics tools, you'll have critical information at your fingertips so you can keep your job humming in real time.

OpenSpace Capture is fast, simple, and powerful; it gives project teams everything they need to fully document the project site, analyse progress and issues, reduce risk and resolve conflicts.

ClearSight™ Progress Tracking turns your OpenSpace images into actionable data and dashboards by automatically tracking and quantifying work-in-place for key trades and

project milestones. OpenSpace trackers use computer vision and machine learning to recognize, track and quantify work in place. It is the fastest and easiest way to track and validate percent complete, quantity installed and rate of work automatically, anytime, anywhere.

"OpenSpace offers many benefits such as progress tracking and accurate and reliable digital asset information, OpenSpace applies advanced technology to make construction simpler and more transparent," said Jojo Zeng, Solution Engineer, OpenSpace.

The company exhibited at BEX Asia 2022 alongside Procore. OpenSpace integrates with the tools you use every day. View OpenSpace directly from your homepage in Procore, and export image data directly into RFIs, Observations, and more.

For more information, visit www.openspace.ai.

Jojo Zeng (second from left) and her team members at their booth. Photo credit: OpenSpace

bbp presents energy optimisation solutions

Photo credit: bbp

bbp is an award winning energy optimisation firm based in Singapore. The company helps customers to reduce their energy consumption in cooling facilities (HVAC) and hence reduce their carbon footprint.

Founded in 2012, bbp has enabled multiple-chip and Fortune 500 companies to achieve up to 40 percent of energy and cost savings using patented HVAC optimisation technologies, Internet of Things (IoT), proprietary software algorithms and machine learning.

bbp currently serves around 40 customers across Asia.

"Customers do not have to pay any upfront cost. They only pay us a small percentage from the savings that they achieve," said Jael Ng, Manager, Marketing & Communications, bbp.

bbp's customers commit minimum or zero upfront investments to enjoy energy and cost savings. All investment costs associated with implementation and delivery of energy savings solutions are borne by bbp. Cost savings across all sites are independently verified by third party auditors like TÜV and DNV.

bbp's solutions address the largest global warming contributors – HVAC cooling takes up 30 percent to 60 percent of total energy consumption in commercial, industrial and data centres.

The company turns 10 years old this year. BEX Asia was a good opportunity to showcase its solutions.

For more information, visit www.bbp.sg.

Empowering sustainability with Daikin Airconditioning (Singapore) Pte Ltd

Daikin Singapore applies cutting-edge technologies to enhance man's inner space, providing the comfort of sophisticated air conditioning systems to thousands of Singaporean homes, educational and recreational needs, now and in the near future. Apart from delivering premium, energy-efficient products that allow their customers to enjoy quality lifestyles, Daikin Singapore also values their relationship with customers. They recognise the importance of carbon neutrality and are focusing efforts on sustainability solutions on "Perfecting The Air" through IEQ, ECO and IoT – these three pillars were showcased at BEX Asia 2022.

Photo credit: Daikin Airconditioning (Singapore) Pte Ltd

Firstly, Daikin Singapore is committed to improving Indoor Environmental Quality (IEQ) that makes air healthier for homes and offices through the Streamer Air Purifier and 3D Air Simulator.

Streamer Air Purifier

The Streamer Air Purifiers have a compact design that allows a flexible choice of where to place the unit in different spaces and/or areas to purify the indoor air. The Streamer technology can neutralise more than 99.9% of the 5 types of Coronavirus (including Conventional, Alpha, Beta, Gamma and Delta) strain in 4 hours, Omicron strains in 2 hours and suppressed 99.9% of Coxsackievirus (Hand, Foot and Mouth disease) strain in 4 hours. The Streamer Air Purifier is hassle free as the electrostatic HEPA filter has a life span of 10 years and has a powerful 3D suction to effectively take in dust over a wide area to maximize air purification.

3D Airflow Simulator

Allows users to visualize temperature distribution and airflow through airflow analysis simulation. The 3D Airflow Simulator helps to diagnose existing airflow issues, uncover airflow blind spots, discover poor air circulation, improve the circulation of air, gather simulation runs on room layout design and choose the best position for an Air Purifier.

Secondly, Daikin Singapore also enhances the ECO of air for a greener and more sustainable future for generations to come through the Modular Chiller, HFO Chiller R1234ZE (E) and Chemical-free Cooling Water Tower Treatment Solution.

Modular Chiller and HFO Chiller R1234ZE (E)

Modular Chiller Plant delivers high performance with all the benefits of pre-fabrication. The Modular Chiller Plant perfectly combines the most advanced technology with oil free magnetic bearing water cooled chillers, pumps with VSD and controls to provide excellent performance. Superior performance water cooled chillers. The new generation Multi-compressor Oil Free Magnetic Bearing Chiller with HFO Refrigerant, R-1234ZE, has superior performance where the design of the magnetic bearing drive system does not require lubrication. It is a green HFO refrigerant that has an extremely low Global Warming Potential (GWP) value to keep carbon dioxide emissions and any other environmental impact at a minimal level.

Chemical-free Cooling Water Tower Treatment Solution

Chemical-free Water Treatment (DeCalon™) is a revolutionary approach to eliminate scale, prevent corrosion and biofouling automatically in cooling water treatment systems. Through applied electro-chemistry and an intelligent controller, it removes water hardness from cooling systems without the need for hazardous chemicals. This green innovation achieves up to 25% energy savings, 50% water saving, low maintenance costs and chemical costs in cooling water management.

Lastly, through IoT smart solutions such as the iPlant Manager and Reiri Smart Solutions for Home, Office and Hotel, the company strives to manage air better and more efficiently from wherever in the world they may be.

iPlant Manager

iPlant Manager is the new-gen smart plantroom optimization and control software system with AI and ML. Optimum control of every device is achieved via integration into a single synergistic system. A good investment that provide up to 40% energy savings potential of HVAC plantroom equipment, and to reduce your total energy bill significantly.

Reiri Smart Solutions for Home, Office and Hotel

Reiri for Home provides the solution that makes daily life convenient and faster than ever. Integrate with sensors for

Photo credit: Daikin Airconditioning (Singapore) Pte Ltd

safety and a healthy lifestyle, it ensures healthy indoor environment and key insight of system performance – the motion sensor Reiri Home will alert user if someone is around the home, the smoke sensor can detect the presence of smoke in a home to alert occupants that a fire has broken out and the multi sensor is an all in one sensor that helps to monitor healthy space such as the temperature, CO2, PM2.5, humidity & many more.

Reiri for Office a SMART office management system helps optimal building performance and offers the most cost-effective option to achieve energy savings for different office sizes. It can seamlessly connect multiple sites with Reiri for office/ office with touchscreen, centralized control via the internet for multiple buildings at different locations.

Reiri for Hotel provides hotel managers with the tool to optimise comfort for guests by remotely monitoring and adjusting the room temperature to an ideal desired level before and during occupancy, hence improving guest satisfaction. This smart control system also helps to reduce electrical consumption without compromising on the comfort level and ease of control as the hotel management system helps to obtain room statuses such as performance of the different automatic control settings, interlock with key card and window contacts.

For more information, visit www.daikin.com.sg.

Pylon.AI aims to revolutionise the construction industry through data analytics and IoT technology

Senior Minister of State Mr Tan Kiat How (third from the left) visited the company's booth on 8th September 2022 and met Mr Shaun Ng, COO of Pylon.AI (fourth from the left) and his colleagues. Photo credit: Pylon.AI

Lim Sze Jing (extreme left), Song Ying (middle) and Tan Yan Ru (extreme right) at their booth at BEX Asia 2022

Pylon.AI, a construction analytics firm providing transformational fit for purpose solution that gives companies control and oversight at their fingertips, also exhibited at BEX Asia 2022. With integrated and comprehensive dashboards, users can improve worksite efficiency across the areas of Manpower, Machinery and Materials, facilitate engagements across parties, and minimise wastage and costly delays. Leveraging digitalisation, Pylon.AI integrates Internet-of-Things (IoT) technology with clients' existing data to provide relevant real-time insights to their business. Their solution replaces manual processes and retrospective activities with straight through, real-time data for clients to control and manage their projects.

"Our single platform brings in data from multiple areas of business for you to have a comprehensive view of your project and site," said Lim Sze Jing, Data Analyst, Pylon.AI.

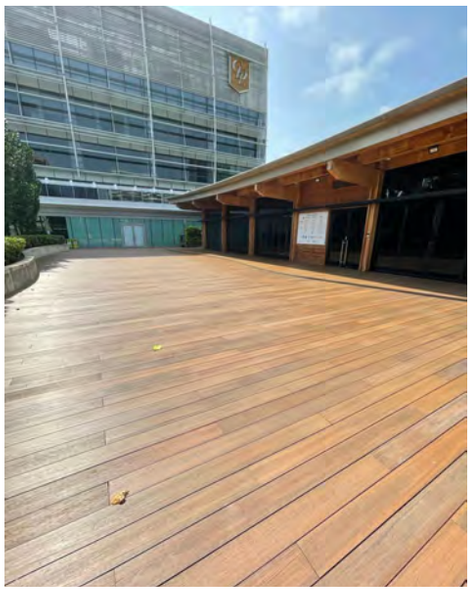
For more information, visit www.aipylon.com.

Exterpark Decking Reinvented promises innovation and sustainability

Exterpark (S) Pte Ltd showcased the 'Exterpark Decking Reinvented' outdoor decking system at BEX Asia 2022.

Exterpark is the outdoor decking brand by YVYRA, a leader company in manufacturing, commercialisation and installation of indoor engineered flooring, as well as high quality outdoor decking, using the most advanced technology in the market.

Exterpark (S) Pte Ltd has been distributing the product in Singapore for more than three years now and has completed many projects such as shopping malls and condominiums. In 2019, Exterpark was involved in the refurbishment of the deck on the rooftop of City Square Mall – one of the most eco-friendly buildings in Singapore.



The rooftop deck of City Square Mall was refurbished by Exterpark. Photo credit: Exterpark

Exterpark's booth at BEX Asia 2022.

"Exterpark offers a wide range of deckings made of top-quality and sustainable materials," said Lim Pooi Yin, Chief Marketing Officer, Exterpark (S) Pte Ltd.

The Exterpark Decking Reinvented is made with two patented innovations and offers four unique features: invisible profile, screw-less installation, 100 percent accessible and aluminum joists.

The magnet® in the Exterpark Decking Reinvented offers installation benefits. It is an advanced mechanical locking with superior grip which holds boards stronger than a screw but yet flexible to open up and close again when necessary.

For more information, visit www.exterpark.sg.

Gen3™ elevator from Otis is advancing in new ways

Otis recently participated at BEX Asia 2022, the region's leading built environment trade show.

"The key highlight for me was the opportunity to connect again with our customers and showcase our products and services, including our latest technologies such as the Gen3™ elevator, Otis ONE™ IoT platform and Compass®360 destination dispatching," said Grant Mooney, Managing Director, Southeast Asia, Otis.

Otis showcased its new Gen3™ elevator, which offers a platform for numerous possibilities of a more connected future. With the proven design of the company's best-selling Gen2® elevator and the built-in connectivity to the Otis ONE IoT digital platform, the Gen3 elevator is advancing in new ways.

Some key features of Gen3 include:

People first

The Gen3 elevator reflects human-centric innovation and design, offering safe and comfortable rides, promoting healthier environments and delivering confidence and convenience.

Ready for what's next

The Otis ONE IoT digital platform allows the Gen3 elevator to add many new technologies. It combines Otis' more than 30 years of remote monitoring experience with the latest in cloud technology, machine learning and the internet of things to deliver customers, passengers and Otis service teams with an entirely new, connected experience to offer real-time equipment health information in addition to predictive maintenance insights.

Efficiency always

The Gen3 elevator is designed with features that are up to 50 percent more energy efficient than conventional elevators, achieving substantial energy savings and significant reductions in CO2 emissions. It combines convenience, style and performance to deliver a new passenger experience that adds value to any residential, commercial, hospitality, medical or industrial building.

Photo credit: Otis Elevator

For more information, visit www.otis.com/en/sg.

Leica Geosystems launches new safety awareness module in Leica ConX cloud solution

Photo credit: Leica Geosystems, part of Hexagon.

Heerbrugg, Switzerland – Leica Geosystems, part of Hexagon, recently announced the launch of the new safety awareness module in the cloud-based collaboration platform Leica ConX. The integration of Leica Geosystems' safety awareness solutions with ConX increases safety on construction sites by collecting and visualising data that enhances awareness, speeds up hazard response and provides better insights.

Leica Geosystems previously introduced the safety awareness solution portfolio, including Leica iCON PA10, iCON PA80 and iCON CAS, which addressed the need to immediately warn on- and off-machine field personnel of potential machine-to-people, machine-to-machine and machine-to-object and collisions. The next step announced recently, integrates the field-generated safety data into the cloud-based collaboration platform Leica ConX, allowing decision makers to review incidents and assess the entire operation over time and space. These insights support important safety initiatives by providing visualisation, analysis, monitoring, reporting and data management functions, and address communication and integration needs.

"Our ConX cloud platform leverages machine and site-specific data and has become an integrated site management solution for many contractors," said Kris Maas, Director Product Management at Leica Geosystems. "For a comprehensive approach to operations, it is essential to include people and safety functions. With the new safety awareness module in ConX, contractors can improve communication, interaction and safety for all workers operating with and around equipment on a job site."

For maximum accident prevention, the new safety awareness module allows site managers to send real-time alerts to specific machine operators in case of potential incidents, such as blasting, demolitions or storms. They can also send SOS alerts, such as evacuation orders to all machines on site at the click of a button. System-generated alerts and user responses are saved, providing traceability and clarity. An API provides access to the safety awareness data in ConX so that it can be used in safety systems from other providers.

"Construction sites hold numerous safety hazards, which is why we strive to increase safety on-site. With the new Leica ConX safety awareness module, Leica Geosystems has closed the gap between existing solutions and a cloud platform that allows our customers to make more data-driven decisions," said Neil Williams, UK Business Director, Heavy Construction at Hexagon's Geosystems division. "The new safety awareness module in ConX provides crucial insights that enable acute focus on safety-optimised environments."

Vectorworks, Inc. launches 2023 version of BIM and CAD product line

Columbia, Maryland, USA – Global design and BIM software provider Vectorworks, Inc has released Vectorworks 2023, featuring performance improvements and tools developed to give users more time to design. The 2023 release includes Vectorworks Architect, Landmark, Spotlight, Fundamentals, Braceworks, ConnectCAD and Vision with the English-language editions of these versions available today.

"We understand the importance and value of time and we're excited to give some of this critical resource back to designers with Vectorworks 2023," said Vectorworks Chief Technology Officer Steve Johnson. "In our continued effort to empower our users to design without limits, our latest release boasts upgrades to essential tools that will lessen the need for manual work. With the freedom to model anything with fewer steps, more automated operations and more ways to collaborate with others, users will be able to supercharge their workflows and maximise their productivity."

The Vectorworks 2023 product line features improvements focused on accelerated BIM workflows, interoperability, user experience enhancements, BIM for the landscape and entertainment-focused quality improvements.

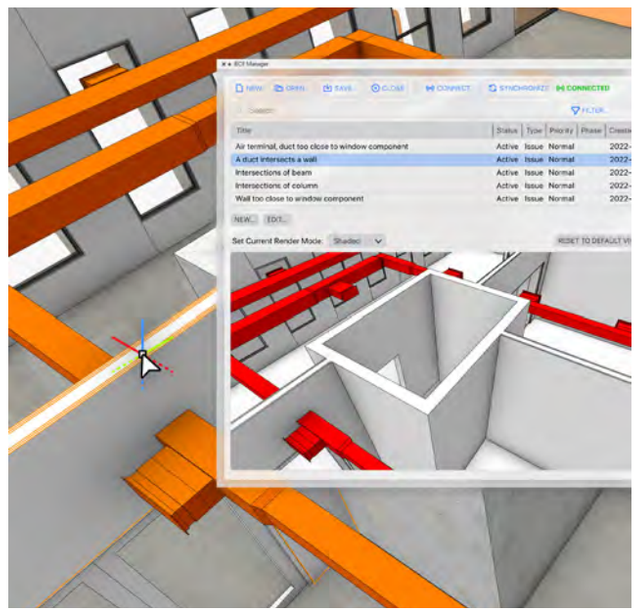


Photo credit: Vectorworks, Inc.

BIM

Data is vital when it comes to BIM, and Vectorworks 2023 makes it more accessible and easier to manage, allowing designers to use data to their advantage for more efficient and precise modeling and documentation. Powerful data reporting additions will simplify the process of creating detailed reports and quantity takeoffs for building objects, allowing for highly accurate reports for walls, slabs, roofs and railing/fence objects and their defining components.The Data Manager's capabilities have expanded, making it more predictable and easier to use when creating and managing all data types. import/export improvements for essential exchanges of DWG and DXF files.

Photo credit: Vectorworks, Inc.

User Experience

With everyday performance improvements focused on process automation and efficiencies, Vectorworks 2023 does the heavy lifting for you. Users can now streamline documentation workflows with improvements to Section Viewports. Taking advantage of the Vectorworks Graphics Module, these have the new ability to move calculations and processing to the background, allowing for viewport updates up to six times faster while also providing the ability to work on other tasks simultaneously.

BIM For Landscape

With improved visual and organisational capabilities and new tools to save time on grading plans and terrain modeling, Vectorworks continues to pave the way to make adopting BIM into landscape workflows simpler. Users can now also take advantage of Vectorworks' GIS and georeferencing integrations making file collaboration more straightforward by automatically placing referenced files using GIS settings from a master document. Plus, new GIS Settings and Coordinates allow you to note your preferred method of coordinate entry to incorporate georeferencing data more accurately.

Entertainment

With a focus on continuous improvement to provide entertainment and lighting designers tools they can trust, version 2023 includes critical upgrades to allow for more efficient and successful workflows.

LG launches new climate-friendly products to bring clean air to homes

Singapore – LG Electronics (LG) showcased its total air care solutions by unveiling the latest air-conditioners and air purifiers at the LG Air Solutions launch event held on 9 September 2022 at the Gardens by the Bay. At the event, LG launched the new climate-friendly R32 refrigerant for air-conditioners and the LG PuriCare™ AeroTower™ Air Purifying Fan to emphasise the importance of clean air and healthy homes. Together, the company's latest innovations aim to bring clean and fresh air to homes.

LG Multi Split Air Conditioner. Photo credit: LG Electronics Singapore

The R32: Environmentally friendly refrigerant

Taking ecological responsibility to the next level, LG has adopted the industry's next-generation R32 refrigerant for its single and multi-split air conditioners in commercial and residential settings. The energy-efficient R32 refrigerant is combined with LG air conditioners' intelligent features and innovative product design to deliver cool air in a greener way.

Enjoy clean, cool air with LG PuriCare™ and AeroTower™

The LG PuriCare™ AeroTower™ Air Purifying Fan features the perfect combination of an air purifier and a fan, with adjustable, three-way airflow modes that deliver fresh and clean air to every corner of the house. The LG AeroTower™ graces any home with its sleek design that blends seamlessly into the interior. Employing a 3-step filtration system – comprising the Pre-Filter, 360-degree HEPA filter and Deodorisation Filter, the LG AeroTower™ effectively removes allergens, fine dust[1], odours and harmful gases[2] in the air, improving indoor air quality significantly. In addition, the air purifying fan is equipped with LG UVnano™ technology to remove up to 99.9 percent of bacteria[3] on the fan blades, ensuring that clean air is delivered to every corner of the house.

LG AeroTower™ Air Purifying Fan. Photo credit: LG Electronics Singapore

Control usage remotely with the LG ThinQ™ App

The LG ThinQ™ app provides next-level convenience for users to remotely control and manage their LG products. The LG ThinQ™ app allows users to switch on/off the device and adjust temperature settings to avoid energy wastage. It also provides updates on indoor air quality and notifications to replace air purifier's filters.

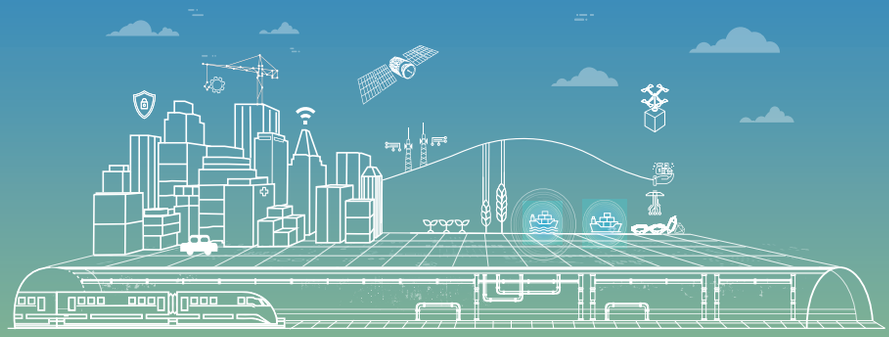
LG air conditioners with R32 refrigerants and AeroTower™ Air Purifying Fan are available at LG official brand stores – KrisShop, Lazada and Shopee, and authorised retailers.

[1]Tested by SGS IBR Laboratories in November, 2021 with DOE radial-pleat filter element using test method in compliance with IEST RP CC001.6 (2016) HEPA and ULPA Filters. Results may vary depending on the actual usage environment.
[2] Tested by Korea Air Cleaning Association in April, 2021 using test model FS061PWHA, test method in compliance with SPS-KACA 002-0132 indoor air purifier. Results may vary depending on the actual usage environment.
[3] Tested by TÜV Rheinland using test model FS061PWHA measuring a bacteria solution (Staphylococcus aureus, Staphylococcus epidermidis, Klebsiella pneumoniae) on the blower fan blade at speed Level 1 for an hour exposed to LG UVnano UV-C LED test method in compliance with ISO22196:2011. Results may vary depending on the actual usage environment.

GEO CONNECT Asia 2023

Wednesday 15th & Thursday 16th March

Sands Expo & Convention Centre,
Marina Bay Sands, Singapore



co-located with

Drones Asia 2023 — Connecting the Region's Commercial UAV Industry

in conjunction with

DIGITAL CONSTRUCTION Asia 2023 — Delivering Solutions to the Built Environment

Geospatial & Location Intelligence Solutions for Asia
Underground, Land & Sea to Sky

Geo Connect Asia and Digital Construction Asia return in force in March

The 3rd edition of Geo Connect Asia on the 15th & 16th March in Singapore provides the opportunity to focus on how digital consturction and geospatial-based solutions can drive productivity across the building and construction industries.

More than 100 companies will offer digital solutions, combining underground, surface and aerial technologies to assist developers, consultants, contractors, surveyors and engineers improve both their performance and connectivity across projects.

At the heart of the discussion is data, its management, storage and access, being the catalyst for operational and productivity enhancing improvements.

Digital Construction Asia, as an integral part of Geo Connect Asia, is the platform for exchange.

Drones Asia, as a co-located event, offers solutions for aerial data collection and facilities maintenance to offer cost effective methods of improving planning and operations.

In participating you will learn about the latest solutions but also be able to see how related industries are addressing similar challenges, with a focus on sustainability and resilience.

Key visitor markets include:

- Climate Resilience
- Construction & Infrastructure
- Disaster Response
- Energy Exploration & Production
- Heritage & Conservation
- Infrastructure Monitoring
- Insurance & Risk Assessment
- Mining
- Ports & Maritime
- Precision Agriculture & Forestry
- Proptech & Innovations in Real Estate
- Rail & Road
- Smart Cities & Urban Solutions
- Tracking & Logistics
- Utilities

Supported by the industry

Geo Connect Asia and Digital Construction Asia is supported across government and the private sector, with a strong focus on the ASEAN market.

Visitor Registration opens 1st December 2022

Plan your participation & make contact with us!

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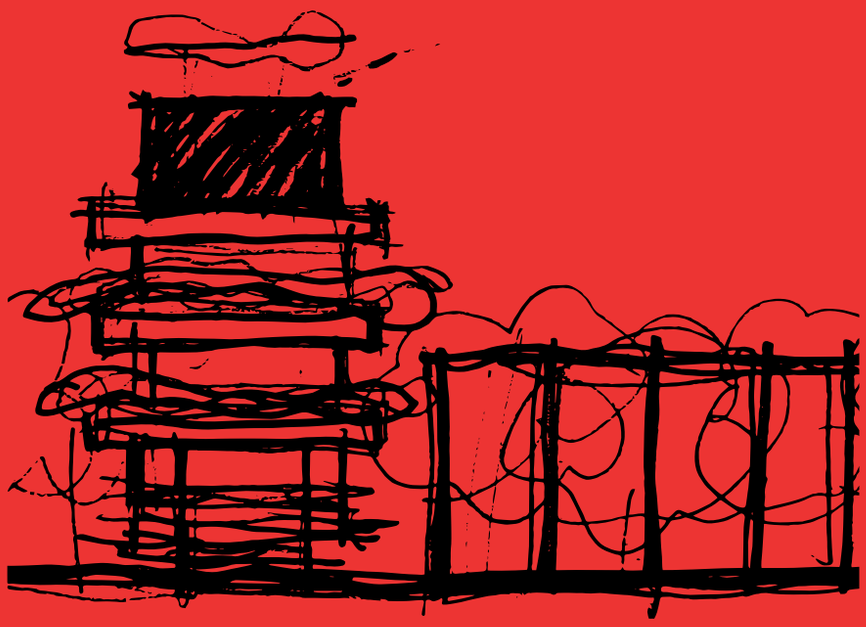

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Earthquake Expo Asia 2022	7-8 Dec 2022	Singapore	Singapore	www.theearthquakeexpoasia.com	IBC
Geo Connect Asia 2023	15-16 Mar 2023	Singapore	Singapore	www.geoconnectasia.com	73
ARCH:ID 2023	16-19 Mar 2023	BSD City	Indonesia	https://arch.id	74
ARCHIDEX 2023	26-29 July 2023	Kuala Lumpur	Malaysia	https://archidex.com.my	IFC

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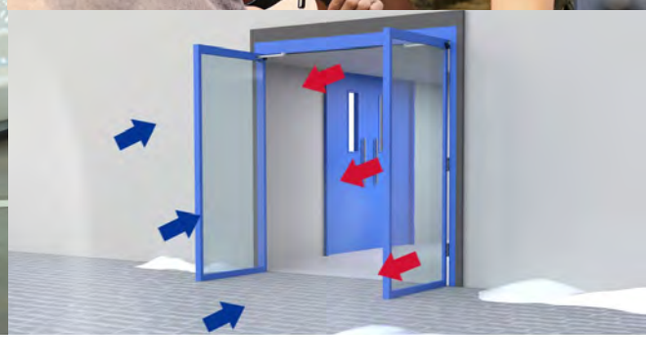

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