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DECEMBER 2019 | ISSUE 17
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DECEMBER 2019 | ISSUE 17 | HKD50 | RMB65
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BUILDING A SMART CITY

EDITORIAL HIGHLIGHT ON BUILDING WITH DATA; THE QUAYSIDE; & SMART DEVELOPMENT IN KOWLOON EAST

SPOTLIGHT ON MAX WONG, DIRECTOR, PROJECT AND OPERATIONS, LINK

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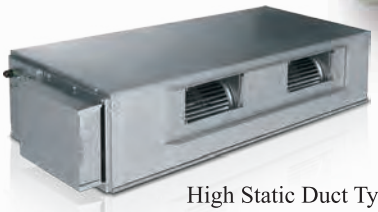

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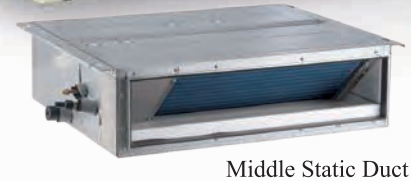

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COVER

Construction+ Supporting Associations

AIA Hong Kong – A Chapter of The American Institute of Architects (www.aiahk.org)

BEAM Society Limited (BSL) (www.beamsociety.org.hk)

China Green Building (Hong Kong) Council (CGBC) (www.cgbchk.org)

Construction Industry Council (CIC) (www.cic.hk)

Hong Kong Construction Materials Association Limited (HKCMA) (www.hkcma.asia)

Hong Kong Designers Association (HKDA) (www.hongkongda.com)

Hong Kong Green Building Council (HKGBC) (www.hkgbc.org.hk)

Hong Kong Institute of Surveyors (HKIS) (www.hkis.org.hk)

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Retail Design Institute (RDI) Hong Kong Chapter (retaildesigninstitute.org)

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Royal Institution of Chartered Surveyors (RICS) (www.rics.org/hk)

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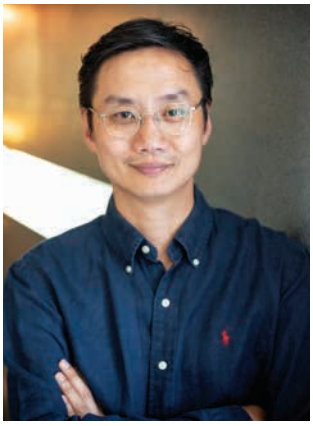

The common starting point for this year's Bi-City Biennale of Urbanism\Architecture is Innovation & Technology and the curatorial direction for the Hong Kong part of the Biennale (UABBHK2019) builds on the belief that Imagination is the key driver for Innovation that makes the most of available Technology to deliver the future of our city.

Entitled "2x2: Imagine to Innovate", UABBHK2019 will explore new ideas and experiments that can bring positive change to the city. It also hopes to build on an initial idea of 'ImaginiCITY', a hypothetical index to measure the level of imagination in the town, to create a 'Listening Biennale' for UABBHK2019 to encourage the expression of imagination. The energetic curatorial team and its international curatorial advisors believe that how current and future generations imagine and envision the city will unlock unlimited possibilities in city living. More specifically, the curators identified three interrelated sub-themes for the biennale: IDENTITY, LIVEABILITY and SUSTAINABILITY.

As Chief Curator of UABBHK2019, I am particularly honoured to write the forward for this issue of *Construction+* with its special focus on The Smart City Blueprint for Hong Kong and Smart City Development in Kowloon East. The curatorial team look forward to hearing feedback generated from this particular issue and picking up the discussions through the exhibition and programmes of the Biennale, which will take place in the Mills between December 2019 and March 2020.

ROGER WU
Chief Curator
UABB (HK) 2019

CET

Smart Lamp of Smart City

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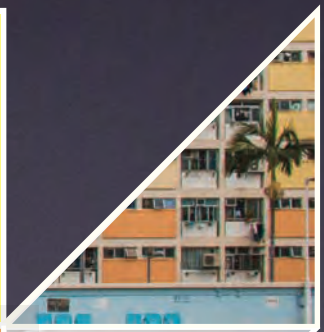

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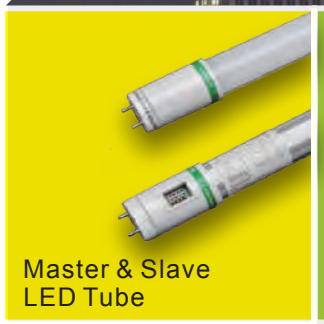

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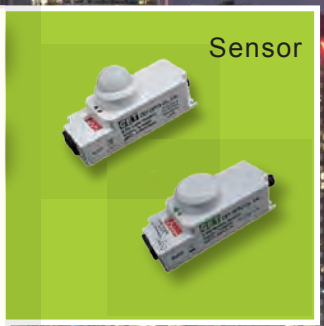
LED Tube



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The preservation and sustainability of our earth have become points of focus in recent years. More and more companies are taking the responsible initiatives to go green with their operations and minimizing their environmental footprint.

In this year-end issue, our focused coverage will revolve around sustainability and "green" development in the construction field in Hong Kong. We will bring you an update on its development and how our architects and developers make a concerted effort to capitalize on resources in a wise manner to create high-quality, energy-efficient buildings, be it commercial or residential.

In Editorial Focus – Smart City, we will take a closer look at the current computer-aided technology and its benefit in terms of the construction efficiency and making the building intelligent. The Quayside (TQS) is one of the examples in Hong Kong that incorporated numerous intelligent and sustainability features that are worth our attention. In order to offer our readers a deeper understanding of The Quayside (TQS), we are delighted to be able to carry out an interview with Max Wong, Director of Project and Operations from Link REIT in "In the Spotlight". In the interview, Mr. Wong meticulously elucidated the rationale of sustainability behind the development of The Quayside (TQS) and its importance to the company.

What will also be featured in this issue includes The Hong Kong Green Building Council Limited (HKGBC), which is a non-profit, member led organization, striving to promote the standards and developments of sustainable buildings in Hong Kong. They introduced BEAM Plus, a benchmark that offers independent assessments of building sustainability performance. Year 2019 marks the 10th year of its establishment and BEAM Plus Certification Ceremony will be held every year to appreciate the contributions of the green buildings to the sustainable built environment in Hong Kong.

Thank you for your unflagging support in Year 2019.

I look forward to seeing you again in Year 2020.

Avery Kwok

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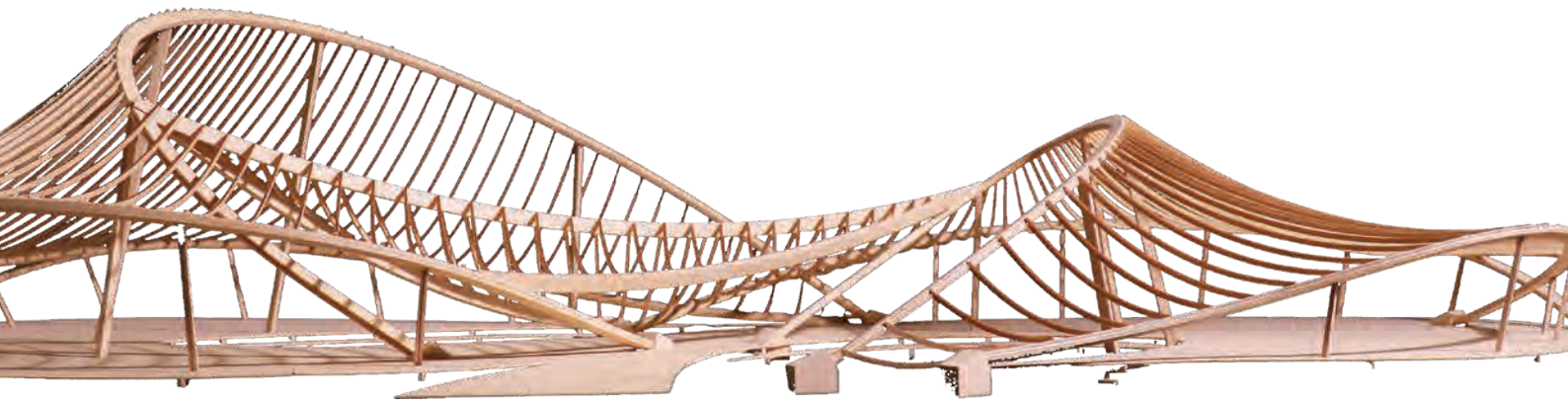

Logistics services to large-scale construction projects

Image by Robby Mccullough on Unsplash

Logistics solutions to construction projects

Image by Anne Nygård on Unsplash

SHANGHAI FIRM SEEKS ENGINEERING SERVICE STANDARDS CONNECTIVITY TO BELT AND ROAD MARKETS THROUGH HONG KONG

By Wing Chu

Growing numbers of mainland companies have gained considerable experience in construction and engineering in recent years through their involvement in massive infrastructure projects across China. Their achievements are remarkable by any standards. Logistics service providers supporting these projects have also benefitted, continuously innovating and offering total logistics solutions to construction projects with advanced technologies and specialised equipment.

However, the standards that Chinese companies in the construction and engineering project logistics fields currently work to are not the same as those used in overseas markets. Even companies with many projects under their belt have difficulty winning overseas business opportunities solely

Specialised logistics subcontracting fields

Image by Jean-Francois Henri on Unsplash

on the strength of their track record. In order to overcome this hurdle, some are hoping to gain international recognition by servicing construction projects in Hong Kong, in the expectation that this will help them explore overseas and Belt and Road markets. A Shanghai-based engineering project logistics firm told HKTDC Research that mainland enterprises may also use their overseas experience to gain access to the Hong Kong market.

Daisy Liu, Deputy Director of the Engineering Design Centre of China Shipping Vastwin Project Logistics Co (China Shipping Vastwin) [1], explained how working in Hong Kong can help mainland businesses win contracts overseas, saying: "Construction projects in Hong Kong are up to international standards in their design, quality and safety requirements. They are also in line with international industry standards and certification systems. Leading Hong Kong and international construction firms and related service providers have won international recognition for their track record, and also know very well how to meet the requirements of their overseas peers. Mainland companies can gain valuable experience and become proficient in international industry standards, technological requirements and certification systems by participating in construction projects in Hong Kong. This way they can effectively bridge the gap between Chinese and overseas standards."

A joint venture between COSCO Shipping Logistics Co - a subsidiary of the China COSCO Shipping Group - and the Jiangsu Vastwin Logistics Holding Co, China Shipping-Vastwin specialises in project logistics. Capitalising on its core engineering design capabilities, China Shipping-Vastwin focuses on ocean engineering, oil and gas refining, municipal infrastructure, new energy and special engineering projects. It offers on-time, safe and cost-effective total logistics solutions to clients in

Construction projects in Hong Kong are up to international standards in their design, quality and safety requirements.

the electricity/new energy, petroleum/coal chemical industry and specialised logistics subcontracting fields, using advanced transportation equipment.

China Shipping-Vastwin runs an office in Hong Kong. As well as using the territory's financial services platform to handle funds for projects in the Middle East, the US and other overseas markets, it also makes use of its innovative engineering technologies and specialised transportation equipment to provide logistics services for Hong Kong's infrastructure projects. An example of this would be the delivery of various types of modular structures and complete units of oversize or overweight load. Liu hopes to provide more logistics services to large-scale construction projects in Hong Kong, such as the airport extension project and the construction of roads and bridges, and team up with Hong Kong companies looking to take advantage of Belt and Road opportunities.

Hong Kong are up to international standards

Image by James Sullivan on Unsplash

WING CHU
Business Advisory Manager

Mr. Chu heads up the HKTDC Research Department's Business Advisory Unit. The Unit, supported by business advisors seconded to the HKTDC from government departments of mainland China, partners with a number of institutions in Hong Kong and on the mainland to provide information services to the public on trade-related issues via different formats, such as seminars and practical workshops.

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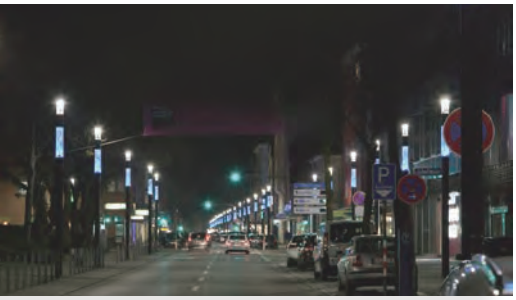

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"CO-VITALIZE OUR HERITAGE" – CO-CRAFT WITH MASTERS

PROJECT INTRODUCTION
The Hong Kong Institute of Architects (HKIA) organizes a community-wide project "Co-Vitalize Our Heritage" from March to October this year. Funded by the Built Heritage Conservation Fund of Development Bureau, HKIA will collaborate with 17 local revitalized sites and other partners to raise awareness on the importance of revitalization to different stakeholders and members of the public. The project covers 4 themed components including Co-Tour with Docents; Co-Craft with Masters; Co-Create with Students and Co-Design with Architects.

THE LIST OF LOCAL REVITALIZED SITES:
7 Mallory Street, Asia Society Hong Kong Center, Blue House Cluster, Crown Wine Cellars, F11 Foto Museum, Fringe Club, Green Hub for Sustainable Living, Haw Par Music Farm, Hong Kong Baptist University School of Chinese Medicine - Lui Seng Chun, The Hong Kong Jockey Club University of Chicago Academic Complex | The University of Chicago Francis and Rose Yuen Campus in Hong Kong, The Hong Kong Museum of Medical Sciences, Hong Kong News-Expo, Jao Tsung-I Academy, The Mills, PMQ, SCAD Hong Kong, and YHA Mei Ho House Youth Hostel.

ABOUT CO-CRAFT WITH MASTERS
Architects partnering with veteran Master Craftsmen to lead 6 hands-on workshops on antique and conservation building techniques, with each workshop staged at a historic building (revitalized or otherwise) that made actual use of such crafts. The crafts include painting of "door gods", washed-grano finishing, traditional roof tiling etc. Participants have the opportunity to learn about the history and traditions of these techniques in additional to their hands-on experience, while gaining an insight into the cooperation between architects and craftsmen in each of the conversation process in question.

CO-CRAFT WITH MASTERS – WORKSHOPS HIGHLIGHTS:

Washed-Grano @ Haw Par Music Farm (Grade 1 historic building)
Washed-grano was one of the finishing techniques used in the conservation and revitalization of Haw Par Mansion. Participants learned the history and craft of this European technique and its wide adoption in architectures in South-China from 1920s onwards, which like Haw Par Mansion can be said to carry a style of "Chinese Eclecticism"

Bricks Repair@ Conservancy Association Centre for Heritage (CACHe), (Grade 2)
Co-Craft with Masters was held at CACHe, a red-brick historic building, where architects and craftsmen illustrated to participants the brick-laying styles of various traditions, typical composition of bricks used in these buildings, and the brick-laying and repair techniques.

"Door gods" Painting @ HKSKH Lady MacLehose Centre, Lo Wai Village
After learning from architects the history and traditions of 'door gods' by visiting a traditional ancestral temple in the village, participants took up the craft of painting 'door gods' under the guidance of craftsmen and finished their own door for the day.

Roof tiling at Hong Kong Museum of Medical Sciences (Declared monument)
The roof tiling workshop explained the various roofing methods and demonstrated traditional Chinese tiled roof techniques used at Hong Kong Museum of Medical Sciences, which made use of Chinese roofing methods in a Western architecture, a combination that is unique to the Guangdong area and can still be found in many historic buildings from this period.

Exterior Moulding @ Blue House Cluster (Grade 1 historic building)
Moulding at the exterior of architecture is not only decorative but of functional use. Participants learned the peculiar challenges faced in the conservation project of The Blue House Cluster from architects and craftsmen, while getting to try out the craft of moulding themselves using lime mortar.

Timbre purlin at Tam Kung Temple (Grade 1 historic building)
Architects in the timbre purlin workshop which was staged at the historic Tam Kung Temple, itself a wood-heavy architecture, illustrated the history and traditions of this type of temples and the techniques used in both their structures and decorations. Participants also learned from craftsmen the skills in repairing wooden beams as well as colouring the decorations.

GREENBUILD CHINA 2019

Date: 23-24 October 2019

Company: U.S. Green Building Council

Greenbuild China, hosted by U.S. Green Building Council, the flagship event in the Asia Pacific region for sustainability professionals returned to Shanghai for a third time.

This year's four major themes - "Toward Net Zero: Present and Future", "Green Buildings and Cities in 2050", "Sustainable Living: Production, Consumption and Lifestyle" and "Build Climate Resilience, Improve Quality of Life" - inspired powerful discussions across 31 stellar education sessions on topics such as low carbon cities, ROI & cost benefit analysis of green buildings, smarter and greener buildings of the future, and climate-resilient design.

Andy To, Managing Director of USGBC & GBCI North Asia, said, "Greenbuild is committed to providing engaging educational offerings that deliver innovative and inspirational content to green building professionals. Greenbuild China serves as a perfect platform for industry leaders, game changers and frontline professionals in the green building community to inspire, motivate and drive change."

Andy expresses his gratitude to all the participants

At the conference, USGBC was also honored to announce the recipients of its 2019 Leadership Awards, an annual recognition of the outstanding individuals and organizations at the forefront of the green building community. They are: Sammy Hui, Business Development Leader, Building & Construction, Dow, McDonald's China and Beijing Construction Engineering Group. Another noteworthy feature of the Leadership Awards is the award trophy, which is made with materials recycled from construction waste presented by BCEG Resources Recycling company.


Representatives of 2019 Greenbuild China Leadership Awards recipients

GREEN BUILDING AWARD 2019 AWARD PRESENTATION

Inspiring the Next Generation and Excellence in the Sustainable Built Environment
November 6th, 2019

Government officials, main Sponsors representatives, HKGBC Founding Members representatives, Directors of the Hong Kong Green Building Council and Professional Green Building Council, Presidents and representatives of the Professional Institutions, the Green Building Award 2019 Jurors, Organising Committee, Scientific Committee and Judging Criteria Committee Members joined the officiating guests for a group photo after the kick-off ceremony to celebrate the GBA 2019.

Mr Michael Wong Wai-lun, JP, Secretary for Development, presented the Grand Award to Nan Fung Development Limited for their project, The Mills.

Winners of the Green Building Award 2019 (GBA 2019) were announced at an award presentation ceremony hosted at JW Marriott Hotel Hong Kong on Tuesday, 5 November 2019. Over 400 distinguished guests, including developers, construction companies, consultants, property management companies, representatives from professional institutions, as well as the representatives of government attended the event. The Guest of Honour, Mr Michael Wong Wai-lun, JP, Secretary for Development, Government of the HKSAR cum Honorary Advisor of GBA 2019 Jury Panel, together with Special VIP Guest Mr Wong Kam-sing, GBS, JP, Secretary for the Environment, Government of the HKSAR, commended the contribution made by leading stakeholders in the building industry.

Themed 'Inspiring the Next Generation • Excellence in Sustainable Built Environment', Green Building Award 2019 received overwhelming response from the industry. There was a record-breaking number of 89 nominations, of which 67 became Finalists to compete for Awards in New Buildings Category, Existing Buildings Category, Research & Planning Category, Building Products & Technologies Category, as well as Green Building Leadership Category. This was also the first time to introduce six sub-categories in the Pioneer Award of Green Building Leadership, including Developers, Contractors, Consultants, Facilities Management, Green Product Industry Business and Government, Institutions & NGOs, with an aim to recognising companies or organisations which demonstrate exemplary leadership in respective criteria areas.

In Green Building Award 2019, 10 Grand Awards, 5 Green Building Leadership Pioneer Awards and 20 Merit Awards were presented to private and public sectors which were selected by a Jury Panel comprising of a broad base of renowned industry experts and academia from local and overseas. In addition, two projects were accredited with a Special Citation as they were deemed to have met the United Nations Sustainable Development Goals and positively contribute to the development of sustainable built environment.

Ir Allan Chan, Chairman of GBA 2019 Organising Committee and Professional Green Building Council said, "The Green Building Award 2019 was jointly organised by The Hong Kong Green Building Council and the Professional Green Building Council. I wish to express my sincere thanks for the active participation from the industry and the dedication from the Jury Panel, Sponsors, the GBA 2019 Organising Committee, Scientific Committee and Judging Criteria Committee, all of which have collaboratively brought the Green Building Award towards a new and highly significant milestone."

Mr Cheung Hau-wai, SBS, Chairman of the HKGBC, remarked, "I wish to offer my heartfelt congratulations to the winners of Green Building Award 2019 for their excellent achievements in green buildings. This year marks the 10th Anniversary of HKGBC, and I wish to sincerely thank the government and all partners for their contribution in promoting the green building movement. This effort contributes to reducing energy consumption and carbon emissions, and empowering Hong Kong to become more sustainable and eco-friendly in the built environment."

TALKING LIGHT

October 30th, 2019

On Wednesday, October 30th, 40 people gathered at the Great Room in Hong Kong for an evening panel discussion on the importance of lighting and how it impacts on us.

The three panel members were Jason Gaekwad, Regional Manager-Building Physics & Sustainability, Inhabit Melbourne, Lifestyle and Event Photographer Justin Lim and Tom Herron, Principal at Hassell Studio.

The discussion was moderated by Ben Luder, Principal – Lighting Design at Inhabit, Hong Kong, who said while the panelists were from different industry sectors, they all consider light hugely important in what they do.

"The modern-day culture means that people spend most of their day indoors.

However, we humans aren't built to do this – we are meant to be outside – moving, using our body in various ways, adapting to our changing environment, enjoying the changing air, light and sounds," Ben said.

He questioned why we continue to create office environments that are static and low in contrast and unchanging.

"As we all know, daylight is constantly changing throughout the day and year, not only in colour temperature, but also in contrast, angle of direction, intensity and so forth. There is extensive and continued research into the effects that light has on humans and our wellbeing.

"We also have the WELL Building Standard that has been developed to address important aspects of lighting such as: circadian rhythms, glare control, illuminance levels and colour quality," he said.

Ben then asked the panel members to highlight the key aspects of lighting that they see as fundamental to people and how they respond to it with reference to their area of expertise.

They also discussed the changes in the built environment they would like to see it happen for the benefit of people and our wellbeing.

The Great Room in Hong Kong is a co-working space located in the prestigious building of 1 Taikoo Place, Quarry Bay, where it occupies an entire floor. Recognized as one of the best co-working spaces in the world, The Great Room features a design language and ambiance which is aligned with a high-end hospitality approach.

Inhabit's Specialist Lighting Design Team worked in close collaboration with Hassell Studio (the interior designer for the project) to develop bespoke detailing and lighting features which are carefully positioned to generate a welcoming feel with a balanced level of drama and functional light.

Inhabit is an innovative consulting group exclusively focused on providing sustainable specialist services in the built environment.

SIBT AND SSHT 2019: SMART OFFICE, HOME AND COMMUNITY ELEMENTS CREATED INTELLIGENT INDUSTRY ECOSYSTEM

The 2019 editions of Shanghai Intelligent Building Technology (SIBT) and Shanghai Smart Home Technology (SSHT) concluded successfully on 5 September. While SIBT debuted the Shanghai Smart Office Technology (SSOT) zone, introducing IoT technology to enrich office environments, SSHT continued to ride on the fast-growing real estate market in China, extending the concept of smart homes to a community-wide level. With the concurrently held Parking China, the trade fairs encompassed intelligent buildings, homes, parking, offices and community topics, completing the smart technology ecosystem.

SIBT and SSHT spanned halls W2 to W4 at the Shanghai New International Expo Centre. As well-recognised industry platforms in China, the two trade fairs and Parking China collectively attracted over 280 exhibitors and 30,374 professional buyers. Meanwhile, the total exhibition area reached 28,750 sqm.

With the success of SIBT and SSHT, Ms Lucia Wong, Deputy General Manager of Messe Frankfurt (Hong Kong) Co Ltd shared her gratitude toward the co-organisers. "Supported by the Intelligent Engineering Branch of China Exploration and Design Association (CEEDI), SIBT was held successfully again this year. The trade fair also debuted the SSOT zone, further completing the smart industry ecosystem. Meanwhile, SSHT and China Smart Home Industry Alliance (CSHIA) cooperated to promote smart home concepts in real estate and smart communities. Spurred by the development of 5G and AI technology, the intelligent industry is now growing on a fast track. SIBT and SSHT also strive to be ideal business platforms for the industry, presenting original trends and technology insights through myriad forums and seminars."

Aiming to create a favourable business environment, SIBT and SSHT invited delegations from overseas to connect with exhibitors, including representatives from Asia Institute of Intelligent Buildings (AIIB), Panasonic, Thailand D-One Decor Co., Ltd, Thailand e-Business Centre (TeC) and Terma Products (UK) Ltd. The trade fairs' new business matching service also offered a one-to-one channel for companies and associations to better discuss potential business interests.

Key industry trends illustrated through 16 seminars

This year, leading corporations were again invited to speak at forums and seminars, including Alibaba DingTalk, Huawei, Microsoft (China), Country Garden, China Telecom, HP China, Siemens, Schneider, Haier, Signify, Ikea, ABB and Hager. With SIBT, SSHT, Parking China and SSOT combined, over 120 speakers highlighted key industry trends at 16 forums and seminars.

The trade fairs also invited the China Academy of Information Communications Technology Department of Strategic Planning & Research of CTTL – Terminals to envision a smart living concept aided by 5G, AIoT & IoT facilities in real estate. Meanwhile, standard protocol alliances, such as Bluetooth, Wi-Fi, EnOcean, Zigbee, KNX and ZETA, highlighted the new changes in building technology through individual events.

Co-organised by SIBT and CEEDI, a smart building forum discussed the application of IoT technology. Furthermore, making a first appearance this year, SSOT cooperated with ZhiXing XiaoZheng to analyze the benefits of smart offices over traditional workspaces from a user's perspective. Held together with International WELL Building Institute, another smart office seminar shed light on the future of technology-enriched workspaces. Exhibitors also shared positive views on SSOT. Lenovo thinkplus Project Director Pengbo Yuan commented, "Not only are we satisfied with the visitor number, but these clients are also our target audience. Visitors from different backgrounds all agreed that it is time for workspaces to change, and have therefore visited our booth to learn how."

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CoeLux® 45 LC

Maxgrand Limited is a market-leading lighting solution and control system provider in Hong Kong.

Since last year the company has become the distributor of CoeLux. CoeLux is a scientific breakthrough in a way that it recreates the sun and sky in an interior space with the physical effects and optical phenomena of natural light, especially the diffusion and transmission of sunlight through the atmosphere.

Like trying to describe the colors of tropical sun, CoeLux's uplifting effects are so amazing that goes beyond description. The effect of warm, artificial, direct sunlight illuminates and enhances objects, completely transforming domestic and public spaces, and creating a new relationship between people and their surrounding architectural space.

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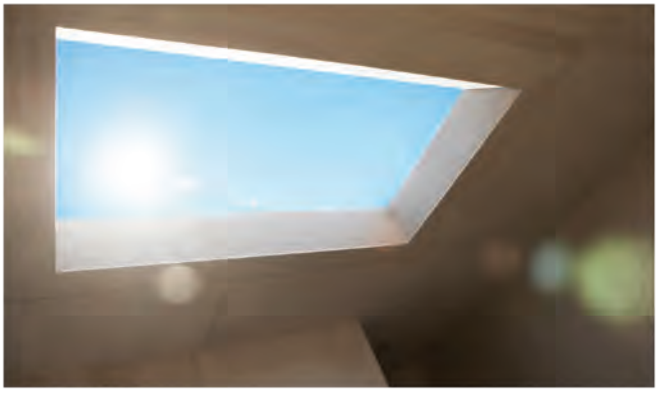
In the nighttime, HE Moon generates comfortable and relaxation experience. In spite of very little light in the environment, the product will surprise you with the brightness of its night sky. With wireless control system, light level can be adjusted by bluetooth signal.



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DYSON LAUNCHES THE AIRBLADE 9KJ

The fastest most energy efficient HEPA-filtered hand dryer

Dyson has recently launched the Dyson Airblade 9kJ hand dryer, the fastest most energy efficient HEPA-filtered hand dryer among Dyson Airblades[1]. With a completely unique design Curved Blade™ and cutting-edge technology, the Dyson Airblade 9kJ hand dryer enables people to dry their hands as fast as 10 seconds and hygienically, while using low energy and offering an alternative to single-use paper towels.

The Dyson Airblade 9kJ hand dryer machine has been over three years in development, with more than 700 prototypes made. The result is the quietest Dyson Airblade™ hand dryer yet , with fast hand drying in 10 seconds[2]. The motor and airflow technology allow the new Dyson Airblade 9kJ hand dryer use up to 53% less energy than last generation Airblade products[4].

Comparing with last Airblade generation, there are two power modes - Max mode or Eco mode - to suit your washroom. Busy washrooms such as train stations or shopping mall with high footfall need to quickly dry people's hands. Max mode uses 900W, drying hands efficiently in 10 seconds[2], using 10.7 kJ energy per dry[5].

Eco mode may be preferable for washrooms with comparatively lower footfall, for example offices or restaurants. This mode dries hands in 12 seconds[6], using only 9.1kJ energy per dry[7].

What is more, the Dyson Airblade 9kJ hand dryer has a stainless steel body, which is built to last. The machine is rigorously tested to withstand real-life washroom conditions.

Unit Price: HK$12,880
Available Date: Pre-sale is now available

1. Dry time and energy consumption calculated for Max mode and compared with other Airblade products.
2. Measured in Max mode and Dry time determined using Dyson test method 769 based on NSF P335 to a measurement of 0.1 g residual moisture.
3. Average loudness (measured in sones) compared to Dyson Airblade™ hand dryers.
4. Compared with Dyson Airblade dB(measured in sones).
5. Measured in Max mode.
6. Measured in Eco mode and dry time determined for Max mode using Dyson test method 769 based on NSF P335 to a measurement of 0.1g residual moisture.
7. Measured in Eco mode.

Company name: Jebsen Building Products Limited
Website: www.jebsenindustrial.com
Contact: 852 3180 3330

DUNWELL'S MEMBRANE BIOREACTOR SEWAGE TREATMENT & RECYCLING SYSTEM

Residential, Sai Kung

Image by Daniel M Cheng

Located at the beautiful eastern coast of Hong Kong with the second-largest area in terms of landmass, Sai Kung is dubbed to be the back garden of Hong Kong, known for its beautiful scenery, hiking trials, beaches and islands, geological formations and leisure lifestyle. In recent years, more residential developments were built in Sai Kung area with more in the pipeline driven by increasing demand for palatial living space underpinned by population growth in Hong Kong. However, most of the area is not covered by public sewer system due to relatively lower urbanization coupled with peculiar geographical landscape. To facilitate the development of Sai Kung, on-site sewage treatment has become one of the priority issues to be resolved prior to construction of the projects, be them residential, tourist or ancillary facilities.

Sewage treat plant

A licensed sewage treatment specialist, Dunwell Engineering Co., Ltd. has recently completed an advanced tertiary sewage treatment plant, Membrane Bioreactor (MBR), for a 100,000-sqm luxury residential development covering 680 residential units, clubhouse, carpark and commercial area at Clearwater Bay, Sai Kung. This one-of-a-kind sewage treatment system in Sai Kung caters to the daily needs of 2,000 residents by treating all sewage from the whole complex and producing clear effluent free from fecal coliform bacteria counts that is suitable for irrigation, flushing or floor washing whereas the surplus effluent can be discharged to the nearby water sensitive zone, Port Shelter. Currently, effluent produced by conventional secondary sewage treatment system may not be allowed for similar discharge practice.

In addition, Dunwell's compact MBR plant only occupies 0.4% of total site area (71,900 sqm), saving up to 50% of required floor area compared to conventional secondary sewage treatment system. Equipped with fully automatic plant operation, web-based remote monitoring system and electronic maintenance information management system, Dunwell's MBR enables engineers to access the data of 160 sewage treatment plants across Hong Kong, Macau China and Japan anywhere and anytime so as to regularly monitor their performances and deploy technicians for timely repair or maintenance to the sites as necessary. Besides, all data related to site performance and maintenance is recorded accurately by the electronic maintenance information management system on-site for analysis. Consequently, users can enjoy reliable and hassle-free services at lower management cost.

For further information or enquiries, please visit Dunwell's website at www.dunwellgroup.com, or contact Dunwell at 2443 8188 or info@dunwellgroup.com.

MAX WONG

Mr Wong joined Link in May 2013, and is responsible for formulating and executing the asset enhancement projects, and managing the operation and maintenance functions to realise the full potential of our asset portfolio. He is also responsible for development projects. Mr Wong has over 25 years of experience in major residential and commercial projects in Hong Kong and Macau. Prior to joining Link, he was the Assistant General Manager (Head of Project for Hong Kong Operations) at HKR International. He also held various senior positions at Aedas Limited, Wong Tung & Partners, and Kwan and Associates. Mr Wong holds a BArch and a BA (Architectural Studies) from The University of Hong Kong. He is a Registered Architect and an Authorized Person in Hong Kong and also a member of The Hong Kong Institute of Architects.

Being the first commercial development of Link, what are the reasons behind designing The Quayside as a smart and sustainable building? What, in your view, is the key to developers that strives for sustainable future?

M: At Link, we believe that businesses can move toward a philosophy centred on mutual interdependence with the environment and eco-innovation. Adopting sustainable practices not only helps the environment, but also leads to increased productivity, reduced costs, improved brand image, happier shareholders and countless other benefits.

In addition to some of the more commonly known ways to implement environmentally friendly initiatives, we have been proactively promoting the concept of sustainable development within our company as well as the wider community by working closely with our stakeholders – including investors, vendors, tenants and staff – and encouraging them to formulate long-term sustainability goals and consider sustainability elements from the project planning stage.

With this in mind, we commissioned Arup as our sustainable building design consultant early in the building design process to inject sustainability and intelligent features into the Quayside (TQS), the Group's first commercial development in Hong Kong. The project emphasises the importance of work-life balance by creating an efficient, eco-friendly and healthy commercial space

The Quayside entrance on Wai Yip Street

Lobby of The Quayside

for building users as well as residents of the Kowloon East district.

We hope that the TQS project can set an example for the industry and community. We also hope it can show that sustainability does not have to be expensive. In fact, the cost of constructing a green building can be greatly reduced as long as the coordination work is done in the early stage of project design.

What roles did green technology plays in your company's design initiative?
M: In cities like Hong Kong with heavily built environments and high population densities, we believe it is crucial for responsible corporations, and even citizens, to drive sustainable development. Therefore, we positioned TQS as a smart Grade-A commercial building that helps protect the environment, advocates the importance of work-life balance and provides healthy commercial spaces for users.

Green technology plays a major role in driving the sustainable development of TQS and the wider community. During the early design stage, the project team took into account the heat island effect and urban microclimate to minimise the building's impact on the surrounding environment while enhancing indoor air quality and thermal comfort. Moreover, by implementing green initiatives such as innovative energy efficiency technologies, we have greatly reduced TQS' carbon footprint, which has enabled us to contribute towards environmental protection and provide an enhanced working environment for users. These features include a kinetic jogging track which are made of the smart tiles developed by the renowned UK start-up Pavegen and an innovative air induction unit designed by Arup, both of which save energy and raise awareness of the need for environmental protection.

The Quayside is a milestone for The Link as it shifted the company from managing just retail spaces in public housing estate to large-scale commercial development, what sort of challenges did you face and how did your company overcome it?
M: TQS represents the first time that Link REIT, Asia's largest real estate investment trust, has developed a grade-A commercial building. However, with the invaluable experience of our partner, Nan Fung Group, an established property developer in Hong Kong, we have been able to combine traditional building techniques

with innovative solutions for sustainability, creating shared value in the process.

The greatest challenge we faced during the project was ensuring sustainable design. Though it is in the heart of Hong Kong's emerging new Kowloon East CBD, TQS is also located in close proximity to an old industrial district and the Kwun Tong Bypass. Adding to this crowded scene is a cluster of short buildings to the west of the project site, which posed great design challenges when considering the complexity of the microclimate in the surrounding area as well as acoustics, the amount of solar energy absorbed by façades and indoor thermal comfort.

Many might expect the greatest challenge of sustainable development to be maintenance costs, as it is common for developers to focus on the cost-effectiveness of their commercial building projects. But in fact, maintenance costs can be significantly reduced by incorporating sustainability features into the building early in the design stage. Through the close collaboration with our internal project management team, our leasing and asset management team, and our architect and engineering consultants, we were able to implement an effective mix of sustainability facilities and also align them with the development targets for TQS.

How do you position TQS in the transforming Kowloon East – the second CBD in Hong Kong? What are your visions and missions?
M: Our mission is to make TQS a centrepiece and model for Hong Kong that showcases innovative green building features and reflects the Group's strong commitment to the environment and community. By launching a number of engagement initiatives, we are also striving to promote the values of work-life balance and knowledge-sharing among our staff, tenants and the community.

Our vision is to work together with the Hong Kong Government to support its plan to develop Kowloon East into the city's second CBD and a smart city pilot area – defining a new standard of co-working culture that meets the needs of the new and old economies, and championing the growth of Kowloon East into a dynamic new lifestyle hub.

In cities like Hong Kong with heavily built environments and high population densities, we believe it is crucial for responsible corporations, and even citizens, to drive sustainable development.

The Link is the first tenant moving in to TQS, can you share what initiatives your company have adopted in response to the sustainability mission of TQS?
M: We have always followed a comprehensive set of sustainability principles that make the company more environmentally friendly and efficient and enable it to cater for the different needs of our staff. Our technologies and optimisation measures include digitalising our most commonly used work forms, which allows staff to submit and approve documents using digital signatures. We also count the amount of paper used by our staff every year and convert the total figure into the equivalent number of trees that would need to be cut down to meet that level of consumption, encouraging our employees to use less.

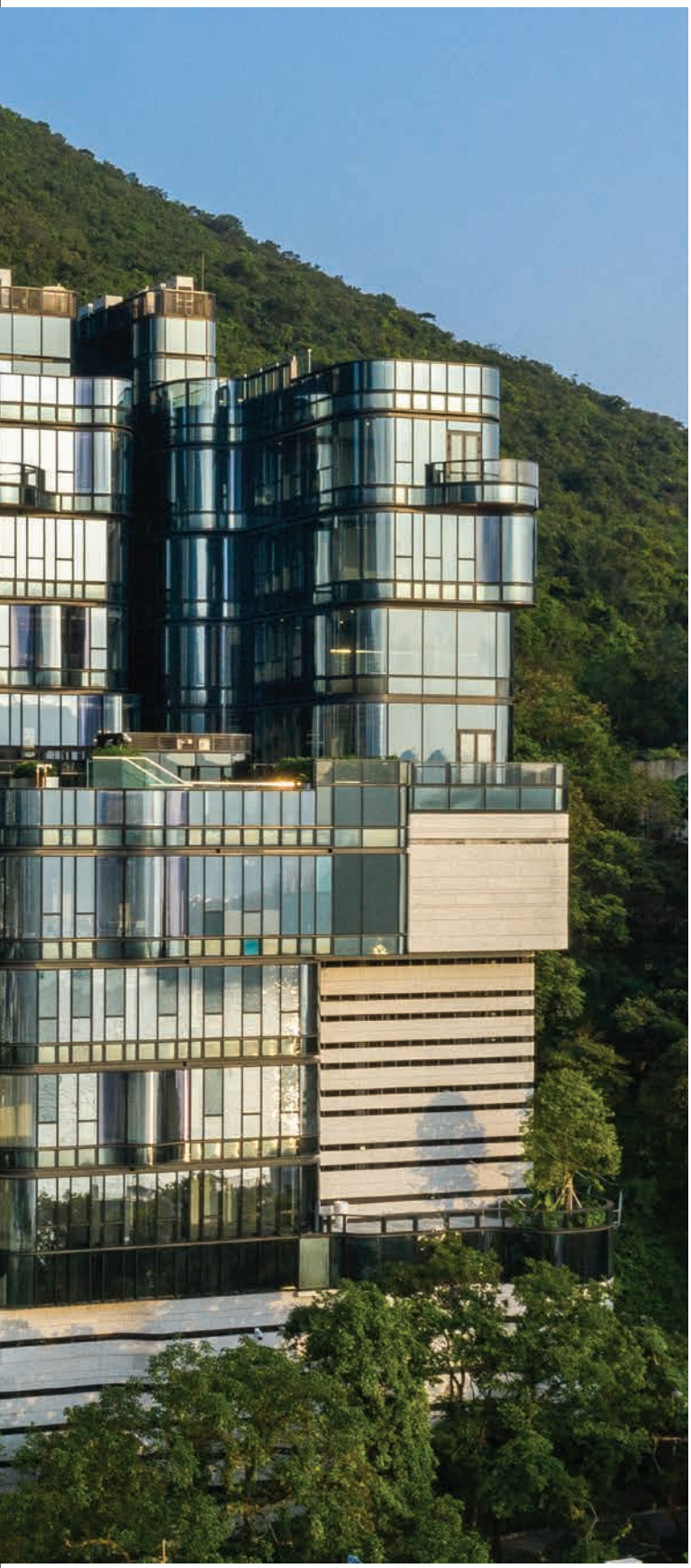
Also, in order to provide staff with a better working environment at our new headquarters, we offer tailor-made work desks. Employees can choose to use traditional or stand-up desks according to their preferences. In addition, we are currently testing a co-working space initiative with 30% of our staff. As these employees do not have fixed cubicles, their daily work desks can be selected based on their work needs, thus encouraging collaboration and communication between departments.

Moreover, we will also upgrade our software facilities to allow staff to browse and edit various files through cloud storage at their convenience. This will also enable multiple employees to work on the same document at the same time, eliminating the need to print documents out for editing. This facility will not only enhance efficiency and productivity, but also encourage collaboration and communication among staff and help build team spirit.

Why sustainability is important for an asset management company like Link?
M: At Link REIT, we take pride in being a pioneer and a leading real estate investment trust, managing and developing exceptional properties that are integral components of vibrant communities. We operate with the belief that responsible companies must generate economic value while positively addressing social needs and challenges. A sustainable business is one that welcomes input from different stakeholders to make informed decisions, striking a balance between the needs of the environment, society and economy. As a sustainable asset management company, we care about the needs of our users and the community, and this inspires us to create places where people want to be, both now and in the future.

For TQS, we have implemented global best practices in green building standards, including LEED and BEAM Plus, as well as over 40 green facilities with the aim of providing a better environment for users and residents in the Kowloon East district. This has helped us attract multinational corporations and renowned brands that are increasingly focused on sustainability and staff wellbeing. We believe that this holistic approach will steer us towards a more sustainable, environmentally friendly future and ensure business success over the long term.

External view



PULSA - SEA WAVES BY THE BAY

Repulse Bay is among the most luxury residential areas in Hong Kong. Backed by mountains, Pulsa is steeply sloped with spectacular sea view of the Bay. Eight houses are arranged in two tiers to optimize sea views, yet minimizing disturbance to the natural slope.

“When the architecture is integrated with nature and even becomes its integral part, damage to the environment is minimised.” According to Aedas Executive Director Cary Lau. Embracing residents and visitors with nature is what Cary’s design plans to achieve.

Surrounded by lush landscapes, the design motif of Pulsa is inspired by sea waves. Different floor area, layout, building profile and materials have been adopted, bestowing each house a unique identity in a coherent statement. Facades of houses create diffractions and reflections, creating ever-changing perspectives from different viewing angles, to surround residents by the natural beauty of Repulse Bay.

Located on a slope of approximately 40 degrees, the plot is originally in irregular geometric shapes. Not-for-development areas need to be reserved as required by regulations, to provide reasonable buffer between the adjoining developments. Nonetheless, Cary managed to optimize space and desirable views by arranging houses in two rows.

Aerial view - Greening works surrounding Pulsa

Cary gave careful thought to the best house dispositions on the natural slope. He chose a cascading arrangement, in which 3 houses in the front row are built downwards, whereas 5 houses in the rear row are built upwards. Building foundations in the rear row are slightly raised, while garages and plant rooms in the rear layer are set under the residential floors. The consequent master layout plan ensures that all houses acquire sea views of the Repulse Bay.

“Integrating nature into architecture is just the beginning. We should focus on its long term impact, to make our design meaningful.” Cary has put thorough considerations to reduce carbon footprint for Pulsa. The project achieved BEAM plus GOLD in Provisional assessment for its environmentally-friendly design and selection of materials. Different Low-E coatings not only control glare, but also reduce heat transfer across building envelops. The design applies cross-ventilation to enhance thermal comfort, while outdoor swimming pools are set on roof floor and the floor system raised on roof, to enable an effective energy- saving architecture.

"From day one of our design process, our team has already been thinking solutions to lower impact on the environment. Pulsa made it. This is a project belongs to both nature and itself.” Cary said.

Greenery nearby

Pulsa blends in with the nature

PROJECT DATA

Project Name
Pulsa

Location
Hong Kong, PRC

Scope of Work
Design and Project Architect

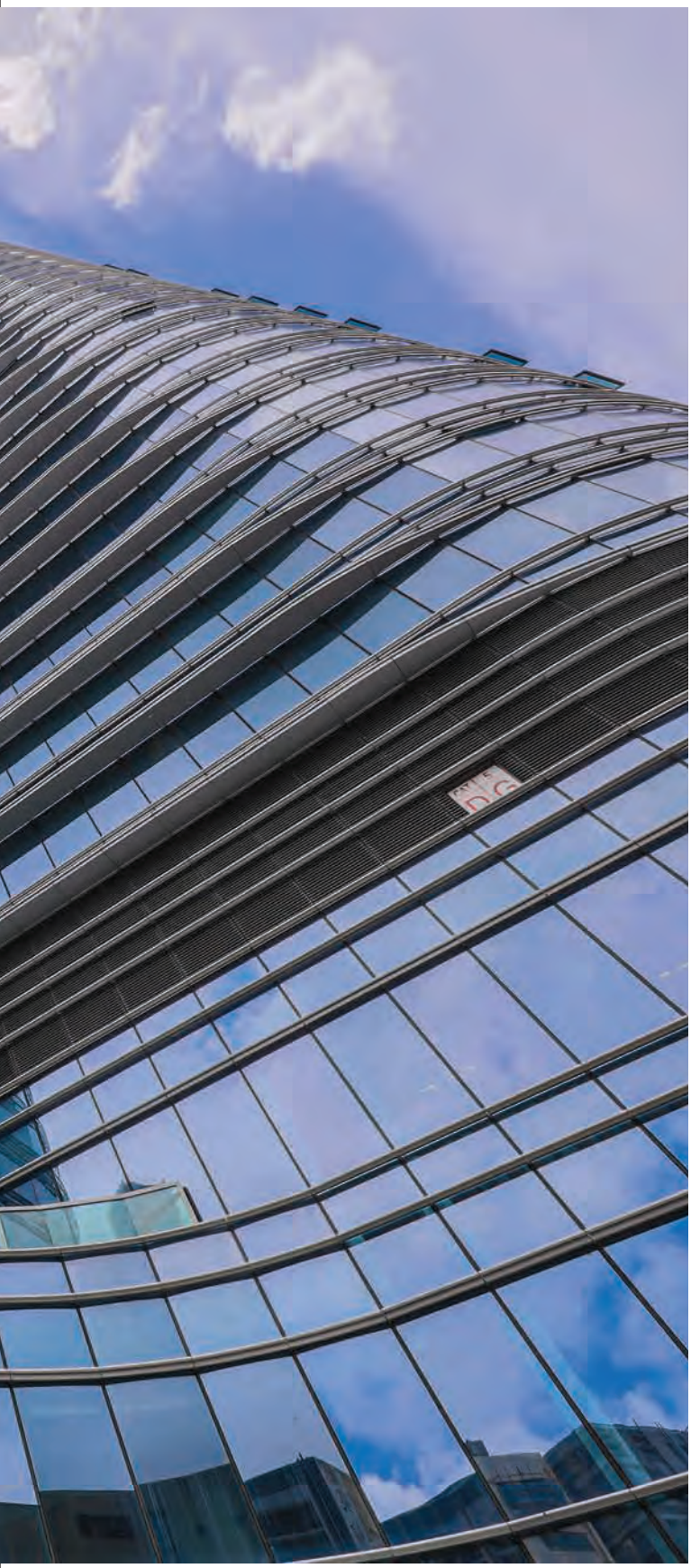
Client
Winfield Investments Ltd

Gross Area
3,906 sqm

Completion Year
2018

Director
Cary Lau

Solar-responsive architectural fins



THE QUAYSIDE

The Quayside (TQS), which is located next to a reforming industrial area and the Kwun Tong Bypass with relatively shorter buildings to the west, was completed earlier this year. With more than 40 green features, the building is Hong Kong's first office and retail mixed use development with the largest total floor area obtaining the WELL Building Standard Gold Precertification. The project also emphasises the importance of work-life balance by providing an energy-efficient, eco-friendly and healthy commercial space for TQS users as well as residents of the Kowloon East district.

TQS was designed to create an environment that facilitates life beyond work. As a major stakeholder in the Kowloon East community, TQS' mission and passion are to promote work-life balance by providing leisure facilities and hosting activities such as knowledge-sharing events, sports activities, etc. It also cultivates a diverse tenant mix that offers a variety of experiences so that wage earners can have a break from the hustle and bustle of city life.

Constructed along the waterfront, TQS commands panoramic views of Victoria Harbour. To save energy costs associated with lighting, the designer installed a glass curtain wall that allows natural light from the harbour into the building. However, excessive sunlight can raise indoor temperatures, which often results in higher energy consumption due to increased use of air conditioning systems.

To solve this challenge, Arup and the design team used computer modelling to analyse how the sun path interacts with TQS and its surrounding buildings and then customised a series of solar-responsive architectural fins of varying lengths to suit the building's different levels. These fins provide shading that keeps bright light from directly entering indoor spaces.

Given the fact that traffic along the Kwun Tong Bypass in front of TQS is very busy, the design team has adjusted the design of the solar-responsive architectural fins to minimise glare and enhance drivers' safety.

Thanks to the special design of the glass curtain wall, which includes the architectural fins and high-performance glass, TQS's Overall Thermal Transfer Value has largely been reduced to 18 watts per square metre, which is far lower than the standard 24 watts per square metre as required by the Building (Energy Efficiency) Regulation.

High building density is common in Hong Kong's urban areas. To increase the distance between the building and the Kwun Tong Bypass, the design team shifted the towers 45 degrees. This can not only further reduce TQS' impact in terms of air and noise pollution, but also maximize sea views from different floors.

In Hong Kong's hot and humid climate, mechanical fans are widely used to ventilate semi-outdoor areas. However, whether they are standing fans or hanging fans, their airflow and coverage are narrow and uneven, and their clumsy appearance is difficult to harmonise with many interiors. In response, Arup's engineering team invented a new ventilation device, the air induction unit (AIU), which integrates functionality and aesthetic design. TQS is the first commercial mixed-use development project in Hong Kong to feature it, installing one at the building's semi-open Podium Garden.

The AIU's design is inspired by aircraft wings. Using aerodynamic principles, the AIU can induce a large, continuous volume of airflow with an average wind speed of 1-1.5m/s within the operational area. The airflow is similar to natural wind and can further induce the flow of the surrounding air. Thus, the AIU can continuously create a cooling effect for large areas with no dead spots. Compared with traditional oscillating fans, the AIU is quieter, more energy-efficient and has a larger coverage area. Also, its bladeless design allows for safe operations as well as easy cleaning and maintenance, making it suitable for any environment.

TQS is also installed with a 40m-long jogging track designed by Pavegen at the podium garden. Underneath the jogging track is a series of interlocking triangular tiles made of composite materials, each connected to three electromagnetic generators that convert every footstep into an average of three joules of energy – enough to run a three-watt bulb for one second. Ten steps can produce sufficient power to enable one minute of talk time on an iPhone 8.

This innovative jogging track is intended to encourage people to walk more for a healthy, green lifestyle, while at the same time reminding us that energy is a precious resource which we need to conserve.

Target for low carbon footprint of the whole building life cycle takes into account the embodied carbon of building materials used during construction. Special attention is paid

The Quayside

Solar-responsive architectural fins

The lobby at The Quayside

Air induction unit

to the selection of both green materials with high recycled content and regionally sourced materials, by which the emissions of embodied carbon arising from transportation, raw material extraction and manufacturing can be significantly reduced. Several low carbon materials adopted in TQS are: (1) Construction Industry Council Carbon Labelling Scheme certified concrete mixed with fly ash recycled from power plant to replace cementious material, (2) reinforcement steel of around 10% to 20% recycled metal into the steel, (3) gypsum board of reused by-product from power plants and (4) ceiling panel of recycled aluminium.

Regional material which was extracted and manufactured locally within 800km of the site effectively reduced transportation carbon emissions. TQS has utilized regional materials supplied from places such as Guangxi, Dongguan, Guangdong, contributing to over 20% total material.

It is vital to sustain sources of raw material supply from nature and minimize the impact and harm imposed on it during extraction. Therefore TQS has capitalized on
50% of timber from responsible sources which is certified by Forest Stewardship Council
(FSC). It is verified that The FSC timber is produced under sustainable forest management and its production causes minimised impact on the environment.

Low VOC-emitting interior materials such as painting, flooring and furniture in compliance with international LEED and WELL certification standard are used for better indoor air quality, which is conducive to the health and wellness of both construction workers and future building occupants.

PROJECT DATA

Project Name
The Quayside

Location
77 Hoi Bun Road, Kowloon, Hong Kong

Status of Construction
Completed

Completion Date
31 July 2019

Site Area
Approx. 6,843 Sq.m.

Gross Floor Area
Approx. 82,044 Sq.m.

Building Height
Approx. 96m above mean street level

Client/Owner/Developer
Century Land Investment Ltd. (Joint-venture of Link Asset Management Ltd. and Nan Fung Development Ltd.)

Authorized Person
Lee Ming Yen Jennifer

Executive Architect
P&T Architects and Engineers Ltd.

Design Architect
P&T Architects and Engineers Ltd.

Interior Design Firm
CL3 Architects Ltd.

Principal Designer
William Lim

Civil & Structural Engineer
AECOM Asia Co., Ltd.

Mechanical & Electrical Engineer
WSP (Asia) Ltd

Quantity Surveyor
Arcadis Hong Kong Ltd.

Lighting Consultant
LIGHTLINKS International Ltd.

Landscape Architect
AECOM Asia Co., Ltd.

Green Building Consultant
Ove Arup & Partners Hong Kong Ltd.

Main Contractor
Gammon Construction Ltd.

Interior Fit-Out Contractor
Pat Davie Ltd. and Sundart Timber Products Co., Ltd.

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GREENLAND PRIMUS RESORT & APARTMENTS, SANYA, CHINA

Situated in Yuelan Bay, Sanya, with a mountain backdrop, the Greenland Primus Resort & Apartment provides modern travelers with a peaceful and relaxing retreat away from the hustle and bustle on Hainan Island, also known as the Eastern Hawaii.

The entire property is divided into two parts: a beach resort to the west and an apartment tower to the east, connected by public amenities shared by both parts with individual lobby and entrance. The guestroom and apartment wings emanate from either side of the lobby in order to maximize the scenic view for each room. The space combines local cultural influences with the contemporary, minimalist trend, offering a unique tropic experience for the guests. The team from B+H Architects provided interior design for key public areas and guest suites for the apartment tower. The apartment tower has 131 units, including one Royal Suite with the courtyard and an outdoor pool with beautiful mountain views.

Their interior design strikes a careful balance between nature and the modernity. They were inspired by the surrounding coastline topography and Hainan's pearl history. The design pays careful attention to the guest experience and amenities within a sustainable environment that is connected to the local nature and culture.

The interior design concept is inspired by the alluring and magnificent pearl. China has a long and rich history with the pearl, dating back 4000 years. Hainan Pearls were recognized as early as the Qin Dynasty (206-221 BC) with its abundant pearl production on the island, widely used in ornaments, fine jewelry, medicine and beauty products. The deep history, tradition, culture and sense of place that the pearl represents guide the design in its use of local materials, sense of luxury and elegance.

Courtyard


PRIMUS

Their design provides guests with a “wow” factor immediately upon stepping into the suite for the first time, just like the special moment when human beings first discovered the pearl that lies within the oyster.

The unique locale inspired the designers to integrate traditional cultural elements and classic Asian motifs in unusual ways: materials, textures and patterns inspired by the jewellery, accessories, and pottery from the local Li & Miao ethnic minority group.

Furniture and fixture selection in the living areas showcase the elegant, yet succinct silhouettes associated with the Primus Brand but with an added resort touch. The suite encompasses a collection of rich luxurious materials such as marble countertops, warm wood veneer and reflective polish found in the furniture and millwork details. The use of stone and wood recall the resort’s connection with the natural environment, while the abstract textures of the carpet, bathroom tiles, credenza countertops are reminiscent of the rough but beautiful oyster shell. The glamorous and bold navy and gold color palette elevates the design by layering texture, pattern and sparkle, while the rustic and unique furniture style evokes the vacation feel. The seamlessly integrated elements of the indigenous location and splendor can be discovered in the suite, leaving guests feel like they’ve found a rare treasure.

The soothing, soft tonal color palette inspired by the textural quality of Sanya’s natural landscape is balanced by dark wood floors and vaulted roof forms that symbolize the waves and mountains nearby. Pendants in the bedroom and living area are carefully selected to evoke a feeling of sophistication and tasteful elegance. The clean lines and modern aesthetics are applied to the bathroom design layers in an element of unexpected poise and refinement.

The public areas echo the vacation feel of those in the living zones, promoting a relaxed experience. The apartment lobby, bordered on one side by a graphic wall with regional patterns, connects with poolside pavilions by covered corridors. All the interior aspires to reflect a sense of stillness and calm found in nature, enabling guests to rest and immerse themselves in the breath-taking surroundings.

Lobby lounge area

Big guest suite bedroom

Restaurant

Guest suite outdoor view

PROJECT DATA

Project Name
Greenland Primus Resort & Apartments, Sanya, China

Location
Sanya, Hainan Province, China

Status of Construction
Apartment tower completed in early 2019, resort will be completed in November, 2019

Completion Date
November, 2019

Site Area
19,000 sqm2 (resort: 9078 sqm2, apt: 9922 sqm2)

Gross Floor Area
39477 sqm2 (resort: 22158 sqm2, apt: 17319 sqm2)

Building Height
34.1m

Number of Rooms/Units
Resort (276 keys);
Apt tower: 131 units

Client/Owner/Developer
Greenland Group

Authorized Person
Jecy Huang

Executive Architect
UA design

Design Architect
UA design

Interior Design Firm
B+H/CHIL

Principal Designer
Adele Rankin, Celine Wang, Sachi Iwamoto

Civil & Structural Engineer
IPPR

Mechanical & Electrical Engineer
IPPR

Lighting Consultant
Focus Lighting

Landscape Architect
B+H Architects

Main Contractor
MLongyuan Construction

Interior Fit-Out Contractor
Longyuan Construction

Images
B+H Architects
(Photographer: Hu Yijie)

Living Room

OOOTOPIA KAI TAK

We were commissioned in late 2018 by a real estate fund to research, explore and design a co-living-inspired serviced apartment concept primarily targeting young creatives, professional couples, small families and students who want to live in harmony with like-minded people in Hong Kong and Asia.

Our client had purchased three existing in buildings in up-and-coming locations across Hong Kong, namely To Kwa Wan, Tai Kok Tsui and Sai Wan with the goal of regenerating them to match the nascent nature of the neighbourhoods and fit seamlessly into the area's existing personality.

We set out to create communities that, unlike other co-living concepts, prioritises private space just as much as the carefully designed communal areas by providing residents with smart furnishings, flexible room types and intelligent technology that align with their varied lifestyles. It was certainly developed with a certain type of tenant in mind. Someone who's open-minded, open to different cultures, happy to share, is independent and actually has something to offer the world.

Our properties are largely in the heart of Hong Kong's undiscovered areas. Up-and-coming neighbourhoods with a wealth of history waiting to be told. We believe it's our responsibility to share these lesser-known locales, including their colourful residents, restaurants, bars and boutiques, with the world. We've therefore been very careful to factor in elements of the immediate culture and community, utilising a range of materials to create environments which reflect the properties past, present and future. We really want the fabric of Hong Kong -- indigenous Hong Kong -- to shine through, as we know from our research that residents prefer authentic flavours over the ostentatious and superficial. That's not to say that we can't be flexible with space and amenities we provide.

A key component of our concept is the uniquely themed communal living spaces at each of the properties. Conceived to appeal to socially conscious residents, the 'Living Room' at Kai Tok is adorned with plants and flooded with light thanks to the floor-to-ceiling windows that create a dialogue between the people inside and outside. At Oootopia Tai Kok Tsui, meanwhile, the shared space, dubbed the 'Tea Room' is subtly influenced traditional Japanese tatami rooms, while the 'Ooobar' at Oootopia West directly references the surrounding neighbourhoods' bustling nightlife.

We do not subscribe to the old "co-living" narrative, which is often to design overpriced college dorms, but without any of the entertaining aspects! Co-living is not simply co-sleeping. Everyone needs a private space to galvanise their ideas and to fully rest. Therefore, all of our rooms are en-suite, affordable and serviced.

In terms of practicality, many of the rooms feature smart furniture, including foldable dining tables and wall-beds. One of our main aims was to create a more compassionate living environment in both the shared and private spaces. Although tiny spaces offering little interaction is unfortunately often the norm in Hong Kong these days, somebody looking to succeed and enjoy a happy life shouldn't be forced to live like that. They should have access to decent facilities and sunlight and sleep in a comfortable bed. Above all, they should have access to other people!

In addition to the regular events that are held in the Living Rooms, interaction is also encouraged through deliberate design choices such as placing the water and coffee machines in the living room rather than on every floor.

The use of natural materials acts as a permanent reminder that we are part of a larger eco-system. It also has the added benefit of durability and within the units allows residents to more easily personalise their spaces. Storage is also a key component. Each of the three properties includes more storage space than most equivalent serviced apartments on the Hong Kong market. This once again ties into the understanding that in order to make Oootopians — as residents are known — feel at home it is imperative that their stay does not feel temporary.

In an aesthetic nod to Hong Kong's history, we've incorporated traditional mosaics into some of the properties interiors, which are often complemented by minimalist stone and wood surfaces. Indeed, wood is predominant throughout the common areas and residential rooms at each of the properties, as well as references to the surrounding architecture in each of our locations.

Like any contemporary design firm, we are also very careful

Studio Deluxe

when it comes to our carbon footprint and are eager to ensure that our projects are future-proofed. We advocate recycling and environmental friendliness to the core, which is why recycling bins and amenities made from organic ingredients are provided. Appreciating the negative impact air-conditioning units have on the environment, sensors have been installed to ensure that all electrical goods turn off when the room is vacated. This is not only a bonus for the environment but also our Oootopians electricity bills!

While the curation of spaces is a core part of the Oootopia experience, what we want to deliver goes way beyond bricks and mortar. It encompasses bringing people together both offline and online beyond the walls of the properties and screens on phones to create lasting memories. We are essentially creating a co-living concept for people who like people -- based on a belief in the "Three OOOs", which stand for Opportunity, Openness and Originality.

This is the Opportunity to meet kindred spirits, make lasting memories and shape personal and professional experiences. The Openness shared by a community that embraces social interactions, encourages individuality and lives in harmony. The Originality of our co-living concept, our neighbourhoods and of course all Oootopians.

Corner Suite

Living Room

PROJECT DATA

Project Name
Oootopia Kai Tak

Location
18 Sung Wong Toi Road, To Kwa Wan, Kowloon, Hong Kong

Status of Construction
Completed

Completion Date
March 2019

Site Area
1812 sq.ft

Gross Floor Area
18000 approx

Building Height
8 storeys (1/F – 7/F)

Number of Rooms/Units
56

Client/Owner/Developer
Oootopia Hong Kong / ARCH Capital/ Wanderwonder Hospitality

Executive Architect
Groundwork Architects + Associates

Design Architect
Groundwork Architects + Associates

Interior Design Firm
Groundwork Architects + Associates

Principal Designer
Groundwork Architects + Associates

Mechanical & Electrical Engineer
Pinebridge Group

Quantity Surveyor
KCI Management Consultancy Limited

Main Contractor
Ying Fat Engineering & Design Company Limited

Interior Fit-Out Contractor
Ying Fat Engineering & Design Company Limited

Project Management
Arch.IF Architects Limited

Licencing
M2R Solutions Limited

Images
Oootopia Hong Kong

Moon Hut (Night)

MOON HUT

MOON MARSH

As a general rule, there is a half-moon “Pond” in front of Hakka ancestral hall of enclosed architecture in Lingnan region, or “Moon Marsh”, as it is called, which I think to be a pool of lucid water nourishing each enclosed ancestral hall, where it contains an inexhaustible source of dew for the family. That is the origin of “Moon Hut”. So, the facade of the “Moon Hut” is expressed in the form of “Moon Marsh” of the Hakka Enclosed house. The planar profile looks like “Mid-autumn Moon”.

LOWER YOUR HEAD, BE MODEST

As of today, the world becomes, in a natural way, more and more confident. Everyone is too confident in living in the world to be modest and humble as before. Everyone is conceited and overconfident in holding his head up to the sky, never mind of the earth beneath, regardless of others or things in his life, not, never and absolutely lower his head, in the mindset of submission. Everyone is perky to hold explaining to the world his perfection, no matter how unrest and void is in his inner heart. Both achievers and losers “pretend to tell sorrow as poets do”. This is the world we live in. For this reason, “Moon Hut” serves as a home for modesty and humbleness. Anyone who wants to visit “Moon Hut” has to bow down to come in. Whoever you are, there is no “entrance” if you refuse to lower your head, or the “entrance” is around. In this huge area of Hakka ancestral hall, “Moon Hut” silently reminds all visitors, as if telling ‘hold your head down, be modest in heart, and keep humble.’ This is the sorrow of our shared “nostalgia” in this age. In the “Dawn Home” of enclosed Hakka houses, at the moment of mid-autumn moon rising, and in this time of perfect life, each visitor entering in “Moon Hut” may think of his moon-lit hometown through the bleary dome, evoke “nostalgia” that has been missed and originated from innermost memory. This is what “Moon Hut” means.

Moon Hut (Night)

Moon Hut

PROJECT DATA

Project Name
Moon Marsh

Location
Dawn Home, Shenzhen

Status of Construction
Finished

Main Materials
Bamboo sheets, fiberglass nets, ribbons, hollow panels

Completion Date
September 2019

Gross Floor Area (sqm)
128 square meter

Building Height
3.5m

Client/Owner/Developer
Shenzhen Pingshan District Culture, Radio, Television, Tourism and Sports Bureau

Executive Architect
Feng Yu

Interior Design Firm
Deve Build

Principal Designer
Feng Yu

Images
Deve Build

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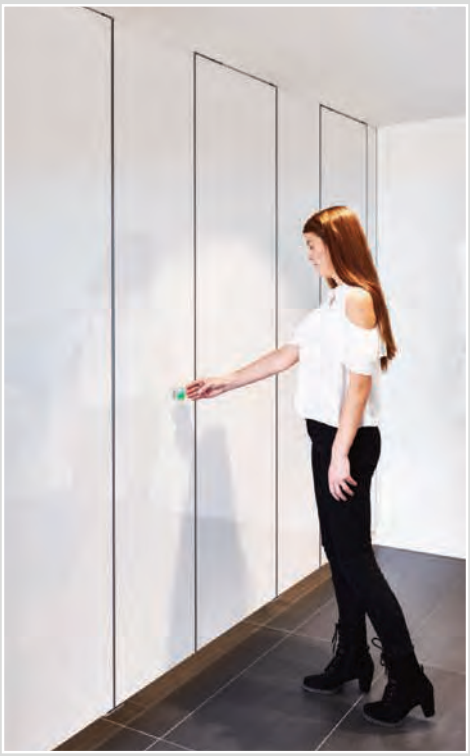
SCAN FOR VIDEO

Schäfer Look&Wave
Touchless toilet partition system



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Upon entering the washroom, large-scale LED displays light up, making it easier to find a free cubicle. This assures the optimum flow of visitors, especially in high-traffic facilities. A real plus for user comfort. To open the door, simply hold your hand in front of the marked sensor area. The cubicle can then be entered, without having had to touch anything.

No contact is required to lock the door either. Simply hold your hand in front of the sensor area in the cubicle to lock the door. As soon as the door is locked, the LED indicator inside and outside will turn red. This ensures the user feels safe in the cubicle, and visibly signals to people outside that the cubicle is in use.

The door is also unlocked by holding the hand in front of the sensor area. The lock is released and the door opens automatically.

Genesis 361° Solution

Genesis provides supply and installation services for all specialty products, including lavatory partition systems, lockers, indoor and outdoor flooring in Hong Kong and and Macau. In becoming the distributor of international premium brands, including German Cubicle manufacturer Schäfer Trennwandsysteme, French Vinyl Flooring leaders Gerflor, SHAW Carpets USA, and Mondo Outdoor Running Track and Rubber Flooring, Genesis is able to offer exceptional quality of products from global premium brands, excellent technical consultant and professional installation services.

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THE GREEN TRANSFORMATION

Development of HKGBC in the past decade

More than 300 industry leaders and peers gathered to celebrate the establishment of Hong Kong Green Building Council with an Inaugural Ceremony cum Conference in 2009

Each city tackles climate change in its own way because of the uniqueness. Hong Kong is no exception as it is filled with densely built high-rise with a subtropical weather. Buildings and related activities account for 90% electricity consumption or 60% greenhouse gas emission. Thus, for Hong Kong, it is important to reduce building's carbon emission. In 2009, The Hong Kong Green Building Council (HKGBC) was established to promote the standards and developments of sustainable buildings in Hong Kong, and aims to raise green building awareness by engaging the public, the industry and the government, and to develop practical solutions for Hong Kong's environment.

INDUSTRY ENGAGEMENT

The BEAM Plus assessment, which assessed by BEAM Society Limited (BSL) and certified by the HKGBC since 2010, has been regarded as a significant contribution to the sustainable development in Hong Kong. It is now the leading initiative to offer independent assessments of building sustainability performance in the industry. Since 2014, 50% annual percentage of private sector project joining BEAM Plus. As of this year, more than 1,500 buildings were certified under BEAM Plus, and total registered gross floor area (GFA) reached over 430 million square feet.

In order to encourage innovation, technology and human-centric approach to green buildings, the council has launched BEAM Plus New Building version 2.0 which places more emphasis on wellness of building users by re-branding the Health and Wellbeing aspect, to reflect on the global trend of healthiness and WorldGBC's advocacy in 2015. It also makes the assessment tools more human-centric, making buildings not just saving more energy and reducing carbon emission, but more people-oriented and liveable.

In addition to stimulating sustainable development in Hong Kong, HKGBC has also provided green practitioners training to the green experts in the industry. From 2012 to 2018, there were about 4,000 Green practitioners in Hong Kong, and they have obtained professional qualifications such as BEAM Pro

or BEAM Affiliate as they serve to empower the sustainable building industry. To provide recognition to building-related projects and organisations with outstanding performance and contributions in sustainability and the built environment, HKGBC organises the Green Building Award with Professional Green Building Council (PGBC) to honor project teams and organisations with exemplary leadership in respective areas.

Another critical factor for green development is building materials. To encourage the use of green materials for buildings, the launch of CIC Green Product Certification is formed through the merge of HKGBC's HK G-PASS and CIC's Carbon Labelling Scheme (CLS). HK G-Pass covered 25 product categories and focused on aspects such as human toxicity, resources consumption and ecosystem impacts. CLS covered 3 product categories and dealt with a single impact which is climate change. As a result of the merge, CIC Green Product Certification now covers 28 product categories and slightly over 110 certified products.

HKGBC launched several guidebooks in order to educate the industry on green buildings. In 2018, the Green Design Guide for Material Resources Optimisation in Building Life Cycle was launched to provide practice guidance to the industry. It alerts the public and building professionals about the building material waste problem and provide adequate guidelines during planning and design stages in minimising building material waste for the Hong Kong building industry.

To improve the energy efficiency of existing buildings, HKGBC has partnered with the government to launch the ACT-Shop Programme in 2016. The programme aligns with Government's initiatives and also adopts the 4Ts approach to assist building owners to enhance the energy performance of the existing buildings. The main aim of the programme is to encourage existing building practitioners to implement a knowledge-based energy management and retro-commissioning practices in their buildings, in order to improve the building energy performance. Through this programme, building owners could identify the improvement potentials on energy saving and make decision based on the data analysed.

By November 2018, The ACT-Shop programme has already launched the fourth batch of pilot projects and successfully conducted retro-commissioning for 24 privately-owned buildings. The project helps those buildings save 1.3 million kWh of power.

COOPERATION WITH GOVERNMENT

The connection between the Council and the government is also important for providing a greener built environment to the industry. Since 1 April 2011, certification by BEAM Plus is one of the prerequisites for the granting of gross floor area (GFA) concessions for certain green and amenity features in

BEAM Plus New Building version 2.0 which places more emphasis on wellness of building users was launched this year.

Mr CHEUNG Hau-wai, SBS, Chairman of HKGBC, is delighted to see the growth of Green Building Award in terms of number of high-quality entries and impact over the years.

Recognitions were presented to the outstanding organisations of BEAM Plus projects during the Gala Dinner of WorldGBC Congress Hong Kong 2015

HKGBC organises Green Building Award with PGBC to honor project teams and organisations with exemplary leadership in green building industry.

development projects. By cooperating with government to encourage green building developments, it is estimated that 710,850 MWh of electricity and 15.7 billion Litre of fresh and sea water have been reduced annually. As a result, the total estimated carbon emissions saved each year is 506,350 Tons of Co2e which equal to 22 million trees planted.

To engage the general public and different sectors of the community, HKGBC holds public events such as Hong Kong Green Building Week. Since 2011, HKGBC also engages schools and students by holding school competition to educate the younger generation with green building knowledge, and nurture them to become pioneers in promoting green building concepts.

INTERNATIONAL RECOGNITION

To promote green building with the world, HKGBC organises various world conferences and events for the industry. For industry players in Hong Kong, they can take reference to the projects from worldwide while others can learn from the successful local projects as well.

Currently HKGBC is the Established Member of the WorldGBC (highest level of membership) since November 2012. The council has also joined the current WorldGBC Board to set the strategies to promote green building development globally and help to promote the messages and events of WorldGBC from time to time. Ms Ada Fung, HKGBC's director has been appointed to be the WorldGBC Board Secretary while Ir Cary CHAN, Executive Director of HKGBC was appointed to be the Vice Chair of WorldGBC's Asia Pacific Regional Network (APN).

The theme of the World Sustainable Built Environment Conference 2017 Hong Kong was "Transforming Our Built Environment through Innovation and Integration: Putting Ideas into Action."

To reach the target of "Advancing Net Zero" all buildings operate at net zero carbon by 2050, Cary will lead WorldGBC's APN to work on the strategies with WorldGBC. HKGBC will continue to take the lead to engage both the Government and investors on Green Building development, and be a role model to the world on developing green buildings in a high density city.

Over 100 members and stakeholders of the Council attended the Briefing Session of Public Engagement on Long-term Decarbonisation Strategy.

BEAM PLUS ACHIEVEMENT IN 2019

The Upgraded Green Building Rating Tool and Scalable Green Building Certification

Since launch in 2010, BEAM Plus is Hong Kong's leading initiative to offer independent assessments of building sustainability performance. Under the scheme, the buildings are assessed by BEAM Society Limited (BSL) and Certified by the Hong Kong Green Building Council (HKGBC). There are now over 1,300 registered BEAM Plus projects, covering a total gross floor area (GFA) of over 400,000,000 ft^2. The government is a keen supporter of BEAM Plus, major new government buildings have to achieve Gold rating or above under BEAM Plus. Since 2014, the annual percentage of private sector projects joining BEAM Plus has reached nearly 50%.

Both organisations have been continuously developing and upgrading the rating tools, in order to meet the demands from the industry and enlarge adoption of green building certification in Hong Kong. In September 2019, the upgraded BEAM Plus New Buildings V2.0 was launched. It places more emphasis on health and wellbeing of building users, as well as includes a new assessment aspect named Integrated Design and Construction Management. The tool has also been re-designed to enhance adaptability, certainty and practicality of the assessment.

With a view to accelerating the transformation of existing buildings, BEAM Plus Existing Buildings Volume Certification has been launched in October 2019. By streamlining the assessment processes and providing fee discount for multiple-project registration, it enables property owners, developers and facility managers to assess the sustainability performance of multiple existing buildings in a faster and more economic manner. Since launch, nearly 100 properties have been registered for volume certification, and a number of property management companies will join hands with us to promote the initiative among their portfolio of buildings.

The annual BEAM Plus Certification Ceremony is held to honour project teams with exemplary performance in BEAM Plus assessment. The number of certified projects is growing year by year. This year we will be welcoming over 80 project teams whose projects have achieved Final Platinum, Gold, Silver and Bronze as well as Provisional Platinum ratings.

Know more about the projects at BEAM Plus Online Exhibition:
http://greenbuilding.hkgbc.org.hk/

HKGBC BEAM Plus 綠建環評

Certification body

Assessment body

10th Anniversary HKGBC 香港綠色建築議會

BEAM 建築環保評估協會

LIST OF BEAM PLUS CERTIFIED PROJECTS THIS YEAR

EXISTING BUILDINGS (EB) V1.2

- Hysan Place
- Kowloon City No. 1 and No. 2 Sewage Pumping Stations

EXISTING BUILDINGS (EB) V2.0

- Jardine House
- Cityplaza
- Alexandra House
- Hong Kong Pacific Centre
- Edinburgh Tower, Gloucester Tower, York House and Landmark Atrium
- Prince's Building
- One, Two & Three Exchange Square and The Forum
- Tsim Sha Tsui Centre
- Empire Centre

EXISTING BUILDINGS (EB) V2.0 SELECTIVE SCHEME

• Sun Hung Kai Centre	-Excellent (Energy Use Aspect)
• Gammon Technology Park	-Excellent (Energy Use Aspect)
• Tung Wah Group of Hospitals Wong Fung Ling Memorial Building	-Excellent (Materials and Waste Aspect)
• Exchange Tower	-Satisfactory (Management Aspect)

INTERIORS (BI) V1.0

- M Moser Hong Kong Office
- Shell Siu Lam Station
- Renovation Works of BIM Space and Office of the Construction Industry Council

NEW BUILDINGS (NB) V1.1

- Yuen Chau Kok Complex
- Maxim's Centre
- FLEUR PAVILIA
- The Spectra
- Mount Pavilia
- VTC Halls of Residence (Tsing Yi)
- Capri
- School for Social Development for Girls at Choi Hing Road, Kwun Tong
- Hong Kong International School, Lower Primary School
- Park Ivy
- The Bloomsway
- The Wings IIIB / PopWalk
- AXA Southside
- PARK HILLCREST
- W668
- Composite Development at 97 Belcher's Street
- Babington Hill

LEGEND

- Final Platinum
- Provisional Platinum
- Final Gold
- Final Silver
- Final Bronze

NEW BUILDINGS (NB) V1.2

- Tin Shui Wai Hospital
- Kingston International Centre
- Lin Tsui Estate
- Shek Chung Au Sewage Pumping Station
- Lee Garden Three
- Technological and Higher Education Institute of Hong Kong (Chai Wan Campus)
- Water Supplies Department Tin Shui Wai Building
- Sha Tin Community Green Station
- Kwai Tsui Estate
- Harbour Area Treatment Scheme Stage 2A - New Main Pumping Station & Workshop Building
- South Island Place
- Lam Tsuen Valley Sewage Pumping Station No. 5 (Ma Po Mei)
- Lam Tsuen Valley Sewage Pumping Station No. 6 (Pak Ngau Shek)
- Lam Tsuen Valley Sewage Pumping Station No. 1 (She Shan Tsuen)
- Kowloon East Regional Headquarters and Operational Base cum Ngau Tau Kok Divisional Police Station
- Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Fire Station Cum Ambulance Depot
- Design, Build and Operate San Wai Sewage Treatment Works - Phase 1 (DC/2013/10)
- Two Taikoo Place
- Black Point Power Station Unit D1 Project
- Proposed Residential Development at 11 Muk Tak Street
- Central Plaza Annex
- Queen's Hill Substation
- Hong Kong-Zhuhai-Macao Bridge Hong Kong Port - Passenger Clearance Building
- CUHK Medical Centre at The Chinese University of Hong Kong, Sha Tin, New Territories
- ONE HOMANTIN
- Savannah
- International Trade Tower
- Sheung Chui Court, Tsuen Wan
- Ching Chun Court, Tsing Yi
- Mei Pak Court, Sha Tin
- ARTISAN HUB
- Tung Wah Group of Hospitals Ma Kam Chan Memorial Primary School (Main Campus)
- The Luna
- BOHEMIAN HOUSE
- Chi Yun School and Po Leung Kuk Anita L. L. Chan (Centenary) School
- Mei Ying Court, Sha Tin
- Tsuen Wan Sports Centre
- Artisan House
- THE PAVILIA BAY
- Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - C&ED Inbound Cargo Examination Building
- NAPA
- La Cresta
- Mantin Heights
- The Mediterranean
- We Go Mall
- No. 33 Des Voeux Road West
- 28 Aberdeen St.
- The Papillons
- Sha Tau Kok Chuen Ying Hoi House
- Park Mediterranean
- Mega Cube
- 420 Prince Edward Road West
- Hotel Purple
- Hotel Development at Inland Lot No. 9020

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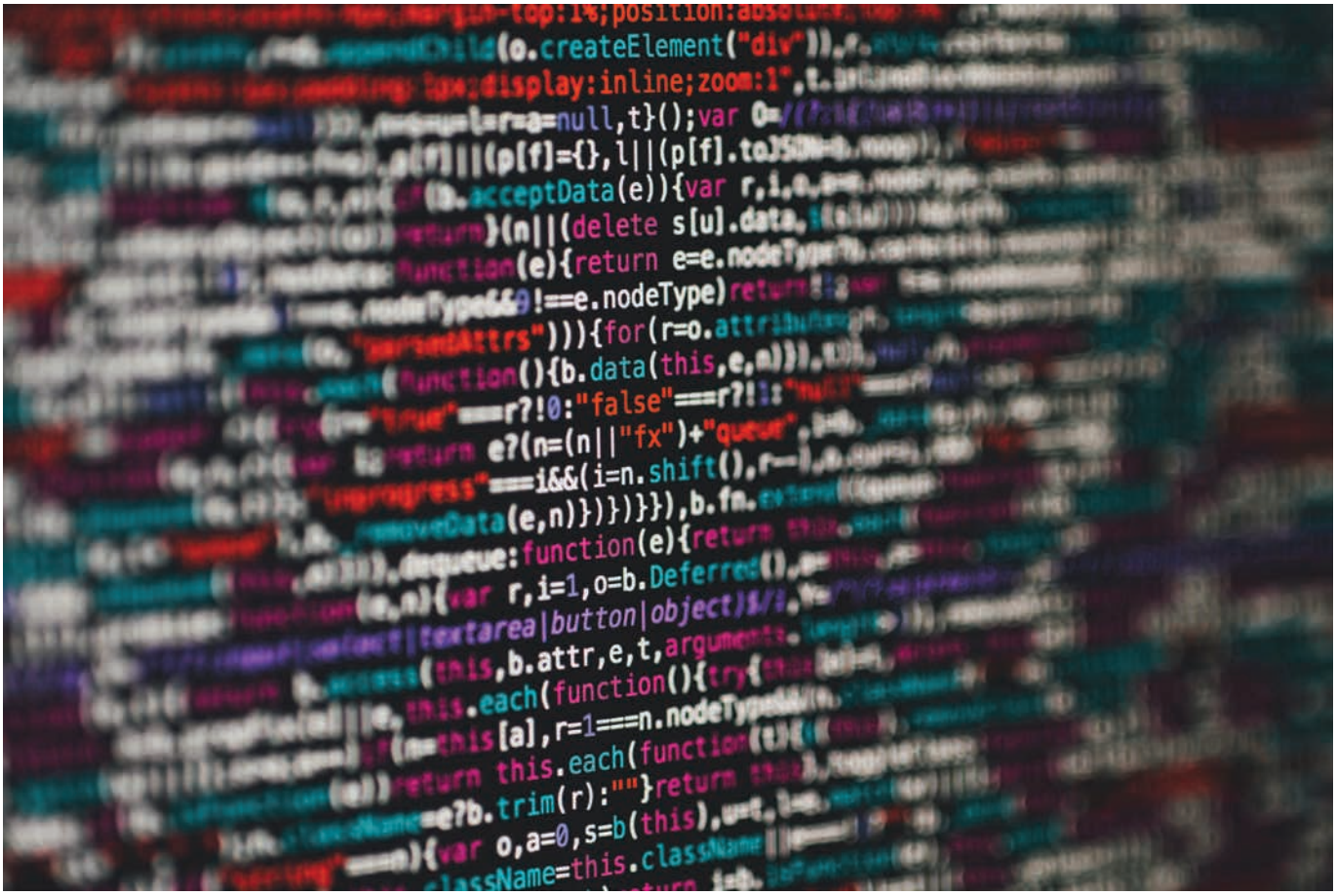
BRICKS, DATA AND MORTAR: IT'S TIME TO BUILD IN THE INTELLIGENCE



Digital era has reshaped everything

Image by Markus Spisk on Unsplash

When the modern office first appeared, it was a factory for white collar workers: a big box where people could sit and process information, on paper, in files, by person and by phone. As the digital era has reshaped everything about our world and our work, so it's become clear we need to revisit some of the assumptions about the shape of the buildings where people congregate. And it's not just offices. Today, wherever there are people, there is data that could be better served by the buildings or assets people are using.

The next generation of building design will take place in an era marked by artificial intelligence. This promises to take data and turn it into incredibly responsive services and experiences. Yet to date, the built environment industry has been slow to understand the implications, and slower to spot the opportunities. Too often buildings' IT packages are more of an after-thought, something to fit in, not an opportunity to be seized.

IMAGINATION PLUS TECHNOLOGY EQUALS LONG-TERM VALUE

Change is coming. Developers are increasingly asking about the data performance and features of the buildings they fund. They know users, tenants will demand flexibility, and that buildings that can't change purpose and performance are less valuable over the long haul. There are implications for design. It means the data, sensor, intelligence aspects of an asset must be considered right at the start, no longer viewed as a final stage 'cabling issue'.

Consumer technology has already commoditized much of the I.T. required, meaning cost isn't prohibitive. The real challenge is integrating data and AI in a flexible, intelligent way, that generates real value for developers, owners, tenants and users. As new buildings, like the fittingly titled 'White Collar Factory' in London's Shoreditch set new standards for responsiveness, environmental control, connectivity and future flexibility, demand for this approach to intelligent buildings is

likely to build quickly.

REAL TIME MONITORING

We've already established the value and power of intelligent assets. We've been helping our bridge clients by embedding real time sensors, for the Stonecutters bridge in Hong Kong and Queensferry Crossing in Scotland, that can power autonomous operational systems. In the lift manufacturing industry in Hong Kong, as lifts age the government is insisting on more real time data collecting sensors for their maintenance.

THE DIGITAL, LIVING BUILDING

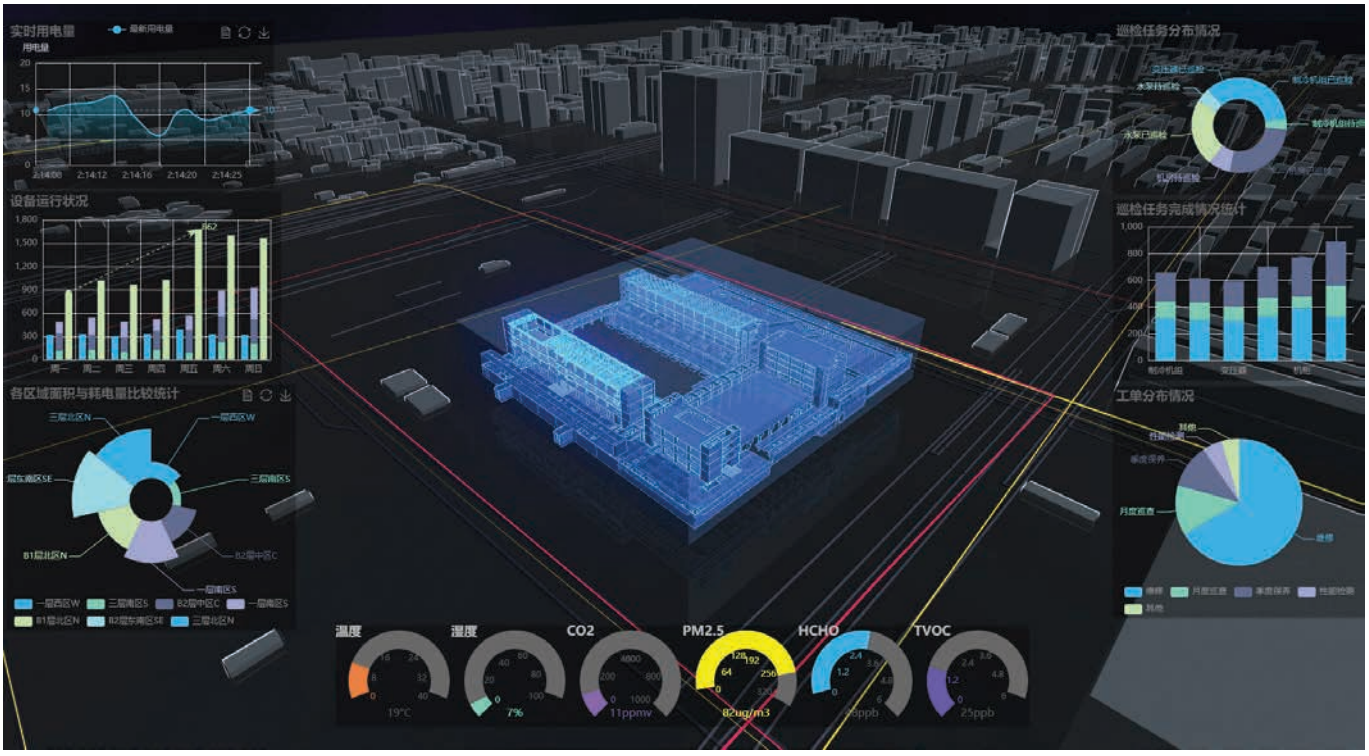
Our Neuron product show's what's possible. Recently implemented on One Taikoo Place, a commercial tower in Hong Kong, Neuron provides a new level of real-time control over the building's many systems. Machine learning and AI allow the many systems to combine more like a living thing and improve over time. These tools add real value to operators, tenants and users alike. Making sure a building is designed to take advantage of them is key.

Artificial intelligence is still developing but there are already affordable, edge-AI boxes that process local data about building performance, right on the premises. This brings rich data-driven operational services to almost any user, even those without the deepest pockets. And as ever in the digital era, whoever can turn raw data into valuable operational intelligence will succeed.

INTELLIGENT BUILDINGS, SMARTER INDUSTRY

A building's digital performance is as key to its long-term value as how well it deals with climate, energy or other physical factors. This should be the mantra for this digital built environment era. Data, bricks and mortar are all part of one seamless understanding of what the end user will need, long into the future.

Construction might be one of the last

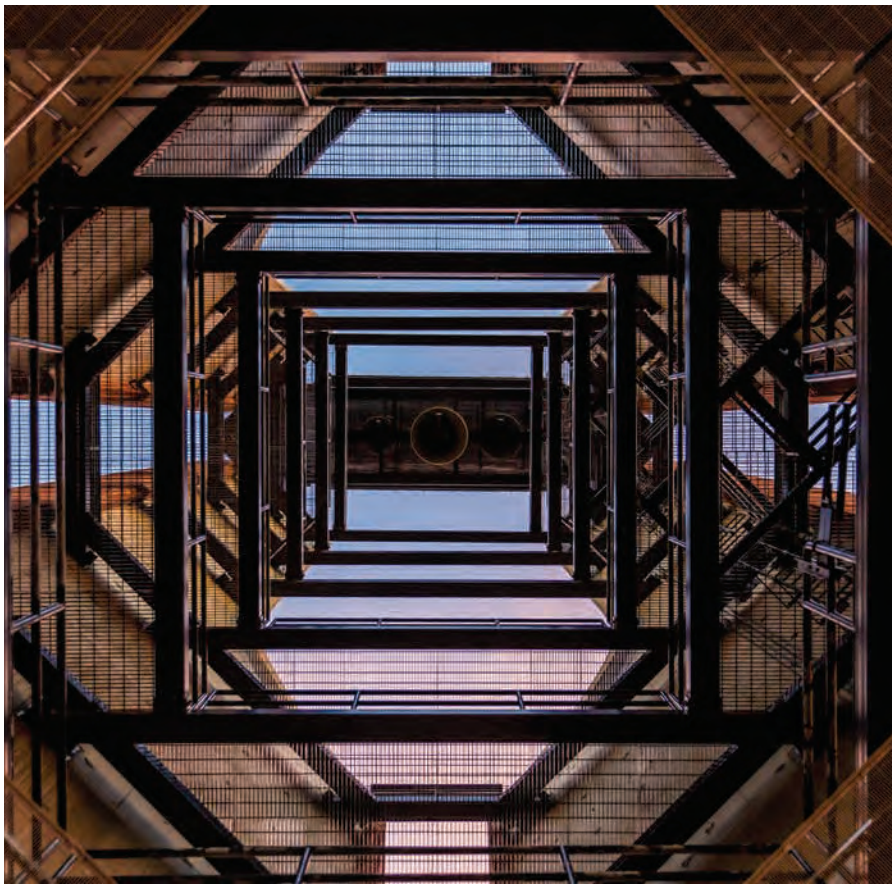


Digital Platform

Image by Arup

Queensferry Crossing Bridge

Image by John Cameron on Unsplash



Building design will take place in an era marked by artificial intelligence *Image by Dayne Topkin on Unsplash*

Real Time Monitoring *Image by Stephen Dawson*

industries to become truly data-driven. Perhaps some established businesses still believe that A.I. doesn't need to be core to their business or their ways of working. But that era is surely drawing to a close. Digitally designed, data-ready structures will be able to achieve the kind of performance gains that meet sustainability targets, lower costs, and raise revenues from users. It's time for our industry to seize the opportunities in front of it.

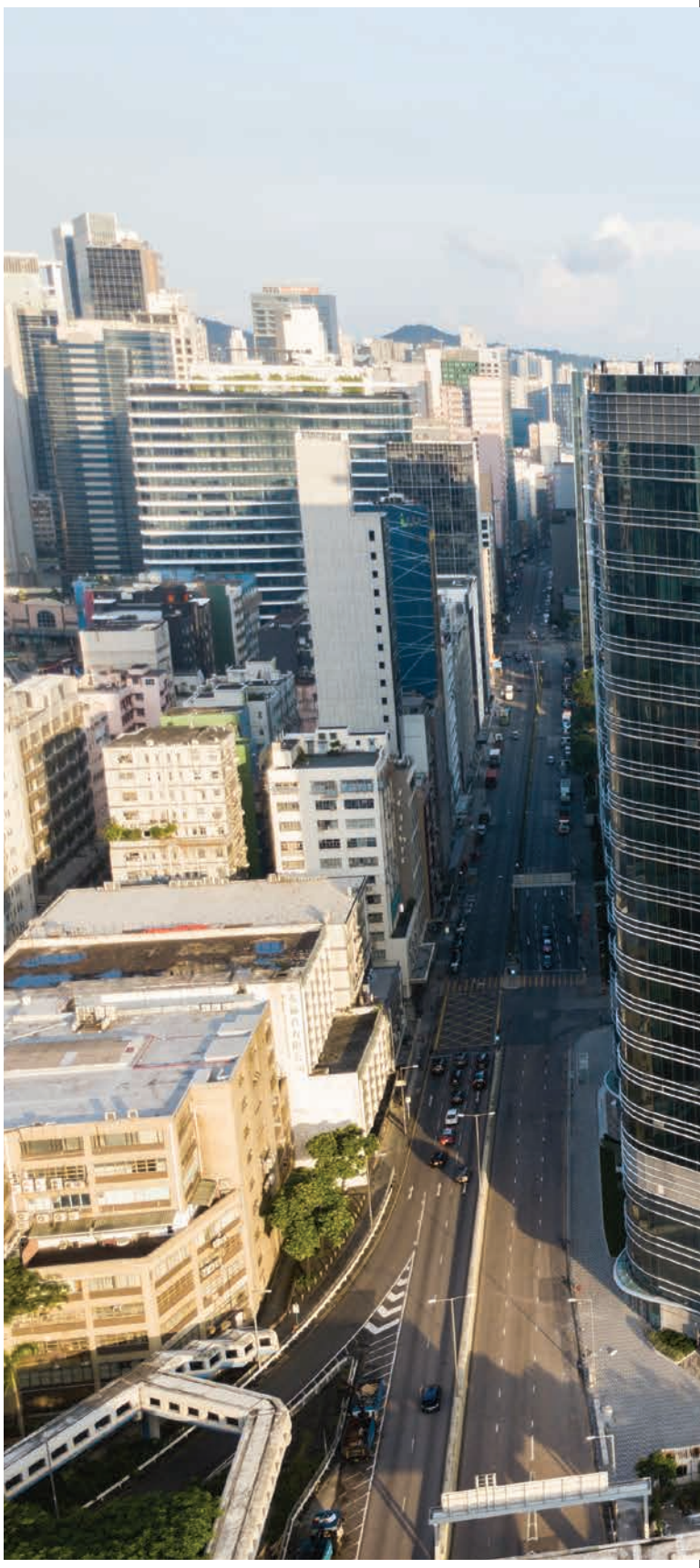
SANKAR S. VILLUPURAM
Digital Services Leader in East Asia
As Arup's Digital Services Leader in East Asia, Sanker is, passionate about and specialised in the articulation of insights gained by connecting things and people. Currently, he is a member of the Board of Directors in the Hong Kong Internet of Things Alliance;he also served the Project Management Institute (Hong Kong Chapter Board).

THE NEW LANDMARK IN SMART KOWLOON EAST – THE QUAYSIDE

The Quayside (TQS) is the largest harbourfront development and grade-A commercial building in Hong Kong's emerging new Kowloon East CBD. To support the Hong Kong Government's plan to develop Kowloon East into a smart city pilot area, TQS' joint developers, Link REIT and Nan Fung Group, appointed the project's sustainable building design consultant early in the building design process to incorporate numerous intelligent and sustainability features, which helped reducing construction costs and seamlessly integrating green elements into the district's new landmark.

In the early design stage, the consultant carried out a comprehensive study of TQS' orientation to determine the most suitable scheme and minimise the building's impact on the surrounding environment. Features such as smart tiles developed by the renowned UK start-up Pavegen and an innovative air induction unit designed by Arup were included to save energy and enhance awareness of the need for environmental protection.

Green and sustainable construction is gaining popularity in Hong Kong, but it is still at an early stage and there is much room for improvement. We hope that the TQS project can set an example for the industry and community and show that the cost of constructing a green building can be greatly reduced while coordination work is done in the early stage of project design. In this way, optimal results can be achieved with minimal effort. It is our hope to see more projects like TQS in Hong Kong in the future, which not only contribute to a greener environment, but a brighter and better future.



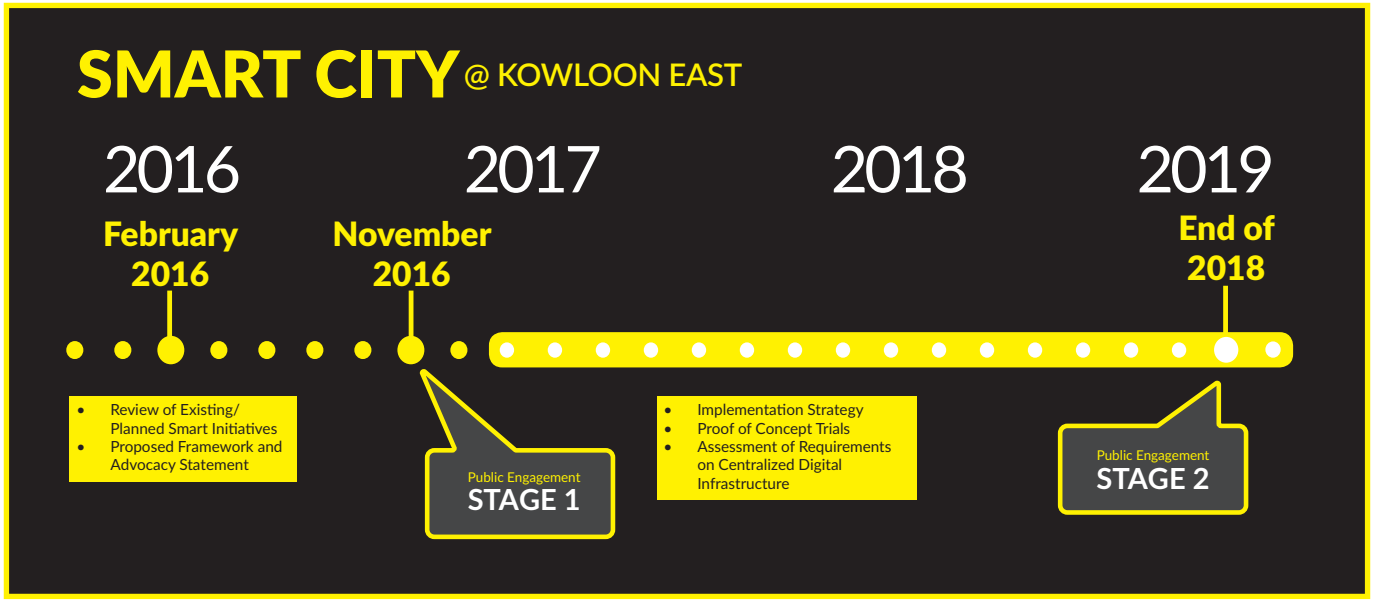
Bird eyes view of The Quayside

Smart tiles

SMART CITY DEVELOPMENT IN KOWLOON EAST

Smart City Development in Kowloon East KE consists of the former airport site – the Kai Tak Development area, the Kwun Tong and Kowloon Bay Business Areas. Since the closing of the airport, the relocation of manufacturing industries to the Mainland and the rapid increase in demand for high grade office buildings, KE has been rapidly transforming. The Government advocates the transformation of KE into another core business district (CBD2) to support Hong Kong's economic development by adopting a visionary, coordinated and integrated approach. Smart city development can play an important role in this process by offering innovative and sustainable urban development solutions. Read more about The Quayside development in this section.

PoC Trial 1	Persona and preference-based wayfinding for pedestrians	• Self-guided tour function • Users' persona and • Using augmented reality or virtual reality • Suggest personalised routes
PoC Trial 2	Smart crowd management system	• Automatically detect crowd flow and number of vehicles • Identify abnormal conditions • Improve the efficiency of crowd management.
PoC Trial 3	Energy efficiency data system	• Installation of smart electricity sensors • Real-time electricity consumption data
PoC Trial 4	Kerbside loading / unloading bay monitoring system	• CCTV cameras and video analytics
PoC Trial 5	Smart recycling bin system	• Fill-level sensors • Estimate the fill-up time • Suggest an optimized collection route through artificial intelligence
PoC Trial 6	Multi-purpose lamp post	• Multi-purpose lamp post • Air quality and weather monitoring • Pedestrian and vehicle flow analysis • Real-time information dissemination • Electric vehicle charging facilitie • Solar power facilities and Wi-Fi hotspots
PoC Trial 7	Real-time road works information	• Real-time road works information
PoC Trial 8	Illegal Parking monitoring system	• CCTV cameras and video analytics • Detect illegal parking activities



THE DIRTY OF LOUDNESS

Investigation on the traffic noise pollution to residents in Western District

By Kenneth Wong (DUPAD, HKU)
2017 ESRI Young Scholar Awards, Grand Award

BACKGROUND

- At the end of 2015, the daily total road travelled by vehicles in Hong Kong had reached a new peak of 36.41 million vehicle perday.
- How bad will the traffic noise be is a concern to public health
- Connaught Road West Flyover is chosen in this project to study the traffic noise generated from this highway.

We would like to:

- Investigate the noise level generated from the traffic in Western District
- Figure out the number of residents living in area exceeding the standard proposed by the goverrntment

FINDINGS

We produced 24 noise maps revealing the noise level in each hour, and 12 of them are shown below. Areas in dark red are those severely exceeding the standard of 70dB(A), while that of pale red slightly exceeds 70dB(A) (which still exceeds the standard, though).

Then we summarised the noise maps together to how long are the buildings being affected in one day

METHODOLOGY

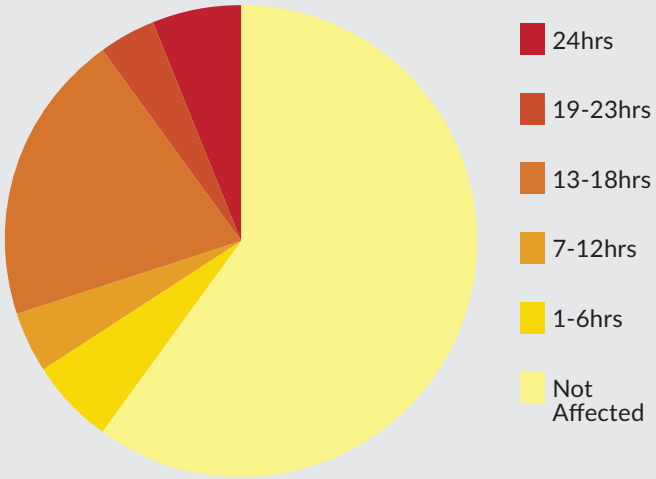
Traffic noise generated and the noise received by the residents are calculated by the following questions.

$$L_{10}(1h)=10\times\log_{10}(q)+33\times\log10_{10}(V+40+500\div V))+10\times\log_{10}(1+5P\div V)$$

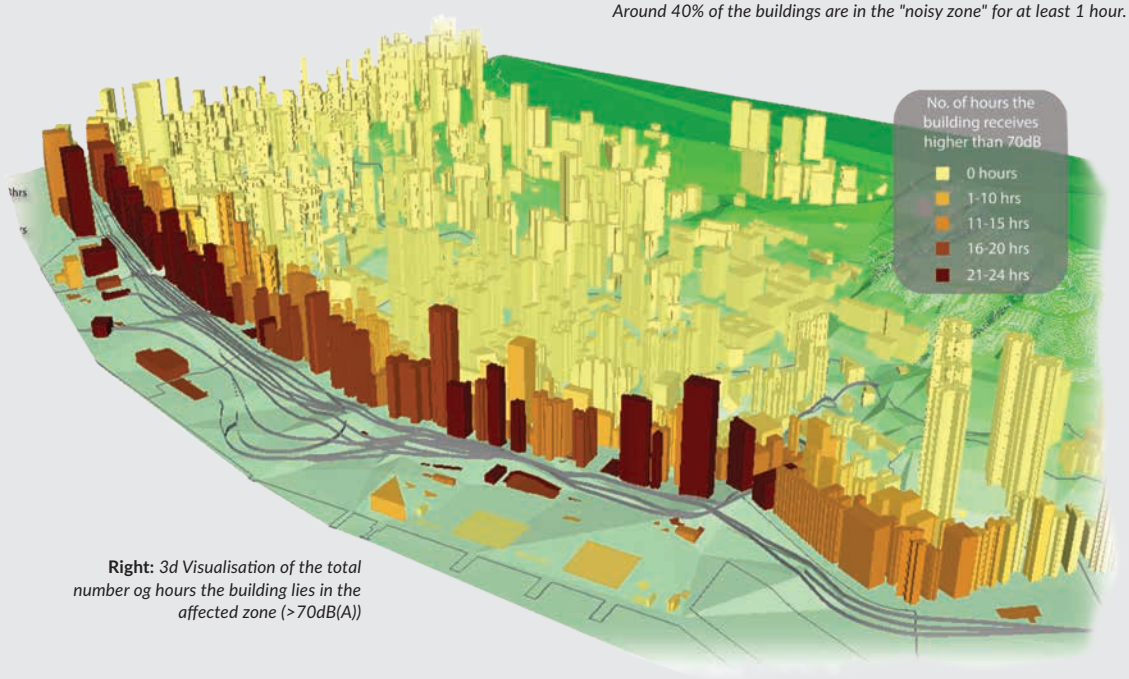
$$L_{corr}=-10\times\log_{10}(d\div13.5)+5.2\times1\times\log_{10}(3\div(d+3.5))$$

$$L_{received}=L_{10}(1h)+L_{corr}$$

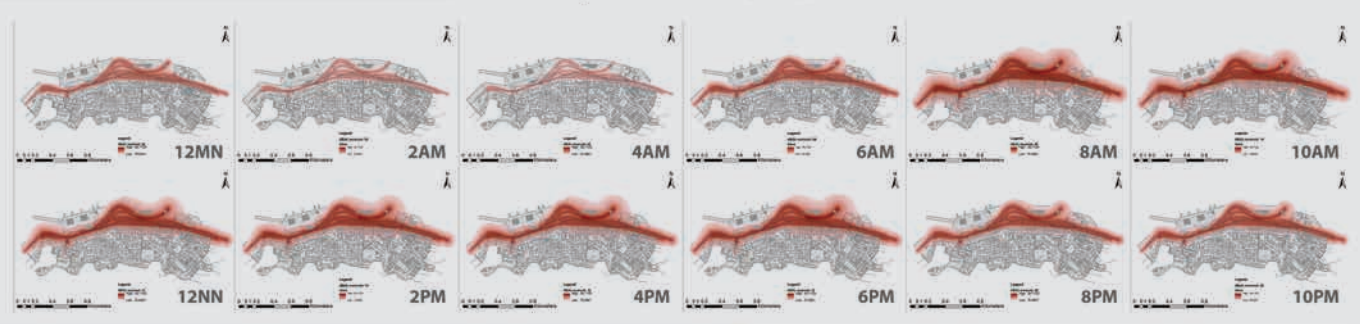
$$L_{total}=1-\times\log_{10}\sum_{i=1}^{n}100.1\times L_i$$



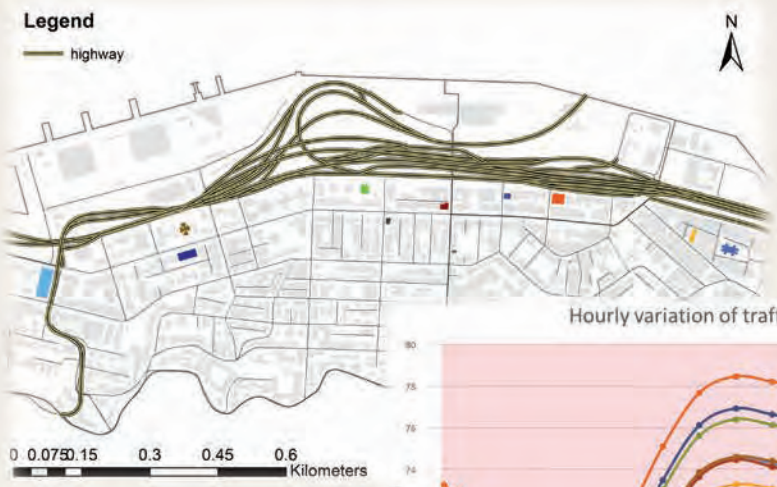
Distribution of the total affected hours of all 1495 buildings in the investigated area. Around 40% of the buildings are in the "noisy zone" for at least 1 hour.



Right: *3d Visualisation of the total number og hours the building lies in the affected zone (>70dB(A))*

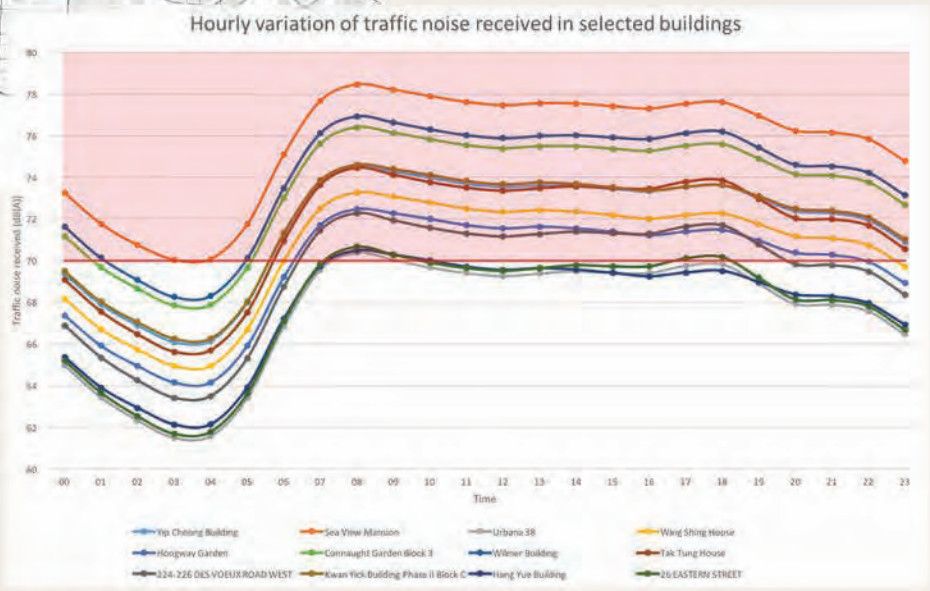


Noise map on hourly basis from 12MN to 10PM on 2-hour Interval



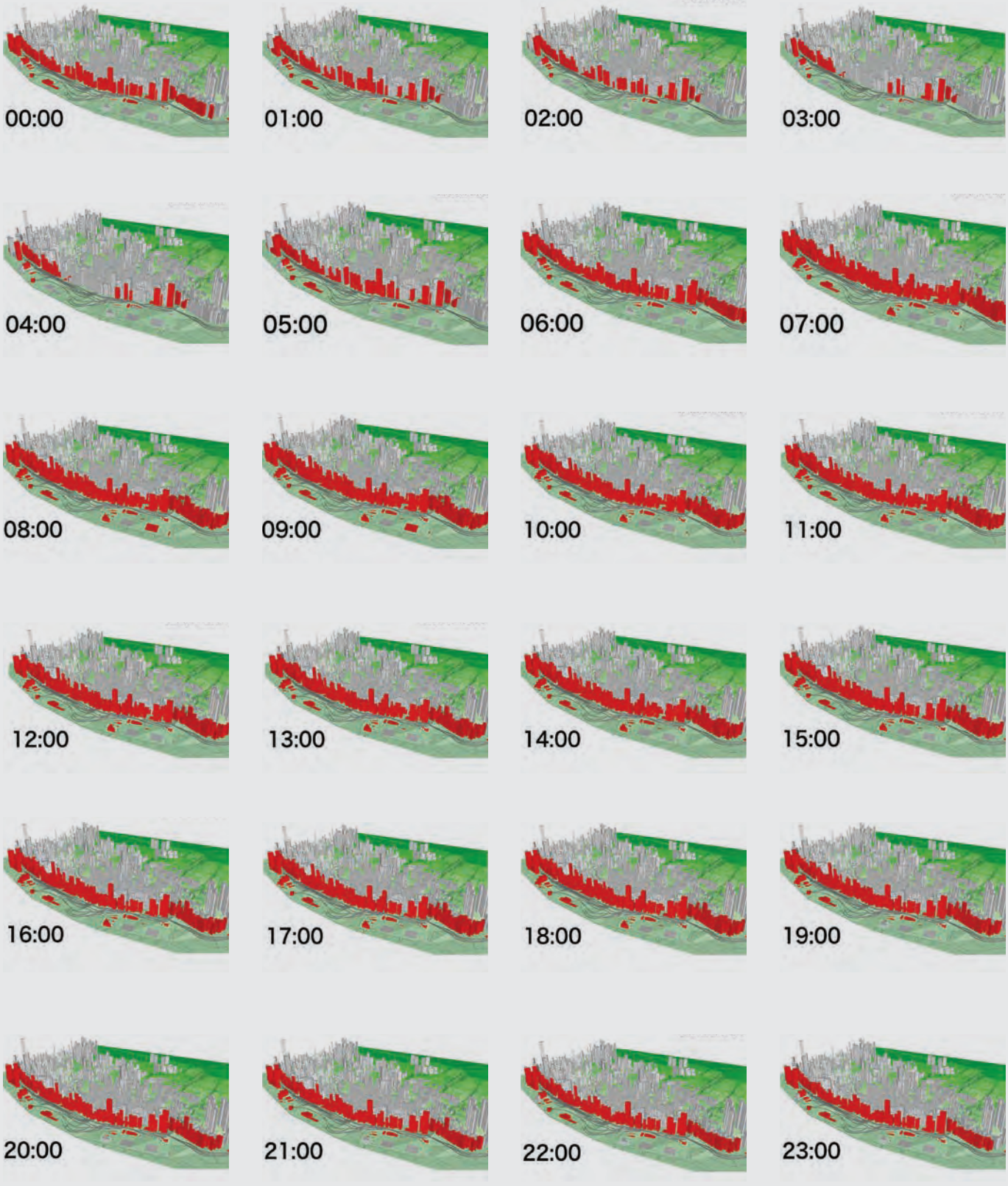
Location of the 12 selected buildings

12 buildings are selected in order to find out their hourly variation in the noise received in detail. Buildings located much closer to the highway are unsurprisingly exceeds the standard for longer period.



Hourly variation of the noise level received from the selected buildings

The total percentage of residents suffering from the busy traffic noise ranges from 15% to 50% in a day. That is, around **48,400** residents are living in the noisy area during peak at 8AM. Furthermore, there are still around **14,700** residents suffering from the traffic noise at 3AM, even the vehicle flow is already the lowest!



The Dirty of Loudness Noise Pollution Analysis- Assess on road traffic noise at different times of a day

CONSTRUCTION YEAR IN REVIEW & FORECAST

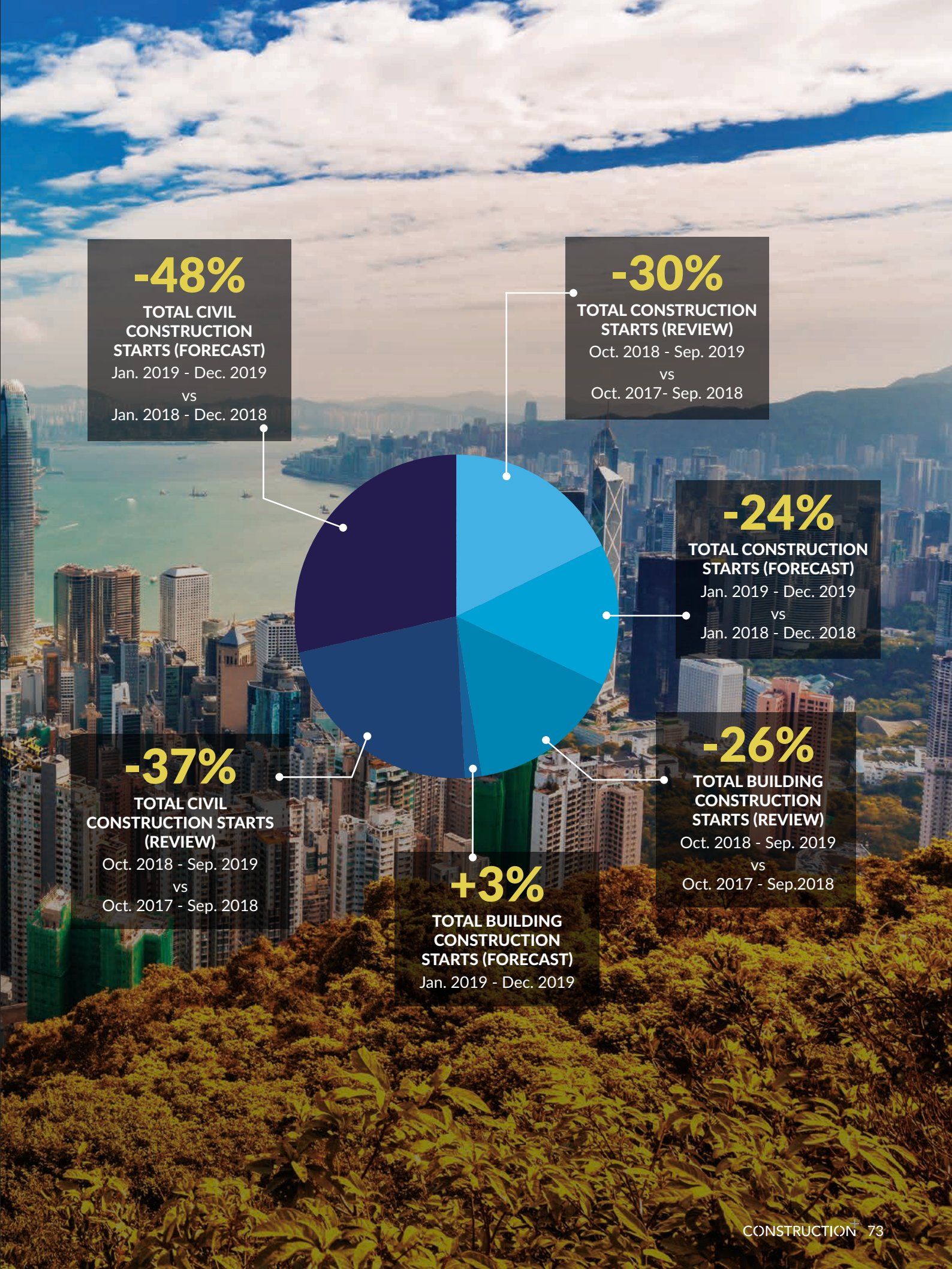
Overall 2019 has been disappointing with a notable decline especially in new Civil construction projects commencing construction. The decline in the gross value of construction works (14% in the first half of 2019) has been somewhat offset by the high volume of work already in progress but the pipeline is beginning to dry up. The impact of a slowing global economy was already becoming evident in 2018 and its influence has continued to dampen investment confidence. However, clearly in 2019 the civil unrest has been a significant disruption, especially on the Legislative Council which has been limited in its ability to review tender contracts and funding applications. This dislocation has been particularly noticeable in the Civil sector construction with construction starts expected to plummet 48% in value in 2019 compared with 2018 although, according to the Construction Industry Council, a total of $HK70 billion of public works is pending for public approval. Yet despite the gloomy outlook, there have been some highlights. Thanks in particular to the Advanced Manufacturing Centre and Taikoo Place Phase 2B, the value of commencements for Office projects soared by 106% over the 2018 result. The commencement of The Fullerton Hotel @ Ocean Park and The Open University of Hong Kong – Nursing & Healthcare Complex contributed the positive 44% and 58% respectively in Retail & Hospitality and Education categories. Although we remain optimistic, we are also realistic about the prospects for 2020 with the Civil sector (essentially government funded) remaining subdued with the Building sector underpinned by Residential construction and some improvement in Retail and Hospitality expenditure.

CHAIN VOLUME MEASURE OF CONSTRUCTION (2016 PRICES) CENSUS & STATISTICS	
Q2 2019	HKD 28, 843 MILLION
% CHANGE Y-O-Y	-9.0%

YEAR	2017	2018	2019E	2020F
HKD MILLION	194 890	181 437	138 114	139 546
% CHANGE	7.5%	-6.9%	-23.9%	+1.0%

*2019e – the final figure for the year has been estimated (still two months to go)
*2020f – this is a real forecast.

CONSTRUCTION STARTS (FORECAST) BY CATEGORY JAN. 2019 - DEC. 2019 VS. JAN. 2018 - DEC. 2018	CHANGE %
OFFICE	+106
COMMUNITY	+28
INDUSTRIAL	-43
RETAIL & HOSPITALITY	+44
RESIDENTIAL	-26
EDUCATION	+58


-48%
TOTAL CIVIL CONSTRUCTION STARTS (FORECAST)
Jan. 2019 - Dec. 2019
vs
Jan. 2018 - Dec. 2018
-30%
TOTAL CONSTRUCTION STARTS (REVIEW)
Oct. 2018 - Sep. 2019
vs
Oct. 2017- Sep. 2018
-24%
TOTAL CONSTRUCTION STARTS (FORECAST)
Jan. 2019 - Dec. 2019
vs
Jan. 2018 - Dec. 2018
-37%
TOTAL CIVIL CONSTRUCTION STARTS (REVIEW)
Oct. 2018 - Sep. 2019
vs
Oct. 2017 - Sep. 2018
-26%
TOTAL BUILDING CONSTRUCTION STARTS (REVIEW)
Oct. 2018 - Sep. 2019
vs
Oct. 2017 - Sep.2018
+3%
TOTAL BUILDING CONSTRUCTION STARTS (FORECAST)
Jan. 2019 - Dec. 2019

“NOBLE WAVE” SAPIENTIA

“We were able to create a hotel-like luxurious workspace that is truly comfortable for employees to work in, to feel proud and engaged with their company. Our spatial composition draws in the scenic harbourview of Hong Kong from the top of the IFC II tower." - Kenny Kinugasa-Tsui, co-founder of Bean Buro

“A sculptural bookcase connects a homey boardroom to the general open plan workspace with a proper café in the backdrop. We created a noble materials palette of natural timber, green marble, leather and various custom designed furniture..” - Lorène Faure, co-founder of Bean Buro

Bean Buro’s new office design for Sapientia Investment takes its inspiration from the breath taking vistas observed from the top of the IFC two tower. One of the challenges for this project was to create a soothing space, an oasis in the centre of one of the world’s biggest and busiest financial district. As a response to this conundrum, the overall design expresses the natural, organic forms of Hong Kong’s landscape, drawing from the harbour’s energetic movements and topographic form to sculpt a space that echoes its surrounding mountains and tides.

This cosy 1,600 sq. ft. office offers an open working area for staff, a boardroom and a private office for the director. A sculptural central bookshelf serves as a linking element to those three spaces, as it wraps around the dividing wall, visible from one room to another through glass partitions.

Entry view of the open workspace with a timber bookcase volume that encloses a boardroom and private office

The work area opens to a generous pantry with a large bar. This section of the office was designed with hospitality in mind as it aims to create an area where staff can either socialize or take a break. A continuous bespoke joinery 'wave' creates an undulating connection from the open office to the pantry area, encouraging staff to fully utilize the space. This architectural expression is also a solution to creating efficient storage, concealing all equipment and paperwork that could otherwise easily pile up and become a distraction.

The space also serves as a gallery to the director's personal art collection and travel memorabilia. The central library serves as a curated wall to display these objects as well as a variety of Japanese floral arrangements that creates a connection with the exterior greenery and a balanced feel in the interior space. The full height windows allow the space to be filled with natural light and a view of the city's most beautiful sunset scenes on Hong Kong's Central harbour and surrounding islands.

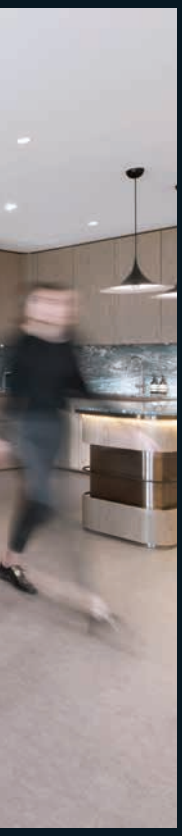
Bean Buro has custom-designed a large working table to allocate full-time staff and occasional visiting staff from overseas. This design allows for a flexible and interactive workflow whilst still offering privacy with a half-height acoustic partition dividing the table.

In addition to being a space for formal team and client meetings, the boardroom also serves the purpose of 'gallery' area for the office. The room is furnished with iconic pieces of furniture and rare artwork are displayed on the walls and in the bookshelf. Even the TV can easily be mistaken for a painting as the newly selected model incorporates the latest technology and design solutions to transform AV equipment into a piece of art.

As an office space designed for a company established in investment banking, we want Sapientia's new workspace to reflect the company's status in the financial world. To do so, we have selected finer materials such as Cipollino marble or Italian plaster and have tastefully incorporated them into the space as subtle luxurious accents. Softer colours and materials such as light timber veneer and fabric create a soothing atmosphere to complement this slight note of luxury. Copper is used to highlight key areas in the office space, such as the niche wall in which the open office table merges as well as the magazine rack that wraps around the bar area.

A continuous 'wavy' backdrop that connects the work cluster to the cafe pantry

A hotel-hospitality-inspired materials palette of high grade timber veneer, metal and leather finishes



Lounge office with panoramic view of Hong Kong skyline from IFC 2 Tower

PROJECT DATA

Project Name
"Noble Wave" Sapientia

Location
7013, 70/F, Two IFC, 8 Finance St, Central, Hong Kong

Completion Date
April 2018

Site Area
145 sqm

Gross Floor Area
122 sqm

Number of Rooms/Units
3 rooms, 1 unit

Client/Owner/Developer
Sapientia Investment Consulting Limited

Principal Designer
Lorène Faure, Kenny Kinugasa-Tsui, Philippine Vidart, Abby Liu, Jay Jordan

Main Contractor
Winsmart Contracting Co. Ltd.

Interior Fit-Out Contractor
Winsmart Contracting Co. Ltd.

Images
Bean Buro

Pantry cafe with a high quality green quality stone with a wavy pattern

"LAYERED FRAMES" WILLIAMS LEA TAG WORKPLACE

"*The narrative is inspired by the layered densities of downtown Wanchai in Hong Kong in terms of the neon signs on porous facades, as a set of architectural joinery devices to encourage social interaction and chance encounter in this workplace.*" - Kenny Kinugasa-Tsui, co-founder of Bean Buro

"We developed a dynamic palette composed of natural finishes with coloured accents. The main feature was a bar island upon entry surrounded by diner style booths, and a sculptural boardroom that visually frames the external street view constructed entirely in plywood." - Lorène Faure, co-founder of Bean Buro

Placed at the heart of the dynamic Wanchai district is Bean Buro's design for marketing brand Williams Lea Tag's new workplace in Hong Kong. Drawing reference from the district's urban typologies and symbol, the proposal reinterprets characteristic framing and layering devices, generating a work environment that feels as raw, diverse, and multifaceted as its context.

The design brief was to create a new workplace for the international creative company to house their 80 people workforce in Hong Kong which includes fixed and flexible desks, as well as a variety of collaboration spaces.

This 7,200sqft (670sqm) workplace reinforces the Williams Lea Tag's pursuit in fostering a spirited, sociable and collaborative work environment in a way that echoes the unique spatial experience of the adjacent Lockhart Road, where networks of neon signs, Scaffolds and shopfronts superimpose public and private realms.

Upon entry into the front of house, visitors are greeted by a series of rhythmic framing, screening and layering devices that guide the eye through the space and out into the city, stretching and distorting the boundary between interior and exterior.

Centralised timber boardroom with seating platforms for events in the pantry cafe

Two generous collaboration booths and informal seating moments are framed with blue scaffold, a language applied throughout the space to denote and invigorate flexible working spaces, offering momentum and directionality. Bespoke neon Signage seems to have been taken directly from the streets below, whilst an informal bookshelf / display area appears as a magazine stand on a street corner.

Striking plywood framing details envelop the main architectural elements across the floor plate, emboldening shadows, generating rhythm and seemingly revealing their raw structure as a subtle industrial gesture.

As the main architectural player in the space, a sculptural plywood boardroom functions at once as informal seating, formal meeting space, storage and viewfinder. Acting as a backdrop for nearly all front and back of house spaces, the boardroom employs a vibrant hue and grain, bringing warmth to more neutral office zones. Within the volume, a peaceful, light-filled boardroom atmosphere with excellent views both into and out of the space, completed with a large feature pendant. An emblematic black, arched portal door framed in blue acts as the threshold into the space, perpetuating a sense of understated playfulness.

A bespoke, rounded pantry table and complimentary pendant light piece imbue the pantry space with additional vitality - moments of bold contrast and colour. Seating up to 16 people, the table becomes an opportunity for respite, rest and conversation in an otherwise busy front of house. A raw pantry conceals plentiful storage for the office of 80 employees, as well as another arched door with playful porthole detail.

In the main open plan spaces, variation and energy is explored through distinct carpet and wall treatments that generate spatial hierarchy effectively with simple colours and tones. Broad, sweeping fillets cut across the floor, denoting space allocated to key departments, whilst corresponding paint curves on vertical surfaces begin to suggest a division in the 3rd dimension. The overall effect is a multilayered open plan that feels spatial and architectural elements.

Placed at the centre of the open plan in a supporting roles are a collaborative Island, 2 acoustically sealed phone booths concealed by a writeable exterior surface, an informal collaboration worktop with a vibrant scaffold detail.

Meeting rooms with large glass partitions framed in black retain as much natural light as possible. Simple variations of back painted writeable glass, coloured wall and feature display ledges give each room a sense of personality, orienting individuals in the space.

Social island bar with bespoke pendant light


Ceramic tiles patterns inspired by restaurants in old Wanchai Hong Kong

Dynamic lattice colours to create a layering effect for the social area

Cafe collaboration booths inbuilt with AV equipments for impromptus meetings

PROJECT DATA

Project Name
"Layered Frames"
Williams Lea Tag Workplace

Location
7/F, East Town Building,
41 Lockhart Road,
Wan Chai, Hong Kong

Status of Construction
Built

Completion Date
May 18, 2018

Site Area
667 sqm (i.e. 7180 sqft)

Gross Floor Area
466 sqm (i.e. 5025 sqft)

Building Height
Entire floor

Client/Owner/Developer
WilliamsLeaTag

Interior Design Firm
Bean Buro

Principal Designer
Lorène Faure,
Kenny Kinugasa-Tsui,
Lelia Ku, Jay Jordan

Main Contractor
Winsmart Contracting Co. Ltd.

Interior Fit-Out Contractor
Winsmart Contracting Co. Ltd.

Images
Bean Buro

INWARD JOURNEY

Stepping into this 3,000-sq-ft flat in Sky Oasis in Macau, you will be welcomed by the warmth of the natural materials – a simplistic, minimalist symphony of three kinds of wood, stone, paper and an occasional hint of brass. The demure lighting throughout immediately stills your mind and invites you to explore this forest of details. Meandering through the bar, the dining area and towards the living room, your best guide is the curvaceous wooden structure which is visible from all directions. The rustic yet graceful centerpiece-combo – the coiling ceramic vase and the floral arrangement by Hong Kong ceramist Ryan and WY and florist Jan respectively – flanked by terrazzo and washi adorns the space with a splash of zen.

While you are mesmerised by the Eastern charm of the installation, the modern, westernized elegance of the living room on a lower level takes you to another realm – a den that exhibits timeless and non-ostentatious luxury made possible by neutral hues, custom-made low furniture with clean-line silhouette and tactile fabrics. This contemporary area is linked effortlessly with the adjacent dining room and bar by the conscious, repeated application of terrazzo and the pared-down three types of wood, contributing to the unity, clarity and continuity of the common areas.

EASTERN AESTHETICS

The dining room is modulated into a minimal, clutter-free wooden space whereby the wagami lamps and the wooden stripes are reminiscent of clouds in the woods. Such mono ambience is balanced and enriched by the discreet infusion of brass and stone in the bar, showcasing a modern interpretation of Eastern aesthetics.

JAPANESE TEAROOM

The rhythm of the common areas extends to the Japanese tearoom and the master room on a raised level. Visible through the curvy centerpiece, these rooms receded near the main entrance can be flexibly opened up and closed when one needs privacy – thanks to the Japanese-inspired folding doors.

BESPOKE JAPANESE FEATURES

The sakura-patterned wooden screens, the bespoke Art Deco style mixed-media vanity table and the grey stone

The modern, westernized elegance of the living room on a lower level takes you to another realm – a den that exhibits timeless and non-ostentatious luxury made possible by neutral hues, custom-made low furniture with clean-line silhouette and tactile fabrics.

Meandering through the bar, the dining area and towards the living room, your best guide is the curvaceous wooden structure which is visible from all directions.

wall in the master bedroom together is a manifestation of understated extravagance. The effect of emptiness in the connecting tearoom, however, adds a beautiful pause attributing to a perfect breathing space.

HONG KONG ARTIST COLLABORATION

This is a show-flat – yet it is not showy. The designer seeks the equilibrium between being a part of nature and manoeuvring an artistic curation, ensuring the most meditative and immersive living experience for the future owne. Various Hong Kong artists have been commissioned to create works of art inspired by the ambience of this piece of interior design – ceramic vases and tea wares; an ink wash landscape painting and an auspicious red-crowned crane oil; gold-thread painting inspired by the ocean; gongs and copper wares contrasting the softness of the wood; Japanese knots on door handles sending peace to the space. Insinuation, imagination and seduction are provided for the dwellers as they reside in this exquisite setting. Even scents and music are well taken care of, giving the design the fourth and fifth dimensions –the scents of green tea and sandal wood shower the space; zen-inspired background music provides a backdrop for calmness, concentration and a reflective inward journey when one is home.

The demure lighting throughout immediately stills your mind and invites you to explore this forest of details.

The sakura-patterned wooden screens, the bespoke Art Deco style mixed-media vanity table and the stone wall in the master bedroom together is a manifestation of understated extravagance.

The rustic yet graceful centerpiece-combo – the coiling ceramic vase and the floral arrangement -- flanked by terrazzo and washi adorns the space with a splash of zen.

PROJECT DATA

Project Name
Inward Journey

Location
Macau

Status of Construction
Complete

Gross Floor Area (sqm)
300sqm

Number of Rooms/Units
5 rooms

Client/Owner/Developer
One Oasis

Main Contractor
Chinney Timwill Construction (Macau) Co. Ltd

Interior Design Firm
Max Lam Designs

Principal Designer
Max Lam

Lighting Consultant
Max Lam

Images
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South Elevation

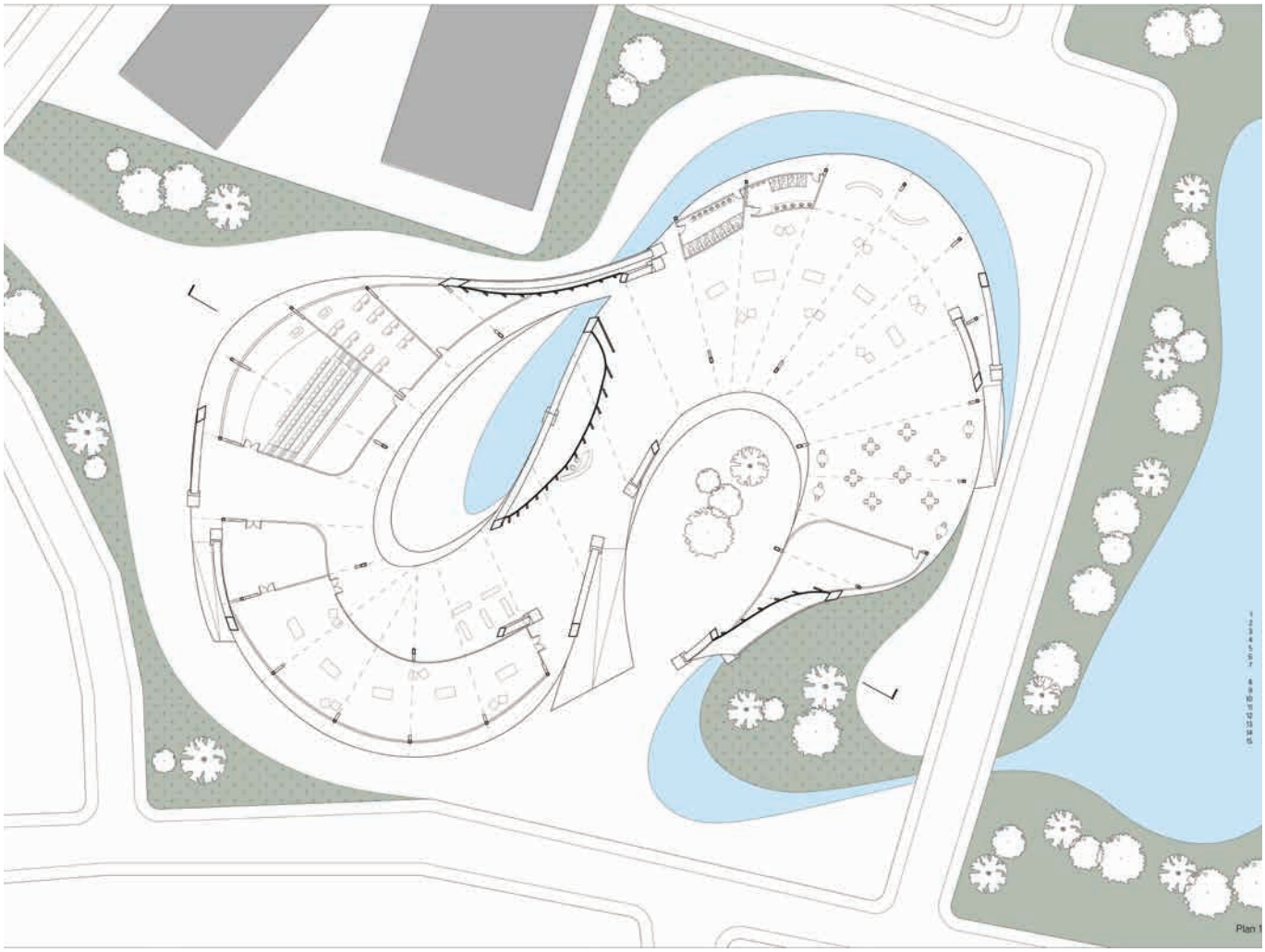
POST-DIGITAL TIMBER ARCHITECTURE: EXPANDING CATENARY STRUCTURE

In today's post-digital architectural era, the focus is shifting towards novel materialisation strategies for buildings using computational and digital means. With the introduction of computer-aided design system and digital fabrication machinery, the difficulty of fabricating non-standard architecture has been overcome. Although CNC fabrication technologies exist, many construction contexts may not have easy access to such technologies. However, digital design tools can still provide new solutions for local construction in those contexts when traditional manufacturing constraints are absorbed in the design of the encoded aspects of design and production system.

This thesis project studies new methods for traditional glue-laminated timber construction with the aim to practically integrate them into hyper light-weight structural systems. It explores the opportunities of non-standard timber architecture design that are broadened by the use of digital design tools, minimising both design and construction complexity. By reducing fabrication difficulties, non-standard, high-performance sustainable timber architectural design is promoted in the project. Evolutionary optimisation algorithms allow for non-linear design optimisation for both structural and material performance.

In previous decades, hyper light-weight architectural forms were typically designed through elaborate analogue performance simulation models and complex mathematical calculations. Today, the design of hyper light-weight architectural systems is substantially simplified with the introduction of digital design and simulation tools. This project focuses on one type of the hyper light-weight systems: catenary timber structures – a structural suspension system in which the form is generated by the weight of the structure itself, forming a tension-only system in which every part of the form

Entrance



Ground Floor plan of the Visitor and Education Centre at FRIM, Malaysia

is in equilibrium. This system is much more material-efficient, cost-effective and ecologically sustainable than conventional girders under bending stress, as the use of material strength is at its maximum throughout the suspended beam section. As a result, 90% of construction material required is reduced, which is proved by a structural analysis software.

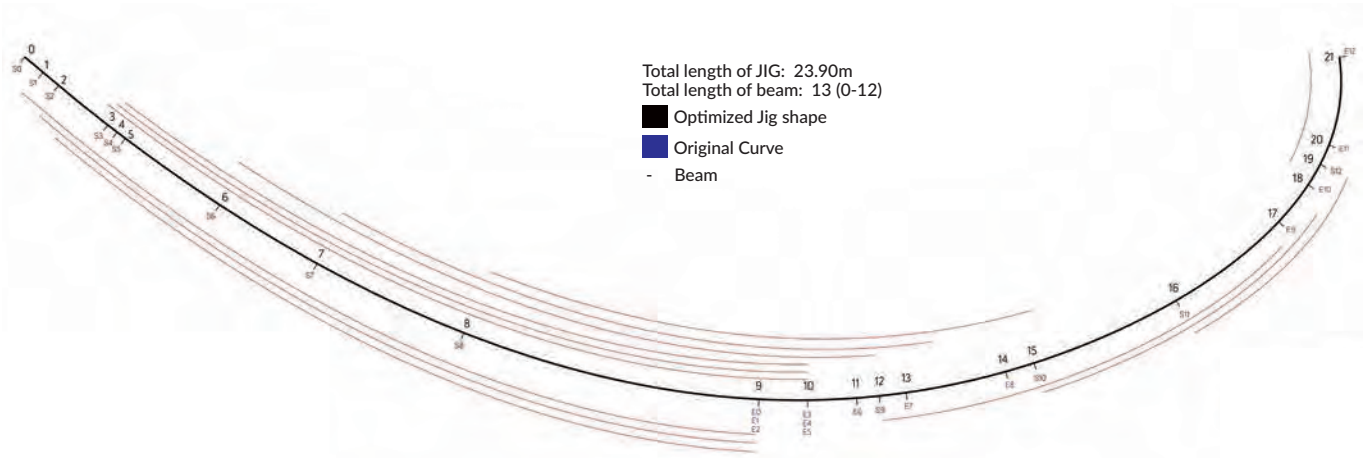
A method that employs genetic algorithms to simplify the fabrication of a suspended roof structure's range of weight-saving, catenary-shaped Glulam beams is proposed. To minimize the number of costly high-strength steel pressure vice setups required for their individual production, idealized curve geometries are minimally tweaked until a single, reusable jig setup becomes possible. When combined with a wooden roof underfloor, tectonic systems that employ such beams have the potential to dramatically reduce structure material requirements while producing architecturally engaging and spatially complex non-standard space.

The idealised curve geometries used to make the reusable jig is generated by using Galapagos Plugin of Grasshopper. By generating a random NURBS curve, inputting the glulam curve to be fabricated and calculating the total deflection of the NURBS curve from the input shape, a desire position for the input shape is found with the minimum deflection.

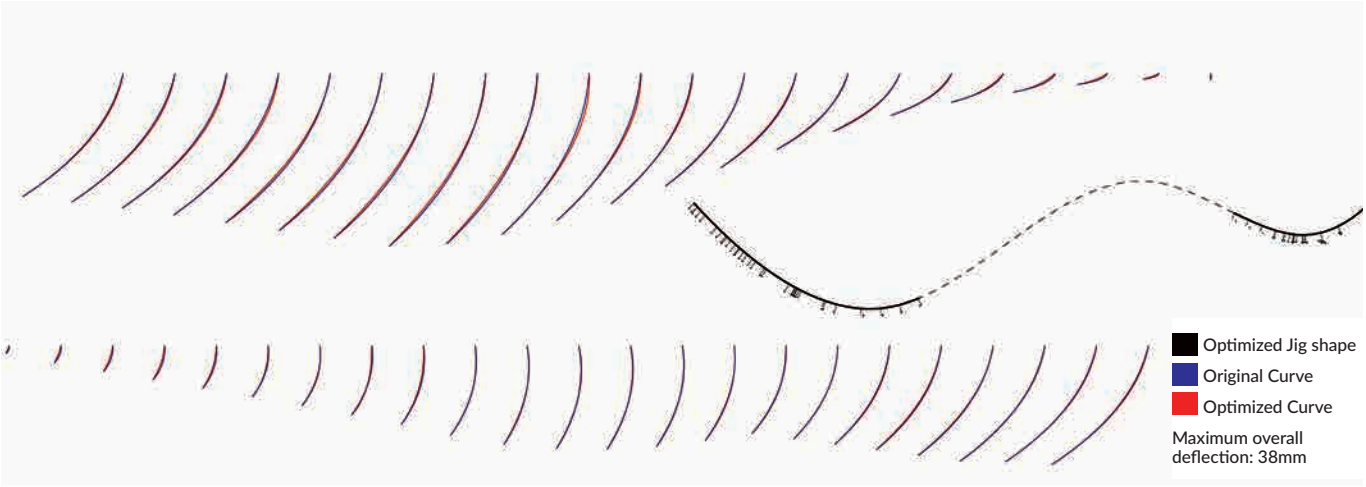
When one inputs a number of glulam curves, Galapagos will keep on finding the best shape for all of the curves, just like the idea of a "French Curve". Each of the input curves shares a part of the final jig's curvature. Thus, the reusable jig setup becomes possible. This will dramatically reduce the complexity of fabricating the suspension glulam structure.

The method's validity, applicability and room for architectural design were tested, evaluated and discussed through a conceptual architectural design project proposal of a Visitor and Education Centre at FRIM, Malaysia, which operates as a demonstrator, expanding the potential of non-standard sustainable timber architecture.

Timber is an environmentally friendly material and has a



Optimized jig for 13 catenary beams of Wilkhahn Pavilion



Optimized jigs for 45 beams of the Visitor and Education Centre

much smaller carbon footprint than common contemporary architectural materials such as steel and concrete. Timber is also preferred in terms of embodied energy, positive impact on global warming, air pollution emission, water pollution emission and solid waste production. Therefore, from an ecological perspective, hyper light-weight timber structure systems provide long-term advantages for the future.

Timber is widely used globally, especially in Canada but also in the Asia Pacific region. In several Asian countries, timber has historically been used in traditional or religious architecture, such as temples and palaces. There, restricted by local construction methods, timber structures are often limited to a specific set of spatial forms and typologies, with limited variations in spatial quality and architectural appearance. With the invention of engineered timber elements, such as glue-laminated beams, spatial and architectural design possibilities of timber can now be expanded. Timber construction can be perfectly introduced into a digital design and fabrication system, enabling the practical materialisation of non-standard geometries in architecture. C

PROJECT DATA

Project Name
Post-Digital Timber Architecture: Expanding Catenary Structure

Location
Kuala Lumpur, Malaysia

Site Area
9000 sqm

Gross Floor Area
3825 sqm

Building Height
2 storeys / 32m

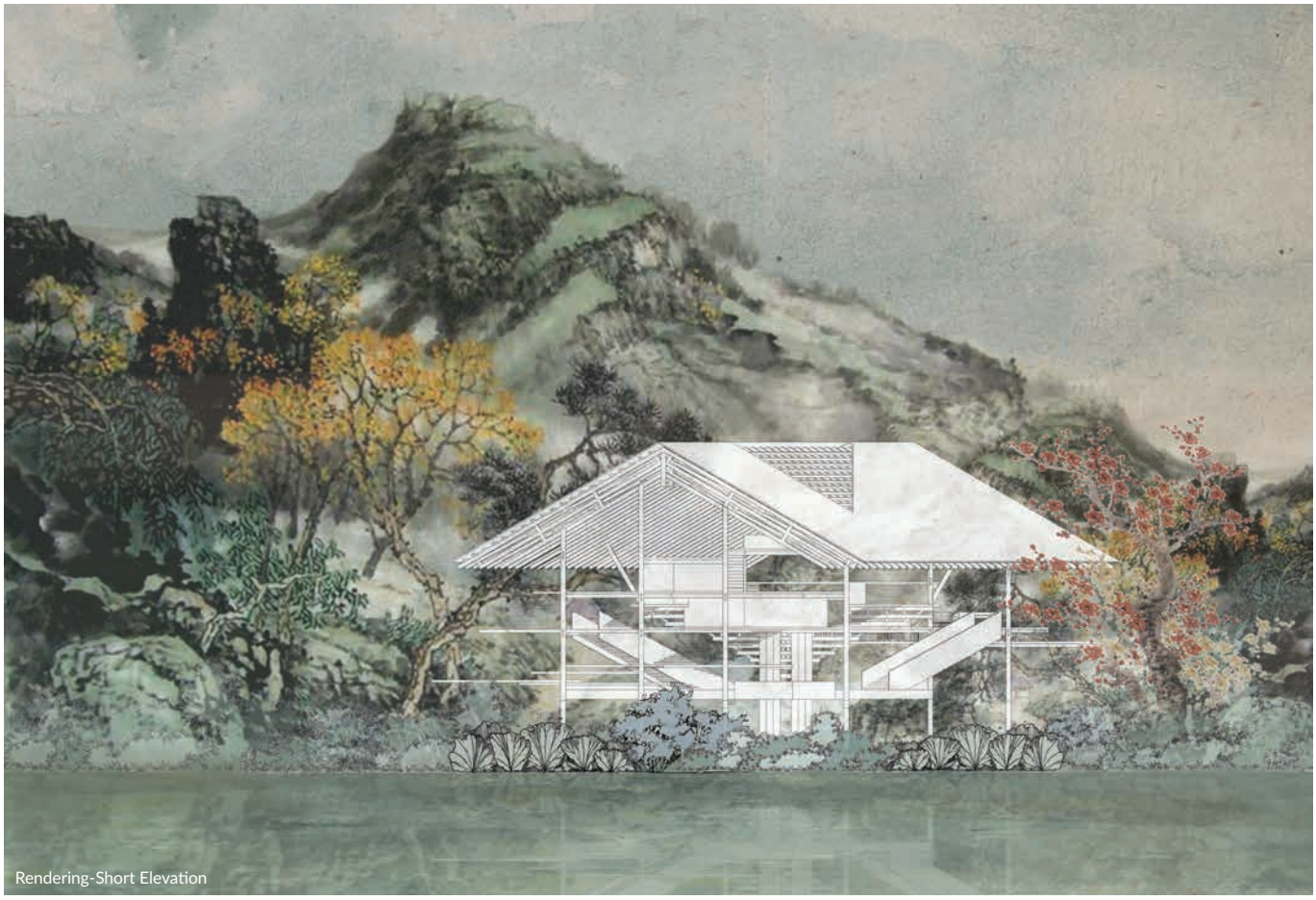
School
The Chinese University of Hong Kong

Student Name
Wong Long Hin Nichol

Programme
Master of Architecture

Instructors
Kristof CROLLA

Dong Building-Wind and Rain Bridge Study-2



Rendering-Short Elevation

MATERIAL AUTHENTICITY: SEARCHING FOR THE MEANING OF AUTHENTICITY THROUGH WOOD IN DONG MINORITY VILLAGES, CHINA

Under the era of the image, architectural designs are aggravating toward a scenographic inclination with blind worship of foreign architectural styles, while rampant and largely unreflective importation of Western ideas is ubiquitous to new constructions in many rural territories in China. In such circumstances, can the returning to foundations and giving prominence to materials become a possible way to go against this phenomenon?

In today's China, the use of wood in construction has declined drastically as a result of the emergence of modern architectural styles that promote the use of mass-produced components made of steel, glass, and concrete etc., often to achieve a sense of universal aesthetics. Wood is therefore increasingly marginalized as a low-cost, low-quality building material only utilized by the rural population. As a result, the broad range of responsibilities that the carpenter had previously held as the master builder on the job-site has also diminished. In order to lift the importance of timber industry in the Dong villages among the southern China wood markets, it is important to

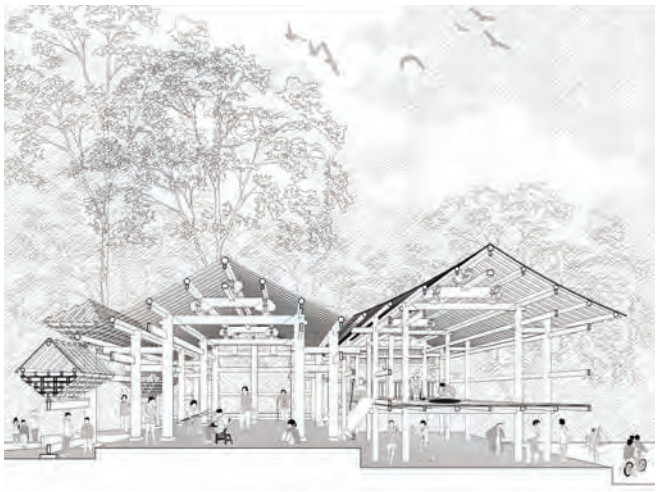
take advantage of the local vernacular architecture knowledge and traditions of high-quality craftsmanship, which, on one hand, will be able to re-establish wood as a material that could successfully meet the stringent requirements imposed on buildings today. Thus, offering an alternative to different types of wood construction is a crucial strategy. On the other hand, carpenters, in particular, will be benefited from this change, as they regain the responsibility for the construction of entire buildings after decades of having been relegated to the mere installation of roof structures. Within the transition to modern, computer-assisted design and production processes, the use of modular building systems, high levels of prefabrication, and efficient equipment for transportation and lifting will be involved, which streamline off-site manufacturing and facilitate rapid and precise on-site installation. This comprehensive development will open up significant markets for wood, ranging from small-scale components to building constructions, while remaining deeply rooted in its craft tradition.

Taking the autonomous region of Dong minority group and its wood-oriented culture in Hunan, China, as a testing ground, the project has looked for a positive attitude to the connection between architecture and age, exploring the composition of an autonomous space by elaborating on the intrinsic quality of wood. From the intimate, personal experience with wood to the comprehensive network of the local timber industry, it is hoped that this project can become a useful model and a source of inspiration for the present situation, promoting an integration of vernacular values and a new approach for specialists and communities.

In order to achieve a positive approach, this project has looked for a deeper understanding of material authenticity at multiple levels through the study of wood, not only from the perspective of technology and structure, but also looks at the interactive relationship between the surface properties and spatial qualities of wood. Transparency, colour and texture of wood are accounted for the spatial effect, contributing two different expressions of materiality - visible and invisible. With the dual implication of wood, this project aims to balance the relationship between material, space, and spiritual culture.

To respect the traditions, this project proposed a school of carpentry, trying to bring back the manpower and sustain the wood craft industry, through a contemporary language which does not compete with the old, but respectfully presents and communicates with traditions. New building types and forms are occasionally seen in Dong settlements, but they have not yet had any sweeping effect in changing the settlement patterns. Usually, a school is inherently a social system. It teaches students knowledge about the past, while also progressively bringing prospects to different ways of thinking. In essence, the project is more than merely a school, which can be regarded as a social centre for the entire village with the focus on the interpretation of traditional timber system and spatial fluidity.

Concept Model



Dong Building-Drum Tower Study-4

Under this strategy, the knowledge and skills of working with wood are evolved and can hopefully be passed down from one generation to the next. Carpenters are not only competent craftsmen who master traditional skills, but also competent as modern master builders, playing the role as if the mixture of the architect and engineer.

Rendering-River bank

PROJECT DATA

Project Name
School of Carpentry

Location
Hunan, China

Site Area
2500m^2

Gross Floor Area
400m^2

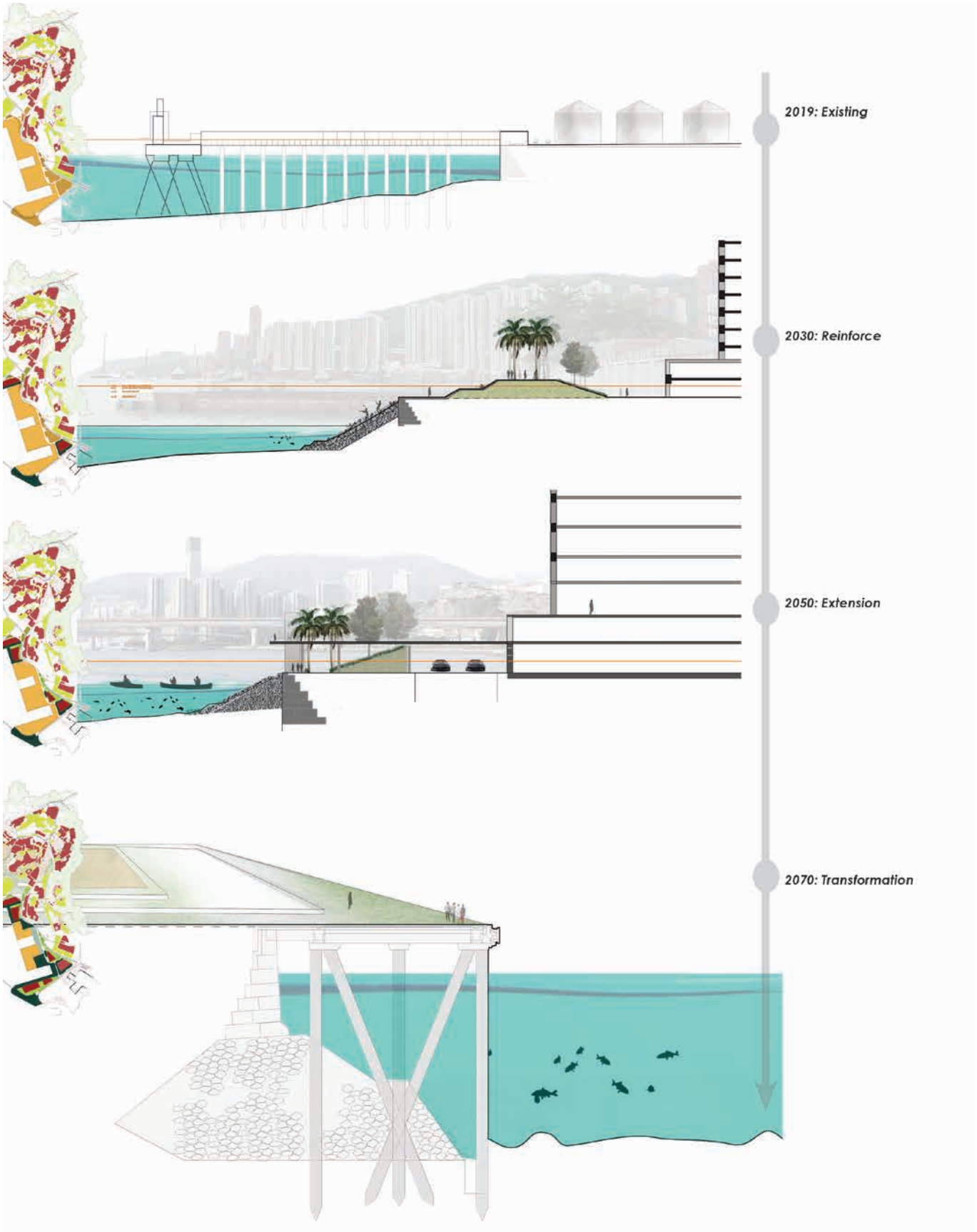
Building Height
3 storeys / 15m height

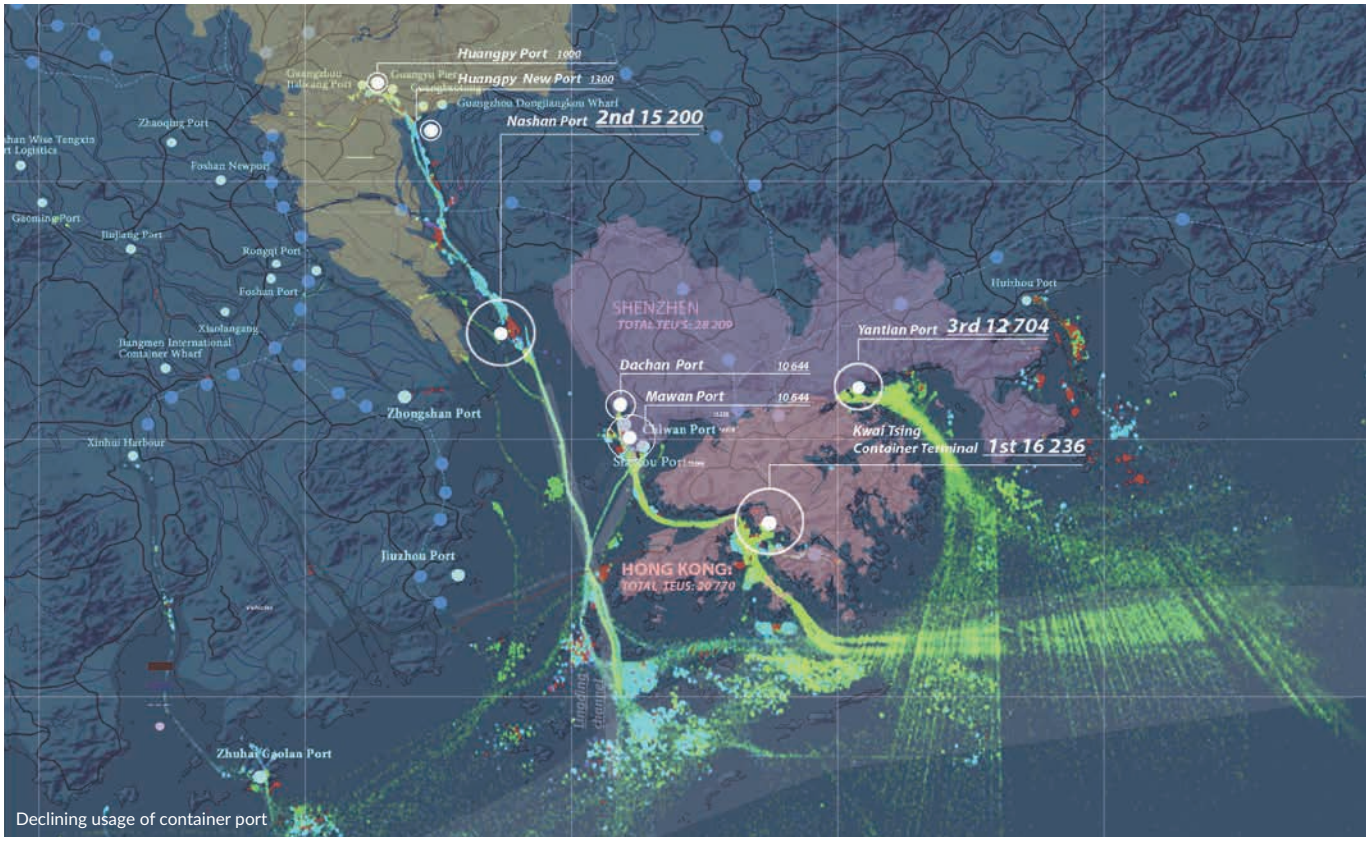
Post Graduate / School
The Chinese University of Hong Kong

Student Name
Beryl Wong

Building Height
MArch

Instructors
Peter W. Ferretto


2019: Existing
2030: Reinforce
2050: Extension
2070: Transformation



Declining usage of container port

WEAVING THE WATERFRONT: RESILIENCE PLANNING FOR PORT DISTRIC

INTRODUCTION

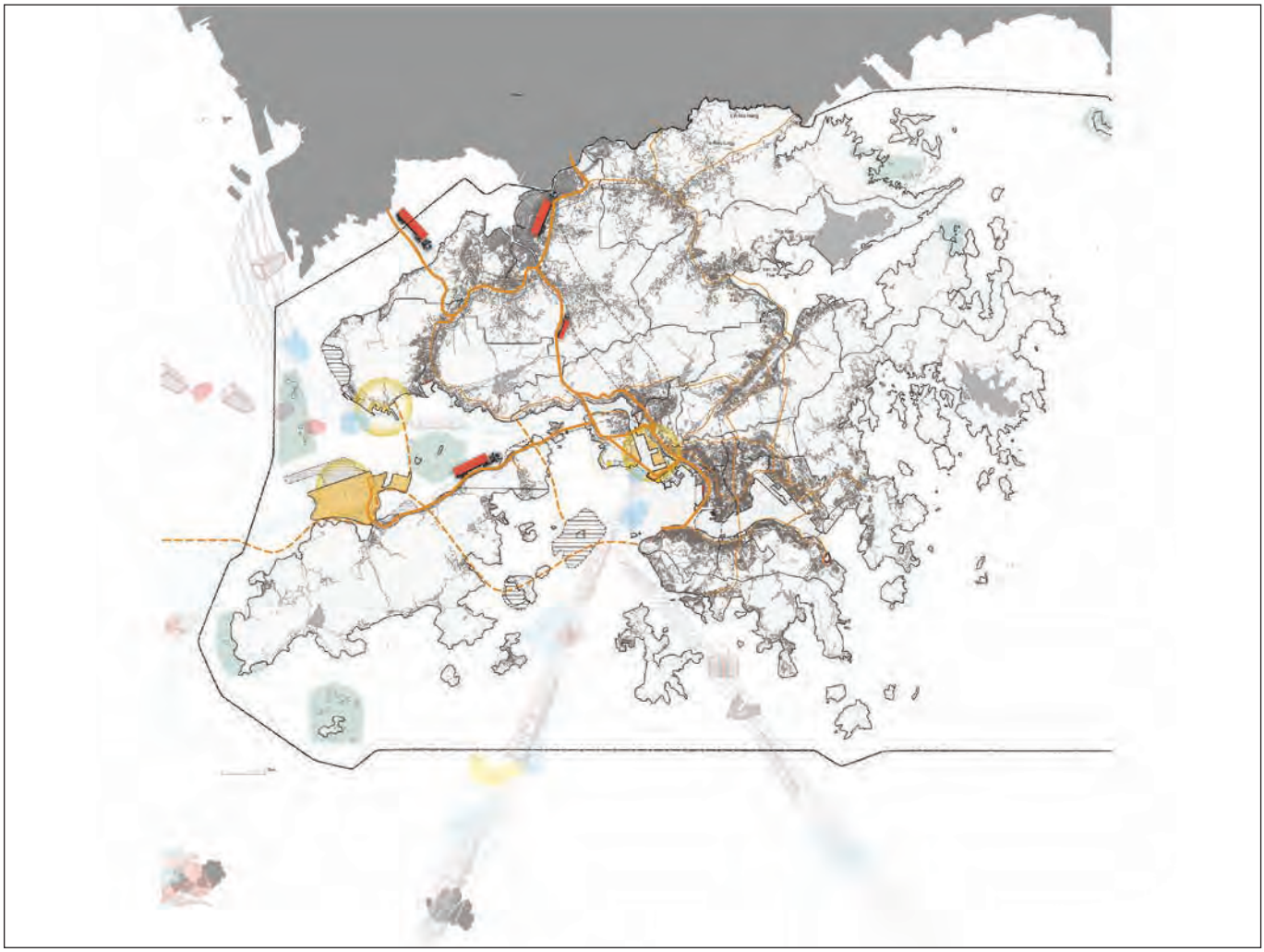
Hong Kong's logistics industry is undergoing transformation towards high value-added logistics services. The usage of Hong Kong container terminal will constantly decline under the influence of structural reconfiguration of transshipment from coastal Mainland ports and it is expected to decline gradually until 2070 By that time, it could release 65% of port area, which is equivalent to 265 ha of area for redevelopment. At the same time, sea level rise and frequent typhoon are threatening the coastal area along Rambler Channel. As a result, it provides opportunities to rethink the elevation of coastal area. This project proposes a process to connect existing waterfront with a part of coastal industrial area which could become vacant.

SITE ANALYSIS 1_ECONOMIC TRANSFORMATION OF LOGISTICS INDUSTRY IN HONG KONG

The relaxation of Chinese Cabotage Rule in Shanghai and Guangdong Port has been constantly decreasing the usage of Kwai Chung Container Port. The capacity of Hong Kong port now is 23 400 000 TEUs. It occupied 410 hectares of Land in Kwai Chung. If all the transshipment related to China (65% of the total TEU in 2015) is lost, the container area could be reduced to 145 ha which is comprised of 98 ha of port area and 47 ha of port back-up area accordingly.

SITE ANALYSIS 2_THREATS OF COASTAL FLOODING ON PORT CITY

Typhoon Mangkhut hit Hong Kong and caused widespread destruction on 16th September, 2018. The site could be broadly divided into 3 types of vulnerability based on the land use. The first type is called damage on citizens' properties. The second



High-valuer added logistics in Hong Kong

type of vulnerability is buoyancy of container. When the storm tide reaches the waterline of the ground floor of the container stacks, it could cause a collapse of the entire container stacks and environmental damage. The third type of vulnerability is concerned with oil spill that could lead to water pollution.

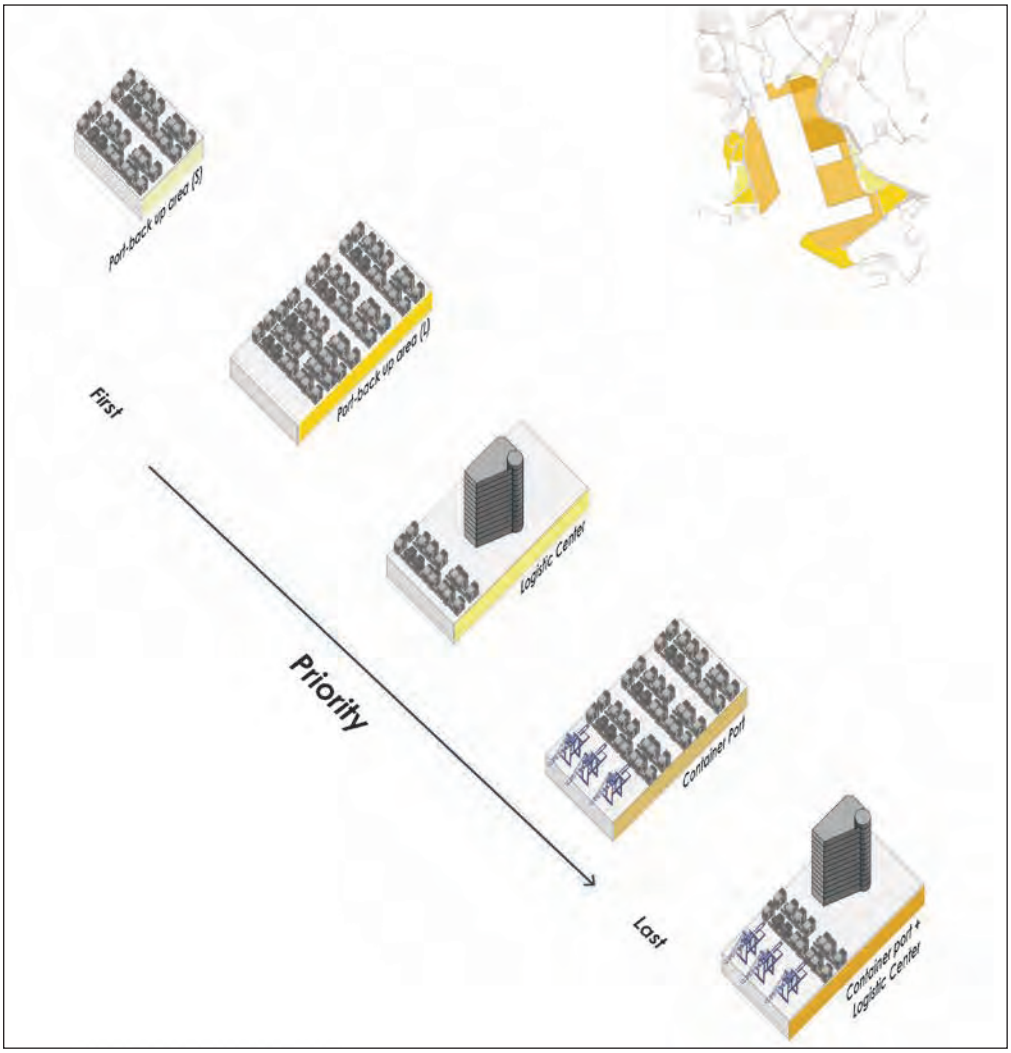
DESIGN RESPONSE_4 PHASINGS TOWARDS RESILIENT WATERFRONT

In response to the economic and climate change, four milestones are set to gradually create a resilient waterfront.

Phasing 1: Upgrading Industrial Area (2019-2022)
The first milestone is to increase the resilience of container port because the failure of protection to them will cause significant environmental problems. “Wet-proof container” is a fast and easy method to implement. The first floor of container stack becomes wet-proofing by removing the wall planes. It only keeps the frame of the container to support those upper containers. As the projected level of storm tide is far from the waterline of the second floor of container stacks, only the first floor of the stack is required to be transformed to be wet-proofing.

Phasing 2: Reinforcement (2030s)
In 2030, the second milestone would be to reinforce the existing waterfront area in Tsuen Wan and Tsing Yi. In order to protect the area from the rising tide, filling of Rambler Channel is highly restricted by Victoria Harbour Ordinance. Therefore, the only feasible method being available is to raise the elevation of the reclaimed area. This kind of project is recommended to apply a multi-purpose levee. It is concerned with a raised levee that connects to an adjacent pedestrian bridge system and transportation road. The highest point of the levee should be above 7m mPD, which needs a 2m tall structure.

Phasing 3: Extension (2050s)
In 2050, Tsing Yi industrial estate and a cargo working area is expected to move out. The dike system could then be extended



Order to release container port area

to these two places. Moreover, there is also a possibility of the Industrial Estate being transformed either into office space or art studio, which had taken place in other former industrial estates in Hong Kong, such as Wong Chuk Hang Industrial Estate. The industrial element could be kept as a feature of the park and as part of storm surge strategy. For example, a barge could be reused as floating breakwater that provides recreational value to the adjacent neighbourhoods.

Phasing 4: Transformation (2070s)

In 2070, it is the last milestone of the project. A large amount of the port area could be transformed into residential area under the protection by a terraced waterfront. Waterfront area from the North of Ramble Channel could be well extended to the South. It will form a waterfront network which is well connected. The concept of the terraced waterfront landscape is to protect inland residential area, rain garden and road from coastal flooding. At the same time, it could provide various leisure venues including amphitheatres, event lawns. C

PROJECT DATA

Project Name
Weaving The Waterfront: Resilience Planning for Port Distric

Location
Kwai Tsing Waterfront, Hong Kong

Site Area
915 ha

Post Graduate / School
The University of Hong Kong

Undergraduate / School
Technological and Higher Education Institute of Hong Kong

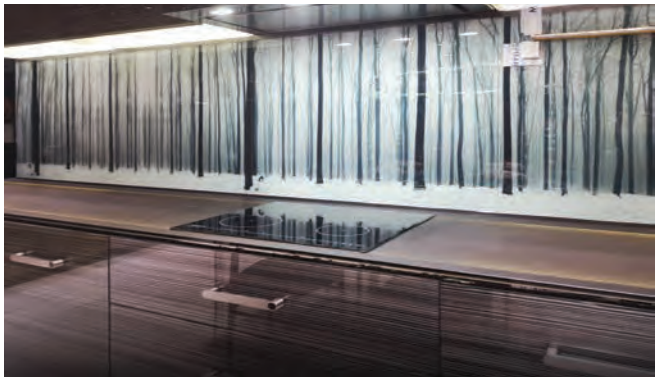
Student Name
Cheng Kwok Cheong, Louis

Programme
Master of Landscape Architecture

Instructors
Sunnie Lau

Images
Cheng Kwok Cheong, Louis

TO CREATE EXTRAORDINARY GLASS DISPLAYS



BRINGING THE MAGIC OF PRINTED GLASS TO A NEW GENERATION

The performance of Saintglas's high resolution digital ceramic printing provides waterproof and scratch resistance finishing, which is perfect for both indoor and outdoor. The precise printing can print photorealistic images and imitate material such as wood, marble or even gold. It uses ceramic inks to transfer any image from a computer onto glass panels digitally. The printing solution has been widely used for designing residential, shopping malls, hospitals, offices, and more, bringing a glass printing technology to another level. The ceramic inks are made of nano particles of glass and inorganic pigments and become part of the glass by fritting into the panel during the tempering process, which means it can survive under any weather or environmental condition without colour fading. Saintglas's printing solution allows printing a variety range of colours at once, which is an exceptional capability when it comes to glass since it usually requires more complicated processing. Digital ceramic printing on the backside of the glass is not only esthetic solution for interior refurbishment, but it also helps to protect the surface from the humidity and corrosion.

IDEAL MATERIAL FOR TABLETOPS

Saintglas's digital glass printing allows you to design a glass tabletop that's both visually amazing and highly functional. The design possibilities are endless, you can do any graphic design or photorealistic image like an abstract painting, marble, etc.

During the day, natural light will make your printed glass top spark, while at night it will continue to spark, catching the reflections and glimmer from the room's lighting. With digital print on glass, one thing's for sure, your glass top is an extraordinary art piece.

FEATURE

- Scratch resistance
- Resistant up to 600°C
- Any chemical can be used to clean surfaces
- Do not lose its colours and brightness over the years
- Water jet cutting, CNC cutting drilling, edging etc. are possible on printed glass.

CONTACT DETAILS

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