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March / April 2023

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IN THIS ISSUE

Infrastructure Architecture

ON THE COVER: Clark International Airport New Terminal Building / Philippines

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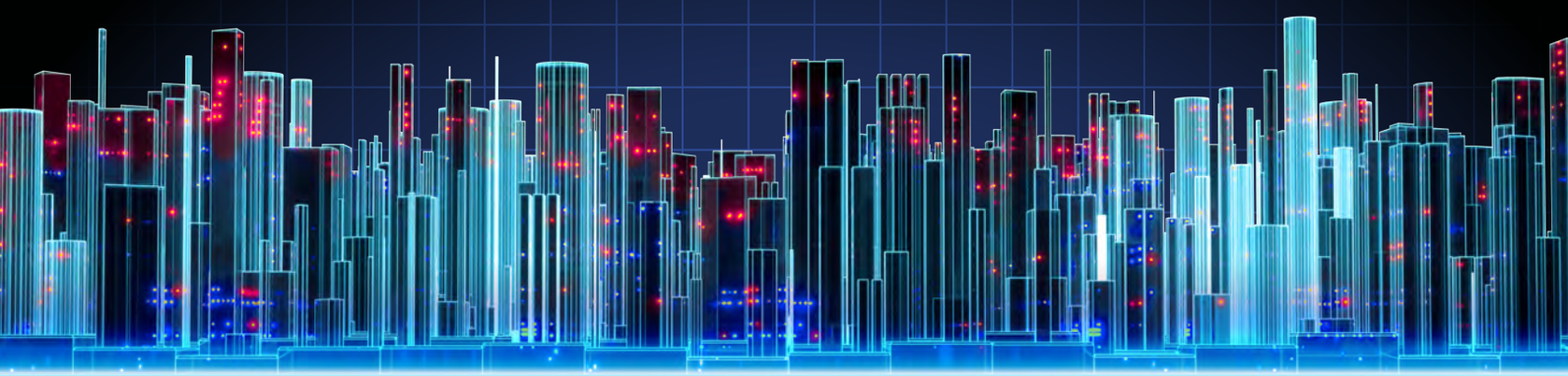

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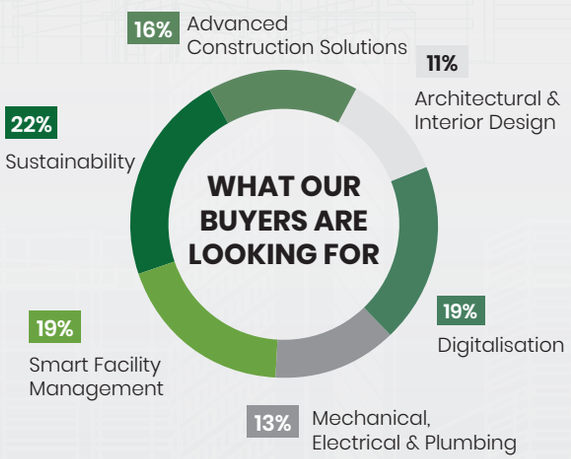

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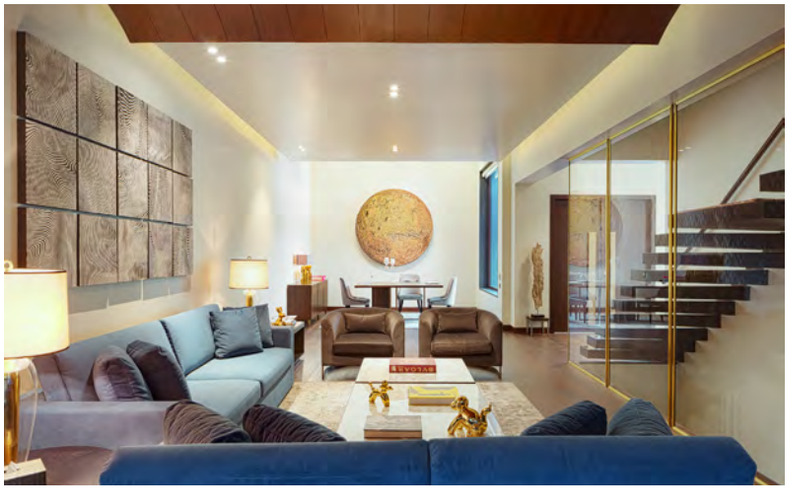

Project: Envelope
Interior Design: Studio IAAD
Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP
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On the Cover: Clark International Airport New Terminal Building in the Philippines. Photo credit: Luzon International Premiere Airport Development (LIPAD) Corporation

Cover design by Fawzeeah Yamin

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Welcome to Mar/Apr issue!

This issue's theme is on infrastructure architecture. For many of us who travel frequently on the plane, train or bus, we know how easy or confusing our journeys can be. Hence, a well-designed infrastructure facility plays an important part of our daily lives. In order to create a smooth ride or flight for people, architects are designing infrastructure facilities such as airports, train stations and bus terminals with the passengers in mind. Focusing on the needs of passengers as well as on aesthetics, architects have come up with some of the most interesting and iconic designs. We showcase some of the projects in this issue.

We also have filled in the interior design and landscaping sections with some nice stories. Studio IAAD has created a contemporary home for a respected luminary in the cinematic industry in New Delhi. Dawson Estate in Singapore was recently rejuvenated and features new playgrounds. In Landscaping news, Surbana Jurong has bagged several awards in the Singapore Landscape Architecture Awards 2022.

Remember to access your digital magazine issue from our website. The PDF copy contains the product showcase and MEP stories to keep you up to date.

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

Take care!

Amita Natverlal

May / June 2023 Issue

FEATURES:

- Biophilic Design
- Retail / F&B Interior Design
- Playgrounds & Landscaping

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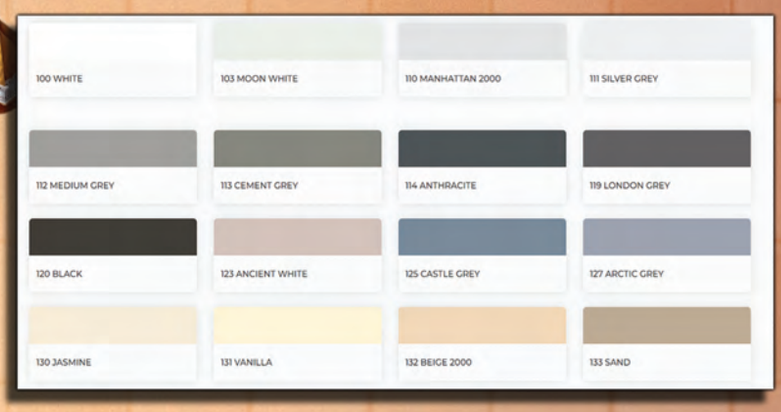

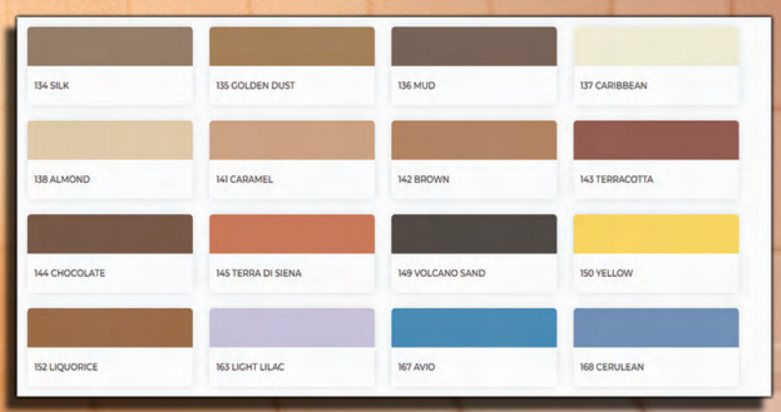

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Swire Properties secures premium residential site in Bangkok

Hong Kong – Swire Properties is pleased to announce that it has acquired a 40 percent interest in a site located on Wireless Road in Bangkok, one of the city's most prestigious addresses, for residential development. The interest was purchased from HKR International Limited for a consideration of THB 2.4 billion (around HKD570 million).

This acquisition marks Swire Properties' first investment in the Bangkok property market. The Company plans to develop the site, located in the prime Lumphini sub-district in Pathum Wan District, into a luxury condominium project, in partnership with renowned local developer City Realty Co. Ltd.

"We are very excited to be entering into the residential market in Bangkok. Bangkok is currently one of the most exciting emerging markets in South East Asia and we see significant potential for quality, high-end residential properties in the city. South East Asia is an important part of our residential trading strategy, and we will continue to explore opportunities which enable us to bring our premium residential brand to new markets in the region," said Tim Blackburn, Chief Executive of Swire Properties.

"This is a rare opportunity to develop a freehold site within the core area of Bangkok and, working closely with City Realty, a reputable partner with invaluable local experience, we are confident that we will be able to develop a new landmark in Bangkok."

With a site area of 12,666 square metres (approximately 3,166 square wah), the site enjoys an unrivalled location in the core CBD area of Bangkok and the project will have open views of both Lumphini and Benjakitti parks. Situated adjacent to Lumphini park, the site is conveniently located close to upscale shopping malls, international schools, five-star hotels and embassies.

CR Land's MixC Sungang by 10 Design: Redefining retail-gastronomic experience

Hong Kong – International architecture practice 10 Design (part of Egis Group) has successfully converted a former warehouse site into a retail-gastronomy destination, marking an important milestone for the ongoing transformation of the Sungang industrial area.

10 Design was commissioned to reimagine the site into a 78,890 square metres retail and F&B space topped with two Grade-A office towers. As part of the urban regeneration plan, the masterplan also includes residential and serviced apartment towers, resettlement housing and public amenities.

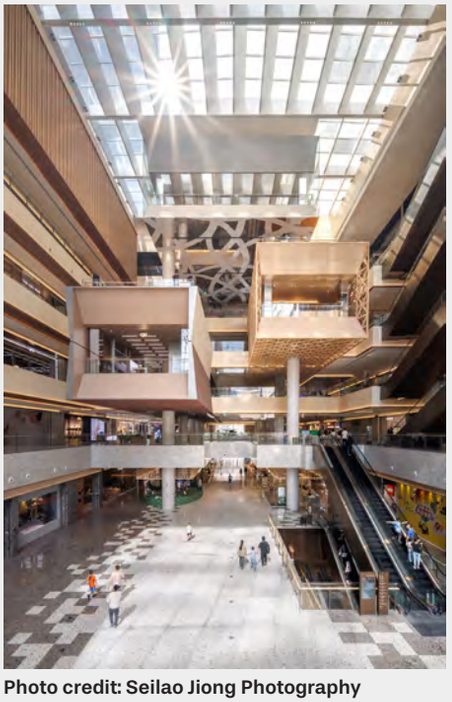
Jointly led by two Design Principals, Ted Givens and Chin Yong Ng, the concept for this new development breaks away from the conventional shopping mall design and instead draws inspiration from a traditional market square, creating a vibrant central meeting place for the community.

The compelling frontage of MixC Sungang is marked by a sculptural stainless steel canopy that pulls visitors into a pedestrianised retail street, creating a dynamic boulevard for shoppers and diners to enjoy.

The retail street is punctuated with the shopping mall entrance – the jewel of the scheme. The design of the entrance is animated by three floating food truck-inspired structures, which creates a unique spatial experience for dining and gastronomic experiences.

By weaving the concept of traditional marketplace and experiential retail together, MixC Sungang provides an immersive sensory experience to attract consumers from all backgrounds and age groups.

MixC Sungang is becoming a new catalyst of growth in this emerging CBD, as highlighted by Chief Operating Officer Miriam Auyeung. However, it also acts as a lifestyle complex which offers a rare opportunity for citizens to reconnect with nature and their communities in the bustling city of Shenzhen.



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dormakaba gets prestigious recognition for its progress in sustainability

Headquarters of dormakaba.

Rümlang, Switzerland – dormakaba announces two important acknowledgments for its commitment and progress on sustainable development. EcoVadis, the world's largest provider of corporate sustainability ratings, awarded dormakaba a gold medal. This result places dormakaba among the top five percent of more than 100,000 organizations assessed worldwide. Furthermore, dormakaba improved its CDP (Carbon Disclosure Project) score from B to A – by the end of 2022. With this result, dormakaba is well above the global average of more than 18,700 assessed companies. Being part of the Leadership band means that dormakaba is recognized as implementing current best practices for addressing climate issues.

The EcoVadis evaluation is based on a comprehensive catalog of questions in which the results of the criteria surveyed are grouped into the four topic areas including environment, labour & human rights, ethics and sustainable procurement. Compared to other companies in the industry, dormakaba is especially strong in the areas of labour and human rights (top 2 percent) and sustainable procurement (top 6 percent). dormakaba's gold medal is a reference for customers who want to purchase from companies with a high sustainability performance.

The not-for-profit CDP runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. The world's economy looks to CDP as the gold standard of environmental reporting, with the richest and most comprehensive dataset on corporate and city action. dormakaba's A-score Leadership level is a result of its efforts in proactive energy management and reduction of carbon emissions. These include investments to increase the energy efficiency both at operations and of products, to decrease dormakaba's energy consumption, and to expand its purchase and generation of green electricity. The latest example of these initiatives is the announcement in January 2023 that dormakaba powers it manufacturing facility in India with solar. With its CDP score level, dormakaba has also successfully positioned itself as the leader in sustainability in the access solutions market.

"We are very pleased to see dormakaba ranked this high by CDP and EcoVadis. Such ESG (Environment Social Governance) scores and ratings reflect our increased investments and continued progress in sustainability. dormakaba has committed to an industry-leading framework for sustainability with over 30 ambitious ESG targets as part of its strategy, Shape4Growth. It is inspiring to see the progress we are making in several areas, such as circular economy, diversity and inclusion, or more rigorous supplier assessments," says Stephanie Ossenbach, Group Sustainability Officer of dormakaba.

In November 2022 dormakaba also achieved Prime Status in ISS ESG Corporate Rating. In FY 2021/22, dormakaba's MSCI rating improved from A to AA, suggesting that dormakaba is among the industry leaders in managing the most significant ESG risks and opportunities.

Visit dormakaba's latest Sustainability Report to learn about its goals and results: www.report.dormakaba.com/2021_2022/en/sustainability/

Onyx Solar completes the largest building-integrated photovoltaic installation on the African continent

Avila, Spain – Onyx Solar, a leading producer of photovoltaic glass technology, has successfully completed the largest photovoltaic integration project on the African continent at the Sterling Bank headquarters in Lagos, Nigeria. The 6,500 square metres of crystalline silicon photovoltaic glass and 1 MW installed power will allow Sterling Bank to save energy costs and reduce its carbon footprint.

Onyx Solar's photovoltaic glass is easy to install and maintain and the innovative solution features 3,250 photovoltaic glasses of 2,000x1,000 mm in blue to match Sterling Bank's aesthetic requirements.

The installation will allow Sterling Bank to save energy costs and reduce its carbon footprint. Onyx Solar's photovoltaic glass is easy to install and maintain, meaning that the Nigerian bank can take advantage of both the active and passive properties of this innovative technology.

Aerial view of Sterling Bank's headquarters in Lagos, Nigeria. Photo credit: Onyx Solar

WATG appoints Sean Harry AIA, NCARB, LEED AP BD+C Managing Principal, Design Technology

Los Angeles, USA – WATG has announced the appointment of Sean Harry as Managing Principal, Design Technology. In this newly created leadership role, Sean Harry will lead the firm's ongoing strategic investment and deployment within WATG's technology ecosystem focusing on generative design, computational systems, visualization and software development.

Commenting on the appointment, Dave Moore, President + CEO of WATG said: "Throughout WATG's 77-year history, we have pioneered design innovations in the hospitality sector. Appointing Sean to this new role will allow us to continue to leverage technology to innovate and deliver enduring success for our clients around the world."

Sean Harry will work closely with the firm's principals to elevate the craft of design through technology with a focus on sustainability, while remaining true to the firm's hospitality design ethos.

Commenting on his new appointment, Sean Harry said: "Technology is rapidly transforming our AEC industry and it's critical that we are thoughtful in our evaluations and applications of solutions both in the short and long term. The benefits of design technology for our clients are immeasurable but must always be balanced with a human-centric approach to our design. We design destinations, places and spaces for guests, visitors, and residents. The role of design technology is to support our design process and workflow efficiencies without compromising our craft."

Sean Harry. Photo credit: WATG

Sean Harry rejoined WATG in 2015 and currently serves on the firm's Board of Directors, following his early tenure with the firm from 2006-2013. His project work spans the globe from Asia Pacific, Greater China, the Americas, and Middle East. Sean is also an accredited LEED professional with Building Design and Construction credentials.

He holds a Master of Architecture and a specialty in Architecture and Digital Design Technology from the University of Cincinnati and a Bachelor of Arts in Architecture, Architecture and Environmental Design from Miami University.

Naples Afragola Station

Where required, the concrete was repaired and levelled off with MAPEGROUT T60 and MAPEGROUT LM2K. EPORIP was recommended to seal any cracks in the concrete.

International Project Feature: Infrastructure Architecture, construction of the Naples Afragola High-Speed Railway Station. Mapei was proud to be involved in the project.

Installation of the metal and glass roof structure of the station, where POLYGLASS synthetic membranes were also used.

After two years of work and a contract worth around 600 million Euros, the Naples Afragola Railway Station was inaugurated by then Italian Prime Minister, Paolo Gentiloni, on the 6th of June 2017. Because the station plays a strategic role in linking the north and south of the Italian peninsular, it is also known as the Gateway to the South. Apart from being a fine example of contemporary architecture and a strategic hub for the regional and national high speed railway network, Naples Afragola is an important opportunity to integrate the urban areas of the local territory with the world of transport.

Once it is working at full capacity, thanks to its future connection with the Circumvesuviana line, the hub will serve a catchment area of around three million potential users from North part of the whole region.

The station is the result of an international design contest with which the national railways group FS Italiane, through its subsidiary company RFI (Rete Ferroviaria Italiana), intended to launch a new era in large-scale architectural railway projects in Italy. After four extensive design contests that spanned four different cities and more than a decade later, the project can be

The walls in the area alongside the platforms were protected against scuff marks and scratches with WALLGARD GRAFFITI BARRIER.

considered on the road to completion following commissioning of the stations of Turin Porta Susa HS, Rome Tiburtina and Naples Afragola, with just Florence Belfiore missing from the role-call.

Functional and modern: How a new station is born

The station was designed by the British architect of Iraqi origin Zaha Hadid, who

Photos 1 & 2: The surfaces were skimmed with PLANITOP FINE FINISH, which was specifically developed for this site. They were then finished off with MALECH primer and COLORITE BETON paint in a tailor-made RAL colour.

3

passed away in 2016 and carried out by Astaldi Group. It has sinuous lines similar to a train in motion and the CNN news network put it on the list of highly anticipated works of 2017.

The overall length of the central body of the station is 400 metres and, like a large bridge, straddles the platforms and connects the areas crossed by the railway lines, giving a sense of continuity between the surrounding landscape and the railway lines. The building of the station itself is characterised by large windows supported by steel and concrete walls that sit flush with the Corian dressing, a composite material made from acrylic polymer and alumina trihydrate (ATH), creating an effect of continuity between the opaque and transparent walls. The structure covers an area of more than 30,000 m2, rises to a height of 8 metres above the level of the tracks, slopes away at the ends and is developed over 4 levels.

The first level is for the movements of the trains themselves which, during the first phase, will use four of the available platforms: two for arrivals and departures and two for the trains that do not stop at Naples Afragola. A further two platforms will be put into service during the second phase and they will be used for regional trains and for the extension to the Circumvesuviana line. On the second level of the station are the ticket offices and hospitality lounges of the railway company, which will provide various services for passengers in the new station. The third and fourth levels will be phased in shortly with shops and other commercial services available for the passengers.

A large glass cover of more than 6,000 square metres was designed and installed on the roof of the station. The station was initially projected to have the external area to be around 150,000 square metres with gardens. Accompanying infrastructure around the station was also planned to include: a car-park for around 500 cars, which upon completion of the project will be extended to accommodate 1,400 cars. A taxi rank was also in the works for 53 vehicles with a dedicated kiss&ride drop-off lane (free parking places for quick stops) and a bus terminus with eight bays, which will then also be extended to 15 bays. Completion of the second phase and of the functional works for the commercial services will be gradually phased in over the coming years.

Architectural concepts and language according to Zaha Hadid

Naples Afragola is a concrete example of a new concept in rail travel, in which the station is no longer just an arrival and departure point for trains, but forms part of a more far reaching concept of mobility, with roots in the urban fabric in which it is located. This was intended by the Zaha Hadid Studio to act as a catalyser in the redevelopment of a highly urbanised territory located at the gateway to Naples. Designing a bridge-like structure over the tracks allows trains to have quicker stops, creates a more fluid internal distribution of traffic and, from an architectural point of view, guarantees a more rational use of spaces and the opportunity to use the main body of the station as a visual

reference point for the flat landscape. The entrances are positioned at the two ends of the bridge-like structure so that the west entrance, which points in the direction of the city of Afragola, is close to the terminus of the public transport system, the car-park and access to the high-speed railway lines, while the east entrance is in correspondence with the access to the central part where the areas for the employees of the station are located.

Also, from a technological point of view, the layout of the bridge allows the main body of the building to be oriented according to best practices in sustainability. Solar panels integrated into the projecting roofs, combined ventilation and integrated cooling and heating systems all help to reduce the amount of energy required over the year.

The construction technology adopted, on the other hand, may be summarised into three main sections: reinforced concrete for the base and glass panels for the roof over the commercial and shopping gallery, while for the raised structure, the external shell of the building (around 20,000 square metres) supported by around 200 specially-shaped steel columns, is made from concrete and Corian, a material chosen for its high performance properties in these particular atmospheric conditions and its exposure to chemical agents. To increase the level of comfort in the station, allow natural light to enter from above and improve visibility in the station to help passengers find their way around, the internal walls are mainly in glass, while the artificial lighting is mainly by LED to guarantee higher efficiency from the lighting.

Mapei intervention

Mapei Technical Services was also contacted right from the very start of the project for the new infrastructure to provide support for the work carried out on site and to work alongside the main contractors, Astaldi, the Works Director and the Zaha Hadid Studio. To complete the work on Naples Afragola station, the work was divided into two phases. Phase 1 involved the commissioning of the High Speed service area of the station and the level 2 of the building where the commercial services and the west entrance are located, while the east entrance will continue to be used as the entrance to the site until at least the end of this year. Phase 2 involves completion of all the work connected to the project for the Naples/Cancello link, which was scheduled to be completed in late 2023.

As far as Phase 1 which is discussed in this article is concerned, Mapei systems were used for the construction and installation of the external shell and for the floor coverings installed inside the station. Floor coverings have been installed up to Level 1 and most of Level 2, apart from the east gallery, while Levels 3 and 4 have been left in a semi-finished condition for the present time. The areas open to the general public have been cordoned off from the

Photos 3, 4 & 5: The gallery where the shops and commercial services are located, the corridors connecting various areas in the station and the waiting areas were coated with MAPEFLOOR SYSTEM 31.

ones that are still closed by installing temporary barriers with a similar finish to the original ones, so that the station can remain fully operative, safeguard the overall architectural uniqueness of the structure and allow for a more rational use of the commercial areas.

The façades of the building are in exposed concrete and, initially, Mapei Technical Services suggested repairing and levelling off the surfaces where required with MAPEGROUT T60 fibre-reinforced, sulphate-resistant thixotropic mortar and MAPEGROUT LM2K two-component, fibre-reinforced, thixotropic cementitious mortar mixed with corrosion inhibitor. To seal the cracks in the surfaces it was recommended to apply EPORIP two-component, solvent-free epoxy adhesive.

Once this phase had been completed, the delicate job of skimming the façades could commence. After discussing the opinions and specific requirements of the client, the Works Director, the contractor (Astaldi) and the artistic director (the Zaha Hadid Studio), Mapei R&D laboratories worked from June to December 2016 to develop a product with the required characteristics: PLANITOP FINE FINISH. This product is a light grey coloured one-component, ultra fine-textured cementitious skimming compound which, thanks to its special composition, gives the mortar a particularly high level of adhesion and excellent flow during application. Once the substrate was cured, it was initially treated with MALECH micronized acrylic resin-based primer, which is used to even out the absorption of substrates and promote a better bond with the layer of paint applied afterwards. The entire surface was then painted with COLORITE BETON semi-transparent, anti-carbonation paint in the colour RAL 9984 to even out the surface, which was also specifically developed. The paint forms a semi-transparent film which leaves the effect of the formwork or the exposed finish of the building visible and evens out its colour.

COLORITE BETON has a special formulation that protects surfaces over the years from damage caused by carbon dioxide, sulphur dioxide and direct sunlight and ensures good water-repellence.

In certain areas of the station such as the platforms, up to a level of 1.5 metres above ground level, the walls were protected against scuff marks and scratches with WALLGARD GRAFFITI BARRIER paint.

To form the resin floors inside the station (around 8,000 square metres), Mapei Technical Services suggested using MAPEFLOOR SYSTEM 31. This system is particularly recommended for floors areas where a multi-layered, non-slip resin coating with excellent mechanical properties and excellent resistance to chemicals and abrasion is required. The coating was formed by priming the floor with MAPEFLOOR I 910 epoxy binder and then applying a layer around 0.8 mm to 1.2 mm thick of MAPEFLOOR I 300 SL two-component, solvent-free, fillerized epoxy formulate. Where required, some of the areas were treated with MAPECOAT I 600 W two-component, epoxy resin-based-formulate. For some of the work on the roof, Mapei Technical Services proposed using waterproofing membranes made by POLYGLASS, a subsidiary company of Mapei Group.

The collector channels for the rainwater on the metal roof were coated with white, high-reflectance MAPEPLAN T B flexible, waterproof polyolefin membrane.

The membrane was bonded to the metal sandwich support panels with MAPEPLAN ADS 300 adhesive. The waterproofing work was carried out in two phases. The first phase was to pre-waterproof the collector channels prior to installation in the Carrara works, which was carried out by the specialised company contracted to carry out the work. The second phase was the actual installation of the collector channels on site and then to blend in and finish off the waterproof membrane.

Mapei Products

Repair of exposed finish surfaces: Eporip, Mapegrout T60, Mapegrout LM2K, Planitop Fine Finish
Façades protection and finish: Colorite Beton, Malech, Wallgard Graffiti Barrier
Flooring preparation: Mapecoat I 600 W, Mapefloor I 300 SL, MAPEFLOOR I 910

Polyglass Products

Roofing waterproofing: MAPEPLAN T B, MAPEPLAN ADS 300

Article source: Realtà Mapei International 65/2017

PROJECT DETAILS

PROJECT NAME: Naples Afragola Station
PROJECT LOCATION: Naples, Italy
PERIOD OF CONSTRUCTION:
PHASE 1: 2015-2017
PERIOD OF INTERVENTION:
PHASE 1: 2015-2017
INTERVENTION BY MAPEI: Supply of products for concrete, for finish and protection of surfaces, preparation of resin flooring, waterproofing of roofing
PROJECT: Zaha Hadid Architects
CLIENT: RFI-Rete Ferroviaria Italiana
WORKS DIRECTION: Italferr
CONTRACTOR: Astaldi Group (via Afragola FS Scarl)
INSTALLER COMPANY FOR POLYGLASS WATERPROOFING MEMBRANES: ALPHA AS Srl – Carrara (Italy)
MAPEI COORDINATORS: Giuseppe Mastroianni, Renato Soffi (Mapei SpA)
PHOTOS: Provided by Mapei

Clark International Airport New Terminal Building

Departure Gate

Clark International Airport (CRK) is located inside Clark Freeport Zone in Pampanga, Philippines, and serves as the main gateway to the Northern and Central Luzon Regions. It is accessible via the Subic–Clark–Tarlac Expressway (SCTEX), which connects the North via Tarlac–Pangasinan–La Union Expressway (TPLEX), and Metro Manila and the Southern Luzon region via North Luzon Expressway (NLEX).

CRK is operated by the Luzon International Premiere Airport Development (LIPAD) Corp, a special purpose company established to manage the operations and maintenance of Clark International Airport. The members of LIPAD Corp are Filinvest Development Corporation, JG Summit Holdings Inc., Philippine Airport Ground Support Solutions Inc., and Changi Airports Philippines (I) Pte. Ltd., a wholly-owned subsidiary of Changi Airports International. The consortium members each have vast experience in airport operations, air transportation, and property development.

On August 16, 2019, LIPAD Corp was formally awarded the O&M (Operations and Management) Project of the Clark International Airport.

The project has three components:

- The existing terminal which can accommodate up to 4.2 million passengers annually.
- Fitting out, opening, and operating the new terminal building that is projected to accommodate up to 8 million passengers annually: and,
- The management of the leases of the surrounding areas for the general aviation industry, among others.

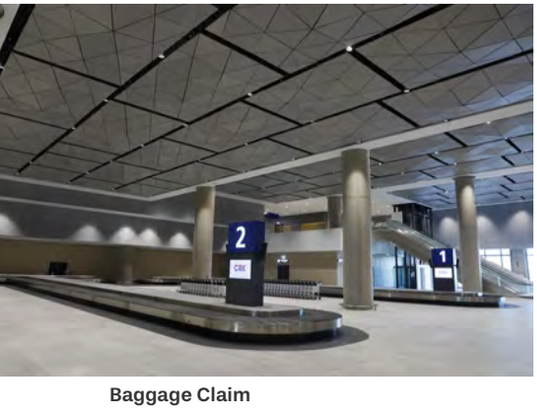
When LIPAD took over CRK in 2019, the airport network covered 19 domestic and 12 international destinations serving over 700 flights weekly from a total of 20 airlines. Today, LIPAD aims to continue working towards expanding this network to pre-COVID levels, connecting Clark to more domestic and international points, and cementing its position as the premier gateway for Central and Northern Luzon.

New terminal building

The new passenger terminal building of Clark International Airport, which started operations in May 2022, is a four-level building with a total area of 110,000 square metres and can accommodate eight million passengers annually. The new building houses both Domestic and International terminals of CRK.

The new terminal building of CRK offers unique features that make this airport truly world-class:

First are CONTACT-LESS options. There are self-service kiosks



Baggage Claim

Domestic Boarding Gate

International Boarding Gate

Clark International Airport

for passenger check-in, and self-bag drops to ensure minimal contact between passengers and airport personnel.

The new terminal is also focused on inclusivity. Toilet categories have been expanded with Family Rooms, gender-neutral and PWD-friendly restrooms and all boarding gates have escalators and elevators, providing seamless access for all passengers.

There is a transfer desk for the convenience of international passengers. Transfer passengers can skip immigration, pass through the transfer desk, and go straight up to the departure area to wait for their next flight.

Technology that can improve passenger safety and on-time performance of aircraft is also a priority at this new terminal, thus, the terminal is using the state-of-the-art – "intelligent" Advanced Visual Docking Guidance System – a system that allows pilots to park aircrafts precisely and safely even in adverse weather conditions, using advanced laser technology.

The opening of Clark International Airport New Terminal shall pave the way in achieving CRK's objective of serving millions of the country's travelers as well as further pushing economic developments in the region.

The Airport will redefine the air travel experience. It will be northern and central Luzon's gateway, connecting the region to the rest of the Philippines and the world.

Commercial Area

CRK Departure Hall

PROJECT DETAILS

PROJECT NAME: Clark International Airport New Terminal Building
PROJECT LOCATION: Clark Freeport Zone, Pampanga, Philippines
CLIENT: Luzon International Premiere Airport Development (LIPAD) Corporation
LEAD DESIGNER & INTERIOR FIT-OUT: Populous
TOTAL AREA: 110,000 square metres
COMPLETION: January 2021
OPENING: May 2022
PHOTO CREDIT: Luzon International Premiere Airport Development (LIPAD) Corporation

Samarkand International Airport Main Passenger Terminal Building


INTERNATIONAL AIRPORT

Samarkand is one of the most fascinating and charming cities of the world since its historical and cultural background. This touristy city is located in the heart of Central Asia, on the historic silk road.

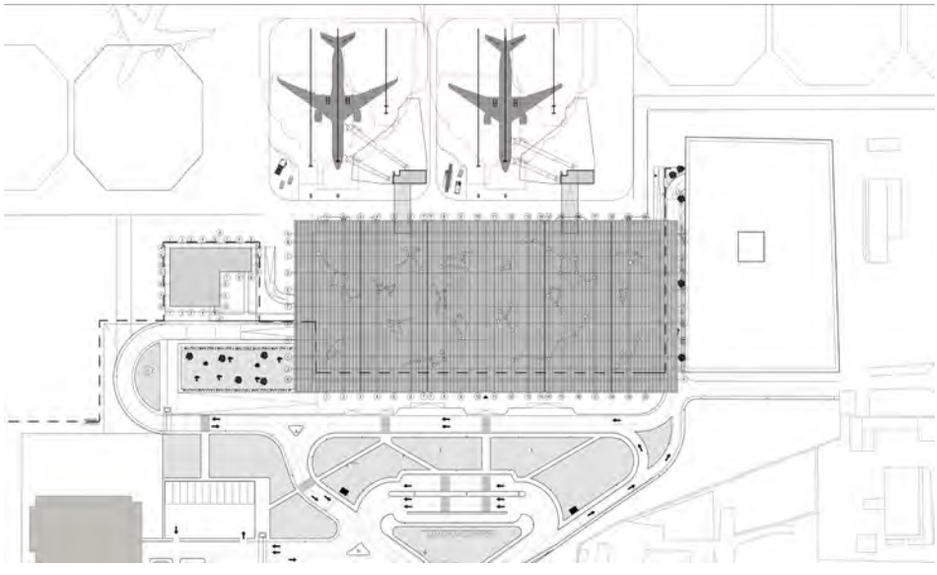
The design of the passenger terminal building of Samarkand Airport is commenced at the end of 2019. The main idea was creating a timeless and unique airport structure with historical references rather than copying them and with remarkable passenger experience. When the issue is an airport, Mirza Ulugh Beg and his astronomical works (star catalogue, minutes and seconds of arc, etc.) in Samarkand set our origin.

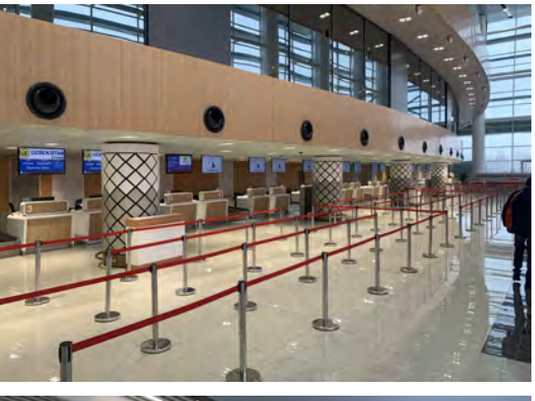
In order to evince this story of stylish and attractive design with a mix of local and modern inspirations; bright, simple and flexible architectural elements are combined with traditional trends in a smart way by form and material selection.

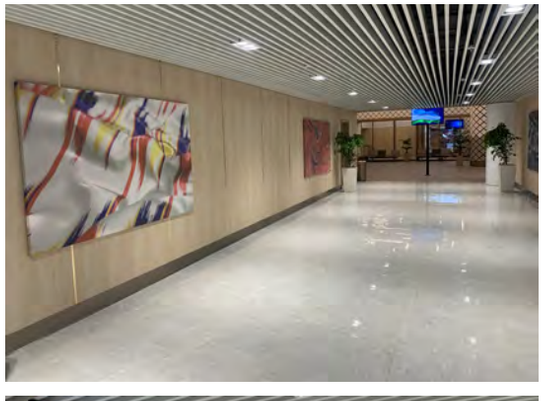
The use of wooden elements, appealing mix of organically shaped retail units and green zones also triggers a warm and natural atmosphere inside.

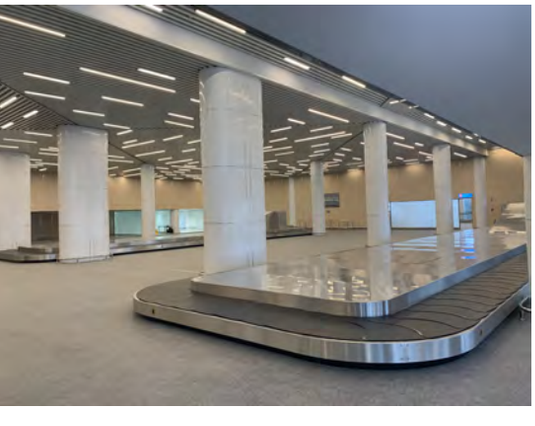
As a result, an airport design came up in the heart of Central Asia with totally 1,5 million yearly passenger capacity (planned additional 1 million expandable strategy by 2030) and 42,000 square metres construction area.

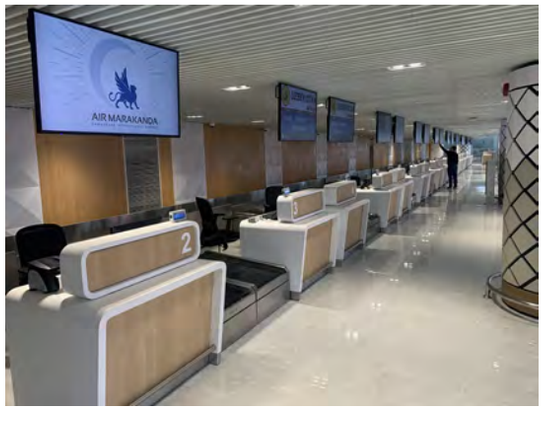
Led by Meltem Oz, KIKLOP Design unveils their design for Uzbekistan's "Samarkand International Airport Main Passenger Terminal Building". Having begun construction at the beginning of 2020, the project was completed in the third quarter 2022.











PROJECT DETAILS

PROJECT NAME: Samarkand International Airport Main Passenger Terminal Building
PROJECT LOCATION: Samarkand, Uzbekistan
CLIENT: Ministry of Transport of Uzbekistan, Enter Engineering
LOCALIZATION ARCHITECTS: Prime Tower
AVIATION PLANNING, STRUCTURAL CONSULTANT, MEP, BHS/SAS CONSULTANT, LANDSCAPE CONSULTANT, SIGNAGE CONSULTANT, INTERIOR DESIGN: KIKLOP Design
CONSTRUCTION AREA: 42,000 square metres
CONSTRUCTION STARTED: Beginning of 2020
CONSTRUCUION COMPLETED: Third quarter of 2022
PHOTO CREDIT: KIKLOP Design

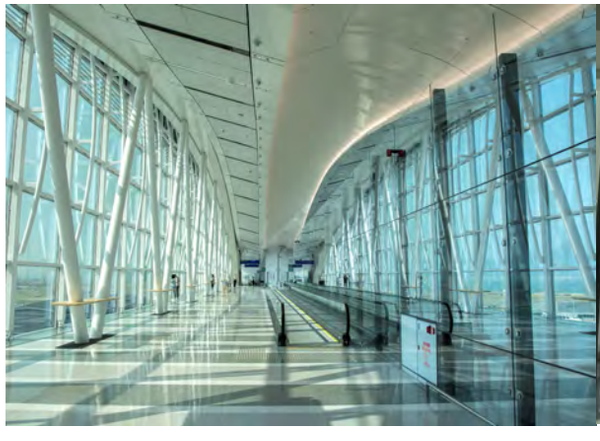
Sky Bridge at Hong Kong International Airport

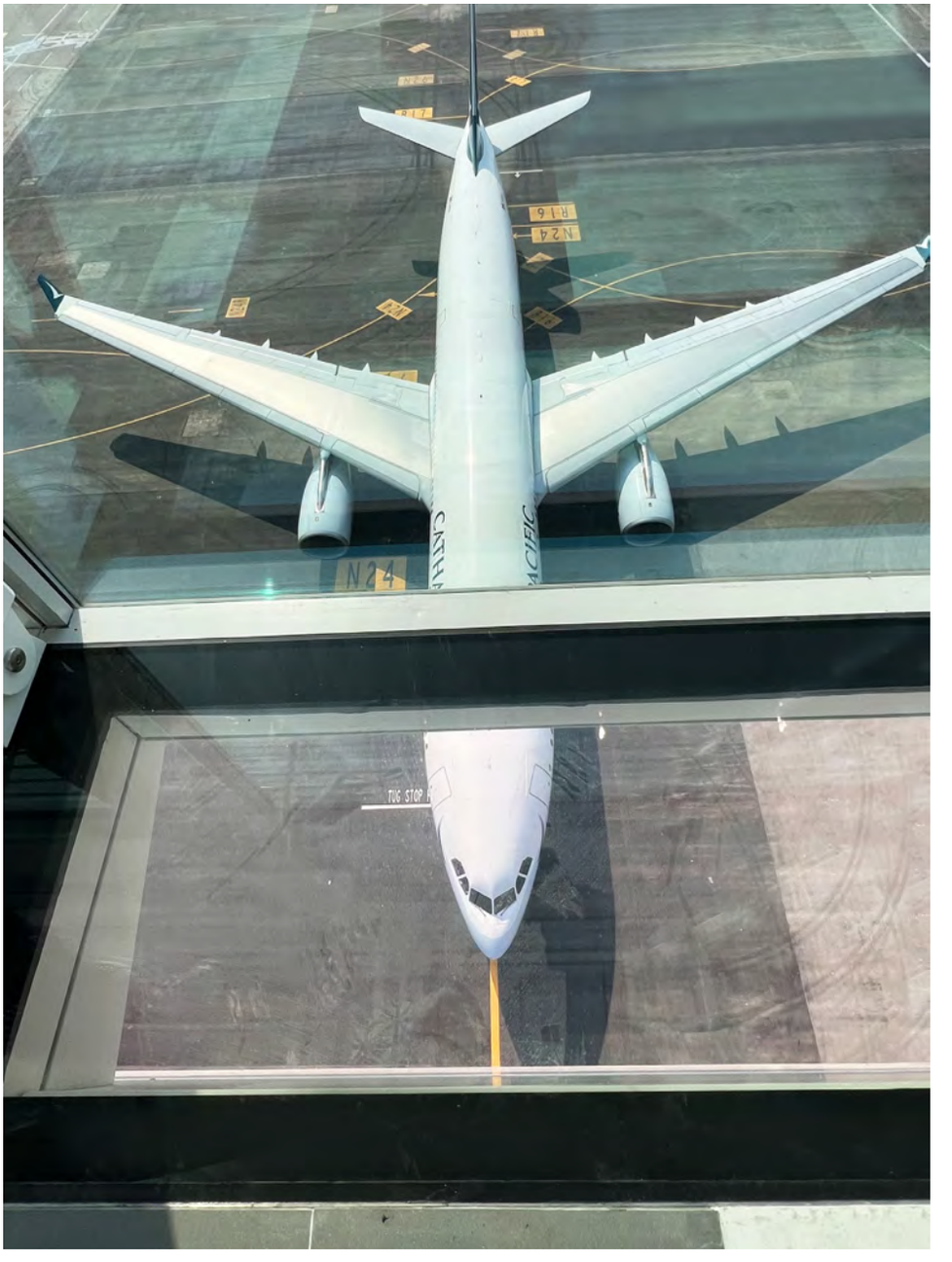

AY PACIFIC

Starting 1 November 2022, passengers can conveniently travel between Terminal 1 (T1) and T1 Satellite Concourse (T1S) at Hong Kong International Airport (HKIA) via Sky Bridge, a new 200 metres-long and 20 metres-width footbridge equipped with escalators and automated walkway.

Spanning a taxiway at the airport and is 28 metres above the ground, Sky Bridge is the world's longest airside bridge that allows the largest passenger aircraft code F, i.e. A380, to pass under it. With the exterior glazing and glass floor installed on the bridge, passengers can enjoy the extraordinary experience of an aircraft passing beneath their feet. With the unique panoramic view across the airport, Sky Bridge offers the highest view point of the airport for passengers. An observation deck, a catering outlet and a shop on the Sky Bridge will open in phases.

Ricky Leung, Executive Director of Engineering & Technology, Airport Authority Hong Kong said, "Sky Bridge is aspired to be the iconic feature at HKIA.





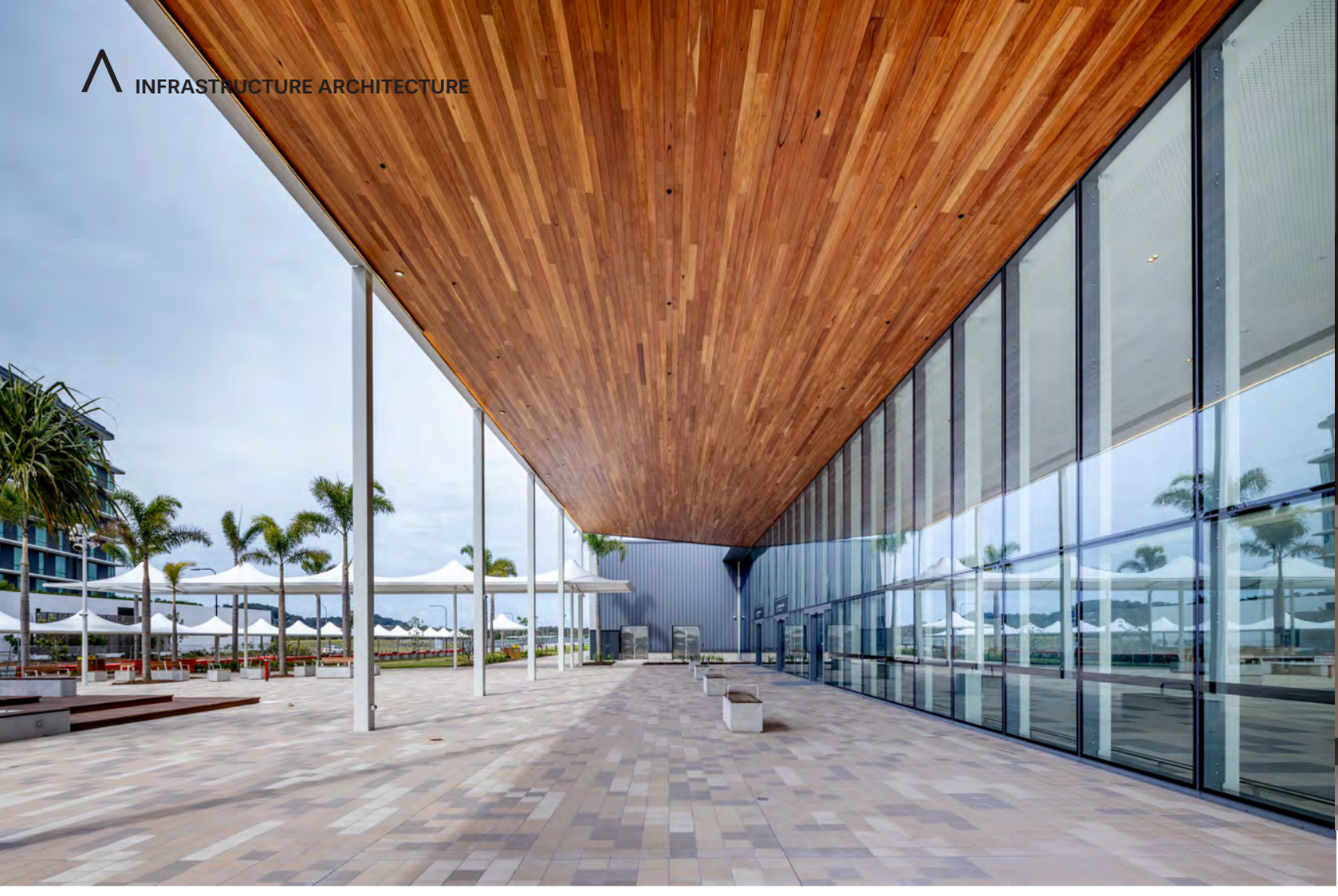
It offers passengers a spectacular view of the entire airport with the nearby landscape as the backdrop. Passengers have a brand new spot for snap shots before they go on with their journey. Sky Bridge is a part of our efforts in renewing and enhancing passenger experience at HKIA. Together with other upgraded airport facilities, we look forward to welcoming passengers from around the world." Before the commencement of Sky Bridge, passenger had to take shuttle bus to and from T1S for boarding and disembarkation.

PROJECT DETAILS

PROJECT NAME: Sky Bridge
PROJECT LOCATION: Hong Kong International Airport
CLIENT: Airport Authority Hong Kong
TOTAL AREA: 200 metres-long and 20 metres-width footbridge
COMPLETION: November 2022
PHOTO CREDIT: Hong Kong International Airport

Gold Coast Airport Terminal Expansion


al arrivals



The highly anticipated Gold Coast Airport Terminal expansion between Brisbane and Byron Bay in Australia officially opened in November 2022 and welcomed holiday travellers.

As passenger numbers increase considerably over the next decade – especially in the lead-up to the 2032 Olympics in Brisbane – Hassell's design for the expansion of Gold Coast Airport on Bundjalung and Yugambeh Country includes a new and improved 30,000 square metres three-level terminal, double the footprint of the existing space.

"The three-level terminal gives the airport greater operational flexibility and will support the considerable increase in passenger numbers over the next decade. We're very excited to see this critical new expansion now open for holiday travellers," says Hassell Principal Mark Wolfe.

Highlights of the new terminal design include four glass aerobridges and an innovative swing gate system, which effortlessly transforms departure and arrivals gates from international to domestic, in addition to premium retail and dining facilities plus new departure lounges.

"The impressive Gold Coast hinterland and the region's iconic coast greatly influenced the landscaping in the new forecourt, which passengers can now enjoy as part of their journey to-and-from the airport.

"The design redefines the traditional approach to aviation precincts with a flexible plaza, abundant planting and a large lawn providing opportunities for community events and numerous other activations," says Hassell Principal Jason Cuffle.

Photo credit & photographer: Christopher Frederick Jones

PROJECT DETAILS

PROJECT NAME: Gold Coast Airport Terminal Expansion
PROJECT LOCATION: Gold Coast, Australia
CLIENT: Queensland Airports Limited
ARCHITECT: Hassell
EXPANSION AREA: 30,000 square metres
COMPLETION: November 2022
PHOTO CREDIT: Gold Coast Airport

New Goa Manohar International Airport


Exit
निकास | भायर वचप

New Goa Manohar International Airport, developed by GMR Goa International Airport Limited (GGIAL), a wholly owned subsidiary of GMR Airports Infrastructure Limited, commenced Scheduled Domestic Flight Operations from New Goa Manohar International Airport at Mopa, Goa on January 5, 2023.

This airport was inaugurated by the Hon'ble Prime Minister of India Shri. Narendra Modi on December 11, 2022. It will unleash the true potential of Goa by strengthening its connectivity nationally and internationally.

Speaking on the occasion Mr. R. V. Sheshan, CEO-GGIAL, said, "The commencement of flight operations at the New Goa Manohar International Airport marks the beginning of a new chapter of growth for Goa. Through this airport, GGIAL will constantly work towards providing a world-class experience for travelers, airlines, and all stakeholders. Goa is an International tourism destination and we aim to cater to the world with the best of facilities."

Built on 2,132 acres, the New Goa Airport is located at Pernem Taluka in North Goa. It is a state-of-the-art 24x7x365 international airport serving all the segments of inbound and outbound tourism.

Salient features of fully operational New Goa Manohar International Airport (Phase I) are:

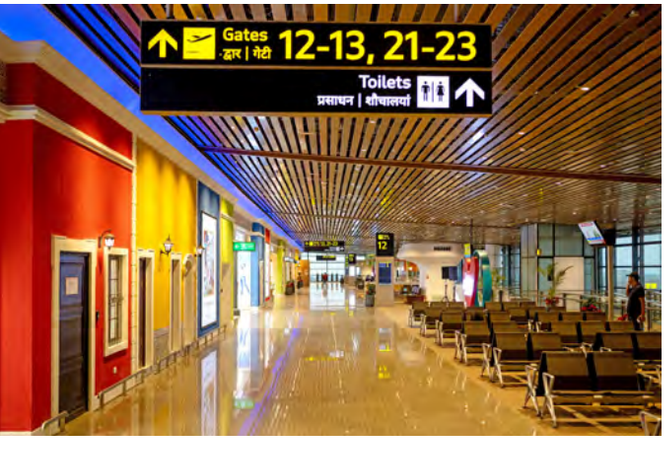
- Main Runway: 3.5 kilometres long and 60 metres wide code 4E compliant runway; capable of handling the world's largest aircraft like Airbus A380/equivalent.
- Parallel Taxiway: similar specification as the main runway, with 2 Rapid Exit Taxiways & 6 Cross Taxiways.
- Parking Bays: 14 numbers, out of which five are aerobridges.
- Provides adequate night parking facilities for aircraft.
- Comprehensive underground fuel hydrant system backed up with 7,500 Kilo Litres of ATF storage.
- Expansive 25,000 Metric Tonnes temperature-controlled cargo terminal.
- 18 check-in counters and 4 self-baggage drop facilities.
- 12 Immigration and 8 emigration counters.
- Integrated terminal building with contemporary world-class amenities.
- State-of-the-art and independent air navigation infrastructure.
- Adequate in-flight catering services.
- Airside and terminal infrastructure are expandable in a modular manner to meet future demand.

Environmental sustainability initiatives at New Goa Airport include:

- The New Goa Airport is designed to be a zero-carbon footprint airport and will join the elite club of green airports across the world.
- A 5-MW Solar PV Power Generation Plant within the airport premises.
- Bridge Mounted Equipment has been installed to reduce Green House Gas (GHG) emissions from Auxiliary Power Units (APUs) of Aircraft.
- The Airport has a state-of-the-art 625 KLD capacity Sewage Treatment Plant (STP) making the airport a Zero Discharge Unit.
- The airport has a solid waste management plant with a capacity to process 2 tonnes of biodegradable waste every day & 3 tons of non-biodegradable waste per day.
- >5 Lac native species tree saplings have been planted in & around the project site.
- Green & sustainable initiative adopted by the airport operator has brought down the power requirement.

The New Goa Manohar International Airport captures the true essence, culture, and spirit of Goa and its people from the moment the travelers set foot at the airport. The passengers are welcomed by the architectural specialty of Goa, the Azulejos tiles, along with the avid usage of bright red, green, blue, and yellow colours. The new airport flaunts a designated area especially curated for flea markets where local artisans and craftsmen are encouraged to display and market their products. Taking forward the Goan culture and its essence, the food court reflects the true characteristic of a typical Goan café.

GGIAL has set up Aviation Skill Development Centre, which will skill & empower the local Goan youth and make them employable. About 2,000 people are likely to be employed in the airport operations and it is expected that more than 5,000 people will be indirectly benefitted from the airport.



PROJECT DETAILS

PROJECT NAME: New Goa Manohar International Airport
PROJECT LOCATION: Goa, India
CLIENT: GMR Goa International Airport Limited (GGIAL), a wholly owned subsidiary of GMR Airports Infrastructure Limited
ARCHITECTURE AND MASTERPLAN CONSULTANT: COWI India and Nordic – Office of Architecture
SITE AREA: 2,132 acres
CONSTRUCTION: Ongoing process
COMPLETION: December 2022 (Phase One)
COMMENCED SCHEDULED DOMESTIC FLIGHT OPERATIONS: 5 January 2023
PHOTOS: Courtesy of GMR Goa International Airport Limited

Ginkgo Swan Lake Train Station No.2

External view of the project.

Multifunctional space on the north side of the project.

Ginkgo Swan Lake is located in the Xiushui New District of Jiaxing. It is based on the natural ecological landscape and uses rich water resources and integrates traditional culture. At the same time, it introduces unique projects such as ginkgo forest, small train around the lake, art museum, ecological bird island, and waterside homestay. It is committed to build a future life experience zone where ecology and nature coexist harmoniously, wisdom and technology coexist, and art and humanity blend. The Train station No.2 is the end of a wonderful journey, and is also a complex space that integrates programs such as children's club, reception, and exhibition.

Design concept

Continuous and jumping space under a big roof. If children was architects, design will be a game. Use wooden sticks to prop up a big roof and then let the train drive into the station. Fold the roof diagonally, there would be a more wonderful space underneath. Coat the roof surface with a layer of silver, which then reflects the changing sky.

Space

Beneath the large roof on the south side is children's club. Jumping platforms connect the site in front of the building to the site on the back, which are on different levels. With all of the ancillary functions being placed under it, the jumping platforms merge into one continuous ground. The spatial experience in between the folded roof and the jumping platforms is constantly changing. It also extends from the transparent facade and the overhanging eaves to the outdoor platform and the landscape.

Under the large roof on the north side is a flexible complex space. Hexia Architects built two "white towers" on both sides as back of houses, creating a flexible large space in between them, to afford programs such as reception, exhibition, pop-up stores, and forum. Following the curved staircase to the top of the "White Tower", there is a loft close to the roof, giving a surprising scale jump from the large space below. It's cozy here, you can "overlook" the busy hall and the quiet "white tower" on the other side. Following the rhythm of the wood structure, the ceiling extends to the outside, tends to touch the opposite one, turns the platforms and rail into a patio.

Another external view of the project.

Children's club on the south side of the project.

When the train stops, it looks like a bigger toy is placed in the patio, giving the space a surreal scale reference.

Structure and material

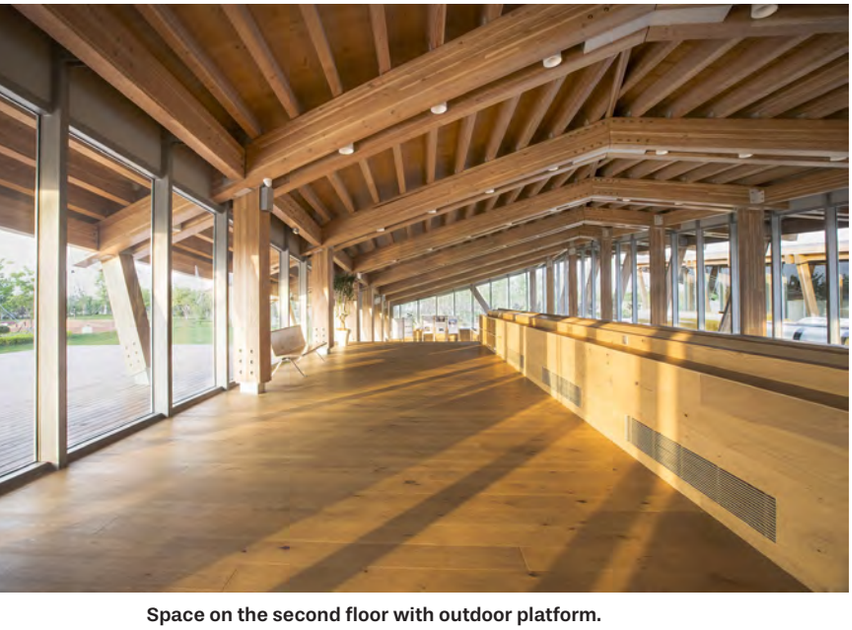
Hexia Architects has been experimenting with more environmentally friendly and sustainable construction methods in its design. Replacing steel or concrete with wood can reduce the carbon emissions per square metre to one-tenth. At the same time, wood is a natural renewable resource, and its growth is a "carbon reducing" process. In this project, Hexia Architects made two large spaces with wood structure to break a common misunderstanding in China that "a wooden building is either an ancient building or a small building."

Structural sequence

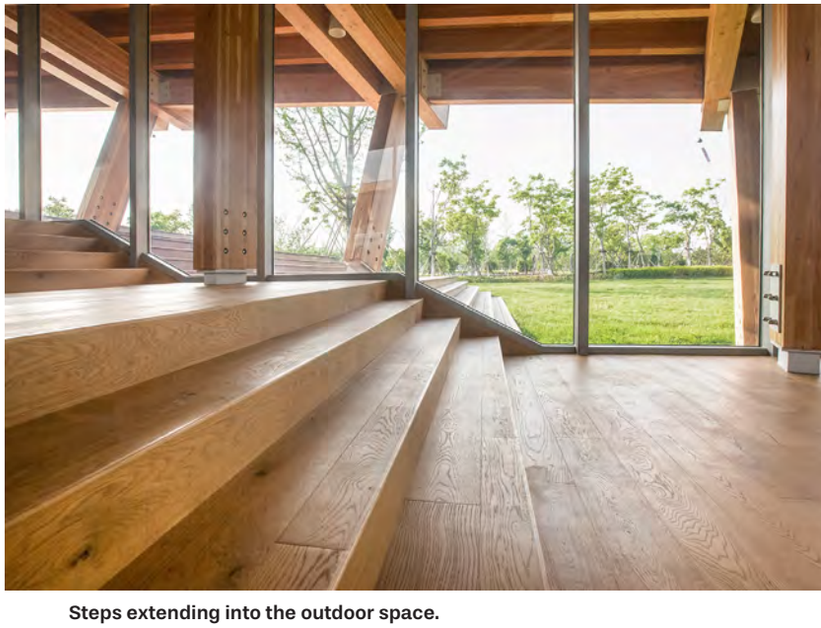
Electricity, pipelines, and air-conditioning equipment are all hidden, only the stacked wooden structures are exposed. This is also to let people understand the construction process and feel the beauty of the wooden structure.

PROJECT DETAILS

PROJECT NAME: Ginkgo Swan Lake Train Station No.2
PROJECT LOCATION: Ginkgo Swan Lake, Youchegang Town, Xiuzhou District, Jiaxing City, Zhejiang Province, China
ARCHITECT: Hexia Architects
GROSS FLOOR AREA: 1,980 square metres
STRUCTURE FORM: Engineering timber structure
COMPLETION: 2020
PHOTOS: Jiayu Zhu

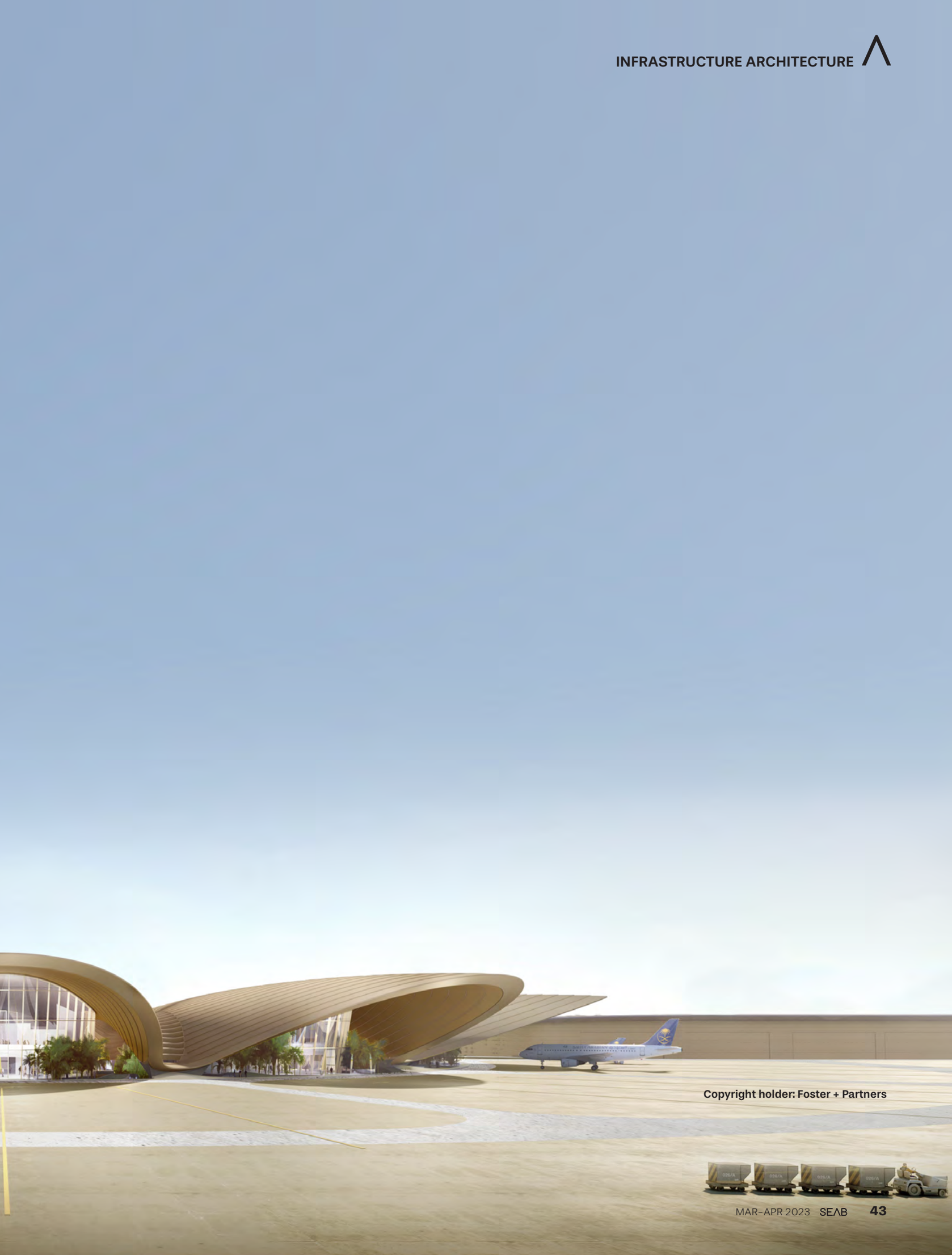


Space on the second floor with outdoor platform.



Steps extending into the outdoor space.

Red Sea Airport



Copyright holder: Foster + Partners

The new Red Sea Airport by Foster + Partners is set to welcome an expected one million visitors by 2030 to this area of stunning natural beauty. The terminal building has been inspired by the forms of the desert, the green oasis and the sea, and will remove the usual hassle associated with travel by providing a tranquil and memorable experience for passengers from the moment they arrive.

Gerard Evenden, Head of Studio, Foster + Partners, said: "The Red Sea Airport has been envisaged as a gateway to one of the most unique resorts in the world and an integral part of the visitor experience.

Inspired by the colours and textures of the desert landscape, the sustainable design seeks to create a calm and luxurious journey through the terminal. It will become a transit hub for visitors coming in by both land and air. We look forward to working with the Red Sea Development Company to fulfil the vision for this ambitious one-of-a-kind project."

The design of the terminal aims to bring the experience of a private aircraft terminal to every traveller by providing smaller, intimate spaces that feel luxurious and personalised. The form of the roof shells is inspired by the desert dunes and cantilevers on the landside and airside to provide shade to the passengers. An internal green oasis with an indigenously planted garden forms a green focus, creating a relaxed, resort-like atmosphere within the airport terminal. The airport will be powered by 100 percent renewable energy.

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The arrival experience is about

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speed of processing passengers, while welcoming them to their destination along with giving them a first impression of the Red Sea Experience. Upon arrival, passengers follow the natural spatial flow down through the lush oasis landscape towards the Welcome Centre, where they are met and welcomed to the Red Sea Resort. All security and immigration checks are dealt with speedily and the checked-in baggage is sent to the resorts directly. The centre offers an immersive experience of the highlights at the resort, giving visitors a flavour of what is to come.

The departure sequence is generally longer than the arrival experience, so the spaces are designed for longer waiting times with larger, more relaxed spaces. The five departure suites are arranged as a series of pods to allow an easy transition from their cars to the plane. Passengers are dropped off outside the terminal and quickly enter one of the departure pods which feature spas and restaurants enveloped in a relaxed atmosphere. The baggage is loaded onto the aircraft directly after being checked-in at the resort.

PROJECT DETAILS

PROJECT NAME: Red Sea Airport
PROJECT LOCATION: Hanak, Tabuk, northwestern Saudi Arabia
CLIENT: The Red Sea Development Company
ARCHITECT: Foster + Partners
DESIGN REVEAL: 2019
EXPECTED COMPLETION DATE: 2030


BVLGARI

Project Name:
Envelope

Project Location:
New Delhi, India

Interior Design:
Studio IAAD

Formal living room. Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP

Nestled in the leafy bylanes of an urban pocket in the heart of New Delhi, the Envelope is a contemporary home for a respected luminary in the cinematic industry, one that is contemplative in nature with a sleek iconic profile reflecting its metropolitan city character. The house is distinctly private in its appearance, with a sheer monolithic wall screening the approach, strategically punctuated by minimalistic punctures within. Due to its location in a densely populated neighbourhood, it was essential to the client to create a clear visual and perceptual distinction between the interior dwelling spaces and the external built fabric. Consequently, the heart of the home is securely ensconced within an envelope of screens and flora.

Studio IAAD has recently augmented its existing structural and architectural framework. Added as part of the conceptualized refurbishment is a second floor and remodelling of the entire interior design scheme. The underlying design concept of the existing home has been extended while conceptualizing the new spaces, thematically maintaining the sanctity of the overall design vocabulary. Even after a volumetric addition to the home, the massing and character of the prototypical built form remain unchanged.

An unobtrusive entrance peeks from behind the punctured front facade, with a deep, shaded front porch accented by a warm timber-clad canopy. This projecting cantilever spans across the porch, resting at last at the main door. Almost injecting itself into the ground floor living spaces, the iconic canopy dramatically draws the eye inwards all the way from the outside. The house opens up, transforming into a home.

The ground floor and basement spaces are primarily reserved for social, formal functionality – with the ground floor layout encompassing a formal living and dining area, the kitchen, an open court, and a bedroom tucked away in the rear quarter of the house. The conscious positioning of art dotting the living space is not merely incidental/situational: the homeowner is an avid collector with a distinctly global, refined taste for art pieces and sculpture. Staying integral and instrumental in helping craft a cohesive design scheme for the entire home's interior strategy, the design brief stems from selected artworks often forming the focal point around which each space has been conceptualized.

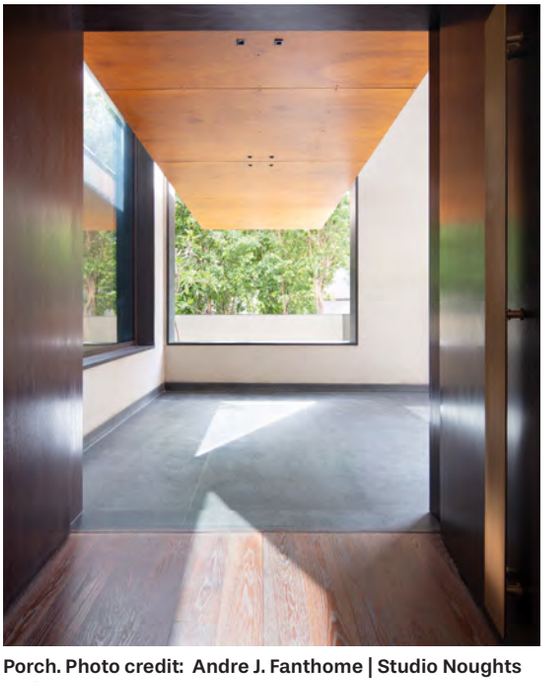
With a perfectly balanced mix of customized and upcycled furniture and luxuriantly finished interiors, the lower ground is a cohesive convergence of art, architecture, and recreation spaces. It houses a spacious den and entertainment area, with a quirky, contemporary bar bringing the place together. A playful, eccentric collage surrounds the bar counter – the artwork features a montage of framed shots from the movie Breakfast at Tiffany's, densely arrayed to bracket the seating space across. It serves as a nod to the owner's association with the cinematic arts – he wanted a place within his home to reflect his enthusiasm for world cinema. An otherwise simplistic arrangement of frames, the artwork takes on an identity of its own as a contextual design element.

A dramatic linear staircase serves as a focal point of the lower floors, transitioning to the more quiet living spaces of the upper floors. The existing first floor comprises a master bedroom, a kids bedroom, and a family lounge, replete with custom-designed furniture, soft furnishings, and art pieces.

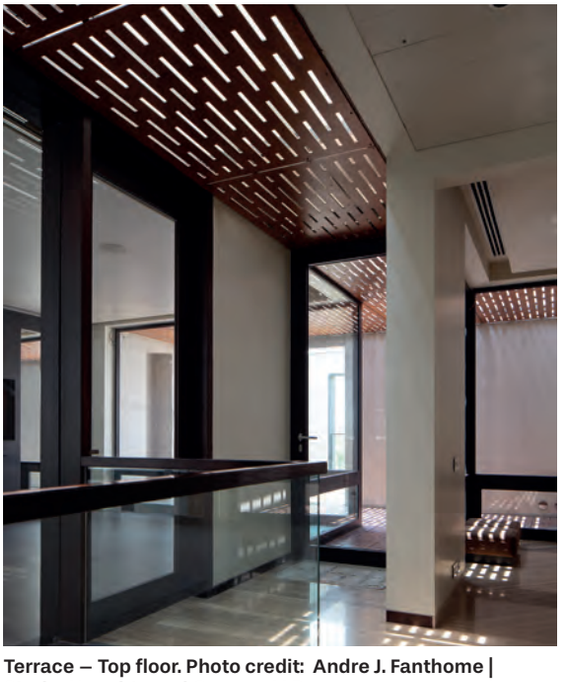
This floor's interior refurbishment reflects true contemporary design ideation, bringing together, in equal measure, aesthetic refinement, and accessible comfort. The resulting approachable and liveable spaces effortlessly achieve the delicate, elusive balance between a house and a home.

Traversing through the floors, one finds iconic art pieces unassumingly adorning

Exterior view. Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP



Porch. Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP



Terrace – Top floor. Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP

distinctive ambience and yet appearing a part of the overarching design scheme. Ascending the level above to the newest volumetric addition, the second floor consists of a bedroom with an attached bath, a well-equipped gymnasium, and a puja room flanking a terrace that opens up towards the sky. A solitary, verdant "Champa" tree blooms at one end, framed under a horizontal perforated trellis, forming patterns in the light.

Fabricated using laminated wooden panels with rhythmic perforations, the trellis emerges as a unifying element for the residence, essential in defining its architectural character. It takes the form of a horizontal skylight along the path of the staircase and spreads to encompass the terrace, transforming vertically as a screen to afford a degree of privacy to the second-floor bedroom. An inseparable component of the built mass, the rhythmic pattern creates dramatic plays of light and shadow through the day.

Thermal comfort and responsible design merit attention, as much as volumes and spaces. The residence was designed to reduce solar radiation for ambient living spaces in the summer months, including screening the south-facing front facade with a high barrier wall at the entrance and deeply recessed massing to promote mutual shading of the form. Additional design interventions have been mindful of climatically responsive designing – the terrace remains largely shaded through the day. Glare-free daylight is encouraged into the spaces, while a perforated trellis screens the bedroom, preventing direct light ingress from the west.

The discreet exterior envelope submits to engaging interiors, with living spaces suffused with natural light filtering through various articulations. Rectangular punctures in the shell are reminiscent of picture frames – designed to capture the outdoors as idyllic vistas pictured from within. The decision to use premium quality materials in muted, pastel tones extensively throughout the house is based on their timeless/ageless qualities – spaces one can live with forever. The design intentionally departs from ostentation and flamboyance favoring lived-in rooms awash in warmth, rendering an environment of restful elegance.

Dining area. Photo credit: Andre J. Fanthome | Studio Noughts and Crosses LLP

Monolithic wooden flooring spans extensively across most rooms for visual and material congruity, tying together various spatial characters. All floor furnishings, including carpets, have been customized specifically for the house. The lighting scheme, too, is bespoke and customizable, featuring floating ceilings fitted with automated mood lights for controllable environments. Lighting fixtures positioned to be accent-oriented rather than ambient create intentional pockets of bright spots – perfect for highlighting artwork and bespoke, premium luxury furniture elements. Meticulous, understated detailing of the most miniature fittings – such as the door handles, customized in metal and polished to a champagne/brass sheen – adds a unique cachet to the attentive designing at play throughout the residence.

Art has played a vital role in defining the character of each room in the house – at many instances during the design process, colour palettes, surface treatments, and interior finishes have been reverse-conceptualized to meld with sculptural or crafted masterpieces. It was a conscious decision to treat the experience of art appreciation in an ambient setting without the use of spotlights – the pieces fit as part of a larger tapestry of interiors. The artwork is positioned to pay homage to the homeowners' refined aesthetic while cementing its identity in the home, rather than isolated with trained spotlights, alienated from its host environs. Only a few selected works are highlighted – to better appreciate their depth, while others meld with the home's finishes in a luxuriant ambience. The neutral-toned material palette throughout the residence is sublimely offset by subtle experimentation with accent colours and textures, highlighting a sophisticated design sensibility.

"Homes are like authored biographies, and to truly animate a client's vision, one must begin by understanding them. Translating their requirements into reality while ensuring the solution entails tastefully stylized spaces that elevate their aesthetic sensibilities – that is the true objective of the architect," reflects Rachna Agarwal, Founder and Design Ideator of Studio IAAD.

An underlying sophistication pervades the interiors of the residence, with the client's preferences manifesting as an understated, subtly layered luxuriance, bespoke art experiences, and a close-knit family abode. The intervention seamlessly builds upon the spatial program, with the existing character of the house unmarred. The result is resplendent: a crisp, stark external visage designed to protect the sanctity of a warm, inviting interior ambience – as if the house was always supposed to be this way. Unifying the best of sophistication, luxury, and true contemporary design principles, the Envelope exemplifies a place of refuge and urges us to revel in art-influenced interiors layered with an understated modern stylization: to treasure the hearth amidst the chaos of the veritable concrete jungle/metropolis.

Surbana Jurong wins big in Singapore Landscape Architecture Awards 2022

Surbana Jurong's landscape architecture designs have again been recognised at the Singapore Landscape Architecture Awards. In the 2022 edition, the team won eight awards, including one gold and one silver, for its Singapore, China and Vietnam projects. Organised by the Singapore Institute of Landscape Architects (SILA), the awards celebrate the best of landscape architecture design by Singapore architecture firms. This is the fourth time the landscape architecture team has been conferred the prestigious awards.

Oliver Ng, Director, Landscape, SJ architecture at Surbana Jurong shared: "Our landscape design philosophy is to create innovation designs incorporating ecological resilience, biodiversity and smart technologies, based on rigorous research. We actively explore new ways to reinvent the landscape design of our projects. We believe such design thinking contributed to the awards we won in 2022, including the International Federation of Landscape Architects AAPME Awards and HDB Design Awards, and are really honoured to be recognised at the SILA 2022 awards."

Oliver Ng, Director, Landscape, SJ architecture (middle) receiving the Gold award for Yazhou Bay Coastal Belt from Mr Tan Kiat How, Senior Minister of State, Ministry of Communications and Information & Ministry of National Development (first from left). Photo credit: Singapore Institute of Landscape Architects

Here are the winning projects by the landscape architecture team in Surbana Jurong.

A Climate Resilient Yazhou Bay Coastal Belt (China)
Gold Award (Analysis & Planning category)

A Climate Resilient Yazhou Bay Coastal Belt in China. Photo credit: Surbana Jurong

This landscape master plan puts forth three main design elements to address existing conditions – the restoration of ecological wetland to preserve the integrity of the ecosystem, the reforestation of the coastal belt to strengthen natural habitats, and the creation of a resilient riverfront park to enhance the sustainability through smart technology and innovative solutions.

The SILA jury citation states that the landscape architects collected and analysed the climate and environmental data to ensure that the design can help to restore and enhance the area. Different treatments based on the ecological sensitivity of the site stood out, demonstrating the careful consideration by the architects.

Provoking Urban Vitality: Landscape Planning of Nan Fan (China)
Silver Award (Analysis & Planning category)

Provoking Urban Vitality: Landscape Planning of Nan Fan in China. Photo credit: Surbana Jurong

The landscape design seeks to connect communities through people-centre transportation, holistic application of smart city concepts, and activation of community nodes. Water-sensitive urban design, biodiversity preservation and vertical greenery are implemented to improve environmental sustainability. These design elements are imbued into a central green corridor to promote an urban fabric which evokes a sense of vitality.

The SILA jury citation stated that the landscape development model married the needs of the community and ecology. Water-sensitive urban design and green infrastructure ensure that the design achieves functionality while providing recreation and supporting conservation.

Activating Urban Water Genes at Jiashan Wuzitang Waterfront (China)
Merit Award (Analysis & Planning category)

Blue-Green Masterplan Angel Island, Ho Chi Minh City (Vietnam)
Merit Award (Analysis & Planning category)

An Oasis for People & Nature: Yishun Boardwalk & Park (Singapore)
Merit Award (Analysis & Planning category)

Upper Serangoon Heritage Corridor (Singapore)
Merit Award (Parks & Recreational category)

Northshore StraitsView (Singapore)
Merit Award (Residential category)

Alkaff Oasis (Singapore)
Merit Award (Residential category)

Blue-Green Masterplan Angel Island in Ho Chi Minh City, Vietnam. Photo credit: Surbana Jurong

An Oasis for People & Nature: Yishun Boardwalk & Park in Singapore. Photo credit: Surbana Jurong

Dawson Estate rejuvenated and features new playgrounds

Innovative design lends character to a given space, but community is the heartbeat of any landscape. With this in mind, the various public residences in Dawson Estate in Singapore were enhanced for communities to come together for fun, leisure and enjoyment. Playpoint (Singapore) Pte Ltd, a leading playground equipment supplier, is pleased to be part of this monumental project and contribute to the fostering of life in this vibrant estate.

Dawson Estate was among the three sites selected to undergo transformation by award-winning design firms under the Remaking Our Heartlands (ROH) programme in 2007. The Dawson estate comprises of Dawson Vista, SkyParc @ Dawson, Sky Oasis @ Dawson, SkyVille @ Dawson, SkyTerrace @ Dawson, SkyResidence @ Dawson, and ForFar Heights.

The purpose of this initiative was to upgrade the HDB environments to meet the needs of growing communities, including building better playscapes for children and scenic areas for families to relax and spend leisure time together such as the rooftop gardens of SkyVille @ Dawson and SkyTerrace @ Dawson.

Playgrounds are essential to a child's development. The more challenging and well-designed a playground is, the more it has to offer to children. In addition to eye-catching designs that attract visitors from all over Singapore, the playgrounds at Dawson Estate possess a multitude of play features intended to train basic motor and cognitive skills as well as spark creativity and imagination, as can be seen in the whimsical New Wonderland Playground at Dawson Vista and the Jungle Playground at SkyParc @ Dawson.

Dawson Vista. Photo credit: Playpoint (Singapore) Pte Ltd

Dawson Vista. Photo credit: Playpoint (Singapore) Pte Ltd

Commenting on the project, Mr Jason Sim, Managing Director, Playpoint (Singapore) Pte Ltd said: "We are privileged and humbled to be bestowed the honour to design and furnish the playground for the Dawson Estate."

These captivating themes and artful designs are not just to make interesting playgrounds, but also to celebrate the unique identity and personality of each site. The design concept is rooted in its heritage, inspired by its lush natural surroundings and articulated in the medium of daring installations and bright colours, resulting in a fantastical but cohesive space that also pays tribute to its location.

SkyOasis @ Dawson. Photo credit: Playpoint (Singapore) Pte Ltd

SkyParc @ Dawson. Photo credit: Playpoint (Singapore) Pte Ltd

SkyParc @ Dawson. Photo credit: Playpoint (Singapore) Pte Ltd

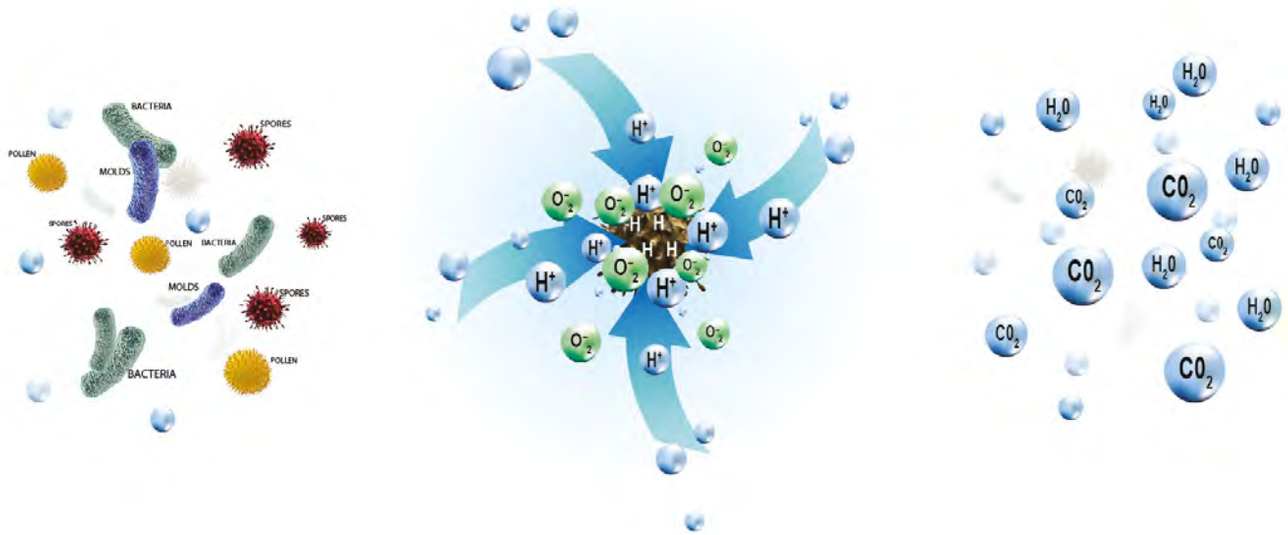
SkyResidence @ Dawson. Photo credit: Playpoint (Singapore) Pte Ltd

Bioxigen® Cold Plasma technology sanitizes both air and surfaces in indoor environments

Bioxigen® from Skill Group S.r.l. (Italy) is an innovative air cleaning system using Cold Plasma Technology. These devices (BioxAir) can be retro-fitted inside a building's air distribution ducts. The sanitizing effects of Cold Plasma are carried through the air duct and into the indoor environment.

There are two important effects of Cold Plasma. In the Chemical Effect, Cold Plasma ionization triggers oxidation-reduction on chemical compounds reducing air pollutants such as volatile organic compounds (VOC), formaldehyde and odours present in the environment.

In Biological Effect, Cold Plasma causes damage to the microbes such as bacteria, viruses, fungi, moulds and yeasts by cell protein and DNA/RNA degradation.



The Bioxigen® Plasma Di-Electric Barrier Discharge (DBD) Tube generates RONS – Reactive Oxygen and Nitrogen Species. These are produced using very little energy at room temperature and therefore they are green and sustainable. The results of the application of Bioxigen® BioxAir are cleaner air ducts surfaces and major improvement in indoor air quality.

Several lab test results have proven the product's performance. The results obtained by the LabAnalysis Srl laboratory of Pavia (Italy) defined Bioxigen® as "effective against all enveloped viruses (including Coronaviruses such as SARS-Cov-2). The tests confirm the validity of the company's sanitization method, demonstrating that the devices have an effective virucidal effect against COVID-19 and other viruses, with a reduction of the viral load of over 99 percent. Tests done at the University of Padova Department of Environmental Medicine and Public Health has shown Bioxigen® can reduce and or eliminate various bacteria up to 92 percent within three hours and 99 percent in 24 hours.

Bioxigen® Products are available in Asia through the master distributor AireFusion Pte Ltd (Singapore).

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Honeywell launches first integrated aspirating smoke detection and indoor air quality monitoring system

Atlanta, USA – Honeywell has launched a first-of-its-kind solution that combines early warning smoke detection with advanced indoor air quality (IAQ) monitoring, furthering its efforts to create safer and healthier buildings. Built on the flagship VESDA-E™ line of aspirating smoke detectors, the VESDA Air Solution has a unique five-in-one IAQ sensor within a single box, which can help improve building safety by identifying life safety, asset protection or IAQ issues before they escalate into problems.

VESDA Air complements Honeywell's ready now Healthy Buildings solutions that can help improve occupant well-being, meet energy efficiency goals and, importantly, change the way occupants experience a building.

Honeywell's VESDA technology actively samples air – rather than passively waiting for smoke to reach traditional spot sensors – to identify trace amounts of smoke and enable early intervention before it disrupts operations. Honeywell engineers have integrated into the same VESDA system a highly sensitive IAQ sensor that measures critical IAQ parameters, including volatile organic compounds (total VOCs) listed by ASHRAE as contaminants of concern, fine particulate matter of 1.0 micron (PM1.0) and PM2.5 or larger with unprecedented accuracy, CO and CO2 concentration, temperature and humidity. Ideal for premium commercial buildings, healthcare facilities, hospitality, manufacturing and schools, the new sensor provides instrument-grade IAQ sensing for data uniformity and accuracy.

"The emphasis on indoor air quality isn't going away – and that's a good thing as more organizations work to create safer, healthier environments that help boost occupant well-being and productivity," said Udaya Shrivastava, Vice President and Chief Technology Officer, Honeywell Building Technologies. "We challenged our engineering teams to find a way to complement the capabilities of our aspirating smoke detection systems with highly sensitive IAQ monitoring. The system identifies not only the minute presence of smoke, but also the presence of air quality contaminants of concern – allowing building operators to react and respond to out-of-bounds parameters quickly, before they escalate into unsafe situations."

The plug-and-play cartridge-based IAQ sensor works much the same as replacing a printer's ink-jet cartridge, thus avoiding costly calibration and other maintenance. This convenience helps to reduce total cost, minimize waste and provide accurate IAQ data.

The scalable solution can be used in both new construction and existing buildings. In new construction, installation of an integrated VESDA Air solution can reduce the total cost of installation (TCI) and total cost of maintenance (TCM) as compared to installing and maintaining standalone smoke detection and IAQ monitoring systems. In buildings with a fully functional smoke detection system, a 'smokeless' IAQ-only system can be installed to provide accurate, actionable data to adjust ventilation parameters.

Photo credit: Honeywell

Photo credit: Honeywell

Johnson Controls collaborates with Clemson University on campus initiative to support 2030 net zero goals

Milwaukee, Wisconsin, USA – Johnson Controls has announced it has expanded its 25-year partnership with Clemson University under a new $45 million net zero campus initiative that will generate savings to fund the entire project. Through the campus-wide improvements, Clemson University is projected to reduce its greenhouse gas emissions by 20 percent by 2025, a major milestone toward its 2030 carbon neutrality goal. The updates will foster a modernised environment for learning and living, while generating estimated savings of more than $3 million annually throughout the 15-year contract.

"By setting concrete environmental targets and making tangible investments to reach them, Clemson University is helping to pave a path forward for sustainable higher education," said Jenny Stentz, Vice President of Innovation, Strategy and Portfolio Management, Building Solutions North America at Johnson Controls. "Net zero campuses drive critical outcomes for schools, from reduced building lifecycle costs to improved health and resiliency. We are proud to work with the Clemson University facilities team to bring these outcomes to their campus to better serve students, staff and faculty."

The project will benefit the entire Clemson University community of approximately 28,000 students, 5,500 faculty and staff and other key stakeholders including parents, potential students, visitors, vendors and clients. A trusted advisor to the university since 1998, Johnson Controls is the sole provider of building automation systems in more than 100 campus buildings. Clemson University called upon Johnson Controls to leverage its industry-leading sustainable infrastructure expertise as well as its deep experience supporting higher education institutions.

"At Clemson University, our purpose is 'educating undergraduate and graduate students to think deeply about and engage in the social, scientific, economic and professional challenges of our times," said Tony Wagner, Chief Operating Officer and Executive Vice President of Finance and Operations at Clemson University. "Understanding how we can contribute to a healthier planet for future generations is a big part of that mission statement. By expanding our partnership with Johnson Controls to make campus-wide sustainability updates, we are advancing toward our environmental targets while investing in our own student experience."

Photo credit: Clemson University

Johnson Controls will install comprehensive energy conservation solutions, including LED lighting, laboratory controls, HVAC and building envelope improvements. These deployments were selected after rigorous evaluations to identify solutions that will align with the university's environmental goals while modernising amenities to support a healthy, safe and rewarding student experience and cut operating costs.

KONE to equip phase two of Metro Line 10 in Chongqing, China

Helsinki, Finland – KONE Corporation has won an order to supply a suite of People Flow® solutions, including 28 KONE elevators and 228 KONE escalators, for a metro line in Chongqing, China.

The phase two of Chongqing Metro Line 10 has a total length of almost 10 kilometres, starting from Liyuchi Station and ending at Lanhua Road. There are eight stations, seven underground stations and one elevated station, including four transfer stations. The line passes through Jiangbei District, Yuzhong District and Nan'an District.

KONE's delivery includes 18 KONE MonoSpace® elevators, 10 MiniSpace™ elevators and 228 KONE TransitMaster™ escalators. The contract also includes two years of standard maintenance.

"We are excited to deliver our solutions to improve the flow of urban life in Chongqing and help make metro travel safer and smoother," said Joe Bao, KONE executive vice president of Greater China.

The building is being developed by Chongqing Rail Transit (Group) Co. Ltd, the contractor is Chongqing Monorail Engineering Co. Ltd and the leading architects are Beijing Urban Construction Design and Research Institute Co. Ltd.

The project is expected to be fully completed in June 2023.

KONE booked the order in the third quarter of 2022.

Superior Sensor Technology first to offer integrated pressure switch feature for pressure sensors

Los Gatos, California, USA – Superior Sensor Technology is offering an integrated pressure switch feature with three threshold pressure modes as part of its NimbleSense™ architecture, a system-in-a-sensor, application-specific pressure sensor platform for HVAC, medical and industrial products. Customers have an option to integrate the switching feature into Superior Sensor Technology's pressure sensors, eliminating the cost of an external switch, and improving performance with faster response times. The new pressure switch capability also maximises design flexibility, reduces PCB board space, lowers power consumption, and minimises product design complexity and manufacturing costs.

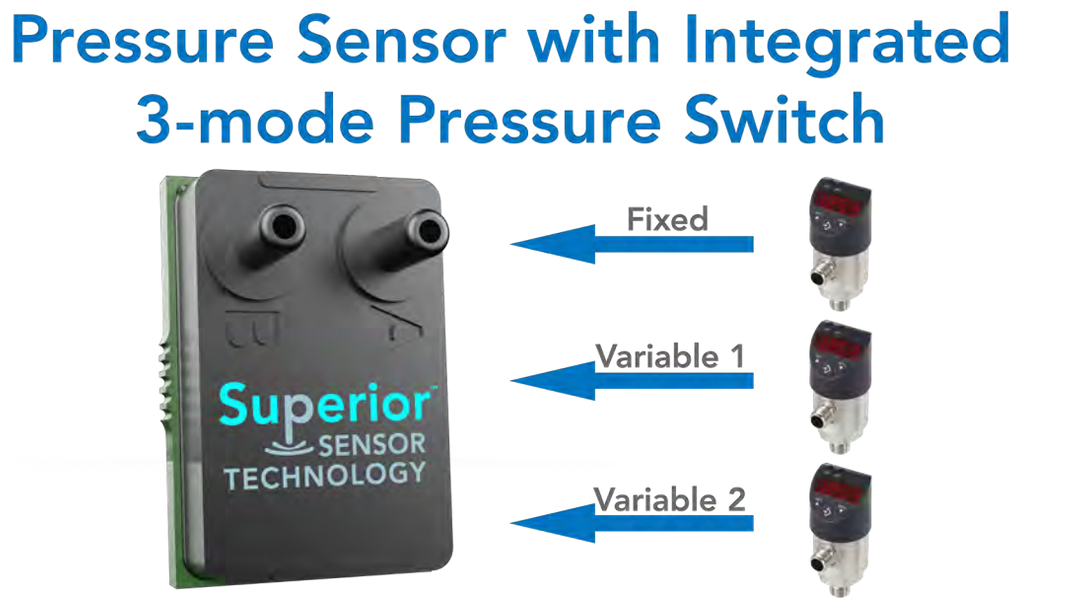
A pressure switch provides a failsafe response when a certain pressure threshold is met. As such, pressure switches often serve as a safety feature and are a critical component of many medical devices, HVAC systems and industrial products. The switch acts as an on/off mechanism that is triggered when a certain air pressure value is reached. For example, when measuring air pressure through an air filter, if the pressure value goes above a specified level, such as 2 inH2O, the switch can notify the maintenance crew to clean or replace the filter. A safety medical example can be seen with ventilators, where pressure switches are in place and activated if too much pressure is being applied to the patients.

Differing from other external pressure switches, Superior Sensor Technology has designed its integrated switch with three modes for setting threshold pressure, providing customers full implementation flexibility. Modes include a Fixed Mode set by Superior Sensor Technology specific to the manufacturer's application, a Variable Mode 1 that the manufacturer sets during product production, and a Variable Mode 2 that is field programmable using software, enabling the switch to be adjusted based on the application at that time.

"Our objective is to offer customers the highest level of integration in the industry to exponentially improve their product manufacturing cost/performance and provide more design flexibility," said Tim Shotter, Co-Founder and Chief Technology Officer, Superior Sensor Technology. "Offering an integrated pressure switch feature for NimbleSense proves our continued commitment to offering the highest level of integration and performance in the industry."

Unique to the industry, the NimbleSense architecture simplifies product design with an integrated building block approach, enabling customers to purchase pressure sensors with features specific to their product application requirements. With the addition of the pressure switch, Superior Sensor Technology is now offering seven features for the NimbleSense architecture. Other features include Multi-Range™, Z-Track™, Closed Loop Control, Advanced Digital Filtering, 50/60 Notch Filter and Self Aware™.

The pressure switch feature is available now for the following Superior Sensor Technology products; the CP Series for PAP applications, HV Series for HVAC applications and ND Series for industrial applications.



Integrated pressure switch feature. Photo credit: Superior Sensor Technology

Trane Technologies named to S&P Dow Jones Sustainability World Index and North America Index

Swords, Ireland – Trane Technologies, a global climate innovator, has been named to the S&P Dow Jones Sustainability World Index for the second consecutive year and the North America Index for the twelfth consecutive year. The company performed in the 97th percentile in the Capital Goods industry in the S&P Global Corporate Sustainability Assessment (score date: Oct. 21, 2022), with perfect scores of 100 in both the environmental reporting and social reporting categories.

"Our recognition on the S&P Dow Jones Sustainability Indices demonstrates our relentless focus on innovation to set the pace for our industry, and for the world," said Dave Regnery, chair and CEO of Trane Technologies. "I'm proud of our team members who work every day to challenge what's possible and identify sustainable solutions that will impact the world for generations to come."

Photo credit: Trane Technologies

Trane Technologies' inclusion on the S&P Dow Jones Sustainability Indices for over a decade underscores the company's sustainability leadership and impact. Through bold, industry-leading action and innovation, the company is decarbonizing buildings, industry and the cold chain and advancing its 2030 Sustainability Commitments, including the Gigaton Challenge, and its pledge to be net-zero by 2050. The company's emissions reductions targets have been externally validated by the Science Based Targets Initiative (SBTi). With its Opportunity for All commitment, Trane Technologies is taking action to achieve gender parity in leadership, workforce diversity reflective of its communities, and community initiatives that support equitable education and pathways to green and Science, Technology, Engineering and Math (STEM) careers.

Carrier to expand its digital solutions available on AWS

Palm Beach Gardens, Florida, USA – Carrier Global Corporation, a leading global provider of healthy, safe, sustainable and intelligent building and cold chain solutions, recently announced that it has signed a strategic collaboration agreement with Amazon Web Services, Inc. (AWS), to offer additional industry-leading Software-as-a-Service (SaaS) solutions in AWS Marketplace. These solutions will include SaaS offerings in the areas of HVAC performance, sustainability, and safety and security. The collaboration is part of Carrier's growing investment in digitally enabled lifecycle solutions designed to inspire confidence in the health and safety of indoor environments.

The strategic collaboration agreement builds on Carrier's ongoing work with AWS after joining the AWS Partner Network (APN) in 2021 to deliver digital solutions like Abound and Lynx to new types of customers. The Abound digital platform, powered by AWS, offers a suite of smart connected solutions for healthier, safer and more sustainable buildings. Abound aggregates, analyzes and visualizes data collected from various building systems, equipment and sensors and provides in near real-time insights about indoor air quality, thermal comfort and energy usage. Abound is installed across a wide range of verticals including commercial real estate, sports and entertainment venues, healthcare facilities, schools, hotels and retail.

Using AWS IoT Core, analytics and machine learning (ML) services, Carrier's Lynx digital platform gives customers around the world enhanced visibility, increased connectivity and actionable intelligence across their cold chain operations to improve outcomes for temperature-sensitive cargo, including food, medicine and vaccines. Both Abound and Lynx were recognised by Fast Company as 2022 World Changing Ideas.

Kährs introduces Nordic Swan Ecolabelled resilient flooring and new member of the PVC-free Kährs Zero family

Photo credit: Kährs

Leading flooring company Kährs has strengthened its PVC free resilient flooring offering, expanding with a new innovative collection for public and commercial spaces – Zero & Green. Certified with the Nordic Swan Ecolabel, Kährs Zero & Green is a high performing flooring solution for projects with tough environmental, health and safety requirements.

Kährs is continuously seeking to reduce its environmental footprint and innovative new materials is one of the focus areas in the company's sustainability strategy. Kährs Zero & Green is the latest example of sustainable innovation from the company.

40 percent of the virgin polymer in Zero & Green is biobased and it contains up to 50 percent recycled Enomer® material and has the same performance and usability properties as the rest of the Zero range. Awarded with the Nordic Swan Ecolabel, this new generation of resilient flooring is especially well-suited for building projects with a clear sustainability profile.

And that is not all, Kährs is also delighted to announce that the complete Kährs Zero range is now produced with 100 percent renewable energy, reducing the CO2 footprint of Zero Sheet with 32 percent.

"I am very proud to introduce the strengthened Zero offering to our partners who are looking for the very best floors for their school or healthcare projects," said Sara Olofsson, CCO Commercial sales at Kährs. "Kährs product development team has made a great job and I am impressed by how they have managed to improve the sustainability properties even more in the Zero & Green Collection, without compromising at all on performance," concluded Sara.

Mowilex creates Indonesia's first renewable, bio-based paint, which improves indoor air by turning formaldehyde into water vapour

The new Naturelle™ paint from PT Mowilex Indonesia (Mowilex) features a groundbreaking, bio-based formula that contains 28 percent renewable raw materials and removes formaldehyde from indoor air. Producing Naturalle™ with plant elements reduces its overall carbon footprint while creating a durable, high-performing matte paint that is low in odour and free of organic compounds (VOCs).

Mowilex is the first manufacturer in Indonesia to formulate a sustainable, bio-based paint. The water-based acrylic binder is made of 28 percent natural ingredients sourced from existing seeds, stalks and grasses. Using plant-based sources eases pollution by reducing the need for petroleum-derived polymers, and that lowers the product's overall carbon footprint.

By trading petroleum resins for plant-based alternatives, Mowilex has created an extra-low odour, low-emission, zero-VOC paint. The innovative, bio-based technology behind Naturalle™ also actively improves air quality in homes and offices. Building materials, cleaning products, lacquers and other items release formaldehyde, a pollutant that can irritate the eyes and nose, trigger asthma attacks, and increase cancer risk. Naturalle™ absorbs formaldehyde and turns it into water vapour, permanently eliminating the contaminant from indoor air.

Mowilex is applying to certify Naturalle™ through the USDA's BioPreferred® Program. The voluntary series of independent, third-party programme tests confirms that products meet or exceed minimum bio-based content requirements.

"Our Naturalle™ paint derives a significant portion of its resins from sustainable, plant-based materials. Using these renewable elements, rather than petroleum-sourced raw materials, lowers the product's carbon footprint. This paint also improves indoor air quality by removing formaldehyde from indoor air, offering a sustainable solution to a common challenge," says Novina Tjahjadi, Mowilex Head of Research and Development.

"PRIMAL™ RN Biobased Acrylic Emulsion and FORMASHIELD™ Technology from Dow Inc. are incorporated in Mowilex Naturalle paint, offering a sustainable solution and healthier environment to meet asthma and allergy standards," says Yena Margono, Southeast Asia Marketing Manager for Dow Coating Materials. "As one of the world's leading materials science companies, Dow Inc. is passionate about discovering

innovative, sustainable solutions through joint efforts with our partners."

"Naturalle™ is a renewable, high-performing paint with excellent formaldehyde-abatement properties. We are excited to offer Naturalle™ and further strengthen our position as the environmental and sustainability leader in our market," says Niko Safavi, CEO of PT Mowilex Indonesia.

With the Naturalle™ launch, Mowilex underscores its commitment to both sustainability and premium product quality. Naturalle™ paint applies easily, spreads smoothly, and hides small surface imperfections. The luxurious matte finish is easy to clean, and the modern paint colours will not fade over time. The anti-fungal, anti-bacterial formula also contains no lead, mercury or other heavy metals.

With its new Naturalle™ paint, Mowilex becomes the first manufacturer in Indonesia to formulate a sustainable, bio-based paint that replaces petroleum-based resins with natural plants. Photo credit: PT Mowilex Indonesia

Wacker presents dispersible polymer powders for high bond-strength, easy-to-process tile adhesives and mortars at ECS

At this year's European Coatings Show, WACKER will be presenting three new polymeric binders for formulating tile adhesives and mortars in exterior insulation and finish systems (EIFS). When added to dry-mix mortars, VINNAPAS® 4419 E, VINNAPAS® 8819 E and VINNAPAS® 4449 E produce an exceptionally creamy consistency, making the resulting product easier for users to process. They also improve slip resistance, wetting capability and open time – the latter being an important property for tile installation. The versatile performance of these new binders makes them the perfect addition to the company's current portfolio of dispersible polymer powders. The European Coatings Show will be held in Nuremberg, Germany, from March 28 to 30.

The new dispersible polymer powders are geared primarily toward improved workability and were developed with a particular focus on the users, i.e., on tilers and other skilled workers. For them, proper mortar consistency is key, both when mixing the dry-mix mortar with water and when subsequently applying the fresh mortar. The creamier and smoother a tile adhesive is and the less physical effort required when applying it, the more pleasant it will be for users to process. Experts at WACKER's technical competence center for tile adhesives in Burghausen, Germany, have translated those subjective impressions into a measurable parameter: viscosity.

The new VINNAPAS® 4419 E, VINNAPAS® 8819 E and VINNAPAS® 4449 E polymeric binders have been modified in a way that lowers the viscosity of fresh mortar up to 20 percent. As a result, less physical exertion is required for processing the mortar and applying it with a notched trowel. Realistic assessments carried out on test walls have demonstrated that this makes the work much easier. Even in polymer-modified tile adhesives and mortars that are relatively easy to process, users have confirmed that formulations containing the new VINNAPAS® grades are extraordinarily creamy and easy to distribute, which makes laying tiles faster and less taxing.

The new VINNAPAS® products also improve open time and correction time – in other words, the period in which the tiler can still make corrective adjustments before the adhesive sets and solidifies. That improvement is particularly notable in warmer regions with more sunlight, where tilers will now have more time to process fresh mortar, even at higher processing temperatures.

Tilers are not the only ones who stand to gain from the new polymeric binders, incidentally – tile adhesive producers will benefit as well. The favorable processing properties of these types of mortars mean that, in some cases, manufacturers will need far fewer additives – or can even dispense with them entirely.

VINNAPAS® 4419 E and VINNAPAS® 8819 E were developed for tile adhesive formulations. In addition to making mortar easier to process, these new binders also improve the ability of tiles to resist sagging in the mortar bed. Tilers can shift, adjust and ultimately fix tiles into place without major physical exertion. At the same time, the new dispersible polymer powders optimize the degree of wetting on the back of the tile – an especially important feature when working with porcelain tiles or large slabs and creating a secure, permanent bond between these materials and the substrate. VINNAPAS® 8819 E was developed especially with the most demanding applications in mind.

VINNAPAS® 4449 E, on the other hand, is suitable for adhesive mortars used for exterior insulation and finish systems. The benefits of this product include its ability to form a particularly powerful bond within the layer system, balancing the forces that arise from temperature fluctuations and other influences. In addition to the improvements already mentioned, VINNAPAS® 4449 E also makes the mortar more resistant to abrasion and improves its flexural strength.

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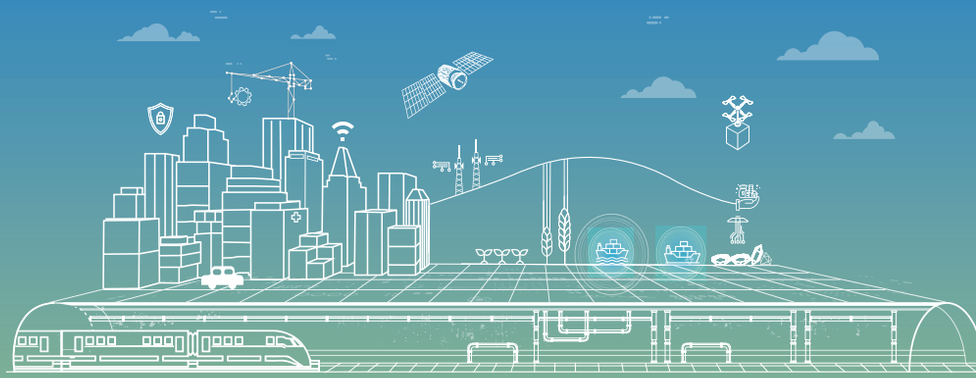

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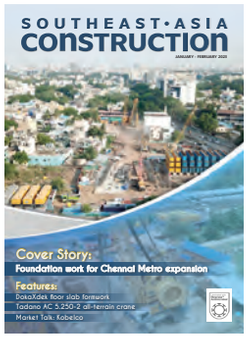

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