

CONSTRUCTION+

Bringing The Building And Design Industry To You

SEPTEMBER 2018 | ISSUE 14 | RM25 | SGD10

PP19040/06/2016 (034532)

MCI (P) 114/07/2018



POSITIONING FOR THE FUTURE

WHY WE NEED REALLY COOL BUILDINGS

RAISING A GREEN NEXGEN

SCRAPING SKIES, DIGGING DEEP



FUTURARC
PRIZE 2019

FUTURARC
GREEN LEADERSHIP
AWARD 2019

**THEY ARE
COMING BACK
IN MID
SEPTEMBER 2018**

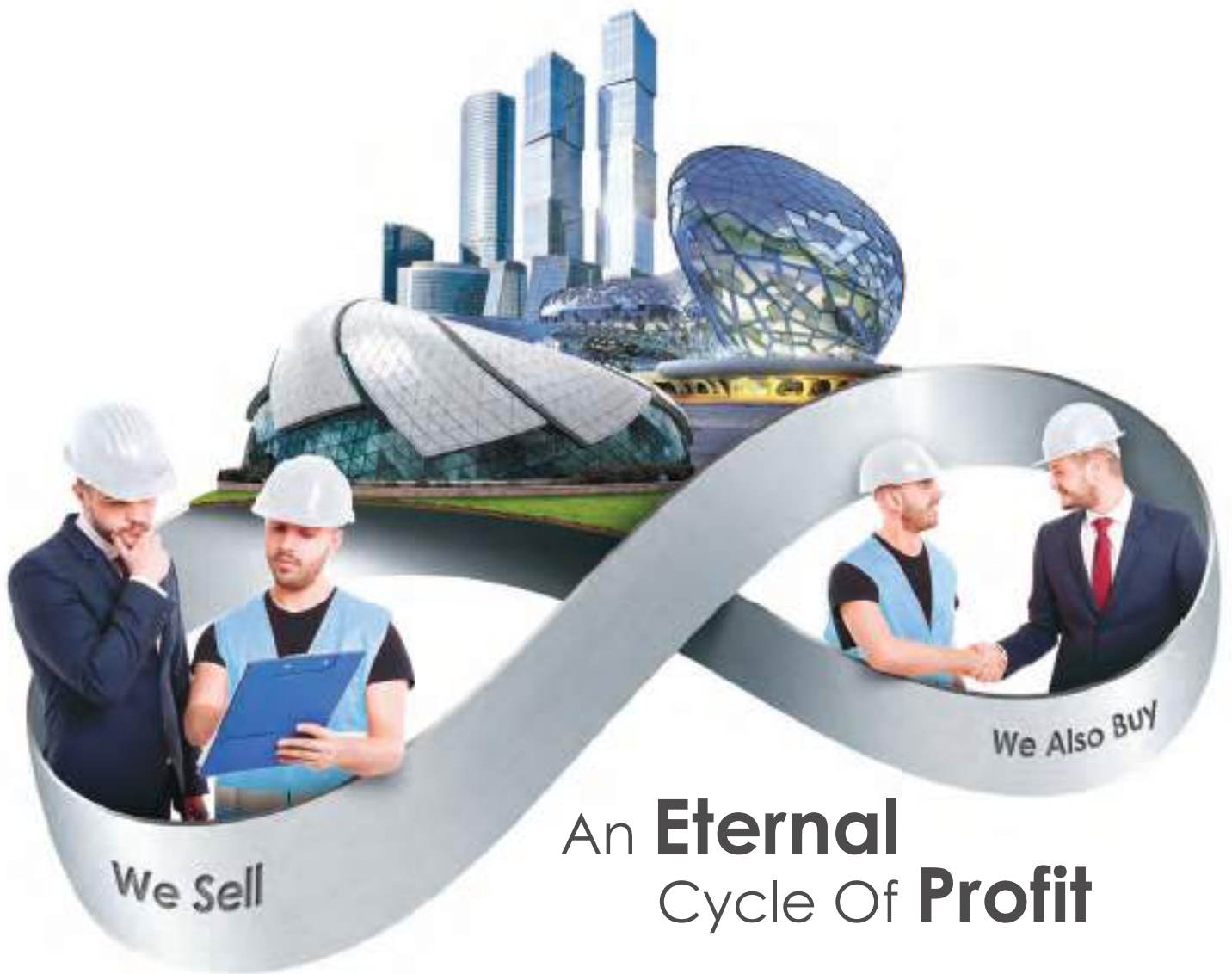
www.futurarcprize.com

www.futurarcgreenleadershipaward.com



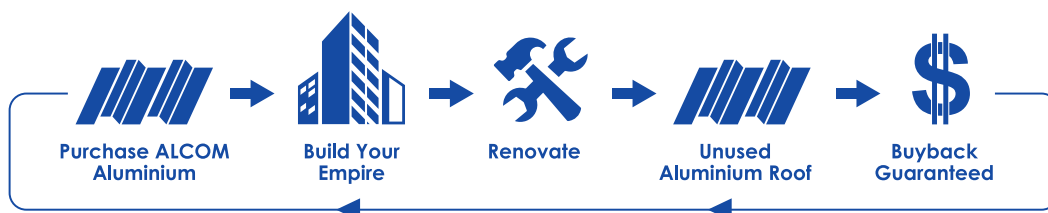


Infinite Possibilities



An **Eternal** Cycle Of **Profit**

Purchase ALCOM aluminium to build your empire of profits
and acquire a lucrative sum if sold back to ALCOM; yes, it's true.
Our aluminium is Green, hence its unbelievable value upon buyback.



Roof your building with
ALCOM aluminium

CONSTRUCTION⁺

Bringing The Building And Design Industry To You

PUBLISHED BY

BCI Asia Construction Information Sdn Bhd
Unit 1106, Block B
Phileo Damansara II
Jalan 16/11, Section 16
46350 Petaling Jaya, Selangor
Malaysia
t (603) 7661-1380
f (603) 7661-1381
e (editorial) construction@bciasia.com

EDITORIAL TEAM

<i>managing editor</i>	Candice Lim
<i>senior editor</i>	Joanna Sze
<i>assistant editor</i>	Lim Yi Zuo
<i>contributing editor</i>	Aylwin Chooi

GRAPHIC DESIGNER

Bazura Zulkiffli

ADVERTISING

Lee Loong Fei; Sally Kheng; Selina Foo
e (Malaysia) malaysia@bciasia.com
e (Singapore) singapore@bciasia.com

PRINTER

Yamagata (Malaysia) Sdn Bhd
Lot P.T. 1661, Nilai Industrial Estate,
P.O. Box 9, 71809 Nilai, Negeri Sembilan
t (606) 799-2814
f (606) 799-8060



www.facebook.com/constructionplusasia/



@ConstructionPlusAsia



@CPlusAsia

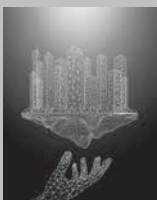
Download the free Construction Plus App
on Google Play or App Store



While every effort has been made to ensure that the information contained herein is accurate, the publisher will not accept any liability for omissions or errors. The publisher is not responsible for statements or opinions expressed by the writers nor do such statements necessarily represent the views of the publisher unless stated otherwise. BCI Asia Construction Information Sdn Bhd disclaims any and all liability, which may be claimed arising out of reliance upon the information presented in this publication.

All rights reserved. No part of this publication may be reproduced, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the publisher's prior written permission.

Publication frequency: Quarterly (4 issues per year)



COVER CREDIT:

Illustrations by
Answer Production &
Chereliss/Shutterstock.com

CONSTRUCTION+ SUPPORTING ASSOCIATIONS



Construction Industry Development Board (CIDB) Malaysia
(www.cidb.gov.my)



Dewan Bandaraya Kuala Lumpur (DBKL)
(www.dbkl.gov.my)



Institute of Landscape Architects Malaysia (ILAM)
(www.ilamalaysia.org)



Malaysian Association of Facility Management (MAFM)
(www.mafm.org.my)



Malaysia Green Building Confederation (MGBC)
(www.mgbc.org.my)



Malaysian Interior Industry Partners Association (MIIP)
(www.miip.com.my)



Malaysian Timber Industry Board (MTIB)
(www.mtib.gov.my)



Ministry of International Trade and Industry (MITI)
(www.miti.gov.my)



Waste Management Association of Malaysia
(www.wmam.org)



Royal Institution of Surveyors Malaysia
(www.rism.org.my)



The Federation of Malaysia Hardware, Machinery & Building Materials Dealers' Association (FMHMB)
(www.mhmba.org.my)



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



American Concrete Institute – Singapore Chapter (ACI-SC)
(www.concrete.org.sg)



Interior Design Confederation Singapore (IDCS)
(www.idcs.sg)



International Facility Management Association (IFMA) Singapore Chapter
(ifmasingapore.org)



Landscape Industry Association of Singapore (LIAS)
(www.lias.org.sg)



The Singapore Contractors Association Ltd (SCAL)
(www.scal.com.sg)



Singapore Building Materials Suppliers' Association (SBMSA)
(www.stas.com.sg/members/sg-building-materials)



Singapore Environment Council (SEC)
(www.sec.org.sg)



Singapore Electrical Trades Association (SETA)
(www.seta.org.sg)



Society of Interior Designers Singapore (SIDS)
(www.sid-singapore.org)



Singapore Manufacturing Federation (SMF)
(www.smfederation.org.sg)



SEA Drymix Mortar Association
(www.seadma.org)



Security Systems Association of Singapore (SSAS)
(ssas.org.sg)

CONSTRUCTION⁺

Bringing The Building And Design Industry To You



Download the Construction Plus App & keep updated on all things construction and design!



BCI ASIA



It is widely discussed that our industry is slow in the uptake and implementation of digital innovation.

One could consider this to be across a spectrum of activities, from data acquisition, design, construction and operation. However, it is exactly this segregation of the industry that causes the fundamental problems that need to be addressed.

Construction+ is to be congratulated for providing a platform for such issues to be explored holistically, and hopefully prompt further integration of our response to the changing world in which we live and work.

This world is already dominated by digitisation, whether obvious or otherwise. And by digitisation, I mean that human activities previously conducted in an analogue world have been replaced by those either supported or controlled through the power of computers. In this issue (page 10), I discuss further the inevitable rise of artificial intelligence (AI), which needs to be understood at least, if not embraced.

The first IBM computer was developed 50 years ago. Twenty-five years ago, we were excited by the opportunity of a mobile telephone! In today's world, the concept of such devices only being used to talk to one another sparks ridicule. In fact, the processing power of today's devices is probably beyond the comprehension of those IBM scientists, and when interconnected and used as a source of secondary information, or big data, the impact on society, and the way in which we live our lives, will completely change how we behave and interact with the world around us.

AI already controls much of our world. And in all likelihood, as Elon Musk speculates, the point at which we could go back has been passed. Imagine turning off the World Wide Web!

So, how does this impact construction?

In my opinion, we cannot ignore or refuse to accept this inevitable paradigm shift in human behaviour, and by implication, its impact on the built environment. This will occur at master plan scale (in the way we live, work and play) all the way down to door handles and access control.

With the rate of change forever accelerating, it is not enough to plan for what we know will change, but to extrapolate and anticipate how our lives and environment may change with what we can only imagine.

Jason Hutchings
Senior Design Director,
SNC-Lavalin's Atkins business in Asia Pacific



TERREAL

RE-ROOFING

PEMBUMBUNGAN SEMULA

屋瓦翻新

It doesn't cost a fortune

As easy as,

1

Check up
Roof Inspection

2

Select
Brand Premium Product Range

3

Installation
Expert Service

Before

After



**Unique
Profiles!**
over 30 rich
colours!



Romane Evo
Clay Tile



Romane XL
Clay Tile



Romane Canal
Clay Tile



Zen Tile Series
Pressed Mineral Tile



Volney PV
Clay Tile



Peransoon B
Clay Tile



Peransoon V
Clay Tile



Mansella
Clay Tile

Worry-free Re-roofing



No mess



No moving
out required



No leakage

Enjoy 1,2,3 Great Benefits

RM
1000

Worth of your old roof
\$ trade in *terms and conditions

2

Years warranty
Longest warranty in town

3

Generations
clay roofs tiles last 75 - 100 years

visit us at



www.terreal.com.my



[www.facebook.com/
terrealasiasia/](https://www.facebook.com/terrealasiasia/)



TERREAL

Building Beauty



Dear readers,

At the recent International Green Building Conference 2018 held in Singapore, one of the tracks I sat in was on DfMA (or Design for Manufacturing and Assembly). Interestingly, during the panel discussion, a panellist brought up that he had to Google to find out what the term meant. In this day and age, it's hard to imagine what life would be like without the Internet, smart phones or devices that could give you what you want in a matter of seconds.

The opening plenary on the second day gave a peek into the making of Singapore Management University's Tahir Foundation Connexion, or SMU-X, which would be predominantly made out of mass engineered timber (MET), along with other active strategies, and is targeted to be an on-site Net Zero Energy building when it is completed in 2019. The architect admitted that while he is not an expert in the various systems or technologies that are going into the construction of this new campus—DfMA, MET, and the like—he recognised that to create a smart building does not just mean the adoption of different systems. It is about bringing together these new technologies and the various parties involved to pave a new way of thinking in line with such an adoption—a collaborative course of action with a common goal.

Similarly, in this Q3 September issue of *Construction+ Malaysia & Singapore*, when we look at artificial intelligence (AI) and its impact on the construction industry, namely infrastructure and transport, and also the use of data and technology—something new—to help us repurpose buildings—something old—we have to remember that the ultimate purpose is for the people.

The application of tech has to have the human touch. Why do we need better intelligence or greater tech adoption in construction? Not just to improve efficiencies and productivity or the bottom line, but also to get better data, more accurate analysis and more in-depth information on the different parameters (such as temperature, air flow, humidity and solar direction), so that architects, builders, planners and property developers can be better informed when designing and constructing for people.

It is heartening to see that there seems to be a consensus about this among our Commentary contributors and Spotlight interviewees in this edition. I urge our readers to reach out to us for a conversation on this topic or others (digitally, of course).

Candice Lim
Managing Editor

Foreword

5 Jason Hutchings, Atkins

Commentaries

10 Platform for Change

16 Asset Repositioning in Asia



22 BCI Asia Awards
Malaysia 2018

Products & Technologies

45 TROX

News & Events

30

In The Spotlight

36 Chan Seong Aun,
Malaysia Green
Building Confederation

40 Quek Yang Thee
School of Engineering,
Republic Polytechnic

Projects

46 Four Seasons Place

52 Memali Mosque

58 Sunway Geo Residence

60 Bencoolen Station

62 The Brownstone

66 Church of the Transfiguration



Regional Projects

70 Infinity House

Interiors

76 Ibis Melaka

80 Damansara Avenue
Sales Gallery

84 De Gallery

86 Seek Asia

90 Columbia Asia Klang

92 Grab Office

96 Hotel G

Regional Interiors

100 Dplus Intertrade

Upcoming Projects

104 Malaysia

105 Singapore

In Design

106 Splash World Harbour City

Student Features

110 WHO Exhibition Hall

112 An In-between Space



A PLATFORM FOR CHANGE

Public transport, and in particular metro rail, will form the backbone of the city of the future as more and more people flock to our urban areas. The way we plan, undertake and pay for our journeys is already changing, so is it time to reconsider our approach to infrastructure as well?

BY JASON HUTCHINGS

Metro systems have transformed cities over the past century. They've connected people to employment, leisure and business opportunities and underpinned economic growth.

The first metro trains rumbled through cities such as London, Boston and Paris more than 150 years ago. For the first time, they ran underground or on elevated tracks, which was an attempt to address the increasing congestion on inner city roads.

The stations that were built to serve them had dedicated entry and exit routes to control the flow of passengers, and subsequently how passenger fares could be collected; raised platforms to help people board and alight from trains; and a concourse accessed by stairs, and later escalators, which was a place for orientation and for travellers to meet and gather.

Over the years, people's safety became a major concern, and strict rules were introduced regarding staircases and evacuation routes, construction materials, layout, smoke extraction and operational requirements.

As a result, most metro stations are designed according to a few key principles and generally have a similar arrangement, even in different parts of the world.

There is also another, increasingly important, aspect of metro station design.

A decade or two ago, we looked at the provision of transport services as an engineering or a mathematical challenge. How many people can you move through a station, and with what level of congestion?

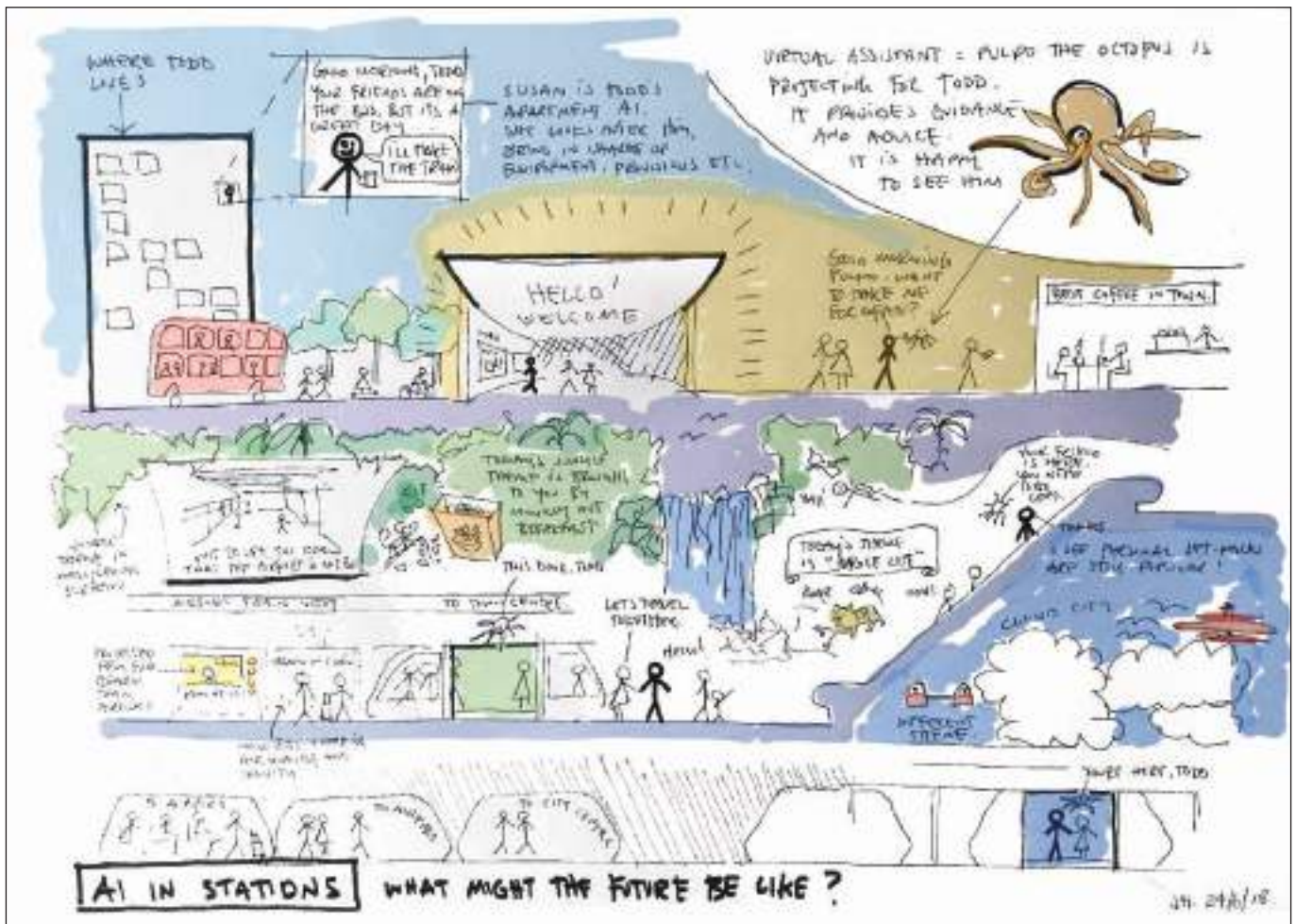
There were a number of ways to answer the question—we assessed the space to determine if it would feel congested



Image courtesy of Surbana Jurong



Artificial intelligence offers us an opportunity to rethink the entire station environment



Our entire journey may one day be tailored to us using AI

Image courtesy of Jason Hutchings, Atkins

and restrict movement, and then based our design on an equation that would help us avoid that.

But now, the focus has shifted away from the numbers to the people using the system. Transport operators believe they're providing a service to their customers, in the same way the retail or hospitality sector does, and we're helping them create spaces that meet their customers' requirements.

Moreover, passengers are behaving differently now, compared to 20 years ago. Immediacy of information, thanks to smart devices streaming TV shows, games, news, books and social media, has resulted in a change in perception of congestion and delay. Many passengers are immersed in the digital world, irrespective of the physical

world around them.

Singaporeans embrace technological advance, such as the move into intelligent mobility and driver-less cars, which are already being tested. These initiatives rely on new hardware, but more so, the distribution and availability of data, much of which is accessible from mobile technologies.

This technology is already being used in some stations to help enhance passengers' journeys—for example, automatic ticketing, journey planning and assistance, contactless payment options, free WiFi and the provision of real-time travel updates. But there are more significant changes ahead. Artificial intelligence (AI) offers us an extraordinary opportunity to rethink the entire station environment.

The growth of AI comes at a key point in our technological and social development, as we become overloaded and consumed by data.

WHY AI?

Data is the currency of the modern age.

There is already an incredible amount of data available to us—an average metro train has more than 2,000 sensors on it, providing constant information to the operator in real-time. But more importantly, big data and metadata generated by the travelling public and the environment around us are increasingly available—for example, passengers' data are captured at the time of booking, when they're swiping in and out of stations, and even when they're on the move within and in the areas adjacent to stations. The information helps operators understand a commuter's preferences and habits, but the way it's currently organised and accessed is inefficient and impractical.

The growth of AI comes at a key point in our technological and social development, as we become overloaded and consumed by data. AI is not only the key to unlocking the human interface, but also, and more importantly, the only method by which we can store, manage and appropriately access such information.

Through AI, our computers will be able to search and recognise specific collections, patterns and trends in the data sets for better decision making. It will enable operators to provide a more dynamic, on-demand service and, for example, reduce waiting times and maximise space on train carriages.

Technologies can also be employed innovatively through AI. Paris Metro is considering using the technology to make the platform screen doors project a colour code that will tell waiting passengers where there's congested versus free space on the next train.

Combining AI with facial recognition technology (which is already used in many transport facilities such as border control and anti-jaywalking surveillance) could help authorities spot behaviour that is out-of-the-ordinary and, therefore, locate a lost child, assist someone who is unwell, intervene in trouble, or address an emergency situation more quickly.

On a typical day on the London Underground, services are delayed through lack of trains (more out of service than anticipated), station access is impaired through faulty escalators and lack of redundancy in older entrances, step-free access is only available through some stations, and internal wayfinding is non-intuitive and poorly signposted. All of these issues can be removed through today's technologies and AI governance.

AI has the potential to transform mass transit. But I can see a point in the future in which our entire journey—from home to the office or leisure facility—is tailored to us, whether we use the metro, the bus network or hail an autonomous car. Imagine walking up to a metro station and an augmented reality avatar pops up in front of you with real-time information that matches your schedule. You recognise it because you see it every day. In effect, the station personally welcomes you and informs you that the friend you are meeting for a coffee is already on the way because her face is recognised on the bus. Because your usual train is running late, it suggests an alternative route to take to get to your destination, so you can arrive at the same time as your friend. The AI also informs your friend of your progress, removing the stress of public travel through assurance and communication.

THE IMPACT OF AI ON DESIGN

So what does this 'hyper-personalisation' mean for station designers? How will a proactive approach and interactive transport service change the way facilities are developed?

While the next 20 years will see fundamental changes in the way we create, use and manage data, it is the 50-year horizon that is especially fascinating. This is the challenge for the transport community, as we are designing station buildings to conservatively address historical practice, for a world in which the pace of change potentially makes them redundant within a generation. Advances in technology are driving social change, and we don't know where it will take us. And yet, the infrastructure, including the stations, we're designing must serve us for the next 100 years.

By way of a simple exploration of how AI and technology can affect station arrangement: If passengers no longer need tickets due to the use of systems such as Mobility as a Service (MaaS), we don't need wayfinding because we have an avatar (or at least a personalised information service), and crowd management is unnecessary due to AI monitoring the station precinct, do we still need a station concourse? Could people access the platform directly from the street given that they'll know where they're going and how to get there? In existing stations, could that space be re-purposed? Could the concourse become an art gallery in the future, and what do designers need to do to futureproof today's stations such that such spaces (and the operational arrangement of the station) are suitably flexible. Simply removing the concourse makes stations quicker, cheaper and safer to build, reduces travel time and increases efficiency in terms of building operation.

In addition to the public spaces, embracing technologies such as nanotechnology, drones and swarm intelligence (under AI control), threats such as fire, flood and terrorists can be reduced. Events can

It is also interesting to consider where such technological development is likely to develop first ... and the odds are this will be in Asia.

be anticipated (or at worst, immediately recognised), and emergency response can be localised, thus reducing risk to personal safety. If technology can reduce risks, then stations may not need redundancy in egress routes and smoke extraction, which currently make up a significant percentage of the station's volume.

The transformation of railway and metro stations within London could offer a clue to the future. At the time St Pancras station was constructed, it would have been difficult to imagine it as a vibrant dining and retail hub, and yet its restaurants and shops draw people from far and wide, even when they're not travelling. Similarly, in Hong Kong, the synergistic development of stations and property development blurs the border between travel and lifestyle, not only environmentally, but at a social and economic level.

Metro infrastructure, being one of high volume and density, is looking to the private sector for financing. The Rail+Property model in Hong Kong (whereby the rail operator is able to commercially develop property around the station) and PPP initiatives (such as Sydney's new metro) will become the norm. With such external influence, the brief defining our stations will be more and more influenced by future-proofing, commercial property awareness, and the impact of tomorrow's technologies.


It is also interesting to consider where such technological development is likely to develop first ... and the odds are this will be in Asia. Although metro systems originated in the West, it is the rising economies of the East, and in particular those of the ASEAN region,

where we may see greater opportunity and demand for the implementation of mobile lifestyle technologies into our built environment.

For example:

- Hong Kong was the first place to develop and widely use the Octopus card as smart ticketing (before Japan and UK) and also as a ubiquitous method of daily financial transaction.
- Shenzhen is recognised as the new Silicon Valley in terms of hardware and is at the forefront of implementing AI into our lives through product development.
- Singapore is already planning for, and trialling, autonomous vehicles and is a leader in the use and availability of GIS data, estate sensor grids and big data.

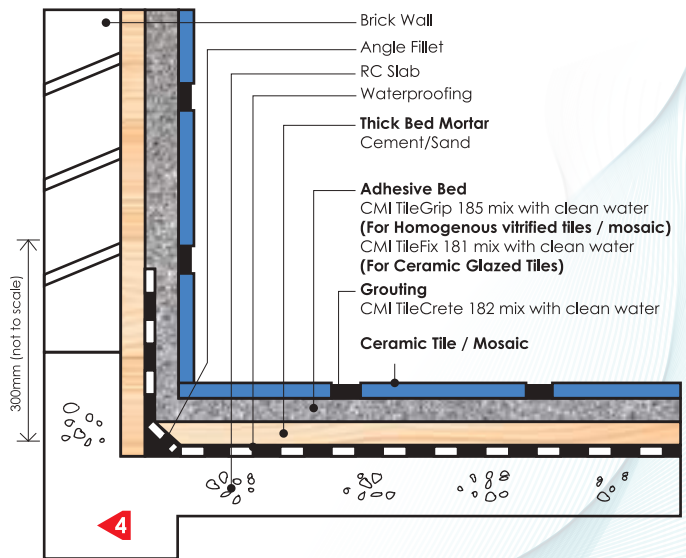
In fact, many Asian cities such as Jakarta, Ho Chi Minh, Bangkok and Manila are either commencing, or expanding, metro networks to meet the growing needs of their economies and are ideally placed to benefit from early adoption of the current and future benefits of AI.

Despite an ongoing paradigm shift in the way we engage with transportation, train services will continue to be an important part of our evolving cities. We can already see the impact of AI in our daily lives, but we need to imagine the extraordinary possibilities AI will provide, and create the appetite now for stations that will inspire and engage people in the future. That may be difficult given the necessarily conservative nature of transport infrastructure and unprecedented pace of change, but it is necessary, challenging and exciting. 



JASON HUTCHINGS
Senior design director,
SNC-Lavalin's Atkins
business in Asia Pacific

Hutchings' 30 years in the architectural business has seen him work for leading design practices specialising in transportation. He has 25 years' experience in Asia, leading rail as well as commercial, hotel and mixed-use projects. He is renowned in the field of transit-oriented development (TOD) and is responsible for projects across Asia and Australia. He is currently working in the field of Human Centred Design (HCD)—employing pedestrian modelling to analyse and fine tune the 3D planning of TODs, which in itself is a contemporary consideration of many transport operators.



1 ACCESSORIES / ADDITIVES
FIBREGLASS MESH 4'' & 6'', PMP CEMENT 100g,
PMP CLAY 150g

2 SKIM COAT
WALLSKIM 281 & 681, BASE COAT PLASTER 381 & 781,
BLOCKSKIM 782, BASE MORTAR GREY EX 981

3 RENDER
THIN RENDER 081,
MEDIUM EASY RENDER 082

4 CEMENT TILE ADHESIVE
TILEFIX GREY 181, TILECRETE 182, TILEGRIP 185,
MULTIFIX 188, BLOCK FIX 187



CMI MARKETING SDN BHD 601659-V

No.7, Jalan Sungai Jerluh 32 / 196,
Bukit Kemuning, Section 32,
40460 Shah Alam, Selangor

+60 17-881 7887
+60 16-228 2586
+60 16-330 3583

03-5131 9325 / 03-5131 9425
03-5131 8325
www.cmimalaysia.com.my



Your Partner in CCTV Solution

Merit Lilin Malaysia Sdn Bhd is a distribution arm of Merit Lilin Ent. Co., Ltd. Taiwan, a CCTV manufacturer specialising in R&D, designing and manufacturing of reliable and award winning CCTV equipment and systems since 1980. Merit Lilin Malaysia Sdn Bhd established in 2002 is privately owned by Mr C.C Hsu, Chairman of Merit Lilin Ent. Co., Ltd. and a local partner to be the regional distribution hub for the vibrant ASEAN market.

Merit Lilin Malaysia Sdn Bhd has been accredited as the Sales & Technical support centre to service our business partners, integrators, consultants, corporate users and installers, dispensing up-to-date product and technical information, sales and after sales support, repair and warranty facilities and even a Training Lab to facilitate the training of our business partners and resellers.

Adhering firmly to Merit Lilin's fundamental corporate belief in Creativity, Progress & Excellence, this philosophy has led Merit Lilin to be one of the major global CCTV manufacturer. In upkeeping with the company's striving for progress in growth and success, technological excellence and innovate designs are the target intents for a product line that satisfies the needs of the global multi-level customers.

Our business principles revolve our belief that a magnificent product by itself is not enough, it must have a blend of flexibility, honesty and reliability in the dealings. Our goal is to make our LILIN not just a global brand but to be in the forefront among the leading brands of CCTV equipments and system provider with unrivalled customer service at every of our global regional offices.

LILIN Architecture



MERIT LILIN MALAYSIA SDN BHD

32 Jalan Ara SD 7/3B, Bandar Sri Damansara, 52200 Kuala Lumpur.

Tel: 03-62745066 Email: sales@lilin.com.my



There are many reasons to look more closely at repositioning and reusing buildings

ASSET REPOSITIONING IN ASIA

Why are properties repositioned and reused in some parts of the world, and not others? Why not just knock them down and rebuild? And how can we go about repurposing existing buildings?

BY RUTH BAILEY

Adaptive reuse of the built environment has long been part of our urban history, often benefiting the local economy, environment and societies across the world. This can take on many forms and be applied to many building types, including commercial, industrial and residential.

Some of the most challenging forms of asset repositioning are those that involve converting historic buildings with tiny windows and low ceiling heights into modern designs with open spaces, natural lighting, good thermal

comfort and centralised systems and fire-safety provisions, while respecting the constraints of any relevant heritage building legislation.

In Singapore, the government's policies on the reuse of historic properties are proactive. There have been some highly successful examples of combining repositioned historic buildings within new developments, such as the South Beach development.

However, in most parts of Asia, little time and effort have been invested to explore

and uncover the value of repurposing buildings. For most, the preferred option is still to demolish existing structures to make way for newer, shinier, bigger developments.

Increasingly, there are reasons—such as lack of land supply in city centre locations, zoning regulations or the time needed for a new product to be available to the market—to look more closely at repositioning and reusing buildings. There are also positive drivers, such as unlocking unrealised potential, capturing a new market or capitalising on the unique value, heritage, history or location of an existing asset.

In Malaysia, a significant issue currently influencing the market is an oversupply across several segments of the property sector. Despite positive economic growth, the property sector in Malaysia is currently and is expected to remain flat in 2018. According to recent reports by Moody and *The South China Morning Post*, vacancy rates for commercial offices could rise to 32 per cent by 2021. Total retail space per capita has increased sharply in key Malaysian states in recent years, and now surpasses regional markets such as Hong Kong and Shanghai.

In an attempt to address this issue of oversupply, as of 1 November 2017, no approvals are being granted in Kuala Lumpur for the development of new offices, retail malls, serviced apartments and luxury residential apartments with a purchase price of more than RM1 million. The ban is expected to last one to three years and is hoped to address affordability issues.

While conditions in Singapore are not as dramatic, the market is still slow with oversupply issues in some key asset classes, including residential, hospitality and data centres.

In such macro-economic conditions, the treatment of existing building stock can be a key differentiator to maintain competitiveness or attractiveness in an

The treatment of existing building stock can be a key differentiator to maintain competitiveness or attractiveness in an oversupply market, improve financial performance and generate greater investment returns.

oversupply market, improve financial performance and generate greater investment returns. Repositioning of real estate is a viable option that may require less capital expenditure compared with total redevelopment, while achieving the investment priorities of the asset owner or investor in a shorter timeframe.

OPTIMISATION STRATEGIES

But it is not a straightforward task. There is a lot of data to consider, current and future market demands, constantly shifting patterns, trends and disruptors, all of which need to be balanced alongside the priorities of the asset owner or investor.

While increasing revenue-generating opportunities through higher rental yield is crucial, the balance of priorities is often driven by what potential current and future tenants, operators, customers or other end-users are demanding, so an in-depth knowledge of their requirements is advantageous when developing an effective asset optimisation strategy that captures the market trend while also carving out key differentiators that put that asset ahead of its competition.

Through appropriate market research and feasibility studies, repositioning/ renovation strategies can be developed that determine the potential return of investment. These strategies demonstrate how it is possible to activate additional areas of the property to generate new revenue streams, lower long-term operating costs through smart investment in technology and buildings systems, and future-proof the

development with flexible designs.

When considering the acquisition of a property for renovation or repositioning, a high quality due diligence study can save a lot of time and cost in the long run. Apart from reviewing a building's condition, these studies should also evaluate future maintenance and operational requirements so that the true cost of investment is established. This is also a good time to consider areas for potential additional revenue-generation so that the full return on an investment is assessed.

For example, when one of our clients was looking to purchase Festival City Mall in Kuala Lumpur, now known as Setapak Central, our team of asset management consultants surveyed the condition of the built asset, reviewed the maintenance regime and provided a one- to three-year look-ahead to identify major repair and cyclical end-of-life replacement costs to enable the client to further understand the necessary investments for the development.

For a partially al fresco shopping mall in Kuala Lumpur that a German asset management company was keen to develop, our team was able to optimise the company's investment by identifying potential revenue uplift opportunities by benchmarking key features against other similar properties in the city. Recommendations included enhancing the finishes in public areas and improvements to the building systems to create a more attractive environment and encourage shoppers to remain within the facility for longer.



Singapore's South Beach development is an example of combining repositioned historic buildings within new developments

FINANCIAL ADVANTAGE

While energy costs are highly regulated and subsidised, Malaysians and Singaporeans are becoming much more environmentally aware, which in turn influences investment and asset-repositioning decisions. An intelligent approach to renovation works can vastly improve the energy efficiency, air quality and thermal comfort of a property, which has the added benefit of increasing attractiveness and improving tenant satisfaction. In addition, whole-life asset management can be adopted from design to facilities management to lower the operating costs and provide effective maintenance on the repositioned asset to minimise asset depreciation.

This has become particularly important in the office sector, where there is

significant supply due to the recent completion of major developments in Malaysia but limited absorption rates. Recent office relocations and renovations, such as the likes of GSK, Roche, Astra Zeneka, Ericsson and Huawei, have focused on optimisation of space and improved working conditions to enhance productivity. This includes wellness factors, such as daylight, thermal comfort, amenities and a high indoor air quality.

Hence, there is financial advantage for office buildings to obtain environmental building certifications as a demonstration of these qualities to potential tenants, particularly large multinational corporations.

SMOOTH DELIVERY

Just as competitive as the commercial

An intelligent approach to renovation works can vastly improve the energy efficiency, air quality and thermal comfort of a property, while also increasing attractiveness and improving tenant satisfaction.

space is the highly competitive hospitality sector, where many aging and underperforming assets in both Singapore and Malaysia are being rebranded and repositioned to revive their appeal to travellers and realise their intrinsic value.

In the current market, cost-effective and guest-friendly refurbishments are needed to protect hotel investments, deliver the best product and activate additional revenue-generating areas. If well managed, these types of renovations can be carried out within a live environment, while minimising lost revenue and ensuring guest experience is not compromised.

Recent examples have included reconfiguring external areas to create additional F&B service offerings, repositioning restaurants to accommodate celebrity chef brands and creating additional spaces targeted at high-end clients

For example, BIG Hotel, a 16-storey boutique hotel close to Singapore's CBD and retail hub, recently underwent a makeover in end-2016 for a trendier look and feel, following its recent acquisition by an investment company. Apart from renovating 308 rooms, the basement lobby and café were relocated to generate additional space for guest facilities, including two new restaurants and a gym, all while the hotel remained operational.

In these projects, procurement and construction methods are chosen

to maximise site usage and maintain revenue streams throughout the renovation period.

It is also important to look carefully at how to avoid negative impact on the facilities that remain in operation, including studying multiple scenarios for phasing and shutdown of rooms and restaurants, while maintaining buffer zones, till an optimal solution is established. A room displacement schedule graphically and numerically shows the hotel team which rooms are in what condition, giving owners and operators a clear understanding of the progress and implications.

Other aspects of approaching asset repositioning projects include taking a lean approach to the delivery of materials, so that minimal lay-down area is required within the property. Delivery routes and times also have to be examined in detail to align with the overall operations.

All this requires a high level of planning, risk management and stakeholder engagement, alongside a comprehensive and robust support system to keep facilities operating round-the-clock.

In today's world where efficient use of resources is high on everyone's priorities, an intelligent approach to asset repositioning is crucial—whether that is finding ways to differentiate in order to attract tenants, minimising operational costs through optimisation strategies, or future proofing the asset through prudent use of technology. **G**



RUTH BAILEY
Associate director and real estate
advisory team leader,
SNC-Lavalin's Faithful+Gould
business in Asia Pacific

Bailey is a chartered civil and structural engineer with more than 15 years of international experience across a large part of the property cycle. She has worked with large multinationals, government organisations, developers, contractors and consultants, playing a key role in delivery of a variety of projects. This has given her a wide range of experience and knowledge and has brought her an understanding of the construction industry in the broadest sense.

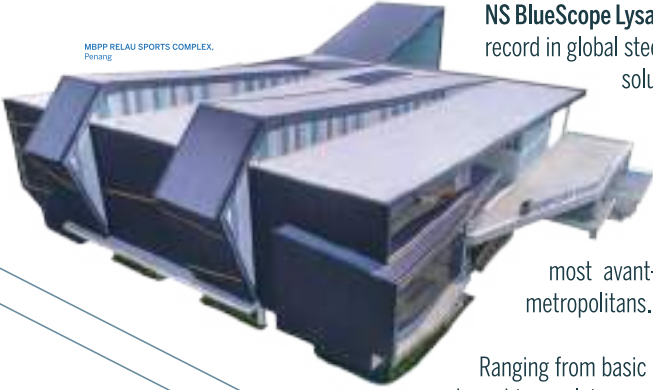
At Faithful+Gould, she leads the team in the delivery of a suite of flexible and bespoke solutions to suit clients' needs. These range from development advisory, feasibility studies and procurement strategies to sustainability solutions and energy consulting.

ONE STOP METAL ROOFING AND DECKING SOLUTIONS



Trusted Partner for Building Systems

MBPP RELAU SPORTS COMPLEX,
Penang



NS BlueScope Lysaght comes under the umbrella of **BlueScope Steel Limited Australia**, a company with solid track record in global steel industry for more than **135 years**. The brand is one of world's most dynamic and largest steel solution provider and rollformer with presence in many ASEAN countries.

As one of the first rollformer in the region, NS BlueScope Lysaght's strength lies in Australia technology, innovation and expertise and serving the demands of the evolving style and design needs of the construction sector. We pioneer the Asian downstream business with expertise in industrial, commercial, residential, infrastructure and institution by providing the most avant-garde products and sophisticated solutions in constructing iconic landmarks across Asia metropolitans.

Ranging from basic residential projects to mega mixed development malls and complexes to public infrastructures, Lysaght complete range of building products provides you with ease of installation with high value for money in all of our offerings:



Roofing &
Walling



Decking



Truss &
Frame



Sheds

From straightforward seamless wall panels to extensive roofing lengths and curves, our comprehensive range of roofing and walling products meet the requirements of most architecturally demanding structures, without compromising on strength and flexibility and enhancing the aesthetics of the building. Our products are light-weight, durable, requires low maintenance and most importantly, it is environmental friendly meeting the strictest green indexes.

All Lysaght products are laboratory tested and developed in providing substantial noise and thermal reduction effect providing our customer complete ease of mind. We give pride in providing the highest quality grade of products with comprehensive warranties spanning from material to product to workmanship *(Terms and conditions apply)*.

To further strengthen our pledge on innovation, the downstream business established Product Innovation Center (known as PIC) in Singapore to sustain Lysaght market leadership. The center focus on product innovation and ideation with continuous lab testing, proposing building material solutions and maximising technical capabilities to meet emerging market trends within the ASEAN region.

NS BlueScope Lysaght strive to stay ahead of the game in the building materials industry by reinventing not only our product offerings, also provides value added customized, total peace of mind solutions:

- **Total Roofing Solution with proven acoustic test performance**
- **Supply and Install expertise for roofing and structural building services**
- **Technical advisory on product application and design**

We value knowledge, experience and commitment to deliver best in class service to our customers by understanding your unique requirements and customize to manufacture according to your needs.

For further enquiries or more information, please visit our website www.lysaghtasean.com or contact our NS BlueScope Lysaght local offices.





**BLUESCOPE
LYSAGHT**

Trusted Partner for Building Systems

A GLOBAL LEADER IN INNOVATIVE STEEL BUILDING PRODUCTS & SYSTEMS

THE SEED RESIDENTIAL,
Johor

PETRONAS TWIN TOWER,
Kuala Lumpur

MARINA BAY SANDS,
Singapore

MALAYSIA ACADEMY OF HUMANITIES,
Melaka

THE PREFERRED ROOF
SOLUTIONS FOR

50
years

For further enquiry, please contact us at:

PENINSULAR MALAYSIA

1700-81-8688

SARAWAK +6082-333-621 | **SABAH** +6088-445-161 | **SINGAPORE** +65-6264-1577 | **BRUNEI** +673-244-7155

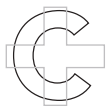
Web:



Follow Us on:



facebook



RECOGNISING MALAYSIA'S BEST IN ARCHITECTURE, DESIGN AND PROPERTY DEVELOPMENT

BCI Asia Construction Information Sdn Bhd honoured Malaysia's top property developers, architecture firms and interior designers—who have helped to shape the country's physical landscape into what it is today—at its 14th annual BCI Asia Awards ceremony held on 29 June 2018 at The Hilton Kuala Lumpur.

The event drew more than 400 distinguished guests from the local building and design industry, and was graced by Yang Berhormat Zuraida Kamaruddin, Minister of Housing & Local Government; Yang Berbahagia Datuk Haji Mahadi Che Ngah, executive director of Project Implementation, Kuala Lumpur City Hall (DBKL); Datuk Ir Ahmad Asri Abdul Hamid, CEO of Construction Industry Development Board (CIDB); Ar Ezumi Harzani Ismail, president of Pertubuhan Arkitek Malaysia (PAM); Ar Chan Seong Aun, president of Malaysia Green Building Confederation (MGBC); Ar Serina Hijjas, co-chair of Green Building Index; and Ar Tan Pei Ing, past president of ArcAsia.

The highlight of the evening was the BCI Asia Top 10 Awards, which recognised the most active architecture firms and developers in Malaysia—based on the highest value of projects under construction during the last full calendar year, weighted by the extent of their sustainability efforts. (For architecture firm, pre-tender projects were included to recognise early incorporation of Green design efforts.) Malaysia's Top 10 architecture firms have a USD10.33 billion combined portfolio, while the Top 10 developers

have a USD2.19 billion portfolio.

BCI Asia Top 10 Architects for 2018 Awards were presented to Akipraktis, aLM Architects, Archicentre Sdn Bhd, BEP Akitek Sdn Bhd, GDP Architects Sdn Bhd, NRY Architects Sdn Bhd, RDC Arkitek Sdn Bhd, SA Architects Sdn Bhd, T&T Architect Sdn Bhd, and VERITAS Architects Sdn Bhd.

BCI Asia Top 10 Developers for 2018 Awards were also presented to Eco World Development Group Bhd, IJM Land Bhd, KSL Holdings Bhd, LBS Bina Group Bhd, M101 Holdings Sdn Bhd, Mah Sing Group Bhd, Naza TTDI Sdn Bhd, S P Setia Bhd, Sunway Bhd, and Tropicana Corporation Bhd.

Apart from the BCI Asia Top 10 Awards, the FuturArc Prize, FuturArc Green Leadership Award and Interior Design Awards (IDA) were also presented to the Malaysian winners at the event.

This year's FuturArc Prize—Asia's leading Green building design competition—commends forward-thinking ideas by international professionals and students on designing a biophilic Asian city. Michelle Lum Zhi Ying and team from Malaysia have been awarded the merit award in the Student Category for their entry titled "Fueling The Future", which explores the principles of permaculture and how it seeks to provide a set of universally applicable guidelines that can be used in designing sustainable systems.

The FuturArc Green Leadership Award recognises the teams behind Green

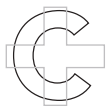
built projects that have demonstrated the best in architectural innovation and environmental stewardship in the region. The winning Malaysian entry in the Commercial category is Factory in the Forest, by a team comprising Paramit, Design Unit Sdn Bhd, Chin Kuen Cheng Architect, IEN Consultants Sdn Bhd, South Island Building Sdn Bhd, Perunding Eagles Engineers Sdn Bhd, Web Structures, and JLL Sdn Bhd.

The BCI Asia IDA 2018 lauds excellent interior architectural designs in seven categories. IM4U Youth Sentral by Ooi Design & Associates Sdn Bhd is the winning Malaysian design in the Schools category. Seven local merit recipients were also recognised at the ceremony.

Malaysia's BCI Asia Top 10 Awards 2018 was presented by Jotun, Beckers, Häfele, Halio, Rigel, Skidata, Armstrong Flooring, Bostik, Greenseal Products, Hansgrohe, HP DesignJet, KH Shutters and Wacker Chemicals. BASF and Schüco were the Platinum sponsors for the FuturArc Prize and FuturArc Green Leadership Award, respectively, while TROX Malaysia was the Gold sponsor for the IDA.

BCI Asia Awards is held in seven Asian regions—Malaysia, Singapore, Hong Kong SAR, Indonesia, Philippines, Thailand and Vietnam. Beyond recognising the most active architecture and developer firms, BCI Asia Awards also aims to encourage the creation of socially-responsible architecture. 





TOP 10 ARCHITECTS



Akipraktis, aLM Architects, Archicentre, BEP Akitek, GDP Architects, VERITAS Architects, T&T Architect, RDC Arkitek, NRY Architects, SA Architects

TOP 10 DEVELOPERS



Eco World Development Group, IJM Land, KSL Holdings, LBS Bina Group, M101 Holdings, Tropicana Corporation, Sunway, Naza TTDI, Mah Sing Group, S P Setia

I am glad that BCI Asia gave us this award as it encourages us to work hard and achieve a higher standard, which will also benefit the industry as a whole.

This year is very challenging; however, we will continue to maintain our quality of service as things are getting competitive and buyers have a lot more project choose from. I think it is a kick in the back for us to strive even harder.
— *Dato' Ar Chan Chee Yong, principal, Akipraktis*

It is a big thing for us to receive this award from BCI Asia. We are thankful that our firm is still busy, with a lot of proposals and jobs available.
— *Ar Ng Hai Yen, director, Archicentre*

It is an honour and pleasure to receive the award for a fourth time as acknowledgment from BCI Asia.
— *Ar Sam Chin Sing, director, aLM ARCHITECTS*

RDC Arkitek Sdn Bhd is proud to be part of BCI Top 10 Architects award since 2005. With the whole team's effort, we are able to continuously strive for excellence and relentlessly explore opportunities. This is the perfect platform for our team to witness and experience what it takes to be part of this challenging industry.

We will never stop despite adversity. Design analysis, feasibility studies and design and built will be the next fundamental approach in the years ahead. — *Ar Tan Choon Kiat, director, RDC Arkitek*

We are honoured to receive this accolade. The award means that the hard work and effort that our team put in towards shaping the built environment of the country is being recognised.

With the current difficult market conditions, it is ever so important that we stick to our guiding philosophy—to be professional and dedicated to all the projects we undertake and continuously strive for the highest standard in design and project delivery.

We continue to be innovative in our design approach to deliver projects with sound constructional principles, long-term durability that meets the client's budget without compromising design.
— *BEP Akitek management team*

It is great to be recognised, and the award serves as an acknowledgement of our efforts and passion as we try to further establish ourselves as a leader within the community as well as across the globe. This award reinforces our strong emphasis on excellent architectural design and detailing with the recent consideration of criteria and inclusion of projects from all ranges, in terms of concept to completion. The wider scope entails tougher competition in which we are delighted to still be seen as one of the top 10 leading architecture firms in the country.

We have to stay competitive and remain relevant in a challenging market. We need to step up our works, explore new opportunities, and discover new ways to engage with our existing and prospective clients.

Our design and work ethos are focused and committed to creating architectural designs that enrich the city and people's lives. With the gradual change of economic, social and environmental concerns in which we are all affected,

SAA strives to maintain our core values, while adapting to changes, by including flexibility, sensitivity and focus on sustainability and socioeconomic issues. — *Hafiz Rahimi Tajudin, associate, SA Architects*

This award is a recognition of our team effort. We also like to thank all our clients for believing in us and for their continuous support. We are honoured to receive this award the second time, and this perhaps helps to reinforce our standing among our peers as a top architecture firm in Malaysia. We hope that with this award, we can attract more talented architects to join us to grow our firm together to greater heights.

The current market is indeed challenging. We have several projects affected due to the change of government, for example the MRT stations and government-linked projects. Moving forward, we are focusing on serving our existing clients well with more innovative designs.
— *Dato' Ar Tung Mun Kiat, managing director, T&T Architect*

As a new developer, we are thrilled and humbled to be one of the top 10 winners again this year as we have put in a lot of effort in establishing our brand name in Malaysia as well as overseas over the past five years. This is something that we would not be able to achieve without the strong support from the customers, shareholders, bankers, business associates and of course our very own team.

Many of our team members have extensive hands-on experience creating and implementing international award-winning projects, which assures our customers of EcoWorld's ability to



execute and deliver on our promises.

2018 will be a tough year in the property market. However, we remain bullish in the long-term outlook for property in Malaysia. We believe that with the right location, connectivity, product type and concept, the demand is still very strong. We will continue to work hard to push sales and to deliver high quality products as well as excellent customer service.

— *Dato' Chang Khim Wah, president & CEO, Eco World Development Group*

We are indeed proud to be recognised for the dedication and craft that all IJMers put into everything that we are involved in towards delivering better, more thought out homes for our customers. It is my pleasure to see how our properties translate into beautiful homes and ideal business premises that inspire, resonate and touch lives, whether they may be for living, work or play. This award represents a true testament to our sustainability efforts and commitments!

We remain optimistic but are mindful of the current market situation. We will continuously adapt to the changes in the landscape accordingly. We continue to stay sharp and vigilant to meet and overcome the challenges and seize opportunities of the future. We have our ears firmly held on the ground and our learning is constant—for us to always be relevant and resonant.

— *Edward Chong, managing director, IJM Land*

This prestigious award is a meaningful way to recognise our achievement, and it sets a benchmark for us to strive harder to enhance shareholders' value.

We will continue to do what we do

best, which is to build affordable houses because we see the potential of this market sector. We strive to ensure that the property development and investment segments continue to remain profitable, besides finding more opportunities to sustain our growth in the long term. Our current business model will enable us to move forward and achieve greater heights, despite prevailing mixed sentiments in the property sector.

— *Khoo Cheng Hai @ Ku Cheng Hai, managing director, KSL Holdings*

This award is testament to the company's commitment and dedication in providing quality homes for the people through our vision—inventing future living that enhances quality of life. Being recognised as the nation's top 10 developers for the eighth year running is a humbling feat. We promise to continue to strive for excellence in enhancing the lives of our customers.

As a market-driven developer, Mah Sing understands the market demands, and developing affordable projects below RM500,000 is currently the main focus of the group to address the nation's growing needs for quality ready-to-move-in homes and hassle-free services. — *Tan Sri Dato' Sri Leong Hoy Kum, managing director, Mah Sing Group*

We would like to thank BCI Asia for acknowledging us as one of the Top 10 Developers with this year's award. It is an incredible honour and a testament of M101's progress, our passionate staff and our strong focus on being continuously innovative. M101's success today is also thanks to the immense support from our customers, business partners and staff.

Despite the challenging global market, we have managed to stay on top of our

game. What makes M101 outstanding is our property tourism business strategy, where we don't just build properties but create and develop destinations. We will continue to innovate and develop branded projects in line with our property tourism business strategy and to live up to the awards we are recognised with. Moving forward, we also have plans to expand regionally. — *Dato' Seth Yap, founder & CEO, M101 Group of Companies*

Tropicana is truly honoured to be named as one of the BCI Asia Top 10 Developers for the seventh consecutive year as it acknowledges our excellent track record in delivering value to our customers and investors by creating quality developments in economic hotspots such as Kuala Lumpur, Selangor, Penang and Johor. We are grateful for the dedication and commitment of our board of directors, senior management team and employees, as well as support and trust of our homebuyers that have taken our company to where it is today.

In keeping up with market demand, Tropicana has been constantly innovating through the creation of our integrated developments by incorporating residential and commercial components to establish vibrant townships that are strategically connected. This recognition will definitely motivate us to continue our efforts in redefining the art of living of Malaysians.

Tropicana is very positive on the outlook of Malaysia's property sector. The group is moving in the right direction towards a buoyant property market as property prices remain stable, with more innovative offerings in the market and government initiatives to increase affordable housing and ease housing loan requirements for homebuyers.

— *Kelvin Choo, senior executive director, Tropicana Corporation Bhd*

FUTURARC COMPETITIONS & IDA WINNERS



FUTURARC PRIZE MERIT
Student: Michelle Lum and team



FUTURARC GREEN LEADERSHIP AWARD
Commercial: Factory in the Forest



IDA WINNER
School: IM4U Youth Sentral; Ooi Design & Associates



IDA MERIT
Exhibition: Damansara Avenue Sales Gallery;
Ooi Design & Associates



IDA MERIT
Hospitality: Rosa Malacca; Rosa Hotel



IDA MERIT
Hospitality: IBIS Melaka Hotel; Aprilist Associates



IDA MERIT
Residential: Meru House; A3 Projects



IDA MERIT
Residential: Monochromatic Crush;
MX Design



IDA MERIT
Residential: De Gallery;
DAA Design Associates



SPONSORS



JOTUN



BECKERS



HÄFELE



HALIO



RIGEL



SKIDATA



ARMSTRONG FLOORING



BOSTIK



GREENSEAL PRODUCTS



HANSGROHE



HP DESIGNJET



KH SHUTTERS



WACKER CHEMICALS



BASF



TROX



IDA 2019

INTERIOR
DESIGN AWARDS

COMING BACK
IN MID-SEP 2018

www.bciasiaidawards.com



KL HOSTS WCSC 2018

Date: 27 September 2018

Kuala Lumpur is hosting the 10th series of the International Conference on World Class Sustainable Cities 2018 (WCSC 2018).

Supported by Kuala Lumpur City Hall (DBKL), this year's conference series—themed Kuala Lumpur: Today & Beyond—will explore how cities in Malaysia can prepare to be more liveable, resilient, inclusive and sustainable, through better planning, technology and social innovations towards implementing the New Urban Agenda for all.

The line-up of international and local speakers includes the Mayor of Seoul Park Won-Soon; Heejin Kim, senior associate principal of Kohn Pedersen Fox Associates; and Daryl Carter, CEO of Avanath Capital Management and past



chairman of the National Multifamily Housing Council 2018, USA.

Participants include more than 550 delegates—built-environment professionals, city managers, government agencies, NGOs and city stakeholders.

Concurrent events and activities include masterclass/workshop sessions, technical site visits and a photography competition.

**CONSTRUCTION+
WEBSITE NOW LIVE**

Visit our website for more on local projects, building technologies, as well as industry insights and happenings.

<http://www.constructionplusasia.com/>

SEARCH 🔍

BCI ASIA

GET IN TOUCH WITH US NOW!
Email: construction@bciasia.com

NEW TRAIN MONITORING SYSTEM ON TRIAL

Date: 29 August 2018

SMRT Corporation Ltd and Nanyang Technological University, Singapore (NTU) officially opened the SMRT-NTU Corporate Lab, which will roll out 13 projects to improve rail reliability in the coming years.

The event was graced by Minister Heng Swee Keat, Minister for Finance and chairman of the National Research Foundation.

The projects include advanced monitoring systems and radio frequency technologies that can detect train door faults and defects on the running rails in advance for speedier intervention by maintenance teams. The new door sensors are currently undergoing trials on a train serving the North-South and East-West lines.



Demonstration of MRT train door fault sensor system



Checking out the real-time rail condition monitoring system

SCAN-RENT

SDN BHD

Providing Smart Vehicle Access Workplatforms

Mast Climbing Work Platforms

RENTAL
SALES
SUPPORT
SERVICES

Tel: +603 4251 1386

Email: info@scanrent.com.my

www.scanrent.com.my

[scanrentmalaysia](https://www.instagram.com/scanrentmalaysia)



Dr Sim's winning project

Image by NEWRI Community Development

WFEO2018 YOUNG ENGINEERS COMPETITION

Date: 17 August 2018

The Institution of Engineers, Singapore (IES) announced Dr Victor Sim, IES council member 2018/2020 and an IES chartered engineer, as sole winner of the World Federation of Engineering Organizations (WFEO) 2018 Young Engineers Competition, for his project on "Clean Water Access for Don Bosco School Hlaing Thar Yar, Myanmar".

Held in conjunction with WFEO's 50th anniversary, the competition recognises young engineers below 35 years of age for leading projects that advance the United Nations (UN) Sustainable Development Goals (SDGs). Dr Sim emerged as the winner from among more than 140 international submissions.

Currently the principal engineer of Sustainable Urban Solutions at Surbana Jurong, Dr Sim steered his team when he was with NEWRIComm—the philanthropic arm of Nanyang Environment & Water Research Institute (NEWRI)—to design an innovative reverse osmosis water treatment system that can provide clean and safe water to an under-

privileged community in Hlaing Thar Yar, a large industrial city in Yangon, Myanmar.

Dr Sim has taken his breakthrough work in membrane technology to real-life application in this project. By taking a holistic approach, he has made a seemingly high-cost technology affordable and accessible to a needy community in Myanmar.

The inter-disciplinary team of process, civil, mechanical, electrical and instrumentation engineers integrated a smart Internet of Things (IoT) concept using sensors and solar power into the system, to optimise maintenance, enable continuous monitoring and reduce operating expenses. The team also developed a business model to make the system affordable through the subsidised sale of water to the school's surrounding community.

When fully deployed in the Don Bosco School, the system is estimated to improve the health of more than 200 young students and about 1,500 residents in the immediate village. NEWRIComm hopes to extend the system to benefit other townships.



Tim Morris on the global role of NAFEMS

NAFEMS 18 ASEAN SYMPOSIUM

Date: 23 July 2018

The inaugural NAFEMS (ASEAN) Engineering Simulation Symposium in Singapore brought together delegates from more than 30 regionally-based organisations to share knowledge and expertise in the fast-growing domain of engineering simulation.

Founded in 1983, NAFEMS is the International Association for the Engineering Modelling, Analysis and Simulation Community, with the mission of facilitating and promoting safe and efficient use of engineering simulation and analysis.

Tim Morris, NAFEMS CEO from the UK, opened the symposium with a talk on the global role of NAFEMS in working with strategic partners to promote the use of simulation technology and support high standards of practice in industry. Fifteen simulation experts also shared about the use of engineering simulation in some of the region's most innovative organisations.

The programme also includes knowledge sharing by leading software developers on the use of their software in enabling innovation and work to make simulation technology easier to use and available to a wider range of specialists in other fields.

SURBANA JURONG INVESTS IN SUSTAINABLE FUTURE

Date: 10 August 2018

Surbana Jurong has been developing research centres to develop and promote sustainability in the built environment.

In Singapore, it is setting up a joint corporate laboratory with Nanyang Technological University, Singapore (NTU) and the National Research Foundation Singapore, while in Malaysia it has signed an MoU with HELP University to set up a Green Design and Technology Centre.

Launched on 31 July 2018, the SGD61 million corporate lab based in NTU will include research aimed at optimising land usage, future-proofing buildings and infrastructure, and transforming the way buildings are designed and constructed.

"The lab will be working on projects that will not only be game changers for Singapore but will also help to further establish Singapore as a global hub for sustainable urban and infrastructure solutions," said Wong Heang Fine, Surbana Jurong Group CEO.

Based in HELP University's Subang 2 campus, the Malaysian centre will offer certificate courses on renewable energies,

sustainable urban planning, architecture, engineering and infrastructure, and focus on research and development.

"This MoU is the beginning of a long-term plan to implement Green curricula into every aspect of training at this new and exciting Green Design and Technology Centre," said Professor Datuk Dr Paul Chan, vice-chancellor and president of HELP University.



Alfred Neo, managing director, M&E Engineering, Surbana Jurong, (left) and HELP's Chan signing the MoU

REACH THE RIGHT PEOPLE IN THE RIGHT PLACES

1928
2018
YEARS



BE SAFER, MORE EFFICIENT AND MORE PRODUCTIVE

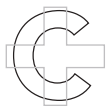
MOTOTRBO TWO-WAY RADIOS, MADE FOR THE WAY PEOPLE WORK.

TOLL FREE HOTLINE : 1-800-8-18590 OR VISIT WWW.MOTOROLASOLUTIONS.COM FOR MORE INFORMATION



MOTOROLA SOLUTIONS

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2018 Motorola, Inc. All rights reserved.



12TH INTERNATIONAL CMCEE CONFERENCE

Date: 23 July 2018

The 12th international conference on Ceramic Materials and Components for Energy and Environmental Applications (CMCEE) was held in Singapore from 23 to 27 July 2018 at the Suntec Convention and Exhibition Centre.

The conference served as a platform for global exchange of knowledge, expertise and ideas in ceramic technologies as a contributor to sustainable development.

Close to 800 technical presentations addressed key challenges and opportunities in research, development, engineering, manufacturing and applications of ceramic materials.

Plenary session speakers included Dr Shunpei Yamazaki, founder and president, Semiconductor Energy Laboratory Co, Ltd, Japan; Prof Alexander Michaelis, Fraunhofer Institute of Ceramic Technologies and Systems, IKTS, Dresden, Germany; Prof Jean Marie Tarascon, Collège de France in Paris, France; and Prof Cato Laurencin, University of Connecticut, USA.

Dr Amy Khor, Senior Minister of State for the Environment and Water Resources, addressed close to 700 delegates from academia, industry and research institutions from more than 46 countries, at the opening ceremony.



Dr Amy Khor at the opening ceremony



Ng: There is a lack of coordination in providing affordable homes

AFFORDABLE HOUSING REPORT BY REHDA INSTITUTE

Date: 14 July 2018

The Real Estate and Housing Developers Association Malaysia (Rehda) Institute recently released its 'Affordable Housing Report', identifying the structural problems involved and holistic approaches required to address them.

"At the moment, there is a lack of coordination between the public and private sectors in providing affordable homes," said Rehda Institute chairman Datuk Jeffrey Ng at the media briefing session.

The nine structural problems identified are a fragmented playing field between public and private sectors, rigid housing policies, unsuitable location, land scarcity, cross subsidies that purportedly made houses more expensive, rising material costs, unproductive use of public funds that cause oversupply, lower financial approval rate for lower income groups, and lack of latest market data.

This has resulted in the mismatch of

supply and demand, leading to tens of thousands of unsold units.

As of the first quarter of 2018, Malaysia recorded a total of 23,599 in residential overhang—most contributed from properties worth RM500,000 and above, from Selangor, Johor and Penang. The study added that the unsold units under the bumiputera quota, which are not released to the open market, add up to holding costs and overall costs of development.

One of the report's proposals was for the government to set up a Special Purpose Central Agency (SPCA) under the housing ministry to provide a holistic master planning for affordable homes. "The SPCA should streamline the policy formulation based on household income and demographics in respective states and local areas," said Ng.

Other proposals include reviewing the government's role in affordable housing, rental housing and financing solutions for a sustainable social and public housing system.



Winners at ARCHIDEX Nite



ARCHITALENT champion John Chua



Biz@ARCHIDEX



Construction+ was a supporting media partner for this event

ARCHIDEX 2018

Date: 4 July 2018

The 19th edition of the International Architecture, Interior Design & Building Exhibition (ARCHIDEX) featured more than 550 local and international exhibitors, drawing some 36,500 delegates and visitors. A new attraction this year was the exhibit zone for 'Building Smarter' with industrialised building systems (IBS).

Jointly organised by the Malaysian Institute of Architects (PAM) and C.I.S Network Sdn Bhd, ARCHIDEX 2018 was held in conjunction with the annual Kuala Lumpur Architecture Festival (KLAF).

"ARCHIDEX is known as the region and Southeast Asia's gathering place that

unites a wide variety of people with common interests and objectives," said C.I.S Network President Datuk Vincent Lim. "With the Belt and Road Initiative implementation and projects, the spill-over effects such as to the built and design industry will open up new opportunities."

"We are deeply honoured to have with us established and emerging architects and designers who have graciously accepted our invitation to share their works with us. It is our hope that their message would uplift and encourage us to delve deeper and go further in designing better buildings, better architecture for future communities," said PAM President Ar Ezumi Harzani Ismail.

The extensive programme included the

DATUM Conferences, The Focus Forum @ ARCHIDEX and Biz@ARCHIDEX, covering the latest trends, technologies and solutions in the building and design industry.

Student competition ARCHITALENT was back for the second year with 15 finalists presenting their sustainable design solutions, based on the theme 'Space'. ARCHIDEX also collaborated with architecture students from UCSI (School of Architecture & Built Environment) to design and build the New Product Award and Green Dot Award gallery display area.

Construction+ was a supporting media partner for this exhibition.



CHAN SEONG AUN

The newly-elected president of the Malaysia Green Building Confederation (MGBC), Ar Chan Seong Aun, has almost three decades of experience in the building design industry and a career-long love affair with sustainability advocacy.

Chan is the principal architect of Arkitek Daya Seni Sdn Bhd, sitting on the Board of Architects Malaysia since 2011, and serving in various roles in the Malaysian Institute of Architects (PAM), including as president (2013-2015).

As one of the founding members of MGBC, he has served as its pro-tem committee secretary general in 2007 and its secretary from 2009, when it was formally registered, until 2011. Chan is a qualified Green Building Index (GBI) trainer and facilitator. He is also a trainer for building information modelling (BIM) and industrialised building system (IBS).

You are considered an expert in sustainability design for architecture and Green Buildings. How did you first get interested in sustainability issues?

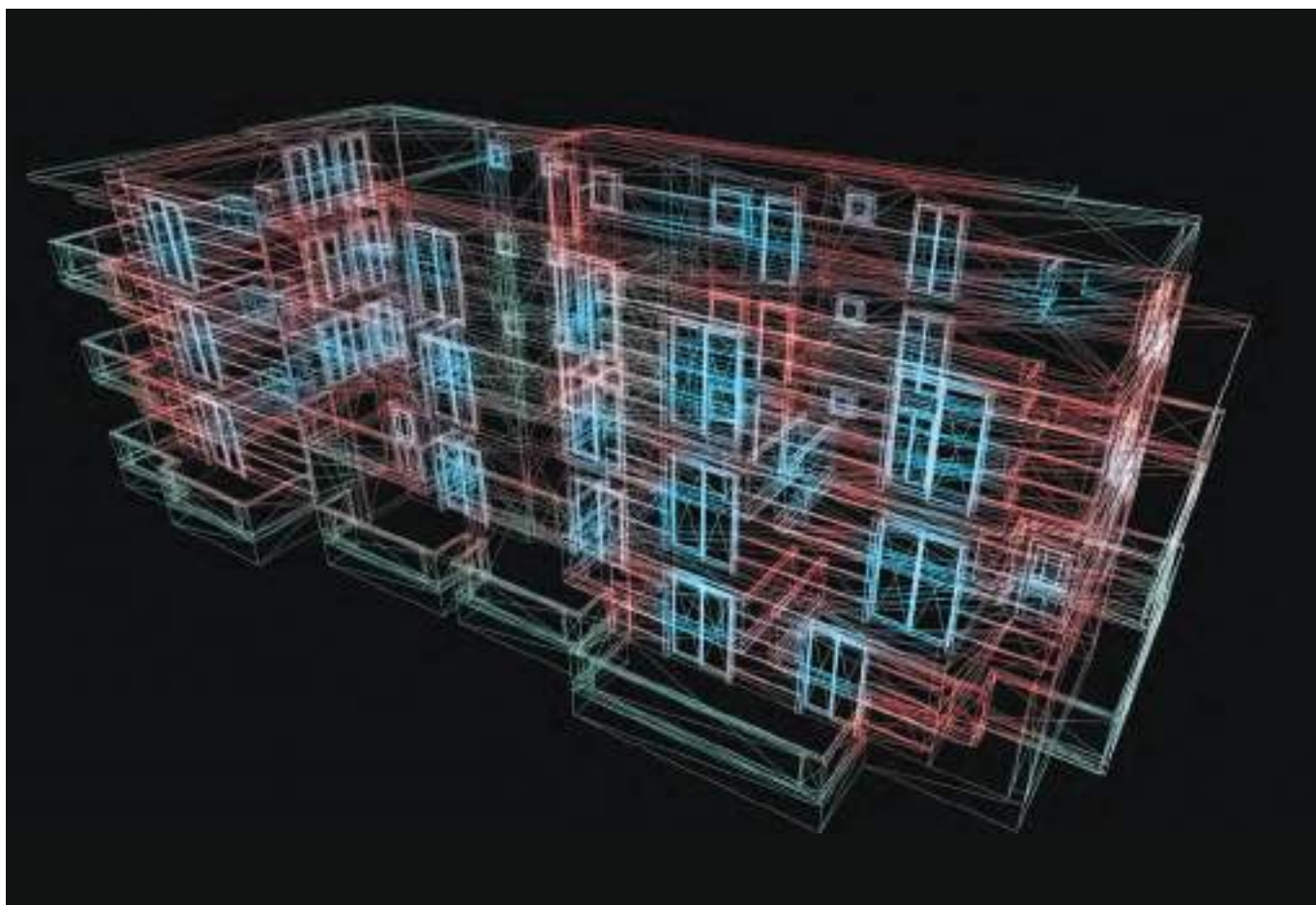
I did my master's degree at Victoria University of Wellington, New Zealand, in sustainable design. The global oil crisis in the 1970s had taught us how important energy is, so the topic of my research was on low-energy school design. I produced a working paper for the New Zealand education board on how to improve sustainability of heating systems in primary schools.

I guess my interest in sustainable design continued from there.

You have worked on sustainability tools for the local construction industry, specifically with the development of the GBI. Why is that important for our local building industry?

My first involvement was as a member of the SIRIM committee for the development and update of MS1525:2006, the code of practice on energy efficiency and use of renewable energy for non-residential buildings.

In 2008, before MGBC was officially registered, I was involved in the setting up of GBI with Ar Dr Tan Loke Mun. The GBI rating tool for non-residential buildings was drafted by Ir Chen Thiam



MGBC's 'Cooling Building' campaign aims to reduce the cooling load in Malaysian buildings to make them more energy-efficient

If we can bring down the peak power requirements for buildings in Malaysia, it can reduce the number and size of power plants needed.

Leong, while I helped draft the tool for residential buildings.

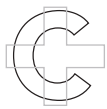
for our architects and engineers to develop sustainable building designs.

We looked at existing Green rating tools throughout the world. The US had LEED, Australia had GREENSTAR, and Singapore had Green Mark. These tools were advancing and entering Malaysia, but none were very suitable for our local context. LEED, for example, is a temperate country tool and follows the US building code. Singapore's Green Mark focuses heavily on high-rise buildings, whereas in Malaysia, landed properties are still more common. As a result, we had to develop our own tool, with our own set of stringent standards,

Since then, about 10 years on, we have 200 million square feet of registered GBI buildings. The uptake is encouraging, although it is still not to the level that we want it. We made it a voluntary tool at the time. We did not want it to be made compulsory so quickly, as that might cause people to cheat to qualify for the ratings.

As president of MGBC 2018/2019, how will you push for Greener buildings in Malaysia?

In May 2018, the MGBC has launched the 'Cooling Building' campaign, a



The Alila 2 in Penang is going for GBI gold



concentrated multi-pronged approach to reduce the cooling load in Malaysian buildings to make them more energy-efficient.

We want building owners to be able to achieve the minimum standards of MS1525, which is by-law 38A of the uniform building by-law 1984 (UBBL). By-law 38A requires all new buildings to be designed to reduce heat gain and is a mandatory requirement for all buildings wishing to be GBI-certified.

Although the UBBL amendment was passed in 2015 on the federal level, to date, only three states have passed the by-law 38A into law—Penang, Selangor and Terengganu. We will work with Construction Industry Development Board (CIDB) to train contractors in these states to install the insulation correctly and to educate local authorities and developers on how to

implement by-law 38A.

During this campaign period, until mid-June 2019, MGBC will also meet up with the remaining states in Malaysia—beginning with the bigger states—to advocate for by-law 38A and persuade them to pass it in their respective legislatures. When gazetted, the by-law will be implemented and enforced by local authorities at the local level.

We will also be continuing our usual campaigns and GBI facilitator courses, as well as training of professionals. We are working towards achieving net-zero buildings and striving for higher standards.

Why is it so important to keep our buildings cool?

With Malaysia's tropical climate, some 60 per cent of the electricity load in office buildings is from air-conditioning. Electricity is generated by power

I foresee a huge impact on the building industry once this by-law is legislated throughout the country and our buildings become cooler, more comfortable and more energy efficient.



Chan (left) with immediate past president Ir Ahmad Izdihar

stations—which burn fossil fuels, such as coal, gas or oil to power them—and these are the largest carbon dioxide producers of the country. If we can bring down the peak power requirements for buildings in Malaysia, it can reduce the number and size of power plants needed.

For double-storey houses, 50 per cent of the heat goes in through the roof, whereas for high-rise buildings, 70 to 80 per cent of the heat comes from direct sunlight through the windows.

Hence, under by-law 38A, all new buildings have to be designed to reduce heat gain through the roof (to less than 25 watts per square metre) and windows and walls (to less than 50 watts per square metre). This can be achieved through proper insulation, building orientation, external sunscreens and low-E glass, which allow daylight in but

blocks heat.

How does this affect existing buildings in Malaysia?

Currently, existing buildings make up less than 10 per cent of submissions for GBI. If these buildings are not properly designed, they become heat sinks. With by-law 38A legislated, by 2020, all existing, renovated and new buildings have to be designed according to the law.

I believe it is a matter of timing. I foresee a huge impact on the building industry once this by-law is legislated throughout the country and our buildings become cooler, more comfortable and more energy efficient.

What are some of the obstacles faced in the push for cooler buildings?

Naturally there will be some resistance from developers. The major developers

support the idea generally, but they don't really understand the concept of cooler buildings and sustainability or how to go about it. The key is education.

For a developer, where costs are concerned, they have to decide whether to offer customers air-conditioning units or roof insulation. Air-conditioning units may be more visible and tangible in the short term, but operationally, it requires electricity and long-term maintenance, and hence, higher costs.

There is also the perception that sustainable buildings cost more to build. In the early years, there was a 20 to 30 per cent increase in cost. But based on our records, after 100 million square feet of GBI-certified space, as of three years ago, a GBI platinum building only saw an increase of 5 to 8 per cent in total construction costs, while certified buildings did not see any extra costs! So, it can be done affordably; it's a matter of good design.

In your architectural practice, what are some Green projects that you have worked on?

We did Saville @ Melawati, which is one of the first few GBI gold residential buildings in Malaysia.

We are now finishing off Sandilands condominium and Alila2 in Penang. We are going for GBI gold, which would make these the pioneer buildings in Penang to achieve this rating. The Penang government actually gives incentives to developers of GBI-certified buildings by reducing developer charges from RM21 to RM7 per square foot. But I believe that if we really believe we can do something for the environment, even if there are no incentives or savings offered, we should still take it up. **G**



IN THE SPOTLIGHT

Like a human body, buildings have to be kept at an optimal health level to operate efficiently



QUEK YANG THEE

As the assistant programme chair of the Diploma in Green Building Energy Management (DGEM) at Republic Polytechnic's (RP) School of Engineering, Quek Yang Thee has launched several programmes to expose, encourage and inspire students to the sustainable energy and Green building industry.

How did you first get involved in Green sustainable technology?

My first Green and clean project in RP was about 10 years ago. The project involved the installation of a 30Wp photovoltaic (PV) solar farm on one of the polytechnic building's rooftop. I enjoyed working on the project and using PV panels for other projects, such as converting an old buggy used by our estate department to a solar-powered buggy that can be tele-operated.

As an electrical engineer by training, the responsibility towards these Green energy projects slowly turned into a passion and a strong belief that Green

sustainable technology is the way to go for the future of mankind. Buildings play a major role in our lives—if they are well designed and constructed with the correct Green sustainable technology, buildings will be able to perform their tasks with optimised resources.

What are the major challenges faced in the implementation of Green technology in our buildings today?

We can analyse this from a few angles. Building owners must first understand that most of the cost of the whole building life cycle comes from operations, not construction. Thus, when doing feasibility studies to retro-fit systems for

improvements, it is important to keep in mind that, eventually, there will be return on investment.

The mindset of “If it ain't broke, don't fix (replace) it” is hard to change. The resistance to upgrade to a more efficient or Greener system is greater if the existing system is still functioning. A simple example would be to convince a user to replace a CRT TV that has been working very well for the past 20 years to an LCD TV. We will need to help him to work out how much he can save on the monthly electricity bill and what the payback period is. On top of the money saved, he will also get a bigger screen,



Republic Polytechnic is a Green campus, with many learning opportunities

clearer resolution, availability of digital TV and many more features.

The other challenge is that some of the benefits of a Green building are not tangible. In a Green building, people will likely be happier and healthier with brighter light, better air filters and more greenery; this will indirectly relate to better productivity in their work. This is an important factor that building owners should take into consideration, although it is hard to put a dollar value to it.

Having said these, mindsets on the benefits of Green buildings are changing. The BCA Green Mark criteria is one such effort to educate people that the benefits of Green buildings are way beyond just reduction in energy, water and material resource usage, but also include reduction of potential environment impact, improvement of

indoor environmental quality for better health and well-being, and clearer direction for continual improvement.

You've mentioned that most of a building's expenses come from operational costs. How does Green technology help improve facility management?

Although the simplest definition of a building is four walls and one roof, it is much more than that. A building is like a human body. We need to keep it at an optimal health level so that it can perform its required tasks with minimum effort and maximum efficiency.

Traditional facility management of a building has moved on to Green building management. Green energy engineers are like doctors—their roles have evolved from just giving treatment to solve and cure problems, to preventive measures

to keep the body healthy before problems occur.

With evolving technologies, especially in renewable energy and Internet of Things (IoT), the technologies needed to maintain a building are also evolving fast. I see a shift of a Green engineer's job from reactive to preventive to even predictive maintenance. There are so many different aspects of a building, each with different features and standards, and engineers will have to make the best decision based on the resources in hand.

In your capacity as assistant programme chair, what are some of the key lessons or values you are trying to impart to the new generation?

Our current generation of students are born in an era when Singapore's power infrastructure is already well established. Resources such as electricity and water that are channelled directly into their houses are often taken for granted. A few years ago, I did a casual survey with my students by asking them what the most important infrastructure in their house was, and most of them told me that it was the Internet network access. I reckon this is because there are so few blackouts or droughts in Singapore that the younger generation think that electricity and water will always be available to them.

Thus, one of the values I want to share with them is to appreciate the things they have around them, and that these things that they have taken for granted might not be there forever. Even though there are great advancements in technology to harvest clean energy more efficiently, if users were to abuse these resources, then no matter how much there are, there will never be enough.

I try to help the students reflect on how they can be more energy conscious themselves and help to Green their home even with small steps. I encourage them to slowly expand their influence to people around them, to look around them and to think of Green innovations that may help the community with the

knowledge that they have learnt in the course.

One such project we have is the Greenovate programme, a collaboration with Building and Construction Authority (BCA) and Johnson Controls Pte Ltd. Under this programme, our students returned to their secondary schools to help their alma mater prepare for their Green Mark certification. The students will perform a Green Mark gap analysis before putting up recommendations with a presentation to the school panel. Our students will also mentor the secondary school juniors to do a basic level of Green building audit, while exposing them to Green building measurement technologies. This programme has benefitted 18 schools since its launch in 2016.

How else does RP's Green building curriculum help prepare students to be Green-industry ready?

RP itself is a Green campus, with many learning opportunities. The Green campus tour is one of the initiatives that I have come up with to help students be more aware and appreciative of the Green features around them—automatic doors, sensor-operated taps and temperature-monitoring air-conditioning—everyday features that not many people recognise for their

resource-saving purposes.

I keep close tabs on industry developments and ensure that the modules our students take are well designed and relevant to prepare them to work in the Green building sector.

Our curriculum focuses on energy management of the building. The pedagogy that we have adopted trains students who step out of this diploma as problem solvers. Students are given problem statements in class that are presented in real world context, and, working in teams, they are required to explore, analyse and develop a solution or response to the problem statement. In the process, they draw on their prior knowledge and integrate new knowledge and skills to apply their collective know-how in tackling the issues.

I have worked with my team to participate actively in Green building projects and work closely with industry partners. All students are required to go for industry attachments to have a hands-on experience on what it is like to work in the Green industry.

I also encourage the students to give back to the society by taking on community projects. So far, we are fortunate to have



Bridging the gap between students and the industry



The Green campus tour helps students be more aware of Green features around them

Experience learning—where students learn from beyond their textbooks, classrooms and laboratories—is something we always try to incorporate.

engagements with community centres and welfare organisations that give our students opportunities to help others meaningfully in the course of their study. The projects that we have worked on range from building and energy audits to feasibility studies of Green technology to prototyping of indoor vertical greenery.

How are hands-on experiences incorporated in the curriculum?

Experience learning—where students learn from beyond their textbooks, classrooms and laboratories—is something we always try to incorporate in our lesson plans. In my years with RP, I have managed the installation of three PV systems on campus. Students get an opportunity to go up to the restricted rooftop of a building, where our solar farm installation is, to see, touch and even lift the solar panel to capture the sun rays at the best angle.

In the management of buildings, we have worked with our campus's Estate Office

to allow our students access to the real working environments to support their learning. Under close professional supervision by our technician colleagues, the students get to enter the actual high-tension/low-tension electrical rooms, transformer rooms and backup generation rooms to see the equipment that are powering our campus.

We have also set up a lab environment where the students can trip the circuit breakers, something that they will not be able to do so in an unsupervised environment without running the risk of getting a scolding.

What are the prospects for graduates of such Green building programmes?

Even though the building industry has evolved so much over the past decades, many parents still have the mental picture of construction workers working long hours under the hot sun. Thus, naturally, both parents and prospective students have a perception that it is


going to be a very tough job when they graduate from a Green building programme. Not many are aware that with the help of digitalisation, building information modelling, prefabricated assembly and integrated design, the number of hours that workers spend under the hot sun have been greatly minimised.

For a building to be successfully built, it requires many parties to work together. The good thing is there are many options for our students when they graduate, although their choices may be so wide that they can be easily lost. To counter this, we have internship programmes for students to experience the different jobs in the industry. Our partners include solar panel manufacturers, facility management, air-conditioning, façade, building materials, and building automation system and modelling companies.

As building technology constantly changes and improves, students and engineers in this industry will have to keep upgrading themselves. I believe there is a demand for graduates of this diploma with good career prospects, as the building and construction industry continues to grow positively.

As a Green advocate, what are your plans moving forward?

I have achieved the STAR Service Excellence Award and the most recent Young Green Advocate Award. These awards serve as a nice recognition of the efforts that I have put in over the years, but I have much more to learn and to accomplish ahead.

I will continue what I am doing. I hope to expand our Green building gap analysis audit to more building owners and premises as a service to the community and to give our students more real-world learning opportunities. With the help from my DGEM team, I will keep updating our curriculum to bridge the gap between our students and the industry, such as injecting more digitalisation capabilities. 



PROGRESSIVE DESIGN FOR AIR MANAGEMENT SOLUTIONS



Architectural impression of the Al Wasl Plaza with the EXPO2020 logo

After six months of intensive research and development, TROX has created the Golden Diffuser. Laser cut to precision into the shape of the EXPO2020 logo, the gold work of art has been designed for the uniform flow of air diffused in an environment. This bespoke product is presented to His Highness Sheikh Mohammed Rashid al Maktoum, Vice President and Prime Minister of the United Arab Emirates (UAE) and ruler of the Emirate of Dubai.

This is just an example of TROX's tailored solutions with architectural design options for new buildings or refurbishment projects.

With the evolution of technology and innovation in product development, TROX has a variety of product solutions to meet a wide range of standards and requirements. The aerodynamic optimisation of air terminal devices, ventilation units and – filters is an ongoing process at TROX and an important aspect of energy efficiency.

While technical improvement is important, attention to aesthetics and design are not neglected. Futuristic-looking diffuser fronts have been designed by renowned architects and consultants to blend in with ceilings, forming an attractive design element in their own right.

Apart from air distribution, air treatment and air discharge, TROX also sees to the control systems, including



The Golden Diffuser: laser cut to precision

fire protection and smoke extract components, with TROXNETCOM. A ventilation and air-conditioning system from a single source also means all components are complementary to each other, reducing interface issues and minimising the design effort.

TROX has established itself as a leading manufacturer of air-conditioning components and systems worldwide. The company is committed to offering high quality products and services, which adhere to a Quality Management System that is ISO 9001:2008 certificated by an independent certification body.

Brought to you by **TROX MALAYSIA**



Lobby



FOUR SEASONS PLACE KUALA LUMPUR

The newest addition to the city's skyline—the second-tallest skyscraper in Malaysia—stands adjacent to the iconic Petronas Twin Towers.

Four Seasons Place Kuala Lumpur is a mixed commercial and residential building that comprises the Four Seasons Hotel and Residences upon a retail podium.

Looming tall at 342.5 meters, the slender tower's height-to-width ratio of 10.5 posed its share of engineering challenges with strong cross wind effects and significant wake vortices. The building drift and human comfort issues had to be addressed while ensuring that the tower's space planning is not negatively impacted.

The extremely tight site space for logistics was also an issue, and this was resolved by the use of the crane for material hoisting by night and construction usage by morning. The hoist outlet was skipped for alternate floors to reduce space occupied for early interior design works completion. Efforts were also made for quicker construction of the fire lift to replace the crane so that the remaining hoist-occupied spaces could be completed.

The low-E glass curtainwall wrapping the tower is fully fabricated in China for better thermal and acoustic control and ready to be installed on site.

The structural system of the podium was changed from reinforced concrete to steel to accommodate additional floors for services, while reducing loading on the existing structure. The belt trusses in the higher tower floors were also converted from reinforced concrete to steel trusses to speed up the tower construction.


All residential floors come with acoustic mat to cut off noise from the upper and lower floors. All pool structures are built on isolation pads to cut off noise from pool activities to the lower floors, while acoustic deflectors are designed to reduce noise generation from the outdoor chiller.

A PEEK OF LUXURY

As this is the Four Seasons' first urban hotel in Kuala Lumpur, the interiors are designed to be reflective of its position, locality and culture with a personalised sophisticated look.

The hotel's understated luxury is executed within balanced volumes, forms, textures and tones—from wood motifs and flora-inspired sculpture to artworks of local artists and Malay-style geometric-patterned air-conditioning grills—reflecting the warmth and depth of the country's peoples, culture and heritage.

The marble is sourced from China and Italy, while every piece of stone has been carefully selected and dry-laid prior to on-site installation to preserve the exclusivity of the natural stone character. More exclusive materials, such as the one-pierce cow hide for bed headboards and stingray skin cupboards, have been imported from Europe.

The retail podium, The Shoppes at Four Seasons Place, includes a selection of luxury retail and dining outlets spread over six floors. 



Grand dining



Lounge



Geometrics and local-inspired patterns



Highest residential swimming pool



The second-tallest skyscraper in Malaysia



Luxury retail and dining options at the podium



Project under construction in 2016

PROJECT DATA

Project Name
Four Seasons Place
Kuala Lumpur

Location
Kuala Lumpur, Malaysia

Completion Date
July 2018

Building Height
77 storeys

Number of Rooms/Units
Hotel: 209 rooms
Private residence: 242 units

Client/ Developer
Venus Assets Sdn Bhd

Architecture Firm
NRY Architects Sdn Bhd

Principal Architect
Ar Yew Bu Hwa

Interior Design Firm
Wilson Associates

Principal Designer
Susan Isaacs

Civil & Structural Engineer
Meinhardt (Malaysia) Sdn Bhd

Mechanical & Electrical Engineer
KTA Tenaga Sdn Bhd

Quantity Surveyor
Arcadis (Malaysia) Sdn Bhd

Lighting Consultant
Light Cible Sdn Bhd

Landscape Architect
Coopers Hill

Main Contractor
CRCC Malaysia Bhd

Interior Fit-Out Contractor
AB Concept

Images
Four Seasons Place
Kuala Lumpur

When considering lifts
for your projects.

Enjoy more choice and comfort with our platform lifts
designed for the home environment.
Download our brochure at <http://www.aritco.com/architectbrochure>

ARITCO™



SUN POWER AUTOMATION SDN BHD (639503-W)
SUN POWER SYSTEM SDN BHD (799462-W)
A Sonepar Company



LOW VOLTAGE

- ◆ CIRCUIT BREAKER
- ◆ CONTACTOR & TOR
- ◆ INVERTER
- ◆ WIRING DEVICE
- ◆ PROTECTION RELAY
- ◆ CAPACITOR

MEDIUM VOLTAGE

- ◆ LIGHTNING ARRESTER
- ◆ SURGE ARRESTER
- ◆ DISTRIBUTION BOARD
- ◆ SWITCHGEAR
- ◆ TRANSFORMER



Indelec

DELAB

ELECTRONICON
always in charge

OBO
BETTERMANN

LS

ESTA

CHHG

SANIL
CONSTRUCTION

GEBE

KAMPUNG TELUK MEMALI MOSQUE

Abandoned for the past 20 years, the 108-year-old Kampung Teluk Memali Mosque in Ipoh, Perak, has been given a new lease of life through conservation efforts spearheaded by ATSA Architects.

The historic mosque—located near the banks of the Perak River and close to the tomb of a former sultan—is believed to have been built in 1908 and completed in 1910. An additional annexe block, known as *balai lintang*, was built in April 1948, based on the date carved on its staircase.

Back in 2011, a study was done on the mosque's distinctive traditional Perak Malay architecture by faculty members of Politeknik Ungku Omar. The dilapidated building was found to be still structurally sound, with a few intact elements, and a proposal was made to relocate and restore it as a house of worship to preserve the country's built heritage legacy. Permissions and agreements were secured from the villagers and local and religious authorities for the proposed works.





NEW BEGINNINGS

Earthworks for a new platform at the mosque's new home in Bandar Seri Botani began in 2016. Following timber identification tests and a dilapidation survey by the Malaysian Timber Industry Board and registered conservator consultants, the dismantling and relocation process began.

Preliminary works involved site clearance and preparation, coding and numbering of each wooden component and the transfer of the old *mimbar* (pulpit) to a safer location. The old *kolah* (ablution) tank was relocated to the new site using a crane and loader.


Next, the workers carefully disassembled the building components, beginning with the roof structure—consisting of zinc and asbestos-free sheet roofing, fascia boards, purlins, rafters and trusses—the wall panels and tie beams, along with the main and supporting columns. Some of the wood components were brought to a timber workshop in Chemor, Perak, for treatment, while others were stored on site, under a canopy tent. At the same time, new replacement timber components were made to order in a factory in Terengganu.

About two months later, the building components and structures were reinstalled at the new site. The process was done sequentially with 23 chronological steps—from the column bases to the rafters and wall panels. For the final roof finish, the singgora tiles were laid on the roof structure, on top of the roof purlins. The finishing touches included timber ceiling strips, decorative wall panels, painting works, fascia boards, lattice arch, *serambi* and window balustrade, timber flooring in the prayer hall and the reconstruction of the *anjung*.

These works, including construction of the new *balai lintang* and electrical wiring, were finished in March 2017, while the toilet building and landscape elements were completed on site by September 2017. The Certificate of Completion and Compliance was awarded in January 2018.

HERITAGE GEM

The conservation of the Kampung Teluk Memali Mosque was made possible through donations and contributions from various organisations and individuals. The restored building can accommodate up to 150 worshippers and is now being utilised by the local community as a *surau* for daily and special prayers. The gazettement process of its heritage status is underway from the Department of National Heritage.

"We sincerely hope that our effort will become an eye-opener and pave to the conservation efforts of many heritage and historical buildings and sites in our country," says Ar Azim A. Aziz, CEO of ATSA Architects. "It shall be our collective and inherent duty to protect and safeguard every built heritage legacies left by our forefathers to be passed down to our next generations." 



A 108-year-old heritage worth preserving



Treating and reassembling step by step



Drawings of the restored mosque





Interior view of the main prayer hall



View of the mosque at dusk

PROJECT DATA

Project Name
Relocation, Conservation and Preservation of Kampung Teluk Memali Mosque

Location
Taman Seri Bougainvillea, Bandar Seri Botani, Ipoh, Perak, Malaysia

Completion Date
January 2018

Site Area
2,023.43 square metres

Gross Floor Area
236.54 square metres

Client/Owner
Council of Islamic Affairs and Malay Customs of Perak (MAIPK)

Design Consultant
ATSA Architects Sdn Bhd

Principal Consultant
ATSA Architects Sdn Bhd

Architecture Firm
ATSA Architects Sdn Bhd

Principal Architect
Ar Azim A. Aziz

Civil & Structural Engineer
MNH Consultant Sdn Bhd

Quantity Surveyor
FLA Jurukur Bahan Sdn Bhd

Timber Consultant
Malaysian Timber Industry Board (MTIB)

Landscape Architect
ATSA Architects Sdn Bhd

Conservation Consultant
Dr Jaki Mamat, Universiti Sains Malaysia

Main Contractors
PU Profile Sdn Bhd; Shane Global Services; Sohig Enterprise

Images
Azahari Salleh; Mohd Nizam Mohd Zan; M. Haziq Zulkifli

Halton Completes the Circle!



By launching the widest range of Air Handling Units, specifically designed for the ventilation of professional kitchens, Halton completes the circle and provides the most efficient solutions for all stages of your kitchen ventilation, from collection, discharge of the air to atmosphere, through to introducing clean, healthy replacement air.

With Halton's PolluStop exhaust units eliminate grease and reduce odours, moisture and smoke concerns. The inevitable headaches linked to fire safety, hygiene and neighbourhood complaints become history. Just establish your kitchen wherever you want!

With Halton's Aerolys supply units benefit from the cleanest and healthiest replacement air. We take control and provide massive savings by combining heat recovery and the most efficient airflow management system: M.A.R.V.E.L.

To discover more, visit us online or contact us at Halton Asia
+60 3 5622 8800.



www.halton.com/foodservice
Enabling Wellbeing

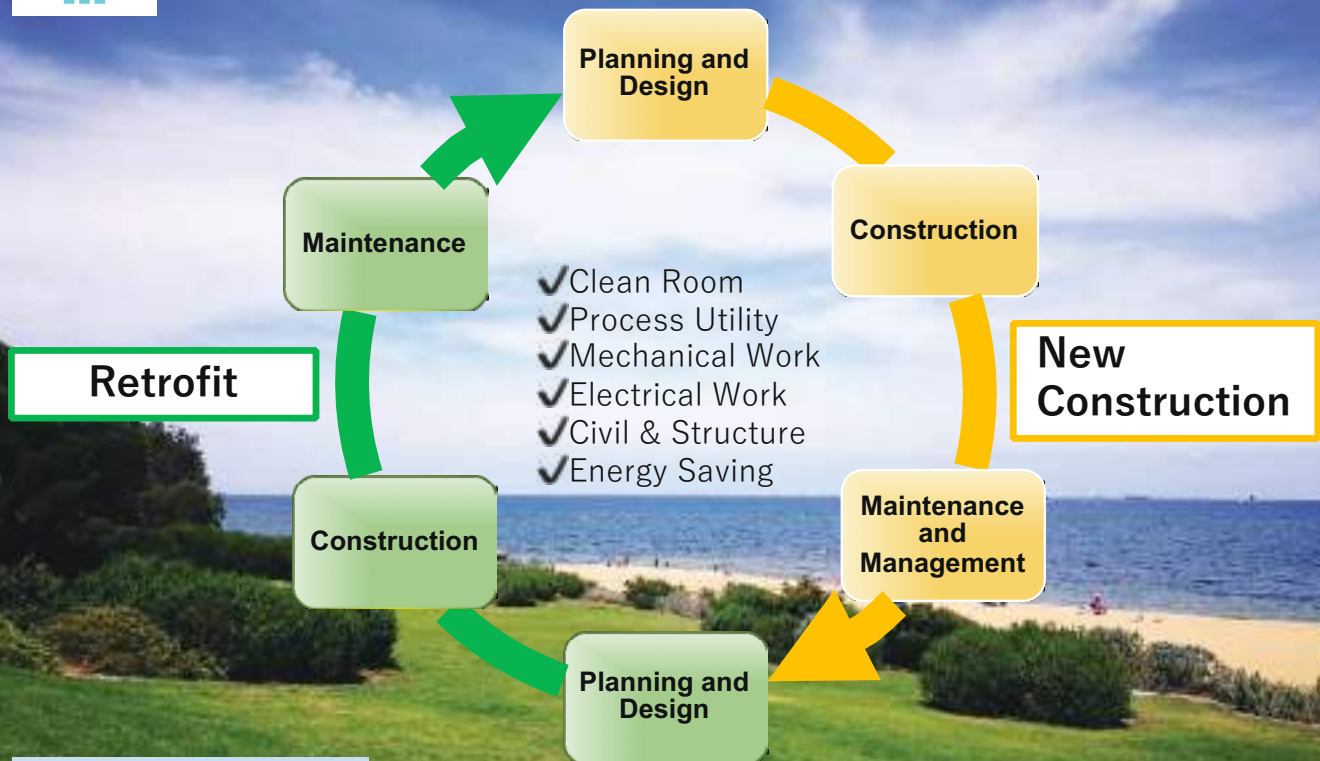


Halton



T.T.E. ENGINEERING (M) SDN. BHD. (64160-K)

Takasago Thermal Engineering Co., Ltd.



Contact:
enquiry@tte-net.com
+603-7955 5972

Branch :
PJ. Penang. JB. Melaka.
Kuching. Kulim. Batu Kawan.



A series of cascading lines and rectangular frames create a distinct architectural expression

SUNWAY GEO RESIDENCES

This project is located on a 6.8-acre land within the integrated development of Sunway Geo at Sunway South Quay.

The two residential towers are designed within strict geometric parameters, combining with rhythmic façade elements, to create a clean-cut silhouette. The disposition of solids and voids and series of cascading lines and frames create a bold architectural statement rendered by shadow and light.

The residential units range from two-bedroom to four-bedroom units. As space is a scarcity in a high-rise apartment, additional storage areas for residents are provided at the bottom of the tower block.

To maximise views, all units are planned along a double-loaded corridor. As the lake view is located in the west, cantilevered cascading lines from the top to the bottom of the tower

help provide shade, while maintaining views. A deep recess is introduced between the units to create a passage for light and natural ventilation.

A wide range of facilities are provided on a 2-acre landscaped recreation deck above the podium car park, below and on top of the tower block, and also surrounding the building block at ground level. One tower adopted the transfer slab system to accommodate the TNB substation below it, while the other tower allowed the shear wall to continue to the ground level, reducing structural costs substantially.

The car park podium is designed to be separated from the main tower block, with a link bridge to both towers, for efficiency and economic sense—this eliminates the need for a basement, thus minimising the amount of soil removal from site. In addition, the project is directly linked to a commercial development next door via a covered pedestrian bridge. 



Play of geometric forms and patterns on the recreation deck roof



Interplay of forms and shadows creates depth



Half-court basketball court at ground level

PROJECT DATA

Project Name
Sunway Geo Residences

Location
Sunway South Quay,
Bandar Sunway,
Selangor, Malaysia

Completion Date
26 April 2017

Site Area
27,518.41 square metres

Gross Floor Area
61,500 square metres
(excluding car parks)

Building Height
35 storeys; 121.9 metres

Number of Units
472

Client/Developer
Prosper Revenue Sdn Bhd
(Sunway South Quay Sdn Bhd)

Architecture Firm
Pakatan Reka Arkitek

Principal Architects
Ar David Teh;
Rochana Deshpande

Interior Design Firm
X Dimension Sdn Bhd

Principal Designer
Ian Chew

Civil & Structural Engineer
Perunding ACE Sdn Bhd

Mechanical & Electrical Engineer
J Roger Preston (M) Sdn Bhd

Quantity Surveyor
Econcos Consultants Sdn Bhd

Landscape Architect
PTA Design Sdn Bhd

Main Contractor
Awangsa Bina Sdn Bhd

Interior Fit-Out Contractor
X Dimension Sdn Bhd

Images
ACT Studio; Hanif Chan



The station's vent shaft integrates with the streetscape

C936 BENCOOLEN STATION

The Downtown Line is the longest underground mass rapid transit line in Singapore running on automated, driver-less trains.

Its construction, done in three segments, was one of the most challenging projects for Singapore's Land Transport Authority (LTA), with the line's tunnels traversing through varied ground conditions, undercrossing the Singapore River, and excavating under and close to many existing buildings and roads in the city.

Downtown Line 3—consisting of 16 stations, including Bencoolen Station—runs from Expo in the east to Fort Canning Station in the downtown area.

DEEPEST MRT STATION

Bencoolen is located within the heart of Singapore's Cultural Civic District, near the junction of Bras Basah Road. It is Singapore's deepest MRT station with tunnels built 43 metres below ground (equivalent to a 14-storey building) and comprises six levels—the concourse, upper mezzanine, lower mezzanine, platform and two service levels.

Situated within a confluence of many buildings and existing

rail tunnels, the station had to be constructed at such depths to avoid existing infrastructures at ground level and two existing underground rail lines. The result: a deep and narrow underground station integrated within an existing building.

With the buildings on both sides of the station along Bencoolen Street located just 25 metres apart, the station was designed to be 22 metres wide and 140 metres long. As the rail tunnels are just 1 metre above the existing North-East Line's tunnel, and undercrossing the North-South Line and Circle Line operating lines at 8 and 3 metres, respectively, the construction process also had to be carried out with precision.

Hundreds of monitoring instruments were installed in these live tunnels and monitored round-the-clock to ensure the construction did not affect the live rails and train operations. There was also the challenge of excavating in very hard ground conditions, and mechanical and chemical means had to be used to split the boulders found underground.

Due to the tight space constraints, Bencoolen Street had to be closed during construction for the safety of motorists and pedestrians. As the station is also located near high-rise buildings in the area, the working hours were constrained. To



Wall cladding depict layered earth striations



Architecture impression of concourse level




Artwork installation on B1 subway level

minimise inconvenience, LTA and contractors worked closely with the hotels and tertiary institutions in the area to manage noise and environmental issues.

In a busy, prime urban area, which is rich in cultural heritage, careful attention was paid to the location of at-grade structures, such as entrances and ventilation shafts, to enable the safe preservation of adjacent buildings' façades, while creating a vibrant, comfortable walking environment at street level.

Station Entrance A, which is integrated with the NAFA Tower Block above the station and the B1 underpass link with Singapore Management University (SMU), showcases artwork by students of Nanyang Academy of Fine Arts (NAFA). Entrance B of the station has a glass and frame retro-design to complement the adjacent Hotel Rendezvous' colonial image. An underground unpaid linkway connects to the Circle Line's Bras Basah station through SMU's basement.

The interior of the station is visualised to echo the layered earth striations of the nearby Fort Canning, emphasising the depth of space. The passenger lifts are clad in maroon-tinted glass walls to enhance commuters' experience of descending into the ground. 

PROJECT DATA

Project Name
C936 Bencoolen Station

Location
Bencoolen Street, Singapore

Completion Date
21 October 2017

Gross Floor Area
20,455 square metres

Building Height
6 levels; 43 metres (below ground)

Government Implementing Agency
Land Transport Authority (LTA)

Architecture Firm
Aedas Pte Ltd

Principal Architects
William Chee; Ario Santoso

Civil & Structural Engineer
Arup Singapore Pte Ltd

Mechanical & Electrical Engineer
AECOM Pte Ltd

Main Contractor
Sato Kogyo Pte Ltd

Images
LTA



THE BROWNSTONE

The Brownstone is an executive condominium project, comprising eight blocks of 10- and 12-storey residential apartments with 638 units. The brown sandstone-like textured façade and 'jetty' balconies are inspired by New York Brownstone row houses.

A key distinctiveness of this project is the conscious use of building technology that is both efficient and sensitive to the environment—specifically, the use of advanced concrete Prefabricated Prefinished Volumetric Construction (PPVC).

The application of concrete PPVC for this project is likely the world's largest and first of its kind for a large-scale private residential development. Some 5,000 building modules were prefabricated offsite and subsequently assembled onsite. This ensured stringent quality control and increased productivity by more than 40 per cent, compared to conventional construction methods.

It was a steep learning curve as there was no precedence to follow for a project of this type, which involves combining multiple modules to form a complete residential unit. Several mock-up units were done for testing and better understanding prior to the full production of the PPVC modules.

There were also logistical challenges. The modules and unit layouts had to be designed to accommodate the maximum sizes that could be transported on trailers on Singapore roads. At the time when the project was in progress, there was also a limited selection of cranes that can offer a hoisting capacity with a tip load of at least 40 tonnes. Hence, instead of conventional tower cranes, a combination of gantry cranes, crawler cranes and mobile cranes had to be used.



Prefabricated and precast building components are used throughout the development



Aside from the extensive use of PPVC for the residential units, precast planks, walls and prefabricated steel structures were used for the carpark, clubhouse, drop-off porch, pavilions and covered linkways. Prefabricated high-quality components contribute to savings in manpower and time on site and reduce heat transmission, debris and accidents during the construction stage.


GREEN AND COOL

The developer also ensured that passive design and sustainable materials, were used to enhance energy and water efficiency and achieve a better indoor environmental quality.

For example, most of the units are oriented along the north-south direction to minimise east-west solar gain. The extensive cantilevered and staggered balconies, which provide a functional semi-outdoor space with panoramic views, also provide sunshading and allow for ample natural light.

As the site is located next to the MRT viaduct, the multistorey carpark is positioned parallel to it as a sound buffer, with a window-less gable end wall directly facing the viaduct. An extensive living green wall helps to screen the side of the multistorey car park facing the development.

The car park building was designed for natural ventilation. This avoided the use of mechanical ventilation and sprinkler systems, translating into reduction of construction and maintenance costs.

Apart from the lush landscaping, hanging bosque and living green walls reinforce the sense of being close to nature. The landscaped sky deck and gym on the roof of the multistorey carpark overlook the 50-metre lap pools and beyond. 



A green wall screens the multistorey car park from the residences



Cantilevered, staggered balconies provide shade and natural light



A sense of being close to nature



PROJECT DATA

Project Name

The Brownstone

Location

150 Canberra Drive, Singapore

Completion Date

October 2017

Project Site Area

28,562.5 square metres

Gross Floor Area

59,981.25 square metres

Building Height

10 and 12 storeys

Number of Units

638

Developer

Canvey Developments Pte Ltd
(joint venture between City
Developments Ltd (CDL)
and TID Pte Ltd)

Architecture Firm

ADDP Architects LLP

Principal Architect

Tang Kok Thye

Landscape Architect

COEN Design International
Pte Ltd

Green Building Consultant

ADDP Architects LLP

Interior Design Firm

Index Design Pte Ltd

Civil Engineer

KTP Consultants Pte Ltd

Structural Engineer

P&T Consultants Pte Ltd

Mechanical & Electrical Engineer

United Project Consultants
Pte Ltd

Quantity Surveyor

Arcadis Singapore Pte Ltd

Design & Build Contractor

Teambuild Engineering &
Construction Pte Ltd

Mechanical Ventilation & Air-Conditioning Contractor

YiTac (S) Pte Ltd

Electrical Contractor

MES Electrical Engineering
Pte Ltd

Fire-Protection Contractor

Rico Engineering Works Pte Ltd

Sanitary & Cold Water Plumbing

MW Envirotech Pte Ltd

Waterproofing

Maxiseal Pte Ltd

Images

Canvey Developments Pte Ltd



A welcoming community-friendly entrance



The centrepiece stained-glass in the main sanctuary

CHURCH OF THE TRANSFIGURATION

Centrally located at the heart of Punggol town, the Church of the Transfiguration is one of the largest parishes in Singapore.

Standing within an area of about 3,000 square metres, the building optimises the use of space to accommodate the main church hall, lobby, adoration room, auditorium, 15 classrooms, roof-top garden, priests' living quarters, and 140 carpark spaces.

The design of the church centres on the biblical scene of the Transfiguration, which took place on Mount Tabor in Israel. The overall massing of this five-storey building—finished in a sandstone look-alike texture, complete with 45-degree bevelled edged chamfers—symbolises the mountain and exudes a spirit of permanence. An authentic stone from Mount Tabor has also been incorporated into the foundation of the church.

The theme of light is accentuated and expressed through tall vertical windows wrapped around the building, with one feature elevation in white aluminium perforated motifs. The modular windows—louvered, pivoted or fixed—wrapped around the building create a monastic ambience within.

A grand staircase leads up to the main sanctuary, giving a sense of a journey up a mountain.


The three-storey stained glass in the 1,100-seater main sanctuary features the Transfiguration scene—Jesus in the centre, flanked by the prophets Moses and Elijah. Designed by Italian stained-glass maker F.R. Vetreria Artistica, the cross-like artwork forms the centrepiece of the space and draws focus to the altar. The hall is column-less, so worshippers have an unobstructed view at Mass no matter where they sit.



Vertical windows in various configurations

The church is envisioned to be community-friendly; hence, the first storey facing the main street is designed to be relatively opened. The landscaped entrance plaza offers seats for the public to stop and rest. Supporting facilities are weaved into the building with pockets of prayer spaces interspersed on the first and fifth storey. Being a town with many young families, the church is designed with ample family-friendly facilities, such as nursing room, child protection seats at designated toilets, and kid-friendly wash basin, among others.

With a tight and compact site (and budget), the challenge was to juggle the spatial requirements in the brief with the requirements by the authorities, such as minimum carpark provisions. These spatial constraints have translated to design solutions that facilitate dual or flexible use of spaces. The main sanctuary was carefully planned to enable the sacredness of the space to be experienced within a modern architectural context, with meticulous study of line of sight, acoustics, audio-visual, materiality and lighting.

Construction commenced on Feb 13, 2015, and the structural works for the five-storey building and two basement levels, took just two years to complete. 



Rooftop refuge



White aluminium perforated motifs on the façade

PROJECT DATA

Project Name
Church of the Transfiguration

Location
51 Punggol Central, Singapore

Completion Date
24 February 2017

Site Area
2,999 square metres

Gross Floor Area
4,796.26 square metres

Building Height
5 storeys with 2 basements

Client
The Titular Roman Catholic Archbishop of Singapore

Architecture Firm
RSP Architects Planners & Engineers Pte Ltd

Project Architects
Michael Tan; Phae Sia Tan

Principal Architect
Lawrence Ler

Principal Designers
Lawrence Ler; Samantha Tan; Denise Tan

Civil & Structural Engineer
MSE Consultants Pte Ltd

Mechanical & Electrical Engineer
Squire Mech Pte Ltd

Quantity Surveyor
Northcroft Lim Consultants Pte Ltd

Lighting Consultant
Philips Lighting

Main Contractor
Chong Tong Construction Pte Ltd

Images
David Phan

ZWCAD

Create Amazing Things



SACN TO LEARN MORE ABOUT
ZWCAD GLOBAL PROMOTION

Free download at www.zwsoft.com

Email: sales@zwcad.com



Amazing Structure Originated From Simple Design

- | Seamless compatibility with DWG 2018
- | Save budget with perpetual license
- | Customizable UI and toolbar
- | Powerful features and innovative tools
- | Maintenance Plan & Friendly upgrade policy

Free download at www.zwsoft.com | Email: sales@zwcad.com | Powered by ZWCAD Software Co.,Ltd.

Authorized partner across: Malaysia, Singapore, Indonesia, Philippines, Vietnam, Thailand and India.



A play of lights



INFINITY HOUSE

The site for this private residence is on a hill station in Khandala, India, about 150 kilometres from the city of Mumbai.

The primary requirement in the design brief was for the home to embrace as much of the surrounding views as possible. The complex topography—the plot was irregularly shaped and contoured, with a dense undergrowth—posed the biggest challenge in finding the best angle to orientate the building so that every room could face the view. After surveying the area and a lot of deliberation, the architects made their best guess (48 degrees) and started work, only breathing a sigh of relief when they were standing on the first slab of the house.

Taking advantage of the site contours, the house was designed with the ground floor and a storey above and below. At the centre of the ground floor is the living area, flanked by the kitchen and service areas, changing rooms, jacuzzi and guestroom on one side, and another guestroom and the staircase core on the other. The living area opens up to a deck



Games room

and the pool. The first floor houses the bedrooms, while the lower floor is an entertainment area.

The site was ideal for an infinity swimming pool at the core of the villa, resulting in a juxtaposition of forms that add character to the entire area via an interesting play of light, shadow and volume.

As Khandala experiences heavy rainfall, moisture poses a serious problem to the interiors. As a form of protection, the construction is done in brick and concrete, with 9-inch-thick walls and large overhangs. Furniture is kept to the minimal, and hard materials are used for highlights or feature walls.

The contemporary villa is draped in white, both inside and outside, with white Ihasa marble flooring—creating a striking contrast with the lush green gardens. A flat slab construction technique ensured a seamless aesthetic, which further augments the openness and visual connection with the outside.

The living room features a dramatic Brazilian granite wall that



Striking in white




Attached bathroom at the daughter's room

serves as a backdrop to the dining area. Bright-coloured vases and a yellow sofa break the monotony.

On the first floor, the master bedroom is cantilevered partially over the swimming pool below for the best views and to provide shade to the outdoor sitting beneath. The volume and geometry enables the dynamism of the overall design.

The son's room is a stark minimalistic combination of a patterned concrete wall, wooden floor and a large bed with a Satvario marble backrest. High windows on two sides of the bedroom open out to a huge deck, surrounded by lush green trees.

The daughter's room opens out onto a huge balcony with a scenic corner view. A painting forms part of the ceiling design, while the rest of the bedroom is simple with a leather platform bed.

The games room has a different palette altogether, with cement walls and floor tiles and a stark red wall. 



Infinity pool



Sketch

PROJECT DATA

Project Name
Infinity House

Location
Khandala, Maharashtra, India

Completion Date
May 2017

Site Area
1,208 square metres

Gross Floor Area
1,300 square metres

Building Height
2 storeys with basement

Architecture Firm
GA design

Principal Architect
Rajan Goregaoker

Interior Design Firm
GA design

Principal Designer
Rajan Goregaoker

Civil & Structural Engineer
MR Enterprises and Integrated Building Services

Mechanical & Electrical Engineer
Neha Electricals

Lighting Consultant
Neha Electricals

Main Contractor
MR Enterprises

Images
Prashant Bhat

FUTURARC

The Voice of Green Architecture in Asia

FuturArc is the leading voice of Green architecture and design in Asia, reporting on prominent projects and featuring in-depth discussions and commentaries of issues relevant to architects and industry professionals. Established in 2006, BCI Asia started FuturArc to advocate for architecture that demonstrates social responsibility and sustainability, as well as to generate discourse to heighten awareness. Today, the editorial content is compiled by regional and global FuturArc correspondents and contributors.

www.futurarc.com

Register Now For Free! 

www.futurarc.com/index.cfm/faappsubscriber/

Get the App and join the Voice of Green Architecture NOW!



www.futurarc.com/app



www.facebook.com/FuturArc



@futurarc



@FuturArc

BCI ASIA

Powerfully Integrated. Pervasive Intelligence.

Hikvision Integrated Security System for Smart Building Harmonizes Complexities

In any comprehensive security system, obstacles abound. A complete and easy-to-use central system is absolutely crucial. Hikvision's Smart Building Solution provides a unified system for today's sophisticated security needs. Open to third-party systems, each subsystem seamlessly integrates into Hikvision's intelligent video management platform. This means an optimized linkage strategy, better business intelligence, and lower cost. In short: better service for customers.

HIKVISION (MALAYSIA) SDN. BHD.

301, Level 3 of Menara LGB, No. 16 Jalan Wan Kadir,
Taman Tun Dr. Ismail, 60000 Kuala Lumpur
Sales Email: sales.my@hikvision.com
Technical Support: support.my@hikvision.com

www.hikvision.com



MECHNATECH

Engineering & Construction Sdn Bhd

ENGINEERING AND CONSTRUCTION APPLICATIONS

We are experts in site-construction and equipment installation, assisting clients all the way throughout the planning stage, construction progress and start up of industrial projects of any kind.

OUR SUMMARY OF SERVICES OFFERED:

- ▶ Equipment installation
- ▶ All Kind of Piping Line Construction
- ▶ HCHO, UFC, and Resin Plant Set Up
- ▶ Skill & Unskilled Manpower
- ▶ Plant Maintenance & Services
- ▶ Electrical Division

For more information, visit our website at <http://www.mechnatech.com.my>
or drop us an e-mail at enquiry@mechnatech.com.my



Blend of modern and local furniture



IBIS MELAKA HOTEL

The Ibis hotel is an international chain with its own brand image. This project, set in the historic city of Melaka, was envisioned with a tradition- and culture-driven design. Hence, the challenge was to blend the melting pot of local cultures through architecture and artwork in a way that is also in line with Ibis' modern simplistic design standards.

The 249-room Ibis Melaka Hotel is located within the UNESCO World Heritage protected zone, surrounded by many tourist attractions and low-rise buildings dating back to the different colonisation eras. As such, each design process had to be carefully thought through to comply with the UNESCO and local regulations.

Therefore, the hotel's architecture is designed with the influence of Victorian style, with a façade similar to its neighbours, and is kept to six storeys to blend seamlessly into the local context.



Open living room concept at the reception



Internet corner




Stone flooring with Peranakan patterns

The interiors focus on subtle Peranakan elements, with a modern twist and a blend of Victorian, offering guests a transition of cultures as they walk through the hotel. As the red of the Ibis brand colour is also iconic in Peranakan culture, it is cleverly applied, from the fabrics and abstract paintings to the hand-painted tiles. Wooden louvred Peranakan-styled doors are used as riser doors in the guestroom corridors. Materials such as tumble stones in the public area and local wooden furniture play on the sentiments of classic bygone days.

Images of the former Savoy Cinema, a local landmark that originally stood at the hotel's site before it was razed in a fire, decorate the walls of the hotel—simple touches that pay tribute to the history and memories of the area.

As the lobby is located in the centre of the building, a skylight is incorporated to allow sunlight in to enhance the interior spaces. The changing light and shadows with each passing hour also create atmosphere variations in the lobby.

The windows along the façade bring in natural light and also allow passers-by to peek in. The open-plan ground floor is often a hive of activity, with meeting areas and restaurants, and timber flooring and screens help to reduce the noise levels.

The hotel guestroom floors are U-shaped to allow guests a hotel courtyard view or street view. With all the hotel facilities confined to the ground floor, the remaining five storeys could be maximised for rooms. 



A sleek guestroom with a touch of Ibis red

PROJECT DATA

Project Name
Ibis Melaka Hotel

Location
Jalan Bendahara, Kampung
Bukit Cina, Melaka, Malaysia

Completion Date
May 2017

Number of Rooms
249

Client/Owner
Goldstone Property (Malacca)
Sdn Bhd

Architecture Firm
Arqhitect NIA

Interior Design Firm
Aprilist Associates Sdn Bhd

Principal Designers
Melvin Gan; Abby Yoong

Civil & Structural Engineer
McCallum Engineering
Consultant

**Mechanical & Electrical
Engineer**
PKV Consulting Engineers
Sdn Bhd

Images
Accorhotels



Copper clouds float above the multipurpose area



DAMANSARA AVENUE SALES GALLERY

The transformation of this multifunctional sales gallery was no easy task. The original building—rundown from years of disuse—had a disjointed layout and unattractive façade. By extending the internal spaces and upgrading the finishings, the result is an impactful yet cohesive and timeless gallery.


To reflect the image and concept of the developer's product offering, the gallery's exterior was revamped with new gunmetal grey frames, replacing the original aluminium-framed glass panels. The covered walkways blocking the building's frontage was also dismantled.

A new reception area now links the sales gallery to the office for optimal user experience and traffic flow. This lavish space greets visitors with its polished marble floor, colour-changing membrane ceiling, custom-designed rose gold feature wall, and a fine marble and rose gold-clad reception counter.

Within the gallery space, a casual seating area by the windows is propped up on a long rug—representing flowing water to reflect the outdoor water feature—and set against the picturesque greenery outside. The overhead air-conditioning is camouflaged with angled-stars timber strips, which allow for easy maintenance.

At one end, a swanky cocktail bar area, decked out with a dark marble bar counter and velvet-wrapped bar stools, also doubles up as a buffet area during events. In the centre, the architectural model stand of the development's masterplan is clad in mirror and concealed lighting to provide a floating effect.

At the far end, a multipurpose area is creatively designed on a platform with large LED panels. Copper cloud sculptures hang from the ceiling for a dreamy effect, while the video wall is fitted with concealed light backing for optimal display. Two pods that extend over the water features serve as private discussion areas.

A new elevated platform was constructed at the rear to house the show units. The washrooms that were initially inaccessible from inside the building have also been relocated and given a sophisticated uplift with a play of dark grey and black colours. 



A lavish marble and rose-gold infused reception area



The casual seating area frames the gallery

PROJECT DATA

Project Name
Damansara Avenue Sales Gallery

Location
Bandar Sri Damansara, Selangor, Malaysia

Completion Date
January 2017

Site Area
12,700 square metres

Gross Floor Area
1,500 square metres

Building Height
1 storey

Client/Owner
TA Global Bhd

Architecture Firm
GDP Architects Sdn Bhd

Principal Architect
Wan Bahrum Wan Ali

Interior Design Firm
Ooi Design & Associates Sdn Bhd

Principal Designer
Ooi Boon Seong

Civil & Structural Engineer
Asia Pacific Engineering Consortium Sdn Bhd

Mechanical & Electrical Engineer
Jurutera Perunding Urus Jaya Sdn Bhd

Quantity Surveyor
Perunding Kos T&K Sdn Bhd

Landscape Architect
Just Right Design Sdn Bhd

Main Contractor
Key Project Resources Sdn Bhd

Interior Fit-Out Contractor
Key Project Resources Sdn Bhd

Images
Ooi Design & Associates Sdn Bhd

HOSO



SIGMA



WLT RESOURCES SDN. BHD (119129-K)

NO. 3435, JALAN PERMATANG PAJUH, GODOWN, 13400 BUTTERWORTH, PULAU PINANG.

LOT. 819, JALAN SUBANG 9, TAMAN PERINDUSTRIAN SUBANG, 47500 SUBANG JAYA, SELANGOR.

04-333 1440

03-8024 9913

WWW.HOSO.COM.MY



威達雲石地磚有限公司

WEE TATT TRADERS SDN.DHD.

Modern brick

Inspired by different designs, a satisfying lifestyle



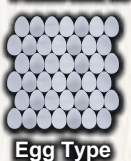
Decors



Flake EX 16



EX 6



Egg Type



KZ112



1. Bathroom 2. Kitchen and living room 3. Bedroom 4. Study room
5. Balcony 6. Hotel 7. Outdoor 8. Commercial space 9. Wall surface

威達雲石地磚有限公司

WEE TATT TRADERS SDN.DHD.

Head Office:

No 865, Simpang Tiga Juru, 14000 Bukit Mertajam, S.P.T, Penang, Malaysia.

Tel +604-507 7308 Fax + 604-502 1871

Email: wtatt@hotmail.com

Penang Branch:

No 88-U, Jalan Masjid Negeri Taman Greenview 11600 George Town Pulau Pinang

Tel +604-658 0454 Fax + 604-6567883

Email: wtatt@hotmail.com

THE CUBE KITO



Hanging iron-and-wood cabinets run through the entire space

DE GALLERY


Within the constraints of the second storey of a shophouse, a trendy boutique guesthouse is birthed. The unassuming 1,525-square-foot space has been ingeniously revamped with clever space and functionality planning at the design stage.

By accentuating spatial quality rather than dimensions, the designers take on the challenge of redefining the area and creating a more effective and organised use of space. For example, the dining room is substituted with a more flexible bar counter.

Convertible partition walls, designed as distinctive barn doors, also help deliver a more versatile living environment. When closed, they serve as partitions for a smaller guest room. When opened, they create an inviting communal space, that doubles up as a living room theatre during movie nights.

Based on a rustic industrial concept, a curated selection of raw bricks, wood materials, iron and brass pieces carry the tastefully rugged look throughout the guesthouse.

The cement flooring is intentionally maintained in its original condition without further polishing, while the ceiling displays exposed bars and track lights. Indirect lighting effects and a contrasting furniture colour scheme create a dramatic and distinctive ambience.

For a sense of cohesiveness, hanging iron-and-wood cabinetry runs through the entire space, elongating the overall spatial experience. The raw iron pieces add a sense of contemporary timelessness and elegance against the otherwise gritty feel. A streamlined sleek metal door opens up to the master bedroom, which is bathed in warmer ambient lighting and darker colour tones for a tranquil and serene setting. 



A bar counter offers more flexibility than a dining room



Raw brick, wood and metal carry the rugged-chic look



The bedrooms are bathed in warm ambient lighting and darker colour tones

PROJECT DATA


Project Name
De Gallery
Location
Johor Bahru, Malaysia
Completion Date
1 September 2017
Gross Floor Area
141.67 square metres

Client/Owner
DAA Design Associates Sdn Bhd
Interior Design Firm
DAA Design Associates Sdn Bhd
Principal Designers
Chow Jie Yang; Tiu Kim Chuan
Images
DAA Design Associates Sdn Bhd

SEEK ASIA HEADQUARTERS

SEEK Asia's new headquarters in Kuala Lumpur has been designed to inspire collaboration within an agile and robust environment.

Spanning 61,000 square feet across four levels in AIA Cap Square Tower, the 500-capacity workplace includes an open plan office for maximum daylight exposure, 26 acoustically-treated meeting areas, a main reception with a full-height video wall as a striking centrepiece, a business lounge and a café with an adjacent meeting suite.

Completed over 12 weeks—with an early handover of a phase—the project posed a variety of logistical and operational challenges. The contractor responded to the tight programme of works with efficient procurement and selection of products and materials that allowed for quick delivery, such as the locally-produced glass partition system used in the office meeting rooms. 



Breakout zones interspersed within the open plan office



The new headquarters houses 500 employees across four floors



A full-height video wall serves as the centrepiece at the main reception area



A large breakout café encourages employee collaboration



One of the 26 meeting areas with aluminium-framed glass partitions



PROJECT DATA

Project Name
SEEK Asia Headquarters

Location
AIA Cap Square Tower,
Kuala Lumpur, Malaysia

Completion Date
January 2018

Gross Floor Area
60,000 square feet

Owner/Client
SEEK Asia

Interior Design Firm
SL+A

**Mechanical & Electrical
Engineer**
MCE Consulting

Interior Fit-Out Contractor
ISG Malaysia

Images
Jack Shea



Low frills yet high-tech appearance

COLUMBIA ASIA KLANG


It is not often you'd hear a company liken itself to a fast-food chain. But the Columbia Asia group of hospitals intentionally sets out to be the 'McDonald's of healthcare'.

As described by founder Richard Evans, the hospital chain wants to be known for its 'machines that get you well and send you home quickly', rather than for creature comforts. Its hospital model omits excesses and minimises inefficiencies by keeping its hospitals relatively small, with no more than 150 beds), and avoiding unnecessary equipment outlay. Its no-frills yet high-tech appearance is designed to shift the focus to its diagnostic technology instead.

The hospital in Klang is no exception. Its exterior and interior architecture is visually simple, sleek and elegant—with a glass curtain wall to maximise natural daylight and roof lighting

that creates a 'floating' effect at night.

Environmentally-friendly building materials are used not just for sustainability but also for suitability to the hospital setting. These include anti-bacterial low-VOC paint, optimal U-value glazing, energy management system and dual flush cisterns, which are locally sourced.

Due to stringent regulations by the Ministry of Health upon private healthcare facilities, the architectural and M&E engineering design and coordination have to reach a heightened level of sophistication. The repetitive nature of the group's new hospital expansion plans and systematic refurbishment of existing facilities results in the use of the same consultants and contractors to exhaust learning curve and enhance efficiencies. 



Clean and sleek café area



Fuss-free and functional general wards



Under the sea at the paediatric clinic

PROJECT DATA

Project Name

Columbia Asia Klang

Location

Klang, Selangor, Malaysia

Completion Date

13 March 2017

Gross Floor Area

8,569 square metres

Building Height

3 storeys (including basement)

Client

Columbia Asia Sdn Bhd

Interior Design Firm

Environmental Design Practise
Sdn Bhd

Civil & Structural Engineer

Jurutera Perunding Bersama Sdn Bhd

Mechanical & Electrical

Engineer

PE Associates Sdn Bhd

Quantity Surveyor

HA Associates

Lighting Consultant

Antara Elektrik Sdn Bhd

Landscape Architect

Landarc Associates Sdn Bhd

GRAB OFFICE

Ride-hailing service Grab recently unveiled its two-storey research and development (R&D) centre and headquarters at Marina One.

The 80,000-square-foot centre has more than 70 meeting rooms—named after iconic places or landmarks in the region—and spaces devoted to engineering and technological research. Nestled in the 22nd and 23rd floor, the centre is clad in floor-to-ceiling glass panels that offer clear views of the bay and the now-disused Tanjong Pagar Terminal.

The design brief called for a flexible and productive workplace that fosters interaction, with a variety of inspirational spaces and abundant natural light. As business units from different regional countries will be working together here, the design concept expresses South East Asian cultures and traditions within a modern and high-tech office, using various decorative elements, such as wall designs, artwork, fabric and accent pieces, down to the floor tiles.



Variety of breakout spaces






Whites and light wood tones

A clean and simple interior, using whites and light wood tones with hints of bright colours, portray a welcoming office environment. Transportation elements are used to create a fun and interactive workplace, as well as wayfinding devices. A showcase of framed photographs featuring Grab's driver-partners is a tribute to the group's multinational and inclusive workforce.

The main office area is home to the company's engineering, marketing and research teams, with shared spaces and desks to encourage teamwork and small phone booths for private calls. A green walking path runs around the office space for those who want to get some steps in during breaks, while an equipped gym is available for more intense workouts. The canteen-like eating area offers wide open spaces with long tables so employees can interact freely over meals.

To save costs, the designers flew to Vietnam with the client to handpick pieces of furniture to be shipped to Singapore. Another challenge was navigating the job site during the renovation period, as the Marina One building still had ongoing construction work, resulting in space constraints and a shared cargo lift. This had to be tackled with careful time management to ensure work efficiency. 



Office with a view



A green walking track meanders around the office



Flexible spaces bathed in natural light

PROJECT DATA

Project Name
Grab Office

Location
Marina One West Tower,
Singapore

Completion Date
20 November 2017

Gross Floor Area
7,432 square metres

Projects Height
2 storeys

Owner
Anthony Tan

Interior Design Firm
Ai Associates Pte Ltd

Project Manager
Ai Associates Pte Ltd

Mechanical & Electrical Engineer
Ai Associates Pte Ltd

Quantity Surveyor
Ai Associates Pte Ltd

Interior Fit-Out Contractor
DecoFurn Pte Ltd

Images
INFINITUDE – Architecture
& Interior Photography

HOTEL G SINGAPORE

This project involved the takeover and revamp of an existing hotel, hence there were considerable structural and spacing limitations. On top of that, the hotel was still operational throughout the makeover process.

The renovations focused on optimising the existing space and creating additional space. This included fully renovating the ground floor to accommodate two new restaurants, adding a mezzanine to the double-volume ground floor, relocating the reception to the second floor, and moving the fitness centre to the third floor.

As the hotel is located at a major cross-junction—Middle Road and Bencoolen Street—the design capitalises on its prime location. The two award-winning dining additions each face one of the two major streets and are designed to capture the attention of foot traffic. Large French doors and windows open out to the sidewalk, ushering in diners and lots of natural light.

Between the restaurants on the ground floor lies a communal space that is constantly refreshed with pop-up features and a mini gallery of works by local artists.

To target young social media-savvy travellers, the design and planning process also considered the need for 'Instagrammable' spaces within the hotel. The guest rooms have been refurbished to include edgy decorative and practical elements, with a handmade dreamcatcher chandelier as a focal point and framed photograph accents. The hotel gym is inspired by vintage boxing gyms, with a vintage sandbag and speedball within the space. Materials, furniture and decorative elements are imported from neighbouring countries, such as Indonesia and Thailand. 



A vintage-styled boxing gym





Bathed in natural light



Handmade dreamcatcher chandeliers are a focal point of each room



Revamped and infused with a new identity



An eye-catching bistro-style restaurant



PROJECT DATA

Project Name
Hotel G Singapore

Location
200 Middle Rd, Singapore

Completion Date
February 2017

Project Site Area
1,340.8 square metres

Gross Floor Area
8,844.3 square meters

Building Height
17 storeys

Number of Keys
308

Owner
GCP Hospitality

Interior Design Firm
Aedas Interiors

Civil & Structural Engineer
Beca (S) Pte Ltd

Mechanical & Electrical Engineer
Bescon Consulting Engineers Pte

Quantity Surveyor
Barton Bruce Shaw Pte Ltd

Lighting Consultant
Nipek

Interior Fit-Out Contractor
ISG Asia (Singapore) Pte Ltd

Images
Hotel G Singapore



Blue, the company's corporate colour, leads the overall interior design



Rooftop

DPLUS INTERTRADE HEAD OFFICE

In line with the electronics and IT accessory trading company's quest to reinvent its corporate identity as a modern dynamic brand, its head office in Bangkok was also revamped into a homey, yet energised workspace.

As the building is located in a prime rental office area with 19 other 'typical-looking' commercial buildings, the design renewal process aimed to add a personalised and distinct character to the company's head office and potentially attract and inspire the new generation, not just via The project not only aims to enhance the building's aesthetics but also the motivation and quality of life of the employees.

IN AND OUT

The interior design focused on colour, shape, and floor plan to express the character of each group zone. An in-depth analysis of the organisation and its departments was done before the allocating different spaces and sections to facilitate design consistency and conformity.

Blue, the company colour, was selected to lead the overall

design, with a mix of red, yellow, orange and green to infuse a lively, fun and cheerful character to the office. The colours also serve to identify the function of each building section—such as learning centre, library or canteen—as well as a floor indicator.

The exterior renovations focused on expressing the corporate identity. D, the company's initial, is inserted into the building's aluminium façade panel (using matte sticker sheets) but is only visible from the side angles—disappearing from view when one is looking straight at the building. This silence dynamic technique adds a notion of motion to the building from different perspectives.

The white aluminium louvres at the façade are assembled diagonally to reflect the dynamic character of the enterprise. The continuous louvres also create a smooth skin as there are no blocking frames between each floor. Aluminium is the best material for this purpose as it is lightweight and easy to install.

The blue cantilever panel at the entrance is made of aluminium




Lobby



Meeting room

composite and enhances the elegance of the building.

Feng shui elements have also been blended into the design theme, with the inclusion of a pond and garden in front of the building and the use of the colour brown in the back office, which symbolises wealth of the earth.

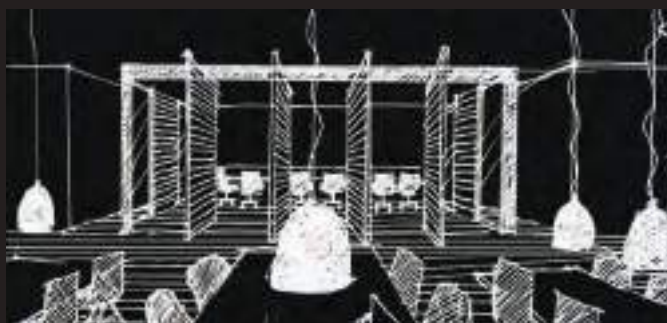
Some of the challenges faced include the height of the floor and beam installation, as well as the complex M&E system, which had to be installed within a tight 10-month construction timeline. Quick solutions were required to address the different unexpected problems that arose during the construction process. 



Internet corner



Each section has its own distinctive colour scheme



Sketch of second meeting room

PROJECT DATA

Project Name
Dplus Intertrade Head Office

Location
Yanawa, Bangkok, Thailand

Completion Date
2017

Site Area
1,600 square metres

Building Height
5 storeys

Client/Owner
Dplus Intertrade Co, Ltd

Architecture Firm
Pure Architect Co, Ltd

Principal Architect
Kiengkiat Chuenterawong

Coordinating Architect
Pimonphan Kinkul

Interior Design Firm
Pure Architect Co, Ltd

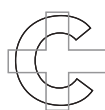
Civil & Structural Engineer
Teerayut Surasakchalothon

Quantity Surveyor
WQS Co Ltd

Main Contractor
Perfect Leaf Decorate and Construction Co, Ltd

Interior Fit-Out Contractor
Perfect Leaf Decorate and Construction Co, Ltd

Images
Chaovarith Poonphol



MALAYSIA

KENWINGSTON SKY LOFTS



THE QUARTZ



PROJECT TITLE	PROJECT TYPE	LOCATION	DEVELOPER	ARCHITECT/ CONSULTANT	CONSTRUCTION START	ESTIMATED PROJECT VALUE (RM 'MILLION)
Kenwingston Sky Lofts	Serviced apartments	Subang, Selangor	Opulence E&C Sdn Bhd	Kuek Wee Chien Architect	3Q 2018	80
The Quartz	Apartments	Melaka	Modern Diversified Sdn Bhd (WeBest Sdn Bhd)	Arkitek AAP	3Q 2018	40
Impression U-Thant/ Residensi Mutiara U-Thant	Apartments	Kuala Lumpur	Yong Tai Bhd; KOF Holdings Sdn Bhd	Archiconic	May 2018	100
KSL City Mall 2	Hotel	Klang, Selangor	Khoo Soon Lee Realty Sdn Bhd	SA Architects	July 2018	465
Ipoh Shoe City	Factories; shops; hotel; convention hall	Ipoh, Perak	DSG Shuez City Sdn Bhd (DS Group)	Perunding Jurucita	2019	100
ONE Cyber	Apartments; offices	Cyberjaya, Selangor	Vista Global Development Sdn Bhd (MCT Consortium Bhd)	MDP Studio	4Q 2018	90
Scarletz Suites	Offices	Kuala Lumpur	Suriamas Lumayan Sdn Bhd (EXSIM Group)	W Design Associates	2Q 2019	145
illi KL	Serviced apartments; shops	Cheras, Kuala Lumpur	Symphony Life Bhd	Arkitek MAA	4Q 2019	360
Berjaya Langkawi Beach Resort	Chalets	Langkawi	Berjaya Group	Wong CS Architect	2020	100
Dreamhomes @ Cyberjaya	Apartments; wellness centre	Cyberjaya, Selangor	Storyworld Sdn Bhd	Arkitek TYL; G&P	2020	100

Source: BCI Asia Research

SINGAPORE

TAMPINES GREENFOLIAGE



WOODLANDS GLADE



FERNVALE COMMUNITY CLUB, HAWKER CENTRE AND WET MARKET



PROJECT TITLE	PROJECT TYPE	LOCATION	DEVELOPER	ARCHITECT/CONSULTANT	CONSTRUCTION START	ESTIMATED PROJECT VALUE (SGD 'MILLION)
Tampines GreenFoliage	Residential	Tampines North	Housing & Development Board (HDB)	Ong&Ong Pte Ltd	September 2018	76.30
Woodlands Glade	Residential	Woodlands	HDB	Ong&Ong Pte Ltd	September 2018	72.38
Fernvale Community Club, Hawker Centre and Wet Market	Civic & community institution	Sengkang West	People's Association (PA)	AGA Architects Pte Ltd	September 2018	53.82
Teck Whye View	Residential	Jalan Teck Whye	HDB	ADDP Architects LLP	September 2018	65.60
Perumal Road Residences	Residential	2 Perumal Road	Low Keng Huat (S) Ltd	Metaphor Design + Architecture	September 2018	50
Ubi Grove	Residential	Geylang	HDB	Surbana Jurong Consultants	September 2018	172.10
Polyclinic and Senior Care Centre	Healthcare & community institution	Chin Cheng Avenue	Ministry of Health (MoH)	Forum Architects	September 2018	31.99
Verandah Residences	Residential	231 Pasir Panjang Road	Oxley Amber	DP Architects Pte Ltd	September 2018	40
SMU-X	Institutional	81 Victoria Street	Singapore Management University (SMU)	MKPL Architects Pte Ltd	September 2018	40
Carpmael 38	Residential	38 Carpmael Road	Lim Wen Heng Construction Pte Ltd	Tektonik Studio	September 2018	5

Source: BCI Asia Research


SPLASH WORLD THEME PARK @ HARBOUR CITY

A RM200 million water theme park in Melaka is in the works, and will be the world's first 'sky' theme park—located 14 floors above ground, between two 30-storey mixed-development towers.

When it opens in 2020, the 500,000-square-foot water park can accommodate up to 5,200 visitors. It will offer both indoor and outdoor sections, with more than 50 attractions, an amphitheatre, a 2-kilometre man-made river and more than 1 kilometre of water slides. The 15 water slides are stacked on top of each other in a vertical space, which was a challenging design and build.

This 'sky-high' brief was accomplished via an international team of client representatives and consultants, including water park specialists, despite the confined and limited loading constraints.

The project site is located on the recently reclaimed waterfront of Melaka city, hence, the park carries an oceans theme—with colour choices and ombre-like effects, as well as ground finishes representing sand and boardwalks, to depict the high seas.

LED screens, photo imaging and lighting effects wrap the entire water park in moving light, creating a graphic-immersive ocean ambience. Plants and materials are also selected to survive the salt air and high winds. Cost-effective pebblewash and stamped concrete are used, together with imported higher-end travertine and marble. 



The water slides had to be stacked atop each other due to limited space





Park plan



An ombre-like effect enhances visitors' experience



Ground finishes represent sand, boardwalk and ocean floor

PROJECT DATA

Project Name
Splash World Theme Park
@ Harbour City

Location
Harbour City, Pulau Melaka,
Melaka, Malaysia

Expected Completion
1Q 2020

Site Area
6 acres

Theme Park Gross Floor Area
500,000 square feet

Facilities Area
46,452 square metres

Theme Park Height
3 storeys

Developer
Gold Mart Sdn Bhd
(member of Hatten Group)

Architecture Firm
CHY Architects Sdn Bhd

**Landscape & Theme Park
Consultant**
WHZ Environmental
Design Sdn Bhd

Principal Designers

Jason Zlotkowski;
Antony Hastings

Operational Consultant

Samsung C&T Corporation

Theme Park Designer

Polin Waterparks

Interior Design Firms

Add Effexx Sdn Bhd;
Hospitality & Leisure
Asia Sdn Bhd (HLA);
HBA/Hirsch Bedner Associates

Civil & Structural Engineer

SNA Consult Sdn Bhd

Mechanical & Electrical

Engineer

Greatians Engineers Sdn Bhd

Main Contractor

China Construction Yangtze
River (Malaysia) Sdn Bhd

Images

Gold Mart Sdn Bhd;
WHZ Environmental Design



THROUGH PLAY,
WE BUILD HOPE
FOR OUR CHILDREN



All PARK GAMES products are designed and manufactured in accordance to the International Safety standards; EN 1176: TUV of Germany, ASTM of USA, MS 966 of Malaysia and the Quality Management System of ISO9001;2008

- Children Playground Equipment
- Indoor Children Play Centres
- Interactive Electronic Outdoor Play
- Rope And Climbing Structures
- Waterplay
- Skate Park
- Outdoor Fitness And Gym
- Safety Flooring
- Park Furniture

PGE



+6(03) 7491 0278 PARKGAMES.COM.MY

The fairing design



SPECIALIST
IN SUPPLY
INSTALLATION
MAINTENANCE

**LIFT TRAVELATOR
ESCALATOR**

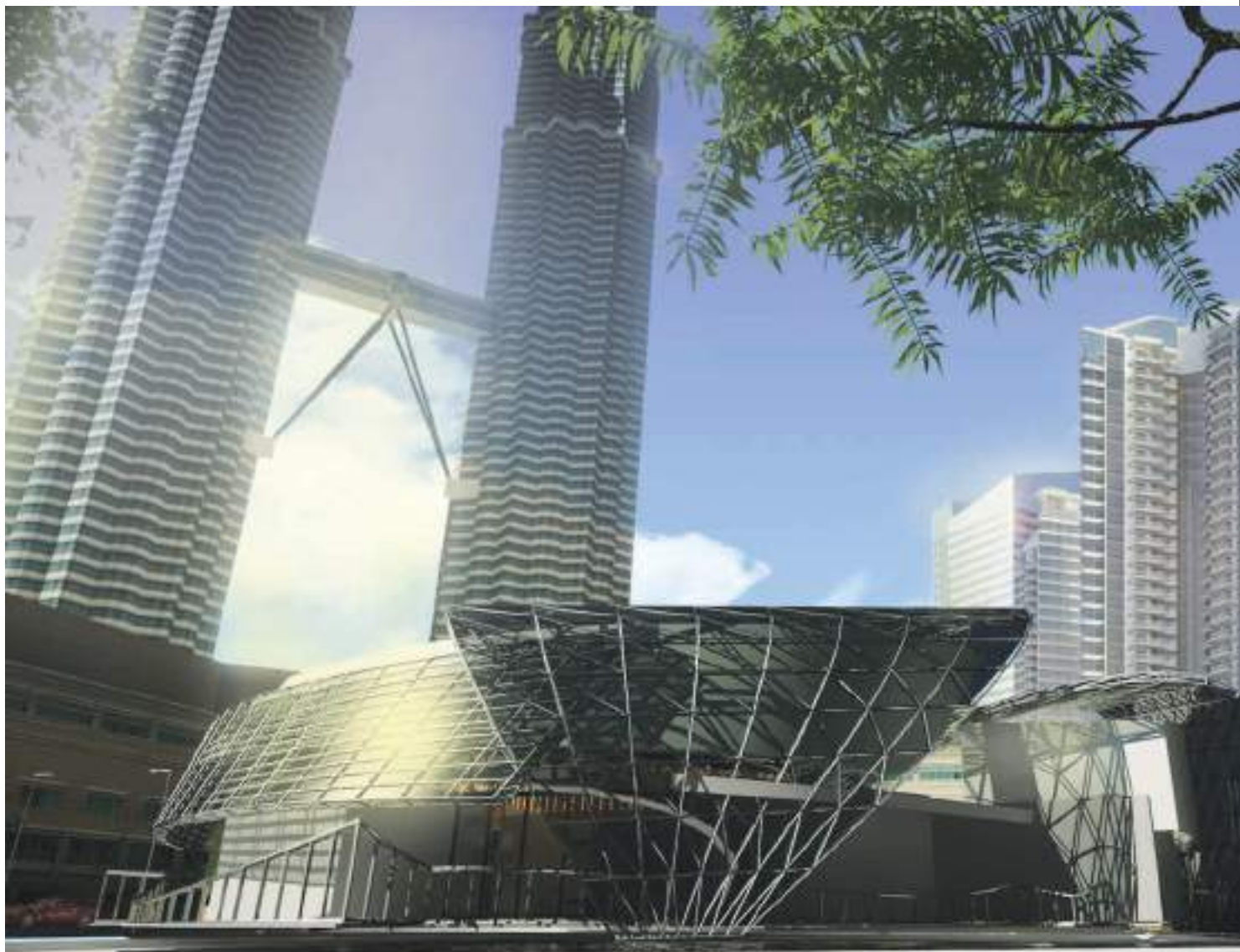
CONTACT US NOW:

SWORD ELEVATOR (M) SDN BHD
510, BLOCK A, GLOMAC BUSINESS CENTRE,
NO. 10, JALAN SS6/1, KELANA JAYA,
47301 PETALING JAYA, SELANGOR
TEL: +603- 7880 4437
FAX: +603 7806 2003

E-MAIL: sales@sword.com.my

www.sword.com.my

SWORD



The building is designed to blend into the cityscape


WHO EXHIBITION HALL

The proposed exhibition hall design for the World Health Organization (WHO) seeks to shine the spotlight on mosquito-borne diseases to promote a better, healthier future for people all over the world.

As such, the hall is designed using radial organisation to represent the breaking out of the virus—from a small cell that is enveloped by different layers—while the interior space is designed to represent the spread of information and awareness.

The design was planned to create an interaction between the hall

and its surrounding. Various degrees of light and shadow help create an interaction between the building and its surrounding. Different types of materials and different heights help to filter the ventilation and natural daylight. Timber and plaster boards are used for the wall partitions for easy installation and dismantling. Low-E glass is used for the ceiling area to keep the exhibition area cool.

The space planning also helps encourage communication with various zones—introduction zone, timeline zone, education zone, children zone and donation area—that are suitable and accessible for both children and the elderly. 



Education Zone



Natural lighting fills most of the building



Reception



Introduction Zone

PROJECT DATA

Student Name

Chow Kha Huan

School

The One Academy

Instructor

Ong Pai Ling

Project Name

World Health Organization
(WHO) Exhibition Hall

Project Year

2017

Location

Symphony Lake, Kuala Lumpur
City Centre, Malaysia

Images

Chow Kha Huan



Reception and showcase area



Rooftop reading area

AN IN-BETWEEN SPACE

Juvenile delinquency and youth crime is a serious, complex and multi-faceted social issue.


This student project features a youth care centre—an in-between space to bridge the gap between at-risk youths and society by dissolving boundaries. Through the development of educational, vocational, social, emotional and basic life skills, as well as public participation and support, youths are rehabilitated and reintegrated back into society.

Based on the concept of mediation, the Tanjong Pagar Railway Station, a heritage site with a strong sense of 'in-betweenness', is selected for the centre. In the past, the station acted as a transition between Malaysia and Singapore, where people traverse from one country to the other.

The configuration of the spaces is developed with the railway track as the axis of the whole building and a series of overlapping

linear spaces that respond to the existing site.

The spaces are divided into public zones, in-between spaces and private zones. The public zones cater to society at large, with a retail area, exhibition walkway and counselling area for parents, while the private zone has more enclosed spaces for youth counselling, as well as a showcase area and art and craft studio. The in-between space blurs the boundaries between public and private areas, bringing both sides together in a courtyard, where seminar and library facilities are located.

The proposed materials for this project include glass, concrete and sustainable timber, which are sustainable and can be easily procured locally. The use of glass for many of the walls bring about the idea of being 'transparent, bright and open-minded', contributing to the blurring of boundaries between people who are in different spaces. 



A series of overlapping linear spaces



Section elevation



The courtyard serves as an 'in-between' space



First-storey layout plan

PROJECT DATA

Student Name

Lo Yiin Shan

School

Nanyang Academy of Fine Arts,
Singapore

Programme

Diploma in Interior
& Exhibition Design

Instructor

Tung Ching Yew

Project Name

An In-Between Space

Project Year

2017

Location

Tanjong Pagar Railway Station,
Singapore

Gross Floor Area

1,573 square metres

Number of Rooms

13

Building Height

10.7 metres

Images

Nanyang Academy of Fine Arts

Panasonic
BUSINESS



PropertyGuru



KANSAI PAINT

Feruni
CERAMICHE



A member of UEM Group



Gold Partners



NextProperty



Media Partners



CONSTRUCTION+



Present this ad to get
RM300 off @

RM988

For a limited time only*

*Normal price RM1288.00

REHDA INSTITUTE CEO SERIES 2018

ANNUAL PROPERTY DEVELOPERS CONFERENCE

7.00am - 5.30pm 24 September 2018 Sunway Putra Hotel Kuala Lumpur, Malaysia

For more event info: www.rehdainstitute.com/event/ceo2018/

OUR HIGHLY DISTINGUISH SPEAKERS:



Dato' Jeffrey Ng Tiong Lip
Chairman, REHDA Institute,
CEO, Sunway REIT



Dato' Ir. Soam Heng Choon
President, REHDA Malaysia,
Group Managing Director,
IJM Corporation



Tan Sri Datuk Eddy Chen
Trustee, REHDA Institute,
Managing Director,
MKH Berhad



Datuk Seri Michael K C Yam
REHDA Patron,
Chairman, InvestKL



YM Tengku Dato' Ab. Aziz
bin Tengku Mahmud
Immediate Past President,
FIABCI Malaysia,
CEO, PNB Merdeka Ventures



Dato' Soh Thian Lai
President, Federation of
Malaysian Manufacturers
(FMM), Managing Director,
YKGI Holdings Berhad



Mr. Foo Chek Lee
President, Master Builders
Association Malaysia (MBAM),
Executive Director,
Mitrajaya Holdings Bhd



Dato' Sri Gavin Tee S.H.
Founder & President,
Swhengtee International,
President, Malaysia
PropTech Association



Mr. Siva Shanker
Head of Investment
AXIS REIT, Immediate past
President of MIEA

For conference tickets and group discounts please contact:

Mr. Pearljit Singh | 016 3260 598 | pearljit@rehdainstitute.com

Ms. Nurul Ain | 013 2690 816 | ain@rehdainstitute.com



03 7803 6006 / 7006



inquiry@rehdainstitute.com



REHDA
INSTITUTE

22 YEARS^{*} AND COUNTING

OVER 170,000,000 AAC SOLD

4 HOURS FIRE RATINGS

* Manufactured by Senawang factory to Malaysia and Singapore market

DESIGNED AND TESTED TO THE HIGHEST STANDARDS

Thank you for making HENNER the leading manufacturer in autoclaved aerated concrete (AAC) in Malaysia and Singapore. We are committed to maintaining the highest standards in our AAC blocks.

50% LIGHTER & COST SAVING

Reduces foundation and structural costs by as much as 25% and 10% respectively in high-rise structures.

ACOUSTICS & INSULATION

HENNER products offer better sound insulation owing to its porous concrete content.

2X FASTER INSTALLATION

HENNER - 22 m²/worker/day
6 Bricks - 10 m²/worker/day
HENNER - 75 m²/worker/day
25mm plaster - 20 m²/worker/day



AUTOCLAVED AERATED CONCRETE BLOCKS

CALL +603 5567 9119

WWW.HENNER.COM.MY

KIM HOE THYE INDUSTRIES SDN BHD (849519-K)



White-label Platform-as-a-Service dedicated to **Smart Homes** and **Buildings**



SmartKiz[®]

The first
Zigbee 3.0
gateway certified
by the Zigbee
Alliance



OVERKIZ
will be at

BEXASIA
(Trade Show in Singapore).

Meet us
at booth #G29 on
**5th-7th
SEPTEMBER
2018**

A MEMBER OF **SOMFY** GROUP

Headquarters
Overkiz Annecy - France
Immeuble Variation A, Allée de la Mandallaz,
74370 Epagny Metz-Tessy France
Tel : +33 (0)4 50 10 79 50

Overkiz Paris - France
13-15 boulevard de la Madeleine
75001 Paris France

Overkiz Hong Kong
Suite 2402, 24/F, Chinachem
Exchange Square, 1 Hoi Wan Street,
Quarry Bay, Hong Kong
Tel : +852 6090 7437

Place your order for
our Evaluation Kit:
sales@overkiz.com
www.overkiz.com