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March / April 2024

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In This Issue

Office Buildings Architecture

Exclusive Content: Architects Discuss AI In Design

ON THE COVER: Dubai World Trade Centre: Office Buildings 4 & 5 / UAE

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Welcome to Mar/Apr issue!

Hello readers and nice to meet you again. We are back with another issue of SEAB. This issue is packed with many office architecture stories. We have put together a wide range of projects such as office buildings, corporate headquarters, head offices and offices in mixed-use development for your reading. Every building is uniquely designed and developed to meet the needs of its occupants and employees.

In Exclusive Content, we invited some architects to share with us their views on the use of Artificial Intelligence (AI) in architecture. They present the pros and cons with some renderings of projects that they have done with the help of AI.

In the interview section with property developers, we are honoured to hear the comments of Dato' Beh Huck Lee, Group Managing Director of Eupe Corporation Berhad. He tells us how the company incorporates the wellbeing of residents into the design of its residential projects.

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

Take care and enjoy reading the issue!

Amita Natverlal

May / June 2024 Issue (Sustainability)

FEATURES:

- Hotel Architecture
- Restaurant Interior Design
- Playgrounds & Landscaping
- Interview With Property Developers On Current Issues
- Exclusive Content – Sustainable Materials (Innovations in Materials)

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Gensler releases 2024 Design Forecast Report

Published since 2013, each year, the annual report explores and identifies trends and impactful design strategies that are shaping the future of the built environment and beyond.

Singapore – Global architecture and design firm Gensler has released its annual Design Forecast report, which presents strategic advice, research, and projects from across Gensler's 33 practice areas to help the firm's clients and industry partners navigate the most pressing issues we face today, through leveraging the power of design.

Diane Hoskins and Andy Cohen, Gensler Co-CEOs: "This year's Design Forecast is all about the power of design and its ability to develop solutions for the world's complex challenges. We have an enormous opportunity to address the crises we face – from economic pressures and geopolitical volatility to climate change – but only if we're willing to use our innate creativity and problem-solving abilities to think bigger and lead with bold new initiatives. Design truly is a universal language that can build common ground and make a positive impact."

The report reveals key trends that are shaping the building industry, including AI's immense potential to accelerate ideas and innovations in design, how we can transform our cities to better suit the needs of its inhabitants and be nimbler to change, as well as the non-negotiable necessity of sustainable building practices, the allure of the 20-minute city, and more.

The firm has identified "8 Trends Shaping Design in 2024" that highlight the most important signals and key opportunities in the building industry today:

- **Experience Multipliers Pay Premium Dividends:** Now more than ever before, people are craving phenomenal, visceral, and connected experiences in every part of their lives, whether that's in a workplace that feels like a clubhouse or a sports stadium that anchors a vibrant, 24/7 mixed-use entertainment district. In 2024, real estate leaders will find success reclaiming human connection with "experience multipliers": immersive designs that drive loyalty, boost sales, and improve vibrancy with a shared sense of inspiration and belonging.

- **Conversions Resurrect Stranded Assets:** Office-to-residential conversions and other creative repositioning will represent a new value proposition for the building industry: transforming under-performing office buildings into housing and addressing a vital need for new residential options in cities. As organizations seek out fully amenitized, recently built projects, this "flight to quality" is stranding under-capitalized and unoccupied B and C buildings in urban cores around the world. In 2024, expect more government municipalities to incentivize adaptive reuse strategies and conversions whose renovations breathe new life into cities and offer vital infrastructure enhancements – and do it in an environmentally responsible way.

- **Sustainable Design Becomes a Non-Negotiable:** As intense weather and climate change assail the built environment, sustainable design shifts from an option to an obligation. By 2024, the building and real estate industries around the world will recognize the value of environmentally conscious design and its ability to mitigate risk. Higher standards for products and materials, the adaptive reuse of existing buildings, net zero energy strategies, and regenerative design principles will define our sustainable future.

- **The Future of the Workplace as a Compelling Destination:** As more organizations understand that the workplace landscape has permanently changed, the focus will shift less on how many people come into the office and more on what the future of work looks like to support their people's needs. In 2024, organizations will continue to plan for in-person experiences in spaces that are agile and flexible enough to evolve with the changing demands of the workforce and useful enough to earn people's commutes.

- **Mixed-Use Lifestyle Districts Bring Cities Back to Life:** Monolithic, office-focused downtowns have become a thing of the past, replaced by vibrant, experience-driven social districts that are focused on a mixed-use collection of retail, entertainment, sports, housing, and other lifestyle-anchored developments. By prioritizing safety and mobility in these new multimodal districts, cities can attract residents and tourists and bring COVID-impacted neighborhoods back to life.

- **Designers Harness AI to Accelerate Ideas and Innovation:** In 2024, AI will open the door to new ideas, new talent, and new creative opportunities. Far from

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replacing designers, AI will become a collaboration tool that will help designers redefine the design and innovation process with new insights, rapid iterations, and more immediate response times. Buildings and spaces designed with the help of AI will be more sustainable, better performing, and more responsive to individual needs and preferences.

- **Focus Shifts to Ageless Communities and Design for a Lifetime:** Over the past 50 years, the average life expectancy for people around the world has expanded by more than 10 years, a figure that will only grow in the coming decades. With the global trend toward increased longevity, 2024 will mark a shift toward designing age-inclusive communities. Demand for flexible and multigenerational communities that foster accessibility and affordability will have universal appeal.

- **20-Minute Cities Become Archetypes of Equity and Accessibility:** As city leaders seek out design strategies to help them enhance their central business districts to be more lifestyle-oriented, the idea of the 20-minute city remains increasingly attractive. These vibrant, walkable neighbourhoods, where all essentials lie within a 20-minute reach — including restaurants, retail spaces, medical facilities, educational places, and much-needed residential alternatives — are redefining city living. This trend underscores the importance of creating accessible, inclusive urban spaces that promote equity, connectivity, and community.

The 2024 Design Forecast also reflects Gensler's own transformation in the past year as the firm has added four new practice areas, bringing the total to 33, and three new offices, for a total of 53 in 16 countries. The new practice areas include Build to Suit & Headquarters, Entertainment, Industrial & Logistics, and Mobility & Transportation.

Download the full report here (https://www.gensler.com/doc/gensler-design-forecast-2024.pdf)

Aurecon commits to research hub to advance timber in the built environment

Brisbane, Australia – Aurecon has committed AUD 200,000 in funding and in-kind support as a Principal Partner of the AUD 16.5 million ARC Industrial Transformation Research Hub to Advance Timber for Australia's Future Built Environment, administered by the University of Queensland.

The aim of the hub is to develop the resources, enablers, and drivers to advance timber, as a natural resource, to be the material of choice, leading towards a net zero future for Australia's built environment.

Aurecon is involved in various nodes including Performance of Building Components, Manufacturing Innovation, Towards a Low Carbon and Circular Economy and Building Performance for Occupants.

Aurecon's Major Project Director, Ralph Belperio, who is on the Hub's Executive Board and Hub Partner Investigator, said that Aurecon has identified that timber has a key role to play in decreasing both embodied and operational carbon as we move towards a net-zero future.

"Several of the research nodes that the Hub is tackling are directly relevant to the decarbonisation pursuits of many of our key clients," Belperio said.

The Aurecon team. From left to right: Callum Lillywhite, Ralph Belperio, Danette McLean, Peter Ayres, Evelyn Storey and Daniel Bree.

"We have assembled a team of our most eminent practitioners to focus on each of the relevant nodes that can help guide the research strategies to ensure that the outcomes remain industry focussed and meet the needs of the broader construction community.

"Our significant investment is key to our desire to remain at the forefront of innovation, both in the efficient and effective use of timber in our efforts to decarbonise the built environment, and in our broader drive for more sustainable outcomes".

Aurecon has an enviable track record of designing and delivering mass engineered timber structures, including Murdoch University's Boola Katitjin, which won the 2023 Engineers Australia Project of the Year; 25 King St, which is Australia's tallest mass-engineered timber commercial building; and Gaia, one of the largest mass-engineered timber buildings in Asia.

Aurecon also contributes to mass-engineered timber advocacy as a partner of the Forest and Climate Leaders' Partnership Coalition on Greening Construction with Sustainable Wood and the Materials Embodied Carbon Leaders' Alliance.

The research support for the ARC Advance Timber Hub is just one of a number of research and development commitments that Aurecon is currently undertaking, including the development of sustainable alternatives for sand in shotcrete, improving design through AI-assisted stakeholder engagements, and reducing wastage through a circular economy approach to building retrofits.

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TZ leads the way with Unilin Technologies' P-SPC technology

Belgium / China – Unilin Technologies, a global leader in innovative flooring technologies, is delighted to announce the expansion of its licensing partnership with the Zhejiang Tianzhen Technology (also known as "TZ") group of companies. This expansion focuses on Unilin's patented PET-based P-SPC core material, redefining the resilient flooring market with its eco-conscious approach.

P-SPC is a PET-based product that not only combines the best features of SPC flooring, such as water resistance, while also championing sustainability and eco-friendliness, thanks to the use of recycled materials such as P-SPC or PET bottles.

Photo courtesy of Unilin.

"We are proud to be the pioneers in upgrading resilient flooring products and introducing the new PET-based products to the market," states Mr. Fang Qinghua, President of TZ. "Unilin's P-SPC technology perfectly aligns with our dedication to innovation, sustainability, and a circular economy. This collaboration marks a significant step forward in offering eco-friendly flooring solutions to our customers."

MAD Architects unveils Nanhai Art Center, a gentle ripple by the lake

Beijing, China – MAD Architects unveiled the design for the Nanhai Art Center in Foshan City, Guangdong, which covers a total site area of 59,445 square metres and includes three major functions: the Grand Theatre, the Museum, and the Sports Center. When completed, it will provide the citizens of Guangzhou and Foshan with a new public gateway on the waterfront, harmonizing social, creative, and natural attributes.

The development is located in Nanhai Cultural District, the heart of the Guangdong-Hongkong-Macao Greater Bay Area, an important urban site that bridges the cities of Guangzhou and Foshan. Ma Yansong, the founding partner of MAD was once a participating artist in the Nanhai Art Field (the biggest land art festival in Foshan City), he said, "The traditional culture of Nanhai, is in the drum beat and boat drift during the dragon festival boat race and in the kung-fu in the lion dance. Watching them, you can feel the dynamic vibrant and innovative spirit from ancient times till today. We want to bring it back to modern living here."

The Nanhai Art Center resembles a continuous wave of water, with three main buildings looming underneath the floating sun canopy. The semi-outdoor merges the central landscape of the lake with the programs, inviting the local communities to immerse themselves in the waterfront landscape.

"The local culture of Southern Guangdong is always about the gathering of people. To keep the same lifestyle, it has to be contributed by the contemporary cultural venues. The design of the Nanhai Art Center wants to provide the maximum grey spaces


Image Copyright: MAD Architects

for such activities. It is also inspired by the large eaves of the traditional architecture of Lingnan (ancient broader Guangdong area)," Ma Yansong explains.

The design intends to build a spiritual field by creating a coherent visual axis to the lake. The programs are planned on both sides of the central axis. The total floor area of the Grand Theater and the Museum is about 89,269 square metres on one side of the central axis, of which the Grand Theater includes a 1,500-seat amphitheater and a 600-seat multi-purpose hall, for a variety of performances and conferences; the Museum will meet the standards of a national-level museum upon completion.

The Sports Center is located on the other side of the site, with a gross floor area of about 32,006 square metres containing swimming pools, basketball courts, badminton courts, and other types of sports spaces and facilities.

The permeable facades allow nature to flow through the site back to the city.

Image Copyright: MAD Architects

The two-storey landscape platform extends outward, organically linking the central lake, riverfront park and urban space, achieving a harmonious balance between nature and architecture.

Commercial spaces are placed along the lake, radiating architectural texture to the lakeshore landscape belt. Cultural spaces are interspersed. The second-floor viewing platforms and outdoor patios connect three main functions together, also with the commercial and F&B space below to complete the visitor experiences and loop circulation. The top of the platform serves as a pedestrian space leading to the cultural spaces entrances.

Sustainability and green carbon reduction are fully integrated into the design concept from the start and form a narrative of building technology and innovation. Under the translucent white ETFE membrane structure roof, the Nanhai Arts Center incorporates energy-saving and environmentally friendly technologies, including photovoltaic power generation, rainwater collection, and vertical greening systems.

Construction of the Nanhai Arts Center is scheduled to begin in 2024 and to be completed in 2029.

One Shenton receives Gold certification from NParks for integration of greenery into building upgrading initiatives

Singapore – One Shenton has received the Gold certification from the National Parks Board (NParks) under the Landscape Excellence Assessment Framework (LEAF) certification scheme. The recognition is attributed to One Shenton's initiatives to incorporate biophilic design including vertical greenery as part of the development's building upgrades, showcasing a commitment by its owners to embrace sustainable and nature-centric landscape design.

Organisations involved in One Shenton's LEAF certification include the condominium's managing body (MCST3748), Managing agent Savills Property Management, Architect / Landscape Architect CKA Consultants / CKA Design, Landscape Contractor GWS Living Art, and Builder Abramtle International. Before commencing building upgrades, the MCST identified cost-saving opportunities (combining technology and energy savings initiatives) to ensure the necessary investments could be funded without raising management fees.

One Shenton started its series of skyrise greenery architectural facelifts in 2018 and applied for financial support through the NParks' Skyrise Greenery Incentive Scheme (SGIS). This is an initiative to encourage owners of existing buildings to enhance their built environment with rooftop and vertical greenery, where up to 50 percent of installation costs of rooftop and vertical greenery can be funded by NParks.

Front view of One Shenton. Photo credit: One Shenton

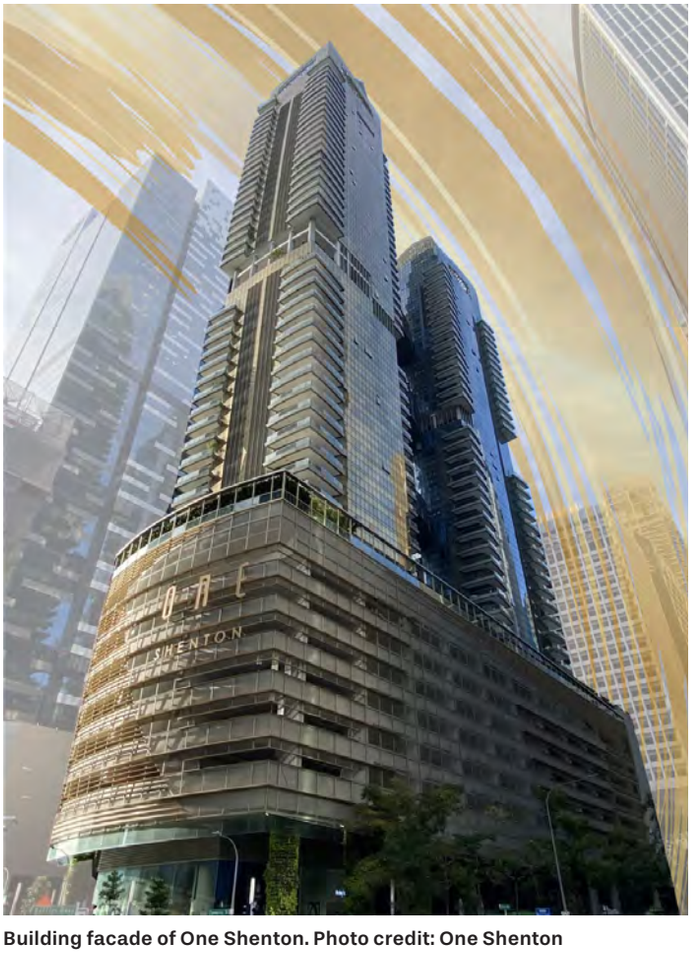
Since One Shenton's landscape enhancements concluded

in 2013, condo unit owners (subsidiary proprietors "SPs") saw a cumulative reduction of 12 percent for the development's maintenance fees, which include the management fund, sinking fund, and one-off rebates.

LEAF is the first and only scheme in Singapore that is solely dedicated to recognising the provision and management of greenery in developments and parks. In addition to showcasing projects and efforts of developers, landscape architects, architects, contractors, and maintenance agents that incorporate biophilic design into urban landscapes, the LEAF certification also helps inform the public of the quality of landscapes of the certified development.

LEAF applies to new and existing development projects, and the certification is valid for five years. Projects are assessed on a variety of aspects including Community Wellbeing & Engagement, Environmental Sustainability, and Design and Landscaping.

"The addition of rooftop and vertical greenery at One Shenton has helped us to harness the inherent benefits that nature brings to our urban environment. The biophilic design offers tangible benefits, including improved air quality, reduced energy consumption, and a positive impact on the well-being of our residents, neighbours, passersby, and CBD office workers. Receiving the LEAF award will not only elevate One Shenton's allure as an urban oasis but also establish that condominium owners can enjoy long-term benefits when they align with Singapore's vision of becoming a City in Nature," said Alexandre COLLIN, the chairperson of One Shenton's management council.



Building facade of One Shenton. Photo credit: One Shenton

One Shenton drop off area. Photo credit: One Shenton


Terrace Deck of One Shenton. Photo credit: One Shenton

"Retrofitting on a large scale for an existing building was not without challenges, especially with rising construction costs. We were fortunate to have NParks' expertise and support as we sought to find cost-effective solutions to incorporate an optimum green scheme. Integrating sustainable elements was paramount and the LEAF framework was useful in our journey to enhance the development's climate, social, and ecological resilience. By creating a beautiful and lush environment with natural elements, we have also managed to elevate One Shenton's visual profile and impact in the CBD," Cheryl Tan, Director, CKA Design Pte Ltd.

Located right across from Lau Pa Sat, Singapore's most iconic hawker centre, numerous tourists have been seen capturing selfies amidst One Shenton's "green pillars forest". The green facade of One Shenton was also featured in the "Little Women" Korean drama. With the building enhancements, One Shenton's street-level Food and Beverage (F&B) tenants have benefited from improved business, allowing the MCST to extract more value from the Outdoor Refreshment Area (ORA) in front of the restaurants.

Perkins&Will strengthens presence in Southeast Asia with two key hires

Singapore – In response to soaring demand for city-building and placemaking in Southeast Asia, global architecture and design firm Perkins&Will welcomes Seven Qi and Christian Aryo Palguno Bravianto to help lead the firm's regional practice. Based in Singapore, Qi joins Perkins&Will as Studio Director and Bravianto joins as Director of Urban design.

"The regional industry knowledge and on-the-ground experience that Seven and Christian have are so important to our clients," says James Lu, Regional Director for Perkins&Will in Asia. "By expanding our presence here, we're making a pledge to those clients – and to the communities we serve – to design places and spaces that enhance their daily lives."

Seven Qi brings 15 years of experience in sustainable urban planning in markets across Asia, including large-scale masterplans and cultural, tourism, branded resort, and mixed-use developments. At Perkins&Will, she will focus on developing new business opportunities and enriching the client experience. She will also champion Living Design, incorporating its design drivers into district-level planning so clients can ultimately achieve high environmental performance with their projects.

Seven Qi. Photo credit: Perkins&Will

Christian Aryo Palguno Bravianto. Photo credit: Perkins&Will

"Over the years, it's been exciting to be part of the urbanization and rapid growth in Asia. Now, together with my talented multidisciplinary colleagues at Perkins&Will, I look forward to making a positive impact through the comprehensive planning and design that only our firm can offer," says Seven Qi.

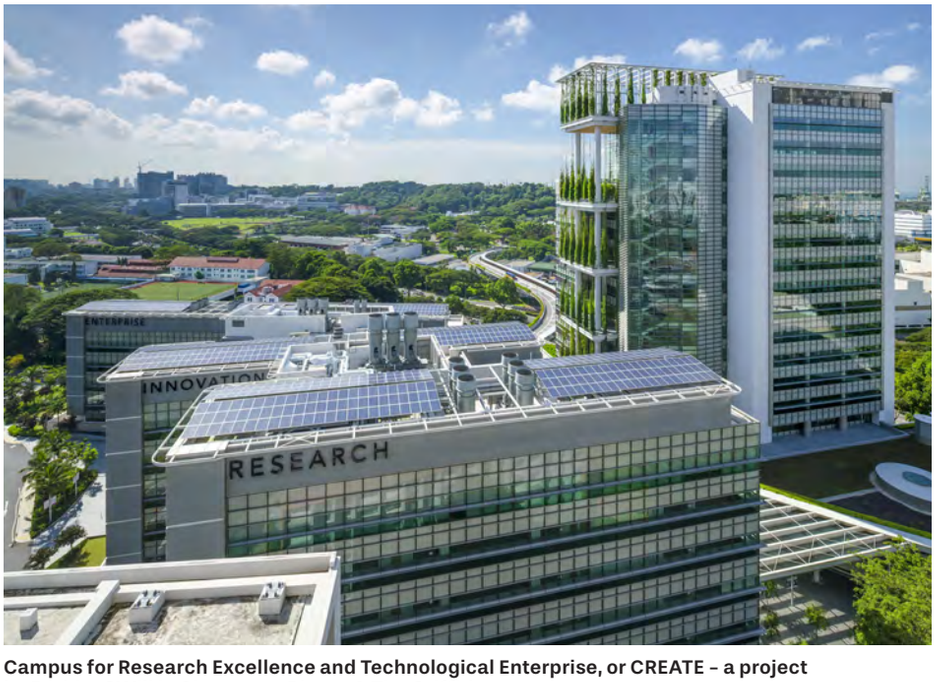
Christian Aryo Palguno Bravianto brings over 20 years of industry experience in Southeast Asia, having led urban design and planning for some of the largest and most complex projects in the region. As Director of Urban Design, he will focus on broadening the firm's services, particularly for members of the Association of Southeast Asian Nations (ASEAN), with an emphasis on transit-oriented urban districts, tourism masterplans, innovation districts, health districts, and academic campuses.

"I am ecstatic about joining Perkins&Will – a firm that, like me, believes in the power of design to inspire joy, create thriving communities, and enhance quality of life," Bravianto says. "Southeast Asia is an extraordinary part of the world; incredible things are happening here. I look forward to partnering with our visionary clients to shape our region's future," says Christian Aryo Palguno Bravianto.

The appointments of Qi and Bravianto mark the start of a new era of client engagement and design services in Southeast Asia for Perkins&Will.

Perkins&Will has a legacy of built work in Southeast Asia, including the Campus for Research Excellence and Technological Enterprise, or CREATE. Completed in 2013, CREATE serves as an important research hub for some of the world's leading academic institutions.

"With a full-time, on-the-ground presence in Singapore, we bolster our ability to meet – even exceed – the diverse needs of our clients," Lu says. "From urban design to architecture to interiors, our clients can count on us to deliver innovative design solutions that are inherently connected to the local context."



Campus for Research Excellence and Technological Enterprise, or CREATE – a project by Perkins&Will in Singapore. Photo: © Tim Griffith

Mapei is boosting its overseas operations through three acquisitions

Milan, Italy – The Group is continuing its process of internationalisation with operations in Denmark, Canada, and Saudi Arabia.

Canada – Diaplas joins the Group

At the beginning of February, the Mapei Group announced the acquisition of Diaplas, a company specialising in the manufacture of profiles, trims and moldings based in Laval, Quebec. The operation, carried out through the Canadian subsidiary Mapei Inc., which is also based in Laval, is in line with the Group's strategy of providing increasingly integrated and complete products for the construction industry, as well as its desire to continue to grow in North America. Diaplas's clients will be able to take advantage of Mapei's extensive distribution network and strong Research & Development capabilities. In turn, Mapei Canada will benefit from Diaplas's experience and manufacturing capacity based around high turnover items and articles.

Denmark – A new plant for concrete admixtures

In January this year, Mapei Denmark, the Group's Danish subsidiary took over a new 15,000 square metres facility in Vejen in southern Denmark, complete with a concrete admixture manufacturing plant, offices and a warehouse. This new manufacturing unit will enable the company to meet the growing local demand for quality building materials more effectively, while reducing the environmental impact of transporting products. An investment, as Veronica and Marco Squinzi stated, the Group's CEOs, "in line with the Group's growth strategy in Nordic countries".

Saudi Arabia – Bitumat was acquired, a new plant was opened

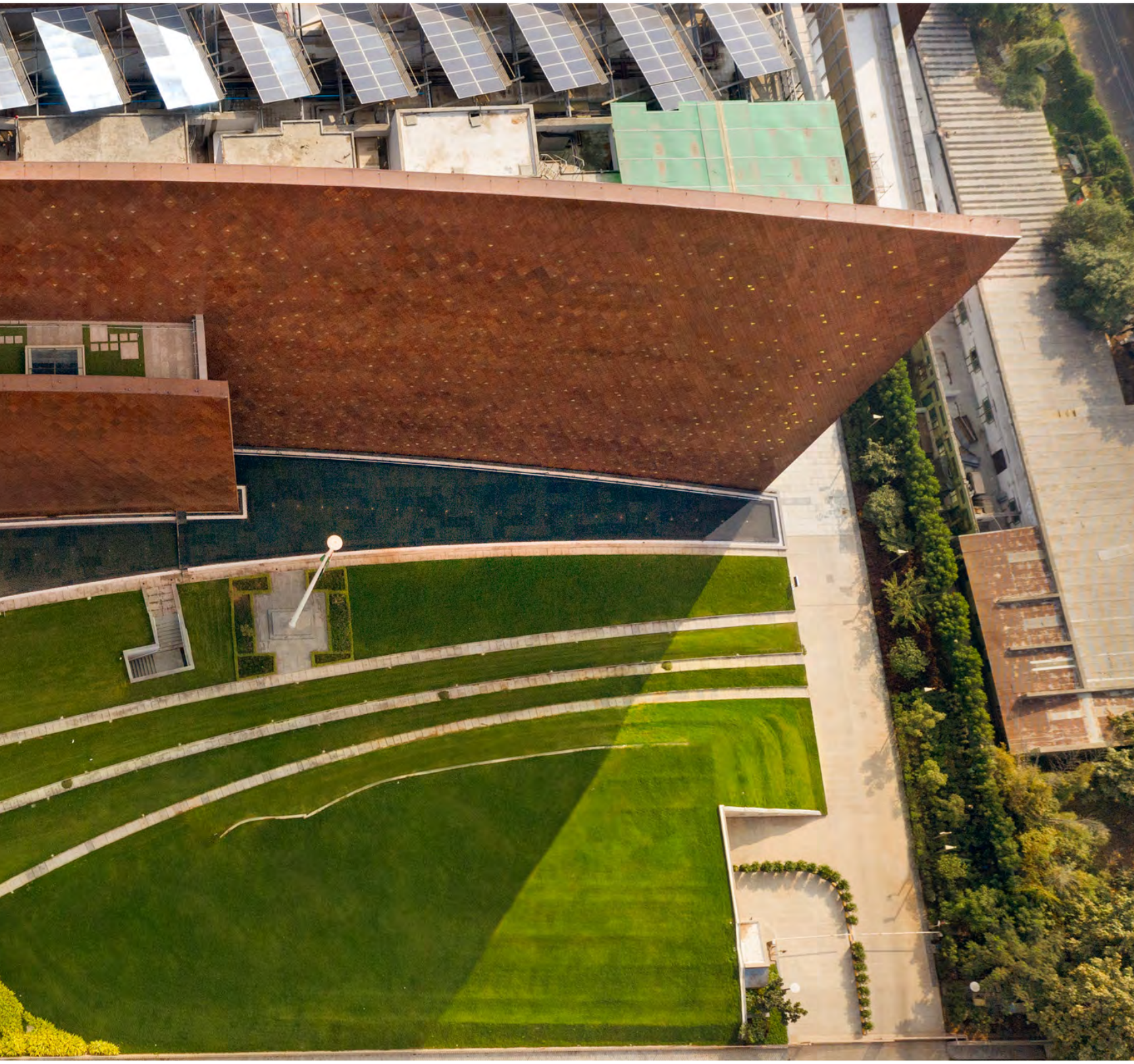
Mapei's growth rate has doubled in Saudi Arabia. On the one hand, there was the acquisition of Bitumat, a leading company in the manufacture and marketing of waterproofing systems with a head office and a 100,000 square metres manufacturing plant in Dammam on the east coast. The acquisition also included a manufacturing unit in Bahrain, as well as offices and

warehouses in the cities of Riyadh and Jeddah, and sales offices in the United Arab Emirates and Oman. "The acquisition of Bitumat," so Marco Squinzi, Mapei's CEO, claims "enables us to strengthen our operations and manufacturing output in the region and also to get increasingly actively engaged in the "Vision 2030" government programme, which envisages the construction of infrastructure, tourism, residential and entertainment projects throughout the country, partly in view of the forthcoming Asian Winter Games in 2029 and FIFA World Cup in 2034". On the other hand, Mapei, which already operates through its own subsidiary in Saudi Arabia, has set up a new plant in Tabuk in the north-west of the country, which extends over 10,000 square metres and is devoted to concrete admixtures. As Veronica Squinzi, Mapei's CEO, stated, "Mapei is already actively supplying technical solutions and cutting-edge products for numerous projects throughout the country: from the futuristic region of Neom and the capital Riyadh (the site of Expo 2030) to coastal development work in the Red Sea and the preservation of the historical heritage of the archaeological site of Hegra". Thanks to the new facilities, Mapei will be boosting its operations in the Middle East area where it already has subsidiaries in the United Arab Emirates and Qatar.

Article source: Realtà Mapei International 101/2024

If growth has always been part of Mapei's DNA, then internationalisation is at its very core. At least since 1978, when the opening of the Laval plant in Canada marked the beginning of the company's overseas operations through subsidiaries, manufacturing plants and local employees. Underpinning this internationalisation is a desire to work more closely with clients to be able to respond more effectively to the specific needs of each individual market, guaranteeing fast product delivery times and reducing the environmental impact of transport operations. Under the motto of "Italians in Italy, Americans in America, Chinese in China..." and so on, the Group has made internationalisation one of the cornerstones of its corporate policy producing exponentially positive results. Over the years, the Group's facilities, companies and people across all five continents have grown to take on truly global proportions. At the beginning of 2024, this trend accelerated: in about a month and a half, a production plant was made operational in Saudi Arabia and three acquisitions were completed in Denmark, Canada and Saudi Arabia.

Zydus Headquarters



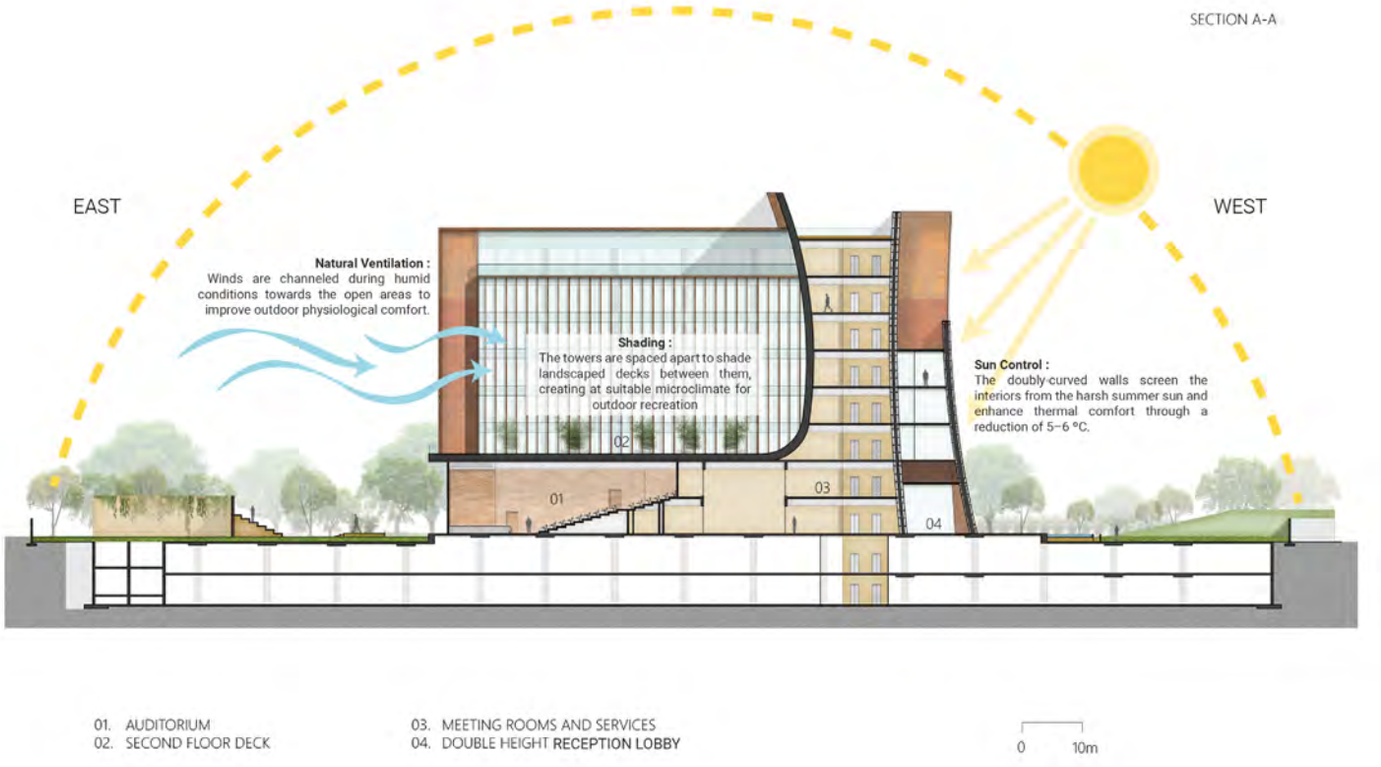
Envisioned as a resilient 21st-century workplace that borrows from Gujarat's vibrant architectural and cultural heritage, the head office of Zydus, located along a busy highway in suburban Ahmedabad sensitively responds to the region's extreme hot-dry climate. A robust monolith with a peaked profile, the building's fortress-like form references mediaeval-era monuments from the walled city of Ahmedabad: The Bhadra Fort, the Pavagadh Fort, the stepped courts of Adalaj, as well as from the traditional 'Bhunga' architecture of Kutch. The Pavagadh Fort provided key contextual cues for the three rampart-like walls forming the western facade that effectively screens the interiors from the harsh summer sun and provides a thermal buffer against extreme temperatures. These doubly-curved Corten steel bulwarks (14,200 data points) are articulated in the intricate geometries of Ahmedabad's traditional metal craft of the 'Kansaras', translated parametrically through computational design. The triangular glass tubes embedded within the walls

are inspired by mirror work on 'Bhungas', vernacular Kutch dwellings venerated for their architectural resilience and ornamentation. The tubes are finished in dichroic film, catching the sun's movement through the day and rendering the facade with a perpetually kaleidoscopic dynamism.

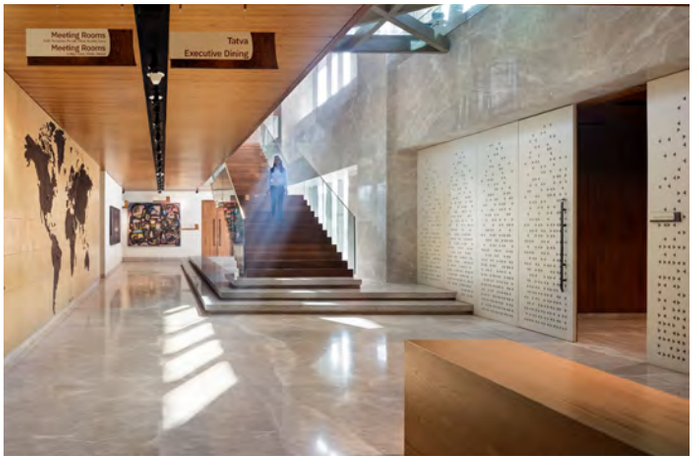
Spanning east to west, the walls shield and create an oasis for the north-south oriented office towers that are about their edge. The towers are spaced apart to shade the stepped courtyards between them, thereby generating a suitable microclimate to encourage outdoor recreation and engagement. The column-free work halls are completely glare-free, 100 percent day-lit, and blinds-free, thereby eliminating the need for artificial lighting during the day. The use of passive design and climate-responsive strategies contribute to a significantly reduced Energy Performance Index (EPI) of 56 kWh/sq.m./yr, and the building consumes up to 50 percent less energy than stipulated by the best Green Building standards.

In addition to functioning as an environmental shield, the building's walls house the entire social incubation space for the two thousand-strong workforce. Circulation areas between the walls that run along the length of the site consist of breakout spaces, alcove seating, bistros, employee engagement zones, visitors' lounges, and booths for brainstorming sessions and informal meetings. This spine connects all the formal work areas in a vertebral configuration. In today's context this zone also doubles up as a social distancing space to spread out the workforce.

The planes of architecture and landform seamlessly converge and diverge to create a unique land modulation. This is further layered in detailing and materiality through incorporating the five elements found in nature. The



Zydus Headquarters Section. Image credit: Noughts & Crosses LLP



primary architectural challenge was to marry the age-old knowledge of craftspeople who build by hand, to the precision required in the geometry of the walls. The surface treatment, in addition, incorporates local crafts and construction methods such as in-situ terrazzo flooring, mould-cast cementitious pigmented tiles, hand-turned metal furniture and installations.

The project exemplifies the ideology of equity and transparency in the workplace as an integral part of its architectural vocabulary. Reimagining Gujarat's rich crafts traditions in a contemporary idiom, and through its focus on simple passive design and efficient building principles, the building aspires to be an exemplar of globally and locally relevant commercial architecture.

PROJECT DETAILS

PROJECT NAME: Zydus Headquarters
PROJECT LOCATION: Ahmedabad, Gujarat City, India
CLIENT: Zydus Cadila Group
ARCHITECT FIRM: Morphogenesis
BUILT-UP AREA: 8,40,000 square feet
SITE AREA: 6.4 acres
COMPLETION DATE: August 2022
PHOTOGRAPHER: Noughts & Crosses LLP

Sathapana Bank PLC Head Office

The Sathapana Bank PLC Head office is an office tower located in Phnom Penh City, Cambodia. The project is designed to be a Grade-A office providing column-free office spaces, executive floors, a rooftop sky garden, and retail & privileged banking for customers.

The project site is located along the main North-South vehicular artery of Preah Norodom Boulevard in the Phnom Penh City Centre. The tower is situated on a 2,130 square metres plot area that is in close proximity to the cultural and historical sites including the Royal Palace, Sisowath Quay, and the Central Market. As Phnom Penh's inner city skyline of mainly of 3-5 storey buildings, the relatively extended height of the Sathapana Bank PLC Head Office will offer views of the Mekong River to the East, and high-rise landmarks such as the Vattanac Capital Tower and Olympia City project to the West.

The design brief for Sathapana Bank PLC Head Office was to create a key development of Grade-A office standards

that would host the Centralised Headquarters for the two merging companies – Sathapana Bank and Maruhan Japan Bank – in Cambodia. Sathapana Bank has been playing a crucial role in offering financial and health education services to poor communities in Cambodia and contributing to the country's development, as well as aiding farmer's and women's emancipation.

Taking inspiration from the merger of two companies and the growth will bring to Cambodia, the proposed design takes the form of two orthogonal corner surfaces embracing an emerging and more naif-shaped volume, rounded in the corners, with the analogy of two hands holding a baby.

The development's design incorporates a Grade-A level office comprising staff facilities such as training rooms & a staff canteen, as well as a data centre within the building. The higher floors hold the executive floors for management-level employees with views of the Mekong River and a rooftop sky garden for all the employees. The

ground floor also accommodates the public arrival experience, segregating between office and retail banking use for bank customers.

The setback requirements have led to a narrow, rectangular design for the strategic placement of the Sathapana Bank PLC Head Office Tower. Aside from its aesthetic appeal, this design choice offers a logical framework for efficient planning and execution.

The tower's distinctive form features a side core adjacent to the rear of the site. The naturally lit lift lobby not only enhances the arrival experience but also offers captivating views to the west of Phnom Penh. The rounded facade corners are strategically designed to offer the best views – the Royal Palace and Mekong River on one side, and Vatannac Tower and Boeung Kak Lake on the other – providing stunning Executive Offices, Meeting Rooms, and other exclusive spaces.

Simple elegant design with a glass facade and fins form a streamlined design to give the building a sleek and modern look, with fins leading along the facade down to the canopy to provide solar shading. Windows and glass walls use double-glazed insulated low-E glass units to maximise daylight and to provide seamless views of the outdoors while minimising heat gain.

On the ground floor, the drop-off zone is off-centered towards the south, allowing for an arrival plaza at the north-east. Drawing inspiration from the rice paddy fields, which are symbolic of Sathapana Bank's history of assisting farmers and agriculture, a sequence of stepping gardens and water bodies is incorporated to make a strong approach statement and serve as a corporate identity.

PROJECT DETAILS

PROJECT NAME: Sathapana Bank PLC Head Office
PROJECT LOCATION: Phnom Penh, Cambodia
CLIENT: Maruhan (Cambodia) Bank
DESIGN ARCHITECT: Aedas
GROSS FLOOR AREA: 30,000 square metres
COMPLETION YEAR: 2021
PHOTO CREDIT: Bruce Vincentiis

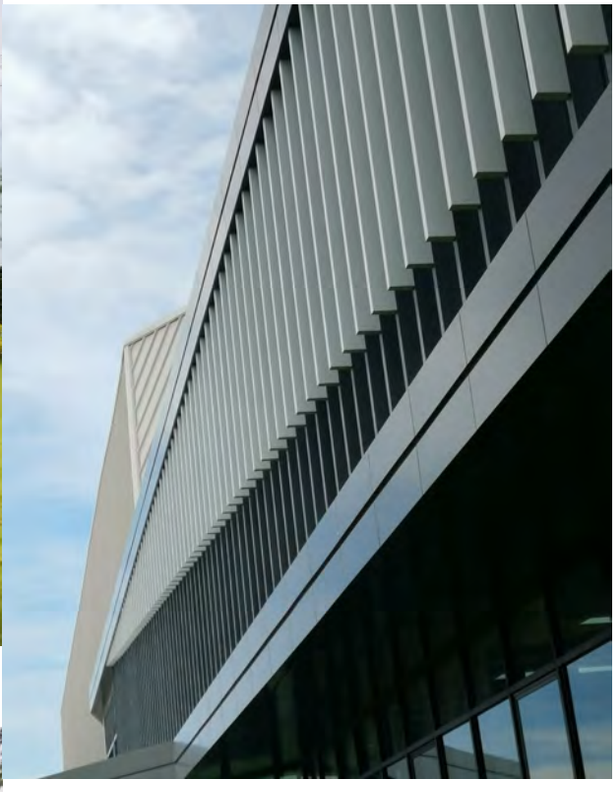
Vittoria Cotton Tires Factory

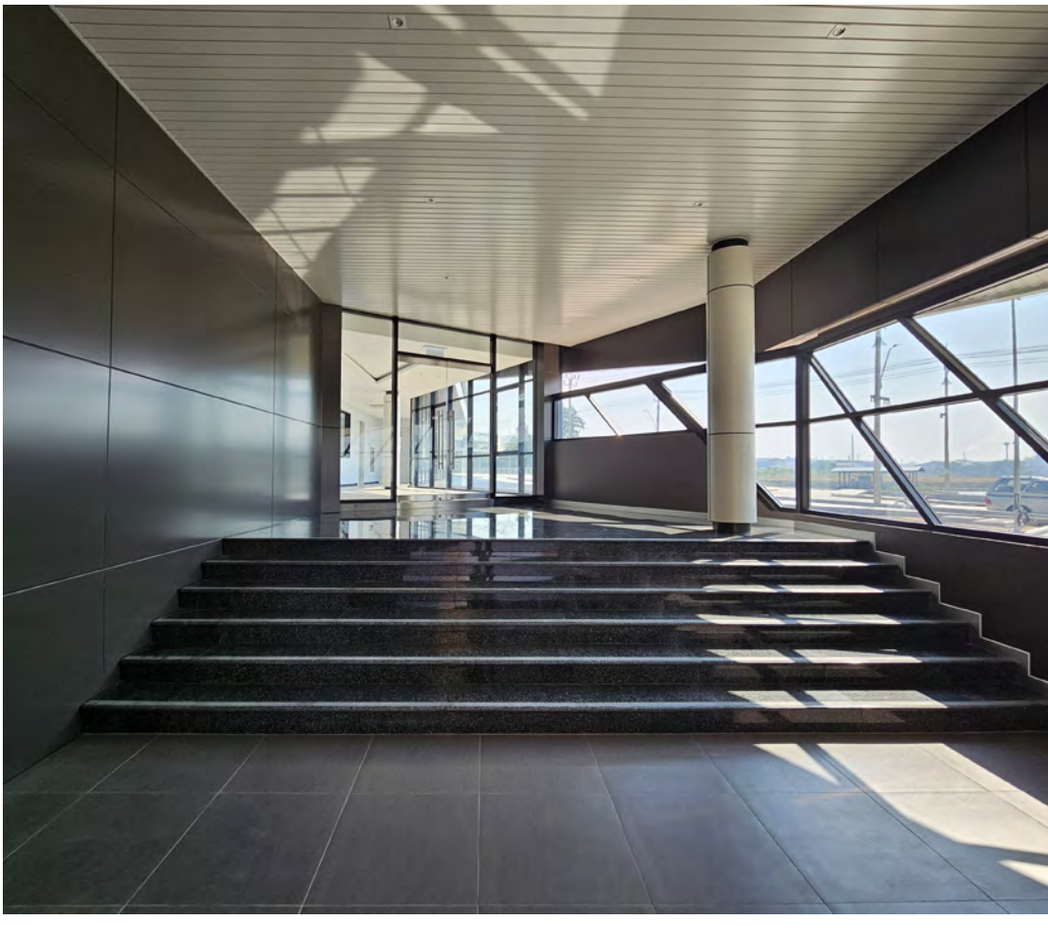
Credited with creating the most advanced cotton tyres in the world, Vittoria tyres are familiar to cyclists the world over. The Italian brand engaged ONG&ONG Thailand to design its new cotton tyre manufacturing plant at Preaksa Industrial Estate, Bangpoo, Thailand.

The architecture team was inspired by the Vittoria brand DNA, which cites "dynamics, precision and reliability" as its key values. Rendered in a sophisticated ecru tone, the factory sports a coated steel facade with subtle diagonal slats that visually underscore the brand's innovative approach in developing unique products.

Darker grey tones and angular elements anchor the interior spaces, while windows look out upon a lushly landscaped internal courtyard, reflecting biophilic design principles. The double-storied entrance and office areas feature full-height glass panels to let in light and external views. Vertical louvres front the upper-level windows, helping to mitigate heat gain.

Certified as a carbon-neutral operation, the factory has solar panels on its rooftop, electric automated guided vehicles, and an electric vulcanisation process. Officially opened in October 2023, the Vittoria Cotton Tires factory is set to revolutionise the cycling industry.





PROJECT DETAILS

PROJECT NAME: Vittoria Cotton Tires Factory
PROJECT LOCATION: Preaksa Industrial Estate, Bangpoo, Thailand
CLIENT: Vittoria Tyres (Thailand) Company Limited
ARCHITECT: ONG&ONG
GROSS FLOOR AREA: 9,000 square metres
COMPLETION: 2023
PHOTO CREDIT: ONG&ONG

Leeza SOHO

Located on Lize Road in southwest Beijing, the Leeza SOHO tower anchors the new Fengtai business district – a growing financial and transport hub between the city centre and the recently opened Beijing Daxing International Airport to the south. The new business district is integral to Beijing's multi-modal urban plan to accommodate growth without impacting existing infrastructure networks in the centre of the city.

This 45-storey 172,800 metres tower responds to demand from small and medium-sized businesses for flexible and efficient Grade A office space.

Adjacent to the business district's rail station at the intersection of five new lines currently under construction on Beijing's Subway network, Leeza SOHO's site is diagonally dissected by an underground subway service tunnel.

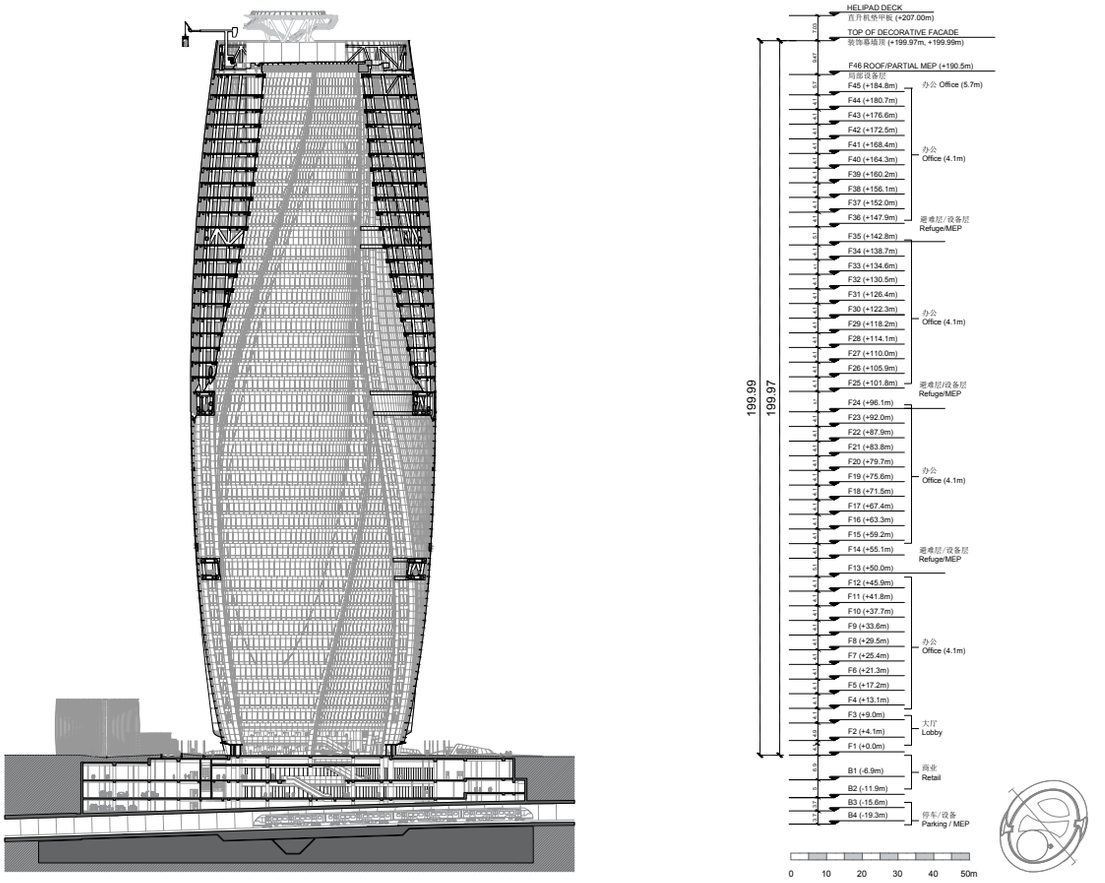
Straddling this tunnel, the tower's design divides its volume into two halves enclosed by a single facade shell. The emerging space between these two halves extends the full height of the

tower, creating the world's tallest atrium at 194.15 metres which rotates through the building as the tower rises to realign the upper floors with Lize road to the north.

This rotation of the atrium intertwines Leeza SOHO's two halves in a dynamic 'pas de deux' with connecting skybridges on levels 13, 24, 35 and 45; its glazed facade giving panoramic views across the city.

Leeza SOHO's atrium acts as a public square for the new business district, linking all spaces within the tower and providing varying views due to its twisting, sculptural form; creating a fantastic new civic space for Beijing that is directly connected to the city's transport network. The atrium brings natural light deep within the building, acting as a thermal chimney with an integrated ventilation system that maintains positive pressure at low level to limit air ingress and provides an effective clean air filtration process within the tower's internal environment.

Leeza SOHO's double-insulated, unitised glass curtain wall system steps the glazing units on each floor at an angle, providing narrow ventilating registers to draw outside air through operable cavities where required; creating extremely efficient environmental control for each floor.



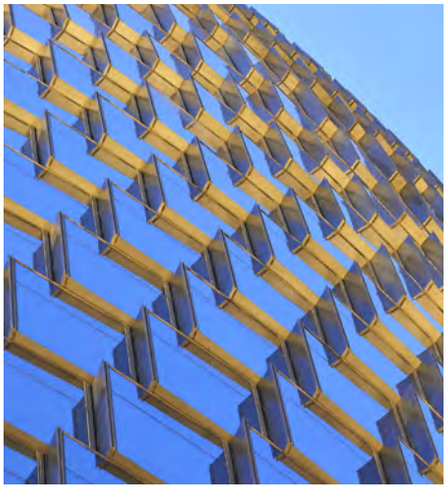
SECTION A-A

LEEZA SOHO | 丽泽SOHO

ZAHA HADID ARCHITECTS

Leeza SOHO Section AA. Image credit: Zaha Hadid Architects

The two halves of the tower shade the atrium's public spaces, while the double-insulated low-e glazing maintains a comfortable indoor environment in Beijing's extreme weather conditions. With a u-value of 2.0 W/m2K, the glazing has a shading coefficent of 0.4. The tower's overall external envelope u-value is 0.55 W/m2K.



At the forefront of 3D Building Information Modelling (BIM) in design, construction management and building operations, Zaha Hadid Architects and SOHO China have implemented proven technologies to reduce the energy consumption and emissions at each of their four collaborations, totalling 15 million square feet (1.4 million square metres) of mixed-use urban space in Beijing and Shanghai.

Designed to achieve LEED Gold certification by the US Green Building Council, Leeza SOHO's advanced 3D BIM energy management system monitors real-time environmental control and energy efficiency. These systems also include heat recovery from exhaust air and high-efficiency pumps, fans, chillers boilers, lighting and controls. The tower incorporates water-collection, low-flow rate fixtures and grey water flushing as well as an insulating green roof with photovoltaic array to harvest solar energy.

2,680 bicycle parking spaces, with lockers, shower facilities and dedicated charging spaces for electric and hybrid cars are located below ground; while low volatile organic compound materials are installed throughout Leeza SOHO to minimise interior pollutants and high efficiency filters remove particulates via the air-handling system.

PROJECT DETAILS

PROJECT NAME: Leeza SOHO
PROJECT LOCATION: Beijing, China
CLIENT: SOHO China Ltd.
ARCHITECT: Zaha Hadid Architects
SITE AREA: 14,365 square metres
GROSS FLOOR AREA: 172,800 square metres
CONSTRUCTION: 2015
COMPLETION: 2019
PHOTO CREDIT: Hufton+Crow

Dubai World Trade Centre: Office Buildings 4 & 5

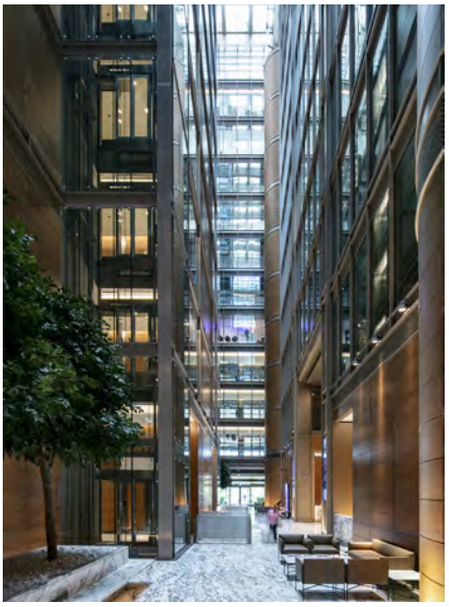
The Dubai World Trade Centre Office Buildings 4 and 5 are part of the wider One Central development, a one million square foot mixed-use free-zone in the Central Business District (CBD) of Dubai and comprising commercial, hospitality, entertainment, and residential components. They are located at the centre of Dubai World Trade Centre District Phase 1 and form the heart of the development.

Designed specifically for large multinational and local organisations, the two buildings offer large single commercial A grade floor plates up to 4,000 square metres in area with private rooftop gardens. Office Building 4 consists of 13 storeys with 39 premium offices and rooftop terraces, while Office Building 5 offers 9 storeys with 35 premium office spaces, two central atriums and a 7th floor roof terrace. The shell and core floor plates range in size from approximately

1,077 to 4,190 square metres (Offices 4) and 1,303 to 4,662 square metres (Offices 5) per floor with an efficient planning grid of 1.5 metres x 1.5 metres.

At ground level, retail units are linked together by a network of internal and external shopping routes with shaded arcades, providing a rich variety of interesting indoor and outdoor shopping areas. Below, four levels of basement provide service areas and parking for the retail and offices above, leaving the street level for pedestrian and visitor traffic only.

A LEED Gold rating was achieved by the implementation of some key sustainable design features, including the creation of a naturally planted green roof, façade planting and condensate recovery. Specialist energy modelling was used to produce a facade that shades the building from direct sunlight whilst maximising diffused natural light. The project uses LED light fittings throughout and sanitary ware fittings with low flow rates. Where feasible, materials have been specified with recycled content and all planting is from local and adaptive species irrigated through grey water recycling.



The buildings were designed to meet the British Council for Offices (BCO) Guidelines. The generous 2.8 metre ceiling heights and high-quality interior stone floors and natural timber cladding has allowed Dubai World Trade Centre to attract blue chip A-Grade tenants to this prestigious location within the city.

PROJECT DETAILS

PROJECT NAME: Dubai World Trade Centre: Office Buildings 4 & 5
PROJECT LOCATION: Dubai World Trade Centre District Phase 1, Dubai, UAE
CLIENT: Dubai World Trade Centre
ARCHITECT: Hopkins Architects
SITE AREA: 999,999 square metres (whole masterplan)
GROSS FLOOR AREA: 75,999 square metres (both buildings)
COMPLETION YEAR: August 2019
PHOTOS: © Marc Goodwin / ARCHMOSPHERES

One Central Macau

Project Name:
One Central Macau

Project Location: Macau

Client: Hongkong Land Limited and Shun Tak Holdings Limited

Design Firm: CAN Design

CAN's Scope: Facade upgrade, interior design and signage design

Photo Credit: CAN Design

CAN Design, the emerging international architecture and design firm, is proud to announce that the firm is delivering a multi-disciplinary scope covering façade upgrade, interiors, and signage design for ONE CENTRAL Macau (OCM). This sophisticated renovation aims to revitalise the luxury retail mall and enhance the shopping experience.

OCM, a waterfront flagship shopping mall, is located in the upscale Napa district of Macau. Catering to the needs of luxury spenders, OCM is a secret garden in vibrant Macau, providing the most exclusive and understated personalised hospitality in the finest elegance, curated an immersive new retail experience for its visitors. This project is a joint venture between Hongkong Land Limited and Shun Tak Holdings Limited.

OCM's three-level shopping mall is the destination of many luxury brands' first, largest or flagship stores in the city. Inspired by the community and surrounding environment, the design celebrates Nam Van Lake's natural beauty and elegance. It brings tranquillity, coziness, and luxury, enhancing the mall's panoramic views. The highlight of the revamp is the renovation of the second floor. The new design concept embraces minimalism and flexibility, offering an inviting atmosphere with clean lines and open spaces.

The Main Atrium will showcase an exclusive collection of the world's most luxurious brands, establishing itself as the ultimate haven for discerning clients in Macau. It will also serve as a dynamic venue for captivating activations and installations, elevating the visitor experience to new heights.

"Our design reconsiders the circulation with a focus on creating a seamless flow between different retail area. From the revitalisation of the facade to the individual storefronts, every detail is carefully crafted to create a cohesive and inviting atmosphere for shoppers and visitors alike. The holistic design highlights the sense of stylish luxury yet offers domestic level of comfort to a certain extent," said Tammy Chow, Associate Director at CAN Design.

"OCM is a significant project for CAN Design as we expand into this dynamic and vibrant region. We are excited to embark on this transformative journey, leveraging our expertise to revitalise and create an unparalleled luxury retail destination in Asia. In addition to the luxury renovation, OCM continues to evolve and shape the community," said Ada Ng, Director at CAN Design.

With sustainability in mind, OCM is committed to obtaining green certifications, including BEAM Plus Interiors v2.0, WELL (Core) v2, and EDGE (retail) v3.0.0. The revamp incorporates sustainable practices such as modular design, regional materials, and the use of recycled furniture, ensuring minimal environmental impact.

The revamp commenced in December 2023 and will continue until February 2025. Once completed, OCM will reaffirm its long-term positioning as one of the premier destinations for discerning shoppers in the Greater Bay Area.

Creating A Living Environment That Enhances The Mental & Physical Health Of Home Buyers

Dato' Beh Huck Lee

Eupe, an emerging Malaysian property developer, was recently recognised by the ESGBusiness Awards, winning the Healthy Lifestyle Product Award – Malaysia and the Green Building Award – Malaysia. The company's success can be attributed to its philosophy of "building homes that nurture individual well-being". In this interview, **Dato' Beh Huck Lee,** Group Managing Director of Eupe Corporation Berhad, tells us how the company incorporates the well-being of residents into the design of its residential projects.

Q: We understand that Eupe is one of Malaysia's most innovative and trusted developers. According to your website, Eupe has built more than 25,000 homes since you started in 1986 and it is still growing. How did Eupe become so successful?

A: Our success is firmly based on adhering to our values. We believe that as a property developer, we have a very important responsibility of giving our buyers the very best. Buying a home is the most important investment people make. So we're determined to provide buyers who place their trust in us the best design, the best lifestyle and the best investment possible. That's why our mission and vision statement is grounded in what we call 'Shared Value' – creating more value so we share more value with our buyers.

At the end of the day, we believe our commitment creates a lasting and positive difference to our buyers' lives. And I think the market has responded positively to our offering because we put so much emphasis on design detail, sustainability and lifestyle innovation.

Q: Eupe's philosophy is to build homes that nurture individual well-being. Why do you think that the well-being of the occupant is important in the design of a project? Can you give an example of such a project?

A: The home environment is where so many of our important memories and experiences happen. That's why we believe home design is so important to playing a positive part in the well-being of our buyers. Our second KL project – Parc3 @ KL South – is a very good example of what we call our social sustainability approach. Every aspect of its design, down to the smallest detail – is aimed at creating a nature-inspired, living environment, which enhances and sustains the mental and physical health and well-being of our buyers. We do this by embedding the power of connection in our residential designs. Extensive, innovative landscaping, iconic architecture and public art, connectivity to nearby amenities and passive design to ventilate and cool the building naturally – everything at Parc3 is aimed at creating a home where residents not only connect with nature, but also with each other, and by extension with themselves.

Q: What strategies or design principles do you use to achieve the resident's physical and mental well-being in your projects?

A: Our design approach is deeply informed by our four eco-design principles, which form our *Sustainability Plus* strategy. We see each principle as the biggest point of leverage in ensuring the design of our homes maximises the well-being of our residents. For example, 85 percent of the air we breathe is indoors. That's why our Healthy Air principle means our high-rise projects are designed with an abundance of voids and spaces to allow for the inflow of natural, healthy air to ventilate and cool the building. This reduces reliance on air-conditioning which has the added benefit of reducing carbon emissions. Our Green Community design principle is not only a commitment to maximise the amount of green space and gardens within our projects. It's also about increasing the biodiversity of these green spaces, so residents can readily enjoy and connect with nature.

> "At the end of the day, we believe our commitment creates a lasting and positive difference to our buyers' lives." – **Dato' Beh Huck Lee**

Q: How is the property market doing in Malaysia right now and how eco-conscious is it?





Parc3 @ KL South – a residential project in Kuala Lumpur by Eupe Corporation Berhad.

A: The property market is well-anchored in the resilience of the Malaysian economy despite ongoing global uncertainties. Property buyers overall are becoming more environmentally conscious and want sustainability to be a key part of the homes they buy. Younger property buyers are particularly focused on this aspect of home design, due to their awareness and commitment to climate action and biodiversity.

Q: What advice would you give to young people thinking about entering the property developer market in Malaysia?

A: Entering the property market is tough as home prices continue to climb. At the same time, buying a home and investing in property is the most important financial decision a young person can make. My advice is to persist and strive to get on the property ladder early. Choose a home that's not only a good investment, but it is also a great place to come home to.

All Photos: © Eupe Corporation Berhad

INTERVIEW WITH Théo NEUVILLE, Associate Architect – ENSAV, BLOOM Architecture

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?
A: At Bloom, we mostly use AI for creative expansion. It is a tool that allows us to rapidly create images to illustrate the potential design direction for a project.

This time saved to generate images enables us to explore many different alternatives and cover a wide range of possibilities to illustrate our vision during design or even before, to potential clients, which give them the ability to visualise and project themselves before committing with us.

The other side of the coin is that you can also spend too much time on AI and lose yourself in the process.

The possibility to create so many iterations can be time consuming and that is why it is important to frame the research from the start.

Defining the KPIs of the project and strong keywords can help you stay focused on the result you're looking for without drifting too far.

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate

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"AI is a tool that architects must learn to work with and not against."

– Théo NEUVILLE

1, 2 & 3: Bloom Architecture uses AI to illustrate its proposals presented for potential clients. Photo credits: Théo NEUVILLE for Bloom.

Théo NEUVILLE

and give us a few examples of building projects which have been designed with the help of AI.

A: One of our applications of AI into our practice is to illustrate our proposals presented for potential clients.

Certain clients contact us because they liked one of our projects and they want to replicate the concept for their personal project.

AI facilitates the process of producing feasibility studies for a client before reaching an agreement.

It helps us create images rapidly to show to a client and to have better support for discussion with them.

Q: In future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.

A: The relation between an architect and his client is something that will never be replaced with AI.

The trust, dialogue and feeling are key elements that build a bond between them that is essential to complete a project.

AI is a tool that architects must learn to work with and not against.

By mastering new competence and adding another string to their bow, architects can adapt their skill set and evolve with the flow of new technologies.

In the near future AI will be even more able to solve problems easily and rapidly, but as an orchestra conductor, it will still be the work of architects to work upstream of a project to identify these potential problems and coordinate with the right people and tools to finalise a project.

INTERVIEW WITH Jaskaran Singh, Principal Architect, Fab Studio

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?
A: The advent of artificial intelligence has stirred the architectural and engineering landscape to a transformative era that surpasses traditional practices and permeates diverse industries. Historically burdened, architects now find themselves at the precipice of a paradigm shift, where AI catalyses groundbreaking possibilities in design through the echo chamber of prompts.

AI offers architects and engineers many innovative tools to streamline and elevate their practices. The capacity to automate mundane tasks, optimise design processes, and simulate complex scenarios affords a newfound efficiency, saving creative energies for more profound conceptualisation. Imperative to the practice, striking a balance between harnessing the immense potential of AI and adding human intelligence is critical for architects and engineers as they navigate this dynamic intersection of technology and creativity. It is crucial to underscore that AI is neither an alternative nor a threat but rather a harmonious coalescence with human ingenuity, promising a plethora of possibilities.

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate and give us a few examples of building projects which have been designed with the help of AI.
A: Yes, as the role of architects undergoes a profound evolution, a distinctive opportunity unfolds for these professionals to ascend to new heights of creative influence. This transformative shift imposes architects

Fab Studio employs AI to generate iterations for its high residential projects. Photo credit: Fab Studio

"It is crucial to underscore that AI is neither an alternative nor a threat but rather a harmonious coalescence with human ingenuity, promising a plethora of possibilities."

– Jaskaran Singh

to make reasonable and informed decisions that resonate with the demands of the evolving scenario.

At Fab Studio, we have seized upon this opportunity by employing Artificial Intelligence (AI) to generate iterations for our high residential projects, engaging in exploring materials and styles ranging from the modern to the contemporary. Seamlessly integrated into our design process, AI serves as a muse for facade treatment, providing inspiration. This deliberate collaboration with AI complements and amplifies our creative endeavours. It reflects a tangible expression of partnership with AI wherein human creativity and technology stand out.

Q: In the future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.

A: The built environment will not witness the decline of architects, as the amalgamation of Artificial Intelligence (AI) into the design process signifies a transformative wave. Driven by an insistent demand for delivering superior quality work within compressed timelines, adaptation emerges in navigating this change. AI is positioned as a tool to surpass conventional methodologies and propels architecture to evolve rapidly.

Although AI stimulates certain facets of the architectural profession, it embraces human capability. The essence of architecture and engineering lies not merely in the mechanisation of tasks but in the fusion of creativity, contextual understanding, and empathetic problem-solving. As architects, we must leverage software strategically and not forsake its intrinsic value rooted in emotional intelligence, creativity, and the social dynamics integral to every project. Architects will always add soul to the fabric of spatial solutions.

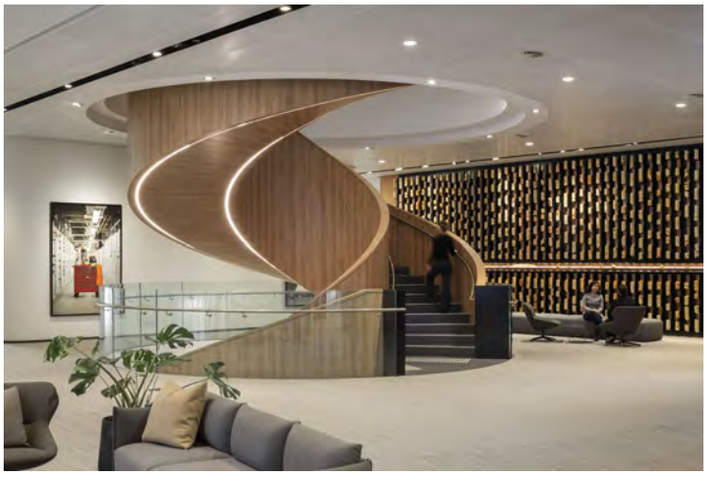
Jaskaran Singh. Photo credit: Fab Studio

Fab Studio employs AI to generate iterations for its high residential projects. Photo credit: Fab Studio

INTERVIEW WITH David Calkins, Regional Managing Principal, Gensler

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?
A: As the world's leading architecture and design firm, Gensler embraces the opportunities and challenges presented by the emergence of Artificial Intelligence (AI) in architecture and design. AI's notable strength in expediting the design process and enhancing efficiency allows us to navigate complexities, generate diverse iterations, and allocate more time to high-level conceptualisation, exploring innovative solutions beyond traditional methods.



Project Photos: Chevron Australia HQ
Gensler addressed the challenge of blending local culture, sustainability, and indigenous heritage for a cohesive design using advanced modelling tools. This strategic approach allowed us to overcome technical complexities and visualise the design before executing it. Photo credit: Gensler

"AI tools should be seen as robust collaborators, elevating creativity, efficiency, and decision-making without diminishing the essential human touch in design."

– David Calkins

AI's contribution to data-driven decision-making, particularly through insights from our Gensler Research Institute, integrates sustainable architecture and design solutions, aligning with our commitment to achieving a net-zero carbon portfolio by 2030. However, concerns about intellectual property safeguarding arise with the use of externally hosted AI platforms, emphasising the need to balance traditional design skills with AI assistance to preserve the integrity of our profession.

In response, Gensler is investing in developing its own AI database. Envisioned as a core system for processing data and producing reliable outcomes, this initiative involves sifting through decades of project data to create a robust database. With a vast portfolio covering hundreds of projects annually across 33 practice areas, our focus extends beyond design quality to safeguarding client confidentiality and intellectual property.

While recognising the time-consuming nature of developing our own AI database, Gensler adopts a long-term outlook, anticipating a more controlled system that meets specific needs for creating high-quality images and details. This move underscores our commitment to innovation, ensuring a harmonious relationship between technology and our world-renowned design expertise.

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate and give us a few examples of building projects which have been designed with the help of AI.

A: In the Asia Pacific Middle East region, Gensler architects and designers are integrating AI into their design processes. The proprietary NFORM Ecosystem, introduced by our Design Technology team, provides innovative tools for flexible ideation and real-time exploration, reinforcing the firm's commitment to sustainable design. This suite of technology tools allows for real-time simulation and exploration, seamlessly integrating design elements with a wide array of data sources. This approach not only promotes confident and productive design exploration but also underscores our dedication to shaping a sustainable and resilient future.

For instance, Gensler's AI algorithm globally evaluated over 1,000 buildings, identifying 32 percent as viable candidates for adaptive reuse, contributing to sustainable development practices and potentially saving 3.3 billion kilograms of carbon emissions. This AI application aligns with the firm's emphasis on sustainable practices, where repurposing existing structures emerges as a powerful tool in mitigating the environmental footprint of urban development.

David Calkins. Photo credit: Gensler

Q: In future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.

A: While AI is bringing about transformative changes in the fields of architecture and design, the prospect of complete replacement is minimal. AI should be regarded as a supplementary tool, enhancing the capabilities of professionals rather than replacing them entirely. Architects and designers bring creativity, intuition, and a profound understanding of human needs – elements that AI, at present, cannot fully replicate.

Therefore, AI tools should be seen as robust collaborators, elevating creativity, efficiency, and decision-making without diminishing the essential human touch in design. Architects and designers must maintain control throughout the design process, with AI serving as a tool guided by human intention and creativity. This underscores a human-centric approach to design, where AI complements rather than replaces the designer's role. As AI assumes specific tasks within the design process, architects and designers will experience a shift in responsibilities, requiring them to curate, refine, and guide the outcomes generated by AI models, highlighting the evolving nature of roles within the design profession.

INTERVIEW WITH

Mitu Mathur, Director, GPM Architects and Planners

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?

A: Artificial Intelligence (AI) offers architects and engineers unprecedented opportunities to revolutionise architecture and the construction industry. AI-driven automation can streamline design processes, enabling rapid generation and optimisation of innovative solutions facilitating the exploration of countless design alternatives. It offers transformative opportunities in parametric facade design, 3D printing and fabrication, AI prototyping, and form evolution, enhancing creativity, efficiency, and functionality across these domains, thereby revolutionising traditional processes. Advanced simulations and analyses help predict and optimise performance, reducing errors before physical implementation. This predictive capability extends to project management, where AI enhances scheduling and efficiency.

Conversely, the complexity of AI models may hinder understanding and transparency. Security risks, overreliance on technology, and legal liabilities pose additional challenges. Navigating these opportunities and threats requires a thoughtful approach, ensuring that architects and engineers harness the benefits of AI while addressing its potential risks. Continuous education and ethical considerations are crucial for successful integration into their professional practices.

1

Renders for Courtyard by Marriott, Hrishikesh.

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate and give us a few examples of building projects which have been designed with the help of AI.

A: The integration of AI in architectural practices has been notable, with firms leveraging AI for tasks ranging from design optimisation to project management. Generative design algorithms have become prevalent, allowing architects to explore many design possibilities efficiently. Projects like the Tencent Seafront Towers in Shenzhen have incorporated AI for energy-efficient design and smart building management in China. The towers use AI algorithms to analyse

"As AI continues to evolve, it is likely that more architects will explore its potential for pushing the boundaries of architectural creativity and efficiency."

– Mitu Mathur

environmental data and adjust building systems in real time, contributing to energy conservation.

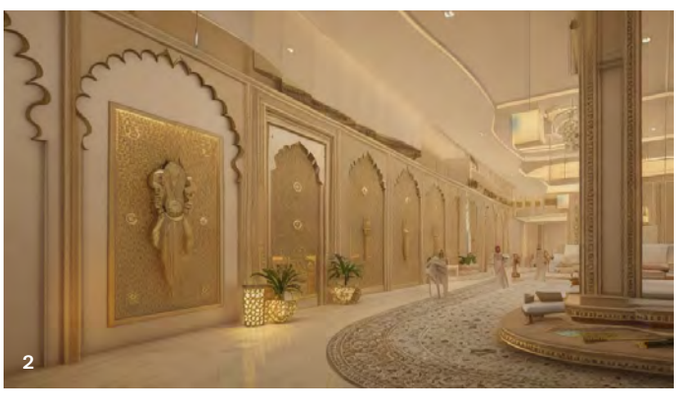
At GPM, we have also been experimenting with advanced digital tools and computational techniques. Under GPM DRL (Design & Research Lab), we have leveraged cutting-edge digital tools and technologies to design and create architectural and urban environments. Using softwares like Grasshopper and Python for analytical data integration such as daylight simulations, weather analysis, wind simulations etc, along with AI generative tools for generating multiple renders for various design options, the entire process of integrated design, sustainability and construction becomes much faster and organised. With a focus on AI, parametric design, generative design, optimisation and simulations, we have been working on creating parametric facades, sustainable design iterations and complex design solutions for many of our ongoing projects, such as interior iterations for Udaipur Airport, facade designs for Yesvantpur Railway Station, and also generating renders for experience development for hospitality projects like Courtyard by Marriott, Hrishikesh.

These examples underscore the growing trend of architects incorporating AI into their workflows to achieve innovative, sustainable, and technologically advanced designs. As AI continues to evolve, it is likely that more architects will explore its potential for pushing the boundaries of architectural creativity and efficiency.

Q: In future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.

A: While AI can augment and enhance certain aspects of the design and engineering processes, human involvement is crucial for envisioning and creating solutions sensitive to context, culture, and human experience. Therefore, the more plausible scenario is a collaboration between AI and human professionals, where AI tools support and amplify human capabilities, leading to more efficient, innovative, and sustainable outcomes. The future will likely see AI as a valuable assistant, allowing architects and engineers to focus on higher-level thinking and creative aspects of their professions.

Mitu Mathur. Photo credit: GPM



Interior iterations for Udaipur Airport.

Facade designs for Yesvantpur Railway Station.

1, 2 & 3: Photos of ongoing projects in India by GPM Architects and Planners using AI generative tools and other advanced digital tools. Image credits: GPM

INTERVIEW WITH Charles Gallavardin, Architect & Interior Designer and Co-Founder & General Director, Kanopea Architecture Studio / T3 Architects / Kanopya Living (Lodges)

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?
A: As co-founders of the agencies Kanopea Architecture Studio (France) and T3 Architects (Vietnam), I mainly see a threat with artificial intelligence applied to the field of architecture because it means replacing the collective intelligence of humans with artificial intelligence of a machine, with the deleterious effects that this can have on the development of the human brain in the medium and long term.

With AI, I also see the production of housing and buildings as a consumer good in the same way as a simple object while architecture must be at the crossroads between technique, economy, quality of use (aspects on which AI can possibly be effective), but also bring poetry, personalisation, symbols, promote local materials and know-how specific to a region.

I fear that AI will come back to standardise architecture across the world at a time when we should instead return to a bioregional architecture that is unique to each country and group of humans.

Bioclimatic dormitories in Vietnam – a project by T3 Architects & Kanopea Architecture Studio, using no AI. Photo credit: Herve GOUBAND (ALISA Production)

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate and give us a few examples of building projects which have been designed with the help of AI.
A: Many architecture firms are already embracing AI in Asia, for several bad reasons in my opinion:
- Go ever faster when we should slow down the world and preserve our resources because these resources (materials) are finite and we should not believe that they are infinite. Taking the time to design buildings is a guarantee of quality and constructive discussions between project stakeholders.
- Many architects are mediocre and this is the only way for them to make people believe that they are competent. While it is the machine that does part of the work. But a machine has no label; However, to build, you need a lot of ethics because

"I fear that AI will come back to standardise architecture across the world at a time when we should instead return to a bioregional architecture that is unique to each country and group of humans."

– Charles Gallavardin

when you construct a building, it is for several decades. And we must take care of future generations.
– Bad architects and clients can educate in architecture still consider that the form (aesthetic which generally goes out of fashion quickly) is more important than the substance (quality of use, urban integration, energy efficiency, sustainability, life cycle).

With T3 Architects Vietnam, we do not use AI out of personal conviction, to preserve a world where humans do not work to their loss by thinking in the short term.

Q: In future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.
A: It is up to people and architects to decide their destiny. This is why it is always important to take a step back from technologies. Even if we cannot go against progress, we must carefully measure the technologies that truly represent progress for humans, that is to say a technology that allows them to live better individually and within their community. If this is not the case, it is then necessary to create an ethics council as exists in several countries on certain subjects such as the end of life for example; and debate before deciding where laws should dominate in a future dedicated to technologies.

Bioclimatic tropical villa in South Vietnam – a project by T3 Architects & Kanopea Architecture Studio, using no AI. Photo credit: Phu Dao

Charles Gallavardin

Personally, I think that there is every interest in architects continuing to educate themselves on climate issues, to realise that the construction sector accounts for 40 percent of global CO2 emissions; and they will realise that the future is not to build as much as possible with concrete, but to renovate all existing buildings to preserve them for as long as possible.

And when it is necessary to construct new buildings, ensure that we limit the artificialization of the soil (because it is the soil that feeds people), use natural materials sourced locally (to avoid transport and develop local supply chains of biosourced and geosourced materials and to design according to the principles of bioclimatic architecture (protecting yourself from the sun in hot periods or heating yourself with the sun in cold periods, protecting yourself from strong winds, protecting yourself from heavy rain, and promoting natural ventilation to try to do without air conditioning, etc.).

The future will tell us whether humans and architects will have been sufficiently foresighted not to destroy their work by letting AI do things for them; because the work gives meaning to life, if we are serious and want the good of humanity. We must not believe that a technology is good because it was invented. Let's take a step back and be philosophical. Architects should read and educate themselves and they would quickly realise what is good for their future and that of their communities.

INTERVIEW WITH Vicky Chan, RA AIA ASSOC. HKIA BEAM PRO, Founder, Avoid Obvious Architects

Q: What kind of opportunities and threats does Artificial Intelligence present to architects and engineers?
A: The need to go through multiple design options to identify look and feel are tremendously useful especially during the early design phase. We believe AI will eventually mature enough to replace 70 percent of our repetitive work. The opportunities are that we will be able to take on more work at lower cost to serve the general public more and faster. There are two threats. On a global scale, we still have a severe issue on digital divide. There are communities that still don't have access to computers and Internet. These communities will fall even more behind with the advancement of AI. On a professional scale, AI has been training their knowledge using existing knowledge. Copyright will become a bigger issue when signature projects are being stolen. For manual labour, architectural work like many other disciplines will be narrowed down to some physical tasks that computers cannot perform. I think there is a need for less of us and we have to be more competitive to stay relevant.

Q: In Asia, are architects embracing Artificial Intelligence to complement their work? If yes, kindly elaborate and give us a few examples of building projects which have been designed with the help of AI.
A: I think everywhere in the world, people are embracing AI in the concept phase. I am not sure if we are seeing buildings being built already with the outcome of the AI yet. The software in the less 10 years are more about optimization and automation. It was less about generative design. I don't think any architects in public have admitted that their work has been 100 percent replaced by AI. I think clients will get quite upset if architects charged a human fee but instead submitted work done by a computer. In short, I don't know any buildings in Asia made 100 percent by AI. Again, the software have copyright issues. I am not sure it is wise for architects to admit that their work were done by AI unless for the few firms that had such a large database to make sure their outcome was trained only using their own copyrighted materials.

> "The opportunities are that we will be able to take on more work at lower cost to serve the general public more and faster."
>
> – *Vicky Chan*

Vicky Chan

Q: In future, is there a probability that Artificial Intelligence will replace architects and engineers? Kindly explain your thoughts.
A: Yes. Especially to non-site specific issues. Once we identify the site issues related to utilities, policies, and user requirements. The actual production to turn these ideas and solutions to fit the site constraint will be completely replaced by AI. Architects will be more physical at construction site and client meeting to turn the ideas into reality.

Alat and Carrier partner to advance climate and energy solutions in the Kingdom of Saudi Arabia

Riyadh, Saudi Arabia – Alat (Alat), a PIF company, and Carrier Global Corporation, global leader in intelligent climate and energy solutions, recently announced their commitment to build a cutting-edge manufacturing and R&D facility in Saudi Arabia that will deliver advanced heating, ventilation and air conditioning (HVAC) solutions. The partnership will serve customers in the Kingdom, and its visionary Giga projects, such as NEOM, as well as ensure broader regional – and even global – distribution. Alat was established on February 1, 2023, by His Royal Highness Prince Mohammed bin Salman Abdulaziz Al Saud, Crown Prince and Prime Minister, Chairman of the Board of Directors of Alat.

The agreement will leverage Alat's financial strengths and Carrier's technology and manufacturing capabilities to develop made-in-Saudi Arabia intelligent climate solutions, marking the first phase of the partnership with Alat. These offerings will address the continued growth of the HVAC industry in the Middle East and North Africa (MENA) region, which is expected to become a US$10 billion addressable market by 2030 – and a US$334 billion market globally by 2030 – driven by secular trends including urbanisation, sustainability and energy solutions, and digital transformation. This market will also provide scale to develop products, such as solutions for district cooling and heating, which could be used globally.

Carrier and Alat plan to break ground later this year on an advanced sustainable manufacturing and R&D facility in the Kingdom that will provide high-volume, high-tech, energy-efficient HVAC products including variable refrigerant flow (VRF), air-cooled chillers, air handling units (AHUs) and rooftop units for MENA markets, supported by local supply chain. R&D will focus on developing breakthrough technologies to meet region-specific requirements, such as high ambient temperature and natural/Low GWP refrigerant HVAC systems, both of which can, also be exported globally. As many as 5,000 jobs are expected to be created locally to support the project.

Danfoss unveils Asia Pacific's first Sustainability Technology Center in Singapore to accelerate decarbonization efforts regionally

Singapore – On 29 January 2024, Danish multinational engineering group, Danfoss, unveiled Asia Pacific's first Sustainability Technology Center (STC) in Singapore at the Nordic European Center, International Business Park, Singapore.

Supported by the Singapore Economic Development Board, the STC is set to become a prime gateway for introducing global decarbonization solutions to bolster the region's sustainability efforts through technological development and strategic partnerships.

As a hub for competence development, the Center will also help to localize tried and tested solutions Danfoss has to offer to the Asia Pacific region, empowering local partners with the knowledge and skills for effective implementation of sustainable technologies.

The launch event was graced by Her Excellency, Ms. Tan Poh Hong, Singapore Ambassador to Denmark; Ms. Birgit Dohmann Chang, Deputy Head of Mission at Danish Embassy; Mr. Soh Wai Wah, Principal and CEO of Singapore Polytechnic; Mr. Kim Fausing, President and CEO of Danfoss; together with Mr. Jan Schoemaker, Regional President of Danfoss Asia Pacific Region; and Astrid Mozes, President Regions of Danfoss, commemorating Danfoss' work and commitment to the green initiatives globally. Over 80 esteemed partners including business leaders, government embassies, agencies and institutions of higher learning were also in attendance.

Sustainability Technology Centre (STC)

The STC will showcase live

demonstrations of Danfoss' global decarbonization solutions, where visitors get to witness groundbreaking technologies that underpin some of Singapore's key sustainability projects.

This includes the Electric Dream Ferry and Keppel Bay Tower, Singapore's first BCA Green Mark Platinum Zero Energy commercial building. Apart from showcasing Danfoss' novel marine electrification solutions, the STC will double up as a training, pre-testing and commissioning ground for future adopters.

Kim Fausing, President and CEO, Danfoss commented on the opening of the STC: "Today marks another significant milestone for Danfoss. The Sustainability Technology Center will be a gateway for collaboration, partnerships, innovation, development, and elevating skills in sustainability solutions through training and application development. Seeing is believing, and this Center will serve as a platform for showcasing live decarbonization solutions to our customers and partners. Singapore's sustainability initiatives and infrastructure make it a prime location to drive decarbonization efforts across the region and beyond. Personally, I am thrilled to witness the Sustainability Technology Center taking off successfully and accelerating the implementation of sustainability initiatives in Singapore and the wider Asia Pacific region. Being part of the solution to build a better future is what our purpose in Danfoss is all about."

Situated at the central location of Asia Pacific, Singapore is easily accessible for various customers in the region, making this STC geographically strategic to support the different sustainability goals across the Asia Pacific countries. In addition, this STC is an expansion from the previous Green Building Training Center, that was launched in 2020, and the Marine Electrification Application Development Center (ADC) which was previously housed in the Danfoss Singapore Office. With a bigger space, we are now capable of showcasing more energy-efficient innovations for various megatrends.

With a specialization in Buildings, Food & Beverage, Land & Marine Electrification, and Industrial green technologies, the STC will showcase technologies to decarbonize cities and improve energy efficiency across various sectors. These solutions aim to play a pivotal role in Singapore's roadmap to reach its sustainability commitments made at COP28, as well as its Green Plan 2030 goals.

The STC will also foster the collaborative development of innovative sustainable solutions for traditional industries such as mining, palm oil, and construction. Specialized training to harness application of technologies will form the bedrock of the STC, as it works together with local partners and industries that are moving towards an environmentally conscious future.

Danfoss is also taking active steps to support Singapore Polytechnic (SP) in its efforts to make the entire educational campus CO2 neutral by 2030, as Singapore gears towards having at least one in five educational institutions reach carbon neutrality by 2030. The blueprint for SP comes from the ProjectZero model based on the town of Sønderborg, Denmark which is on track to be CO2 neutral in its energy system by 2029.

ebm-papst SEA announces change in managing director

Singapore – ebm-papst, a leading manufacturer of fans and motors headquartered in Mulfingen, Germany is pleased to announce a change in leadership for its Southeast Asia (SEA) headquarter. In addition to the position of Vice President, Product Management & Strategy, APAC & MEA Air Technology, Mr. Thomas Schwab will take over the position of Managing Director at ebm-papst SEA, effective from January 1st, 2024.

Thomas has been with the ebm-papst group for more than 11 years. He started as a corporate student and worked afterwards in the sales of ebm-papst Mulfingen until December 2019. In January 2020, he was transferred to China by taking the role of product management. In early 2022, he took the co-project leader role for the strategic project "Making The Future Together" until his recent job as Vice President of Product Management & Strategy, APAC & MEA. Thomas graduated from Duale Hochschule Baden-Württemberg with a Master degree of Science, majored in Industrial Engineering and Management. With his solid background and experience, Thomas is well-poised to lead the Southeast Asia team to the next level of growth and breakthroughs with a focus on sustainability and digitalization.

Mr. Thomas Schwab, Vice President, Product Management & Strategy, APAC & MEA Air Technology & Managing Director, ebm-papst SEA. Photo source: ebm-papst

Mr. Lee Kun Sub has been temporarily leading ebm-papst SEA as Managing Director since March 2022. At this time, he introduced a new leadership style, created transparency and started a transformation process in the subsidiary.

"We would like to thank Kun Sub for his engagement, commitment and the great results he achieved in the previous 1.5 years. Kun Sub will continue in the position of Managing Director at ebm-papst Korea and Global Lead for SBF Clean Room," said Andrej Honstein, Senior Vice President, Sales APAC & MEA Air Technology, ebm-papst Group.

Panduit launches wire basket cable tray routing system

Singapore — Panduit, a global leader in network and electrical infrastructure solutions, announced the launch of its next generation of cable management solutions, the Wire Basket Cable Tray Routing System, an offering designed to route and manage copper data cables, fiber optic, or power cables within data center, connected building, and industrial environments. Wire Basket provides an innovative design that improves strength-to-weight ratio compared to competitive options and is easier and quicker to install, providing a cost-effective installation solution.

Photo courtesy of Panduit.

The Wire Basket pathway sections have a grid pattern with larger openings than previous routing system offerings, allowing a greater number of cables to pass through while reducing wire cutting. By creating less wire cutting and leaving fewer sharp edges, the routing system creates a safer environment for network engineers. For a proper bend radius, the Wire Basket Cable Tray Routing System is available in a variety of sizes to protect cables at intersections.

The Panduit Wire Basket is UL listed to the highest standard of ruggedness and bonding capacity. Its innovative features provide quick, safe, and easy assembly for reduced cost and fast deployment.

"Panduit is excited for the release of Wire Basket because of its versatility of application," said Michael Zhang, Panduit Wire Basket Product Manager. "This offering brings improved safety to the market through its innovative design making the Wire Basket a standout product."

Delta supports hyperscale datacenter in Australia with rapid deployment of power train solution

Sydney, Australia — Delta Electronics, a global leader in power and thermal management solutions, demonstrated its adeptness in overcoming diverse logistical challenges by successfully executing the rapid deployment of an innovative, prefabricated, and fully self-contained Power Train Unit (PTU) solution to support a hyperscale datacenter in Australia.

Mr. Farhad Azizian, Delta Australia Engineering Manager, said, "Not only was this a major project, but it was also a real breakthrough for Delta as it is the first of its kind to be delivered to this site halfway through its expansion. Leveraging Delta's high power density products, enabled us to deliver power solutions with substantial capacity in a minimal footprint to fit in site-limited space. To enhance the overall system efficiency, we incorporated a high-efficiency Delta UPS, implemented an energy-saving cooling solution using elevated water temperature, and optimized the supply-to-load delivery path to reduce losses. This resulted in a more sustainable solution in addition to saving energy and reducing client OPEX. This was made possible with close collaboration between our experienced engineering team, the client, and seamless coordination with the site contractor team."

Delta's PTU is a prefabricated and fully self-contained solution for datacenter power and cooling. This solution offers datacenter owners the advantages of rapidly deployed scalable power with high reliability and efficiency. For this project, Delta deployed 12 PTUs for the customer's datacenter in 16 weeks in comparison to the 30-40 weeks typically required for a traditional power solution of the same scale. Moreover, providing a factory-tested solution saved considerable time and costs during the on-site testing and commissioning phase.

Delta PTU Solution. Photo credit: Delta Electronics Australia

Delta's PTU solutions for this site are rated to 1425kW utilizing the modular DPH UPS with UL9540A tested Delta Lithium-Ion batteries, water-cooled DX cooling, fire detection (VESDA) and gas fire suppression (NOVEC), and a fully customizable monitoring and management system using Delta's Energy Management System (EMS) software platform. This advanced turnkey solution allows for rapid deployment to the site.

The hyperscale datacenter customer selected Delta as a solution provider because of the company's proven track record in delivering quality PTUs to this industry with an agile services team that is able to supply, install, commission and hand over within extremely tight timeframes. As a world-leading data center solutions provider, Delta has extensive experience implementing power and cooling solutions for MW data center applications in Australia and Asia.

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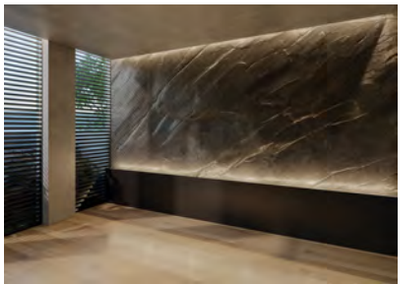

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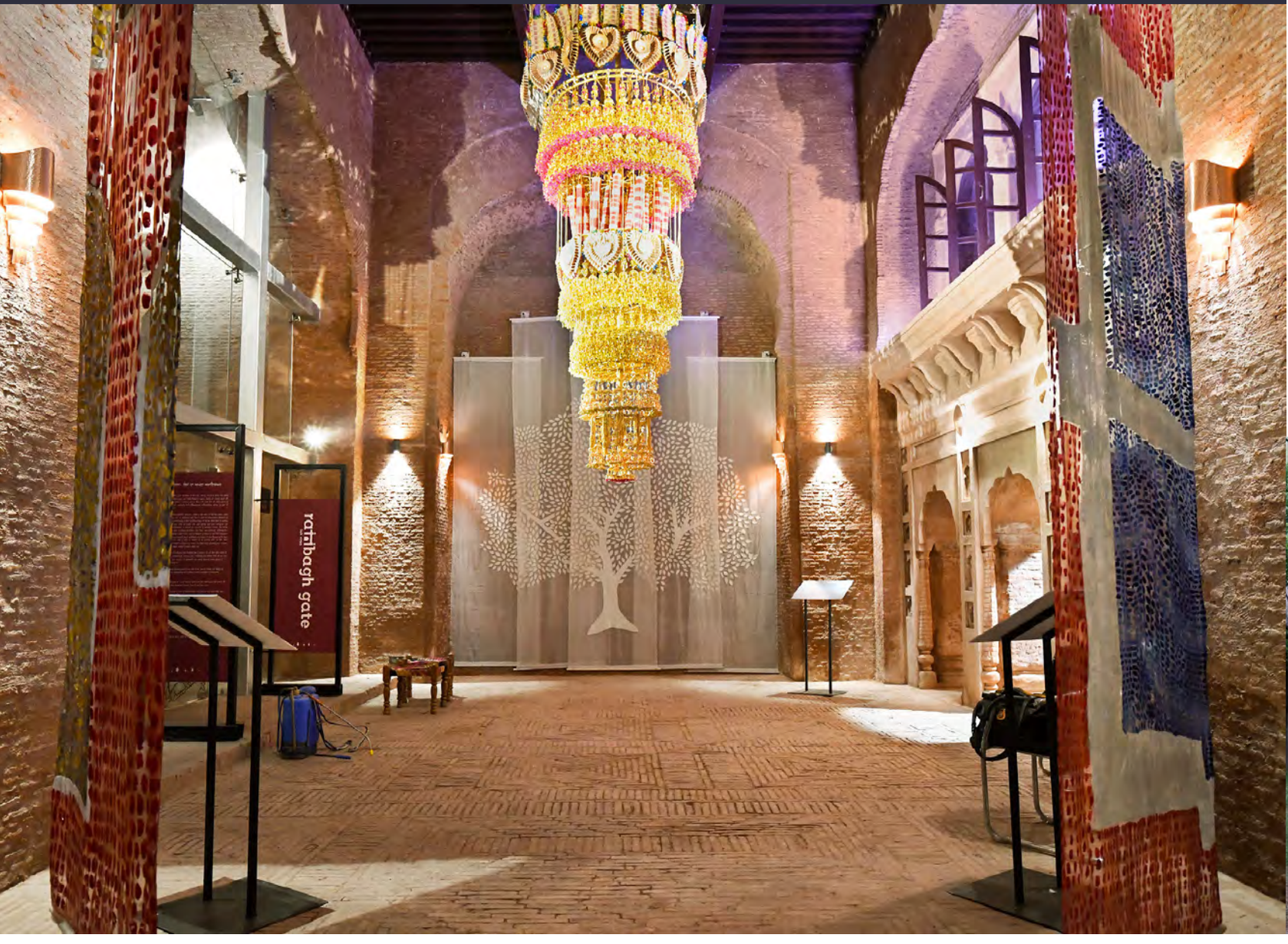
UNESCO announces winners of **2023 Asia-Pacific Awards for Cultural Heritage Conservation**

12 projects from China, India, and Nepal have been acknowledged by the Awards jury in this year's cycle.

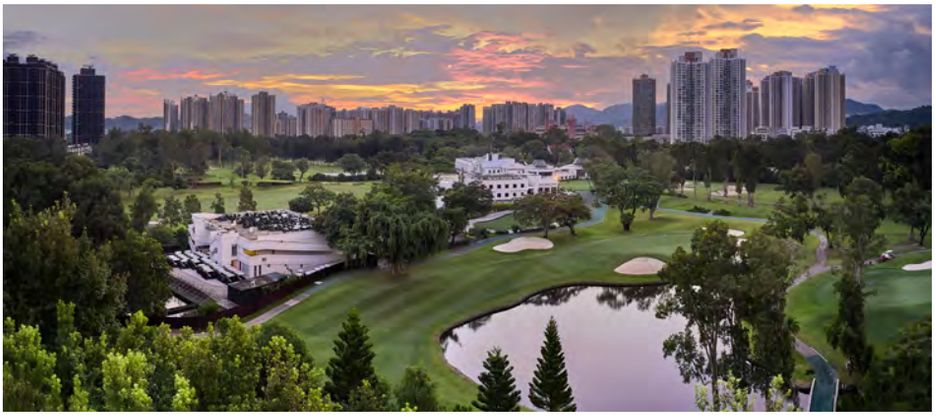
With people, heritage and creativity at its core, the resilient urban revitalization of the Rambagh Gate and Ramparts in Punjab, India, has garnered the highest honour, 'Award of Excellence', in this year's UNESCO Asia-Pacific Awards for Cultural Heritage Conservation. The project was lauded by this year's Awards jury for ensuring the continuity of the site's existing uses, while enhancing inclusivity and access for the broader community.



Rambagh Gate and Ramparts in Punjab, India.

Through a deliberation process carried out in November 2023, the jury selected a total of 12 projects on the basis of their understanding of place, their technical achievements, and their sustainability and impact, as specified in the Awards Criteria.

Three projects, namely the Fanling Golf Course in Hong Kong SAR, China; Dongguan Garden Residences in Yangzhou, China; and Karnikara Mandapam at Kunnamangalam Bhagawati Temple, Kerala, India, garnered an Award of Distinction. Five projects were recognised with an Award of Merit, including Yan Nan Yuan, at Peking University, Beijing, China; Pan Family Residence, in Suzhou, China; Church of Epiphany, in Haryana, India; David Sassoon Library and Reading Room, in Mumbai, India; and Bikaner House, in New Delhi, India.



Fanling Golf Course in Hong Kong SAR, China.

Karnikara Mandapam at Kunnamangalam Bhagawati Temple, Kerala, India.

Dongguan Garden Residences in Yangzhou, China.

Yan Nan Yuan, at Peking University, Beijing, China.

Pan Family Residence, in Suzhou, China.

Church of Epiphany, in Haryana, India.

Bikaner House, in New Delhi, India.

David Sassoon Library and Reading Room, in Mumbai, India.

The Award for New Design in Heritage Contexts went to Erlitou Site Museum of the Xia Capital, in Luoyang, China.

Erlitou Site Museum of the Xia Capital, in Luoyang, China.

The Karnikara Mandapam at Kunnamangalam Bhagawati Temple, in Kerala, India; Pipal Haveli, in Punjab, India; and Sikami Chhen, in Kathmandu, Nepal, were awarded with the Special Recognition for Sustainable Development for their transformative heritage practices which contribute to larger principles of sustainable development.

Pipal Haveli, in Punjab, India.

Sikami Chhen, in Kathmandu, Nepal.

This year, the jury reviewed 48 project entries from 8 countries across the Asia- Pacific region. Entries were notably diverse in scope and typology. The jury noted that, taken together, all entries collectively represent significant ongoing progress in heritage conservation awareness and practice in the region.

The Awards jury in 2023 was composed of seven international conservation experts directed by a chair. The geographical representation of the jury members spanned the Asia-Pacific region, just as jurors' expertise – archaeology, intangible cultural heritage, landscape design, museology, built heritage conservation – reflected a wide range of perspectives.

Every year, since 2000, the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation programme has been recognising the efforts of private individuals and organisations in restoring, conserving, and transforming structures and buildings of heritage value in the region. By acknowledging private efforts to restore and adapt historic properties, the Awards programme encourages others to undertake conservation projects within their own communities, whether independently or through public-private partnerships (PPPs).

UNESCO introduced the new category, 'Special Recognition for Sustainable Development', in 2020, together with an updated set of Awards Criteria to acknowledge the role and contribution of cultural heritage to sustainable development within the broader framework of the UN 2030 Agenda.

The awarded projects serve as a testament to how cultural heritage can be successfully preserved whilst at the same time mobilised to be integrated into various local development strategies.

The Award winners were selected according to their demonstration of success among various conservation criteria, such as their articulation of the spirit of place, their technical achievement, their appropriate use or adaptation, their engagement with the local community, and their contribution towards enhancing the sustainability of the surrounding environment and beyond.

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Jakarta Surface Show 2024	6–8 June 2024	Jakarta	Indonesia	www.jakartasurfaceshow.com	54
Guangzhou Electrical Building Technology (GEBT) 2024	9–12 June 2024	Guangzhou	China	https://guangzhou-electrical-building-technology.hk.messefrankfurt.com/guangzhou/en.html	58
ARCHIDEX 2024	3–6 July 2024	Kuala Lumpur	Malaysia	https://archidex.com.my	IBC
PHILBEX Iloilo 2024	11–14 July 2024	Iloilo City	Philippines	https://philbex.ph/iloilo	59
CBA Expo 2024	22–24 Aug 2024	Bangkok	Thailand	www.consbuildasia.com	57
Shanghai Intelligent Building Technology (SIBT) 2024	3–5 Sept 2024	Shanghai	China	https://shanghai-intelligent-building-technology.hk.messefrankfurt.com/shanghai/en.html	55
BEX Asia 2024	4–6 Sept 2024	Singapore	Singapore	www.bex-asia.com	9
PHILBEX Cebu 2024	12–15 Sept 2024	Cebu	Philippines	https://philbex.ph/cebu	59
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