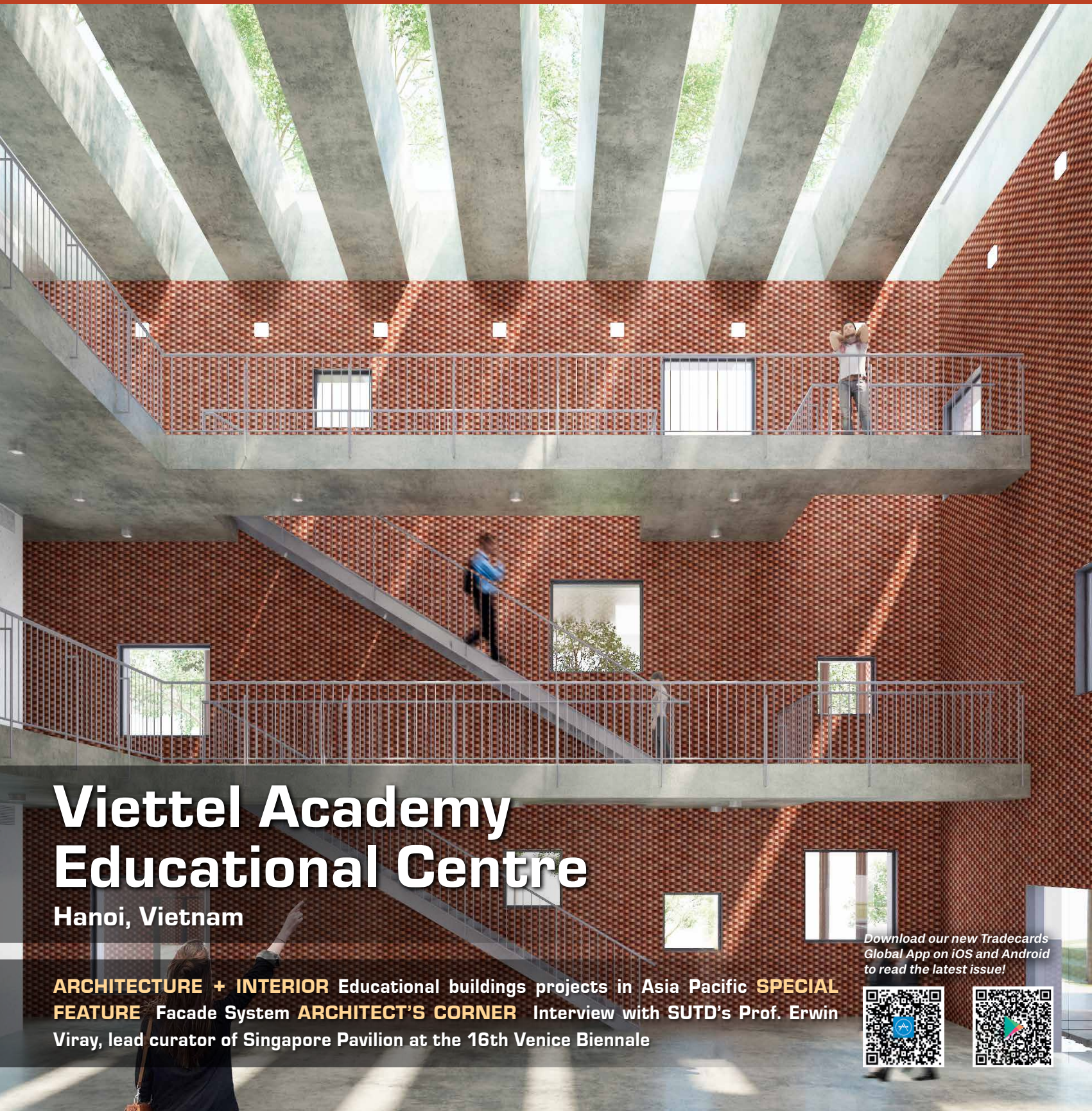


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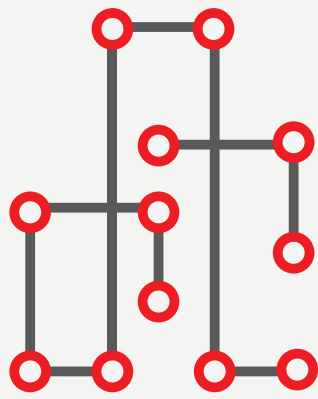
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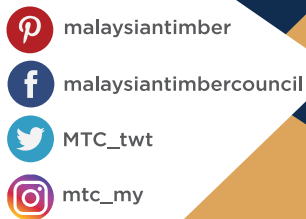
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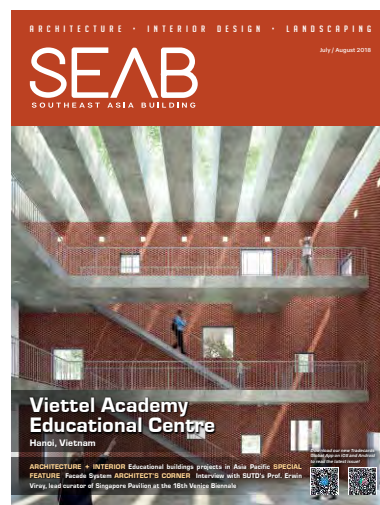
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On the Cover: Viettel Academy Educational Centre in Hanoi, Vietnam. Photo: © Vo Trong Nghia Architects
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Dear readers, hello and welcome back to another exciting issue of SEAB. The focus of this issue is on educational buildings and we take a look at how architects and planners are designing learning spaces to make them functional and interactive while putting students' interests at the forefront. We showcase several projects ranging from nursery to university from various parts of the Asia Pacific region.

In the special feature section, we have a theme on facade system and in the architect's corner, we take a look at what went behind the design of the Singapore Pavilion which is currently taking part in the 16th Venice Biennale.

We hope you enjoy this latest issue. You can read it online or download it for free from our website.

Amita Natverlal

NEXT ISSUE THEMES

- Architecture + Interior – Sustainable Buildings
- Special Feature – Pool and Wellness Equipment & Maintenance
- Architect's Corner – Interview

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New Chair of Arup in Australasia



Photo: © Arup

Singapore – Arup welcomes Peter Chamley, former Group Leader for Arup's Infrastructure practice, as the new Chair for Arup in Australasia as on 1 April 2018.

Peter has over 35 years' experience in leading delivering major projects across the UK, Europe, Australasia, East Asia and the USA. Peter's recent major projects include Crossrail in London, HS2 in the UK, and Second Avenue Subway in New York.

With a background in major infrastructure and city shaping projects, Peter joins our region – which includes Australia, New Zealand, Singapore, Malaysia and Indonesia – at an opportune time. All governments in our region have made significant commitments to new, transformative transport infrastructure and Peter's extensive international knowledge will enable Arup to continue to play a key role in these major projects.

"I want to thank Peter Bailey for his seven years at the helm of the region. I am coming into a healthy and thriving business with so many opportunities to do more, to do it differently, and to always aim to do it better," said Peter Chamley, Chair of Arup in Australasia.

Peter will be based in Melbourne, and will spend the first few months of his role travelling around the Region. Peter Chamley takes over as Chair from Peter Bailey, who has moved into the role of Group Director of Sustainable Development, and will help to align Arup's business with the UN Sustainable Development Goals.

New consortium formed to participate in overseas airport development projects

Singapore – Singapore Technologies Engineering Ltd (ST Engineering) announced that it has joined forces with Surbana Jurong Private Limited (Surbana Jurong) and Changi Airport Planners and Engineers Pte Ltd (CAPE) to form a consortium of Singapore-based companies to participate in overseas airport development projects and meet rapidly growing aviation needs.

With projected global airport development expenditure estimated at more than US\$1 trillion up to 2058*, the Consortium plans to develop a comprehensive export strategy for this business area with a particular focus on Asia Pacific markets and cities with strong growth potential.

Tapping on the unique strengths and complementary capabilities of the companies, the Consortium will deliver holistic, end-to-end solutions that can transform the global airport development industry, enhance the efficiency and security of airport operations, as well as improve air travel experience. This will drive the Consortium's common objective in implementing smart city initiatives worldwide that enhance standards of living and improve the lives of people.

Harnessing its deep technological capabilities in areas such as data analytics and artificial intelligence, ST Engineering will deliver cutting-edge, next-generation solutions that power global smart cities and transform airport operations. These include the Group's proven technologies such as analytics-driven airport operations command systems, security solutions such as counter drone, sensor-based intruder detection as well as biometrics screening, unmanned aerobridge systems and autonomous baggage handling systems that promote safe, secure and efficient airport operations.

With its expertise and proven track record in urbanisation, industrialisation and infrastructure planning, Surbana Jurong will offer its full suite of multi-disciplinary services, such as master planning of aerotropoli, large-scale infrastructure, services design, as well as building consultancy services for the aviation sector.

CAPE, the lead consultant for airfield engineering for Changi East Development which encompasses Singapore Changi Airport's Terminal 5, will complement the collaboration with its expertise in airport master planning, airfield and engineering, terminal planning, as well as project management.

The Consortium will enable access to the partners' experience and expertise that strengthen its global, go-to market strategy, as well as deliver greater economies of scale, efficiency and effectiveness.

The MOU was signed by Mr Vincent Chong, President & CEO of ST Engineering, Mr Wong Heang Fine, Group CEO of Surbana Jurong, and Mr Peter Lee, Managing Director of CAPE.



* Estimates are drawn from Sydney-based CAPA Centre for Aviation's research released on 20 July 2017.

From left to right:
Surbana Jurong Group CEO Wong Heang Fine, ST Engineering's President & CEO Vincent Chong and CAPE's Managing Director Peter Lee.
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Master Building and Civil Consultants appointed for Changi Airport Terminal 5

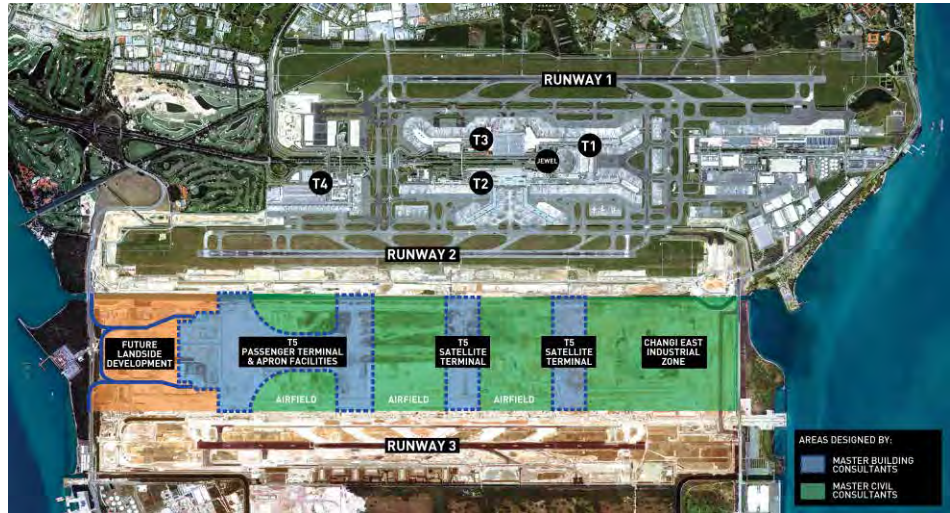
Singapore – Changi Airport Group (CAG) has announced the appointment of the Master Building Consultants, comprising three teams that will provide architectural design and engineering consultancy services for the development of Changi Airport's Terminal 5 (T5).

The three teams comprise the following firms:

- KPF (Singapore) Pte Ltd, in partnership with Heatherwick Studio and Architects 61 Private Limited, for the provision of architectural design services;
- Arup Singapore Private Limited, Mott MacDonald Singapore Pte Limited, and Surbana Jurong Consultants Pte Ltd, for the provision of engineering services; and
- DP Architects Pte Ltd, for the provision of design services for commercial spaces.

These firms will provide full consultancy services for the design of the Main Terminal Building, Satellite Terminal Building, Ground Transportation Centre and Primary Landside Roadway.

In addition, CAG has appointed the Master Civil Consultants for the T5-related landside and airfield works. They



Changi East and Terminal 5 Development Site. Photo: © Changi Airport Group

are Arup Singapore Private Limited, Mott MacDonald Singapore Pte Limited, Surbana Jurong Consultants Pte Ltd and Changi Airport Planners and Engineers Pte Ltd.

These firms will provide consultancy services for the design of infrastructure at the landside and airside areas outside of the T5 buildings. These include taxiways, aircraft parking stands, roadways and drainage systems, as well as the connections for utilities such as power,

water, gas, fuel and telecommunications to the T5 buildings.

Mr Yam Kum Weng, CAG's Executive Vice President for Airport Development, said: "Today's award of the contracts comes after months of in-depth discussions with each of the shortlisted firms. We thank all the firms for working closely with us on their proposals for this project and look forward to taking the development of T5 forward with our appointed consultants."

Architecture and interior design firm dwp realigns the organisation to become an international design powerhouse

Sydney, Australia – After almost five years of collaboration together and 12 months since the merger between dwp (design worldwide partnership) and Australian practice dwp|suters, the company is set to realign their leadership to further develop the organisation's position on the international stage. dwp will be saying goodbye to Leone Lorrimer who leaves the company as CEO. Leone was instrumental in developing the relationship between dwp and Suters which led to the merger, and drove through the implementation of that union for the first year.

Now, in keeping with the company's business strategy to

develop into an international design powerhouse by 2020, dwp has made two changes in the leadership. Firstly they are delighted to welcome Jo-Anne Harrison to the Board of Directors as Independent Director and they are also excited to welcome back Brenton Mauriello as Group CEO.

The company will harness all the benefits of these changes, along with the integration of its professional team and the introduction of a consolidated support platform, to build the organisation's brand presence and influence on the international scene with a clear and unified vision for the business.



Above images are from some of the most prominent fire incidents in past few years around the world.

All of them had one common thing: The facade was cladded with Aluminium composite materials (ACM/ACP). Whenever there has been a fire incident on a building cladded with ACM, the first finger is always pointed on the ACM to an extent implying that it can almost by itself ignite a fire!!

The one fire incident that really caught world's attention was the one at Grenfell towers in London. First reaction was to blame the ACM and only when the detailed investigations were done was it concluded that the real cause of fire was in fact the insulation and its placement most importantly. The BTU of this insulation was so high that irrespective of what facade material would have been used, the fire propagation would have been the same.

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SOM Hong Kong office expands and relocates

Hong Kong – Skidmore, Owings & Merrill (SOM) and SOM Asia Limited have announced the expansion and relocation of the firm's Hong Kong office to better serve its clients and collaborators throughout the region.

James Kirkpatrick joins the Hong Kong office as Regional Practice Leader, expanding SOM's reach across Southeast Asia. He brings over 17 years of experience in world-class urban design and planning and has led large interdisciplinary teams that span geographies to deliver complex urban solutions, from visioning through to delivery in established and emerging cities.

Steve Ma joins the Hong Kong office as Project Manager to reconcile the goals and priorities of SOM with those of our diverse clients while fostering opportunities for design excellence. He is an experienced city planner with nearly 20 years of experience in Asia.

Joyce Lam is an Associate Director of SOM. She helps foster a collaborative environment and develops unique solutions to design and project management. With over 15 years of experience, Joyce



The team from SOM Hong Kong office. Photo: © SOM

began her career with SOM and then rejoined the firm in 2017.

An experienced professional design staff strengthens SOM's new office, located at 8/F, Unit 802, Two Chinachem Central on 26 Des Voeux Road, a landmark in the heart of Hong Kong.

BMAM Expo Asia 2018 focuses on integrated solutions for FM of the future

Bangkok, Thailand – In today's increasingly digitised world, emerging technologies such as Internet of Things (IoT), robotic process automation (RPA), artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) are playing strategic roles in facilities management and building maintenance. As a business enabler, technology will modernise and transform the Facility Management (FM) industry. In the year 2014, Thailand's spending in IoT amounted to 57.7 million US\$ and will increase to 973.3 million US\$ in 2020. The government has policies to support the automation and robotics industries to strengthen its technology hub position.

In response to the technological advancements, BMAM Expo Asia 2018 – an international exhibition and conference on building management and facilities management has added a new show segment in line with the theme "Integrated solutions for FM of



Photo: © BMAM Expo Asia

the future", include smart building solution, showcasing smart devices; building automation systems and application; sensor systems; smart energy; AR; VR; and AI, in addition to FM products and services; work space management; cleaning products and services; security; interior and landscape design; green building technologies; and plant maintenance.

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- **Robotics Show - Future of Facilities Management**

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- **Buyers Programme / Business Matching**

Be our buyer and enjoy a fulfilling experience, along with entitlement to a list of exclusive benefits. The buyer programme is developed to facilitate buyers to source high-quality suppliers and schedule appointments in advance.

When you visit BMAM Expo Asia 2018, you will get to discover the latest FM products and services from over 150 global companies. BMAM Expo Asia 2018 will be held at hall 5-6, IMPACT Exhibition Center, Bangkok, Thailand from 12-14 September 2018.

For more information, visit www.bmamexpoasia.com.

Future Cities Laboratory showcases Singapore's iconic 'green' buildings in Venice

Singapore – The Future Cities Laboratory is featuring several iconic green buildings from Singapore during an exhibition at the Venice Architecture Biennale from May 26th to November 25th 2018. The exhibition "Dense and Green Building Typologies: Architecture as Urban Ecosystem" is part of the 'Time Space Existence' exhibition hosted by the European Cultural Centre (ECC) at Palazzo Mora in Venice. The exhibition features the following projects from Singapore: Oasia Downtown, Khoo Teck Puat Hospital, Punggol Waterway Terraces I, Solaris at Fusionopolis, Skyville @ Dawson, and The Interlace.

The exhibition not only explores their physical attributes but also provides insights into their urban design, architectural, environmental, social and economic impacts. The integration of green spaces in building is increasingly being explored in contemporary architecture and urban design practice in Singapore and beyond. This produces new building types for high-density environments that include public spaces, extensive sky terraces, sky bridges, vertical parks, roof gardens and other "green" components. As part of the exhibition, a series of interviews with architects and landscape architects involved in these iconic projects, such as Tan Shao Yen of CPG Consultants, Richard Hassell



Dense and Green Building Typologies: Architecture as Urban Ecosystem, Time Space Existence Exhibition at Palazzo Mora, Venice Architecture Biennale 2018. Photo: © Future Cities Laboratory - Dense and Green Building Typologies Research Team

of WOHA, and Henry Steed of ICN Design International, provides important insights to the inspiration, rationale, and design concepts behind these buildings.

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Maxwell Chambers innovates to become world's first smart hearing facility

Singapore – Maxwell Chambers, the world's first integrated dispute resolution complex, will soon also become the world's first smart hearing facility, offering more convenient, secure and comfortable hearings for businesses, legal counsels, arbitrators and mediators, through the use of smart technology.

Turning Maxwell Chambers into a smart hearing facility is part of the Ministry of Law's (MinLaw) larger plan to boost Singapore's position as an international dispute resolution hub.

The launch of the "Smart Maxwell" initiative by MinLaw and Maxwell Chambers includes smart booking, security, food and beverage, secretariat and concierge services, and a robot named "Max" to deliver files and food within the four-storey building.

The initiative, supported by local enterprise development agency Enterprise Singapore, is also expected to generate more business opportunities for the legal industry in Singapore – which serves clients seeking dispute resolution at Maxwell Chambers. The use of smart technology will improve the ease of administration and logistics and allow disputing parties to better focus on their cases that are heard at Maxwell Chambers. The smart solutions will be co-developed with users and rolled out in Maxwell Chambers by the end of this year. It will be extended, in Phase 2, to the adjacent Maxwell Chambers Suites and serve the 50 new offices there when the new extension completes in 2019. The smart technology is developed jointly with two Singapore tech start-ups, Habitap and Techmetics.



From left to right: Max, Maxwell Chambers' delivery robot, SMS for Law and Finance, Ms Indranee Rajah S.C., and Mr Franklin Tang, CEO of Habitap after the food order delivery. Photo: © Ministry of Law, Singapore

Union Properties launches 'Zawayya' in Motor City and begins excavation work

Dubai, UAE – Union Properties PJSC, announced the launch of 'Zawayya', a new mixed-use development in Motor City, and the commencement of its excavation work.

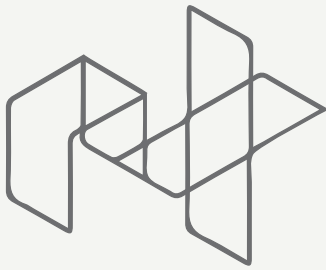
With the launch of 'Zawayya', Union Properties will be initiating the first phase of its new masterplan for Motor City, which is



Photo: © Union Properties PJSC

currently estimated to have a completion cost of over AED 8 billion. China State Construction Engineering Corporation (CSCEC) is in responsible for the excavation work under the agreement, which was signed recently by both companies to complete the new masterplan. Inspired by traditional community-focused neighbourhoods, the project boasts a unique architectural design that meets the needs of modern life in all its aspects and aims to create a vibrant, integrated, and sustainable community within the larger Motor City area. Properties in 'Zawayya' will be built around a main town square, which will serve as the heart of the community, where residents can host pop-up markets, celebrate festive occasions and gather for recreational activities.

With a total floor area of nearly 400,000 square feet, and a retail space of 55,000 square feet, 'Zawayya' will consist of 400 residences including studios, deluxe studios as well as one- and two-bedroom apartments. The 148,000-square foot development will also include retail and leisure facilities, a wide range of restaurants and cafés, open green spaces, swimming pools, a fitness center, and courts for squash and basketball. 'Zawayya' will also provide a modern lifestyle that improves the overall living standard of its residents and will add significant value to Motor City.



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Surbana Jurong and Vanke sign MOU to jointly develop Industrial New Towns in China

Singapore – Surbana Jurong (SJ) and Vanke Industrial Town (Midwest) Co., Ltd. (Vanke), a unit of China Vanke Co., has signed an agreement to jointly develop Industrial New Towns in China.

Under this agreement, SJ and Vanke will jointly develop Industrial New Town projects in China's mid-west regions. Industrial New Town is the latest people-centric urban development model in China that integrates industrial developments and urban living. The aim is to create sustainable cities for residents to live and work in.

The partnership brings together the partners' complementary strengths to provide a one-stop complete value-chain solution in urban and industrial development. It combines SJ's global expertise in planning, design and engineering consultancy in urban and industrial sectors, with Vanke's experience in China's real estate development and management. The first project that both parties will jointly undertake will be Vanke's Jianzhou Dream Town in Chengdu, with SJ providing the design for the city.

Further to this MOU, the partners will explore setting up a joint venture.



(Seated from left to right): Shi Fei, General Manager of Vanke Industrial Town (Midwest) Co., Ltd.; & Michael Ng, CEO North Asia, Surbana Jurong.

(Standing from left to right): Wang Haiwu, Senior Vice President of China Vanke Co., Ltd. and Chief Executive of Midwest Region; & Teo Eng Cheong, CEO International (Singapore, Southeast Asia and North Asia) of Surbana Jurong.

Photo: © Surbana Jurong

Uptown Al Zahia set to elevate urban scene in Sharjah

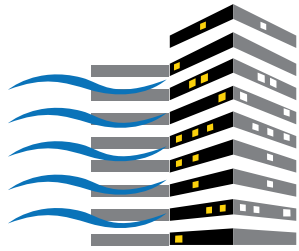
Sharjah, UAE – Sharjah Holding PJSC, a strategic partnership between Majid Al Futtaim - Properties and Sharjah Asset Management, launched Uptown Al Zahia, the newest neighbourhood in Al Zahia, Sharjah's premier lifestyle destination. The neighbourhood offers homes ranging from studios to three-bedroom apartments, featuring swimming pools, fitness facilities and underground parking, all designed within walking distance to cafes, restaurants, leisure and entertainment outlets with direct pedestrian access to City Centre Al Zahia.

Upon completion in 2022, Uptown Al Zahia will be home to more than 700 families, with a master plan that focuses on exclusivity, walkability and convenience. Uptown Al Zahia is also strategically located on University City Road, just minutes from University City, Sharjah International Airport and the SAIF Zone.

Uptown Al Zahia will feature two clusters "Woroud" and "Zohour". The first release features 'Woroud 1', one of five residential buildings within the cluster, offering a wide choice



of studios and one-bedroom apartments. The 'Woroud 1' release saw high demand from customers and homeowners, indicating continued appetite for home ownership in Sharjah's premier lifestyle destination.



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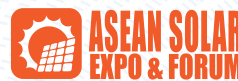
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dormakaba inaugurates new production facility in Singapore

Singapore – dormakaba officially opened its new facility on 11 June 2018. The event was attended by dormakaba Group CEO, Riet Cadonau, key company executives, customers, guests and the media.

The new 22,000 square metres facility is located at No. 12 Tukang Innovation Drive, Singapore 618303 and houses the consolidated operations of dormakaba's 3 facilities, located at various parts of Singapore, under one roof.

Since its founding in 1978, the dormakaba Singapore affiliate has been the regional headquarters for ASEAN. dormakaba Group CEO, Riet Cadonau, said: "Bringing everybody under one roof not only increases our operational efficiency, it will further enhance our customer service. In addition, the investment reinforces our commitment and confidence in Singapore, ASEAN and the broader APAC community."

The year 2018 also marks the 40th year of dormakaba's presence in Singapore, and the inauguration of this new facility is a further testament of its continued confidence in the country. dormakaba Singapore production is the largest production facility for premium hydraulic door closers and floor springs for the global market. The manufacturing facility, which accommodates a workforce of over 400 professionals, includes significant investments by dormakaba in advanced robotics, a state-of-the-art finishing system, precision machining cells and highly mechanised assembly lines. A higher level of Lean Manufacturing and Industry 4.0 elements such as Digital Twin are also implemented on the shop floor.



dormakaba Group CEO, Riet Cadonau (third from left) cutting the ribbon with key executives of dormakaba to mark the official opening of the new facility.

'Customer-First', one of dormakaba's core values, had a considerable influence in the conceptualisation and execution of the new facility. Whether it is technology, product development, manufacturing, supply chain or logistics, aligning all the functions under one roof has made dormakaba's operations more efficient and customer-focused.

The latest addition to the Singapore facility is the installation of a "digital hub" to explore digital service-delivery opportunities in Asia Pacific associated with the company-wide dormakaba digital initiatives. Initiatives in area of digital security, communication, connectivity and data-analytic driven service-solutions making dormakaba's products and solutions future ready for upcoming digital-economy opportunities.

dormakaba is also committed to foster a sustainable development along its entire value chain in line with its economic, environmental and social responsibilities toward current and future generations. The new facility will therefore continue to be committed to sustainability by recycling, reusing and reducing carbon footprint.

The new facility will continue to serve as headquarters for dormakaba's ASEAN business unit, and will continue to support the ASEAN sales organisation as a competence centre for sales support, training, and project management, as well as a regional logistics centre.



dormakaba's new facility at Number 12 Tukang Innovation Drive.

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Winners of BCA Awards 2018 revealed

Singapore – The Building and Construction Authority (BCA) unveiled the winners of the BCA Awards 2018 at its annual banquet held at Resorts World Sentosa on 22 May 2018.

This year, 540 awards were given out to firms for achieving construction and quality excellence, design and engineering safety, universal design, construction productivity, and sustainable design in their scope of work. The "Built Environment Leadership (BEL) Platinum Star" award, the pinnacle award under the BEL category, was scooped by the Housing & Development Board (HDB) and City Developments Limited (CDL).

Guest of honour Second Minister for National Development Mr Desmond Lee, BCA Chairman Mr Lee Fook Sun, BCA Deputy Chairman, Mr Norman Ip and BCA CEO, Mr Hugh Lim presented the awards to the recipients in the presence of over 2,000 guests from the built environment sector.

At the award ceremony, BCA announced that it would continue to innovate and invest into R&D and technological advancements through new initiatives. In his welcome address, Mr Lee Fook Sun said that BCA would focus its funding support for R&D on the development and deployment of technology in the areas of Automation, Robotics, Advanced Materials, Digitalisation and Green Buildings. "We will be launching R&D grants for DfMA solutions under the \$150 million Cities of Tomorrow (CoT) Programme," said Mr Lee Fook Sun.

In the area of Green Buildings, BCA plans to partner with industry stakeholders to launch an Innovation Challenge to develop and test-bed smart building solutions to advance the agenda for Super Low Energy buildings.

In his speech, Mr Desmond Lee said that overall site productivity improved by 12 percent since 2010 because of firms adopting productive technologies such as Design for Manufacturing and Assembly (DfMA), digitalization and Building Information Modelling (BIM). These technologies have helped companies to achieve more efficient building and construction processes.

The BCA Awards 2018 also saw the launch of the BuildSG logo by Mr Desmond Lee. BuildSG is a new set up aimed at laying the groundwork for stakeholders to forge closer collaboration with the Trade Associations and Chambers (TACs), firms, institutes of higher learning (IHLs) and unions to realise the outcomes of the Construction Industry Transformation Map (ITM) launched



BCA Chairman Mr Lee Fook Sun. Photo: © BCA



Second Minister for National Development Mr Desmond Lee. Photo: © BCA

in October 2017. BuildSG, which officially started operations in April 2018, comprises of three centres – iBuildSG, weBuildSG and SGBuilds.

"BuildSG is working closely with our Trade Associations and Chambers to jointly implement the ITM. For instance, it is partnering with SCAL to enhance the productivity clinics to help more firms build capability in DfMA and Integrated Digital Delivery (IDD). BuildSG is also working with the Singapore Institute of Architects to develop a knowledge platform and design guides for architects, covering the best practices in focus areas under our ITM such as DfMA and IDD," said Mr Desmond Lee.

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Goettsch Partners completes Rosewood Sanya and Sanya Forum

Chicago, Illinois – With the opening of the Rosewood Sanya hotel late last year, architecture firm Goettsch Partners (GP) celebrated the debut of the final component of its new hospitality complex on Hainan Island in Sanya, China. The Rosewood Sanya and Sanya Forum together form a landmark resort and meeting destination in Haitang Bay. Developed by Poly Real Estate Group, the complex features a 46-storey, 711-key resort hotel and serviced apartment tower, a 28,000-square-metre forum convention centre, a series of connecting retail buildings, and a modest visitors centre.

The luxury resort hotel, with interiors by Hong Kong-based firm AB Concept, is designed to be intimate and exclusive, offering a limited 246 generously sized rooms – all with ocean views and individual terraces, some with their own plunge pool.

"This hotel marks Rosewood's first mainland China resort, and the forum is the largest convention center in the area," said James Zheng, AIA, LEED AP, president of GP. "We are very pleased



Overall aerial view of Rosewood Sanya.
Photo: © Shen Zhonghai, Ist Image

to deliver this landmark complex in collaboration with Poly Group."

The design concept focuses on two main architectural elements: the "lighthouse beacon" for the hotel and serviced apartment tower, and a complementary "rock" for the forum convention centre. With its glowing beacon visible when approached from land or sea, the 230-metre tower is conceived of as a unique resort in the sky. The building is organised vertically; its arrival sequence, world-class amenities, lush landscape, and incorporation of limitless water views are all considered integral to the creation of an unmatched

resort experience. The forum is integrated with the surrounding landscape to create a compelling architectural presence that blends in with the lush landscape and opens framed views toward Haitang Bay.

At the location where the land meets the sea, the lighthouse beacon tower rises from a conceptual outcropping of rock to serve as the symbolic centre of the bay.

Lotus Equity Group unveils plans to develop the nation's largest timber office building in Newark, NJ

Newark, New Jersey, USA – Lotus Equity Group announced plans to develop the United States' largest mass timber office building as part of Riverfront Square, Newark's most ambitious redevelopment project. Designed by visionary architecture firm Michael Green Architecture, the first

commercial building in the project will encompass up to 500,000 square feet of Class A office space designed to enhance tenant wellness and environmental sustainability.

Riverfront Square will transform one of the downtown area's most important sites into a thriving 24/7 community. The 11.8-acre site sits adjacent to the waterfront, steps from NJ Transit's Broad Street station – accessible to Midtown Manhattan in 18 minutes – and complements the future Riverfront Park designed by the internationally acclaimed James Corner Field Operations. Riverfront Square is Newark's most ambitious mixed-use

project and is expected to provide up to 2,000 residential units, large and small-scale retail, cultural and public open space, a hotel, 2 million square feet of office space, and parking spaces in the heart of downtown.

Environmental advantages of timber-built buildings are largely derived from its construction. Trees absorb and hold carbon until they decompose or are burned, while the manufacture of concrete and steel accounts for an estimated 10 percent of greenhouse-gas emissions.

"To build the nation's largest timber building in Newark speaks to the confidence and belief we have in the city and Riverfront Square as a world-class location that can compete with any great city around the world," said Ben Korman, Chief Executive Officer and Founder of Lotus Equity Group.



Photo: © Michael Green Architecture and Lotus Equity Group

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Croatia pavilion showcases Cloud Pergola, a complex 3D printed structure

Venice, Italy – The Mediterranean sea is a region full of history and past, of great conquests and culture. But is this a place we can picture our future in? Cloud Pergola / The Architecture of Hospitality, the Croatia Pavilion at the Venice Architecture Biennale, surprised visitors with a exhibition curated and authored by architect Bruno Juričić, by transforming a classic mediterranean typology, the pergola, into an uncommon and futuristic forest of lattice trees. A winning bet, that has brought Bruno Juričić and the artists involved in the project to re-think the way we look at hospitality, climate change and sociability.

The Croatia Pavilion brought together visionary companies – Arup and Ai-Build – and advanced designers and innovation-oriented architects – Alisa Andrašek and Bruno Juričić – to envision new synergies between academic research, architectural practice and cutting-edge digital fabrication.

Structured through the interplay of different interventions, Cloud Pergola is the collaborative site-specific environment that remaps a unique experience, essential to the Mediterranean region: the pergola, a space where the private and the public merge, an elementary and vernacular structure that possesses a vivid significance, being both a shelter from the sun and a socially charged space. If the pergola is a space where the man-made and the natural can't be separated, who made what here? The use of 3D generative modeling techniques invites visitors to reflect on the future of architecture and on the interplay between man and machine, human and artificial intelligence, while still offering a warm and cozy space: a more utopian vision of what could be next, a FREESPACE where visitors are invited to sit and converse, overcoming the traditional aseptic rendition of the future.



Cloud Pergola at the Croatia Pavilion. Photo: © Jan Stojkovic

Formed of 300 kilogrammes of 3D printed biodegradable plastic, the pavilion cloud-like structure is formed of voxels oriented along a field of vectors generated by a set of fluid forces designed by the architect. Arup provided structural guidance throughout all phases of the design in the definition of the voxels and in the analysis of the complex structure made of more than 100,000 extruded elements. Arup collaborated with the 3D manufacturing team of Ai-Build to develop a simple assembly sequence for the complex and delicate piece which is meant to be touring various exhibition spaces after its passage at the Venice Biennale 2018.

MVRDV opens new Paris office

Rotterdam, The Netherlands – MVRDV founders Winy Maas, Jacob van Rijs and Nathalie de Vries are proud to announce the opening of a new office in Spaces Réaumur, Paris.

In recent years, MVRDV has become increasingly active in France with prestigious projects in Rennes, Bordeaux and Paris. France has become an important country for MVRDV. In 15 years, the Rotterdam practice realised various projects in France. For example, Pushed Slab (2014), a large office complex in Paris and the transformation of the Teletech Campus (2012) in Dijon. In 2009 MVRDV, in collaboration with ACS Architects, Palo Alto, and AAF Architects and Urbanists, Paris, the firm took on the challenge of the then-president Nicolas Sarkozy to devise a masterplan for Paris and its suburbs. This resulted in Grand Paris, an urban vision for 2030.

"We have already worked for a long time and intensely in France. We want to deepen that love with our presence,"

said Winy Maas, co-founder, MVRDV. 2018 looks promising: a start has been made with the reconstruction of the Part-Dieu shopping centre in Lyon, and with the extensive renovation of the Gaité-Montparnasse shopping centre in Paris, a porous façade connecting the mall to the street, library and station. For Bordeaux and Rennes, MVRDV designed striking apartment complexes situated next to the waterfront. The construction of Maison du Projet in Bordeaux and Ilot l'Octroi in Rennes will commence later this year. By opening an office in Paris alongside a head office in Rotterdam and an office in Shanghai, MVRDV wants to strengthen its presence in France and provide a solid basis for future assignments. The new office will be led by architect Bertrand Schippan, who was involved in various French projects and it is located near the famous Marché de Montorgueil in a six-storey Art Nouveau building from 1905 that was designed by Gustave Eiffel.



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Steven Holl Architects wins international design competition for new residential quarters in the Tushino district of Moscow

Moscow, Russia – Steven Holl Architects, in collaboration with Art-group "Kamen", has won the international design competition for the residential quarters of the Tushino district in Moscow, besting Fuksas Architecture, Zaha Hadid Architects, Mad Global, and Tsimalo, Lyashenko & Partners. The development will provide a new mixed-use center filled with housing, social spaces, a kindergarten and an elementary school on a former paratrooper airfield.

Steven Holl Architects has proposed a new building typology, "Parachute Hybrids," which combines residential bar and slab structures with supplemental programming suspended in sections above, like parachutes frozen in the sky. Large circular openings in the towers' facades give a defining geometric character and express health and social spaces. The master plan is organized to shape public space with maximum sunlight exposure. The buildings wrap around to create large, public garden and playground spaces as a reference to the site's former use as a paratrooper air field.

Tushino is located in north-western



Bird's eye view of the new residential quarters. Photo: © Steven Holl Architects

Moscow along the bank of the Moscow River. For the greater part of the 20th century, the historic site was home to a flying and parachuting school, including the Central Aero Club of the USSR, and acted as an aviation parade ground. In the early 2000s, city officials proposed turning the uninhabited district into a 200,000-square-metre urban centre for housing, commerce, offices, entertainment and sports.

"Tushino can be an important urban model for 21st century high density living, shaping public open space," said Steven Holl. "The new building type we have proposed here, inspired by the site's history, is unique to this place," he added.

Tushino will have a mix of housing types and will provide homes for all economic brackets. The first phase of drawings are to be completed March 15, 2018.

OMA wins competition to design the new Courthouse in Lille

Lille, France – OMA's design for the new Palais de justice in Lille has been selected as the winner of four finalists from a competition. The new public building, commissioned by the Ministry of Justice, will accommodate the high court and district court of Lille. With the design of the new courthouse, OMA returns to Lille more than twenty years after designing the masterplan for the new Euralille district (1989) and the conference and exhibition centre Congrexpo (1994).

Lille's new courthouse will be built near Vauban's former fortifications at the outskirts of the city. Triggered by this location, OMA has designed a colorful multifaceted building that is able to address a wide range of different elements from the city's past and present. From the base of the building, which houses the public and the major courtrooms, a central triangular tower rises where all the minor courtrooms are concentrated. This tower is surrounded by a ring of offices floating above the base.

The interiors of each of the building's components are



Rendering: © OMA / ArtefactoryLab

conceived to make all the procedures of justice accessible, even inviting, free of the intimidation that has traditionally been the main characteristic of the architecture of justice.

OMA's design team is led by Ellen van Loon and Rem Koolhaas. The project is developed in collaboration with Saison Menu, WSP, BMF and Quadrim. Completion is scheduled for 2023.

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Bee'ah Headquarters tops-out towards Q4 2018 completion

London, UK – The structural steelwork of the new Bee'ah Headquarters has been installed. Its concrete dome which forms the centrepiece of the project has been put in place. The main structure of the Visitors' Centre is also complete, together with 50 percent of the standalone Energy Centre.

HE Salim Al Owais, Chairman of Bee'ah; Patrik Schumacher, principal of Zaha Hadid Architects; and Edmund Mahabir, managing director of Al Futtain Carillion officiated the topping-out ceremony.

The new headquarters building continues Bee'ah's on-going investment to transform attitudes and behaviours in communities by providing the infrastructure, tools and support to achieve their environmental goals.

Working towards zero waste to landfill, cleaner air and water, renewable energy and sustainable future targets, Bee'ah is developing and providing environmental solutions; converting waste from being something that is a consumptive by-product of society to something that can be core to society's future.

Environmental considerations are woven into every aspect of the new headquarters' design. It will be a zero net energy consumption building with photovoltaic cells to ensure complete reliance on renewable energy. Bee'ah will use Tesla's advanced powerpack battery technology, with a total capacity



Rendering of new Bee'ah Headquarters. Image: Render by MIR © Zaha Hadid Architects

of 1,890 kWhs, to store energy from the photovoltaic cells. In addition to being completely powered by renewable energy, the new headquarters uses recycled materials in construction, incorporates energy and water saving fixtures, maximises the benefit of natural elements like sunlight and winds for heating and cooling, utilises native vegetation for landscaping, and ensures reuse of greywater.

HE Al Owais said, "I believe that we cannot envision the future of being a sustainable city, without advancements in green architecture. At Bee'ah, as environmental pioneers, we have always driven ourselves to innovate and lead the UAE's journey towards sustainability. Through our HQ project, we have formed partnerships with some of the world's

most renowned entities, to examine as to how we can maximise the potential for sustainability in the built environment.

"With its ultra-low carbon footprint, minimal water and energy usage and the efficient recycling of construction materials, this project will set a benchmark for all future green construction projects in the Gulf region. It is also a model for a green building system that can be replicated across the UAE, as the nation seeks to transition into a green economy," added HE Al Owais.

Designed in response to its natural environment as a series of intersecting dunes orientated to optimise prevailing winds, the new headquarters is being constructed to LEED Platinum certification standards of the United States Green Building Council (USGBC).

PPG opens industrial wood coatings research and development lab at Springdale facility

Pittsburgh, Pennsylvania, USA – PPG recently announced the opening of a wood coatings research and development lab at its Springdale, Pennsylvania, facility. The lab is dedicated to developing industrial coatings for wood products, such as flooring, kitchen cabinets, millwork, molding and doors, used in the interior of commercial and residential buildings.

The lab employs chemists, technicians and colour stylists and is equipped with the latest application, mixing, testing and analytical technology.

Kevin Braun, PPG vice president, Industrial Coatings, Americas,

said the new lab enhances PPG's ability to innovate and transfer coatings technologies from wood to other building product substrates, such as rubber, vinyl and luxury vinyl tile (LVT), to meet the evolving demands of the industry.

PPG's environmentally sustainable wood coating technologies will remain an area of technical emphasis for the laboratory. They include ultraviolet (UV)-cure coatings, which emit virtually no volatile organic compounds (VOCs) when applied, waterborne and solvent-borne coatings, and specialty products such as electro-beam (EB)-cure coatings and ink resins for resilient flooring.

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CTBUH Study identifies the 100 tallest buildings ever conventionally demolished

Chicago, Illinois, USA – The Council on Tall Buildings and Urban Habitat (CTBUH) has released an original "Tall Buildings in Numbers" (TBIN) research study entitled *Tallest Demolished Buildings*. The report examines the 100 tallest buildings in history to have been dismantled by their owners, as well as some of the reasons for doing so. The study also confirms that, if plans proceed as reported, 270 Park Avenue in New York City will become the tallest building ever conventionally demolished, as well as the first building over 200 metres in height to be peacefully razed. Currently, the tallest building ever conventionally demolished is the Singer Building in New York City, which stood at 187 metres and 41 storeys tall until 1968, when it was torn down to make way for One Liberty Plaza. The majority of the world's 100 tallest demolished buildings were torn down to make way for new high-rises, the study showed. Land constraints in dense cities and the potential for greater financial return than



270 Park Avenue in New York City. Photo: © Marshall Geromette

the current building offers can factor heavily in the decision to demolish a skyscraper.

According to the study, the average lifespan of the 100 tallest demolished buildings is only 41 years. While economic considerations for demolition featured prominently in the study, not all of the tallest demolished buildings were razed to make way for new towers. For example, the 116-metre Ocean Tower on South Padre Island in the US was torn down one year into its construction after cracks were discovered in its concrete and the building began to sink. Other high-rises, such as the 104-metre Edificio Windsor in Madrid, had to be demolished after sustaining heavy fire damage.

In terms of geographic distribution, North American cities account for 53 percent of the world's 100 tallest demolished buildings – no surprise given that the modern skyscraper emerged in Chicago and New York City in the 1890s. More than a quarter of the 100 tallest demolished buildings were built between 1890 and 1920, while high-rises built in the 1970s accounted for 24 percent.

CTBUH names 2018 award winners

Oasia Hotel Downtown in Singapore has been named "Best Tall Building Worldwide" for 2018

Chicago, USA – The Council on Tall Buildings and Urban Habitat (CTBUH) is proud to announce the winners of the 16th Annual CTBUH Awards Program, which competed for winning distinctions at the 2018 Tall + Urban Innovation Conference from May 30–31 2018 at Aqua Tower in Chicago. The CTBUH Awards Jury has named Oasia Hotel Downtown the "Best Tall Building Worldwide", in addition to recognising the winners of nine individual award categories.

The winner of Best Tall Building Worldwide exhibited a number of characteristics that impressed the judges. The visually striking Oasia Hotel Downtown stands out amongst the gray and blue high-rises of Singapore with its plant-covered façade of red and green, which connects to the green of the cityscape. Landscaping is used extensively as an architectural surface treatment, and forms a major part of the development's material palette, with a total of 54 species of plants climbing along the aluminum mesh façade screen. With a substantial commitment to outdoor communal space through the incorporation of "skyspaces" along its height, the tower provides respite and relief to its occupants,

neighbours, and city.

"This project won not only because it incorporates 60 storeys of green walls along the exterior," said CTBUH Executive Director and Awards Juror Dr. Antony Wood. "But because of its significant commitment to communal space. The tower has given over 40 percent of its volume to open air communal terraces in the sky," added Dr. Wood.

Oasia Hotel Downtown were chosen from among the four regional Best Tall Building winners, including American Copper Building, Best Tall Building Americas; Oasia Hotel Downtown, Best Tall Building Asia & Australasia; The Silo, Best Tall Building Europe; and Zeitz MOCAA, Best Tall Building Middle East & Africa.



Oasia Hotel Downtown. Photo: © Patrick Bingham-Hall



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Design teams led by women win Global LafargeHolcim Awards 2018

Zurich, Switzerland – Projects in Mexico, Niger, and the USA have won the 5th Global LafargeHolcim Awards for Sustainable Construction. As diverse as the three top projects are in terms of geography, program and scale – they are all led by women.

Alejandro Aravena (Chile) headed the independent jury of renowned experts. They evaluated the 15 finalist projects from all continents that had qualified for the global phase of the Awards. The USD 2 million competition is an initiative of the LafargeHolcim Foundation, which announces the first change in Chairman since its inception in 2003.

Global LafargeHolcim Awards Gold 2018 goes to "Hydropuncture", a publicly accessible water retention and treatment complex in Mexico. The project team is led by design director Loreta Castro Reguera at Taller Capital, and researcher Manuel Perló Cohen from the Universidad Nacional Autónoma de México. The infrastructure project in an underprivileged area of Mexico City intermingles flood basins and public amenities with spaces that follow the gravitational logic of flowing water. The jury stated that the sophisticated design addresses an urgent issue at a scale with real impact.

"Legacy Restored", **the Awards Silver winner**, is a religious and secular complex in Niger that reinterprets traditional local construction for a new mosque and a community centre. The project was designed by architects Mariam Kamara, atelier masomi, Niger; and Yasaman Esmaili, studio chahar, Iran. It creates a civic space open to all in the village of Dandaji, supporting the education of women and strengthening their presence within the community. The design strategy champions local artisanship, traditional building techniques and materials produced on site.

The community-driven neighbourhood planning project "Grassroots Microgrid" wins **Awards Bronze** for re-imagining empty lots as collective infrastructure for energy and food production as well as for civic engagement in Detroit, USA. The large team of authors is led by Constance C. Bodurow, founding Director of studio[Ci], a transdisciplinary design collaborative in Detroit. The project enables neighbourhoods to reach energy autonomy through micro-infrastructure, leverages vacancy as an asset, and creates a new economic paradigm for community renewal.

Jury head Alejandro Aravena commented that the global Gold and Silver winning projects act as role models: "They are masterful pieces that demonstrate what sustainable design and construction can achieve. As a community-driven initiative, the Bronze winner opens a path, innovating an approach that will



Hydropuncture – Publicly accessible water retention and treatment complex, Mexico City, Mexico.
Photo: © LafargeHolcim Foundation for Sustainable Construction

need to be developed further," said Aravena. The global Awards winning teams are all led by women, and continue a strong level of both participation and success in the competition by female professionals and students. "Although not something considered during the evaluation process, the jury was delighted by the strong representation and success of women in the LafargeHolcim Awards," said Aravena.

For the first time, the global Awards jury selected three of the 40 Acknowledgment and Next Generation prize-winning projects from the regional phase of the competition to receive LafargeHolcim Awards Ideas prizes. "We felt that they offer exciting and novel ideas, even within proposals that are not yet fully developed," said jury head Alejandro Aravena. The prizes go ex aequo to "Refrigerating Jar" in Ghana, "Cooling Roof in California, USA, and "Territorial Figure" in Argentina.

The 5th International LafargeHolcim Awards competition attracted 5,085 projects and visions to be implemented in 131 countries. 1,836 projects passed the formal and quality checks and were assessed by independent juries in five competition regions: Europe, North America, Latin America, Middle East Africa and Asia Pacific. 11 prizes carrying a total of USD 330,000 per region were handed-over to winning teams in 2017. The three main winners per region automatically qualified for the global Awards; and the 40 Acknowledgment and Next Generation prize-winners were eligible for the Awards Ideas prizes 2018. The prize pool for the global phase of the Awards totals USD 350,000. The International LafargeHolcim Awards cycle spans three years, the 6th competition will open for entries in mid-2019.

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WorldGBC welcomes China to the green building community

London, UK – In April 2018, the World Green Building Council and China Green Building Council announced a partnership to collaborate efforts to increase green buildings around the world and reduce global greenhouse gas emissions.

This partnership is hugely significant as China is the largest building construction market in the world, with up to 2 billion square metres constructed annually, accounting for nearly half of new construction globally in the coming decade.

"This partnership marks a new era in cooperation with our community of Green Building Councils," said Terri Wills, CEO of the World Green Building Council. "We look forward to learning from their expertise and experience as we seek to create green buildings for everyone, everywhere."

Under the partnership, China GBC has committed to introducing a nearly net zero standard for its Three Star rating system in 2018 as part of WorldGBC's Advancing Net Zero project, and will collaborate with other GBCs from around the world in implementation. Amid issues with urban air pollution, China GBC is committed to the positive impacts that green buildings



Photo: © World Green Building Council

can have on health and wellbeing, with indoor air quality a key driver for this. As part of this, China GBC will work with WorldGBC on our Better Places for People project.

Due to Chinese regulations, China GBC is not a registered NGO and therefore cannot become a formal member of the WorldGBC. Instead, as China GBC is committed to working with WorldGBC in a similar way to an Established Green Building Council – the top tier of

WorldGBC membership – WorldGBC has agreed on a close partnership enabling China GBC's participation in its global movement.

The partnership was formally inaugurated at a signing ceremony on 2 April in Zhuhai, China at the International Conference on Green and Energy-Efficient Building & New Technologies and Products Expo, attended by WorldGBC Chair Tai Lee Siang and Regional Head, Asia Pacific Network Joelle Chen.

Jan Lueder new CEO of Regional Headquarters Asia Pacific



Jan Lueder. Photo: © thyssenkrupp

Essen, Germany – Jan Lueder, CEO of the Regional Cluster Asia Pacific of the Industrial Solutions business area, will also take on the role of CEO of the Regional Headquarters Asia Pacific for thyssenkrupp. He succeeds Vivek Bhatia, who will join Industrial Solutions in a senior management role.

This enables the RHQ Asia Pacific to be closer to the businesses and shows that Industrial Solutions has a key role in driving growth in Asia Pacific.

Mr Lueder joined the thyssenkrupp Group in Singapore in August 2015 from Primetals Technologies China, where he was serving as President and CEO. Under his leadership the regional setup and impact of thyssenkrupp Industrial Solutions in Asia Pacific has been further developed and strengthened. Jan, who holds a master degree in electrical engineering, can build on multi-year experience in Asia in various management positions in China, Malaysia and Singapore.

Green Real Estate Finance Event series in Hong Kong a great success



Exclusive Green Finance Luncheon features Government official, top level management and chief financial officers of major developers in Hong Kong, as well as experts from GRESB for a fruitful sharing on green finance development. Photo: © Hong Kong Green Building Council

Hong Kong – A recent collaboration between Hong Kong Green Building Council (HKGBC) and international ESG performance benchmarking agency GRESB brought a series of events during 9–11 May 2018 in Hong Kong. The events initiated in-depth discussions on the latest development of green finance, providing both global and local perspectives to different stakeholders in the real estate industry.

On 9 May 2018, the GRESB–APREA Green Real Estate Financing & Investing Seminar first examined real estate opportunities in the context of green finance and investment strategies. The seminar, which was supported by the HKGBC and WorldGBC APN, was well attended by over 130 participants including many HKGBC Members.

The Roundtable co-organised by HKGBC and GRESB on 10 May 2018 focused on analysis of the market enablers, relevant frameworks and standards as well as government regulations and the impact to real estate sector, with the presence of professional institutes, think tanks, public bodies and representatives from financial and construction sectors. Speakers discussed the green finance instruments



Green Finance in Real Estate Roundtable discusses various topics of green finance development among professional institutes, think tanks, public bodies and representatives from financial and construction sectors. Photo: © Hong Kong Green Building Council

that are available, such as green loan and green mortgage, and how these emerging tools could fill the investment gap created by the opportunities from the climate actions and the Paris Agreement, as well as the development needs in China, while guests were engaged in a dynamic exchange of ideas.

The event series concluded with

an Exclusive Green Finance Luncheon hosted by the HKGBC on 11 May 2018 with a strong guest line-up featuring top level management and chief financial officers of major developers in Hong Kong. Mr Joseph Chan, Under Secretary for Financial Services and the Treasury of the Government of the HKSAR was invited to share the latest government

policy on boosting green finance. Sharing of first-hand experience of green bond issuance from Swire Properties, The Link and MTR offered interesting insight like the immense demand of green financial instruments from European investors, which was valuable for peer developers' upcoming action in green finance market.

The Green Real Estate Finance Event Series is a fruitful beginning to HKGBC's future conversation and engagement with the financial sector, which is also a vital step for the Council to lead a comprehensive market transformation in Hong Kong for the creation of a sustainable built environment.



Mr Joseph Chan, Under Secretary for Financial Services and the Treasury talks about the latest government policy on boosting green finance during the Exclusive Green Finance Luncheon. Photo: © Hong Kong Green Building Council

PHILGBC to release BERDE Green Building Rating Scheme version 2.0.0. for Renovations

Manila, Philippines – The Philippine Green Building Council will be releasing BERDE version 2.0.0 for Renovation (BERDE GBRS – Renovation) drafts for commenting by May 2018.

BERDE GBRS – Renovation is the green building rating scheme developed for existing building projects that has undergone renovations to improve the building's design and operations.

Last November 2017, during the national conference on Collectively Shaping our NAMA (Nationally Appropriate Mitigation Actions) for the Building Sector organised by the PHILGBC and the Climate Change Commission, the PHILGBC officially release two (2) BERDE Green Building Rating Schemes—BERDE for New Construction (BERDE GBRS – New Construction – v2.0.0) and BERDE for Operations (BERDE GBRS – Operations – v2.0.0).

The framework for BERDE version 2.0.0. includes Energy efficiency and Conservation, Water Efficiency and Conservations, Waste Management, Use of Land and Ecology, Management, Green Materials, Transportation, Indoor Environment Quality, and Emissions.

BERDE is developed in line with international standards development best practices and standards, and harmonised with national and international building and environmental standards. BERDE is developed in harmony with the Quality Assurance for Green Building Rating Tools (WorldGBC 2013).

The development of BERDE is guided by internationally-recognised methodologies for developing standards and by the Quality Assurance for Green Building Rating Tools (WorldGBC, 2013). Under the Quality Assurance for Green Building Rating Tools (WorldGBC, 2013), national green building councils are guided by the WorldGBC to test rating tools through pilot projects to establish and evaluate whether credits, processes, and procedures are appropriate and effective in delivering rating activities for green buildings. Commenting on drafts for version 2.0.0 of BERDE for Renovations will commence this May 2018 and the official release is targeted before the end of the year.

"BERDE is implementing a modified semantic versioning for the development of tools. This allows the swift response and updating of the different Green Building Rating schemes to ensure that BERDE continue to be relevant and responsive to our environmental priorities and aligned with local and international laws and standards," remarked PHILGBC CEO Christopher de la Cruz.

The different BERDE green building rating schemes and user guides area available at <http://berdeonline.org>.



Unveiling of the BERDE Green Building Rating Scheme version 2.0.0. for Renovations by PHILGBC. Photo: © Philippine Green Building Council

Big success for WORLDBEX 2018

Exhibition proved that WORLDBEX 2018 is at the forefront of global expansion.

"Truly, I can see that WORLDBEX 2018 is the biggest construction exposition in the country. It breaks all the records of the 22 years."

– Mr Joseph L. Ang,
Founding Chairman
of WSI

Staged in Manila from 14 to 18 March 2018, the 23rd edition of WORLDBEX saw a record-breaking number of local and international companies exhibiting in the show. There was a 25 percent increase in international exhibitors, a 12 percent increase in local exhibitors and a 20 percent increase in the total number of booths at this year's show.

According to the show organiser, Worldbex Services International (WSI), this was the biggest edition in the history of the exhibition and a testament of the "show's thriving ascendancy as a global force". Held under the theme "Shaping Innovations Toward

Sustainability", WORLDBEX 2018 reflected the show's commitment to connect with the global pulse.

"Deliberately conceived to parallel the growing concern of the international community with regard to the need to develop ingenious yet mindful solutions, our theme for this year's show deeply echoes WORLDBEX's commitment to connect with the global pulse," said Mr Joseph L. Ang, Founding Chairman of WSI.

Held simultaneously at the World Trade Center Metro Manila, the Philippine Trade Training Center, and SMX Convention Center Manila, WORLDBEX 2018 had a combined show area of approximately 37,100

square meters with around 1,500 booths by local and international companies. To meet the increased demand for 120 more booths, an additional 2,500 square meters was provided in the Northwing hall of the World Trade Center Metro Manila.

Present in the grand opening ceremony of WORLDBEX 2018 were Department of Public Works and Highways (DPWH) Undersecretary Rafael Yabut, Department of Trade and Industry (DTI) Undersecretary Irineo Vizmonte, Mr Joseph L. Ang – WSI Founding Chairman, Mrs Levi S. Ang, Ms Jill Aithnie Ang – WSI Managing Director, Arch. Francisco Flamenano Jr. – WSI Executive Director, Mr Rene Ramos, Ms Tessie Roque and IDr. Lilia de Jesus. Members of the diplomatic corporations of different countries, association presidents and the WORLDBEX Icons of interior designs also attended the opening event.

In his opening address, Mr Joseph L. Ang said: "Truly I can see that Worldbex 2018 is the biggest construction exposition in the country. It breaks all the records of the 22 years. This year's theme "Shaping Innovations Toward Sustainability" was formed for the design industry to not only think outside the box but also to prepare adequately



Mr Joseph Ang, WSI Founding Chairman, delivering his opening remarks during the opening ceremony of WORLDBEX 2018. Photo: © Worldbex Services International



Official opening ceremony of WORLDBEX 2018. From left to right: WSI Managing Director Jill Ang, Mr Halil Ozturk from the Turkish Embassy, WSI Director Tessie Roque, H.E. Ambassador Kok Li Peng from Singapore, Ms Yuri Arthur from the US Embassy, Wilcon Depot's Rose Ong, WSI Co-founder Levi Ang, H. E. Ambassador Capaya Rodriguez Gonzales from Venezuela, WSI Executive Director Francisco Flameno, WSI Founding Chairman Joseph Ang, DTI Asec. Ireneo Vizmonte, H.E. Ambassador Thanatip Upatising from Thailand, H. E. Ly Quoc Tuan from Vietnam, Ms. Nyaae Ayup from MaTrade, MaTrade Head, DPWH Senior Undersecretary Rafael Yabut, Guillermo D. Luchangco – ICCP Chairman, President Director of Biowood Mr Teo Pea Ngo, and Richmond Sy of Biowood. Photo: © Worldbex Services International

to cope with the changes in our lives. Meanwhile while we are gearing up for our silver anniversary two years from now, we would like all of you to join us in considering what needs to be done to improve traditional perspectives and open up the industry to more forward thinking concepts to improve products. Indeed we are on our way in transforming our industry for the better and we are embarking on this journey with all of you."

WORLDBEX – A key economic driver

There seems to be no better exemplification of the

burgeoning role of WORLDBEX as a key driver of economic growth on a global scale than the impressive number of international companies participating in this year's show. Among the new countries that exhibited in WORLDBEX 2018 included Indonesia, Australia, Turkey, Germany, Iran and Japan. These countries now join the roster of long time international partners that have been supporting WORLDBEX such as Korea, Malaysia, Denmark, Singapore, Spain, China, New Zealand, UAE, Thailand, Vietnam and USA.

This year also saw an

impressive line up of Malaysian companies occupying as many as 30 booths at the International Pavilion. Leading the pack was Malaysia External Trade Development Corporation (MATRADE). Its mission is to develop and promote Malaysia's export to the world. "WORLDBEX has continuously showcased the emerging and innovative products in the industry. Indeed, it serves as a excellent platform for trade exchange and to learn best practices from other participating countries," said MATRADE's Trade Commissioner, Ms Nyaae Ayup.

WORLDBEX has made a milestone not just for the show but also for the country's economic position as a whole. "With the fast-changing Philippine business landscape and many developments across all industries, it is through events such as the WORLDBEX that the best in the Philippine building and construction industry can come together and showcase the many opportunities within the sector," remarked Florian Gottein, Executive Director of the European Chamber of Commerce of the Philippines.

For more information, visit www.worldbex.com.



Pack of Malaysian companies make their presence felt at WORLDBEX 2018

This year's WORLDBEX saw an impressive line up of Malaysian companies occupying as many as 30 booths at the International Pavilion. Leading the pack of exhibitors was Malaysia External Trade Development Corporation (MATRADE). SEAB editor chatted with Raja Badrulnizam Raja Kamalzaman, Director, ASEAN & Oceania Section, Exports Promotion & Market Access Division, MATRADE, at the show to understand more about their participation and how the Malaysian building and construction industry is progressing.



Raja Badrulnizam Raja Kamalzaman

THIS IS THE FIRST THAT MATRADE IS TAKING PART IN WORLDBEX 2018. WHAT BROUGHT YOU HERE?

Yes, this is the first time that Malaysia is participating on a large scale, that is, at a country level and with a country pavilion. In the past, some of the Malaysian companies had exhibited at WORLDBEX but without MATRADE. This year, under the Malaysian Pavilion, we have 26 companies exhibiting a mixture of products and services such as furniture, building materials, playground equipment, LED lighting, and etc.

WORLDBEX is very diverse in terms of the products exhibited so the companies that we have under the Malaysian pavilions are also very diverse in their nature of business. Some of them are providing training for the upgrading of the workforce such as management and leadership skills related to the construction

sector. Others are supplying concrete formwork and facades for architecture; LED lighting, timber decking, industrial building system, using innovative technologies. The world's first seismic rubber bearing for earthquake from Malaysia is also being exhibited here. It has also garnered a lot of interest from the Filipino trade visitors because Philippines is an earthquake prone country.

HOW DID YOU SELECT THE COMPANIES UNDER THE PAVILION?

When we announced that we are participating in WORLDBEX, we sent out invitations to companies in the Malaysian Building Materials Association and the Malaysian Contractors' Association. Then they provided us with a list of members who were interested in going abroad. We also worked with the Federation of Malaysian Manufacturers, one of the biggest trade associations in the country, to select the companies. When we received their applications, we made sure that the products that they manufactured met certain standards. Some of the companies had experience going abroad, but some didn't. We selected the companies carefully and brought them here to have a feel of the market.

Our participation in WORLDBEX is also part of the Malaysian Promotion Programme in Manila. It is a nation branding programme, which takes place for one whole week in Manila. WORLDBEX is just one of the three main activities that we organised for the whole week in Manila under the brand 'Malaysian Promotion Programme Philippines' (MPPP). We started this MPPP on March 11th and will end it on March 18th. The first programme was the Malaysian Food Fair called Citarasa Malaysia and it will end with WORLDBEX. This is the first time that we have organised MPPP in ASEAN. The idea is to create brand awareness about our country in the overseas market.

The Construction Industry Development Board of Malaysia (CIDB) also worked hand in hand with us. They developed the industry on the domestic side, and we developed the export side of it. When the CIDB members come to the exhibition, they understand the needs of the construction industry and feedback the information to Malaysian companies by providing them training and skills upgrading to prepare for the export market.

CURRENTLY, DO MALAYSIAN BUILDING COMPANIES EXPORT TO THE PHILIPPINES?

Yes they do. Some of the companies are currently exporting to the Philippines. Others have agents here and some of the agents are here today at the show with their Malaysian counterparts. By exhibiting with their agents, the Malaysian companies are able to see new customers, because this exhibition draws buyers and contractors from all over the Philippines as well as meet international buyers from China, Singapore and other countries.

IN MALAYSIA ITSELF, HOW IS MATRADE HELPING BUILDING AND CONSTRUCTION COMPANIES?

On the construction side, we work closely with CIDB and the associations related to construction and building materials. But we also support other industries and sectors related to construction such as professional services, architects, quantity surveyor, and project consultants. We support industries that work together with construction for example interior designs, even ICTs, smart buildings technologies etc, as they need equipment or IoT items. So what we do in terms of export, is first, we organise participation in relevant trade fairs, like BIG 5 in Dubai and BAU in Munich. Secondly, we organise specialised product or services missions for the construction and building materials to many countries. This year, we are targeting Myanmar and other ASEAN countries. We also help them by providing grants to assist them to go abroad like the services exports funds. The other help we give, apart from going abroad to take part in exhibitions and trade fairs, is by bringing buyers from foreign countries into Malaysia to meet the companies. So rather than them going abroad, we bring all the buyers from these countries to Malaysia to meet our companies. We do that in conjunction with major trade events, for example, at end of this month, CIDB, MATRADE and other agencies and Ministry of Works are organising international construction week, ICW which is the biggest construction fair in Malaysia. So we are bringing in a lot of buyers looking to buy Malaysian products, and meeting Malaysian companies.

WHAT ARE THE CHALLENGES OF MALAYSIAN COMPANIES EXPORTING TO THE PHILIPPINES?

There are many challenges, most importantly is understanding the rules and regulations. To go into any market, you need to have market knowledge. One has to understand the business culture. Not just what the country wants but the culture of doing business in the country. Secondly, you need to know the rules and regulations. That is when you come here, do you become a contractor, or become a developer and whether there is a need to find agent, partner, and how do you select the right people to work for you. You also need to know the terms and conditions as

“WORLDBEX is a good show for Malaysian companies to not only meet buyers from the Philippines but also from all over the world.”

– Raja Badrulnizam Raja Kamalzaman,
Director, ASEAN & Oceania Section, Exports
Promotion & Market Access Division,
MATRADE

well as the laws in business. More importantly, you have to get your products certified according to the standard certification. The products have to meet certain standards of the Philippines Standards Bureau for example. It is also about project bidding. How do you bid for projects if you are setting up a company here? Knowing your market well also involves understanding the different licenses, project license, special license, and also the pricing strategy so that your product is not overpriced or underpriced. Topping the list is the quality of the product. It must always be there.

More importantly, they should work closely with our office in Manila to get all the information and help that they need to export to Manila or to any other country. There are many challenges here in the Philippines especially on the big projects. As you know the Government of Philippines is embarking on a very big infrastructure plan 'Build, Build, Build' worth some 20 to 30 billion dollars. Everyone wants to be part of that development of the Philippines we need to prepare our Malaysian companies for that in terms of quality products, market regulations and understanding the challenges.

ARE YOU PLANNING TO COME BACK TO WORLDBEX NEXT YEAR?

It is a good fair. Let's see what the feedback is. Companies said they are happy so far. What we are going to do is that we are going to compile their feedback and understand their needs. Cost is also an important consideration for us. We will work closely with the organiser to get more space next time and we hope they can offer good incentives for us to come back. This year, we are the country of honour and the organiser is very pleased. Hopefully, we will be back.

Overwhelming response to Houseware Fair and Home Textiles Fair 2018

"Hong Kong has long been a cradle for entrepreneurs. Our innovative thinking and entrepreneurial spirit, which have contributed greatly to Hong Kong's economic success, are crucial for the city's future. As such, we continued to organise a Startup Zone at this year's Houseware Fair, featuring more than 20 start-ups to exhibit from Hong Kong, the Chinese mainland, Taiwan and Bangladesh."

- Benjamin Chau, HKTDC Acting Executive Director

Highlight zones of the Houseware Fair this year included the Hall of Elegance, World of Fine Dining, Coffee Alley, World of Building Hardware and World of Pet Supplies.

Hong Kong – The 33rd Hong Kong Houseware Fair and the ninth Hong Kong International Home Textiles and Furnishings Fair welcomed a total of close to 49,000 buyers from 112 countries and regions, up 1.5 percent on last year. Organised by the Hong Kong Trade Development Council (HKTDC), the two shows were held from 20–23 April 2018 at the Hong Kong Exhibition and Convention Centre.

According to HKTDC, more than 29,500 buyers visited the Houseware Fair, while more than 19,000 buyers attended the Home Textiles and Furnishings Fair. Attendance from mature markets such as Singapore, Canada, the United Kingdom and the United States, as well as emerging markets including the Chinese mainland, Vietnam, Brazil, Argentina and Mexico saw satisfactory growth.

In terms of product trends, the respondents said kitchenware and gadgets (15 percent), eco-friendly



Ms Lea Czermak, Senior Creative Project Manager, Home & Luxury Department, NellyRodi

products (14 percent), interior decor and handicrafts (12 percents) are the product categories with the highest growth potential. Simple designs (45 percent), multifunction products (42 percent) and trendy designs (40 percent) are seen as the most outstanding product styles this year.

Highlight zones of the Houseware Fair this year included the Hall of Elegance, World of Fine Dining, Coffee Alley, World of Building Hardware and World of Pet Supplies. The main theme for this year's fair was "L.I.F.E", which stood for Lifestyle, Interior, Feast and Enrich and represented the show's four major themed zones. To highlight the fair themes, the HKTDC collaborated with NellyRodi, a well known Paris-based trend-forecasting agency, to present the four trend concept displays. At the World of Building Hardware, there was participation from Kam Wing Hardware & Tools Ltd, New Pearl Ceramic (Hong Kong) Co. Limited, Smart Technologies & Investment Ltd, Kimbo International Holding Limited, Terenzio



HKTDC Acting Executive Director Benjamin Chau

Design, Hop Wo Furniture & Decoration Works Co. Limited, V-Pro Construction Material Limited, Zisoft Limited, and other manufacturers.

"Hong Kong has long been a cradle for entrepreneurs. Our innovative thinking and entrepreneurial spirit, which have contributed greatly to Hong Kong's economic success, are crucial for the city's future. As such, we continued to organise a Startup Zone at this year's Houseware Fair, featuring more than 20 start-ups to exhibit from Hong Kong, the Chinese mainland, Taiwan and Bangladesh. The zone allowed start-ups to exhibit at a lower cost, making the show a springboard for them to connect with overseas buyers and manufacturers, and a testing ground to gauge market responses to their products. We also organised a number of 'Startup-Smart Launch' sessions for start-ups to present their business ideas and explore opportunities," said HKTDC Acting Executive Director Benjamin Chau.



PIN Genie Inc showcases smart lock system

At the World of Building Hardware fair, Pin Genie Inc launched the '7 Series DEADBOLT LOCK' system and the Smart Lock 8 Series OPTIMA Deluxe.

The 7 Series DEADBOLT LOCK' is a patented peek-proof smart door lock which uses the PIN genie technology. This technology makes it impossible for intruders or even your nosy neighbours or envious friends to peek, trace and spy on your door codes. It has a four-button keypad that reshuffles after each use. This deadbolt lock gives you the utmost security features, which make it suitable for Airbnb hosting. Beside the peek-proof keypad, you can open the door with an app over Bluetooth connection, which is more secure compared Wi-Fi enabled locks. You can securely send and assigned door codes to your guest anytime from anywhere in the world.

The Smart Lock 8 Series OPTIMA DELUXE is a sleek, stylish smart lock with uncompromised security features to suit the convenience of your urban lifestyle. "In the world of security, the more secure it is, the less convenience it is. Our product offering covers the whole spectrum of security and convenience matrix," said Mr. Lee Zheng, Founder & CEO of PIN Genie Inc.



Mr Lee Zheng posing with the company's Smart Lock 7 Series DEADBOLT LOCK (left) and Smart Lock 8 Series OPTIMA DELUXE.

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T: +60 3 2692 6888 **F:** +60 3 2692 2788
E: syed@ambtarsus.com
W: www.lankabuild.org

**3-5
SEPT**

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E: building@china.messefrankfurt.com
W: www.building.messefrankfurt.com.cn

**6-8
SEPT**

Concrete Asia 2018

Hall 7, IMPACT Exhibition and Convention
Center, Bangkok, Thailand
T: +66 2 833 5120
E: watinees@impact.co.th
W: https://concrete-asia.com

**5-7
SEPT**

BEX Asia 2018

Marina Bay Sands
Singapore
T: +65 6780 4671
E: info@bex-asia.com
W: www.bex-asia.com

**12-14
SEPT**

BMAM Expo Asia 2018

Hall 5-6, Impact Exhibition Center
Bangkok, Thailand
T: +66 2 833 5208 **F:** +66 2 833 5127-9
E: chanone@impact.co.th
W: http://bmam-gbr.com

**12-14
SEPT**

CamBuild 2018

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T: +60 3 2692 6888 **F:** +60 3 2692 2788
E: yeo@ambtarsus.com
W: www.cambuildexpo.com

**19-21
SEPT**

**Concrete Show South East
Asia 2018**

Jakarta International Expo
Jakarta, Indonesia
T: +62 21 2525 320 **F:** +62 21 2525 032
E: niekke.budiman@ubm.com
W: http://concreteshowseasia.com/

**19-21
SEPT**

Construction Indonesia 2018

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E: niekke.budiman@ubm.com
W: www.constructionindo.com/

**2-4
OCT**

ArchXpo 2018

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E: info@cems.com.sg
W: www.archxpo.com.sg

**2-4
OCT**

iFAME 2018

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T: +65 6278 8666 **F:** +65 6278 4077
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W: www.ifame.com.sg



**2-4
OCT**

Architecture & Building Services (ABS) 2018

Halls A, B & C

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T: +65 6278 8666 **F:** +65 6278 4077

E: info@cems.com.sg

W: www.architecturebuildingservices.com

**4-6
OCT**

Myanmar Build & Decor 2018

Myanmar Event Park (MEP) at Mindama
Yangon, Myanmar

T: +66 2 713 3033 **F:** +66 2 713 3034

E: info@icvex.com

W: www.myanmarbuilddecor.com

**22-24
OCT**

BuildTech Asia 2018

Singapore EXPO, Hall 3 & MAX Atria
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T: +65 6319 4021 **F:** +65 6319 6140

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**8-10
NOV**

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BITEC

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W: http://thailandlightingfair.

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**16-18
NOV**

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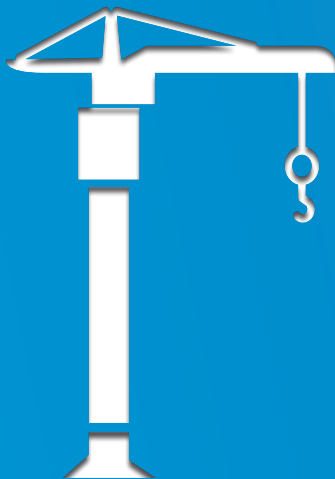
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Innopolis University and Sports Complex

Mapei provides solutions in the Russian hub for high-tech industries.



Mapei mortars, such as MAPEFILL, MAPEGROUT 430 and MAPEGROUT THIXOTROPIC, were used to complete the campus of the Innopolis University in the Republic of Tatarstan.

Innopolis is a city of the Republic of Tatarstan, belonging to the Russian Federation. Its history begins on June 9th, 2012, when Dmitry Medvedev, the Chairman of the Government of the Russian Federation, together with Rustam Minnikhanov, the President of the Republic of Tatarstan, and Nikolay Nikiforov, Minister of Communications and Mass Media of the Russian Federation, laid a capsule with a message to future residents at the groundbreaking site of the construction. Three years later, on June 9th, 2015, Innopolis held its foundation ceremony.

The economy of the city is based on high-tech industries. The Innopolis Special Economic Zone (SEZ) was established on the territory of the city in order to bring to Innopolis the largest and promising

technology companies from all over the world. Innopolis is an attractive place to live and work in comfortable conditions. By 2021, its population may reach 155,000 inhabitants, 60,000 of which will be engaged in Information Technology.

The city has now a unique, eco-friendly city environment with modern infrastructure and many opportunities for education and professional development.

One of the key elements of the city's development was the construction of the Innopolis University, an innovative institution that trains specialists in the IT field. The project of the University was developed jointly with the University of Carnegie Mellon (USA), which is one of the leading information technology schools.

Specialising in the field of modern

information technologies, Innopolis University is not only one of Russia's youngest universities, but also the new city's intellectual center. The teaching staff includes leading Russian and foreign specialists in IT and science robotics. Driven by the demands of both business and industry, the educational programmes are committed to producing a high-quality stream of professionals for companies located in Innopolis.

The Innopolis sports complex is also an important part of the city environment, promoting a healthy lifestyle among residents. The three-storey building attracts visitors with its unique interior design and great vibes. Its total complex area is 9,000 square metres. It offers residents and city guests an universal



Mapei products for ceramic tile installation, such as ULTRACOLOR PLUS, were used both in the University campus and in the sport complex.



The pool substrates in the sports complex were waterproofed with MAPELASTIC before bonding the ceramic tiles with KERACRETE+KERACRETE POWDER.

sports hall for team sports, a 25 metres swimming pool, a jacuzzi, a gym, saunas and hammams.

Mapei solutions for the project

In the Innopolis University, MAPEGROUT THIXOTROPIC fibre-reinforced, shrinkage-compensated mortar and MAPEGROUT 430 fine-grained, fibre-reinforced, normal-setting thixotropic mortar were used to smooth concrete surfaces, due to their high flexural and compressive strengths.

MAPEFILL, a high-flow non-shrinkage cementitious anchoring grout characterised by high adhesion to iron and concrete and excellent resistance to mechanical stress, was used for anchoring works in a shower cabin.

During the construction of the Innopolis sports complex, the above-mentioned products were also used for similar interventions.

Mapei solutions also played a key role in the construction of the swimming pool and the hot tub of the complex.

To provide the necessary waterproofing, MAPELASTIC was chosen. This is a two-component, flexible cementitious mortar for waterproofing balconies, terraces, bathrooms and swimming pools. The product ensures protection of renders or concrete surfaces with cracks caused by shrinkage, against penetration of water even under pressure up to 1.5 bar.

For elastic waterproofing of joints, MAPEBAND alkali-resistant rubber tape was used before covering the surfaces with ceramic tiles.

When installing the tiles, KERACRETE + KERACRETE POWDER two component adhesive system (the latter is distributed on the Russian market by ZAO Mapei) was applied, which is especially suitable for bonding tiles in swimming pools. The system is made up of a synthetic rubber latex mixed with sand and cement and has excellent mechanical strength, impact resistance, vibration resistance, resistance to temperature changes and ageing.

For grouting tile joints, ULTRACOLOR PLUS was used. This is a high-performance, anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent DropEffect® and mould-resistant BioBlock® technology which guarantees a uniform colour, blocks the formation of micro-organisms that cause mould damage and reduces the absorption of surface water.

All these solutions helped to create comfortable areas for those living in and visiting one of the most innovative places on earth.

Mapei Products

Repairing concrete elements: Mapegrout Thixotropic, Mapefill, Mapegrout 430

Waterproofing pool substrates : Mapelastic, Mapeband

Installing ceramic tiles and grouting joints: Keracrete+Keracrete Powder*, Ultracolor Plus

*This product is distributed in Russia by ZAO Mapei.

Article source: *Realtà Mapei International* no. 66/2017

For more information, email mapei@mapei.com.sg.



The surfaces of the hot tub in the sports complex were waterproofed with MAPELASTIC.



MAPEBAND alkali-resistant rubber tape was used in the pool for the elastic waterproofing of joints between walls and between walls and floors.

PROJECT DATA

Project: Innopolis University and Sports Complex

Location: Innopolis, Republic of Tatarstan (Russian Federation)

Period of construction: 2013–2015

Year of intervention: 2014

Intervention by Mapei: supplying products for smoothing concrete, anchoring, waterproofing, and installing ceramics

Designer: Kazan Giproniaviaprom

Client: Innopolis Main Investment and Construction Department

Contractor: Kamgesnergostroy

Mapei distributor: Avitrade, s.r.o

Mapei coordinators: Sergey Kuznetsov and Igor Kazakov, ZAO Mapei (Russian Federation)

Photos: Diana Grischenko



Taipei European School Yangmingshan Campus Redevelopment Project

Located in the beautiful Yangmingshan and adjacent to the famous Taipei Hwa Kang Arts School, the Taipei European School Yangmingshan Campus Redevelopment project sits on a site totaling 16,030 square metres.

The design takes local climatic conditions into account and draws inspiration from Chinese traditional book cases by creating a series of 'shells' on elevation, symbolising the school's 'books'

are collected in the cultural 'book cases'. Spatial design imitates the local 'alleys' to construct the public interactive spaces in the school. Landscaped courtyards are designed with reference to the traditional gardens to provide a natural, vivid and unique learning environment.

"The design of the Taipei European School Yangmingshan Campus Redevelopment Project drew inspiration from traditional



Taiwanese book cases to develop a series of shading 'shells' on the elevation, symbolising the encasing of knowledge in book cases. The laminated bamboo shell shading system reveals the contextual characteristics of Yangmingshan while maximising natural light and providing shading to the functional spaces to reduce the reliance on artificial lighting and air conditioning. Patterned concrete claddings and brick walls create delicate facades in response to the brick structure of neighbouring school buildings. We also took full advantage of the hilly site to maximise indoor and outdoor communal and recreational spaces in the planning of the campus," said Dr. Andy Wen, Aedas Global Design Principal.

PROJECT DATA

Project: Taipei European School Yangmingshan Campus Redevelopment Project

Location: Taipei, Taiwan

Client: Taipei European School Foundation

Architect Firm: Aedas

Gross Area of the Entire Development: 19,361 square metres

Completion: 2021

Winning Awards:

[A' Design Awards 2016–2017:](#) Golden Winner, Architecture, Building and Structure Design

[HKIA Cross-strait Architectural Design Awards 2017:](#) Merit Award, Un-built Projects: Architectural Design Scheme

[MIPIM Asia Awards 2016:](#) Bronze, Best Futura Project

Photos: © Aedas



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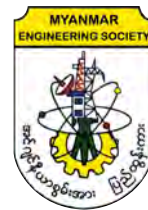
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“

“Inspired by the spatial quality of Taiwanese alleyways, interactive spaces are created along the main circulation route.”

– **Dr. Andy Wen**, Aedas Global Design Principal



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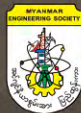
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NIT front view

National Institute of Technology, Delhi

Designed as the future of India, the campus aims to create an environment that will invoke the spirit of innovation, technology and invention through its built volume, hence inspiring the students. Conceived as the first vehicle-free campus built on the principals of sustainability and design innovation, the design goes beyond the fulfilment of a stated brief of functional spaces.

Campus design should be synonymous with inspiration and innovation; a heady mix of formal and informal learning that transforms young fertile minds into confident and knowledgeable professionals ready to chart their course and eager to make a difference. It is with these thoughts that we at Design Forum International (DFI), started on the design process of NIT Delhi as a "Crucible of Inspired learning." DFI researched national and global campuses to gain insights and the Master Plan for NIT Delhi was developed as per the evolving needs of the Institute over 25-30 years for a capacity of 6000-8000 students.



"Master planning a green field educational campus is perhaps the most coveted and fulfilling assignment an architect can undertake!"

— **Ar. Goonmeet Singh Chauhan**, Principal Architect, Design Forum International



From left to right: Goonmeet Singh Chauhan, Anand Sharma, and Anoj Tevatia of Design Forum International.



Learning centre

Site Zoning & Master Planning

City Campuses unlike their country cousins need to be planned in more space efficient manner. They must however retain the openness and informality. N.I.T. Delhi is being built on a 56 acre site (approximately 2 lakh square metres) and is enveloped with a 20 acre green belt that shields the site from the noise and pollution of the NH1 that runs along its North East face, a Master Plan road on SE and a Nallah that runs along the NW to S. The site had to be zoned into four parts, that is, Academics, Administration, Sports & Green, and Residential.

Learning Centre

Treated as the Visual Ambassador of the project, the building acts as a focal point. It lies on the 700 metres long NE front face of the campus, and houses the central facilities like lecture halls, library, computer centre, etc. The design brief for the learning

centre called for India's largest library cum lecture complex and the largest computer centre in the country, as a contemporary, landmark building that would be modern and seem avante garde in 2050, demonstrating cutting-edge technology.

Academic Block

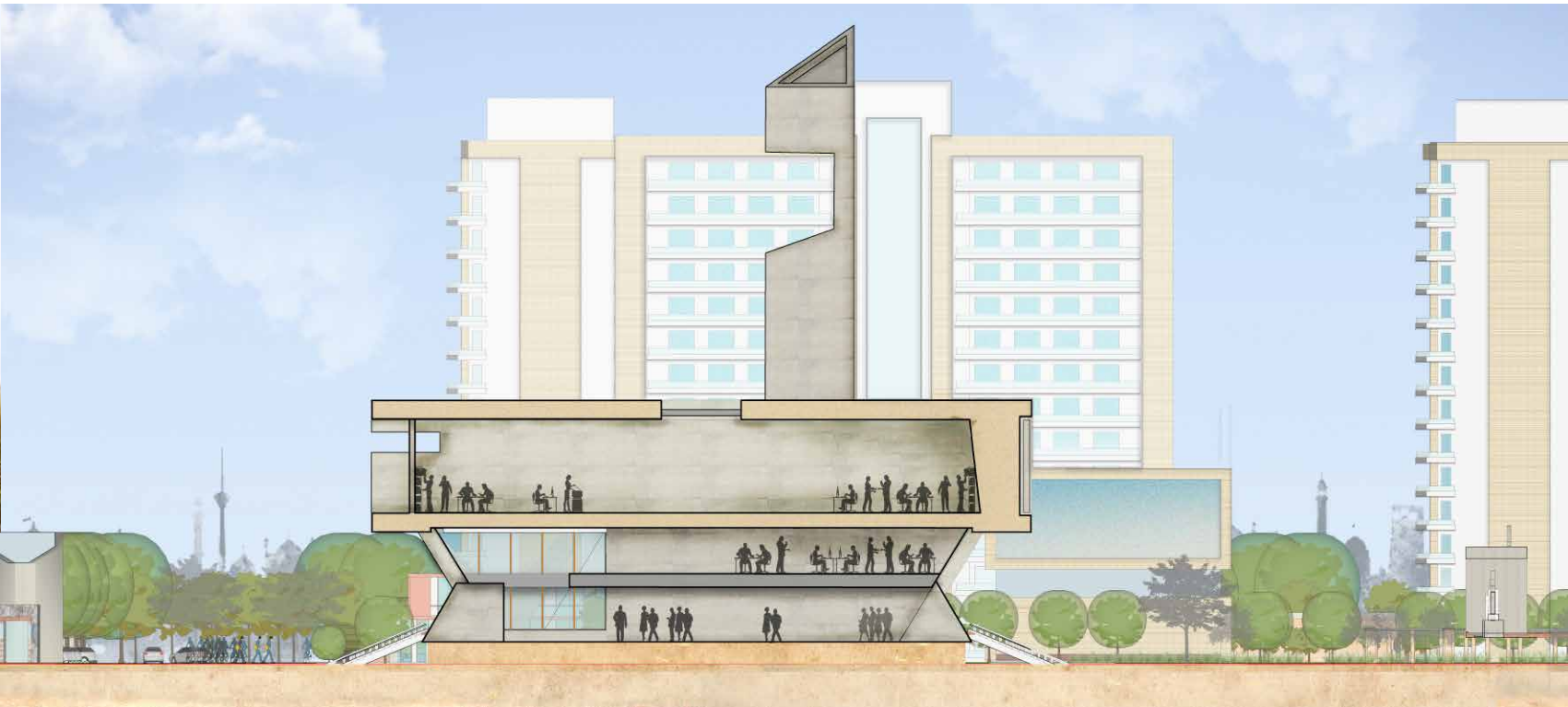
Comprising of regular class rooms, large lecture halls, labs and huge workshops, the academic block is conceived as a shaded space, with partial daylight at certain times during the day. All buildings are planned in a transparent manner that they remain visually connected to the central buffer.

Connecting Bridges

Each department retains its sovereignty and equally shares facilities like lecture halls, laboratories, department libraries, etc. To achieve a connection an interesting matrix based design



Academic block



Administration block

was evolved wherein the academic buildings are connected through bridges at various levels allowing smooth movement horizontally and vertically across.

Plazas

In order to create interactive zones for students, a series of shaded linear plazas were planned. Abutted by generous 5 metres wide by 6 metres high corridors at both sides, these linear plazas would be open on two ends to allow the rising and setting sun to nourish the greens within the plazas and these plazas would also be breezy.

PROJECT DATA

Project: National Institute of Technology
Location: New Delhi, India
Client: NBCC (India) Limited [formerly National Buildings Construction Corporation Limited]
Architect Firm: Design Forum International
Gross Area of the Entire Development: 35,1182 square metres
Completion: 2022
Photos: © Design Forum International



Student centre

Lushan Primary School





Lushan Primary School will be an educational institute for 120 children located 160 kilometres northwest of Nanchang, the capital of Jiangxi Province, and serve 12 local villages with a total population of about 1,800 people.

Surrounded by mountains as well as the rivers and lakes fed by the Zhelin Reservoir, the school is within an agricultural region that also has a rich tradition in the production of ceramics.

The school's curriculum is a synthesis of Chinese and international academic systems; combining an education in the creative arts with a comprehensive syllabus of STEM subjects that also includes advanced internet-based learning technologies. Visiting teachers and artists will make the school a focus for the community it serves.

The campus includes the school, dormitory and utility buildings within vaulted spaces that connect directly with their rural surroundings. The classrooms have flexible learning arrangements and outdoor teaching areas.

Composed as a network of barrel and parabolic vaults that open towards the river, the vaults stretch and intersect to accommodate the school's varied programme. A long central courtyard acts as the school's main circulation space and play area.

The vaulted classrooms are orientated for the best natural light conditions, as well as to frame views to the surrounding landscape. Cantilevers protect the classrooms from the solar gain of Jiangxi's sub-tropical climate and extend the teaching spaces into the landscape to provide a varied and interactive learning environment.

The barrel and parabolic vaults act as the school's primary structure and enclosure, with each vault performing as an individual structural element.

To minimise construction time and also reduce the number of separate building elements required to be transported to the school's remote location, ZHA proposes to combine the local skills of in-situ concrete construction with new advancements in hot-wire cut foam formwork that can be prepared on site by an industrial robot to create the barrel and parabolic shaped moulds.

The modularity of the vaults enables moulds to be used multiple times, further accelerating the construction process and reducing costs. The region's long history of producing the highest quality ceramics dates from the Ming Dynasty. These traditions are continued in the school's ceramic external finishes laid in a gradient of tones that express the differing programmes within.

Located on a small peninsula surrounded on three sides by water and bordering farmland to the north, the school is on an elevated escarpment five metres above the 50-year flood level. Its surrounding landscape incorporates outdoor teaching





spaces and sports facilities, and also serves as a natural water catchment area to further protect the school from flooding.

This surrounding landscape rises towards the school, creating natural areas within its raised courtyards.

Established by Jinggan Yu, president of the College of the Arts in Jiangxi, the Lushan Primary School combines his work as an educator with his passion for the built environment. The design aims to create spaces that build relationships between the students, their teachers and their environment, establishing their life-long curiosity for exploration and discovery. Lushan Primary School will consist of the Foundation Stage for children aged 3 to 6 years (equivalent to kindergarten) and the Primary Stage for children 6 to 12 years of age.

PROJECT DATA

Project: Lushan Primary School
Location: Nanchang, Jiangxi Province, China
Client: Jiangxi College of Art
Architect Firm: Zaha Hadid Architects
Gross Area of the Entire Development: 7,792 square metres
Photos: © VA / © Zaha Hadid Architects



“The design aims to create spaces that build relationships between the students, their teachers and their environment, establishing their life-long curiosity for exploration and discovery.”

– **Patrik Schumacher, Principal, Zaha Hadid Architects**



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Morinoie Nursery School

The site is located in the central area of Sendai city, an area influenced by recent land readjustment projects. It is expected that this area will continue to develop and increase in residential population. With these circumstances in view, Masahiko Fujimori Architects designed an "urban-style" nursery school building that can efficiently accommodate increased numbers of children, while also encouraging their curiosity, creativity, and connection with the local community.

The rooms and the garden are stacked to make effective use of the limited land area. On the street-facing wall are a number of bay windows in colour frames shaped like the block houses that children often draw. This unique visual presentation inspires curiosity, while the bay windows provide extra interior

spaces for children to play and expand their creativity.

The architect aimed to give the nursery school a warm atmosphere with wood materials and comfortable furnishings for the interiors. Meanwhile, the box frame type reinforced concrete construction provides strength, safety and durability. The colourful bay windows present the energy and activity inside the building to the surrounding neighbourhood, offering the site as a positive symbol for the town and a bond between the children and their local community.

Masahiko Fujimori hopes that this building design will carry a happy, childlike energy throughout the neighbourhood, encouraging a vibrant atmosphere in this town where the community is still developing.





“

In planning this project, we looked at the possibility of utilizing the bay window in a unique narrow site seen in the urban area of Japan.”

– **Masahiko Fujimori**,
Founder, Masahiko Fujimori Architects



PROJECT DATA

Project: Morinoie Nursery School
Location: Sendai, Japan
Architect Firm: Masahiko Fujimori Architects
Gross Area of the Entire Development: 662.83 square metres
Completion: 2017
Photos: © Shigeo Ogawa and © Masahiko Fujimori Architects

Planet Kids



The client brief for Planet Kids called for the design of a primary school on a tight site in an urban residential neighbourhood. The program comprising of classrooms, library, multipurpose space, activity rooms and various play areas demanded the building to be spread across five floors including the basement.

The overall design intent articulates the program in a playful manner from a child's perspective and is conceived as a conglomeration of myriad child fantasies. In order to create spatial intimacy, an anthropometrically scaled space has been crafted, that is scaled down for children – from railings to niches, all of them have been designed to not be overpowering. These elements include letters coalescing to form the elevation in the facade, to tiny nooks and corners for children to hide in, to little peep holes in every door and



“The design intent articulates the program in a playful manner

from a child’s perspective and is conceived as a conglomeration of myriad child fantasies. In order to create spatial intimacy, an anthropometrically scaled space has been crafted, that is scaled down for children- from railings to niches, all of them have been designed to not be overpowering. The intention of using various shapes has been to create a graphic space, where each space would become a pedagogical tool.”

– Ar. Smaran Mallesh,
Founder & Partner, Cadence Architects



multiple other experiences. The intention of using various shapes has been to create a graphic space, where each space would become a pedagogical tool. The colours and shapes facilitate the creation of a playful atmosphere, thereby promoting interaction and engagement.

Each program requirement has been seen as an opportunity to create a distinct world for the child. The reception is conceived as a portal to the building and designed to be an object in a Black space. This colourful assemblage of different worlds and experiences is then connected with a staircase and a special void that cuts through the building in section.

An overall attempt has been made to mimic the idea of the 'architectural promenade' in a novel manner, where different spaces unravel along the path of the staircase. The staircase is designed as a sculptural element through a void. The sculptural void also enables visual and spacial interaction between the different levels while enhancing the perception of a larger space.

Within the site context and location, the facade was intended to be a billboard in some sense, like a sign. Hence, typography has been used so that the children can relate to it. The entire building has been conceived as a child's fantasy, flying letters become windows, giant candy shaped objects become rooms, circular openings resembling those on a ship, railings that look like fences in a zoo, and even a playful entrance that is like a mouth of a giant etc. The fabrication of the distinct elements coming together as a whole, enable the creation of a new identity in the residential neighbourhood.

Green is a colour that has been used to bring in vibrancy to the space, while compensating for the lack of a natural, green environment, making metaphorical references to zoos and forests- all part of a child's visual vocabulary. Pink is used in contrast to create a calming atmosphere in the otherwise charged environment. A collage of patterns, colours and materials is crafted; Ferro-concrete is used for the construction of the letters, MS for the patterned bubble grills, striated paint strips for the library, kota and vitrified tiles have been used for the interior floors, flexi ply and gypsum for the furniture and ceiling etc. To facilitate the construction of the non-orthogonal forms and shapes, a non-rectilinear structural grid has been optimised along with the use of ferro-concrete in the facade to sculpt the varied shapes.

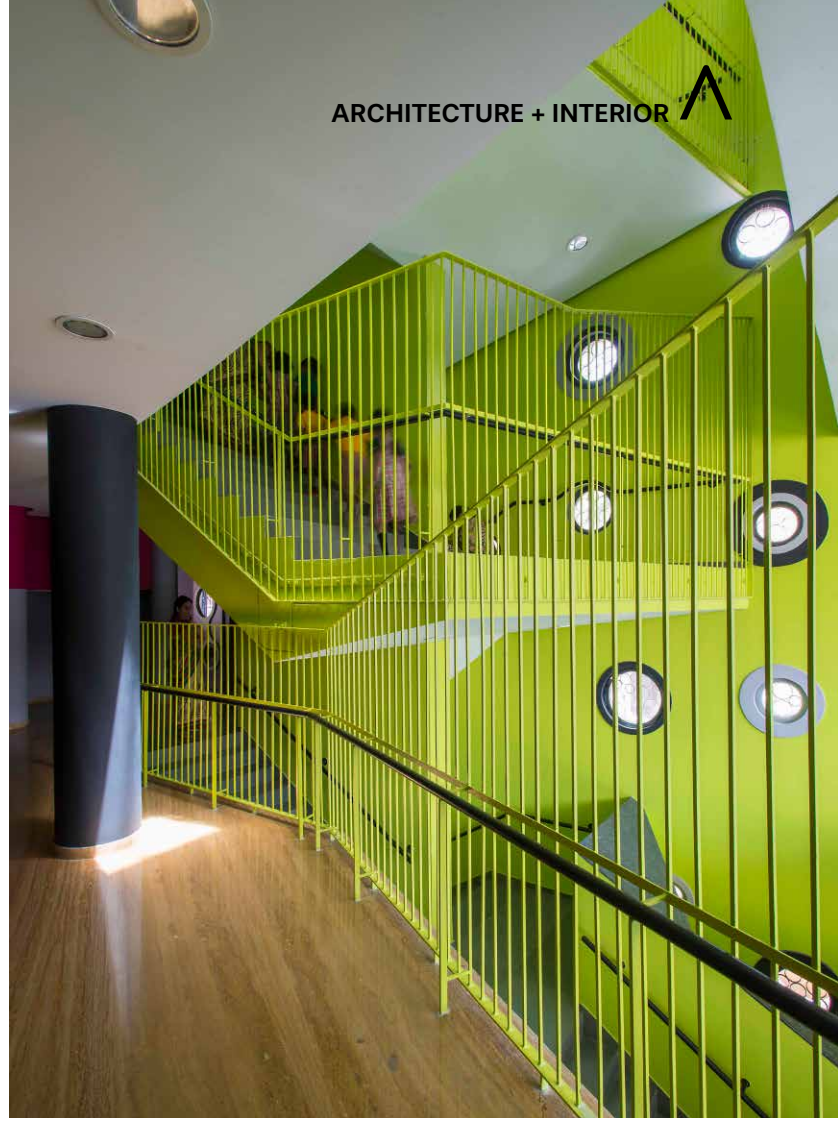


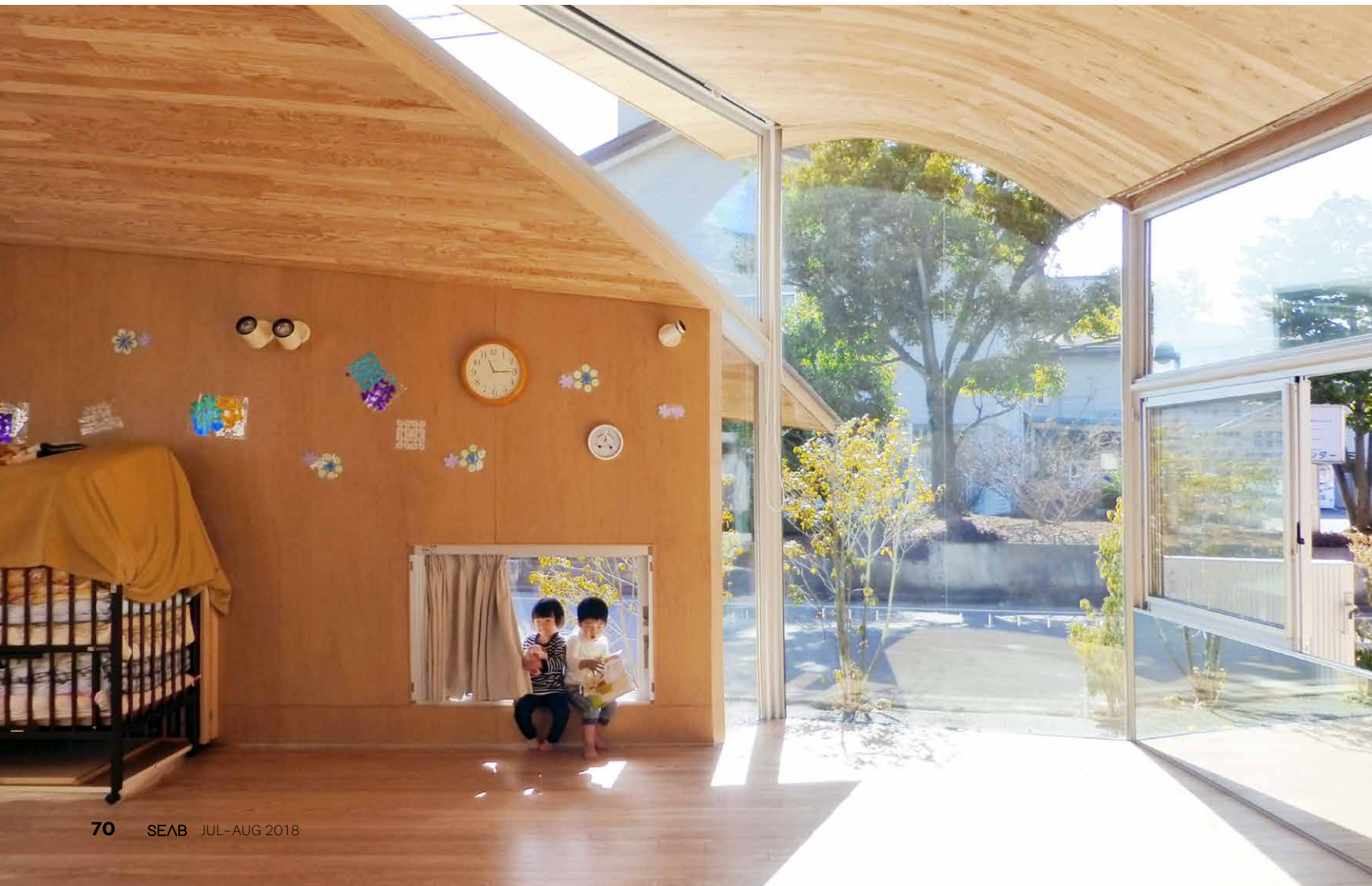
Cross section of Planet Kids.



PROJECT DATA

Project: Planet Kids
Location: Bengaluru, India
Client: Planet Kids
Architect Firm: Cadence Architects
Gross Area of the Entire Development: 298 square metres
Completion Date: 2016
Photographer: Anand Jaju





Toranoko Nursery



The Toranoko Nursery project is a small nursery in a town in Yamanashi prefecture, Japan. Most of the local residents are aged, living in modest houses and farms scattered in the area. Along with a spectacular view of Mt. Fuji, the town creates a peaceful, but a bit deserted atmosphere.

The client operates three assisted-living facilities for the elderly around the site. The initial idea of the client was about building a public place for the patients and the locals, and later it was further specified to create a lounge for the community and a nursery to take care of the children of the town.

On top of the requirement, the architect wanted the project to become a trigger to infuse life into the desolate neighbourhood and further flourish the local community.

Located in the centre of the enclosed site, the roofs are slightly positioned in various angles, opening towards all possible directions to allow physical and visual approach of anybody from any route. Gentle curvature of each roof creates a sequence of scenery, dividing garden, lounge, lunch room, nursing room and office, while the spaces are still kept connected as one.

Children playing around, the elderly taking a rest, mothers chatting with each other, and cats basking in the sun – there is a place for everyone under the roof.

PROJECT DATA

Project: Toranoko Nursery

Location: Yamanashi Prefecture, Japan

Client: Seiko-kai

Architect Firm: Takashige Yamashita Office

Gross Area of the Entire Development: 170.66 square metres

Winning Awards:

[Yamanashi Cultural Prize of Architecture in 2017](#)

[Japan Architecture of the Year 2017, Selected by the JIA in 2017](#)

Completion: 2016

Photos: © Takashige Yamashita Office

“

Toranoko nursery is designed in hopes of creating a core space of the community where people would gather around, as if under a big tree.”

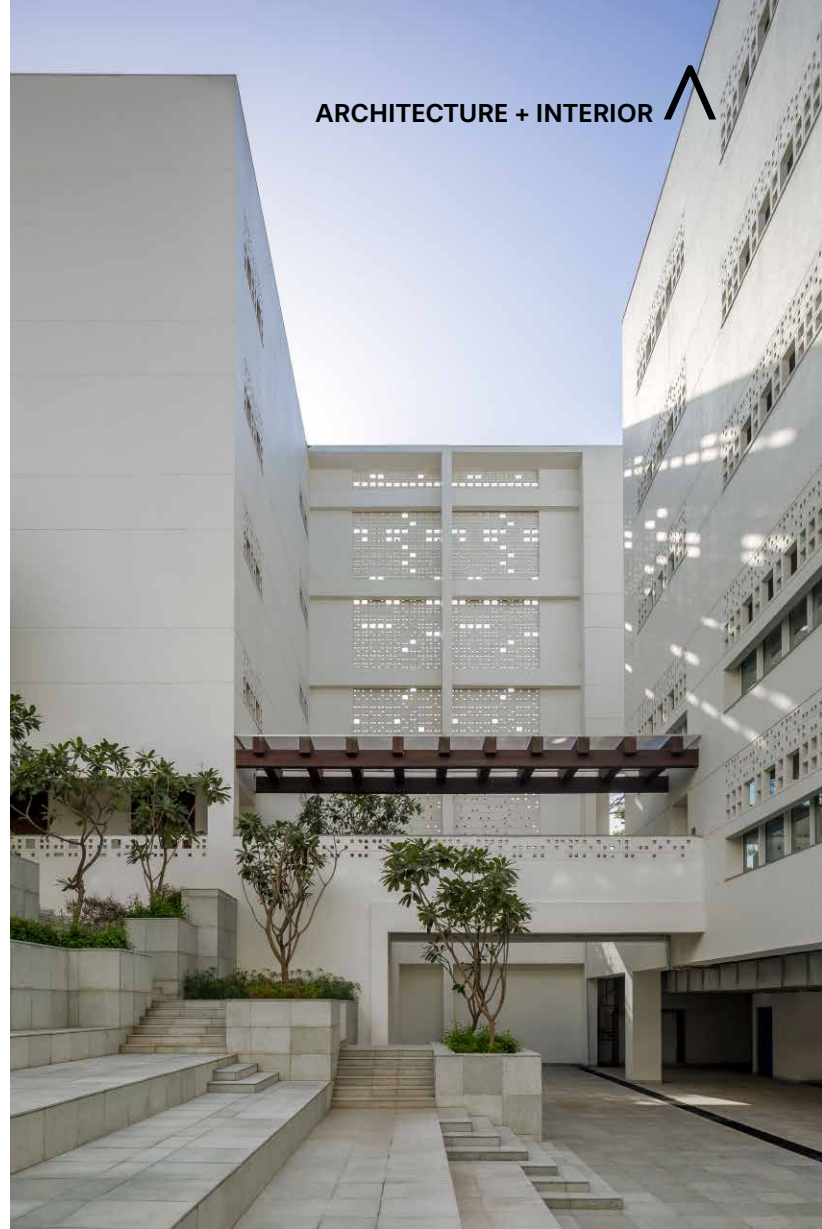
– **Takashige Yamashita, Principal of Takashige Yamashita Office**





The British School

The design of The British School in New Delhi by Morphogenesis enriches the learning experience of its highly diverse student population by providing a contextual richness to their passage through education in India. The unusually diverse student population with over 55 nationalities led Morphogenesis to evolve a socio-culturally inclusive process of detailing the brief.



Adopting sustainable passive design strategies

Two key design strategies were deployed by Morphogenesis to optimise resources. One was to minimise reliance on mechanical systems. Morphogenesis advocated that 50 percent of the school be non-air-conditioned with traditional passive methods used to temper the environment and optimise energy consumption, creating an environmentally experiential learning environment. The second strategy was that of planning the school as a system of courtyards scaled such that majority of them are in shade throughout the year, thus making them effective not only as transition spaces but as extended learning environments. Protecting old trees, creating bioswales, rain gardens and a visible rainwater harvesting system, consciously illustrate demonstrative sustainability.

Creating spaces for social interaction

Breakout spaces have been consciously placed along transition areas, such that the activities they facilitate become an integral part of the student experience, enhancing their holistic socio-cultural awareness and demonstrating the school's outreach philosophy at the same time.

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The multifunctional nature of these spaces helped in optimising the built up space of this urban school. Internal courtyards, *chajjas* (deep overhangs) and verandahs provide opportunities for students to engage with the environment and nature. Taking inspiration from traditional *chaupals* (outdoor gathering spaces) in India, some congregation spaces are designed to sit in the shade of mature trees.

PROJECT DATA

Project: The British School
Location: New Delhi, India
Client: The British School Society
Architect Firm: Morphogenesis
Gross Area of the Entire Development: 21,500 square metres
Completion: 2016
Photos: © Morphogenesis, Randhir Singh, Jatinder Marwaha



“Morphogenesis’ design vision for The British School in New Delhi, found inspiration in the school’s tagline - ‘An International education with an Indian soul’”

– **Manit and Sonali Rastogi**, Founder Partners, Morphogenesis





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Viettel Academy Educational Centre

Viettel Academy Educational Centre is located in a Training Centre Campus at Hoa Lac Hi-Tech Park, which is 30 kilometres away from Hanoi. It has a cooling microclimate as it is surrounded by beautiful landscape, lakes and abundant green space. The Educational Centre is very accessible from the residential zone and other facilities due to its central location within the campus. The project is aimed to create a quiet and peaceful space for the trainees to focus on their studies, away from the hustle and bustle of city life. It will provide short-term accommodation

“

The project is aimed to create a quiet and peaceful space for the trainees to focus on their studies, away from the hustle and bustle of city life.”

– **Vo Trong Nghia**, Managing Director of Vo Trong Nghia Architects





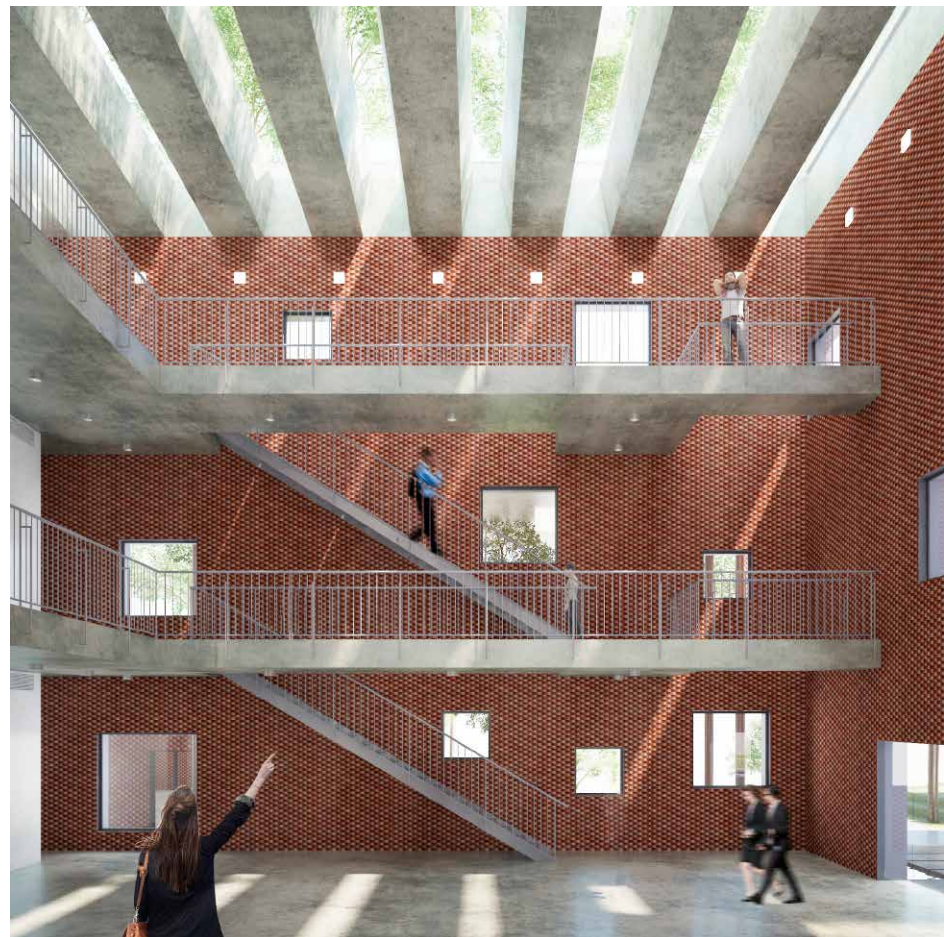
and training courses for the staff of Viettel Corporation, Vietnam's largest mobile network operator.

The Educational Centre consists of 12 blocks, accommodating classrooms, meeting rooms, halls, and offices. The main blocks are 4 to 5 storeys whereas the rest are only 2 to 3 storeys high. These blocks are surrounded by an overflow pool, which not only creates beautiful reflections of the buildings and surrounding landscape but also helps in regulating its microclimate.

The blocks are connected by multi-level circulation paths, such as corridors, ramps, and staircases. This offers many interesting views as well as various quiet areas for studying. Due of the humid tropical climate in Hanoi, a lightweight concrete roof is designed to cover the majority of semi-outdoor spaces, which also functions as sky walk. Besides, the roof helps to reduce direct radiation from sunlight.

The first floor garden system is arranged alternately among the blocks, creating a friendly atmosphere for trainees and bringing them closer to nature. Roof gardens on different floors form a series of hanging gardens that provides students a relaxing space for interaction during breaks.

Local bricks are used as the building finishes, creating an impressive red-brick facade for the whole project. The monolithic facade exudes a strong and rustic presence. The 300-400mm-thick facade is made of two layers of brick-wall with void in-between for insulation to reduce





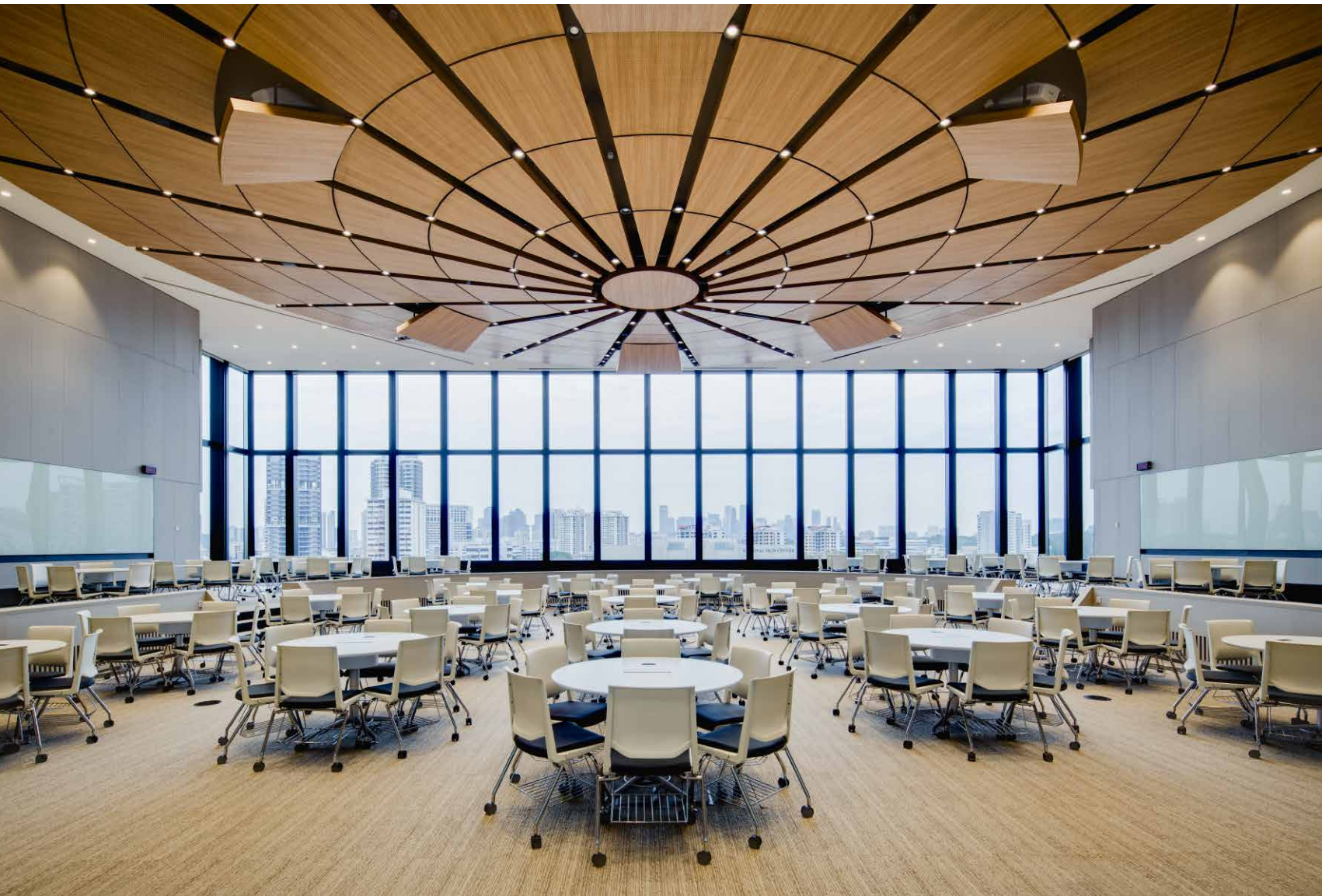
energy use. The brick facades become the backdrop of activities that are taking place around the blocks, creating a vivid memory for the participants during the training course. The combination of red bricks facade with green space will bring a harmonious atmosphere with nature.

The building was completed at the end of 2017.

PROJECT DATA

Project: Viettel Academy Educational Centre
Location: Thach That, Hanoi, Vietnam
Architect Firm: VTN Architects (Vo Trong Nghia Architects)
Gross Area of the Entire Development: 2,651 square metres
Completion: End of 2017
Photos: © VTN Architects (Vo Trong Nghia Architects)





Lee Kong Chian School of Medicine, Novena Campus

The Lee Kong Chian School of Medicine (LKC Medicine) is a joint school between Imperial College London (Imperial) and Nanyang Technological University Singapore (NTU). Bringing together NTU's core strengths in engineering, science and technology and Imperial's world renowned expertise in medicine, LKC Medicine's mission is to equip doctors who advance the science and practice of medicine for the good of humanity, and deliver innovative solutions to tomorrow's healthcare problems.

LKC Medicine consists of 2 campuses

– Experimental Medicine Building within NTU's 200-hectares Yunnan Garden campus and the centrally located Novena campus next to Tan Tock Seng Hospital. Here, the latter development houses the LKC Medicine headquarters in a retrofitted conserved building and the 20-storey Clinical Sciences Building.

Formal symmetry & axis

Paying homage to the adjacent conserved building, the building plans of the Clinical Sciences Building tower echoes the ordered symmetry of the

conserved building plan, which is a clear characteristic of old colonial architecture. The language of symmetry allows the centre of the ground entrance plaza of the tower to be aligned with the main entrance of the conserved building, establishing a strong central axis, visually uniting the old and the new buildings.

Plaza & vista

The tower is intentionally set back from the conserved building at a distance approximately equal to the height of the conserved building. This creates a



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“The integrated design approach is derived from the pedagogy of team-based collaborative learning in the climate of 4th industrial revolution.”

– **Mr Loh Hai Yew**, Director, DP Architects Pte Ltd



Photo: © DP Architects





foreground between the two buildings where one can appreciate the beauty of the conserved building.

A triple-volume communal plaza was created at the 1st storey by lifting up the tower mass off the street level, serves as the Outdoor Living Room of the campus. The sloped ceiling and enclosing walls at both sides of the plaza frames up the view of the conserved building, providing a delightful vista upon arrival. At the 4th storey pre-function hall, outside the auditorium, visitors can also enjoy an elevated view of the conserved building and relate to the old building while being in the new. It was intended for this conserved building to enhance the imageability of these public spaces, become a signature landmark of the medical school, and help contribute to the collective memory of the students and staff alike.

Lateral inversion

The use of reflective glass for the façade of the Clinical Sciences Building purposefully highlights the conserved building through reflection. At the 1st storey plaza, views of both east and west ends of the conserved building central

block are actually hidden by the glass walls at both sides of the plaza.

However, through lateral inversion, both ends of the conserved building central block are reflected onto the plaza glass wall diagonally opposite to it, thereby creating an illusion of an unblocked and complete view of the conserved building for viewers at the plaza.

Clean-edge glass box

A minimal and cleaned-edged glass box is adopted for the building form of the Clinical Sciences Building tower. The design strategy was to bring contrast between the old and new building, not in segregation but in dialogue. The minimalist, glass-clad modern appearance of the tower would not distract viewer's attention from the conserved building but would direct one's focus to the decorative detailing of the colonial architecture.

Clinical Sciences Building

Conceived with the purpose of supporting the delivery of innovative medical education and enabling translational medical research, the Clinical Science Building was designed to provide state-of-the-art learning spaces and advanced

research facilities.

In collaboration with DP Design, each facility was custom-designed to offer immersive and life-like clinical experiences; enabling students to acquire a deep understanding of the foundation of medical practice and hone their clinical skills. In addition, to cater to the range of teaching needs, the spaces were designed to allow flexibility for both large group interactive seminars to smaller group dialogues.

PROJECT DATA

Project: Lee Kong Chian School of Medicine

Location: 11 Mandalay Road, Singapore

Clients: Nanyang Technological University Singapore (NTU), Lee Kong Chian School of Medicine

Architect Firm: DP Architects Pte Ltd

Gross Area of the Entire

Development: 41,350 square metres

Completion: 2016

Photos: © DP Architects

Tarawera High School



Tarawera High School is situated between River Road and the Tarawera River in the small mill town of Kawerau.

Through a collaborative process that involved extensive school and community engagement, the masterplan proposes a school that puts community and cultural facilities at its heart.

Typically with 90 pupils per classroom in open plan learning spaces, an advanced innovative learning environment includes a variety of well-connected spaces through the use of new building materials and technologies. It allows for a variety of teaching pedagogical practice, and specialist teaching spaces with technology and equipment suitable for a multitude of subjects and disciplines and provides spaces which can be utilised by both the school and the community alike. The new buildings are planned and orientated along critical ley lines which are significant to the local community.

The central plan, which consists of a multipurpose Whareniui (the heart) faces directly north to where the Tarawera River meets the coast. Communal facilities include the Whareniui, Performing Arts



“The design reflects Kawerau’s unique culture, history and landscape. The masterplan proposes a solution that inspires learning & promotes the fulfilment of potential in Kawerau’s rangatahi (younger generation / youth).”

– **Richard Naish,**
Executive Director,
RTA Studio Ltd





PROJECT DATA

Project name: Tarawera High School

Location: Kawerau, New Zealand

Client: Ministry of Education

Architect Firm: RTA Studio

Gross Area of the Entire

Development: 6256 square metres

Awards won:

- 2017 Learning Environments Australasia Commendation
- 2017 New Zealand Architecture Award – Education Category
- 2017 Property Council NZ, Property Industry Award – Order of Merit
- 2017 NZIA Waikato Bay of Plenty Award – Education Category
- 2016 World Architecture Finalist
- 2016 Resene Total Colour Awards Winner – Education
- 2016 Resene Total Colour Awards Winner – Colour Master
- Nightingale Award

Completion: 2016

Photographer: © Patrick Reynolds

Centre, and Hospitality Suite along with the School Reception and are placed around an open courtyard, which is accessed directly via the school's main entrance. Aligned on this entrance is the ley line from the local culturally significant mountain – Putauaki which forms a back drop to the school upon arrival. This axis also aligns to the north-west towards

Maketu – an important historic landmark – which forms a street between the senior and middle school Learning Houses.

The traditional style of teaching has been replaced with new modern facilities, which transposes complexity for simplicity in both function and architecture, allowing a new generation to be propelled into the future.





ALUCOBOND® creates luxurious facade for Hermes

ALUCOBOND® PLUS was used to create an aesthetic and elegant facade for the revamped Hermes showroom in Liat Towers, Orchard Road.

About 1,200 square metres of ALUCOBOND® PLUS in a special custom surface finish has provided a sophisticated appearance for the revamped Hermes showroom at Liat Towers in Orchard Road in Singapore.

3AComposites, a leading manufacturer of aluminium composite materials (ACM) such as ALUCOBOND® and ALUCORE® with a global presence, supplied the product to meet the needs of Hermes, who had specified an elegant facade as part of the showroom's facelift programme.

"The client wanted a stylish and sophisticated façade to match their image of a luxury goods group," said Arjen Flierman, Architectural Solutions Director – Asia Pacific of Alucobond (Far East) Pte Ltd.

Keeping in mind the client's requirement, Alucobond (Far East) created a 3D design for the facade that made it stand out from the other buildings in the vicinity. "We gave them the required look in line with the luxurious goods they sell," said Mr Flierman.

The reasons for choosing ALUCOBOND® PLUS addressed several needs of the project ranging from aesthetics to fire safety. "ALUCOBOND®'s durability and long lasting beauty is known to all specifiers and users, and the range of specialty finishes such as the one used on Hermes showroom (sparkling ivory silver in high gloss) will last for a long time in the harsh climate of Asia and around the world," explained Mr Flierman.

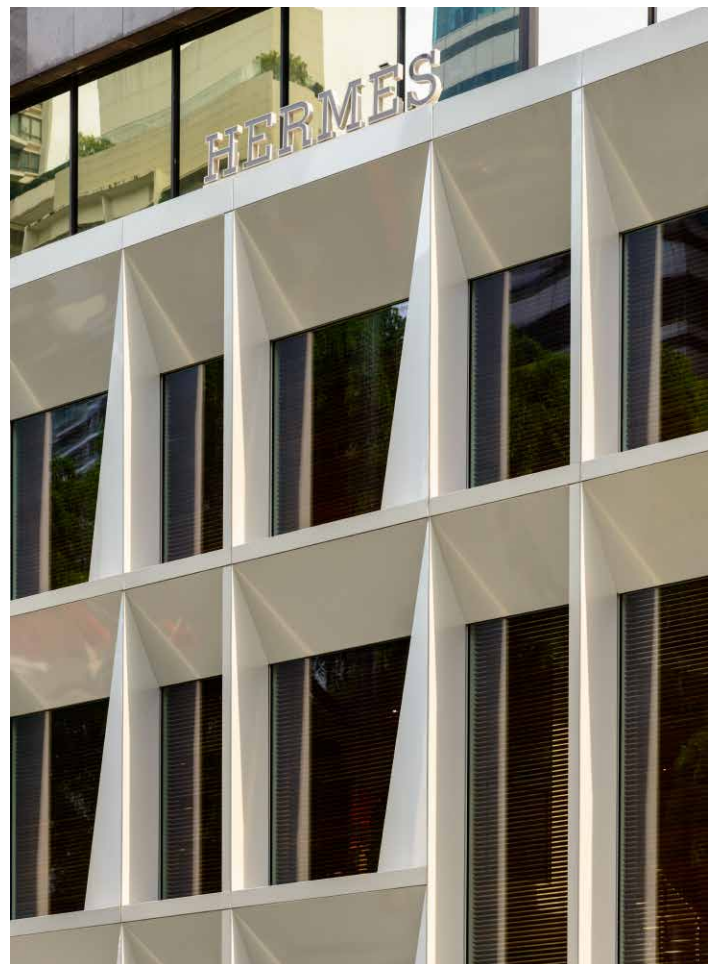
In addition, the material is backed up by ALUCOBOND®'s international warranty and complies with the very stringent

fire regulations set out by the Singapore Civil Defence Force in Singapore.

The unusual design of the showroom's facade, however, presented some challenges but ALUCOBOND® was able to resolve it due to its extensive experience.

The challenges for this design were how to get the panels supplied in extreme long lengths and widths and also to make sure that the amount of joints were reduced to the minimum.

"But despite these large panels, ALUCOBOND® was able to create an absolute flat-looking and high gloss facade as desired by the client," concluded Mr Flierman.



PROJECT DATA

Project: Hermes showroom

Location: Liat Towers, Orchard Road, Singapore

Client: Hermes

Facade product: ALUCOBOND® PLUS

Supplier: Alucobond (Far East) Pte Ltd

Quantity: 1200 square metres

Colour: Sparkling ivory silver 885 in a high gloss finish

Type of cladding: Cassette in 3D design in large panel sizes

Contractor: Redwood Interior Pte Ltd

Completion: 2016

Photos: © Alucobond (Far East) Pte Ltd



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Facade: Fire Safety meets Aesthetics

Can the aesthetics of a building's façade go hand in hand with fire safety? Leading architects and façade consultants will agree that a façade is not just a pretty face but it is an important element that provides protection from fire outbreaks. Recently, fire safety in high-rise buildings has become a worldwide concern and the challenge now is to develop a holistic approach to incorporate fire safety performance in the design of a façade.

We find out Grimshaw Architects' take on this and Malgorzata Haley, Associate, Grimshaw, shares her comments and knowledge here.



Malgorzata Haley, Associate, Grimshaw

A building should express the forces that act upon it, and while this may relate to building typology, use, and organisation it is also particularly important to the building envelope. A building's façade needs to perform many functions, and in the resolution and integration of each of these we strive to achieve a sophisticated, efficient, and visually pleasing façade that responds to its local context.

Essentially, the building envelope is a high-performance skin designed to not only create the identity of the building, but also to protect the structure and the fitout, but most of all the occupants within. How it responds to environmental and functional factors, including safety and fire safety, is paramount to achieving a successful design solution; good architecture addresses these factors while creating enduring spaces that people want to inhabit.

As architects, we have a responsibility to design and deliver buildings that are not only aesthetically pleasing and environmentally responsive, but also – and most importantly – safe. If we fail, the implications could be costly, both in terms of the potential loss of life, and the replacement of inadequate and dangerous materials.

This issue of building façade fire safety becomes even more pertinent when designing tall buildings due to the nature of density and access for the occupants, as seen with the Grenfell Tower disaster. Tall buildings are becoming more prevalent within Australian cities as their populations boom and become increasingly concentrated in urban centres, while the metropolises of Southeast Asia continue to experience rapid growth and development. As such, it's important that architects learn from Grenfell, and set precedents for how to make tall buildings efficient to construct as well as attractive and safe places to inhabit.



The Doherty Institute designed by Grimshaw in Melbourne.
Photo: © Peter Bennetts



Close up of the Doherty Institute. Photo: © Peter Bennetts

In this respect, collaboration is a key part of the design process, both within our design teams as well as with the client and project consultants. At Grimshaw, we are always looking to evolve our knowledge of facades and tall buildings, and always seek further expertise from the broader design team to create an optimised, coordinated and harmonious design response. In addition, research into new materials and technologies forms an important part of our practice, and we are inspired by the choices that the market has to offer.

Current delivery methods however, do not easily allow design teams to be integrated during the value management process which can lead to materials selected by the team being substituted for less suitable options. For the benefit of the project and the building's users, we advocate that the value management process is scrupulously managed with regards to the fire safety performance of a façade. It is during this process that the engagement of the design team must remain strong to ensure that fire safety is optimised and the intent of the design maintained.

Likewise, it's critical that the client and key stakeholders are engaged with the design development of a project to not only enhance their understanding of why materials are being selected but to also ensure that they support those choices. This collaborative design approach allows for a truly holistic response to façade design, providing safe and aesthetic buildings, which in turn contribute to the vibrancy of our cities.

699 Bourke Street commercial building designed by Grimshaw in Melbourne.
Photo: © John Gollings





Photo: © Singapore Pavilion

“No More Free Space?”
is the theme chosen by the
Singapore Pavilion for the
16th Venice Biennale



At the 16th International Architecture Exhibition La Biennale di Venezia, the Singapore Pavilion tells a story of how, in spite of the lack of land space in Singapore, the country's architects and urban planners have found creative ways to design delightful and functional spaces for its people.

Commissioned by the DesignSingapore Council (Dsg) of the Ministry of Communications and Information, and the Urban Redevelopment Authority (URA), and curated by the Singapore University of Technology and Design (SUTD) in collaboration with the National University of Singapore's Department of Architecture (NUS), the Singapore Pavilion is themed "No More Free Space?" The theme fits perfectly in the context of the exhibition's overall theme "Freespace" conceived by curators Yvonne Farrell and Shelley McNamara.

The centerpiece of the Singapore Pavilion is a "cloud" of handcrafted acrylic knots suspended in the air of the venue Sale d'Armi. The installation includes a multi-sensory projection of lights, sounds and images of Singapore for visitors to enjoy the concept of a resourceful free space.



Photo: © Singapore Pavilion

The Pavilion also features 12 Singapore-based projects, which showcase how they turned space constraints into new possibilities by using nature as their main inspiration.

In this issue, we speak to Prof. Erwin Viray, lead curator and SUTD Head of Architecture and Sustainable Design Pillar, on the thoughts that went behind the making of the Singapore Pavilion.

Photo: © Singapore Pavilion

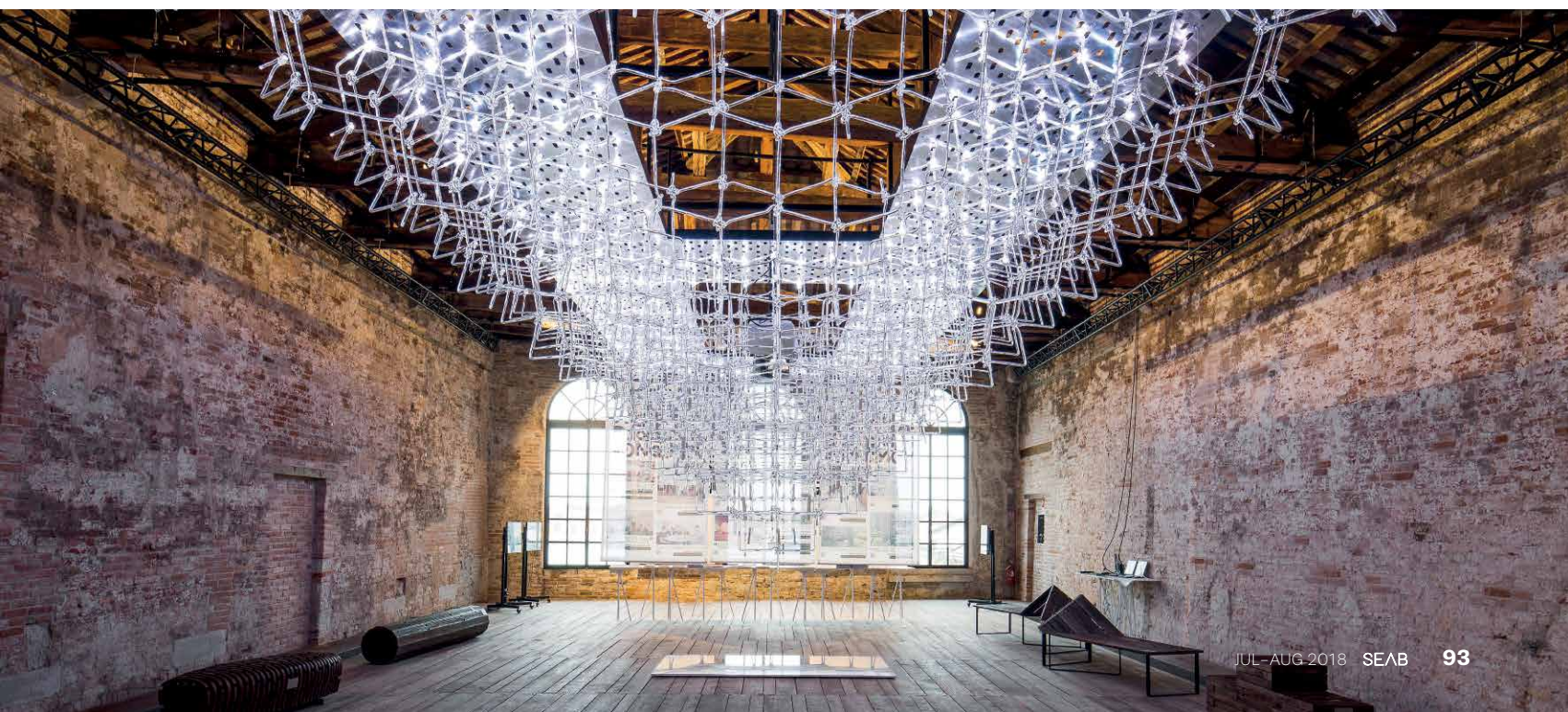




Photo: © SUTD

**“No More Free Space?
hopes to be a testimony
of how the creative
freedom of mind has
the power to turn
space constraints into
a myriad of alternative
possibilities.”**

– Prof. Erwin Viray

Q: Tell us briefly about the theme “No More Free Space?” in the context of the overall theme of the Venice Biennale’s “Freespace”.

A: “Freespace” describes a generosity of spirit and a sense of humanity at the core of architecture’s agenda, focusing on the quality of space itself. Responding to this overarching theme of the 16th Venice Biennale, the Singapore Pavilion asks if there is indeed No More Free Space? in the island state. No More Free Space? tells the story of how, in spite of the lack of free space, Singapore-based architects, urban planners and place-makers have creatively found ways to bring delightful free spaces to the city’s everyday life. No More Free Space? hopes to be a testimony of how the creative freedom of mind has

the power to turn space constraints into a myriad of alternative possibilities.

Q: How long did it take for you and your team to conceive the theme for the Singapore Pavilion?

A: The open call for proposals began in October 2017. In a span of about two weeks, the curatorial team members of deLIGHT (comprising Chong Keng Hua, Tomohisa Miyauchi, Wu Yen Yen and Jason Lim, including myself) were selected. The proposal was based on the premise of Singapore having nothing and borrowing from nature to make something delightful. In the course of the discussion with the commissioning panel, it evolved into a provocation to the Venice Biennale theme of freespace: that is, if there is no free

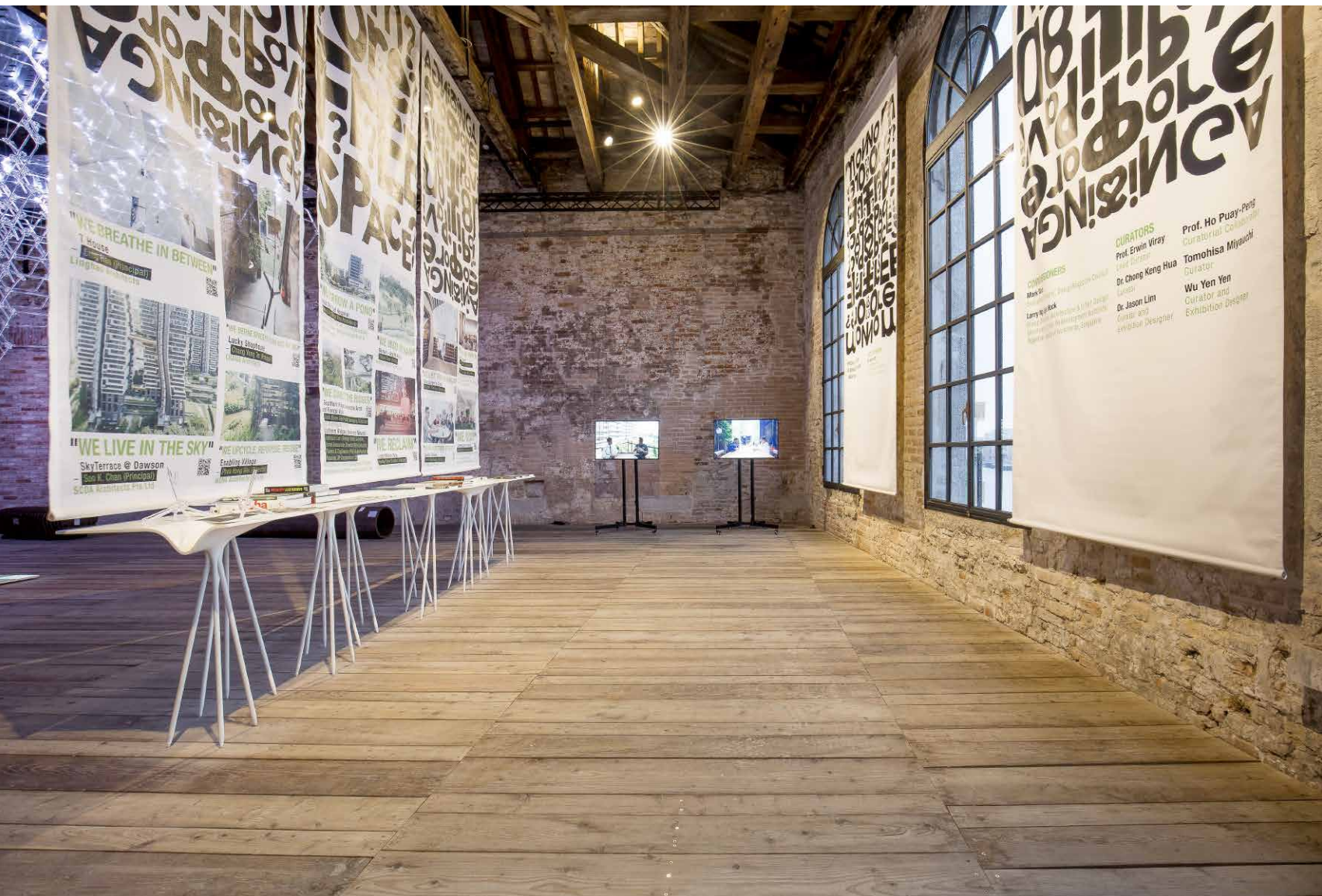


Photo: © Singapore Pavilion

space, is it possible to have "freespace"? And so emerged the question which forms this year's Singapore Pavilion theme, "No More Free Space?".

Q: Can you share with us your responsibilities as the lead curator for the Singapore Pavilion? What was your experience like?

A: A lead curator guides and manages the different entities, elements, people and partners involved in the preparation of the Singapore Pavilion, the programme, design, etc. Perhaps, it can be likened to being a conductor of an orchestra.

It has been a very challenging experience as there are many factors to be considered within a short period of time. However, with the help of everyone,

things managed to fall into place and it has been a very fulfilling experience.

Q: The Singapore Pavilion features a "cloud" of handcrafted acrylic knots suspended in the air with a multi-sensory projection of lights, sounds and images of Singapore. Was there a special reason for choosing acrylic as the material?

A: Although acrylic is a synthetic material, it also appears natural. Despite presenting an image of being rigid, it can also be flexible. Acrylic is also a good transmitter of light. It can have weight and also appear weightless. As a material, it opens up many possibilities with our imagination. The designers of the Pavilion wanted to challenge our preconceptions, offering

possibilities we normally take for granted.

Q: What is the total number of acrylic knots in the installation?

A: There are about 1,420 acrylic knots.

Q: What sort of challenges did you and your team face while conceptualising the theme as well as the acrylic installation?

A: Initially, though there were some very sound ideas of what the team wanted, there were also questions about how we could realise them. Some of these ideas have never been attempted before. So it required some faith that things would work and the perseverance to pursue and test how we could make our vision a reality.

Q: What do you plan to do with the acrylic installation after the exhibition is over?

A: The acrylic installation will be brought back to Singapore for exhibition in early 2019, and perhaps we will auction off the acrylic knots/parts after all activities are done.

Q: The Pavilion will feature 12 Singapore-based projects as part of its exhibition. Are these companies exhibiting at the Singapore Pavilion for the first time?

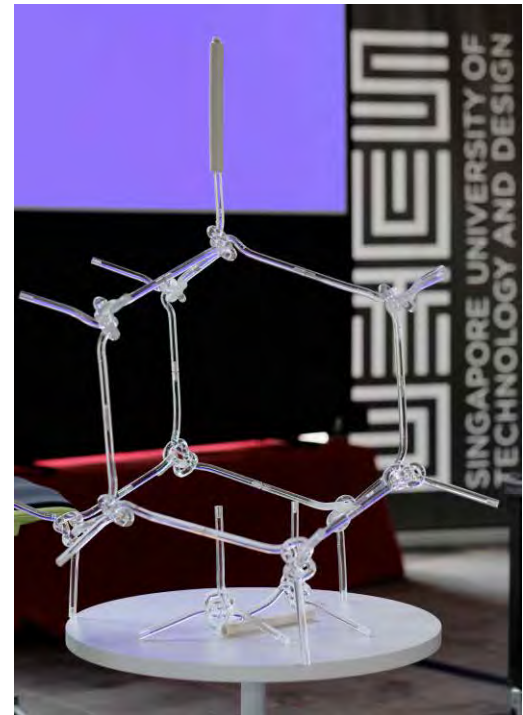
A: Yes, the 12 selected projects are being shown in the Venice Biennale for the first time.

Q: How were the 12 projects selected for the Singapore Pavilion?

A: The curatorial team together with the commissioning panel went through a series of conversations to make the selection. The Singapore President's Design Award is the highest accolade given to works of architecture and design in Singapore and it was used as a benchmark.

Q: As the SUTD Head of Architecture and Sustainable Design Pillar, what advice would you give to students who are pursuing a career in architecture?

A: Architecture is not just a profession but a way of life. People are important to architecture so I hope that students can look at the people around them to see how they behave, understand how they feel; doing so will enable the students to listen to their own hearts, hear what their own minds are telling them, and enjoy imagining a future that is theirs to design and create.



The acrylic knot will be the centerpiece of the Singapore Pavilion. Photo: © Singapore Pavilion

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