

FUTURARC

The Voice of Green Architecture in Asia-Pacific

3Q 2019 | volume 66

Health and Well-Being

Inside: Clinics and Hospitals, Schools and Shopping Centres: how design becomes an instrument of health and well-being | WELL Building Standard; new criteria for indoor environmental quality | Works of Renzo Piano, Nikken Sekkei, SHAU and others | Ken Yeang, Principal, T. R. Hamzah & Yeang Sdn. Bhd.

With projects from Australia, China, Hong Kong, India, Indonesia, Sri Lanka and Uganda

Hong Kong HKD72 RMB80 Indonesia IDR83,000 Malaysia MYR39 Philippines PHP500 Singapore SGD15 Thailand THB290 Vietnam VND190,000

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Designing

by **Heather Banerd**



Photo by Toru Hiraiwa



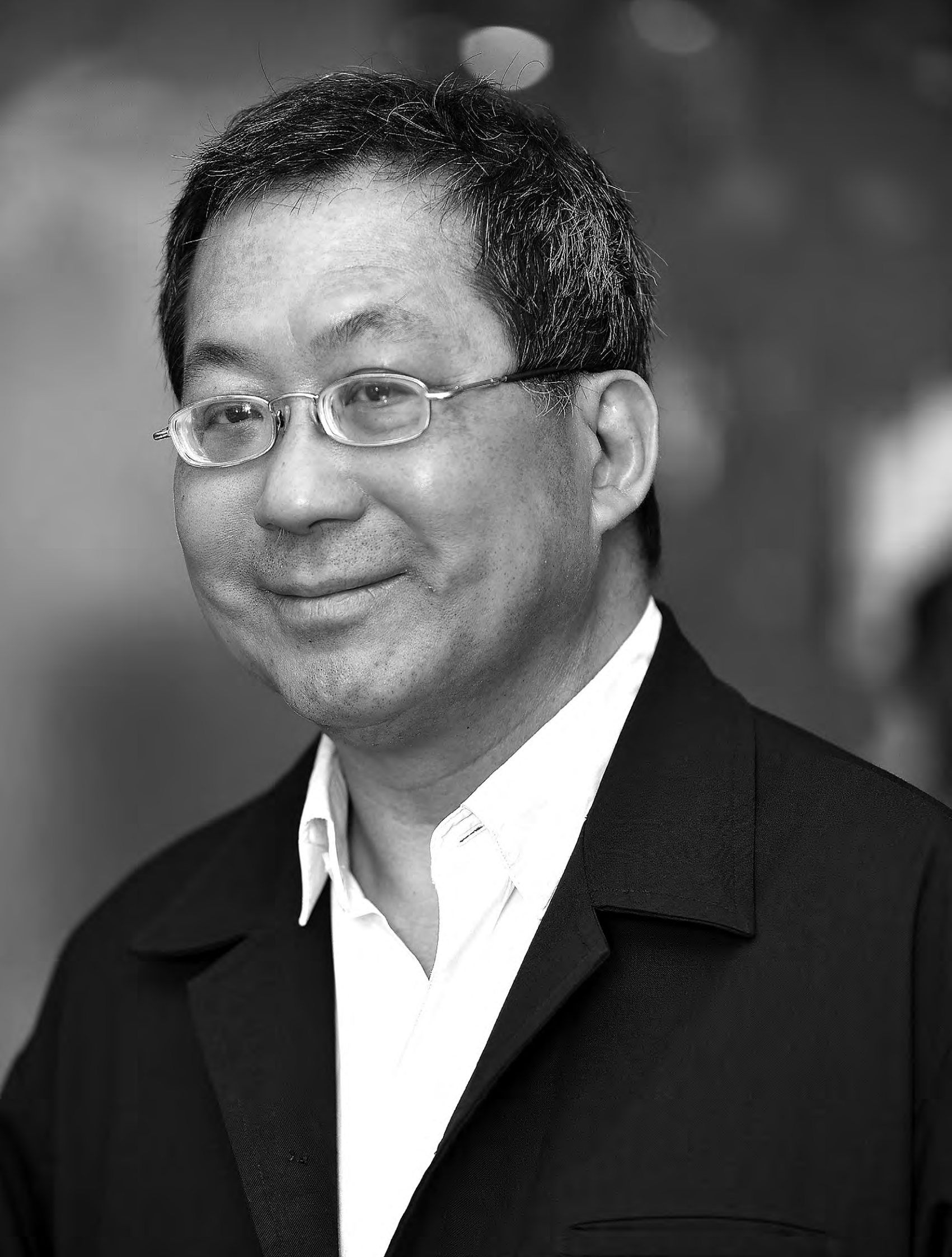
for Health

The FuturArc Interview

Ken Yeang

Principal, T. R. Hamzah & Yeang Sdn. Bhd.

By Heather Banerd



RURAL CLINICS AND FACILITIES

At the heart of healthcare lies the people for whom clinics and hospitals serve. How such facilities are designed and built would affect the quality of care local communities receive, and this is especially so for those living in rural areas or in places where healthcare facilities may be lacking. Working the local context and climate into their architecture and construction, these two projects are worthy examples of designing for the people they care for.

1 Aerial view of the construction site of the Emergency Children's Surgery Center, 25 February 2019









SHANGHAI GREENLAND CENTER

At first glance, one would not think that Shanghai's largest urban park belongs to a shopping mall. The 20,000-square-metre green slope—named Urban Farm—is designed in such a way that the boundaries between the inside and outside have been blurred, creating a lush and spacious arena not only for shoppers but also for the neighbouring community, allowing them to be closer to nature, and contributing to improving their health and well-being.

The project started in 2009, when the architects were concerned about what people's need for space would become in 10 years' time. Hence, they came up with the proposal to "return to nature", counteracting the growth of high-rise urban developments that are engulfing Shanghai. The architects convinced and collaborated with local architecture offices and construction companies for this project, which is commendable in its allocation of a substantial amount of space to the public and greenery, yet still retaining its commercial features of a shopping complex. Now, it is one of the most popular public spaces in the heart of Shanghai, where the daily number of visitors are 1.5 times more than the nearby shopping malls.

1 Merging nature into urban spaces

OUR LADY OF THE ASSUMPTION CATHOLIC PRIMARY SCHOOL

By refurbishing an existing 1970s three-storey concrete building and adding a mass timber structure, Our Lady of the Assumption Catholic Primary School is now enclosed in a high-performance envelope with light, airy interiors. The process transformed the run-down former training centre—a typical institutional example of brutalist concrete monolith of its time—into the first educational facility with engineered timber in Australia for 420 elementary students. The design is a realisation of the school's vision of creating “beautiful, functional and agile spaces conducive to independent learning that engages and enthuses,” shared Cathy Young, the school's principal. Importantly, it has also created an educational space that elevates well-being.

TIMBER FOR WELLNESS

With multiple studies indicating reduced stress and cortisol levels in students with the use of timber application in educational environments, the material has been used extensively throughout the internal spaces both structurally and as a finish. The school's design addressed on-site challenges during a two-stage process. By demolishing most of the walls and replacing the façade in stage one, previously dark and cellular spaces within the facility were ‘lightened’ to create open, inviting educational areas with bright interiors that feature engineered timber glued-laminated (glulam) columns and beams, as well as cross laminated timber (CLT) walls, slabs and an acoustic ceiling and flooring system.

The exterior of the existing concrete structure and new CLT additions have been clad in a highly insulated, custom-perforated zinc cladding façade that wraps round the upper levels of the campus. Replacing parts of the existing concrete façade with timber-framed windows allows for natural daylight and ventilation to penetrate the building. Large timber doors that open out to wide verandas run along the western end of the school, allowing fresh air to circulate and offering classes the option to take their learning outside. Windows and doors are double-glazed to minimise noise while facilitating a seamless transition between learning spaces, the streetscape and the school courtyard.

DESIGNING FOR PEDAGOGY

In stage two, a new hall, library with a suspended reading net, arts space, balconies and rooftop playgrounds were added to the school. A vast four-storey atrium acts as the main entry via a central circulation spine, connecting all educational areas on the upper levels of the building with the administration area and playground located on the ground floor. Classes are situated on either side of this large timber stairway, which also forms an extension to the learning spaces, further encouraging activity and interaction amongst the school community along this central circulation route. By removing most of the internal walls from the existing structure, classes can also gather on either side of an open timber corridor that runs the length of the campus.

Movable furniture (such as beanbags and desks on wheels) and floor-to-ceiling sliding panels were installed to allow easy reconfiguration of spaces to suit different learning needs. In addition, joinery with built-in nooks, withdrawal spaces

1 Timber stairway as the central circulation spine **2** Open, inviting spaces with bright interiors that feature timber walls, slabs and ceiling and flooring system



CHINA

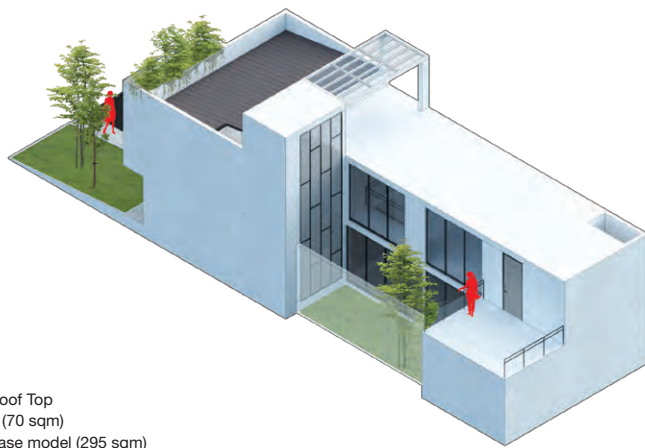


HEALTHY HAUS

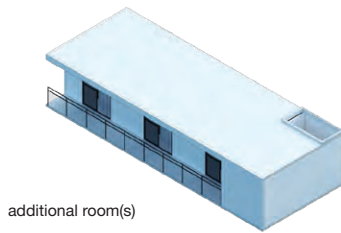
by **SHAU Indonesia**

Healthy Haus is a direct response to the urban living conditions of Indonesians, especially for those living around densely populated areas like Jakarta. The basic idea is to provide future residents with a house, which instead of being a 'machine' for living, becomes a 'machine' for well-being as an answer to pollution, hours spent in traffic jams, as well as other stressful, harmful impacts on the body and mind stemming from capitalism and the lack of enforcement of regulations limiting its adverse effects. In that sense, the house becomes a 'refugium'; literally a machine designed to filter and block out harmful external environmental effects, by producing its own interior microclimate (like a space station).

1 Modules 2 Façade variations



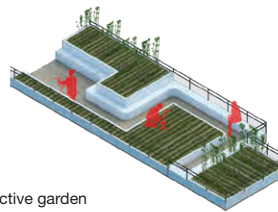
Roof Top
+ (70 sqm)
base model (295 sqm)



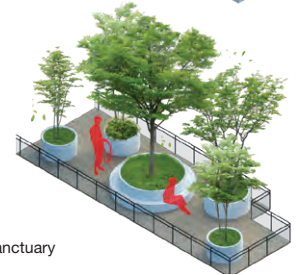
additional room(s)



leisure pool



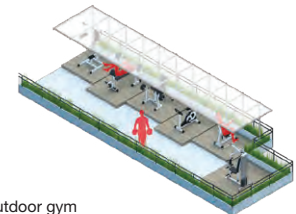
productive garden



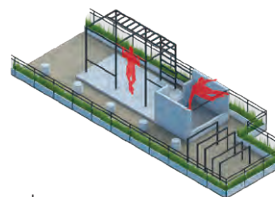
sanctuary



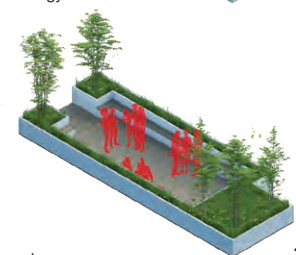
badminton



outdoor gym



urban parkour



green terrace

1



2

OFFICE FOR COMMUNIQUE

The design of this office project seeks to prioritise comfort, health and well-being to its users.

SPATIAL SCHEME

The upper floors house the workspaces within a seamless two-floor volume, accommodating a diverse mix of functions. In order to optimise the infiltration of glare-free daylight, its northern and southern edges are designed to be porous; the fenestration scheme was designed via a metric-based daylight analysis. To reduce heat admission into the building, the western edge—which forms its primary façade—is completely covered with a massive wall and an added layer of insulation. Along the southern edge, informal, semi-open meeting areas are created at both ends of the volume to provide intimate spaces for discussions and conversations. All services are housed at one end of the floor plate to facilitate maintenance operations and easy circulation.

Its spatial planning was the result of having an open-plan office format to represent transparency—it encourages engagement within the team and reflects the company's philosophy of enhancing employee experience, productivity and well-being.

BIOPHILIC DESIGN

The larger biophilic design strategy endeavours to enhance the workers' connection with nature to promote happiness, good health and well-being. In addition, vertical green walls run along the entire two-floor length of the volume along its eastern and western edges, and treated fresh air is brought in to improve indoor air quality. This strategy ties in with the attempt to optimise the building's thermal performance too. Large windows, lined with planters, are installed along the northern and southern edges of the floor-plates; they open to views of the surrounding greenery while ensuring daylight ingress.

ENERGY PERFORMANCE

All of the windows are double-glazed, while glass wool is used as an insulating

material on the western façade. Acoustical treatments—poly-fibre wall and ceiling panels—were integrated within the design from the beginning of the process to reduce indoor noise levels. The use of modern technology extends to artificial lighting design as well, where a simple yet intelligent system is chosen to augment natural daylight, creating optimal working conditions throughout the day.

The Bureau of Energy Efficiency (BEE) Star Label for buildings with more than 50 per cent conditioned area is as follows:

- 190-165 EPI = 1 star
- 165-140 EPI = 2 star
- 140-115 EPI = 3 star
- 115-90 EPI = 4 star
- Below 90 EPI = 5 star

1 The unconcealed air-conditioning ducts add to the raw, industrial look of the space

2 Section drawing of the workspaces that are housed within a seamless two-floor volume



AUSTRALIA





URBN HOTEL

by **Praveen Nair**

The architectural team turned a trio of old buildings, including a former artificial limbs factory and a post office, into a boutique hotel. It holds the record as China's first-of-its-kind carbon-neutral establishment. The architects' radical approach conveys sensitivity to the environment while redefining what a hotel stay should be like. While the attention to sustainability has grown and evolved recently, principal architect Silva feels that the hotel did create a ripple effect to inspire a consciousness in material use and in the creation of healthy spaces.

WELLNESS

Wellness, he thinks, cannot be discussed in and of itself. It is but one dimension of the greater sustainability discourse, centring itself on the health of its inhabitants and of the environment. He feels that only when the term is read alongside concepts such as resilience can it actually realise any significant change in the building industry.

Silva acknowledges that the discussion has evolved from the 1990s, where energy reduction was all the rave, to the 2000s, where rating systems such as LEED were conceived. Following that, the spotlight fell on holistic qualities of space such as daylight, air quality and the social issues surrounding the building context. These sometimes unquantifiable factors potentially resulted in more 'happiness' and fulfilment for users in the space. Wellness therefore becomes part of this broader discussion.

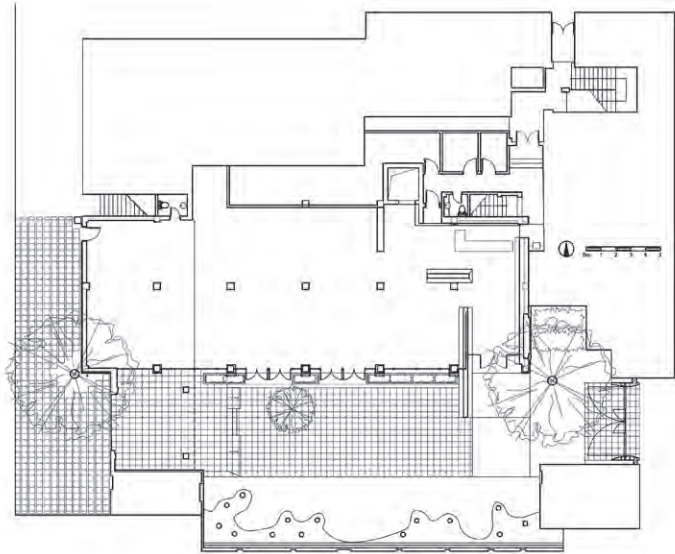
APPROACH

Longevity acted as a guiding term in this project. The architecture firm embraced the memory of the space and the use of new materials, all while ensuring that the Greenest methods were employed and an honest material usage was ensured.

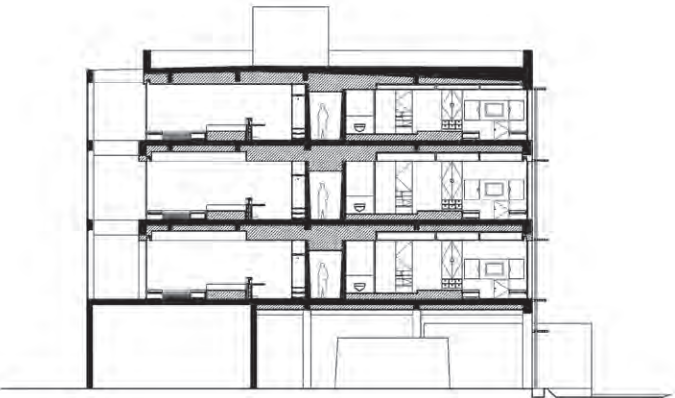
The present form of the building has been largely retained, its original columns and beams left exposed and its original white-tiled external façade kept in place. Two centenarian magnolia trees have also been preserved to add a sense of time and green in the space, keeping the charm and memory of the place intact.

Reclaimed and natural materials were employed in this project too. Coincidentally, much of the old housing quarters in Shanghai were being demolished to make way for new developments. The firm saw this as an opportunity to salvage brick, timber and slate materials in order to extend their life cycles as well as to reduce the cost and energy used to make them anew.

1 Bar 2 Atrium 3 Entrance
4 Studio lounge 5 Floor plan 6 Section



5



6

IN CONVERSATION WITH PALINDA KANNANGARA

by **Candice Lim**



Palinda Kannangara

Although armed with a Bachelor of Science (BSc) in physical sciences, with a specialisation in mathematics, Sri Lankan architect Palinda Kannangara felt his calling was elsewhere. Kannangara joined the study course conducted by the Sri Lanka Institute of Architects in 1994, and trained under Sri Lankan modernist architect Anura Ratnavibhushana, who had worked with Geoffrey Bawa for 16 years. Upon receiving his charter in 2004, Kannangara started his independent practice in 2005. The studio is now located in Rajagiriya, Sri Lanka.

With her interest piqued by his holiday retreat project (see sidebar) that reminded her of a cross between a traditional stilt house on land and a glasshouse, *FuturArc* managing editor Candice Lim had a chat with Kannangara about site sensitivity, transparency/privacy, and wellness.

CL: How do you define wellness in architecture from your experience?

PK: Wellness is a mental and physical state. And in architecture, I believe it's how you make the mind at peace, and create space in a way that is calming, allowing you to rest, as well as how you connect with nature. Wellness is that which makes for more comfortable living, and that which increases the mental strength of the users, allowing them to focus better, like meditation. Spaces can support your wellness, so architecture can help by allowing for less clutter, and having simpler spatial layouts. Ultimately, being connected with nature is the most powerful factor.

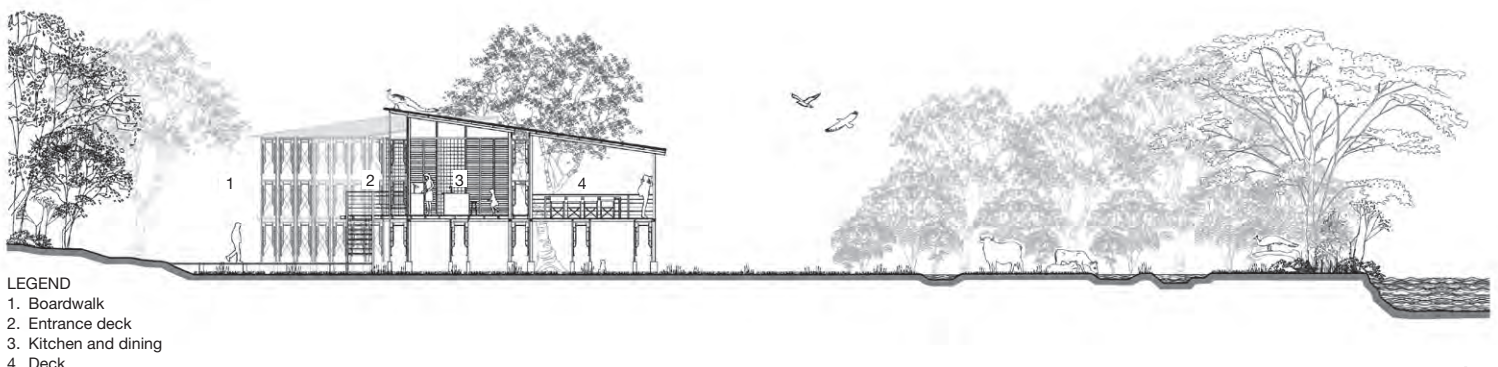
CL: Are there any guidelines or tools commonly used in Sri Lanka presently to measure wellness in buildings?

PK: Most Sri Lankan architects don't really follow any specific guidelines or rules, but rather by our experience, our past and our roots that come from Buddhism. We are rooted in that kind of philosophy—connected with nature; building with nature and respecting nature—that is, being part of nature. Buddhism is a very strong element in our architecture and philosophy, and our way of living in Sri Lanka. Because it teaches you not to add too many things to your life, as well as in architecture. So it brings more calmness to our mindset. It's like designing a monastery. Buildings should be more connected to the landscape, so we try to have a dialogue with the landscape, sky and water. Everything is connected—the thing is how to live with nature within a defined space, a conditioned space, when we design as architects. It's not just about being shaded under a tree all the time, we should aim to simulate the comfort levels even for interior spaces. Architecture is not just an element but it is a whole. Without landscape, one can't think of architecture. Everything should be part of the full context, of how the buildings sit with the surroundings.

CL: Do you think the implementation of WELL will take off in Sri Lanka?

PK: As mentioned, there are no guidelines in Sri Lanka, but such tools are good if you are not aware of the conditions or know how to create an ecological building. But for us, it comes from our background, and our past practices. [Such tools] may help but more than anything, we are already practising with those guidelines of how to respect nature—they are in our systems, our roots, our ethos. So there is no difference between what we are already practising now and what any official rules or guidelines are asking. But such guidelines are good for any country to follow.

1 Sectional drawing of Frame
2 Frame: Platform for the living room



- LEGEND
1. Boardwalk
2. Entrance deck
3. Kitchen and dining
4. Deck



PUTTING WELLNESS AT THE HEART OF BUILDING DESIGN

by **Astee Lim**

It is no longer just about being Green. These days, it is about how well you feel in your physical environment. The built environment has immense potential to affect health, emotions and the quality of work we produce. Though not a new concept, the demand for wellness in workplaces is gaining traction along with the rise of the wellness industry. In response, the real estate industry is collaborating with health and wellness consultants, sustainability experts, designers and architects to establish and promote wellness in our built environment as a way of life.



milestones

Malaysia

Building professionals expound on Green at FuturArc Forum 2019

FuturArc Forum was created to expand the conversation on Green architecture and development beyond the printed *FuturArc* magazine, onto a more personal and interactive medium. Hence, in 2008, the series of conference and networking events was born, and it was held in all seven BCI Asia countries. Thereafter, subsequent Forums were successfully organised in Singapore and Hong Kong separately.

"We wanted to bring together advocates, partners, like-minded professionals and industry players to push the movement along, and carry on the dialogue face-to-face," Candice Lim, managing editor of *FuturArc*, highlighted in her opening speech during the forum on 18 June 2019. "The first FuturArc Forum kick-started in Malaysia back in 2008, so this is a homecoming of sorts."

GBI impacts on Green economy

The day began with a keynote address on the state of Green in Malaysia by Ar Ezumi Harzani Ismail, the immediate past president of Pertubuhan Akitek Malaysia (PAM). As Malaysia's Green Building Index (GBI) reaches its 10th year milestone, it is a good time to take stock and assess the impact of sustainability efforts in the country. Ezumi shared that there are demands to measure GBI key performance index for a reality check, where expectations are as follows:

- Better awareness and knowledge of Green building and energy efficiency
- Industry knowledge to embrace new benchmarks
- Leading the industry to the new paradigm

"When we approach the state governments who have not subscribed to GBI, they question 'What are the real benefits?' This is because they cannot see a reduction in carbon dioxide emissions, and that is why we have to translate the data into something tangible, such as power and water consumption, which accumulates to millions of dollars. That is how we get the buy-in from the government," Ezumi elaborated.

"It's beyond the Green assessment rating; it's about how the building should respond to its occupants and the environment. In the design process, there should be increasing awareness and understanding levels that making a building Green is a cost savings in itself when it comes to energy, water and building management costs. These should be the cost benefits for developers and building owners, etc., to focus on by participating in Green building, where rental and building values will be increased, and not the direct incentives from the government.

"We hope that one day, Green building is not something that is preferred by the people, but something that is the norm—it's not something that they *wish* they have, but it's something that they *must* have," Ezumi noted.

Designing with nature

FuturArc editor-in-chief Dr Nirmal Kishnani spoke about eco-puncture—"pinpricks of transformative changes"—which refers to strategic designs and projects that trigger systemic health (not unlike acupuncture) and create a ripple of good in the surrounding community. With the global threats of climate change and ecological loss demanding urgent intervention, sustainability efforts, he said, should move from mitigation of harm to catalysing change that repairs and restores the environment.

"I would like to start by talking about the gap: this is a gap between what we do as advocates of sustainable design, and what is actually happening in the built environment. This is also a kind of reality check. I think that if we acknowledge the gap in an honest and open manner, then maybe we can find better ways of designing buildings and cities.

"Let's discuss about a few things that we have forgotten in the discourse of sustainability, a few questions that have been left behind. The first one is how do we engage a living planet; how do we connect with nature. And by this I don't just mean biophilic design, where trees are planted around our buildings. By this I mean how do we become, once again, a part of the natural system rather than something that is set apart from it.

"Green design in Asia began in 2003. It may be an arbitrary number, but I think it is significant. Because prior to this, there were very few Green building councils in Asia, other than the ones in India, Japan and Taiwan. But during the post-2003 period, we saw the formation of many such councils and Green assessment tools. By the year 2008, this was entrenched in our vocabulary; we knew how to break it down into actionable parts, what to do with the drawing board, how to measure outcomes, how to monetise it.

"The building that I think really marked a significant moment in the Green building movement in Asia is the CII-Sohrabji Godrej Green Business Centre in India, as it was the first LEED Platinum building outside of the US, in Asia. Here in this building is proof that we can have energy and water savings, etc., without fundamentally changing our economic model, the way in which we relate to natural systems, and the way we were building. This was crucial in Asia because it was in the upswing of economic growth, and everyone was looking for a way to be Green without curtailing the economic growth of Asian cities and economies. So without realising and talking about it, we began to subscribe to an idea: profitable sustainability," Dr Kishnani observed.

Profitable sustainability

"Profitable sustainability is a very important point about environmental responsible design. It argues that you have to be sustainable not just because experts in the room say so, you have to be Green because it makes



FuturArc Forum 2019, Malaysia



Candice Lim, managing editor of *FuturArc*



Ar Ezumi Harzani Ismail, the immediate past president of Pertubuhan Akitek Malaysia (PAM)



Dr Nirmal Kishnani, editor-in-chief of FuturArc

money: Green buildings save money by fetching higher rentals and a better resale value. The Green branding can be monetised because it shapes consumers' sentiment. For people who are concerned about the planet or their own health, they will buy into the notion of being Green. But the problem with this argument is what it leaves out. The conversation around Green has narrowed to what we do within site and shell: how it benefits the occupants and the developers. What is problematic about this is that it gives governments a free pass. In fact, to this day, there are only very few countries where Green is mandated by law; in most places, it is still voluntary, because governments do not need to act since it's profitable, and hence it does not need to be turned into a law.

"The problem of sustainability cannot be solved at the scale of the building; it needs to be solved at the scale of the city, since so much of what happens to the planet happens because of the way we run our cities, the pace of which urbanisation is taking place. There is a school of thought now that argues that we will never be sustainable until we can rethink the urban model of how cities are designed. E.O. Wilson, the father of biophilia, recently wrote a book named *Half-Earth*, in which he argued that we should leave half the planet alone, and intensify the other half (the urbanised bits) with technology and recycling, and so on."

In his conclusion, Dr Kishnani remarked, "Buildings should be measured by their generosity—not just what they do for themselves or their occupants, but also what they do for their cities. The problem of sustainability requires a way of thinking about the right scale of action, and if you start with the question of what should a city be, then everything follows from that; generosity becomes a requirement. Then the question of what a building does is that it must provide space for food, community space, other species, etc. These are the obligations of a building to the city and the ecosystem. As such, rating tools become different as well, where they become ways of negotiating the relationship between cities and the world that we inhabit. How we evaluate buildings changes too. I think that a Greener building is one that makes a good city."

Incentives and business opportunities

Gregers Reimann, managing director of IEN Consultants Sdn Bhd, pushed the case for biophilic tropical buildings with case studies from Malaysia, while C.K. Tang, honorary treasurer of Malaysia Green Building Council (MalaysiaGBC), made a business case for net-zero energy buildings and Green innovation in Malaysia, where he spoke about how sustainability is a business opportunity.

Reimann said, "We have to start levelling the playing field by paying the right price for energy and water. Taxation and incentives are great ways to get the right development. In German, the word for taxes means 'to steer'. I feel that this is actually the right way to look at taxes, to steer developments and society in the direction that we want to go. Of course, the knee-jerk reaction is that the poor will suffer. But taxes should be implemented such that the less well-to-do citizens can still maintain their lifestyle quality and the rich can pay their fair share."

Tang commented, "Personally, I feel that Green rating systems are actually quite complicated, especially for professionals who are not trained in it, and will find it challenging to implement these tools. Hence, I think we need to simplify them further, where everyone can apply them with ease and acknowledge them as the solution. We have reached the stage where we know that these technologies are proven to work. The question is how can we scale it up to every other project, every other new building. At the core of it, from a developer's point of view, is the question of whether there is value for one to carry it out: I can spend \$X million on a project, but a neighbouring property that does not do anything of the same kind can also be sold at the same price. That would be the biggest question mark; how can we do this and influence everyone to do it? Profitability is one, how can we scale it up, where you request for \$X amount, and people are willing to pay more for it. That will encourage the developers easily. Or do we push for government policies and for more developers to follow suit, so that everyone is paying the same price? There are a lot of questions that we need to debate, engage and discuss, between government, private sectors,



Samantha Allen, International WELL Building Institute Asia's director of Business Development



Gregers Reimann, managing director of IEN Consultants Sdn Bhd

FUTURARC PRIZE 2019

This cycle, FuturArc Prize, Asia's foremost Green building design competition, invited entrants to investigate what it means to live in a hyper-dense city in Asia, one with no less than 100,000 people per square kilometre. With the Asian city growing denser by the day, this was a quest for balance and reciprocity. Buildings in this context cannot be seen in isolation; they must engage the wider logic of the neighbourhood.

The competition was held from September to December 2018, attracting both professionals and students, and culminated at the annual BCI Asia Awards ceremonies that were held from April to June across the region. Winners brought home specially designed FuturArc Prize trophies, certificates, attractive cash prizes of up to SGD44,000 and a two-year complimentary subscription to FuturArc magazines. The winning designs are featured in the 2Q 2019 Green Awards issue of the magazine.*

FuturArc Prize 2019 was presented by Schüco as Platinum Sponsor.

The winners are:

Professional category

- **First Place** – Yuan Chao; Ayu Sukma Adelia; Wu Guodong; Liu Shuangyang; Aloysius Lian (Singapore)
- **Second Place** – Amanda Meilia Saputri; Kevin Sutjijadi (Indonesia)
- **Third Place** – Yug Aggarwal; Tarun Bhasin; Manu Dhanked (India)
- **Special Mention** – Arnaud Jouanchicot; Thomas Combes; Paul Chevalier; Bois François (France)

Student category

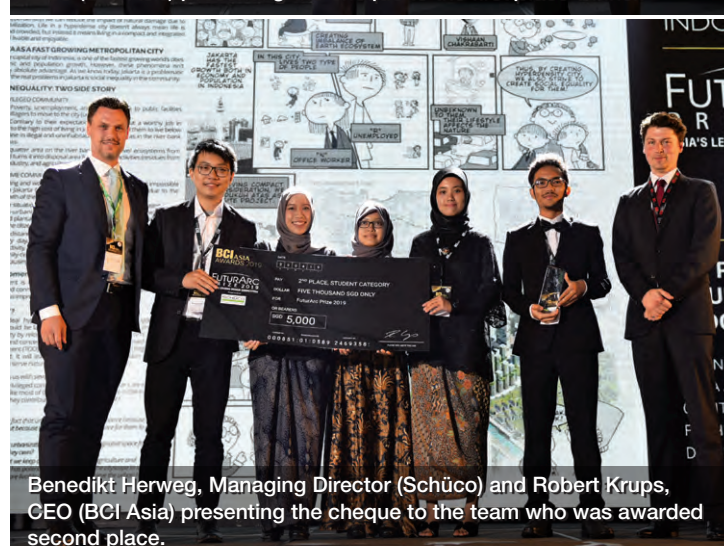
- **First Place** – Fauzi Mizan Prabowo Aji (Indonesia)
- **Second Place** – Kevin Oscar Satriajaya; Qanita Qamarani; Reza Ahmed Dzu Hazhin 'Azheem Mulla Ahsan; Fadhila Neuritasari Rahman; Dewinta Asyiva Sidiq (Indonesia)
- **Third Place** – Henry Yonanda; William; Deanna (Indonesia)

* To view the winning designs of FuturArc Prize 2019, please purchase a copy of the 2Q 2019 Green Awards edition of FuturArc, visit www.futurarc.com or the FuturArc app. The list of citation recipients can also be found on the website and app.

WINNER PROFESSIONAL CATEGORY



STUDENT CATEGORY



MERIT PROFESSIONAL CATEGORY



Robert Krups, CEO (BCI Asia) with team members Karl Frederick I. Taberdo, Bryan M. Ibañez and Micca P. Rangasa.



Benedikt Herweg, Managing Director (Schüco) and Robert Krups, CEO (BCI Asia) with team members Natasha Nurul Annisa, Satria Agung Permana, Gilang Dwi Alridho and Nabila Afif.



Robert Krups, CEO (BCI Asia) with team members Yonni R. Habulan, Maricris B. Ngo-Habulan, Nicole Stephanie M. Omac and Giselle Andrea S. Sta.Ana.



Benedikt Herweg, Managing Director (Schüco) and Robert Krups, CEO (BCI Asia) with team members Leo Tanardy, Rizaldo Suwandi and Tommy Chandra.



Robert Krups, CEO (BCI Asia) and Remo Kow, Business Development Manager – Residential Projects (Schüco) with team members Chai Yi Yang and Ng Yi Ming.



Benedikt Herweg, Managing Director (Schüco) and Robert Krups, CEO (BCI Asia) with team members Venska Frizky Deandra Sukma, A. Christian Pratama Putra, Kurniawan Abednego Putratama, Rifandi Febrianto and Gilang Pidiianku.

FUTURARC GREEN LEADERSHIP AWARD 2019

In its 11th year running, seven outstanding Green projects from five different countries in Asia (Hong Kong, Indonesia, Malaysia, Singapore and Vietnam) has been recognised in the FuturArc Green Leadership Award. Specially designed FuturArc Green Leadership Award trophies and certificates were given out to the winners at BCI Asia Awards ceremonies held across the region. The winning teams will also receive a two-year complimentary subscription to FuturArc magazines.

Since 2009, FuturArc Green Leadership Award has been on the lookout for innovative and ecologically responsible buildings throughout Asia-Pacific. The Award recognises the teams behind these Green built projects that have collectively pushed the limits and demonstrated the best in architectural innovation and environmental stewardship within the region.

FuturArc Green Leadership Award 2019 was presented by TROX Malaysia, Gold Sponsor (Thailand) and Phuc Khang Corporation, Gold Sponsor (Vietnam).

Entries were invited in six categories:

1. Residential – Individual Houses
2. Residential – Multiple Houses
3. Commercial
4. Institutional
5. Urban
6. Socially-inclusive Development

The winners are:

- Castaway Island, Vietnam (Commercial)
- Development of Windsor Nature Park, Singapore (Urban)
- LABO. The Mori, Indonesia (Residential – Multiple Houses)
- Planter Box House, Malaysia (Residential – Individual Houses)
- Puyangjiang River Corridor, China (Urban)
- S Space, Vietnam (Institutional)
- Sekolah Indonesia Cepat Tanggap, Indonesia (Institutional)

To view the winning designs of FuturArc Green Leadership Award 2019, please purchase a copy of the 2Q 2019 Green Awards edition of FuturArc, visit www.futurarc.com or FuturArc app. The list of citation recipients can also be found on the website and app.

WINNER



Luu Thi Thanh Mau, CEO (Phuc Khang) and Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for Castaway Island, Vietnam (Commercial category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for Planter Box House, Malaysia (Residential – Individual Houses category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for Development of Windsor Nature Park, Singapore (Urban category).



Elaine Wai, General Manager (BCI Asia Hong Kong) and Ada Fung, BBS, Director (World Green Building Council and Hong Kong Green Building Council) presenting the award to the winning team representative for Puyangjiang River Corridor, China (Urban category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for LABO. The Mori, Indonesia (Residential – Multiple Houses category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for Sekolah Indonesia Cepat Tanggap, Indonesia (Institutional category).

MERIT



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the team representatives for 3500 Millimeter House, Indonesia (Residential – Individual Houses category).



Luu Thi Thanh Mau, CEO (Phuc Khang) and Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representative for Brick Cave, Vietnam (Residential – Individual Houses category).



Elaine Wai, General Manager (BCI Asia Hong Kong) and Ada Fung, BBS, Director (World Green Building Council and Hong Kong Green Building Council) presenting the award to the winning team representatives for Chai Wan Campus for the Technological and Higher Education Institute of Hong Kong (THEi), Hong Kong (Institutional category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representative for Chennai Airport, India (Commercial category).



Luu Thi Thanh Mau, CEO (Phuc Khang) and Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for iSchool Quang Tri, Vietnam (Institutional category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for Sengkang Riverside Park Large Childcare Centre, Singapore (Institutional category).



Luu Thi Thanh Mau, CEO (Phuc Khang) and Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representative for Stepping Park House, Vietnam (Residential – Individual Houses category).



Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representatives for The Confluence Club, India (Commercial category).



Elaine Wai, General Manager (BCI Asia Hong Kong) and Ada Fung, BBS, Director (World Green Building Council and Hong Kong Green Building Council) presenting the award to the winning team representatives for The University of Chicago Center in Hong Kong, Hong Kong (Institutional category).



Luu Thi Thanh Mau, CEO (Phuc Khang) and Candice Lim, Managing Editor of FuturArc (BCI Asia) presenting the award to the winning team representative for VH House, Vietnam (Residential – Individual Houses category).



Nish PKN, Chief Operating Officer (BCI Asia) and Max Missbichler, Head of Sales, SEA (TROX Malaysia) presenting the award to the winning team representative for Z9 Resort, Thailand (Commercial category).