



PRESIDENT'S  
DESIGN AWARD  
SINGAPORE 2023

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# HALIMAH YACOB

PRESIDENT OF THE REPUBLIC OF SINGAPORE

Design drives innovation. It creates a meaningful impact on our environment, our economy, and the cities we live in. It creates delightful experiences and spaces to build an inclusive society. It shapes useful products and services for everyday life. A well-thought-out design enhances and uplifts the overall quality of life.

This is evident in the work by the recipients of the President's Design Award (P\*DA) 2023. From a green skyscraper to a guidebook for dementia caregivers, it is clear when thoughtful intentions and smart designs meet; it has the power to improve people's lives, bring communities together, and foster innovation. Through the P\*DA, we celebrate the good work of designers who have applied their creativity and craft with empathy and care. Their contributions serve as a beacon of inspiration to many to create a better and sustainable world for our future generations.

Congratulations to our recipients on your outstanding accomplishments!

# DAWN LIM

EXECUTIVE DIRECTOR  
DESIGNSINGAPORE COUNCIL

As the world emerges from a turbulent period, the P\*DA remains steadfast in celebrating the impact of design in creating a better world for all. This is more apt than ever, given the evolving challenges of the pandemic, the growing realities of living with climate change, and the anxieties arising from the advancement of technologies such as artificial intelligence. We must consider our future and how it is shaped by what we do today.

The recipients of the P\*DA 2023 make a compelling case for how design can improve the lives of people from all walks of life, be it in Singapore or overseas, for today and tomorrow. They also demonstrate the maturing of the design industry. As designers take on increasingly complex challenges, they are working across disciplines and with multiple stakeholders to achieve a positive impact in a variety of ways.

For example, designers can help people better connect with nature in an increasingly urbanised world. Integrating people, wildlife, and the environment has been at the core of landscape designer Leonard Ng's practice over the last two decades, as seen in projects such as Bishan-Ang

Mo Kio Park and the Lakeside Garden at Jurong Lake Gardens. Tebet Eco Park revitalises an ageing green space in Jakarta, turning it into an ecological asset that can better manage stormwater and provide a haven for wildlife.

The P\*DA recipients of 2023 also showcase the role design can play in creating a more sustainable world. *R for Repair*, for example, offers a fresh take on repairing broken objects, and ultimately encourages all of us to rethink how we value the things we consume and use every day.

Even as the world shifts towards using our precious resources more responsibly, our P\*DA recipients show how design can open up new possibilities. *Hack Care* is a do-it-yourself guide that empowers anyone to adapt their environment to create a more inclusive home for those living with dementia.

Together, the P\*DA 2023 recipients are testament to the power of design in making a difference to our world. I applaud their achievements and hope they can spur more designers – and even non-designers – to work together to create a better world by design.

# LIM ENG HWEE

CHIEF EXECUTIVE OFFICER  
URBAN REDEVELOPMENT AUTHORITY

The P\*DA celebrates the value of architecture. Beyond having distinctive aesthetic merits, this cycle's projects have demonstrated the power of good design and architecture in advancing the quality of life in Singapore.

From a green oasis in the Central Business District to a high-rise courthouse and a prototype for net-zero urban living, the three Design of the Year recipients have shown how design can improve the wellbeing of its users through creativity and innovation.

For instance, CapitaSpring and the State Courts Towers are front runners in adopting a people-centric approach to design. Mixed-use skyscraper, CapitaSpring, is skillfully designed to create a vibrant environment where its diverse users can live, work, and play amid delightful skyrise green spaces, while the innovative design of the State Courts Towers represents a novel re-envisioning of the traditional courthouse as an open and transparent structure, with lush terraces that offer nature as respite amidst formal court proceedings.

Impactful ideas to promote urban resilience and liveability through good design were also brought beyond our shores by the Singapore

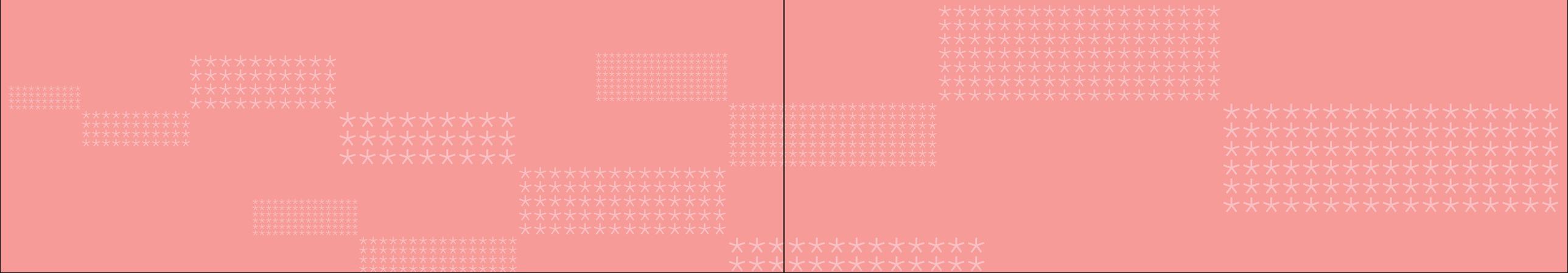
Pavilion at Expo 2020 Dubai. The self-sufficient structure in the Dubai desert was an inspiring showcase of how nature and technology can be seamlessly integrated with the built environment – an apt reflection of Singapore's City in Nature vision.

In celebrating architectural and design excellence, this cycle's Designer of the Year award has been deservedly conferred to Ar. Tan Kay Ngee, an outstanding architect who is well-recognised for his rich collection of architectural works both in Singapore and abroad. His expertise in drawing upon local cultures, histories, and typologies in his designs, in addition to his ability to make architecture accessible to the layperson through his frequent writings on arts, culture, and the city, are aspects that set him apart as a role model for the architectural fraternity.

On this note, I would like to express my heartiest congratulations to all recipients. I am confident that with each cycle, the P\*DA will not only continue to inspire more public interest and appreciation for good design and architecture, but also embolden our Singapore designers and architects to create even more meaningful works that will enhance our quality of life today, and for many generations to come.

\* The President's Design Award, Singapore's highest honour, is accorded to designers and designs across all design disciplines. It recognises the significant achievements of an extraordinary group of people that has positively impacted the lives of Singaporeans and the global community. The

recipients are standard bearers whose commitment to design excellence is the benchmark that future generations of designers should aspire to reach and exceed. These standards will eventually permeate the consciousness of society, whilst bringing about a greater awareness and appreciation of the impact of design.





# RETHINKING DESIGN ON THE WORLD AND ITS IMPACT

A week after judging the P\*DA in Singapore, Kotchakorn Voraakhom was still buzzing from the experience.

"I felt like I had a headache for a week, but in a good way. The P\*DA made me reflect on my own work as a designer," says the Bangkok-based Thai landscape architect and founder of LANDPROCESS.

She was part of a 17-member international team invited to deliberate and decide on the recipients of the nation's highest design honour. Running from 13 to 17 February 2023, the jury sessions saw members being split into two panels for judging: one for Design and the other for Architecture. Voraakhom was part of the former and was joined by other local and overseas jurors as they journeyed across the island to assess candidates for the P\*DA 2023.

It proved to be an eye-opening experience for Voraakhom. The broad range of projects expanded her understanding of the impact of design beyond her discipline. The wide-ranging dialogue among the diverse jurors – who included designers and non-designers in the fields of communications, education,

healthcare, digital technology, the built environment, and more – also stretched her definition of design impact.

"Compared to other jury panels I have been on, the P\*DA had a very refined process," Voraakhom says. "It was very challenging to judge because it involved designs from many different disciplines, but I learnt a lot from the other jurors through our holistic discussions."

As with the preceding two editions in 2018 and 2020, the biennial award seeks to recognise the impact of design in four areas: enabling economic transformation; raising the quality of life; advancing Singapore's brand, culture, and community; and making ground-breaking design achievements. The focus on design's impact since 2018 has expanded the P\*DA's agenda beyond its original mandate since 2006 to recognise designers who were making a difference to the lives of Singaporeans and the global community through excellent design. The shift is a timely rallying call to designers across all disciplines to seek better outcomes that can meet the growing complexity of crises and challenges the world faces today.



Ar. Chan Soo Khian  
Jury Chair (Architecture Panel)  
Founding Principal and Design Director,  
SCDA Architects Pte Ltd



Dr Hossein Rezai  
Jury Chair (Design Panel)  
Global Design Director, Ramboll;  
and Founding Director,  
Web Structures



Lekshmy Parameswaran  
Jury Vice-Chair (Design Panel)  
Co-founder, The Care Lab  
(Spain)



Ar. Angelene Chan  
Chairman, DP Architects Pte Ltd



Liza Chong  
CEO, The Index Project  
(Denmark)



Rama Gheerawo  
Director, The Helen Hamlyn  
Centre for Design, Royal College  
of Art (United Kingdom)



Christoph Ingenhoven  
Chairman, ingenhoven associates  
(Germany)



Dr Emi Kiyota  
Associate Professor, NUS Yong  
Loo Lin School of Medicine;  
and Director (Programme),  
Health District @ Queenstown



Tim Kobe  
Founder and CEO, Eight Inc.



Ma Yansong  
Founder and Principal Partner,  
MAD Architects (China)



Larry Peh  
Founder and Creative Director,  
&Larry



Hans Tan  
Founder, Hans Tan Studio;  
and Associate Professor,  
Division of Industrial Design,  
National University of Singapore



Dr Ming Tan  
Founding Executive Director,  
Tech for Good Institute



Professor Erwin Viray  
Chief Sustainability Officer,  
Singapore University of  
Technology and Design; and  
Director, Kyoto Design Lab



Kotchakorn Voraakhom  
Founder and CEO,  
LANDPROCESS,  
Porous City Network  
(Thailand)



Dr Wong Sweet Fun  
Senior Consultant (Geriatric Medicine);  
Deputy Chairman (Medical Board); and  
Clinical Director (Population Health and  
Community Transformation), Khoo Teck  
Puat Hospital and Yishun Health



Marisa Yiu  
Co-founder and Executive  
Director, Design Trust  
(Hong Kong)

## Design in a post-pandemic world

Each edition of the P\*DA welcomes new jurors such as Voraakhom, but there are familiar faces too. Dr Hossein Rezai, the Global Design Director of Ramboll and a recipient of the P\*DA Designer of the Year in 2016, has served on the jury since 2018. This year, he stepped up to serve as the Jury Chair of the Design Panel. He welcomed the opportunity to meet fellow jurors in person after experiencing the 2020 edition, when overseas jurors participated through video conferencing due to pandemic-induced travel restrictions.

“While we were physically back to pre-pandemic mode, we all appreciated the company a lot more than before. I think the isolation and experience of the pandemic has changed us all forever. The quality of the discussions and the attention we paid to each other’s observations were different and better, I would say,” says Rezai.

The experience of the pandemic also shaped what many jurors were looking out for in 2023. In addition to design that combines purpose and beauty, they convened around celebrating designs that made a difference in a big way, says the Jury Vice-Chair of the Design Panel, Lekshmy Parameswaran.

“No matter where we came from, everybody felt a sense of urgency that design has to tackle environmental issues as well as social ones, such as inequality. The pandemic stripped these topics bare and we discussed and assessed the projects in light of this context,” says the Barcelona-based co-founder of The Care Lab. Parameswaran’s firm received a P\*DA Design of the Year in 2018 for its project *Who Cares? Transforming the Caregiving Experience in Singapore*.

“It’s not just what we design and how we design it, but why we are designing it,” she adds. “The entries that were really outstanding showed a purpose and mission beyond the quality of the design execution itself.”

## A better life, society, and city by design

Regardless of project size, the 2023 recipients showcase how designers from Singapore are taking on the many crises and challenges that the world faces today, and provoking change in a fundamental and systemic way. This ranges from managing the effects of the climate crisis, to better addressing the needs of specific demographic groups, to supporting urban development that is sustainable and responsible.

“On a social, ecological, and technological level, the threats are large and we are confronted with real uncertainty if, as a global population, we don’t change our behaviours and act to preserve the planet and life on it,” says juror Liza Chong, the Chief Executive Officer of The Index Project, a Danish non-profit organisation working to promote and mobilise design that improves life.

“The solutions we saw during the P\*DA this year are the community’s response to these crises and great examples of paths to a sustainable future,” she adds.

Fellow juror Tim Kobe shares a similar sentiment. He adds that many of the challenges the world is experiencing today are due to poor design in the past.

“Many of the problems that we face today are problems of our own creation, and therefore design has the capability to turn those things into opportunities and ultimately transform our operating system to a better solution,” says the founder and Chief Executive Officer of strategic and experience design firm Eight Inc.

This year, the field of landscape design was recognised for its role in designing a better world, garnering two recipients. Landscape architect Leonard Ng was awarded the Designer of the Year, and Tebet Eco Park by SIURA Studio received a Design of the Year accolade. Both advocate for an ecologically based design approach to landscape, which Voraakhom sees as crucial to repairing the relationship between humans and nature in our cities.

“We all know how landscaping has been key

to Singapore's growth as a nation over the last 50 years. Your success in becoming a 'Garden City' and your evolution now into a 'City in Nature' has proven how landscape architecture and design is not just a trend but the way forward for cities around the world," she says.

Local issues with global resonance were also tackled by two other recipients. The toolkit *Hack Care: Tips and Tricks for a Dementia-Friendly Home* empowers people with the knowledge and mindset to design a better environment for people with dementia – a condition that Parameswaran refers to as a "universal blind spot". Another recipient, *R for Repair*, addresses how we perceive brokenness and fragility by showing how 'repair' can be creative and inspiring. It offers an antidote to the obsession with newness and the hyper commercial environment that Singapore and many other cities have adopted.

### Working across disciplines for a better planet

In the realm of the built environment, this year's Jury Chair of the Architecture Panel, Ar. Chan Soo Khian, noticed the recurring themes of sustainability and spatial innovation in many of the shortlisted projects. This made teasing out and distinguishing the merits of each more challenging, says the Founding Principal and Design Director of SCDA Architects.

"A memorable moment was when we had a split jury decision. The jury debated rigorously over the two days until a unanimous decision was reached," says Chan, who himself received the P\*DA Designer of the Year in 2006.

Consider CapitaSpring and the State Courts Towers, two recipients in this edition that stand out for reasons beyond their towering skyscraper forms. The former houses various spaces of multiple levels that turn it into a community space for the Central Business District, while the latter reimagines the traditional low-rise courthouse into a high-rise building that is also open to the environment



because it avoids the typical enclosing facade.

For another juror of the Architecture Panel, Ar. Angelene Chan, the Chairman of DP Architects, this year's architecture recipients also represent a growing awareness of the transformative potential of the built environment.

"Whether it is in terms of sustainability or social equity, architects are seeking authenticity in their design approach and execution. Such conviction and gumption suggest an evolution in architectural design, beyond greenwashing and styling," says Chan, who received the P\*DA Designer of the Year in 2018.

This year, the Architecture Panel selected Ar. Tan Kay Ngee as Designer of the Year, recognising the deep authenticity that has driven his career over nearly four decades. The jury lauded his commitment and sensitivity as a designer, the deep research that informs his practice, and his prolific commentary on cities and culture over many years – the latter being crafted for both specialist and generalist audiences.

As more architects and designers take on the world's increasingly complex challenges and crises, the jurors noted the rise of the "trans-disciplinarian" practitioner who is comfortable working across design disciplines.

An example is provided by the Singapore Pavilion for the Expo 2020 in Dubai, which won over the jurors for how WOHA Architects worked with specialists to seamlessly integrate architecture, technology, and landscaping.

"A shift is happening in the design scene, not only in Singapore but globally too, where designers are crossing the traditional boundaries of design, and are instead innovating across disciplines," says Rezaei.

"This trend is driven by a growing consciousness of environmental issues that cuts across disciplines, and is empowered by the rise of new technologies that lets designers do more than before," he adds.

"An extrapolation of the tendency will lead to more polymaths in the design and environment



arena. This is a good tendency that we ought to appreciate, welcome, nurture, and recognise.”

### Solutions for Singapore, and for the world

While each recipient shines on its merit, they together represent the strengths of contemporary Singapore design. This was particularly evident to overseas jurors such as Chong. Her maiden P\*DA experience offered an insight into Singapore culture, particularly its emphasis on care and social welfare for the needs of the vulnerable.

“The P\*DA is a great showcase of the myriad ways that designers in Singapore are responding to the urgent needs of Singapore. I haven’t experienced an award that does so with this level of maturity and with solutions that can be expanded on a scale that will impact many,” she says.

“More Singapore designers should recognise the potential of exporting their solutions to the world,” Kobe adds. “One of the key takeaways that I have of Singapore’s design scene is that we often look at it in the context of Singapore, as opposed to a broader, global context,” he says.

“If anything, there is a risk associated with thinking about design in the context of national borders or national competitions, which can support a parochial mindset and ultimately limit successful design,” says Kobe.

For Parameswaran, this year’s recipients demonstrate how Singapore is producing its own best practices in design that are relevant to the world. It reflects the incredible growth of the local design scene over the last decade since her practice started working here. The most

successful projects she came across during the judging process were those that married empathy and strategy with outcome – that is to say, design thinking and design strategy were applied to make structural transformation, and with a high level of design execution.

After five days of reviewing and deliberating, the jurors emerged with this year’s selection of recipients as well as a newfound appreciation for the ways their fellow jurors pushed the boundaries of what defines good design and architecture today in the context of assessing impact.

Several jurors attributed the healthy discussion to the well-curated jury panels as they found strength in their diversity. In addition to their different design disciplines, there was a good mix of genders and cultures. This brought much nuance and depth to the deliberations.

“It led to heated debates too,” adds Parameswaran. “I expected it, having done this before, but being hot housed for a week and very, very deeply discussing not just the projects and the execution but also the meaning and role of design right now was wonderful,” she recalls.

The reward for many of the jurors was not only a deeper understanding of design from Singapore and its impact on the world, but new friendships that cross professional disciplines and even borders.

“We had time to gather, see works in Singapore, and come together during lunch and dinner. The conversations that happened along the way helped us to think more about design but also create new relationships,” says Voraakhom. “It felt like we were all in one big design camp together!”



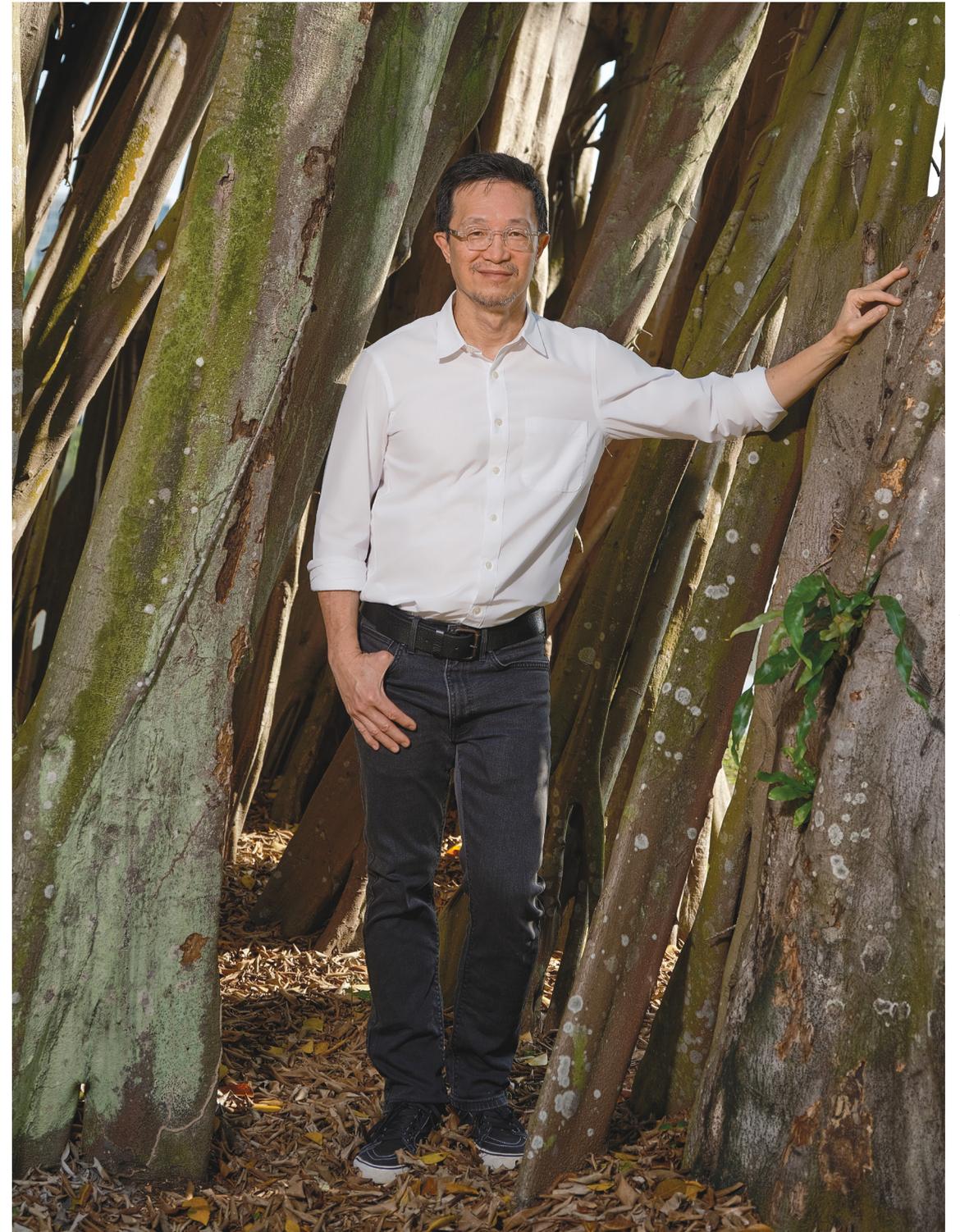
LEONARD  
NG

KEOK  
POH

Anyone who has enjoyed the abundant return of otters and birds to Singapore's parks and waterways must thank Leonard Ng. The landscape architect has played a pivotal role in transforming the city's once functional drainage system into a thriving river of life. Starting from his contribution to the ground-breaking Bishan-Ang Mo Kio Park, Ng has been at the vanguard of integrating the reservoirs and canals in Singapore with parks and the urban environment to create new ecological and recreational assets for the city.

In his career spanning over two decades, Ng has also expanded Singapore's 'Garden City' image with designs that balance the needs of humans, other species, and the environment. His ecologically based approach to parks and landscapes has resulted in green spaces that go beyond offering visual respite for people but also serve as welcoming environments to explore nature and wildlife habitats. They bring people and nature closer together while mitigating the growing effects of climate change and urbanisation – ultimately making the city more liveable and resilient.

Landscape design may have been Ng's second career, but he has made a compelling case for why more should make it their first. His innovative designs have stretched the imagination of what landscape can achieve. Their scope and ambition redefine the traditional role of a landscape architect too. Ng is a pioneer in Singapore's drive towards becoming a 'City in Nature' and continues to be a trailblazer in Singapore and beyond.



**JURY CITATION:**

Leonard Ng Keok Poh is a visionary leader in landscape architecture who is a champion for nature, having created large-scale green public spaces that are beautiful, liveable, and thriving.

From Bishan-Ang Mo Kio Park to Kampung Admiralty to Jurong Lake Gardens, Ng's body of work has shaped many of Singapore's iconic parks and landscapes, touching the lives of Singaporeans across different ages and socio-economic backgrounds. During the pandemic, these green spaces provided much-valued retreat and respite for citizens, offering ways for people to access nature in order to heal and sustain wellbeing. Ng has extended the nation's 'Garden City' legacy such that the city is immersed in nature, not just on the ground plane but also vertically with greenery that thrives on buildings.

The Jury recognises the tremendous amount of dedication that sees visions achieve fruition, as well as Ng's ability to influence and inspire stakeholders across multiple agencies and groups toward a shared vision, encompassing those who may not have a voice such as otters and birds.

The Jury commends Ng on his passionate and selfless journey to elevate the status and perception of the discipline, illuminating the way forward for future landscape architects. He continues to push boundaries to further the narrative and vision for Singapore as a 'City in Nature', imagining a city in deep harmony with nature.

**2 NATURAL CONNECTIONS**

Throughout Ng's two-decade career in landscape architecture, he has sought to bring people and nature closer together. Bishan-Ang Mo Kio Park (2012), for instance, transformed a utilitarian concrete drain into a naturalised river. This has not only improved the capacity to drain and alleviate floods but has also created a welcoming space for wildlife and the community.

**NOMINATOR CITATION:**

Associate Professor Yun Hye Hwang  
Department of Architecture,  
College of Design and Engineering,  
National University of Singapore (NUS)  
I am pleased to write a letter of support for Leonard Ng, the Regional Director (Asia Pacific) of Ramboll Studio Dreiseitl (RSD) Singapore (now Country Market Director, Henning Larsen, APAC). I have collaborated with Leonard on two research projects: "Short-term Vegetation Changes in Tropical Urban Parks" (2017-2020) and "Nature, Place and People: Forging Connections Through Neighbourhood Landscape Design" (2018). He has also been involved in teaching NUS students – as a tutor (2013) and a guest critic (since 2011) – in multiple design studios for the NUS Master of Landscape Architecture programme.

Leonard is active in innovative practice and project collaborations with multidisciplinary approaches. His clear leadership helped establish RSD's reputation as one of the best landscape architecture firms in Singapore. He advocates an extended role for landscape architecture in response to worldwide environmental crises, including biodiversity loss and climate change. His forte is the powerful transformation of the landscape architecture profession uniquely grounded in local and regional sustainability issues.

I fully support his application for the President's Design Award Designer of the Year 2023. I have confidence that his significant influence on reshaping the field of landscape architecture will go beyond Singapore and the Global South.



You have a degree in finance and worked in a bank for 15 years. What made you switch to landscape design in 2000?

Leonard Ng (LN): I was trading currencies, stocks, and bonds and it was a stressful environment where most people didn't stay for long. At the end of the day, you were measured by your balance sheet, which reset to zero every year. I did not want to continue working like that forever, so I started looking for something else.

I've always been interested in design. I enjoyed creating the interiors of the homes I've lived in over the years and thought of being an architect. But the runway to becoming qualified was quite long and I was already in my late thirties. I discovered Lincoln University from New Zealand was then offering a new part-time landscape architecture degree programme in Singapore, which I could take after office hours. While studying, I also began dabbling in the landscape design for my new house and I realised I really enjoyed the experience. It is probably because I developed a love for the outdoors while studying for my finance degree in Canada.

As I learnt more about landscape design, I saw a lot of potential in the field

too. Beyond just aesthetics, it's about creating environments that inspire and tackle issues such as climate change, which was only just beginning to be discussed then.

While studying, you joined the National Parks Board (NParks) where you worked for some five years before leaving to pursue a Master of Arts in Landscape Urbanism in London. What were those formative years like and how did they shape your belief that the intersection of people, nature, and environment should be central in design?

LN One day I was heading the bond trading desk in a bank, and the next day I was interning at NParks. It was a huge learning curve because I had no skills and could not even draw. I was also the oldest guy in my landscape course, and had to work really, really hard. School taught me how to design, but seeing how NParks created landscapes to brand Singapore and add value to people's lives helped me see a bigger picture for the profession.

In 2005, I left for post-graduate studies at the Architectural Association (AA) because I wanted to gain another dimension in my practice. Landscape urbanism was rather new then and was a subject that had



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### 3 COMPACT IMPACT

An early project by Ng was the front lawn of the former New Majestic Hotel. The owners wanted a sliver of landscape to enhance the frontage, but the narrowness of the site and regulatory restrictions ruled out typical planting. Ng's abstract Chinese landscape design injected a breath of nature to the area in Chinatown and offered guests a place to lounge. The project received a P\*DA Design of the Year in 2008.



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### 4 GREENING INDUSTRIES

A good park should be multifunctional, says Ng. One example he designed is Jurong Eco-Garden (2012), a five-hectare development that is part of the industrial development CleanTech Park. The garden offers workers a green space in which to unwind. Green corridors were also created for wildlife movement, while habitats were preserved for the existing flora and fauna of the site. The park received a P\*DA Design of the Year in 2014.

traditionally been seen through the eyes of architects. We were encouraged to blur the lines between landscape and building. Instead of trying to build around a natural landscape or against it, we were taught to use it to strengthen our designs. In the past, we might have built drains to channel a water body underground. But why not create water bodies that would beautify the surroundings and benefit nature? It was really eye opening and I learnt to be sensitive to the environments I work with.

In 2007, you began working on a breakthrough project, Bishan-Ang Mo Kio Park. How was it pivotal to your career and landscape design in Singapore?

LN After graduating, I returned to Singapore to set up my own firm. I was working on various projects, including the front lawn of the New Majestic Hotel, when the German landscaping firm Atelier Dreiseitl asked if I could help set up their Singapore office. They had won a competition to redesign Bishan-Ang Mo Kio Park and my role in the project was to design the softscape for the park, including selecting the plant types and deciding how to use them. I also worked closely with the firm's hydraulic engineers to naturalise an existing concrete canal into a meandering river. The project demonstrated to Singaporeans how a drainage system can be multifunctional. It can drain water and alleviate floods, but also be a surface for play when it is not full and even a space for nature to flourish.

Coincidentally, my graduation thesis at the AA was about how to incorporate water systems into urban environments. I was also then working on a hotel project in Lijiang, China, where I learnt about its ancient water supply system that brings people together with nature. Together, these experiences helped me to understand the importance of incorporating water seamlessly into a landscape and making it a visible part of a city's design.

This approach, which you have described as "using water as a driver for design", is evident in your

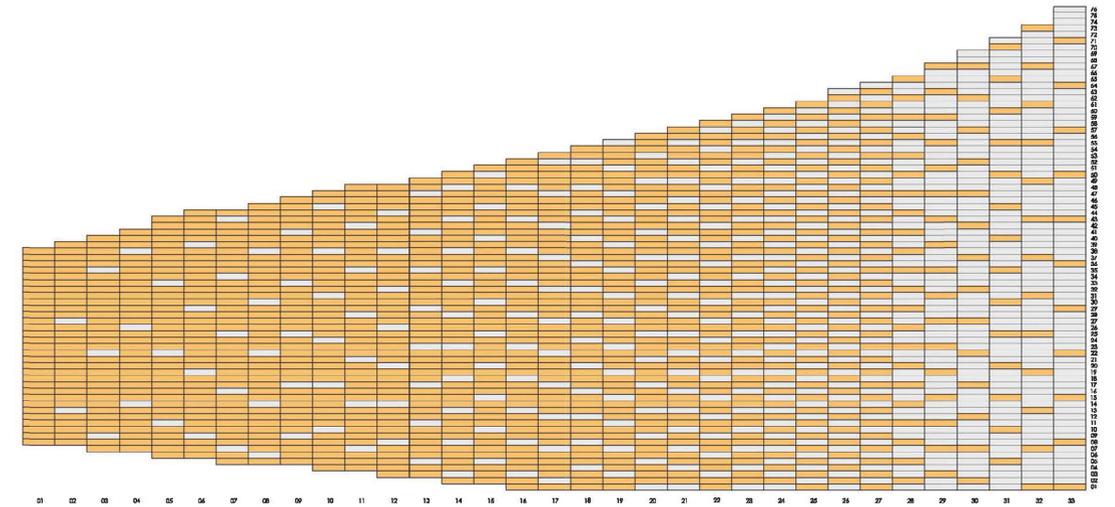
subsequent projects. For example, the landscape designs at Windsor Park and Punggol Waterway Ridges are more than recreational spaces; they collect and clean rainwater too. How has the function of landscape design evolved with issues such as climate change?

LN Landscape design can play a bigger role in cities as climate change is causing rainfall to become more intense over short periods. Our drainage systems that were designed decades ago can no longer accommodate this. Cities are also becoming denser, and there are fewer green spaces to act as sponges to absorb rainfall. Instead, it falls on hardscapes where surface flow is quick and stresses our drains.

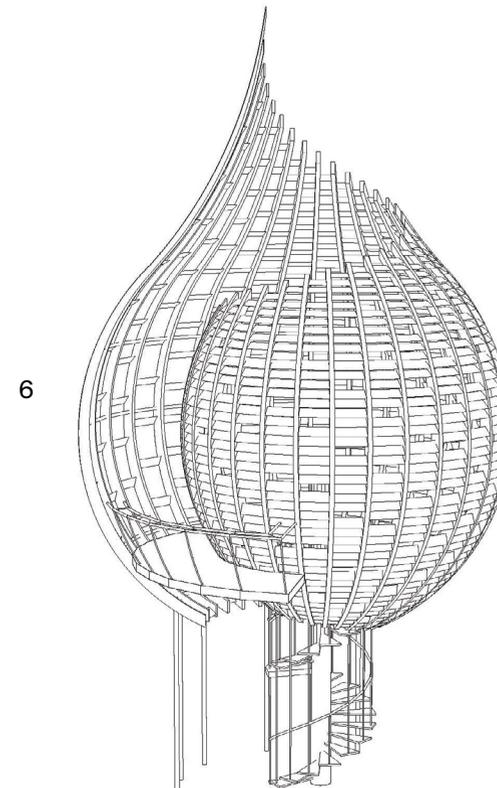
Why not design more spaces for water to infiltrate? We can create landscapes to slow down, collect, and even treat rainwater at multiple points. You can collect it on the roof and irrigate it down a building. At the ground level, rainwater could be collected temporarily at spaces such as playgrounds to dry out, instead of flowing directly into drains. The rainwater can flow along natural swales instead of drains and end up in a detention pond where it can be cleaned by bioremediation before being released into the river. Such treatment elements can not only help to manage the flow volume of rainfall, but also improve water quality.

In a career spanning over two decades, you have designed many public parks in Singapore, from Sungei Buloh Wetland Reserve to the recently completed Lakeside Garden at Jurong Lake Gardens. What defines a successful park design for you?

LN A successful park is one that is multifunctional. The park must work not just visually but also at the engineering level so it is adaptable and resilient to climate change. It must engage multiple user groups – not just the young, but also seniors, families, and all demographics. It must be a space where humans and nature can coexist, too. Finally, it must be a compelling space where people will want to return to build memories.



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#### 5-6 UP CLOSE WITH NATURE

Common features in Ng's landscapes are spaces that encourage visitors to get closer to nature. At Sungei Buloh Wetland Reserve (2013), he created a series of pods with viewing slits that allow for discrete observation of wildlife. A drawing of the "unwrapped" facade of a pod appears above.

#### 7 BE LIKE WATER

Bishan-Ang Mo Kio Park (2012) was a breakthrough project for Ng and helped him develop the approach of "water as a driver in design". This involves creating landscapes in the city to slow down, collect, and even treat water and runoff from storms, resulting in an urban environment that is more resilient and adaptable to climate change. The project received a P\*DA Design of the Year in 2012.





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Lakeside Garden is one example of a biophilic environment that helps to manage stormwater flows while enriching nature and the human experience of it. Our rendering for the design competition showed a flock of birds flying over the park and that is exactly what you can see when you visit it today. It was all by design. We made sure we provided different elements to create a place where birds can feed, roost, and raise their young. For instance, we planted grasslands of Chinese Fountain Grass (*Pennisetum alopecuroides*) to feed the Munia birds. There are trees of different heights for birds like raptors to perch on. There is even a separate island for the Grey Heron to feel secure enough to roost.

Our design also balances these spaces for nature with human needs so that visitors can reflect on their relationship with nature.

#### 8-9 DESIGNING WITH NATURE

Ng's approach of connecting people with other species and the environment can be seen in his work on the revamped Lakeside Garden at Jurong Lake Gardens (2019). A bird hide located within grasslands allows visitors to observe the birds without disturbing them. A former concrete drain (in red) was converted into a series of naturalised streams (in blue) that meander beneath pathways and around existing banyan trees.

A meandering boardwalk allows visitors to see the birds without intruding on them. There is also a playground with animal-inspired equipment that educates children about the wildlife in the park. Finally, we created a tree sculpture made from iron reinforcement bars salvaged from the park's old pathways, which encourages visitors to take pictures and build memories of the park.

Besides parks, you've landscaped buildings such as Kampung Admiralty and the forecourt of the Esplanade – Theatres on the Bay. You've also designed at the district scale. How does the change in scale affect the way you design?

LN There are a lot of similarities in the design process. You first need to understand who you are designing for and the purpose; then it just becomes more complex as you scale up. For instance, you can design a teacup all by yourself, but to design an entire city, you need to work with experts in water, traffic, environment, energy... It is much more multidisciplinary, and as a designer you need to understand all these things in order to put them all together. You become less of an expert and more of a collaborator.

I most enjoy working at the park scale because I am still very much in control of my design. The park scale is the sweet spot where I can create a strong narrative with my landscape design and make a significant impact on the surroundings too.

In recent years, you have worked on projects in China, Indonesia, Vietnam, and the Philippines. How has your experience in Singapore been useful for this overseas work, and what have you learnt from overseas that can be applied here?

LN Today, Singapore is viewed as a leader in landscape design and many people from around the world want to learn from us. This helps us open doors overseas. However, we also realise that many transformative projects can be executed here only because the Singapore government has a long planning horizon of

30 to 40 years. It is also quite generous with its budget for landscaping projects. In contrast, our overseas clients ask how a project can be completed before the next election cycle, so our designs are often much more scaled down.

In Singapore, we must engage with multiple stakeholders in a project. Besides NParks, there is the PUB, Singapore's national water agency, the Land Transport Authority, the Housing and Development Board, the Singapore Tourism Board... The whole of government is interested in making parks and landscapes work from their point of view. It shows how the state is prepared to invest in landscape and nature, which is a good thing. The flip side is that there are many boxes to check to ensure success, which can result in an inflexible design process. When overseas, we have

#### 10 CITY IN NATURE

Ng believes landscaping can help create more spaces for nature even with increasing urbanisation. For instance, he led the landscape design for Kampung Admiralty (2017), a pioneering development in Singapore that integrates apartments and care facilities for seniors. The greenery not only insulates the rooftop of the 11-storey building but also offers residents a space of respite and even an urban farm. The carefully curated landscape has attracted a rich biodiversity, bringing nature back into the urban environment.

#### 11 BRANCHING OUT

In recent years, Ng has expanded his portfolio with overseas projects. He developed the Guangzhou Lijiao Master Plan (2017) to help one of the largest coastal cities in the world mitigate the impacts of rapid urbanisation and climate change. The design proposes flood mitigation measures within a blue-green infrastructural framework to bring seamless connections from nature deep into the heart of the business and community hub.





“We humans tend to think of nature as being here to provide for us. But we need to ask what we can do for nature, because we rely on it to survive.”

more freedom to create something new. This may be something Singapore can learn. We are often afraid of failure, but one must learn to fail in order to be a truly creative economy.

How has Singapore's changing relationship with nature – from 'Garden City' to 'City in a Garden' to 'City in Nature' – impacted the way you practice landscape design?

LN It has pushed the boundaries of the profession in a really good way. Knowing that Singapore is always looking to stay ahead and build better environments forces us to keep up as professionals and find new ways to innovate. Singapore has recognised the importance of nature since the days of our first prime minister, Lee Kuan Yew. It was not even on the agenda for most cities back then.

My design approach is very much in line with the government's idea of a 'City in Nature' and I have been practising this for years. We humans tend to think of nature as being here to provide for us. But we need to ask what we can do for nature, because we rely on it to survive. In an increasingly urbanised world, many cities are now realising this. They are seeking ways to include nature in their environments so they can become more liveable.

Singapore is well known for its greenery and landscaping today. What future opportunities lie ahead for the local landscaping industry?

LN As the city gets denser, we need to find more spaces for nature. For example, there



is a large expanse of roofs in Singapore that contributes to the urban heat island effect. How could we soften these surfaces with landscape to improve thermal comfort?

Another big topic is how we could use landscape to change mindsets about nature. Many people want landscapes but their relationship with these areas can be very transactional in that they want to gain something but not take ownership. Just consider how much litter you see in our parks. Whenever there is a conflict with nature, it suffers first. We often hear calls to cull the otters, crows, and wild boars when they encroach on our spaces. But we should be looking at how we can design landscapes so that these conflicts can be better managed.

What advice would you give to the next generation of landscape architects and designers?

LN I believe we must continue to push for landscape architecture to have an equal footing with other design professions. Architects and engineers have their own governing bodies and can sign off on their designs. Landscape architects should be able to as well, because the scale and impact of our work is significant.

We should also make landscaping an attractive profession so that we draw in the very best talents. That is one of the reasons why I applied to the P\*DA. I want to show future generations that landscape design is a respectable profession, and we can stand up to be counted just like everyone else.

## 12 GREEN IDENTITY

Beyond landscapes and parks, Ng has also designed some of Singapore's best known green destinations. One example is the recently revamped National Orchid Garden (2021). Enhancements include an improved visitor experience, better circulation, and spaces to facilitate orchid naming and other events. The existing orchid nursery was also improved and a new Tropical Montane Orchidatum added.

TAN

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NGEE

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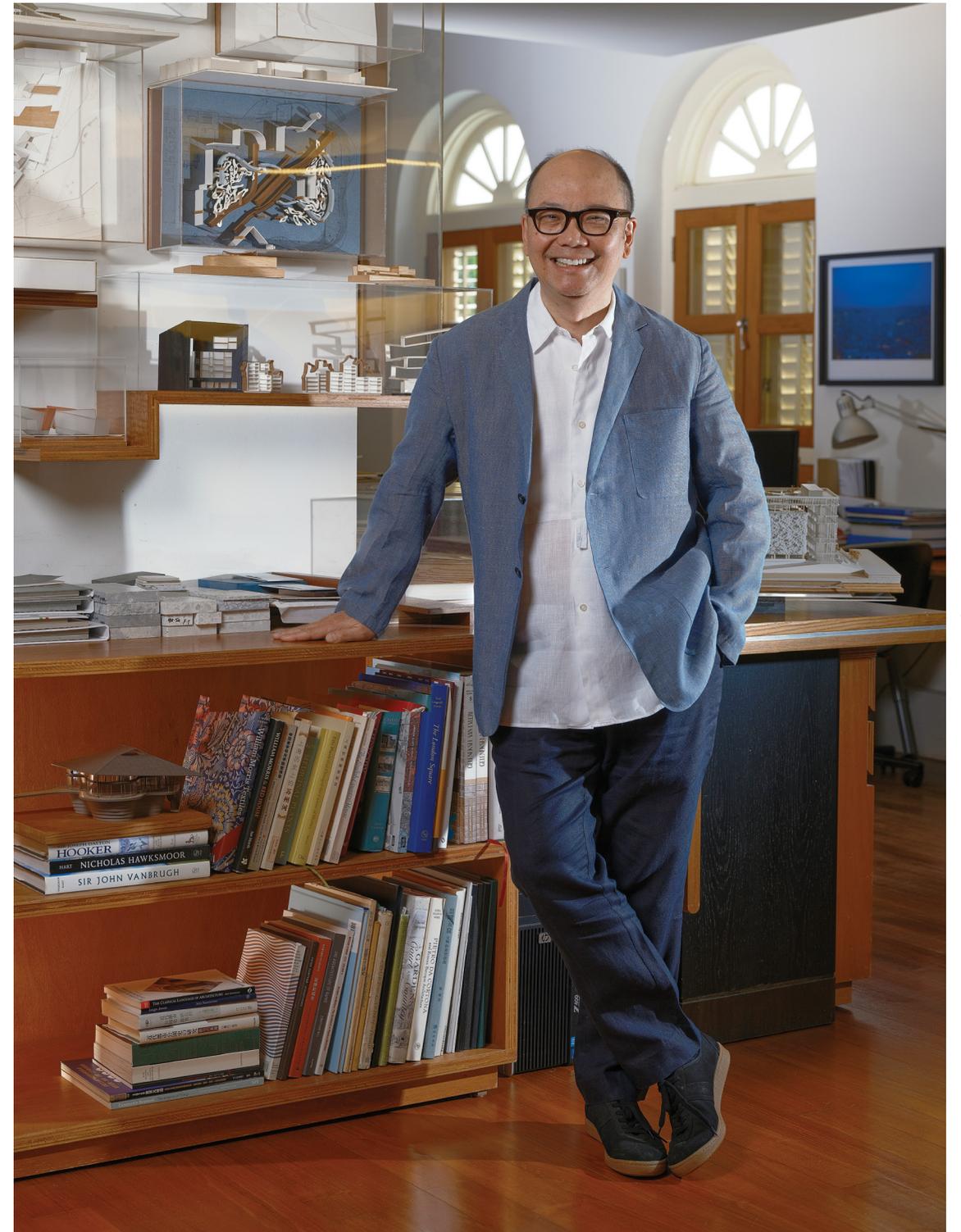
A house where rooms flow from one to another in the manner of a Baroque palazzo. Shelves for a Japanese bookstore that mimic the way a kimono folds. A building facade that resembles the dim sum baskets that its owner serves in their food catering business. Architect Tan Kay Ngee finds sources of design inspiration everywhere, from traditional creative forms to everyday life.

This expressive and diverse design approach stems from his wide-ranging architecture training in Singapore, the UK, and Italy during the 1970s and 1980s. Tan then spent almost a decade practising in Europe before returning home to Asia at the turn of the millennium. He rediscovered the region's rich cultures and began integrating them with his interest in Western classical architecture. Most recently, Tan and his team completed the Gallop Extension for the Singapore Botanic Gardens, which combined his lived experience of English architecture and landscapes with an intimate knowledge of the tropics.

Amidst his illustrious architecture career stretching over nearly four decades, Tan has run a photography gallery, designed theatre sets, and served as an educator. He has regularly written about art, architecture, and the city. Such unbounded creativity comes naturally for an individual who believes that life is never about the destination; it is about the surprises that one discovers along the journey – wherever it may take you.

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AR. TAN KAY NGEЕ  
Principal Architect,  
Kay Ngee Tan Architects



## JURY CITATION:

A scholar, educator, and architect, Tan Kay Ngee is a passionate and sensitive designer who has sustained a body of work in Singapore and globally over nearly four decades.

From a villa at the Commune by the Great Wall in China, to the Kinokuniya bookstore in Japan and the Old Bukit Timah Railway Station, Tan's works are grounded in his understanding and sensibilities in architectural history and typologies. His eclectic range of works are informed by extensive research that influences his designs, which are responsive to local history, culture, and contexts.

Tan is also a prolific writer on the arts, architecture, and cities, with the belief that design involves all aspects of arts in life. The Jury recognises Tan's rich and varied contributions in making architecture more meaningful and accessible to all.

## NOMINATOR CITATION:

Ar. Lai Chee Kien  
Founder, StudioMetis

I have known Kay Ngee for over two decades. We served on committees such as the Urban Redevelopment Authority's Conservation Advisory Panel, collaborated on design projects such as the Shenzhen and Hong Kong Biennale in 2011, and shared the stage during many forums and talks both locally and abroad. I fully endorse his work for the President's Design Award Designer of the Year 2023, and would like to discuss two key aspects of it.

The first aspect is boundary crossing. Kay Ngee's practice is international, with offices in London, Istanbul, and Singapore, while his projects occupy many more latitudes around the world. Being effectively bilingual, and working from these three transnational centres, he has always been able to understand the global and historical cultural flows passing through them. He has expressed these flows in his designs for new and conservation projects. The shuttling between these locations has also formed a mature repository of knowledge of different design languages in him, gathered from around the world and distilled for his work. As an architectural historian, I have always appreciated the depth of understanding, both historically and architecturally,

expressed not only in his past projects such as The Sultan, the Gallop Extension, and most recently, the Bukit Timah Railway Station, but also in his new work based on his understanding of typologies such as the shophouse and the library.

Kay Ngee's work also transcends design genres. Apart from architecture, landscape, and urban design, his practice extends to the graphic, theatre, and literary worlds. He has designed furniture and theatre sets, and created artwork. To promote appreciation of photography, the ground-level space at his Duxton Hill office was converted into a photography gallery for many years, and hosted exhibitions of new local talent as well as foreign photographers of global standing.

The second aspect of Kay Ngee's work is erudition in design. Kay Ngee has been writing about life and architecture since he was a teenager. His thoughts on places, buildings, and life in those spaces have been published in many newspapers and several books. They serve to mentally connect many worlds, and also provide insights to his own.

Very few architects in Singapore write continually over several decades and share such views and

knowledge regularly with the general reader. Architects tend to write mainly about their own projects, and very often produce vanity writing. This is why Kay Ngee's expanded writing for a wider audience is important. It accounts for the architecture world not just for fellow architects, but also for the person on the street. It is a noble cause to translate all that he has witnessed and reflected upon for others.

This literary and educational trait can also be seen in his broad design oeuvre, in projects such as the Singapore Management University, two large international bookshop chains, a library in Kumamoto (Japan), museums and gallery spaces, etc. As a book lover and an author, the transformation of this literary world brings joy and erudition to a larger humanity.

I can think of no other local architect who has culturally impacted generations of Singaporeans and other world citizens, in words and in his projects, in the manner that Kay Ngee has done. I wholeheartedly endorse his work for the President's Design Award Designer of the Year 2023.

You wanted to be a filmmaker when you were young, but your father thought it was not a proper profession. How did you end up studying architecture?

Tan Kay Ngee (TKN): My father was a self-taught electrical engineer who looked after all the technical aspects of the cinemas owned by the Shaw Brothers. He was also involved in the renovation of these cinemas and perhaps because of that, he encouraged me to take up architecture. Although he didn't fully support my ambition to make films, he suggested architecture as it's the closest to art or film making. There was no local arts school in 1977, so I enrolled into the architecture school at the then University of Singapore, a forerunner of the National University of Singapore.

One of the first projects we were assigned by our lecturer Jack Tan was to design a float for the university's Rag Day. While other students designed futuristic structures, I created a hand that could transform into a plant. Jack found it very interesting and chose it to represent the school. That's when I realised architecture need not be mundane but can be expressive and used to tell a story. The more I got into the subject, the more I realised the range of possibilities and dimensions for interpretation in architecture. When it is built, architecture also represents a moment in time and continues influencing its surroundings and people who engage with it. Years later, it became clearer to me that architecture work is similar to film making.

Before starting on the drawing board, a narrative for each project can be established to suit the personality and needs of the client. The design brief can be very dry, but it's up to us to delve in deeper to understand what those needs really are and shape them into a sequence of interesting spaces.

In 1980, you went to London to further your studies at the Architectural Association (AA) and subsequently worked there for a decade. What was this experience like, particularly since you were educated in a Chinese school in Singapore?

TKN Catholic High School may be known as a Chinese school, but it was very bilingual. We were even listening to David Bowie and Joni Mitchell! Half of my family was educated in English too, and my uncles were listening to The Beatles and American jazz. When I first arrived in London, I was drawn to the city immediately because I'd been brought up with these sub-culture influences.

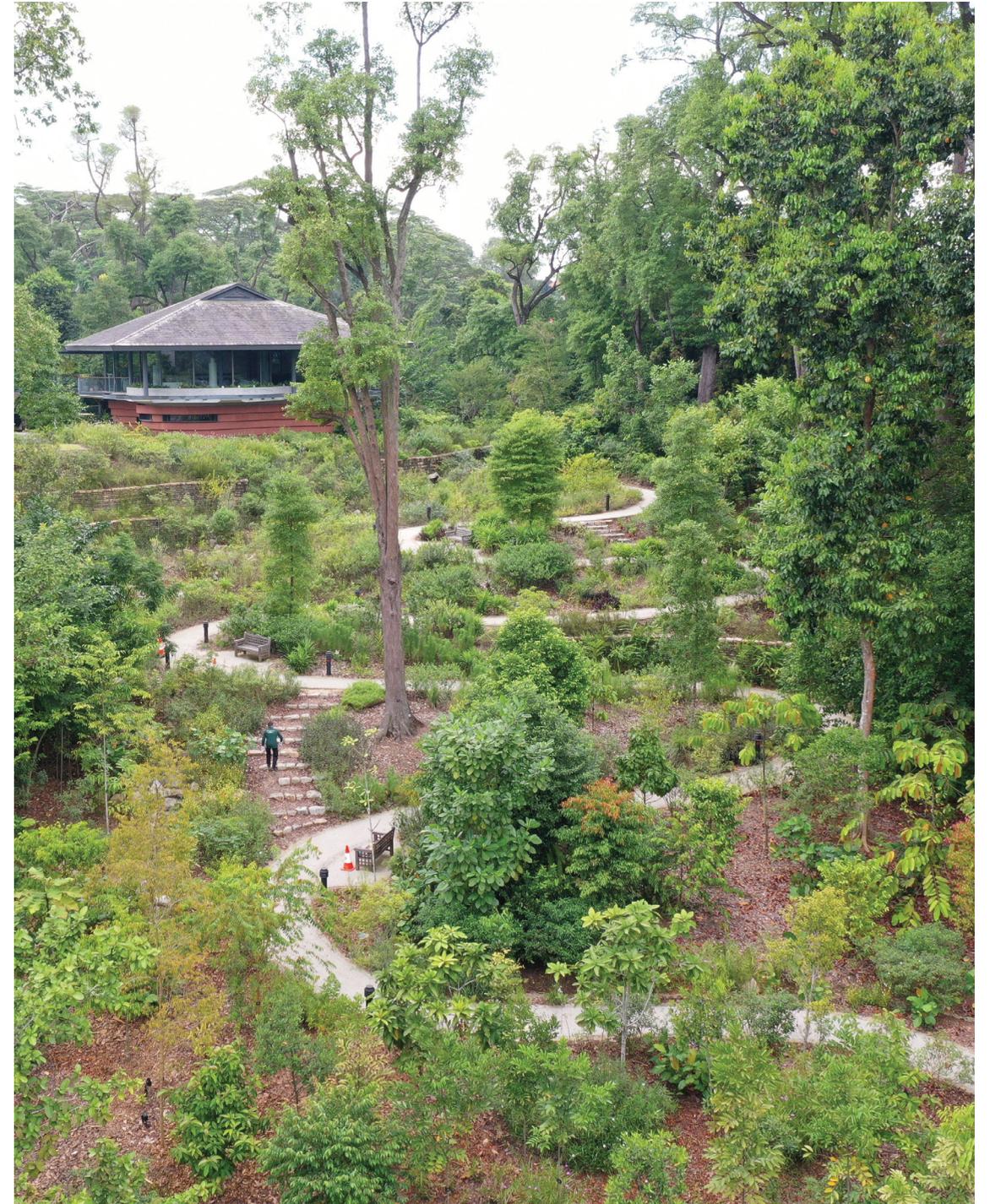
The AA was very multicultural too. We had students from England, Ireland, Spain, Iceland... even the design tutors like Zaha Hadid and Rem Koolhaas were not English. The curriculum was amazingly diverse. The lecturers taught us the modern movement and high-tech architecture, and also Renaissance and Roman architecture. Within the AA, there were units that focused on very different topics. One of the design tutors, Mike Gold, encouraged students to analyse their backgrounds to capture and express their own cultural identities through

## 2 EAST MEETS WEST

Having grown up in Singapore and received training in the United Kingdom, Tan brings together the best of Eastern and Western cultures in his architectural approach. The Gallop Extension of the Singapore Botanic Gardens (2021) beautifully reflects his affinity for traditional English gardens, blending seamlessly with his knowledge on tropical living.

## 3 DIGGING DEEP

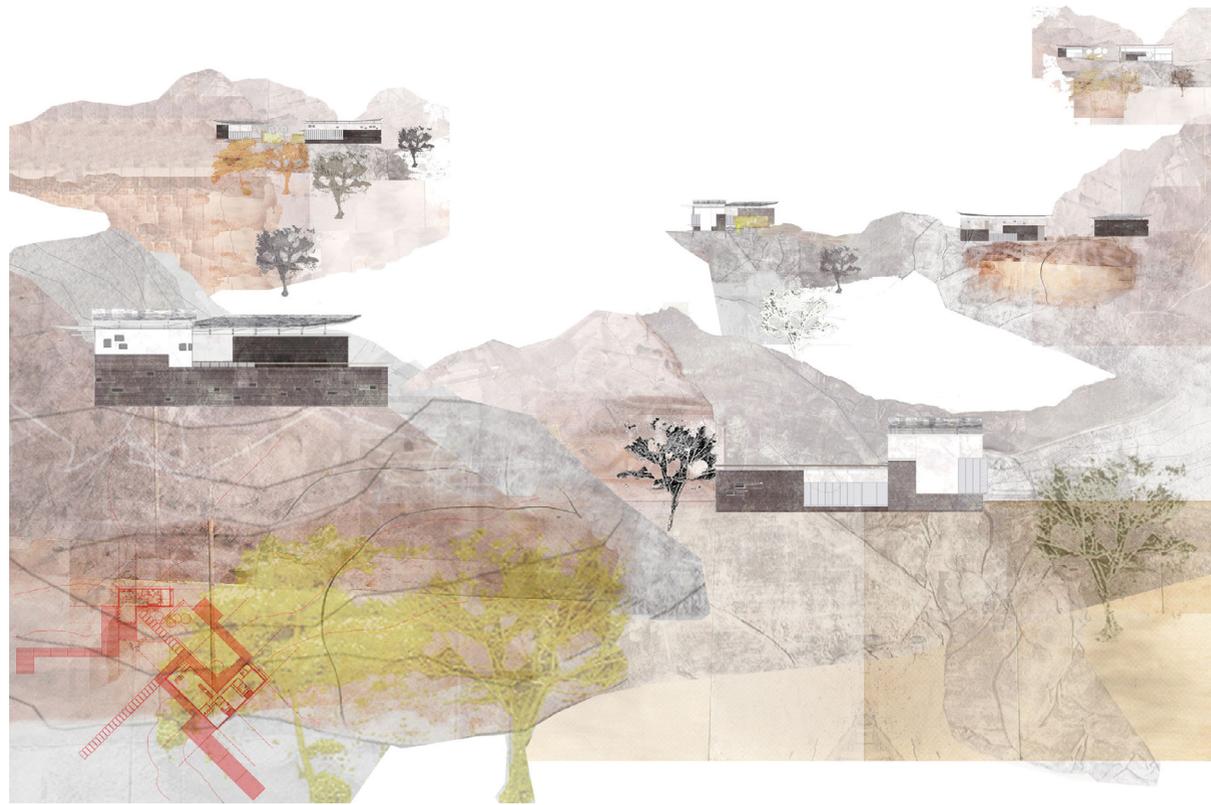
An architect must thoroughly understand a client's needs, says Tan. Through conversations with the owner of House at Peirce Hill (2014), he discovered a shared aesthetic sensibility. It led to this facade inspired by the "Hui" style of architecture, made up of a muted material palette of cement plaster, wood, and grey stone.



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#### 4 BREAKING BARRIERS

Commune by the Great Wall (2001) was a significant milestone for Tan. The project saw 12 Asian architects invited to each design a house along the Great Wall of China. Tan (the sole representative of Singapore) drew inspiration from the traditional quadrangle houses of Beijing but deconstructed the typical structure into two 'L' shaped buildings, creating an interwoven landscape in between.

the design process. This helped them discover why and how designs were conceived, and understand the source from which all original designs emerge. This design approach and teaching method inspired me greatly.

In 1990, you started a practice in London and opened a Singapore office several years later. What prompted you to start your own practice and return home?

**TKN** After the AA, I worked for Arup Associates under Sir Philip Dowson. I was involved in various conservation projects in London, including transforming a psychiatric hospital into the Imperial War Museum and converting a pumping station into a recording studio for St Martin-in-the-Fields. I stayed at Arup for six years until my design tutor at the AA, Sir Peter Cook, encouraged me to join him in teaching and transforming The Bartlett, University College London, in 1990. By then, I had one or two projects coming along, so I set up Kay Ngee Tan Architects in London.

I was eventually commissioned to build my first house in Singapore, among several other smaller projects. These were designed in London and handled locally by my ex-partner Ar. Tan Teck Kiam, who was registered in Singapore. Because of these houses, we were invited by the SOHO Group in China to design a villa as part of the Commune by the Great Wall – a project that drew a lot of media attention. After we won the Singapore Management University (SMU) project, I decided to return home and register to practise in Singapore in 2000. Having left Asia for such a long time, I began to see the region with fresh eyes and found it to be a very fascinating place to work.

One design category you are known for is bookshops, specifically art and design retailer Page One, which your brother founded, and the Japanese chain Kinokuniya. What are some key design considerations you bring to such projects?

**TKN** We started working on Kinokuniya in the 1990s because they were collaborating with Page One. Kinokuniya wanted a bookshop in

#### 5 SINGAPORE HOUSE REIMAGINED

After a decade studying and working in London, Tan returned to practise in Singapore during the nineties and quickly made a name for himself with his avant-garde residential designs. This house at Cluny Park (1994) draws from various inspirations, including traditional Singapore homes. For instance, pitched roofs with spaces between the ceiling for air circulation have been modernised into flat, planar forms.



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#### 6-7 BY THE BOOKS

Tan has designed many bookshops in his career. This includes some 37 outlets across nine countries for the Japanese bookstore chain Kinokuniya with the latest to have opened in CentralWorld, Bangkok, in 2022 (above). He is also behind the former PageOne at Vivocity (2006, right), which was designed for his brother who owns the company. It received a P\*DA Design of the Year in 2007.

Singapore that would attract the younger generation, so they took over a unit in Ngee Ann City. We began analysing why it did not work well for its previous occupant and brainstormed with the client what a good bookshop should have. Our design offered clear circulation paths and zones for books. Windows admitted natural light into the store and granted views out so visitors could relate to the outside world at all times. Being able to look out to greenery and sky proved to work as visitors stayed longer in the store, and they could also sense the gradually changing atmosphere of the interior.

Wherever we design a Kinokuniya bookshop, we study the culture and identity of its locale. If one looks carefully, both ends of the bookshelves for Kinokuniya are a modern interpretation of the yukata, a type of Japanese kimono. In our recent design for the new outlet in Bangkok, we used local wood as the main material for the bookshelves, matched with black, with touches of gold. The materiality and colour scheme relate to Thai culture. It's very important that an international bookshop shows that it respects the local culture and is not trying to dominate it with a singular global identity.



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You have also designed industrial buildings, which is a type of architecture often regarded as functional rather than memorable. What motivated you to reinvent this typology with works such as the BreadTalk International Headquarters (2009) and Select Group Headquarters (2013)?

**TKN** Human beings long for an enjoyable environment, be it in a school like SMU or an industrial building. The design for the BreadTalk Group's headquarters came about because its co-founder, George Quek, is a wonderful client and the landlord, JTC, wanted to try out something new too. Traditionally, an industrial area caters only

#### 8-9 ENJOYABLE FOR ALL

Whether it is a factory or a school, Tan believes all buildings should have spaces for their inhabitants to enjoy. His design for the BreadTalk International Headquarters (2009) includes landscaped terraces that can be seen within the offices. For the Singapore Management University (2005), Tan created sheltered walkways that provide transparency and breathing space as students and staff get around the city campus.



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for factory workers, which means it is usually dead after office hours and during the weekends. JTC wanted to bring liveliness to this part of Tai Seng, which is known for its many small home-grown factories.

Typically, a factory for a food company like the BreadTalk Group will have a central kitchen and an administration office. The new element in this headquarters is the retail portion on the ground floor that acts like multiple showrooms displaying different brands under them, like Din Tai Fung and Toast Box. It is very convenient for foreign investors who are looking to franchise, to understand how they operate. These outlets experiment with new products, attracting many Singaporeans to go to the building to sample the new items on the menus. The

roof garden and internal courtyards were designed for the office floors, allowing the staff to enjoy unconfined internal greenery, and the changing mood of the environment beyond the office space.

Your works have been described as contemporary, innovative, and avant-garde. But over the last decade, you have also worked on several conservation projects including The Sultan (2011) and Gallop Extension (2021). How do we reconcile this interest in the past with your forward-looking works?

**TKN** One of the cities that has impressed me the most is Rome. You could be in a palazzo that was built during the Renaissance period, where the architecture will bring you back to Roman times. But right next door could be a boutique selling you the latest fashion from Dolce&Gabbana or Armani. There are these



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multiple layers in the city. It's the same for London. I recently ended up in a pub in Brick Lane that must be a hundred years old, and it brought me back to Charles Dickens' time. After that, I walked to the Whitechapel Gallery, which was refurbished in the 1980s, with all the modern high-rises nearby built recently. The diversity in the city felt almost like the set of *Blade Runner*. It's not that one must choose the old or the new. The old and the new coexist because they both give such richness to the city, and this can only happen over time.

Besides architecture, you've been very involved in Singapore's arts and culture. You ran a photography gallery as part of your studio from 2006 to 2009, created stage designs for theatre plays, and even curated a showcase of photography from Singapore in Istanbul. How do these diverse interests contribute to your architecture practice?

**TKN** Painters, sculptors, and architects during the Modernist period were all experimenting and searching for new design languages and forms. I don't think you can segregate art and architecture, or even literature, as they all share the same goals and sources of inspiration.

I am always intrigued by what artists are making and inspired by their work, be it a painting, a photograph, or a film. These unconsciously resurface in the architectural sketches I make.

Another constant in your career has been writing. Since the age of 16, you've contributed articles to magazines and newspapers in Singapore and overseas. What has kept you going for so long and how might it have contributed to your architecture practice?



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**TKN** Writing is about recollecting and discovering my thoughts and feelings about things and spaces, which would otherwise disappear. The journey is always full of surprises. I vaguely know what something means to me, but it is not until I put it down on paper that I realise what it is all about.

When the editor of *Lianhe Zaobao* approached me to pen a column for their newspaper about 15 years ago, I decided to start writing in a less academic manner to speak to general readers instead. In these fortnightly column essays, I was hoping to share the appreciation of good design and architecture, and question what makes a city tick.

In the 1990s, you were part of a team that revamped the architecture course in The Bartlett, University College London. You have regularly served as an external examiner to architecture schools and recently started teaching part-time at the School of Architecture in the National University of Singapore. What lessons do you hope to impart to future generations of architects?

**TKN** I will first listen to them before sharing my views. Students are all smart individuals. You don't have to impose or force a belief,

#### 10 CLASSICAL ROOTS

While known for his contemporary designs, Tan has a deep interest in Classical architecture of the Italian Renaissance and other design movements of the West. This proved to be useful when he and his team restored the Atbara (Gallop House 5) and Inverturret (Gallop House 7) - two of Singapore's oldest surviving colonial houses as part of the Gallop Extension project.

#### 11 OLD AND NEW

A vibrant city for Tan is one where old and new architecture coexists. This is why he enjoys working on conservation projects. One early example is the transformation of 10 conserved shophouses in Kampong Glam into a boutique hotel, The Sultan. The project, completed in 2011, won the Urban Redevelopment Authority's Architectural Heritage Awards and paved the way for his firm to take on other adaptive reuse projects.

aesthetic, or design approach. I enjoy it more if I can enlighten students to discover their own way of interpreting things. I often see possibilities in every single one of their proposals.

Other than being original and creative, students have to work hard too. New ideas need to be tried out over and over again. Architects are like scientists who experiment a lot. Some ideas may not work out immediately and some may not work at all, but the process of testing out is vitally important.

The other thing I often emphasise to students is the importance of editing and not holding on to too many ideas in one design.

You have completed works around the world and run offices in London, Singapore, and Istanbul. Why call yourself a Singapore architect?

TKN The definition of being a Singapore architect is a fluid one. It cannot be defined so easily. I am glad to say, as a young nation, we often have the courage to try new things. We have our heritage and a fascinating, mixed cultural identity. In a sense, there is no boundary for creativity.

### 13 DESIGNING FOR PEOPLE

Every person must be aware and knowledgeable of architecture and design in order for the profession's standards to be raised, says Tan. His design for the adaptive reuse of the Old Bukit Timah Railway Station (2022) turns the former station and staff quarters into a heritage gallery and cafe respectively – offering new ways of connecting to Singapore's rail heritage.



### 12 SINGAPOREAN AT HEART

Having worked around the world, Tan still identifies as a Singapore architect. He admires the nation's mix of cultures and its contemporary outlook, which was captured in his design for the Singapore Pavilion, Shanghai World Expo 2010. The musical box-like form speaks of the harmony and symphony of Singapore's multicultural society, a symbolism that carries through with four conical support columns of varying sizes.



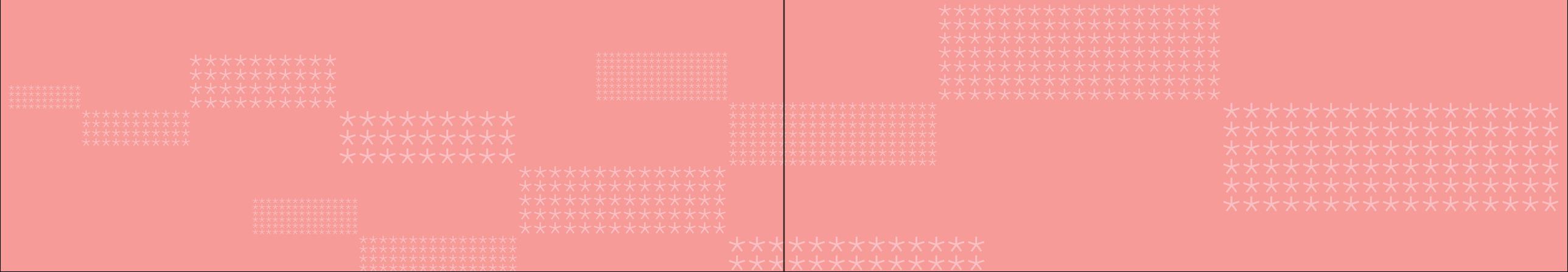
DESIGN

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YEAR

OF

THE





# CAPITASPRING

## IMPACT AREAS

- \* Enabling Economic Transformation
- \* Raising Quality of Life
- \* Advancing Singapore Brand, Culture and Community
- \* Making Ground-breaking Design Achievements

Rising some 280 metres from the ground, CapitaSpring is a striking new addition to the Singapore skyline. It stands out not only as one of the tallest buildings in the city-state, but also as one of the greenest amongst its glass, steel, and concrete neighbours in the Central Business District (CBD).

A voluminous “City Room” integrated with a public park offers a welcoming entrance into the tower grounds where one can grab a drink, participate in community events, or head to the Market Street Hawker Centre that has been rehoused from the original development. The tower’s distinctive pinstripe facade peels open between the 17th and 20th floors to reveal a verdant sky terrace in the mixed-use development. Within this “Green Oasis”, workers in the offices above and residents in the serviced apartments below can dine at the bistro, exercise at an outdoor gym, meet at work pods, or simply enjoy the outdoor breeze. Right at the top of the 51-storey tower is a rooftop restaurant and an urban farm that offers breathtaking city views.

While taking tropical urbanism to new heights in Singapore, the tower designed by the Bjarke Ingels Group (in collaboration with Carlo Ratti Associati) and RSP Architects Planners and Engineers generously extends into its surroundings too. Its multi-level green spaces are open to the tower’s users as well as the general public, offering a new social realm for the community to come together not just for work but to live and play too.

- 1 GREENING ELEVATED  
CapitaSpring is the latest addition to the growing number of biophilic skyscrapers in Singapore. The tower houses over 38,000 plants and its total landscaped area of over 8,400 sqm is equivalent to 140 percent of its site area – a standout amongst its glass-and-concrete neighbours.



**JURY CITATION:**

CapitaSpring stands out for its vertical urbanism, filled with lush greenery and a range of publicly accessible spaces. Its design masterfully creates a diverse layering of office spaces, serviced apartments, food and beverage establishments, and a hawker centre, interspersed with different public spaces.

At the core of the 51-storey building are four connected levels of sky terraces known as the “Green Oasis”, a 35-metre-high open-air garden and a sky garden at its rooftop which are publicly accessible. The innovative spiral walkways offer 360-degree views of the city.

From the exterior, the building’s aluminium facade is an interplay of fluid lines that unifies and reveals the pockets of communal green spaces throughout. The result is a tower that feels as one cohesive space, where diverse programming and communal exterior spaces are successfully integrated to read as a seamless whole. The design of the ground plane is also handled successfully to encourage street life by pedestrianising a part of a road and creating an expanded landscaped area.

The Jury applauds the designer and architect for juggling a diverse programme of uses while contributing to the vibrancy of city living through inclusive public spaces and lush greenery.

**NOMINATOR CITATION:**

David Erdman  
Chairperson, Department of Graduate Architecture and Urban Design, School of Architecture, Pratt Institute

CapitaSpring takes the ideas of greenery, verticality, sociality, and density to a delirious extreme, even for Singapore. Beyond its architectural and urban merits, the project has clearly triggered public interest and tapped into some of the mythical cultural underpinnings of “Singapura”, bridging the city’s local and regional identity into a climate-forward way of building aligned with current and future needs of the 21st century. During my visit to the building, this cultural impact was evidenced by the lengthy lines to get into the building and the citizens and visitors of all generations co-habiting the terraces alongside

birds, herbs, and vegetables. In my humble opinion, this makes it worthy of a President’s Design Award.

The integration of so many aspects of urban living is a challenge that Singapore, as one of the densest countries and located within the largest archipelago on the planet, has excelled in and become both an early adopter and leader. Local and regional solutions to address the complex and “wicked” problems of urban densification and green, grey, and blue infrastructure are abundant in the city, but few, if any, buildings have demonstrated successful solutions to the density challenge, beyond what is encapsulated in this one nearly supertall tower. Furthermore, the CBD exacerbates those challenges as one nears the water’s edge between Marina Bay and the Singapore River. The multi-plot, irregular site geometry underlying CapitaSpring provides an important case study and benchmark on how to develop in challenging urban areas. It does so by intensifying density, understanding green infrastructure as a natural resource, and designing in a climate-oriented manner that is ecologically restorative and publicly inclusive.

The reconfiguration of existing automotive streets and amplification of pedestrian space mark some of the design’s key unique aspects, amongst others. Those important and challenging shifts and adjustments are complemented by increased horticulture and planting at the street level as well as a distinctive and unprecedented “base” tower strategy. While towers are typically subdivided horizontally to adapt to the street level, mid level, and upper level, CapitaSpring brings the facade all the way to the ground, transforming the repetitious linear mullions into a softened array of curvilinear apertures. Collectively behaving as a large colonnade wrapping the perimeter of the building, this design strategy introduces a unique porosity, grain, and texture as one transitions from Malacca to Market Street. It creates an urban effect that becomes increasingly magnetic, lulling one into the generous, multistorey, indoor-outdoor “urban rooms”. Often fully enclosed or with limited access, this street level strategy, shifting of colonnades, urban rooms, and

canopies that “nose” out from behind the building’s perimeter enrich the urban life of Singapore and introduce a level of access and porosity unprecedented in the city and beyond.

As the 280-metre-tall building moves vertically, its urban presence is preternatural, mysterious, and delicate. The promenading public park and urban farm are veiled behind the facade and only visible through a series of “tear drop” apertures formed by prying open mullions in a manner that resonates with those at the ground level. The building presents an adroit balance of “super flat” when viewed from afar and “super 3D” when experienced from within. The use of grey and black metals and glass on the perimeter gives the building a humble and diminished urban presence. The shift in matte materials to mottled, rusty red GRC panels winding between the tower and facade amplify the interior and exterior, as well as the porosity and richness of the design’s multiple urban “landscapes”. All of this is complemented by a bedazzling network of spatial volumetrics that cut across contrasting programmatic typologies (office, serviced apartments, farm, food and beverage, promenade), which collectively act to further bind and give cohesion to the public-private, interior-exterior, tower-landscape mixtures.

The dexterity of spatial textures, materials, and programmes activates the section of the tower in compelling and visceral ways that distinguish it from most tall and supertall towers to date that still striate their programmes with horizontal spatial arrangements. The superposition, mixing, and contrasting of these elements produces an entrancing urban experience like no other. It is “lush” with many assets to draw upon and presents a best practice for how to socialise vertical, urban topographies and green infrastructure. It does so in a convincing manner, in the context of a dense urban habitat, and a tropical climate susceptible to the impact of climate change.

**DESIGN FIRM:**

Bjarke Ingels Group  
(in collaboration with Carlo Ratti Associati)  
*Brian Yang*  
*Eric Lee*

**SINGAPORE ARCHITECT FIRM:**

RSP Architects Planners & Engineers (Pte) Ltd  
*Seah Chee Kien*  
*Nina Loo*  
*Darren Tee*  
*Chin Qin You*

**PROJECT MANAGER:**

CapitaLand Development Pte Ltd

**LANDSCAPE DESIGNER:**

COEN Design International Pte Ltd

**LIGHTING DESIGNER:**

Nipek Pte Ltd

**SIGNAGE DESIGNER:**

Asylum Creative Pte Ltd

**INTERIOR DESIGNER**

(SERVICED RESIDENCE):  
Takenouchi Webb Pte Ltd

**ENGINEERS:**

Meinhardt Singapore Pte Ltd  
Squire Mech Pte Ltd  
Arup Singapore Pte Ltd  
Beca Carter Hollings & Ferner (S.E.Asia) Pte Ltd

**QUANTITY SURVEYOR:**

Asia Infrastructure Solutions Singapore Pte Ltd

**MAIN CONTRACTOR:**

Dragages Singapore Pte Ltd

**CLIENT:**

CapitaLand Development Pte Ltd  
CapitaLand Integrated Commercial Trust  
Mitsubishi Estate Co., Ltd

The project was the winner of an international architectural competition hosted by CapitaLand in 2015. What was the project brief and how did your team respond?

Brian Yang (BY): Essentially, the brief was for a mixed-use development with office space in the heart of the CBD comprising serviced residences, a hawker centre, and parking, among other programmes. We also knew that the goal was for it to be one of the tallest towers in Singapore, and because it sits on quite a significant location, it would also have a major impact on the skyline. While the brief was very clear in terms of what we needed to deliver in a technical sense, it was only after a number of conversations with the client, CapitaLand, that we understood that it was envisioned to be a development that went beyond another typical office tower. Over the years, the CBD had become a place that saw significantly less footfall after office hours. CapitaLand wanted a catalyst

that would encourage people to spend more time in the CBD. That was an important idea for us. It was not just about meeting the efficiency of floor area but creating something that would provide the CBD with a space for the community.

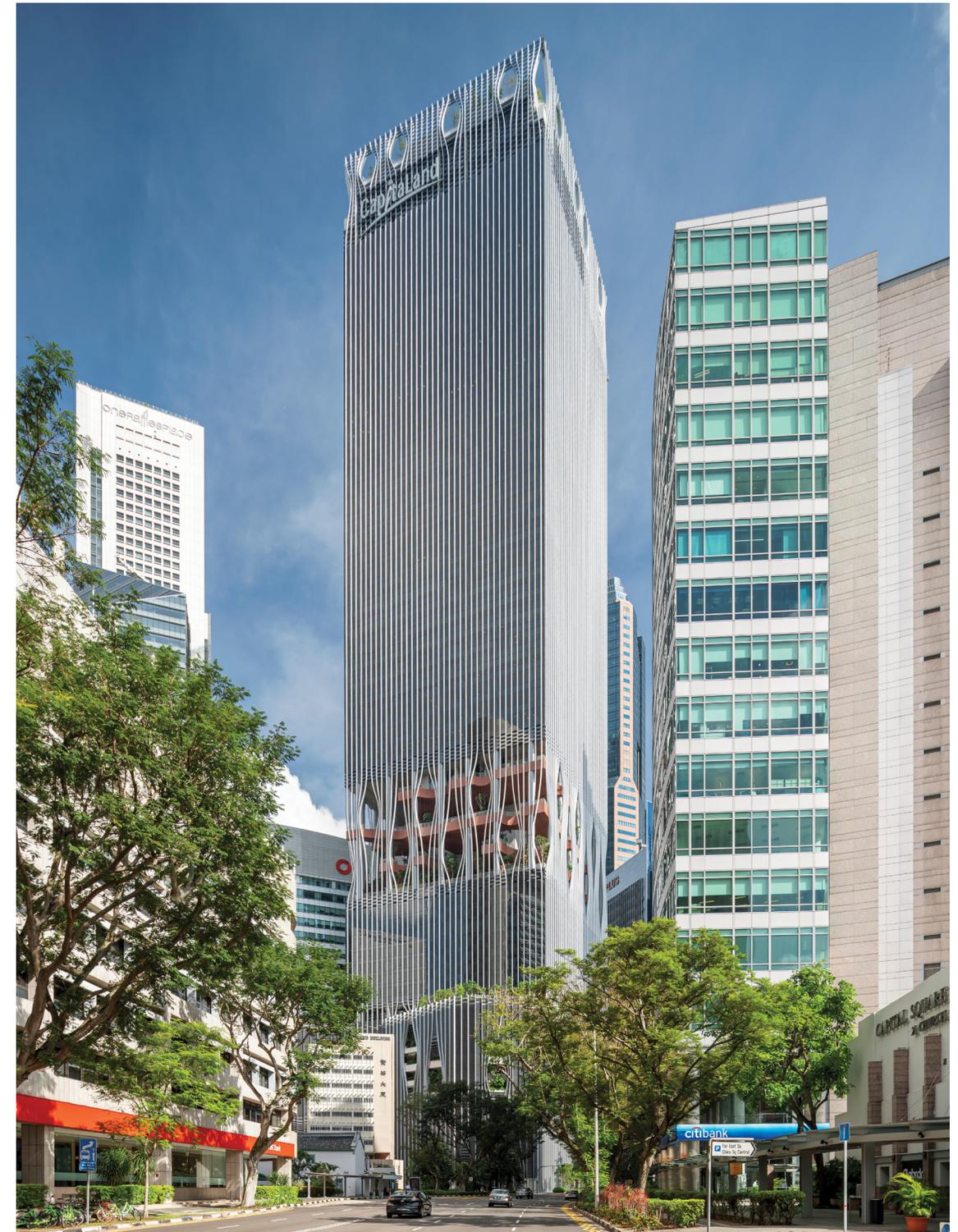
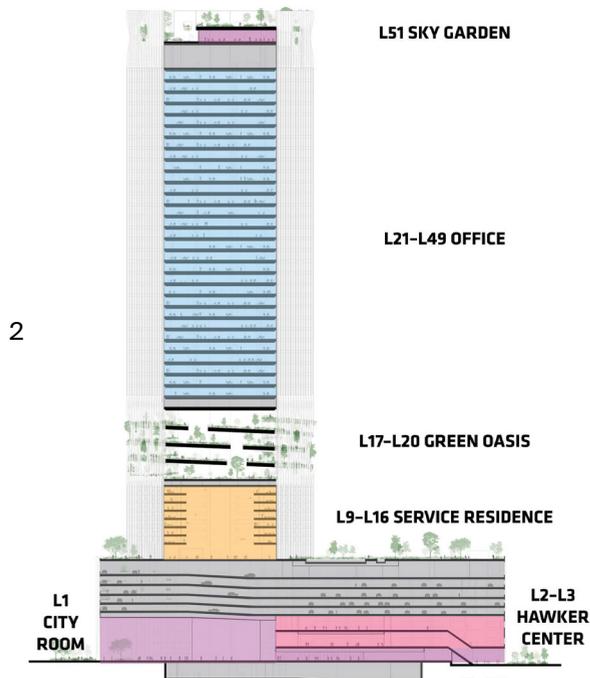
Nina Loo (NL): We were the project architects for CapitaSpring, while Brian and his team from the Bjarke Ingels Group (BIG) were the lead designers. We worked very closely with BIG to ensure their schematic design was compliant with the Singapore authorities. As this is a mixed-use development with different usages and requirements, there is an additional level of complexity compared to a tower of singular use.

Previously, the site was home to the Golden Shoe Car Park, a 10-storey structure that also housed the Market Street Hawker Centre, offices, and retail spaces. How did that inform your design for the new integrated development?

BY: We conducted a lot of research into the history of the car park and Market Street. The car park was well received at the time it opened in 1984 because it added much needed parking capacity for the city centre. It was an interesting structure because of its irregular shape, which made it a bit of a wall in the city. This was a consequence of it being built on much smaller sites that were amalgamated. There were challenges as a structure, but we discovered that its biggest asset was the much-loved hawker centre that provided affordable food to the everyday person. We knew immediately that

### 2-3 DRIVING CHANGE

The tower replaces a 10-storey car park with a 93,000-square-metre mixed-use development of offices, serviced residences, and food and beverage outlets. With options to live, work, and play within it, the 51-storey building injects life into the CBD area, which is made up largely of office towers.



we had to work hard to spruce up the site, especially in terms of its connectivity to the surrounding context. Instead of a wall, we would create open facades that would be welcoming to the surrounding community. At the same time, we had to integrate the parking lots that our new building would replace.

NL As the project architect, we worked very closely with the authorities to design the layout of the hawker centre, the stalls configuration, and the interior seating to ensure it would meet the requirements for operations. At the same time, we needed to create a pleasant environment for the public. This was achieved by creating a high-ceiling space for ventilation and lighting. Most of the stalls from the former hawker centre have relocated to the new one and it has remained as popular as ever. There are very long queues during lunch hours.

BY You could say that it was very critical that we bring back the hawker centre as a unique amenity in the development and ensure that it would be easily accessible from the ground level. For us, it was very important to support the local food culture and to provide dining options for the surrounding community.

Your 51-storey tower design is distinguished by a variety of green spaces that are woven vertically into the architecture. This includes a four-storey-high Green Oasis on the 17th floor that is home to over 38,000 plants and a rooftop urban farm with over 150 species of fruits, vegetables, and flowers. Why was it important to design such spaces in a tower of offices and serviced residences?

BY Biophilia has really become understood as an essential contributor to mental and physical wellbeing. In Copenhagen, where BIG's office is located, we are situated in the upper reaches of the northern hemisphere where growing conditions can sometimes be significantly more challenging. Even so, we try to integrate greenery as much as possible in the work we do. In Singapore, green spaces exist

wherever you walk outdoors. It is an incredible and natural asset.

What you struggle with in the tropics is the heat and humidity. We found that beyond the 17th floor of the tower, you get above the heights of many of the adjacent buildings and there is good natural ventilation that removes much of the humidity. In combination with the solar shading from the entire office component above, it makes the Green Oasis quite a pleasant place to be in. During the design process, we did extensive simulations of ventilation and solar gain to determine the end result. Creating this high jungle space in the middle of the tower also gave us the opportunity to provide amenities like a restaurant on level 17 and an events pavilion on level 20. They are connected by a spiral of informal spaces from work pods to jungle gyms and social spaces. You could say that the Green Oasis is a kind of social mixer that contains all the elements you would need to create a vibrant and diverse community.

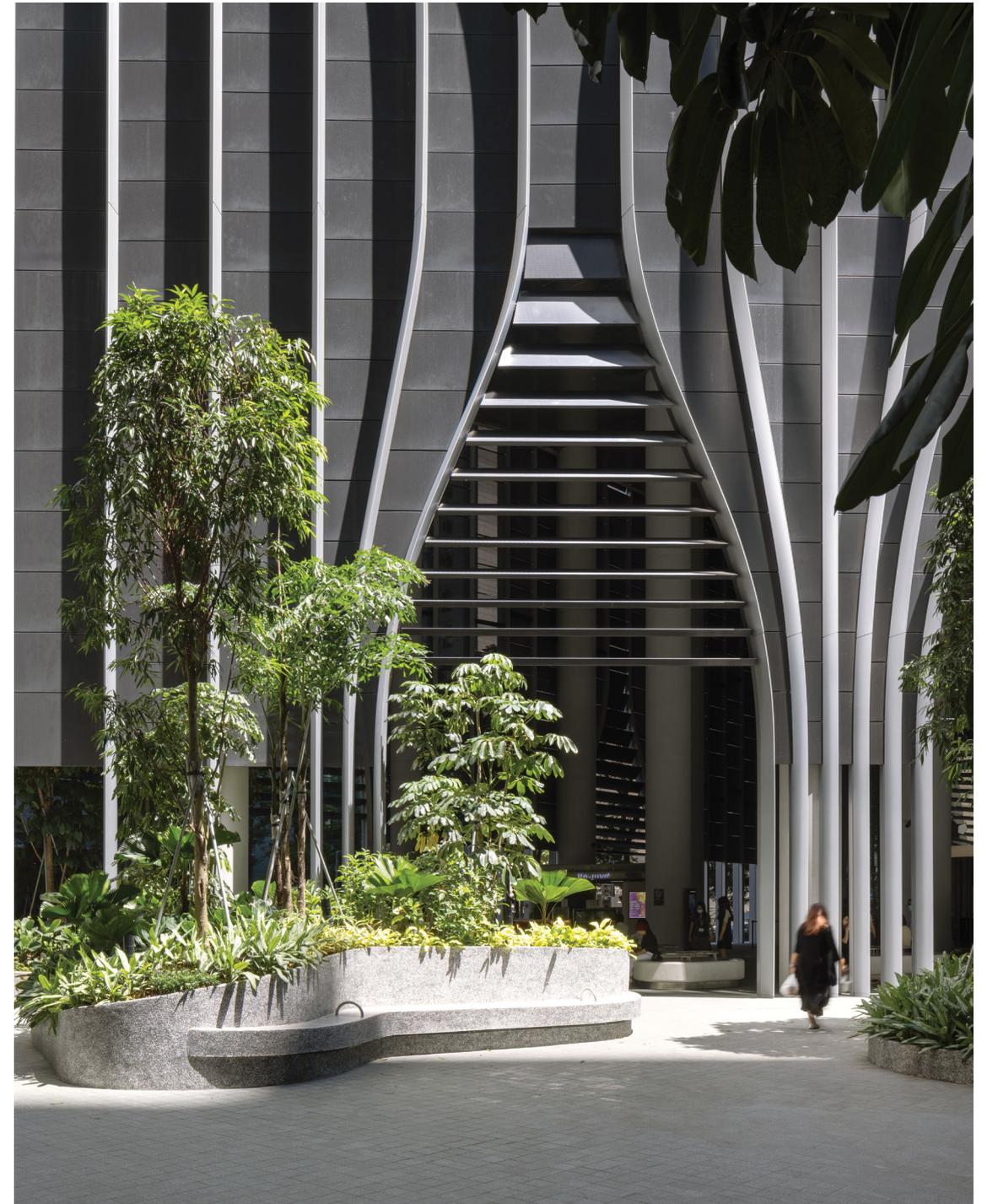
The urban farm on the rooftop generates some 70 to 80 kg of produce a month that supports the farm-to-table concept of the tower's restaurants. I was quite surprised how productive it has proven to be. From this perspective, it has been quite satisfying because this is really a testament to how we can make effective use of limited land to live more locally and sustainably.

Finally, it was also important for us and CapitaLand that these green spaces are not just for tenants and residents, but also open to the public so that the tower becomes a three-dimensional park in the sky.

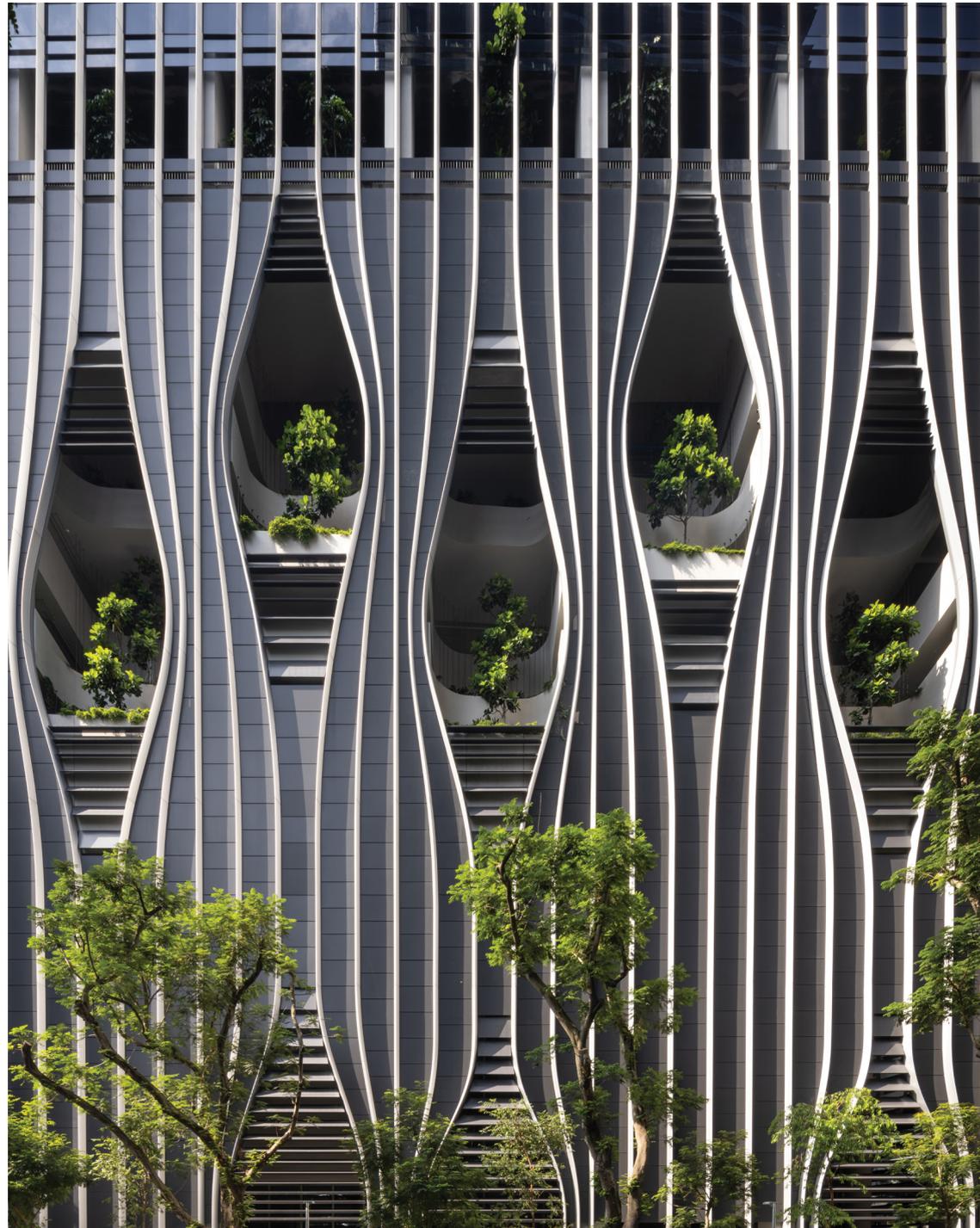
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#### WELCOME IN

A variety of strategies at the street-level, such as a tree-lined public park and facades that peel apart, draws the community towards the tower. The pedestrian walkways around the building and along the adjacent streets have also been upgraded with shelters that link to an existing underground pedestrian network, improving the connectivity of this area.



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Besides the lush greenery, how else was the tower designed to promote sustainability and the wellness of its inhabitants?

BY From a certification perspective, it was designed to meet the Building and Construction Authority's Green Mark Platinum requirements using the necessary technical solutions, such as energy-efficient air conditioning, lighting, etc. From a programming perspective, it was important to include end-of-trip facilities, including bicycle parking, shower facilities, and lockers as an integrated part of the design. This would make it effortless for people to find alternative and sustainable modes of transportation.

Beyond these items, the tower also provides amenities such as nursing rooms, amphitheatre spaces, jogging tracks, and artworks. We also paid close attention to the design of accessibility measures. In these ways, the tower becomes one that is inviting to the inhabitants and the surrounding community.

The tower's ground floor is designed as an 18-metre-high City Room with sheltered connections to neighbouring buildings and the existing underground pedestrian network. Why was this an important feature of the design and how does it contribute to the surrounding CBD?

BY It's essentially a very high-volume sheltered public space that is accessible 24 hours a day. Within the City Room, we also placed two food and beverage kiosks, as well as mobile and fixed seating elements. The ceiling is rigged with plug-and-play lighting and sound systems to support stage events. In essence, we've tried to provide the

## 5 THE REVEAL

A sleek pinstripe facade runs from the top to the bottom of the tower. While providing shade to inhabitants, the pinstripes are strategically pulled apart to reveal the lush, tropical spaces in its modern design.

“The openings in the facade frame unexpected views of the surroundings both near and far. It has reframed my own experience of the city and the downtown area.”

infrastructure for it to become the community node for the surrounding area.

For the space to be activated, we also ensured it is well connected to the surrounding context, whether above or below ground. An important aspect was pedestrianising a part of Market Street and trying to make the tower porous and welcoming. CapitaSpring has become quite a popular meeting point for the public. Many events have been organised for CapitaSpring's tenants such as Oktoberfest and family days, which make it more than just a place for work.

Your tower stands out with its sleek facade of pinstriped fins that unfurl to reveal glimpses of sky-high greenery within. Tell us more about the process behind its design and how it performs.

BY You can think of the tower as a stack of programmes, each one located by virtue of where it wants to be. The offices want to be as high as possible to maximise views and commercial value, while the serviced residences want to be connected to the podium to get access to the amenities. What this creates is also spaces between

## 6 COMMUNITY GROUNDS

An 18-metre-high “City Room” on the ground floor allows the tower to host events, ranging from fitness sessions to temporary art installations. Within the space are two food and beverage kiosks, and seats which make it a popular hangout spot for the public.



the two programmes that become social spaces for the diverse residents of the building.

We wanted a singular design gesture that would unify these spaces from top to bottom. The pinstripe design could also be pulled apart to reveal the lush and tropical spaces in the sleek and modern tower design. The facade also has a certain amount of depth to perform the role of sun shading. We balanced the function of shading while efficiently offering the tenants and residents views of the city.

CapitaSpring was designed before the pandemic, which has disrupted expectations of work environments since. How has the design held up so far?

BY The pandemic was unforeseeable, but the tower integrates many features that have enabled it to be successful in a post-pandemic environment. The project brief always envisioned a future-proof integrated development with flexibility, sustainability, and wellness to attract forward-thinking tenants and their employees. The pandemic accelerated the implementation of many of these themes. For instance, office workers in the tower can step out and into an outdoor and naturally ventilated environment in the midst of tropical greenery. This kind of space offers them physical and psychological security. The injection of lifestyle activities has been very effective in turning the tower into a space to live, work, and play in too.

At the end of 2022, about 100 percent of the office and retail space was tenanted to major companies such as JPMorgan Chase. So it certainly has been successful in attracting tenants even in the midst of the pandemic. The serviced residences have very high occupancy rates too. Whenever I try to book some of the better rooms, I fail to do so because they are occupied!



Since the project was completed in 2021, the tower's striking design has captivated many visitors. What is one aspect of its success that you are most proud of?

BY I have to say it really seems to have become a space that engages with the community beyond its office tenants and serviced residents. I understand that there are long lines to go up to the public areas. The fact that what is fundamentally a privately developed tower has become a

public space is a really strong indicator of its success. I know that for our client it has become an inspiring example of a place where people can connect, collaborate, and create.

Beyond that, what is rewarding for me as an architect is discovering that the tower facades really work both outside in and inside out. They are not just an external element that beautifies the tower. When I walk around the Green Oasis, I've seen how the openings

7 **FOOD HAVEN**  
The beloved Market Street Hawker Centre in the former car park has been rehoused in the new tower. Many of the original hawkers have returned to the new facility designed with better ventilation and lighting. Its 56 stalls are spread across the second and third storeys, which are easily accessible via an escalator on the ground floor.

## IMPACT FACT

More than 80,000 plants are growing across the tower, occupying a total landscaped area of over 8,400 sqm – equivalent to 140 percent of the site area.



## 8-10 GREENING THE SKIES

The tower takes skysire greenery to new heights. A 30-metre-tall “Green Oasis” between levels 17 and 20 offers an open-air garden for work, strolls, exercise, and events. On the roof is Singapore’s tallest public observatory deck and an urban farm with over 150 species of fruits, vegetables, and flowers, which are used by the building’s restaurants.







(L-R) Ar. Nina Loo (RSP), Brian Yang (BIG), Lee Yi Zhuan (CapitaLand), and Gregory Chua (CapitaLand)

#### ABOUT THE DESIGNER

Bjarke Ingels Group (BIG) was founded in 2005 by Danish architect Bjarke Ingels and is responsible for some of the most forward-thinking examples of modern architecture in the world. Brian Yang joined BIG in 2007 and was named Partner in 2015. With a background in energy efficiency research as well as economics, Yang brings an additional focus on environmental and economic sustainability into his projects. He has been the Project Leader on several competition-winning proposals, including the CopenHill waste-to-energy plant in Copenhagen that doubles as a ski slope and the LEGO House. Most recently, he has been the partner-in-charge for the competition-winning scheme for the Vltava Philharmonic Hall in Prague.

RSP is a global multidisciplinary architectural and engineering design group headquartered in Singapore for more than 60 years. Since joining the group some three decades ago, Ar. Nina Loo has worked on a wide range of projects across various sectors, including numerous award-winning projects such as Jewel Changi Airport, Pinnacle@Duxton, d'Leedon, and HDB Hub. She believes that the built environment immensely affects our lives and well-executed design can improve wellbeing and uplift spirits.

frame unexpected views of the surroundings both near and far. It has reframed my own experience of the city and the downtown area. That has been a surprising and satisfying experience.

How does your tower meaningfully add to Singapore's growing number of biophilic skyscrapers and its tropical urbanism?

**BY** It has redefined the ambition for what a sky terrace can be and how to effectively integrate it into a skyscraper. The Green Oasis and the rooftop farm are more than just greenery on the facade and in the sky, but meaningful extensions of social and communal spaces.

**NL** I think the opening of the green spaces for the public to enjoy is a generous gesture. It increases the green spaces in the densely built-up CBD. You normally need to pay to go up tall buildings to enjoy the views. But what you have at CapitaSpring is a free observatory to see the CBD and the surrounding cityscape. It contributes to the public realm by allowing people to take photographs or enjoy the view.

**BY** This layer of publicness is important. On the occasions that I've visited the Green Oasis, I've seen people working on laptops and using it as a social space. It demonstrates that the tower as a public realm and park exists not just on the ground plane but vertically, elevating it into a three-dimensional city.

**11 FUTURE-PROOF**  
Although the tower was designed before the pandemic, its forward-looking design has proven to meet changing work habits. When the building was completed at the end of 2022, almost 100 percent of the office and retail spaces were tenanted. The serviced residences also enjoy high occupancy rates.



# HACK CARE: TIPS AND TRICKS FOR A DEMENTIA-FRIENDLY \* HOME

## IMPACT AREAS

- \* Raising Quality of Life
- \* Advancing Singapore Brand, Culture and Community
- \* Making Ground-breaking Design Achievements

The blissful families in welcoming domestic settings look right out of a furniture and homeware catalogue. But this is no sales pitch. Instead, *Hack Care* is a manifesto outlining how anyone can easily turn their home into one that is friendly to persons with dementia.

The 244-page guide by Lekker Architects in collaboration with Lanzavecchia + Wai offers practical tips and tricks for hacking existing furniture and products into solutions that support caring for people with dementia. Adapted with accessories, an armchair transforms into a care station. Switches, locks, and textiles assembled onto a chopping board create an object for the therapeutic activity of fidgeting. Even the considered arrangement of furniture and familiar objects helps, as the guide explains. The many hacks are presented in an easy-to-understand manner for anyone to access and are highly affordable too.

Going beyond a toolkit, *Hack Care* redefines what design is and who can practice it. Instead of offering fixed solutions, design becomes a process of making and experimenting. It is not just the domain of professionals but also part of everyday human activities. Just as the guide supports caregivers in the creation of a more inclusive home, it opens up access to the world of design.

- 1-3 HACKING IS CARING  
Inspired by the inventiveness of caregivers and their own personal experience, Lekker Architects initiated this toolkit to share ways of adapting and modifying objects and spaces to create a friendlier environment for people with dementia.



Disclaimer: The ideas in the *Hack Care* catalogue have been gathered to suggest ways to improvise and expand care for persons with dementia. While every effort has been made to ensure that the hacks contained in the catalogue do not pose any undue health and safety hazards, the Lien Foundation nonetheless urges all readers to exercise their own judgement on the safety, suitability and appropriateness of these ideas to their own respective caregiving situations. Readers are encouraged to do their own research, and to always consult a professional when in doubt.

*Hack Care* is a social initiative led by the Lien Foundation and is not related to IKEA®, the Inter IKEA Group, or the Iikano Group. All references to IKEA® products are presented for the reader's convenience only and do not imply IKEA®'s approval of the modification of their products. IKEA®, the Inter IKEA Group, the Iikano Group, and the team behind *Hack Care* shall not be liable for any product failure, damage or personal injury resulting from the use of the hacks featured in the catalogue.

## JURY CITATION:

*Hack Care* is a timely, important, and highly accessible piece of work that raises public awareness around providing a life of dignity and grace for persons with dementia. Put together with sensitivity and beautifully designed, the book and toolkit offer creative, affordable, and practical ideas for improving the home environment with simple design hacks and innovations. It encourages and empowers caregivers, as well as seeds advocates for inclusive design with every hack.

The Jury commends the project for its powerful message of normalising dementia – positioning it not as a strictly defeating problem but as a prompt to act, adapt, and create a better experience of daily life through ‘hacking’. The Jury also recognises the designers’ attitude of facilitation, rather than prescription, through design – they refer to family caregivers as designers in the project, along with their intention to open a much-needed deeper debate as to how a complex societal issue such as dementia may be tackled.

*Hack Care* provides a valuable reminder that now more than ever, it is critical to challenge our preconceptions and shape behaviour and thought around dementia, with one in 10 people above the age of 60 years living with the condition in Singapore.

## NOMINATOR CITATION:

Lee Poh Wah

Chief Executive Officer, Lien Foundation

Two years after the completion of *Hack Care*, the Lien Foundation can, in our capacity as client, confidently attest to the project attaining outcome-based success.

In work of such a nature, measuring design’s impact is difficult. But the impact of *Hack Care* can be clearly gleaned from the public’s demand for it. After the original print run of 2,000 copies, which we believed would satisfy the community’s appetite, we had to make a second print run of 1,500. The demand came from exactly the stakeholders who mattered: end users and subject matter experts.

A quarter of the copies were requested by the former (caregivers of persons with dementia), while half were requests from the latter (professional staff from the medical and social services). Caregivers took design into their own hands, putting *Hack Care* into practice through their experiments with household items to elevate the quality of their loved ones’ lives. Professionals did likewise in eldercare centres and nursing homes, improving lives at a larger scale.

Impact was felt in the design fraternity too, not only locally but also internationally. The project was covered in reputable overseas media such as *Wallpaper\**, *Design Wanted*, *Elle Décor*, and *Dezeen*. The book inspired designers around the world to look at dementia, an illness that affects millions, through the usually staid vantage point of the domestic.

The project’s success could not have been presumed. The design challenge was complex, and Lekker Architects worked amid painful personal challenges. But the studio dug deep and – on its own initiative – spent three years working on *Hack Care* alongside its cross-discipline collaborators at industrial design studio Lanzavecchia + Wai, as the vision grew.

This is a special story of designers who reframed adversity as inspiration, using design, satire, and common sense to make a point.

## DESIGNER:

Lekker Architects

Ong Ker-Shing

Joshua Comaroff

Lim Chyi Tung, Ronald

Emiline Elangovan

Chen Shunann

Goi Yong Chern

Lim Yi De

Lua Jin Wei

Isabella Ong

Jason Tan

## COLLABORATOR:

Lanzavecchia + Wai

Hunn Wai

Francesca Lanzavecchia

## PHOTOGRAPHER &amp;

VIDEOGRAPHER:

KHOOGJ

Khoo Guo Jie

## PRINTER:

Oxford Graphic Printers Pte Ltd

## CLIENT:

Lien Foundation

Both of you were caregivers for a person who had dementia. How did that experience give rise to this guide?

Ong Ker-Shing (OKS): Before this project, we had already been designing for users who are not the typical clients one imagines when entering practice. For example, the inclusive preschool Kindle Garden and the Quiet Room in the National Museum of Singapore are for neurodiverse populations. After completing *A Different Class*, a book of ideas pushing the envelope on preschool designs, we began discussing with Lien Foundation what to work on next. Dementia came up as a pressing concern, and it was not just academic, but personal for us as my late father suffered from it. As a practice, we like to take on projects where we have some kind of additional knowledge through our lived experience that enriches what we bring. So it was a confluence of our interest as designers, our lived experience, and clearly something important and urgent to address.

From the initial discussions, we wanted to look at how to democratise design so people feel they can do it too. Our experience caring for my father taught us that dementia is unfortunately a one-way street at the moment. It is decline. It is inevitable. It is constantly changing. There are no design solutions that are generalised enough to help with all the changes to a person with dementia. Although there is equipment such as mattress protectors or spoons for making eating easier, you cannot afford to buy specialised equipment for every stage of the disease. It is more about supporting the person and their unique journey through it.

We noticed our family constantly came up with solutions that were motivated by our love for and knowledge of our father. A lot of other caregivers do that too and even share their solutions with others. There is so much of such innovation in care that is under the radar of big 'D' design. We wanted to create a book to highlight these solutions and this attitude.

Joshua Comaroff (JC): We noticed a lack of guides outside of the medical space on how to care for dementia patients. There are many great books with high-level design principles for dementia care, such as be patient centric, keep engagement active, make a space that is visually clear... but how do you actually do that? What does patient centricity translate into when you have to balance safety and autonomy? It seemed amazing that there was no practical guide on how to care for somebody with dementia. But between the design principles and actual experience, caregivers were already coming up with their own solutions by hacking.

Our idea was to marry the design principles with this treasure trove of inventiveness that has come out of necessity from all these caregivers who are under-equipped and underpaid in every capacity. We wanted to create a primer to help people who are going through this process of caring for someone with dementia.

The guide is styled like a furniture and product catalogue, and many of the hacks are based on products that are commonly owned. How did your team come up with this approach and why was it appropriate?

JC The sense was we needed something that was very general and accessible. If dementia designs and principles are arcane and expensive, how do we present them in a way that is affordable and available to more people? What is a byword of accessibility in design? That was when we arrived at the idea of the IKEA furniture catalogue. We mocked up a sample for a meeting with Lien Foundation's CEO Lee Poh Wah. Before we could show it to him, he said: "We need something like an IKEA catalogue." That was the moment when it was, "Boom!" It was incontrovertible alignment.

OKS We also always turned to IKEA for our solutions. My father suffered from frontotemporal dementia and one of the





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symptoms was that he started losing connection to a sign and what it signifies. He didn't know a knife was for cutting. He started associating water with his IKEA tumbler and only drank from it. These tumblers are cheap and accessible and so my aunts and uncles got them for their houses so my father could drink water when we visited with him.

The IKEA furniture catalogue is also so recognisable. Everybody likes thumbing through the catalogue, and it was very important that our guide was not seen as elite or disempowering so that people would pick it up too.

Tell us about the process of coming up with the various hacks.

**OKS** We worked with the industrial design studio Lanzavecchia + Wai to develop those. It was obvious to us that we should start with a chair after observing how my father's entire world collapsed into one where he spent most of his days. It became his new home where we would bring things to him because of his reduced mobility. We settled on the POÄNG chair because it is one of IKEA's most iconic designs, and many people have probably had one in their homes at some point or other. The chair was one of the showpiece hacks we created.

**4 ACCESSIBLE TO ALL**  
Unlike many existing design guides, which can seem abstract to readers not trained in design, the toolkit is styled like a furniture and product catalogue – enticing and easy to read. It offers practical advice and is accompanied by four do-it-yourself guides on how to hack commonly owned furniture as well as stationery to encourage readers to get started.



Have a continuous chain of handles along the way from the bed to the toilet - just like a string of pearls. This ensures that physical support is available whenever it's needed.

**01 OMTÅNKSAM red grab bar** Bright colours make the grab bar fun and enticing.

**02 SATSUMAS plant stand** How about a wall-mounted ladder frame as both a plant stand and a grab bar? It's suitable for squatting exercises too.

**03 LOSJÖN coloured hooks** These versatile hooks are more than hangers for photo frames. They also double as grab handles.

**04 KALLAX shelving unit** Select bedside tables that are around 80cm high. They also function as useful lean supports when one stands up.

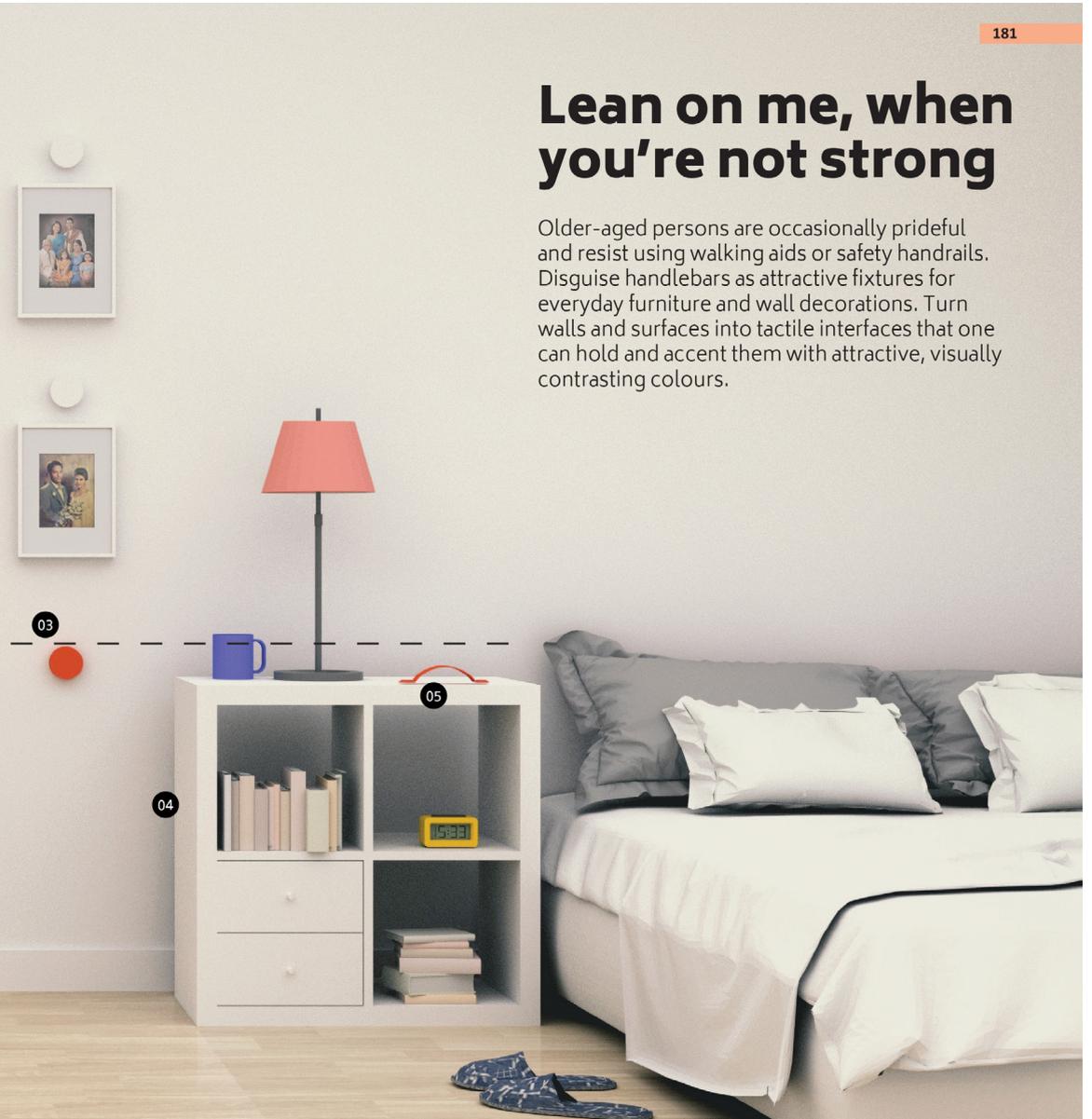
**05 ÖSTERNÄS leather handle** These tactile add-ons make the table look cute — and also serve a practical purpose.

01

02



Handles and bars should be secured at a height of 75 to 80cm from the floor.



181

## Lean on me, when you're not strong

Older-aged persons are occasionally prideful and resist using walking aids or safety handrails. Disguise handlebars as attractive fixtures for everyday furniture and wall decorations. Turn walls and surfaces into tactile interfaces that one can hold and accent them with attractive, visually contrasting colours.

03

04

05

**5 AFFORDABLE HELP**  
One of the motivations for the toolkit was offering alternatives to specialised medical equipment, which can be expensive. Seniors may also resist using medical

objects due to pride. For instance, the guide suggests using affordable everyday fixtures in place of safety handrails to achieve a similar function in a manner that is also more discreet.

### IMPACT FACT

3,500 copies of *Hack Care* have been distributed to caregivers and subject matter experts.



**JC** Another concern we had was: What if products get discontinued? The POÅNG chair has been around since the 1970s, so that is another reason we picked it. We also created hacks around it because when a person spends all day in the chair, it starts to assume other requirements. The question we had then was how to help the caregivers who have to run back and forth all the time.

Besides the conceptual design of such showpiece hacks, another track we pursued was a broad design research where we visited the homes of caregivers to learn what hacks they had come up with. The two tracks were constantly feeding into one another and that was how these ideas populated. For instance, we saw this fidget board a caregiver had made for sensory stimulation. So, we began looking at how we could make one using products from IKEA. The more we spoke to caregivers and heard about their hacks, the more ways we found to adapt IKEA products to create them. There was a day we even spent about six hours at the IKEA showroom and just sat on every chair and squeezed every cushion!

“We wanted to look at how to democratise design so people feel they can do it too.”

**6** **DESIGN AS ACTION**  
The toolkit encourages readers to see design as something they can carry out for themselves. While explaining key design principles, it offers interventions that are simple to carry out. For instance, to ensure the bathroom is “visually legible” for people with dementia, one can choose contrasting colours for important items such as grab bars.



**7-8** **FROM A CHAIR**  
A starting point for the project was hacking a chair for care recipients who have lost their mobility. The designers explored a variety of hacks that could allow this piece of furniture to function as a “second home”, including prototyping ways to make it sturdier so that care recipients can stand more easily.

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## The joy of fidgeting

Holding, grabbing, running one's fingers across soft or textured surfaces are exercises that offer tactile delight. They help to release nervous energy and calm the mind.

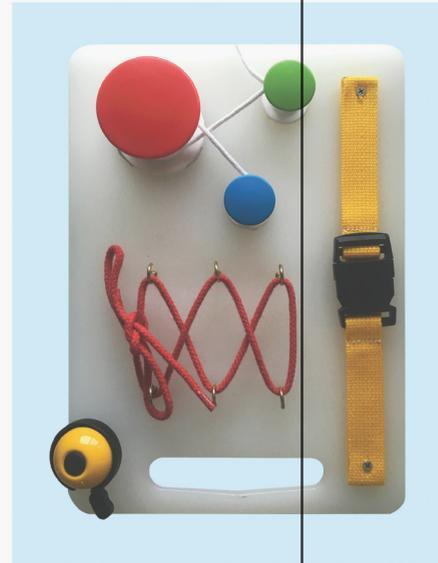


01 Touch is intrinsic to the human need for intimacy.  
02 Fabrics are delightful to hold.  
03 Tiny buttons offer moments of tactile surprise on fidget fabrics.



DIY FIDGET CLOTH  
get creative with everyday objects

Having different objects with different colours on the fidget board allows for varied tactile experiences to stimulate and engage the care recipient.



## FAMILIAR TO THE TOUCH



The touch and feel of familiar objects from one's past rekindles memories of bygone days. Use these items to create a rich fidget board experience.

A key part of your process was testing prototypes of the hacks with other caregivers. How did their input shape the final designs?

JC There were two aspects of testing. One was learning from the experience of the caregivers, which was really important. A lot of the hacks were things that people had already tried. For example, we learnt from Shing's mother to have two twin beds next to each other – one wrapped with a shower curtain – to manage a person with dementia wetting the bed. This way, you can just switch the person to another bed when it happens and handle the mess later.

Another form of testing was letting other caregivers try our hacks. The cool thing about hacking is that you are tweaking and not designing entirely from scratch. It

was a very lively process of adjusting things for different conditions, bodies, and preferences. This was really the ethos of the project. It was a way of going against the notion of design as delivering final products, but rather thinking of it as a process of ongoing engagement with the physical world and objects.

Did your father get to be part of the design process and what did he think about the hacks?

OKS My father was not able to express anything by the time we were working on the project, but we definitely used a lot of the hacks and tips in the guide with him. For instance, we realised congregating around his chair would change the way he expressed himself. A lot of the tips are not products

JC

but logics for how to put a room together. Shing's father could not give verbal cues, but he was nonetheless incredibly sensitive to small changes in his environment. A lot of his responses to the material environment informed our guide. We noticed the arm of his chair was often thread worn and we put two and two together after learning about a fidget board another caregiver created. So it was very much like social science research where you watch what's going on and try to make sense of it.

Which of the hacks in the guide do you think is most successful and why?

OKS We have "hero hacks" like the POÄNG, which are wonderful, but I think they can still be a lot of work to carry out and maybe not everybody feels they can do it. One of the hacks I love the most is our suggestion of using different products to create a mobility guide from the bedroom door to the bed. It's a bunch of red things you can buy from IKEA – grab bar, hooks, leather handle, plant stand, and shelving unit – to subtly underline a path. You don't need to get something from a specialty store to do this. Instead of installing giant grab rails, you can create accessibility tools that are disguised.

One of the things we've learnt from seniors in our other projects is that a lot of pride is at play when designing for them. Many of them won't use walking sticks or frames because they consider it to be embarrassing. They'd rather lean on an umbrella or push a shopping trolley for support.

JC

Having a contractor come in to install a series of grab rails is also beyond the means of many caregivers, and they'd rather spend the money on something else. Dementia, in addition to being incredibly upsetting and stressful, is also crippling expensive. That's why a major consideration behind our hacks is helping others to quite cheaply put together systems to make a better environment. The moment solutions become 'medicalised', their prices often shoot through the roof.

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### 9 LEARNING FROM OTHERS

The designers visited the homes of other caregivers to learn about their hacks too. One hack they discovered was a homemade fidget board that helped stimulate care recipients. As shown in this page extract, the guide offers tips on how to create the fidget board using easily available household objects.

The guide organises the hacks around two main themes of "Microworlds" and "Daily Rituals". There are also interviews with healthcare professionals and caregivers. How do the contents of the guide address the needs of your audiences?

JC The "Daily Rituals" theme addresses the temporal sequence of care. Someone once said that warfare is long stretches of boredom punctuated with short periods of terror. Care is very much like that. So, the hacks offer a structure of activities that becomes really important. The "Microworlds" section is about hacking the spatial relations of the objects with the environment, which is very important too. You could design a wonderfully efficient care station, but it could be marginalised if it is just isolated in the corner of the room.

OKS We really believe that environment matters. It affects the way you feel and perform, and this guide makes that argument. Josh mentioned earlier that my father was incredibly sensitive to the environment. Everybody is. It becomes apparent when you are focusing on how they respond to certain things. The fact that the hacks in the guide can be done by anybody shows how you can improve your environment in many small ways. In this way, I think the guide reaches beyond the subject of dementia care, too.

Besides distributing the guide in print and online, two livestream sessions were also conducted to share the hacks. What kind of feedback has the guide received?

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## Centre of attention

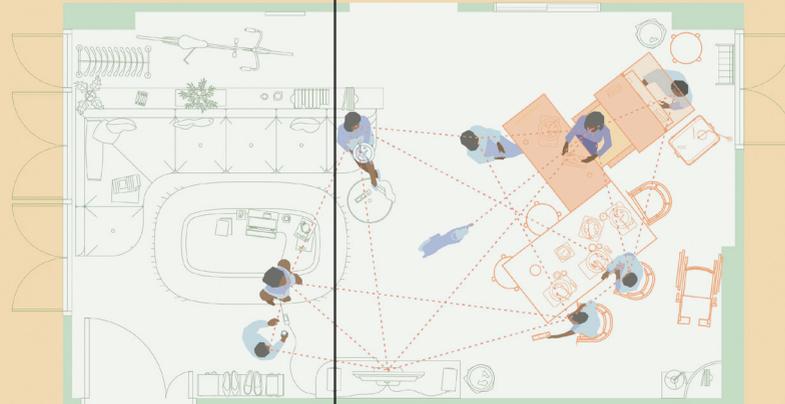
The care recipient becomes less active as dementia progresses to an advanced stage. Ensure that family rituals remain inclusive by organising meals and activities close to where the care recipient spends most of the day. This places him or her at the heart of the family.



Convene the social gathering around the care recipient. Not only does this create an inclusive and convivial setting, it also provides positive social stimulus for the care recipient to respond to.

01 LIVING TABLE Refer to chapter 4 for more information on making your own living table.

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### Interaction around the chair

Let family activity occur around the care recipient. This normalises the immediate social environment, helping him or her feel included. Take care not to overwhelm the care recipient by regulating the amount of social stimuli.

OKS Unfortunately, the guide came out in 2020 along with the pandemic and we have not been able to present it outside of Singapore yet. We did a few talks locally, and it was touching to see participants find a community and resonate with the hacks. This year we've received more overseas enquiries, and we're sure receiving the P\*DA will catapult the project further.

While we were clear that the guide was created for caregivers of people with dementia, we realised it has an impact on others too. After reading about our project in the newspaper, an individual who runs a shelter for senior dogs with mobility issues wrote in to request a copy. He thought it would help him learn ways to care for his dogs. That is just incredible!

The guide has caught the attention of many overseas too, including the World Economic Forum. What is one achievement you are most proud of?

OKS I'm really proud that my mum is proud of the guide. A guide like this might gloss over the lived experience that is raw and messy, but it says something that it still resonates and feels good for someone like her who lived in the trenches. It's also very gratifying to hear other people find a connection with the guide.

JC One of the biggest concerns I had was the tone of the guide, which is a challenge when you talk about dementia and dementia care. There is debate nowadays about putting a positive spin on the disease, which I think undermines the amount of stress, difficulty, and mixed emotion that caregivers experience. We didn't want to suffuse the guide with the negativity of the experience, but neither did we want it to have a sense of self-satisfaction, like what you can get from a commercial furniture catalogue. It had to be optimistic about intervention, and I think the finished product walks that line very carefully.

Instead of experts offering ready-made solutions, your team served as facilitators by "helping caregivers to think like designers". Is this an outcome more designs should aim for?

JC On the one hand, we don't believe that everybody is a designer. Design is really hard. The more you engage with design as research, the more you understand the

10 A WORLD OF CARE  
The "Microworlds" section of the guide looks at how objects can be organised for the benefit of care recipients. Allowing for other members of the household to have meals and carry out activities around them is one way of creating an inclusive setting that can also create positive stimulation.



(L-R) Lee Poh Wah (Lien Foundation); Joshua Comaroff and Ar. Ong Ker-Shing (Lekker Architects); Francesca Lanzavecchia and Hunn Wai (Lanzavecchia + Wai)

#### ABOUT THE DESIGNERS

Lekker Architects is a multidisciplinary practice that explores the social-emotional potentials of design. Co-founders Ar. Ong Ker-Shing and Dr Joshua Comaroff studied environmental design (architecture and landscape) and social science (cultural geography). They combine methods from both areas to search for designs that help people to learn and grow, and form more inclusive kinds of collective relationships.

They are excited by the challenge of catering to the full variety of human bodies, minds, and experiences – not just because it makes lives better, but also because it makes for more compelling design.

Alongside her role as Director of Lekker Architects, Ong is Associate Professor (Practice) and Bachelor of Architecture Programme Director at the National University of Singapore's Department of Architecture. Comaroff is an Assistant Professor in Urban Studies at Yale-NUS College. His PhD studied haunted landscapes and urban memory in Singapore.

Lekker Architects received a P\*DA Design of the Year in 2015 for The Caterpillar's Cove preschool, the 2020 Singapore Institute of Architects' Design of the Year for the Quiet Room in the National Museum of Singapore, and the Urban Redevelopment Authority's Architectural Heritage Award in 2013 for a home and gallery in the Lorong 24A Shophouse Series. Ong and Comaroff are recipients of the

Wheelwright Traveling Fellowship from the Harvard Graduate School of Design.

Lanzavecchia + Wai, established in 2010, is an internationally renowned award-winning design studio based in Italy and Singapore. The studio's work includes research projects for Herman Miller, limited-edition objects, and mass products for brands such as Zanotta, FIAM, Living Divani, LaCividina, Cappellini, De Castelli, Gallotti&Radice, Bosa, Nodus, and Mirage. Lanzavecchia + Wai's work also includes special commissions for major brands and museums such as Hermès, La Triennale di Milano, *Wallpaper\**, MAXXI, M+ Hong Kong, Antolini, Tod's, AgustaWestland, and Alcantara.

The studio's many accomplishments include being awarded the "Young Design Talent of the Year" by Elle Décor International Design Awards 2014, the Archiproducts Design Award, the Red Dot Award Product Design 2016, and the Innovation in Inclusive Design Practice Award of the Royal College of Art.

#### 11 EVERYDAY CARE

The "Daily Rituals" section of the guide outlines activities that caregivers can organise throughout the day. For example, they can get care recipients involved in the preparation of meals, using widely available kitchen equipment to ensure the experience is safe and enjoyable.

complexity you are designing for. But we also want to acknowledge the adjacency of design intelligence to a natural human ingenuity. There are certain things that people who have not gone to design school do that are very, very close to how designers solve problems. With this guide, we acknowledge that there are these forms of design and creativity happening organically. As designers, we can draw them out, talk about why they work, and situate them. It is really design at its best: mediating spheres that don't normally talk to each other.

What we are trying to do is to connect two worlds together by identifying what is happening so that people can proceed with a certain level of self-awareness and confidence, and have the vocabulary for conversations. We understand that design has important disciplinary expertise,

experience, and networks. At the same time, we acknowledge that it's not purely proprietary. Design is part of the extent of human activities that we should acknowledge when it is there.

OKS

I don't think it's about making everyone into a designer, but about rethinking the designer as a provider and the people who use design as just recipients. This guide is not about providing a set of instructions to carry out to have a perfect outcome. It's about a thought process and empowering people with a mentality of hacking. With projects of this type, what's really important is getting conversations going. Who would have thought we could talk about dementia and its unglamorous effects, like wetting a bed, in the context of the P\*DA? What's really important is that it becomes okay to talk about these things, because frankly all of us know somebody who is going through dementia.



# REPAIR FOR

# R \*

## IMPACT AREAS

- \* Advancing Singapore Brand, Culture and Community
- \* Making Ground-breaking Design Achievements

A pair of movie tickets that are fading, but not forgotten. They are encased in a transparent slab and an augmented reality filter brings to life their original state. For the couple that held them on their first date, the tickets live on as a treasured memento. This object is just one example of those revived by *R for Repair*, a curatorial project that seeks to redesign the banal act of repairing into an inspiring and creative endeavour.

In response to two separate briefs designed by Hans Tan Studio, professional designers and design students were asked to create their own interpretation of repair and repair processes respectively. The results are 10 repaired objects and nine repair kits that go beyond simply restoring function. Broken items were returned to their owners enhanced, personalised, and even reimaged into outcomes better than the originals. Each embodies a designer's unique take on what repair is, as well as the stories of the owner's relationship with the object.

Presented together in an exhibition, the wide range of repaired objects and repair kits presented a counterpoint to today's consumerist culture where goods are easily thrown away and replaced. Their beautiful and delightful outcomes also showed how sustainability is not just about using less and acting more responsibly, which can seem burdensome to some. It can be desirable and purposeful too.

- 1 RETHINKING REPAIR  
To shift the perception that repair is merely restoration, Hans Tan Studio invited designers to fix broken objects while also demonstrating how repair can enhance the meaning one takes from an object. Design students were asked to develop repair processes that could enhance the objects they were applied to.



## JURY CITATION:

*R for Repair* celebrates the idea of repairing in a transformative way. Repair is usually seen as the forgotten sibling of sustainable consumption (alongside reduce, reuse, and recycle), with broken objects judged as having lost their value in consumer culture. The project is a delightful reinterpretation of objects and memories that would have been discarded, but for the significance and meaning they hold for their owners.

The Jury recognises the educative and innovative effect of the project, galvanising the design spirit for repair to inspire a new attitude of care toward our possessions. The project highlights the impact of repair in physical, mental, and emotional terms, as it re-tells the stories of the repaired objects and the renewed connections to their owners. The project also developed repair kits, empowering individuals to extend the narratives behind damaged objects and memories themselves.

Beautifully executed with agility from concept to exhibition during the pandemic, *R for Repair* was reprised in a collaborative overseas presentation at the Victoria and Albert Museum in London. *R for Repair* uses design to empower people to extend and enhance the life of 'broken' objects and memories, and has the potential to power a movement toward care and repair.

## NOMINATOR CITATION:

Justin Zhuang

Founder and Partner, In Plain Words

Old. Broken. Unusable. These are words not typically associated with design. Instead, the profession is better known for setting trends, providing function to objects, and even surpassing it through innovation. This is why I sent in my faulty clock radio when I learnt that designers were going to fix objects as part of the *R for Repair* project. To my surprise, this clock radio, which had accompanied me through my graduate studies overseas, was returned to me unable to function as before. The clock could tell the time again, but instead of broadcasting tunes the "radio" was projecting personal memories from my time abroad!

Mine was just one example of how the project's designers redefined "repair" from being simply a straightforward restoration of utility. Together, they showed me how repair is not an activity of last resort but an opportunity to think of our objects anew. The project also challenged the participating designers by bringing them face to face with the throwaway consumerist culture that the profession has enabled over the decades.

Instead of the typical design brief to create something new, they were tasked to fix and even redesign an object made by someone else. This is becoming more common in our world of increasingly scarce resources, and the ability to restore, adapt, and even reimagine what exists will become part of a future designer's toolkit.

*R for Repair* is undoubtedly part of a global trend towards sustainability, but the project does not inflate the role of the design as the solution. The revival of failed designs is humbling for the designers. It even redesigns the age-old activity of repair into one that is inspiring and even desirable. More importantly, it asks us to reflect on our relationships with objects, and ask what or who it is that truly needs to be repaired.

## EXHIBITION DESIGNER:

Hans Tan Studio

*Hans Tan*

*Sheryl Teng*

## EXHIBITION GRAPHICS:

gideon-jamie

*Gideon Kong*

*Jamie Yeo*

## COPY EDITOR:

In Plain Words

*Justin Zhuang*

*Sheere Ng*

## PHOTOGRAPHERS:

KHOOGI

*Khoo Guo Jie*

Iceberg 7

*Edmund Ng*

## REPAIR DESIGNERS:

State Property

Atelier HOKO

Clement Zheng

Lanzavecchia + Wai

Mighty Jaxx

Lim Qi Xuan

Kinetic

Studio Juju

Tiffany Loy

Jonathan Yuen

Students from the Division of Industrial Design, College of Design and Engineering, National University of Singapore

*Ng Luo Wei*

*Mervyn Chen*

*Michelle Loh*

*Xavier Teo*

*Lew Jinjie*

*Darryl Leong*

*Zephanie Lim*

*Xiao Jieying*

*Cynthia Chan*

*Tan Kah Kiat*

*Sen Fong Ling*

*Shaina Kang*

*Tan Zijie*

*Jonjoe Fong*

*Shawn Ng*

*Ye Jiajie*

*Sheryl Ang*

*Celeste Loh*

## CLIENT:

DesignSingapore Council

Designers are typically interested in creating new objects, and repair is generally done to old and broken designs. How did you become interested in curating a project on repair?

Hans Tan (HT): The re-use and transformation of materials or objects has always been part of my practice and the designs I fabricate. The idea of 'repair' came naturally when I thought of putting together an exhibition. The project started in 2019 when I designed a brief for my students at the National University of Singapore to create a method of repair. It had to be encapsulated in a kit to allow someone else to do it themselves, and the outcome of the repair did not necessarily need to restore the object but had to make it better than the original.

While working on this brief, an opportunity arose to adjust it for professional designers as part of an exhibition. The pandemic had happened, and I wanted to rally designers in Singapore to breathe life through design in this challenging time of darkness. I knew many designers who had work cancelled at that time, and I thought this project could be an opportunity. At the same time, they had more free time which could result in more interesting outcomes. I was pleasantly surprised that the DesignSingapore Council picked up on the project and was willing to partner with me too. It became one of the first exhibitions to welcome people back into the National Design Centre in 2021.

The exhibition featured responses to two briefs you designed. One involved 10 professional designers repairing objects they were assigned. Another was an 11-week project where design students developed nine repair kits. How did these different groups take to your design briefs and the idea of repair?

HT Repairing something to its original condition is very straightforward and based on skills. But by asking the students to ensure the repaired object would be "better off" than the original, my brief forced them to think a bit differently about repair. It challenged them to experiment with processes,



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methods, and techniques of repair to end up with an interesting outcome. It also meant they had to shift their design approach. For instance, if you were to design a toaster from scratch, you could use existing manufacturing processes to create something different. The students working on the repair project, however, were asked to redesign the processes used to fabricate elements in a toaster to achieve a different outcome.

The professional designers were each invited to interpret repair using their own imagination. I did not have to guide them much and their eventual outcomes reflected how they saw repair based on their design ethos.

An open call was held for broken, faulty, and worn-out objects for repair. What sorts of things were offered by the public and how did you select the final 10 objects?

HT We had a lot of everyday objects, including a pair of spectacles, a clock radio, broken ceramics, and bags. There were also things that people had used for a long time and were important to them for various reasons. This mix of older objects and utilitarian ones formed a really good foundation for the project.

I had a few criteria when selecting the objects. One was to ensure we had a variety. Another was the manoeuvrability of the object's material. Some materials just



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### 2-3 USEFUL AND MEMORABLE

The range of items submitted for repair through an open call to the public included utilitarian objects such as a clock radio (repaired by Clement Zheng) to ones with deep sentiments attached, such as a piece of jewellery from childhood (repaired by State Property). Participants were also asked to share stories about the objects to inspire the designers.



4-7 EXPECTEDLY UNEXPECTED

The repairs ranged from the practical to the conceptual. Some designers 'repaired' perceptions of what 'broken' means. For example, Kinetic playfully encouraged the owner of a broken pair of spectacles to adapt her face to the deformed frame. Atelier HOKO returned a broken cup with guidance on how to appreciate it without the handle. Other repairs restored the function of the objects but added new features. Tiffany Loy enhanced a worn tote bag for grocery shopping, while Studio Juju applied laminate to an old sewing machine table, making it easier to maintain.

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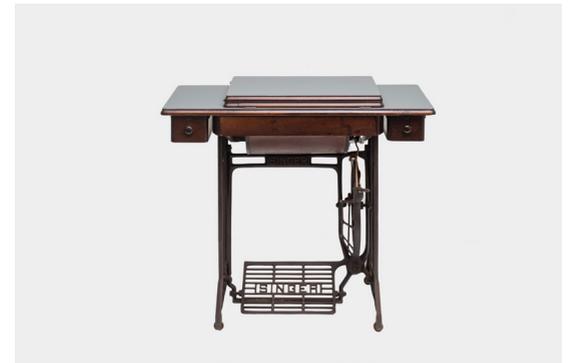


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“The emotional connection between a person and an object is one of the biggest sustainable gestures one can think of.”

7



## 8-9 REPAIRS WITH STORIES

Conversations were held between the designers and the object owners before the repairs began. This helped to drive highly personalised outcomes, such as Mighty Jaxx's journal with pop-up scenography for a toy bus laden with memories of how Singapore used to be during the owner's childhood.

Lanzavecchia + Wai returned a wristwatch gifted by the owner's parents as a clock in a handmade walnut enclosure, capturing the significance of this memento.



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don't allow for much room for creative repair, such as a glass object. Thus, I applied an industrial design perspective to see how much potential an object could have in terms of transformation. A third criterion was the expertise of the designers participating in the project. I deliberately invited designers from a variety of fields, from graphic to product and furniture. However, they were not necessarily assigned to a medium they were good at. Instead, I consciously matched each designer to an object that was slightly challenging and would hopefully spark their curiosity to design something interesting. For example, we had a pair of broken spectacles that one might have given to a product designer who was good at working with details. However, I thought it would be interesting to assign it to the advertising agency Kinetic, whose work is very creative and conceptual. There is only so far you can go in repairing a pair of spectacles, but Kinetic came up with an installation that proposed the owner should adapt herself to the deformed object instead. I was really pleased with the result!

As part of the repair process, your team facilitated a conversation between the commissioned designer and the owner of the object. Why was this important and how did it shape the outcome of the repairs?

HT It is one thing to give a creative spin to repair, but it is trickier when you have to take in the owners' stories behind the objects too. I see this as a way of being user- or people-centric. We normally associate user-centric design with how functional or usable an object is. This project looked at the concept more broadly by bringing the owner into the repair outcome. The conversations helped the designers to learn about the stories behind the objects as well as the characters and dispositions of the owners. They provided an interesting starting point for the repair, which most of the designers took into consideration.

One good example is the bracelet repair by State Property. It was originally an anklet made of teddy bear links that the owner grew up wearing until it broke. She kept the piece of jewellery for over 20 years because it was a gift from her parents. When the designers learnt about the owner's desire to wear it again, they resized it to fit her wrist. They also recreated one of the missing silver teddy bear links but cast it in gold and added a small diamond on its heart to symbolise the importance of the relationship the object represents. I thought it was a beautiful gesture.

The repairs by the designers are far from conventional restorations of broken objects. Were the outcomes what you expected and how did they fit into your definition of repair?

HT The repairs were all unexpected – as I expected! Some were more straightforward such as Tiffany Loy's repair of a tote bag, which the owner had bought with his first pay cheque. It was originally used for work and was relegated to a grocery bag when it became worn out as he could not bear to throw it away. Tiffany discovered that while the exterior of the bag was worn out, the inside was still in quite good condition. She inverted the bag and wove strings on the new exterior to create more space, taking after the typical string grocery bag used in Europe. The repair is a very well-restored piece of work and also captures the owner's story beautifully.

On the other hand, there were very conceptual repairs too. Atelier HOKO was assigned a ceramic cup with a broken handle that the owner had kept because it was handed down by her parents. Instead of reattaching the handle, which was the most obvious thing to do, the designers sanded down the broken edges of the cup and created a small booklet to show the owner how the cup could still be used even without the handle. For instance, she could hold it with two hands instead to feel the warmth. The designers also created a beautiful wooden box to store the broken

handle and honour the fact that the cup was an heirloom. Although this repair did not restore the function of the object, it wove in the story behind it.

Repair kits are about addressing potential design failure. What did your students learn about designing through this unusual project?

HT The really important component of the brief was the need to design a kit, which forced the students to think about the project from an industrial design point of view. They had to consider how to create a repair process that could be mass produced and used by anybody. This was a more challenging brief than having the students come up with a one-off and artistic interpretation of repair like the professional designers.

The repair kits also became interesting during the exhibition as we could not hold in-person workshops due to the pandemic. We realised they were small enough to be sent by post to participants who learnt how to use them over Zoom. It was a very serendipitous outcome!

How did the owners and audiences respond to your project? Do you have any stories to share?

HT At the opening, we had an informal gathering of the designers and the owners of the objects. It was a very powerful moment as we had kept the outcome from most of them. It was the first time the owners saw their repaired objects, and there were a lot of surprised faces and even tears! That session was really quite tender,

and many of the owners came away pleasantly surprised. It was great to see people with no design background appreciate the thoughts and rationale of the designers.

In my curatorial projects, I also regard the participating designers as the audience to whom I offer a different perspective of what design can be used for. We had feedback from the designers that this project challenged their definition of repair. It helped them to recognise how design can play a unique role in infusing creativity into a process we normally see as just restoring objects.

One other element of the project was how the exhibition was designed to capture the spirit of the theme. We made sure most of the components were reusable, which resulted in 70 pieces of furniture that could make ideal side tables for homes. They had no adhesives, which made them easy to put together and take apart. Another motivation for such a design was to avoid onsite construction as it was difficult to apply for work passes during the pandemic and would add to cost. At the end of the exhibition, we conducted a giveaway of the tables and the people who eventually came to collect them were effectively our exhibition teardown team. We were really happy that all the tables were adopted within hours. I still see some of them around in the offices of designers and also at Common Ground, an event space in Bedok.

#### 10-11 HIGH-TECH AND HANDCRAFTED

The designers approached the repairs in a variety of ways. Faded movie tickets from a first date were digitally restored by Jonathan Yuen and made visible through augmented reality technology. A seashell gifted by a childhood friend was handcrafted by Lim Qi Xuan into a sculpture depicting milk teeth that poetically speaks of the friendships that come and go as we grow up.

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## 12-14 DESIGNING REPAIR

Another aspect of the project was an 11-week workshop where design students developed repair kits that created outcomes “better off” than the original. The result was nine repair kits, including one (by Shawn Ng and Ye Jiajie) that allowed for the repair of damaged children’s clothing with iron-on graphic patches. Another was a kit of parts (by Zephania Lim and Xiao Jieying) for transforming broken and unwanted plastic toy parts into new toy forms.

The project’s success led to a new edition that was exhibited as part of the London Design Festival in 2022. How was this different from the first exhibition and what kind of reception did it get overseas?

HT For the second edition, we worked with both designers and objects from Singapore and London. It was a very interesting mishmash of ideas and outcomes. What I noticed was that people in London tended to volunteer objects of a higher value and age, which we had to be very careful with. For instance, we had an 18th-century sewing chest and an antique beer growler. In these cases, the conversations the designers had with the object owners became even more important, to understand some of their unconscious boundaries. That said, a key criterion in both editions was that the owners had to give the designers complete creative freedom.

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15-18 MASS-PRODUCING REPAIR  
 Being asked to create kits instead of one-off repairs, the students had to think about replication and the likely skill levels of repairers. They created easy step-by-step processes for repairing a leather bag (by Lew Jinjie and Darryl Leong), a jigsaw with a missing piece (by Sen Fong Ling and Shaina Kang), a canvas bag (by Cynthia Chan and Tan Kah Kiat), and shoe soles (by Sheryl Ang and Celeste Loh).

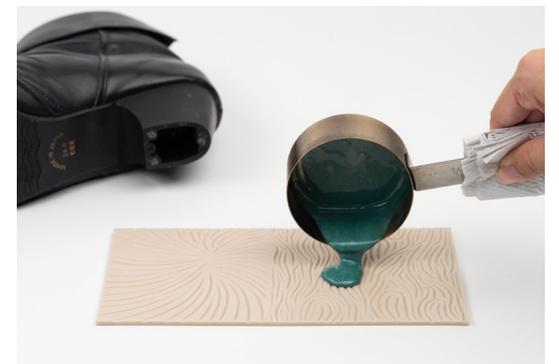
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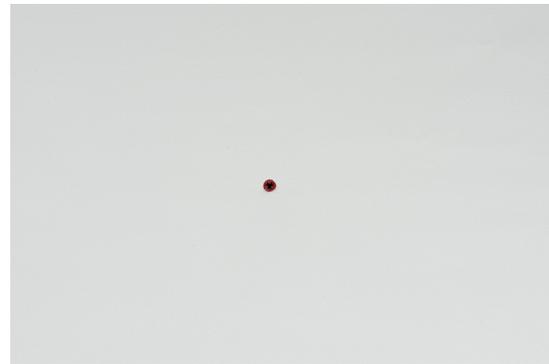


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## IMPACT FACT

Over 5,500 people visited the first edition of the exhibition in Singapore. It went on to London as a cross-cultural exchange, where it attracted more than 32,000 visitors.



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For me, there were two big takeaways from the second edition. Firstly, I had the privilege to work with Jane Withers, who is a well-respected architecture and design curator. Secondly, it was the first time a curatorial project from Singapore was exhibited in the Victoria and Albert Museum, which is one of the leading art and design museums in the world. It was also interesting that we got permission to exhibit within the museum's design gallery. Our repaired objects were surrounded by historically significant design objects, which made for an interesting juxtaposition.

What has looking at repair taught you about designing more sustainably and the ways we ascribe value to our objects?

HT The emotional connection between a person and an object is one of the biggest sustainable gestures one can think of. Sustainable design is not just about using less material and being responsible with how you make an object; it's also about establishing an emotional connection between objects and people. If an object becomes part of someone, then there is very little room for them to think of it as waste – as something to throw away. *R for Repair* builds on this idea and I hope that the visitors to the exhibition thought about the meaning of the objects they own and buy.

## 19–22 SHOWCASING REPAIRS

The repair kits were put to the test in a series of public workshops. Kits were mailed to participants who attended virtual sessions guided by the students. The workshops included repair kits for holes in canvas shoes (by Ng Luo Wei and Mervyn Chen), exposed wall plugs (by Tan Zijie and Jonjoe Fong), and broken plastic objects (by Michelle Loh and Xavier Teo). The students' kits and the repairs by designers were showcased at the National Design Centre from 13 January to 6 February 2021.



(L-R) Hans Tan and Sheryl Teng

ABOUT THE DESIGNER

Hans Tan is a designer-maker, curator, and Associate Professor at the National University of Singapore. At his eponymous studio, Tan makes use of beauty and utility as a pretext for visual discourse, tiptoeing on the boundaries between design, craft, and art. His work maintains a keen focus on disrupting common things, materials, and fabrication processes, embedding narratives that poke at collective memory and comment on design and its industry as a phenomenon, especially in the context of heritage, consumption, and waste.

As a curator, Tan employs design as a creative and generative catalyst to address cultural and societal challenges or to turn up difficult topics, where the presentation of new possibilities challenges preconceptions and tickles our imagination.

Sheryl Teng was the assistant curator and project manager for *R for Repair*. With a background in industrial design and fashion textiles, she dwells in the wonders of materiality and tactile experimentation. As a meticulous designer-maker, her works negotiate and explore relationships between materials, people, and objects, creating surprises through ordinary, quotidian phenomena.



# SINGAPORE PAVILION,

\*

## EXPO 2020 DUBAI

### IMPACT AREAS

- \* Enabling Economic Transformation
- \* Raising Quality of Life
- \* Advancing Singapore Brand, Culture and Community
- \* Making Ground-breaking Design Achievements

### 1-2 NO MIRAGE

To stand out from the nearly 200 competitors and showcase Singapore's unique approach of building a city that can coexist with nature, WOHA designed this pavilion filled with lush greenery to offer visitors a welcome respite from the desert landscape of Dubai.

Amidst the desert, a garden of lush greenery offered a stunning sight and welcome relief to visitors from around the world. This was the Singapore Pavilion at the World Expo held in Dubai – a showcase of how nature and architecture can co-exist to create a sustainable and liveable city.

WOHA Architects designed the compact pavilion interwoven with a garden taking inspiration from the theme *Nature. Nurture. Future*. The ground floor's verdant display of palms, trees, shrubs, and orchids extended into the pavilion structure, including a spectacular "Hanging Garden" on the ceiling. Anchoring the structure were three "cones" that each showcased one aspect of the theme. Together, a passage of walkways and ramps took visitors through an immersive green canopy that culminated with a "Sky Market" offering a slice of Singapore culture, ranging from talks and films to food.

The pavilion was self-sufficient by design. A solar roof shaded visitors and the plants, while obtaining clean energy from the sun to power various technologies, including a desalination system that provided water for the greenery and mist fans for cooling. The seamless integration of nature, architecture, and technology created a biophilic environment that reduced heat and pollutants, sequestered greenhouse gases, and even became a habitat for wildlife.

During its six months of operation from October 2021 to March 2022, the pavilion not only demonstrated how buildings and cities can be designed for regeneration, but also how the world can be made a better place for people and nature.



## JURY CITATION:

With its seamless integration of nature, technology, and the built environment, the Singapore Pavilion, Expo 2020 Dubai not only amplifies Singapore's position as a sustainable and green city, but it also serves as a prototype for how sustainable built environments could be designed for future cities.

Titled *Nature. Nurture. Future.*, the pavilion was designed as a self-contained and self-sufficient system with a net-zero energy target, where architecture, structure, and landscape are integrated to work together as a green, living ecosystem. These elements reflect Singapore's vision of becoming a City in Nature and its journey towards growth, sustainability, and resilience.

Moving through the pavilion, visitors could immerse themselves in a microcosm of Singapore's lush and tropical landscape. Its multi-layered greenery and use of technology supported a conducive environment for biodiversity and a memorable experience for visitors.

The Jury recognises the significance of the pavilion as a testbed and prototype in inspiring future innovative solutions to create more responsible and regenerative built environments.

## NOMINATOR CITATION:

Dr Hossein Rezai  
Global Design Director, Ramboll  
Founding Director, Web Structures

WOHA's design for the Singapore Pavilion at Expo 2020 Dubai announces the maturity of our architecture to a truly international audience.

The architecture is simple, the procession is effective, the structure is integrated, the landscape is fused into the overall design, and the whole building manifests itself as a holistic system. It delivers a desired level of performance that no single part can deliver on its own – the true definition of a “system” at work.

The pavilion occupies a rectangular site of 62 m by 25 m in the vicinity of the Sustainability Pavilion. The actual site coverage is about 50 m by 20 m. The pavilion consists of five main levels including a partial single-storey basement. The superstructure is conceived as a bold expression of the base architecture. Three cone-like elements are arranged linearly along the centreline of the site to invite visitors in.

The three cones are “capped” at the top with the “marketplace floor”, which is reached via a series of

ramps and walkways running through the cones at mid-height level where the exhibits are found. A dramatic tree-top experience is created as one walks through the ramps and walkways throughout the pavilion before continuing to ascend and emerge into the marketplace level via a coiled spiral within Cone 1.

The Singapore Pavilion is a true oasis in the desert that is the current state of our built environment. It signifies the possibilities that a regenerative architecture can offer to the environmental challenges we face. It puts Singapore on the map of meaningful solutions to these challenges and gives us all cause for celebration in an otherwise arid landscape.

The design and its typology deserve recognition. I have no hesitation in recommending the building for the coveted President's Design Award Design of the Year 2023.

## SINGAPORE ARCHITECT FIRM:

WOHA Architects Pte Ltd  
*Wong Mun Summ*  
*Phua Hong Wei*  
*Shefali Lal*  
*Quentin Sim*

## LANDSCAPE ARCHITECT:

SALD Pte Ltd (Salad Dressing)

## STRUCTURAL CONSULTANTS:

Web Structures Pte Ltd  
ASG Engineering Consultants

## ENVIRONMENTALLY SUSTAINABLE DESIGN CONSULTANT:

Transsolar Energietechnik GmbH

## LIGHTING CONSULTANT:

Light Collab LLP

## MECHANICAL &amp; ENGINEERING CONSULTANT:

CKR Consulting Engineers

## PROJECT MANAGER:

Radius Experiential International

## BUILDER:

Evan-Lim Penta Construction Co. LLC

## CLIENT:

Urban Redevelopment Authority

National pavilions at the World Expo are expected to capture the essence of a country. How did your team arrive at the theme of *Nature. Nurture. Future.* for the 2020 edition of the Singapore Pavilion?

Phua Hong Wei (PHW): The questions we asked ourselves from day one were “How can the design differentiate itself from others?” and “Why would one want to visit the Singapore Pavilion?” We did not want to compete with the spectacles of other pavilions and thought a sustainable island filled with nature would draw in visitors. The idea of an “oasis in the desert” crystallised from that. Our pavilion design encapsulates the DNA of Singapore by relating to visitors how our built environment is designed to coexist with nature.

Wong Mun Summ (WMS): Singapore is like an oasis in many ways because of how small and lushly green we are as a nation. The pavilion was designed to be a very green environment such that it feels like you are walking in a park that is shaded by trees. At the same time, we were able to maximise usable spaces for the exhibition and create a Sky Market where people can gather. This showed how Singapore can create real estate even as an island nation with limited space through innovative city planning. This was all expressed in a little pavilion in Dubai. It was small but packed with many goodies as we wanted to create an immersive quality where people could feel the intensity and liveability of Singapore. Finally, we went further to demonstrate Singapore's future with a pavilion that is designed to be net-zero in energy footprint and zero waste. These are targets we need to hit to reduce carbon emissions and we wanted to show how Singapore can be a reference for what a forward-looking, responsible, and liveable city can be.

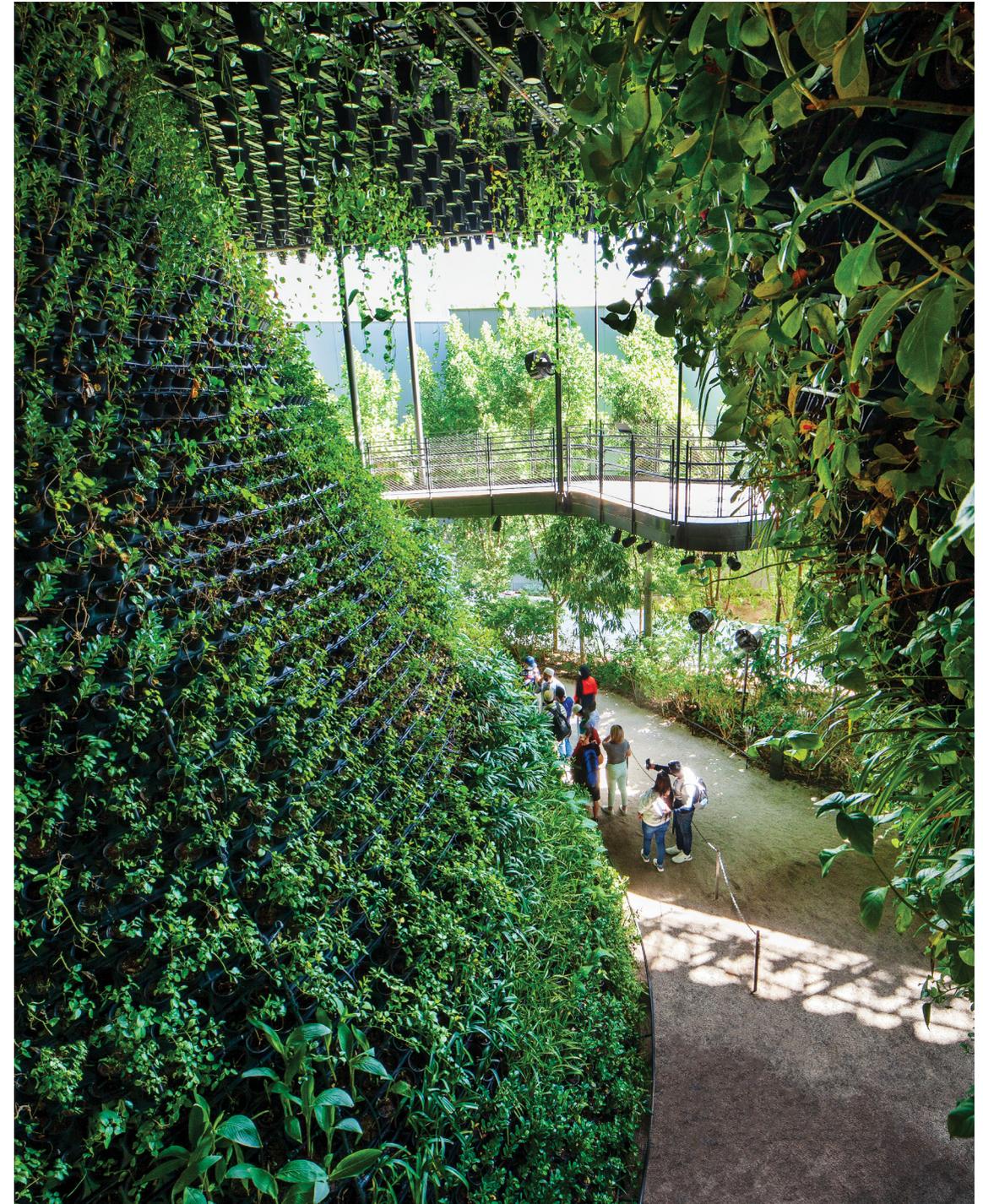
The Expo was held in Dubai, the Singapore Pavilion was in the Sustainability district (the others being Mobility and Opportunity), and it was one of nearly 200 put up by different countries. How did these various contexts and factors influence your pavilion design?

PHW It was quite befitting that Singapore was located in the Sustainability district, which gave us mileage to explore what to showcase. The Expo was delayed due to COVID-19 and eventually opened after the peak of the pandemic in 2021. The pandemic made many realise how access to nature is important. The climate crisis reminds us that humans are part of the larger ecosystem and we cannot ignore the impact of human actions on the planet. The Singapore Pavilion and its agenda reminded visitors about these matters and the fact that we have to urgently deal with them today.

WMS The design of the pavilion demonstrated our beliefs and sustainable strategies that we have been exploring. Visually, our pavilion stood out as very, very green compared to the others in the Sustainability district. Next to us was the Dutch pavilion, which looked at food security and indoor high-tech farming. There was also the Czech pavilion demonstrating water resilience and their technologies to extract water from humid environments. While the other pavilions tackled one strand of sustainability, we offered a verdant park in the desert that was very refreshing and welcoming to visitors. Our pavilion was also open and porous unlike most others that were enclosed and inward-looking. We derived such an open design based on our ambitions for the pavilion, and to allow those passing by to enjoy the greenery too. The message from us was that we need to value nature because it is so important to humans and our planet. I think the Singapore Pavilion spoke volumes about this.

Your pavilion was designed as multiple layers sitting atop three cones draped in vertical greenery and covered by a hanging garden. What were the challenges in creating such a lush environment in the desert-like environment of Dubai?

WMS The average temperature in Singapore is about 30 °C but it goes above 40 °C in Dubai. We were aware of the risk that the plants would not grow under the scorching sun. This is when we decided our pavilion design had





to provide shade for the plants like how we do for people. But shade means the plants don't get direct sunlight and energy. We provided these indirectly through grow lights powered by clean energy obtained from a roof canopy of photovoltaic (PV) panels. This solar roof also had sun pipes that gave the plants the energy of the sun but not the heat. In these ways, we created a microclimate that was much cooler than the outside so the plants could thrive.

We also ensured that the landscaping was very, very dense so the aggregate of all these plants together had more impact on the microclimate. If you walk along Orchard Road, there are big trees that provide shade, but it still feels hot. It is much cooler if you walk in MacRitchie Reservoir or Bukit Timah Hill because of the density of the landscaping. Every single leaf provides the evapo-transpiration to help cool the environment. So, the more trees you have, the more leaves you have, and the bigger the impact.

PHW The PV roof and sun pipes were not something the visitors could see. They were some of the ways we embedded technology as part of the architecture to support the greenery. So, it was not just a pavilion filled with greenery; there was a hidden layer of systems that kept it functioning and comfortable so plants and people could

### 3 SHADE AND POWER

The pavilion structure and ground garden occupied a 1,550-square-metre site. The structure was defined by a large roof canopy made of 517 solar panels that provided shade while generating power on which the pavilion ran. Over the six months of operations, the pavilion generated enough energy to power 70 standard households in Singapore for half a year.

thrive. The energy harvested from the PV roof not only went to the grow lights, but it also powered the auto irrigation system to feed the greenery that achieved the oasis in the desert.

The pavilion performed sustainably with the help of various technologies. Besides the solar roof that powered the infrastructure entirely, there were systems that drew and desalinated water from the ground to irrigate the plants and cool the space. How do you see the role of technology in creating more sustainable design?

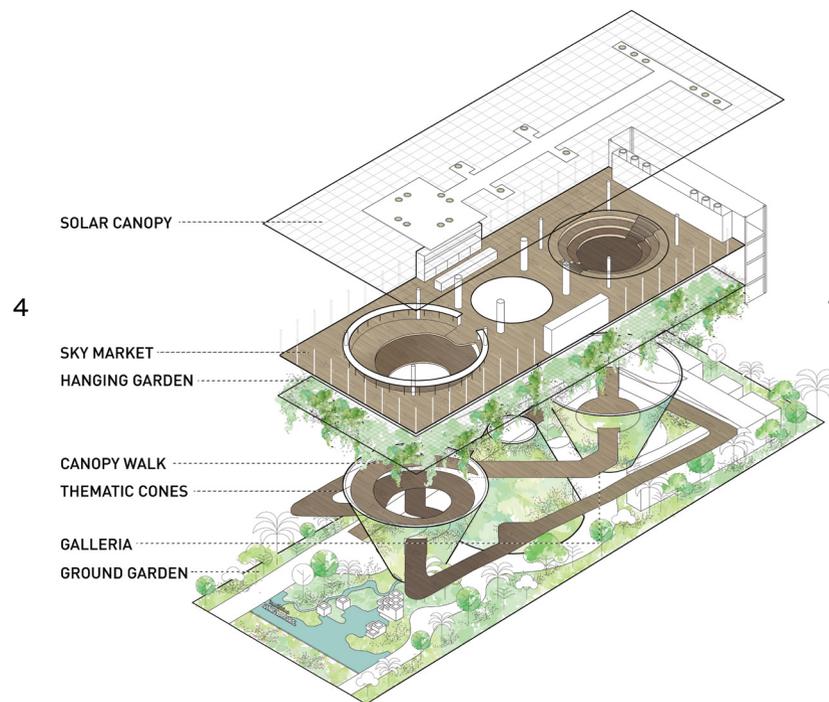
**WMS** The technologies in the pavilion are not new or groundbreaking. PV panels, biodigesters, and the water desalination processes have existed over the past two decades.

**PHW** We think of them as systems that relate to and integrate with one another. For instance, our closed-loop water system extracted water from the ground, treated it

on site, and piped it into the gardens, auto irrigation system, and mist fans. They were powered by energy generated from the solar roof. It was about overlaying and integrating all these different systems together to design the pavilion.

**WMS** And yet, we were still able to create a park for visitors to walk in and enjoy without the technologies getting in the way. This approach is what we call the "club sandwich", where we put different layers together to be impactful. This systems-based-thinking approach is very much like architecture and city planning itself, where different components and programmes are layered to achieve innovative outcomes.

Beyond its architecture, the pavilion showcased Singapore through a variety of local products, services, and creative showcases. How were these curated and integrated into the pavilion and what were some highlights for you?

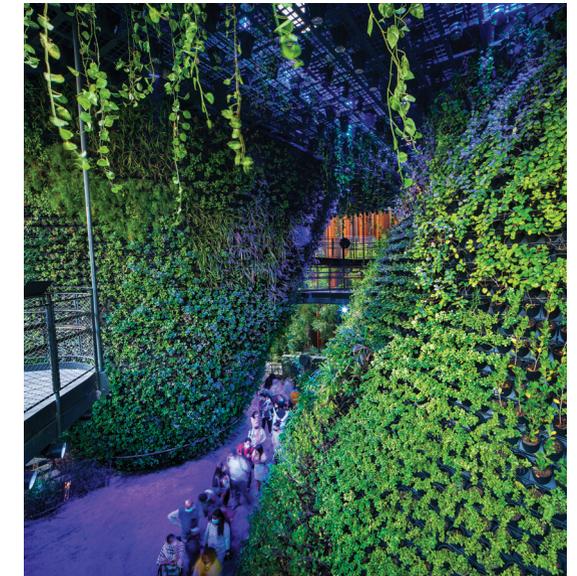


**4** **SYSTEMS THINKING**  
The pavilion's different programmes were designed as layers that are stacked together to form a compact unit. Various technologies were also integrated within the pavilion - including an auto irrigation system for the plants and mist fans - and they were all powered by energy from the solar canopy.

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**PHW** As the creative directors of the pavilion, we tried to introduce Singapore culture to the visitors. After going through the three thematic cones, including a cinematic experience by Singapore multimedia artist Brian Gothong Tan, visitors were led up on an open-plan elevated deck we called the "Sky Market". It was a more informal space where they could mill around, take in the surroundings, and experience the cultural aspects of Singapore through three nodes. There was an exhibition curated with the Urban Redevelopment Authority to showcase the city's built environment. We had an area that was flanked by pantries serving Singapore food. Last, but not least, there was a sunken amphitheatre that hosted talks in the day and showed Singapore films at night. Compared to other pavilions, the elevated floor was unique because it allowed visitors to see the Expo ground from above. It was also a garden offering many moments of respite from the Expo's stimulation and information.

**WMS** Another thing about the Expo is its sheer size, and how tiring it is to go from one

pavilion to the next. You almost can't visit every single pavilion and the queue for the Singapore Pavilion was so long that some people did not manage to get in. Because of the weather, the peak hours started from the late afternoon and went into the evenings. The nightly light shows, featuring a soundscape composed by Singapore musician Don Richmond, were popular. This gave more reasons for visitors to come again.

**5-6** **GREEN AND COOL**  
The ground garden's verdant landscaping extended into the open pavilion design. It was supported by three cone-like structures enveloped with plants. This design created a natural cooling system within the pavilion, which was estimated to have consumed approximately 70 percent less energy than air conditioning an enclosed space of the same floor area.

- PHW** Our pavilion also used many products and designs from Singapore. So, it was not just the architecture. We also specified finishes, fittings, and fixtures to weave in the Singapore brand.
- WMS** We tried using whatever we could bring along from Singapore. It's a national pavilion after all, so the idea of representing the Singapore brand was important and we tried to stay true to this in every possible way.

While showcasing Singapore's distinct approach to designing with nature, the pavilion also sought to demonstrate how its strategies could be scaled up and adapted to different climates and cultures. Can you share some examples?

- WMS** The pavilion represented Singapore's aspirations to become sustainable and self-sufficient, and employed strategies that can possibly be adopted in other cities. We occupied less than 50 percent of the site and the rest was all green space, which is similar to how Singapore is made up of built-up areas and lots of parks and nature spaces. The lush greenery was also very useful in tackling climate change and the urban heat island effect. As the data from our pavilion showed, it experienced a



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- 7-9** **STANDING UP AND OUT**  
After visitors travelled through the pavilion's green landscapes, they arrived at a Sky Market where various nodes offered different experiences of Singapore culture. One was a sunken amphitheatre that hosted talks in the day and played Singapore films at night. The elevated deck also allowed visitors to look out to other pavilions and enjoy a light show in the evenings.

#### IMPACT FACT

**61 tonnes of carbon dioxide were sequestered in the pavilion's lifespan, equivalent to 66 flights between Dubai and Singapore.**



“We wanted to show how Singapore can be a reference for what a forward-looking, responsible, and liveable city can be.”

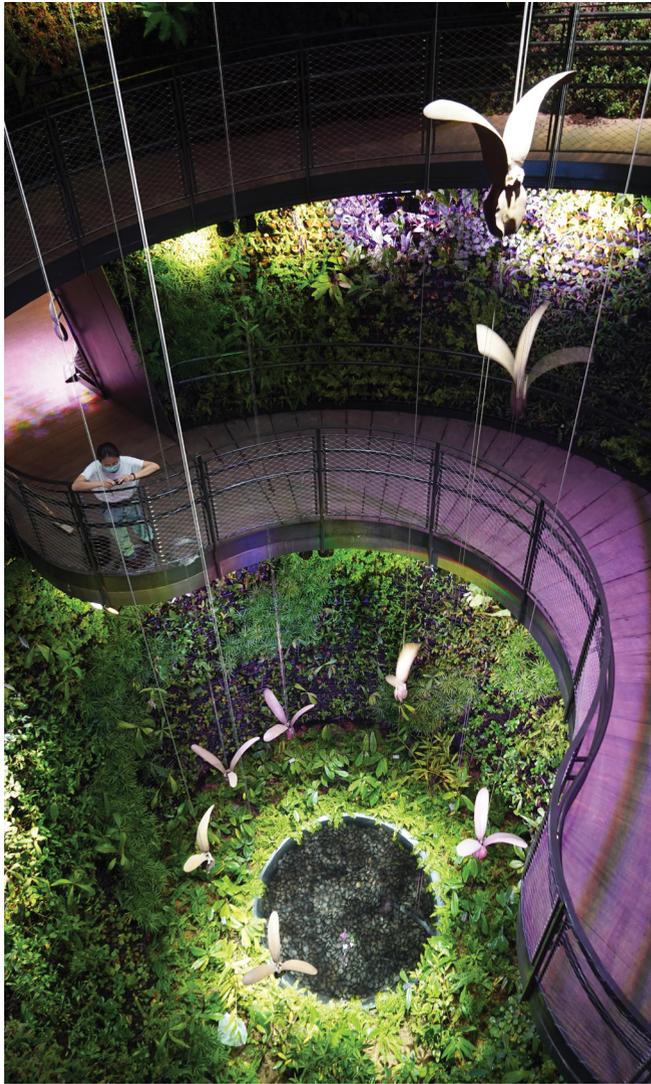


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10-11 3-D GREENERY  
More than 170 varieties of plants were applied not just on the ground and walls but also in a Hanging Garden on the ceiling. They offered visitors an experience of walking through a garden of lush greenery as they journeyed along a meandering “Canopy Walk”. The lush greenery also removed microscopic PM10 particles from the air, performing at the same level as 2,385 sqm of Dubai’s natural forest would.



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## 12-13 CITY IN NATURE

Inside each of the three cones were displays corresponding to the pavilion's theme of *Nature. Nurture. Future.* The Rainforest Cone housed various hanging kinetic sculptures inspired by winged seeds from the Dipterocarp, some of the tallest trees in Southeast Asia. The Flower Cone showcased over 50 native orchid varieties. Finally, the City Cone showcased a multimedia experience of Singapore's urban solutions.

temperature 6 to 10 °C lower than the air outside. We all keep saying our cities are getting warmer, but this pavilion demonstrated how it can be the other way around. A city that is "nature-positive", where biodiversity and ecosystems are restored, can go hand in hand with the built environment. Buildings can be designed more responsibly to become self-sufficient too. When these ideas are scaled up, they can be very impactful.

**PHW** Rather than simply occupying space and taking up resources, buildings and cities can give back and contribute to where they are. The pavilion did that by providing greenery and "ecosystem services". These are direct and indirect benefits that nature contributes to the quality of life. For instance, nature regulates temperature, filters pollution, and sequesters carbon. When nature is

integrated into our buildings, it can perform ecosystem services that are good for us.

During its six months of operations, the pavilion received over a million visitors and was featured extensively by the media. It even won awards for its design. What is one aspect of its success that you are most proud of?

**WMS** I'm proud that birds found it to be a safe and secure place to nest. We had two little birds born inside.

**PHW** Their parents made a nest in the pavilion and two small birds were hatched over the six months. It became an additional touchpoint in the visitor journey!

**WMS** This was not planned at all. But the pavilion design was so welcoming that even birds decided to make a nest in it. This speaks of its regenerative quality.



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(L-R) Ar. Phua Hong Wei, Ar. Wong Mun Summ and Shefali Lal

#### ABOUT THE DESIGNER

WOHA is a Singapore-based practice focused on researching and innovating integrated architectural and urban solutions to tackle the problems of the 21st century such as climate change, population growth, and rapidly increasing urbanisation.

With every project, the practice creates living systems that connect to the city. They aim to be a matrix of interconnected human-scaled environments that foster community, enable stewardship of nature, generate biocentric beauty, activate ecosystem services, and build resilience. This is achieved by applying WOHA's systems-thinking approach, which recognises how each development interacts with other systems that it is part of, and works across disciplines to achieve an integrated outcome.

Ar. Wong Mun Summ co-founded WOHA in 1994 with Ar. Richard Hassell. Wong teaches at his alma mater, the National University of Singapore's Department of Architecture and has also been appointed to the Seidler Chair in the Practice of Architecture at the University of New South Wales in Sydney, Australia. He sits on various design advisory panels in Singapore and around the world, including the Nominating Committee of the Lee Kuan Yew World City Prize.

Ar. Phua Hong Wei is a Director at WOHA who has worked on a variety of its projects, notably Kampung Admiralty, Oasia Hotel Downtown, Enabling Village, and Pan Pacific Orchard Hotel.

Shefali Lal is an architectural designer at WOHA. She is heavily invested in the research and development of WOHA's ideas for future cities through her work on visionary masterplans such as Singapore 2100.

Another achievement was seeing images of people on wheelchairs enjoying the pavilion. Our design was universally accessible, so it was very heartening to see how it allowed people with and without limited mobility to visit.

WOHA has consistently sought to push the boundaries of sustainable architecture in its projects. How might this pavilion offer new ways of thinking about the future design of buildings and even cities?

**WMS** What we were very keen to demonstrate is that there remains a lot of room for looking at how architecture and city planning can put together spatial programmes and technologies in innovative ways. One of the things we tried out this time was to turn the pavilion's floor, walls, and ceiling into green surfaces. This three-dimensional quality was something we had not done before. Being inside the pavilion was almost like being in a forest – being immersed in a canopy.

**PHW** The challenge is not really about the availability of technologies, but how to use design to bring together different components and systems within the built environment to make it more sustainable for future generations.

**WMS** If every building and city can be designed as responsibly as the pavilion, we can reach all our targets: net-zero energy, zero-waste, etc. The pavilion shows design strategies that can be scalable and duplicated in neighbourhoods and districts, and in doing so, we will make a meaningful impact towards tackling the climatic and ecological crisis we face as a global society.

#### 14 ACCESSIBLE TO ALL

The pavilion adopted a universal design approach and had various inclusive features including a ramp. One of the proudest achievements for the architects was seeing people with and without limited mobility enjoying the pavilion, including some on wheelchairs.



## STATE



## COURTS

## TOWERS

## IMPACT AREAS

- \* Enabling Economic Transformation
- \* Raising Quality of Life
- \* Advancing Singapore Brand, Culture and Community
- \* Making Ground-breaking Design Achievements

The larger of the two towers that compose the State Courts Towers complex is a familiar yet surprising sight in Chinatown. Set back from a gridded white framework, ochre-coloured cladding pays homage to the terracotta roofscape of the surrounding shophouses. Yet the State Courts Towers' soaring 178-metre-high form also speaks of the contemporary high-rise architecture that defines the nearby skyline. Both aspects come together to create a striking image for an enduring civic institution.

Unlike traditional courthouse designs that look inward, the architecture by Serie + Multiply Consultants and CPG Consultants features an open design while retaining the customary need to segregate the three primary user groups: judicial officers, persons-in-custody, and the public. This is achieved by splitting the courthouse into two 35-storey towers that separately accommodate the courtrooms and offices, which are connected by 39 link bridges. Open walkways and gardens surround the court tower's 53 courtrooms and 54 hearing chambers, with the typical external glazed facade having been done away with. This transparent and open design brings natural daylight, ventilation, and city views into the building and was envisaged as a symbol of Singapore's impartial judicial system. Together with an easy-to-navigate layout, the building offers an accessible courthouse experience for all.

The State Courts Towers reinvents the classical image of courtroom complexes for contemporary times. Its unusual high-rise form also offers new ideas for developments in high-density cities, be they in Singapore or elsewhere around the world.

## 1-2 A JUDICIARY HUB

The State Courts Towers adds a much needed 113,000 sqm of additional courtrooms, offices, and ancillary spaces to Singapore's judicial system. Sitting on the original site of an open-air car park between its former "Octagon" building and the present Family Justice Courts, the trio form an integrated entity that optimises resources for the court services.



## JURY CITATION:

Demonstrating a thorough understanding of the complexities of the programming and circulation requirements of a court complex, the design of the State Courts Towers not only achieved a clear segregation in the programming of its user groups, its design also maintained an open and easy circulation throughout. The design strategy to separate the courtrooms and offices into two slender towers in response to the tight urban site is commendable, as it allows the nature of the different functions to be expressed, while bringing abundant daylight and greenery into the interiors and on the facades. The open facade also allows for a series of lushly planted sky terraces to surround the various courtrooms, offering places of respite.

To create a design that would resonate with the public, the State Courts Towers referenced the 'typical architectures' of the site, bringing together the design language of shophouses and high-rises into a single gesture. Its materiality was also inspired by the colours and textures of the terracotta roofs of surrounding shophouses.

The Jury commends the designer and architect for the effective design that embraces its space complexities to create a new kind of court complex.

## NOMINATOR CITATION:

Ar. Tan Kok Hiang

Founding Director, Forum Architects

Designing the State Courts, a building type that is highly symbolic and complex to plan, is the dream of every architect. Serie + Multiply with CPG Consultants had the honour of creating a stunning court building that adds harmony and beauty to a less than tidy part of the city.

The State Courts Towers is unusual in that it is a high-rise building. The single pivotal design strategy to divide the functions into two separate towers allows the more public activities to be symbolically expressed in a larger tower that is layered by generous daylight-infused public circulation and planting around the courts, while the more private and secure judicial affairs are conducted in the slim tower. A white "birdcage" wraps around both towers in varying gradient density, one more open than the other.

The incredibly simple plan belies the complex requirements of the courts' functions. Aided by earthy coloured kueh lapis-like precast walls that house the courtrooms, the abundant daylight and the sensitive sizing of circulation spaces make finding the destination a breeze. Warm beech-coloured interiors intentionally make light of the severity of the proceedings.

The State Courts Towers is architecture of a high order, creating a new symbolism for court buildings appropriate for the age we live in and creating a positive impact on the Singapore cityscape.

## DESIGN FIRM:

Serie + Multiply Consultants Pte Ltd

*Christopher Lee*

*Bolam Lee*

*Martin Jameson*

*Yap Mong Lin*

## SINGAPORE ARCHITECT FIRM:

CPG Consultants Pte Ltd

*Colin Wu Kao Ling*

*Tan Shao Yen*

*Tan Hooi Ong*

*Ng Say Chyuan*

*Lo Sie Meng*

*Eleanor Tan Mui Jee*

*Thin Thant Thant Tun*

*Iffah Khairani Muhd Dzaki*

*Choong Seng Lee*

*Pauline Ang Su-Ping*

*Khew Sin Khoon*

*Lee Soo Khoong*

*Peter How Kim Lai*

## CIVIL &amp; STRUCTURAL ENGINEERING:

CPG Consultants Pte Ltd

MECHANICAL & ELECTRICAL  
ENGINEERING:

CPG Consultants Pte Ltd

## QUANTITY SURVEYOR:

CPG Consultants Pte Ltd

## PROJECT MANAGEMENT:

PM Link Pte Ltd

## FACADE CONSULTANTS:

HCCH Consulting Pte Ltd

Building Facade Group

## INTERIOR DESIGN CONSULTANT:

SCA Design Pte Ltd

## SPECIAL LIGHTING:

Ong&Ong Pte Ltd

## LANDSCAPE DESIGNER:

Plantwerkz Pte Ltd

## SIGNAGE &amp; WAYFINDING:

Endpoint APAC Pte Ltd

## ACOUSTIC &amp; AV SYSTEMS:

Alpha Acoustics Engineering Pte Ltd

ENVIRONMENTAL SUSTAINABILITY  
DESIGN CONSULTANT:

Surbana International  
Consultants Pte Ltd

## SECURITY &amp; BLAST:

Certis Cisco Consulting  
Services Pte Ltd

## MAIN CONTRACTOR:

Samsung C&T Corporation

## CLIENT:

State Courts

The project arose out of a need for a new complex to cater for the rising number of court cases in Singapore. Why was it proposed to site the new building upon an existing open-air car park beside the former State Courts building, despite its many constraints?

Colin Wu (CW): The State Courts, formerly known as the Subordinate Courts of Singapore, originally resided in what is known as the "Octagon" building. Site sourcing for a new State Courts building started in the late 1990s. Based on the projected caseload for the following years, the gross floor area (GFA) and facilities required were determined. From there, CPG conceptualised the idea of building the first high-rise courthouse in Singapore. Through this innovative concept that moves away from the traditional low-rise courthouse typology, not only would the new State Courts building have ample space for future expansion, but the Octagon could be occupied by the Family Justice Courts, which also required an expansion of its facilities. This way, the two buildings could form a judiciary hub and operate as an integrated entity, saving time and resources. From there, we worked with the State Courts and conducted various test fit designs for the new State Court Towers during the feasibility studies to develop its planning parameters and assess the suitability of the Havelock Square site for the new building. Much of these information and simulations were then used to formulate the design brief for the open design competition.

In 2011, the approval was obtained from the Master Planning Committee to develop the site into a single judiciary hub. This was followed by the launch of an open design competition for the new State Courts complex.

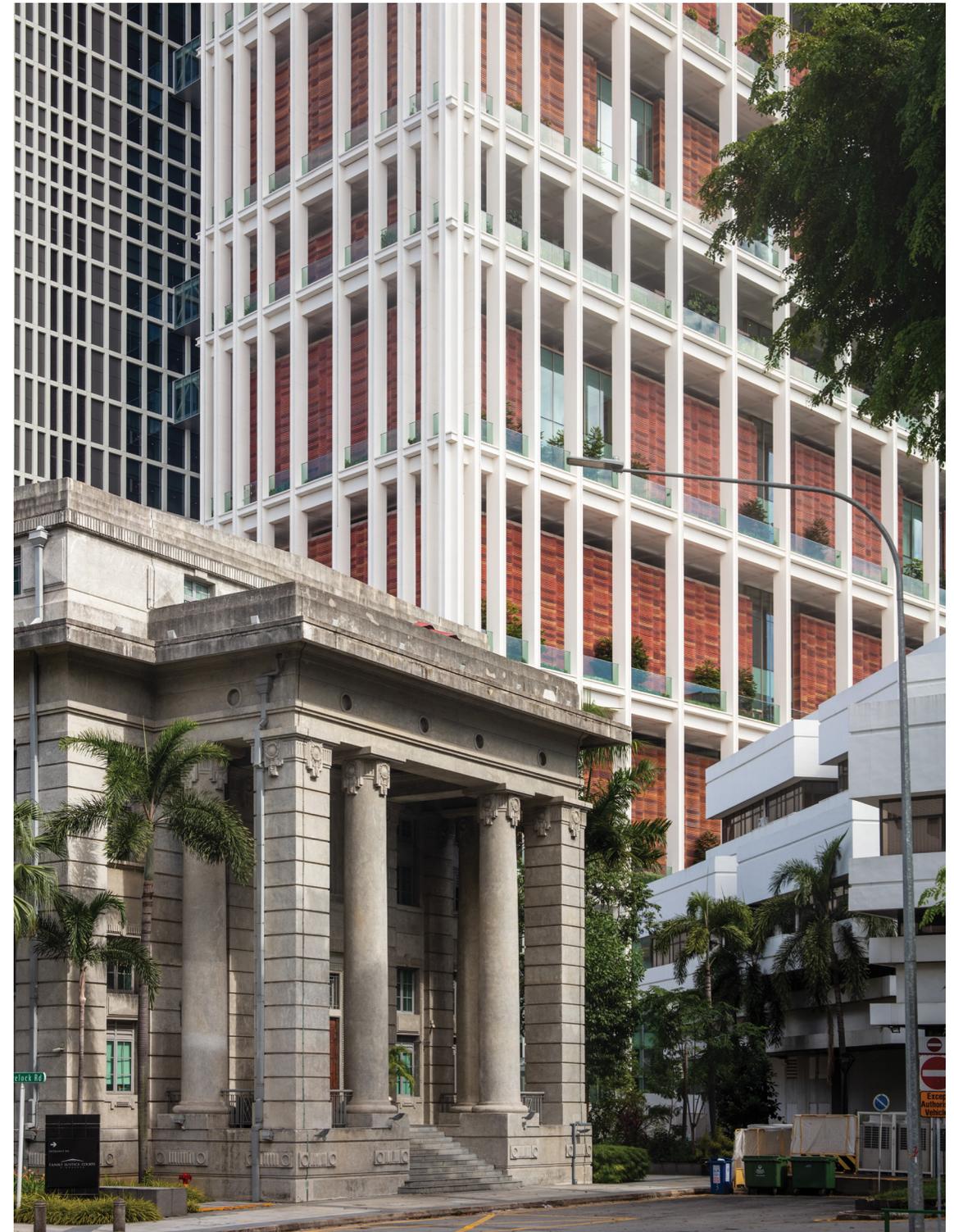
A large number of spaces had to fit into the small footprint. Another key consideration was the traditional courthouse requirement to keep the judicial officers, persons-in-custody, and public separate within the building. How did the team overcome these constraints to create a distinctive design?

CW: First of all, it was necessary to convince the client and stakeholders that it is possible to develop a high-rise courthouse on the tight site. Various design studies were conducted at the feasibility stage to determine if the site was suitable.

Effective function and operations depend on the careful planning of the movement and circulation of the judicial officers, persons-in-custody, and public, with each group having clearly defined and segregated circulation routes. CPG applied our knowledge in court planning and design to conduct various test fits that eventually translated into the development of the brief and massing of the project. These formed the basis of the eventual design.

Christopher Lee (CL): It's precisely because of the constraints and the functional requirements of the courthouse that we were really pushed to innovate in our entry for the competition. Our response was to rethink the traditional courthouse typology in the form of a high-rise building. We conceived it not as a singular building, but as two towers that each has a very clear function. An office tower is given to the judicial officers, while the courthouses sit on a separate tower that is the public interface. In between the two towers is the circulation core connected by link bridges that allow judicial officers to move between their offices and the courtrooms. I think what's unique is how the two towers were designed to appear as though they slide ever so gently past each other, never fully aligned. Each tower is read separately, and the arrangement creates a very slender tower profile.

Conventional high-rise buildings have repeatable floor plates and equal floor-to-floor heights that are wrapped with glazed curtain walls. However, the State Courts Towers lack such traditional facades and were instead conceived as a series of platforms of different heights. What shaped this unusual design and how might it perform differently, too?



CL

What drove the design was not just the reconceptualisation of the traditional courtroom as a high-rise typology, but also how the building relates to its context. In Chinatown, where the building is sited, there are two typical architectures. One is the ubiquitous high-rise. In juxtaposition and within close proximity is the shophouse. What we wanted to do was to bring these two types of typical architecture together. Learning from them was important because such typical architectures have been used by people over time and are accepted socially and culturally. This is why the towers were designed as a series of platforms with variable heights. On them we have placed the courtrooms, or “courtroom boxes”, that have the same granularity as the shophouses. The colour of the shophouse roof is also present on the facade.

In doing so, we were able to create a new courthouse that relates to its context and feels somewhat familiar to people. Such a response also allowed us to create a completely open facade where we can bring in lush landscaping to the public spaces. This presents a pleasant environment for both the staff and the public.

CW

In the former State Courts building, the courtrooms were expressed externally in geometrical forms and arranged in an octagonal layout. With the towers, we have taken a similar approach by externally expressing the courtrooms. The conventional glazed facade is “peeled away” to reveal the courtrooms within and the sky terraces in between. The courtrooms are placed in a dedicated tower, which is “open” to metaphorically represent the notion of a judicial system that is transparent and impartial.

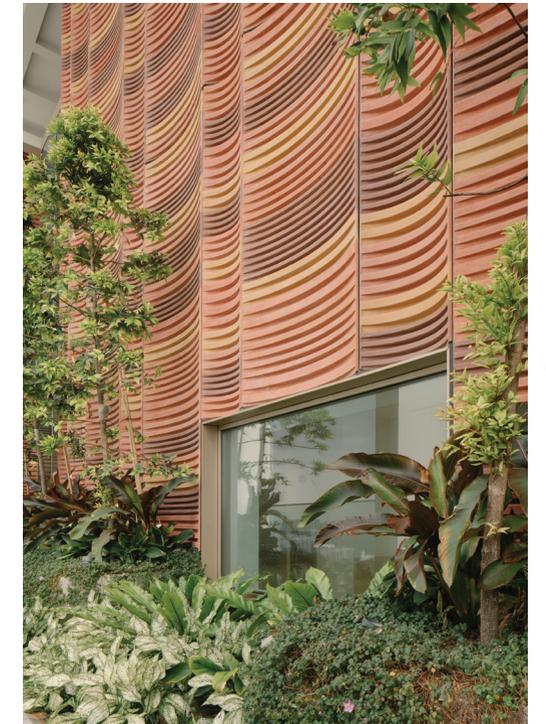
What were the challenges in realising this atypical scheme?

CW

With the removal of the typical building facade or envelope, the definition of what is external and internal became blurred. In this



“With the removal of the typical building facade or envelope, the definition of what is external and internal became blurred.”



### 3-4 NOD TO ITS NEIGHBOURS

The 178-metre-tall towers relate to their Chinatown site with facades inspired by the ubiquitous terracotta roofs of the surrounding shophouses. This is translated into precast pigmented and stained concrete panels that undulate in size and shade to give the towers a distinct yet familiar look.



5

approach, the courtrooms within are now unveiled as standalone volumes. An example can be seen in the treatment of their wall finishes, which is applied on all sides of the box.

External daylight permeates the inner spaces via narrow glazing panels. This has brightened up the inner corridors and lobbies, much to the delight of the court users.

CL One of the challenges was keeping the different temperature zones in the tropical climate. The threshold between an air-conditioned space and one that is naturally ventilated is very subtly designed so you can transition from a lift lobby to the main lobby and out into the naturally ventilated space almost seamlessly. There are no hard barriers between the two.

We also faced a structural challenge. The courtrooms have a wide span of 18-to-20 m, unlike a more traditional high-rise span of 8-to-12 m. The need for them to be column-free meant that we needed a structure that is incredibly efficient but also expressed in a way that looks very light. When you have a span structure of 20 m, the columns typically become incredibly large. What we have done is to conceal some of the heavier structures inside the building so that what you see on the facade are far thinner columns. The structure is thus resolved in a way that appears much lighter and uses less material than otherwise.

Aside from the low-rise shophouses of Chinatown, the project also sits next to two conserved buildings: the former State Courts building and the former Ministry of Labour building. How do the towers respond to this urban setting of different scales and historical styles?

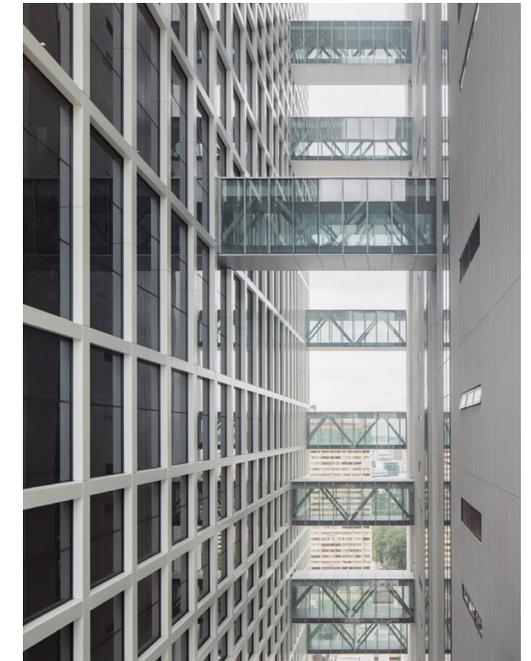
CW As designers, our approach was one that is sensitive to the site and yet still relates to its context. The design of the towers needed to be sympathetic and yet not compete with existing buildings, such as the Octagon with its strong geometry. The Towers has responded well by becoming an appropriate backdrop to the conserved buildings - simple, orderly and yet stately in its appearance, with a sense of formality and dignity as a judiciary

#### IMPACT FACT

**At 178 metres high, this is the tallest government building in Singapore and reinforces the city-state as an incubator for innovative high-rise architecture.**

#### 5-6 TOGETHER APART

To meet the courthouse's need to segregate the circulation of the judicial officers, public, and persons-in-custody in a high-rise building, its design was conceived as two towers with clear and separate functions. The publicly accessible courthouses sit on the larger tower, and the other houses the judicial officers. Some 39 link bridges connect the two, providing connections and stability for the structure.



6

building. In the end, a harmonious relationship is formed between the three buildings which befits its identity as a judiciary hub at Havelock Square.

CL

We have also alluded to this in the way the towers are placed in relation to the Octagon. An entrance pavilion structure between them helps users appreciate the transition between the different spaces and scales.

The towers also respond to the site in the way the facades of the courtrooms express the striking roofs of the surrounding shophouses, which are very visible from the high-rise buildings in the neighbourhood. Their beautiful and undulating colour and texture are expressed as a series of fluted facades that are made from precast pigmented and stained concrete panels. The colours draw an association to the shophouse roofs, and the undulation is an abstract representation. If you draw your eye horizontally across the fluting, you will see that it has a rhythm that goes from large to small, and medium to large. As you move your eye from the bottom to the top, you can also see the banding increase and compress. They exude a certain playfulness that suits the facade very well.



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The spaces in the towers were designed to improve the experience of using the courts. What are some examples?

CL

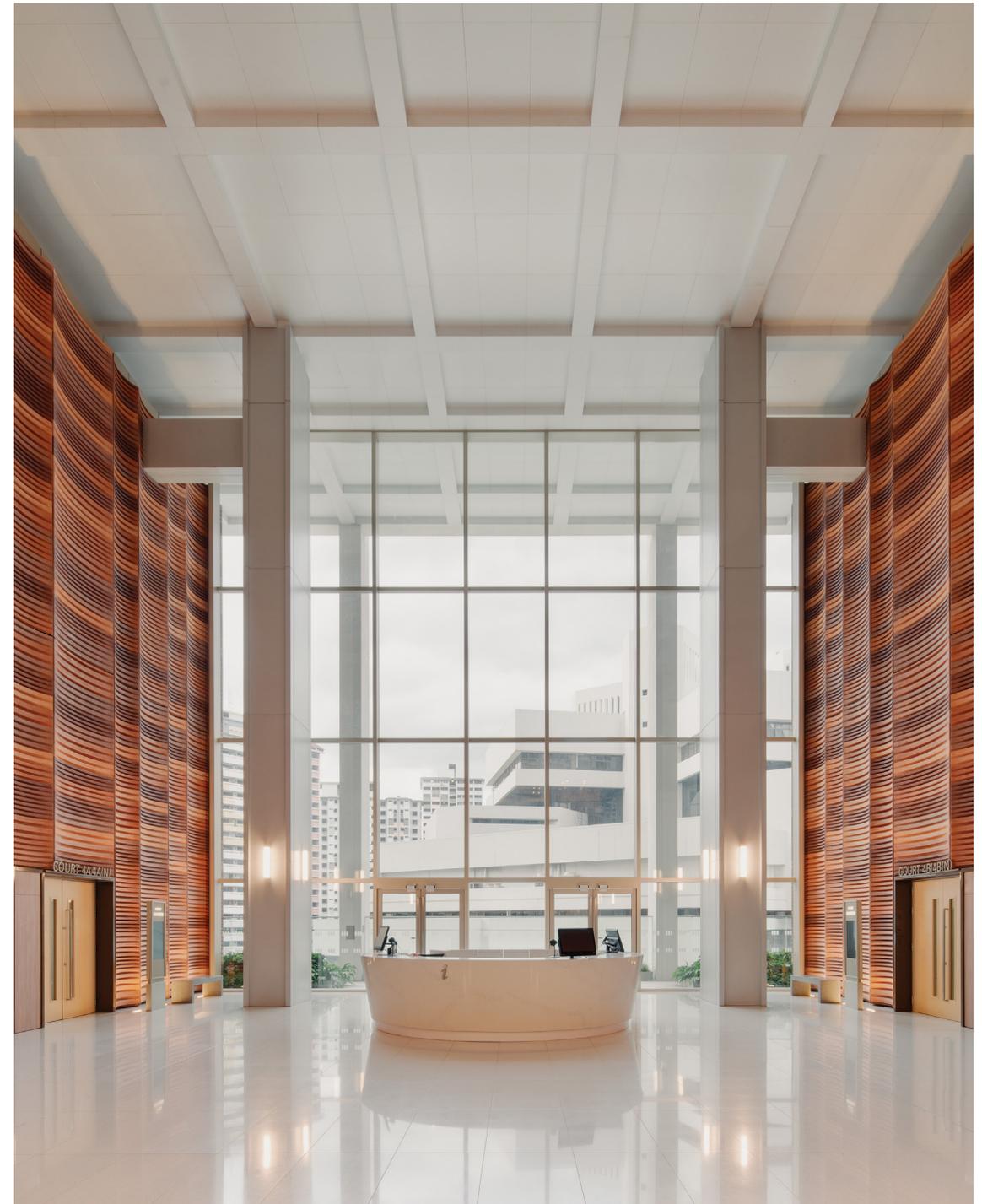
The most critical aspect is that most courthouses have a very internalised environment because of the need to separate the circulation of the three main user groups. This creates a maze-like environment that can be quite confusing to navigate. We really wanted to overturn that experience and make the new building very clear in terms of its layout, and very intuitive to navigate. As you move through it, you are always in contact with the exterior environment – be it light, breeze, or the landscape. This experience was designed to be very coherent from the moment you approach the towers and all the way till you take your seat in the courtroom.

CW

In terms of circulation and movement, the journey from outdoor to indoor was choreographed through design. For instance, visitors are greeted by two lift lobbies which bring them up within the tower. The lift doors open to spacious lobby spaces. This layout repeats itself on every level, allowing intuitive wayfinding, especially for those on their first visit. For the judiciary officers, the two-tower arrangement allows their offices to be centrally located at the Office Tower while maintaining easy access to the courtrooms at various floors via the link bridges.

#### 7-8 HIGH-RISE REINVENTED

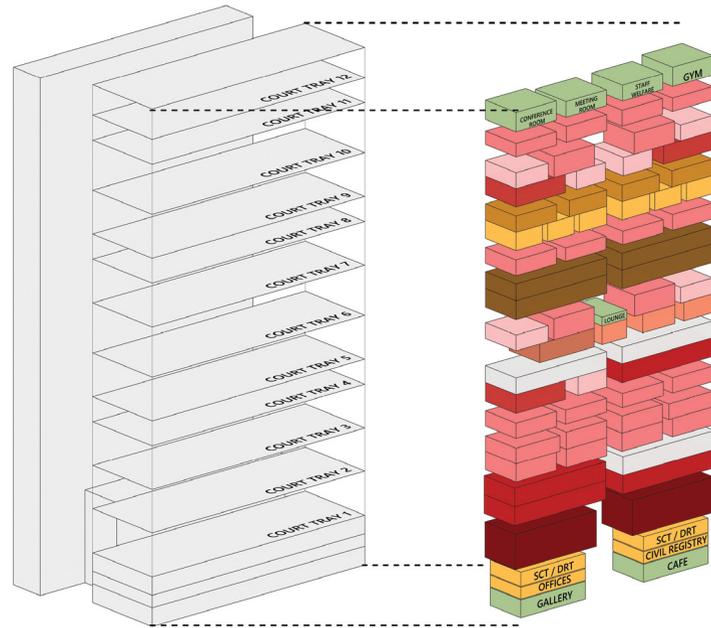
Unlike typical towers, this one has no external glazed facade. Each level simply houses the courthouses as singular boxes clad with the same wall finishes. This design allows daylight to permeate the inner spaces of the building and court users are always conscious of the exterior environment. Together with the lush landscaping on the terraces, this offers a respite from the often stressful legal proceedings.



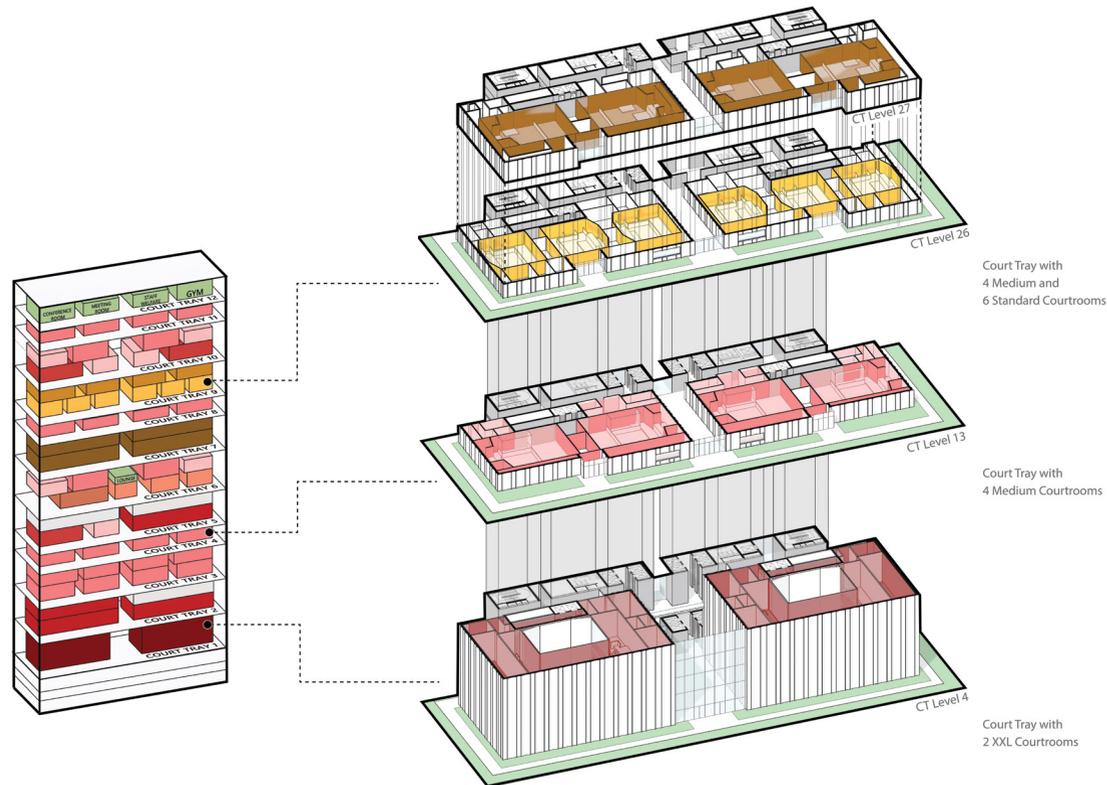
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9

CRIMINAL COURTS		43
XXL Criminal Mentions Court	2	
XL Criminal Mentions Court	3	
XL Criminal Court	1	
Large Criminal Court	3	
Medium Criminal Court	24	
Standard Criminal Court	7	
Coroner's Court	1	
Community Courts	2	
CIVIL COURTS		10
Large Civil Court	4	
Standard Civil Court	6	
TOTAL NUMBER OF COURTS=		53
Shared Amenities		



10



In addition, we empathised with the users of the building who are going through the judiciary processes, which may often be tense and emotional. We wanted to provide spaces that can offer respite from the often demanding and stressful experience of legal proceedings. The open sky terrace areas provide a place to calm down and find peace whenever the need arises. Court users can meet while having a view of the surrounding city skyline too. The provision of green spaces also enhances user experience as the State Courts Towers becomes a vertical extension of lush urban greenery from the street level. Today, Singapore has done well in terms of greenery on the ground, but we hope to push the boundaries more with the idea of abundant greenery within a judiciary building too.

Courthouses need to express the important role of the judicial system in society. Singapore's former Supreme Court did so with its 1930s neoclassical design that was modernised when it moved into a new building in 2005. The former State Courts building was designed in the Brutalist style, which was used to convey the monumentality of such institutional buildings in the 1970s. How does this new design address this need?

CW The towers do not attempt to replicate a distinct style. They were designed in a way that is true to function and needs. The formality and stately appearance required of a courthouse is subtly expressed in the order and distinct appearance of the white colonnade facade and grid. While the functions within, such as the courtrooms, are unveiled, they are raised up to a prominent and elevated position that recognises the dignity and decorum of the judicial process. In all, the architecture is of a high order and befitting a courthouse today.

CL From the onset, we knew that the courthouse had to convey a sense of belonging. I've already mentioned the way in which the towers relate to their context through referencing the typical architectures of the immediate context. Secondly, a courthouse must allude to a timeless idea of rationality,

because it is the bedrock of justice. This is why most courthouses are designed with the language of classical architecture that arose out of the Age of Enlightenment. For instance, the former Supreme Court conveys its dignity and decorum with columns in front of the building that are placed with a certain rationality in terms of their spacing to express its structure.

Our design draws on this classical idiom while adapting it into a new architectural response. The facade of the courthouse tower is expressed as a series of columns placed in front of the courtrooms, which are stacked one above the other with variable spacing in heights. The order of the columns is expressed in a new way too. The spacing between the columns of the former Supreme Court are equal, but it is not so for the new towers. What we've done is to place the centre columns further apart and contract their spacing towards the corner to support more of the building's structural load. This contraction and expansion creates a new expression of the classical courthouse idiom.

The towers have been recognised with awards both in Singapore and overseas. What aspect of this project are you most proud of?

CL The way in which we have reinvented the courthouse typology into a high-rise building that really belongs to the Singapore DNA. When it comes to high-rise, high-density architecture, Singapore has the capacity

9-10 **SIMPLE AND CLEAR**  
The transparency of the building is expressed in the way the 53 courtrooms are laid out to sit on levels or "trays" of different heights across the 35-storey tower. As the courtrooms are singular volumes and arranged around a spacious lift lobby, court users can easily find their way around the open design, even if it is their first time visiting the building.



11



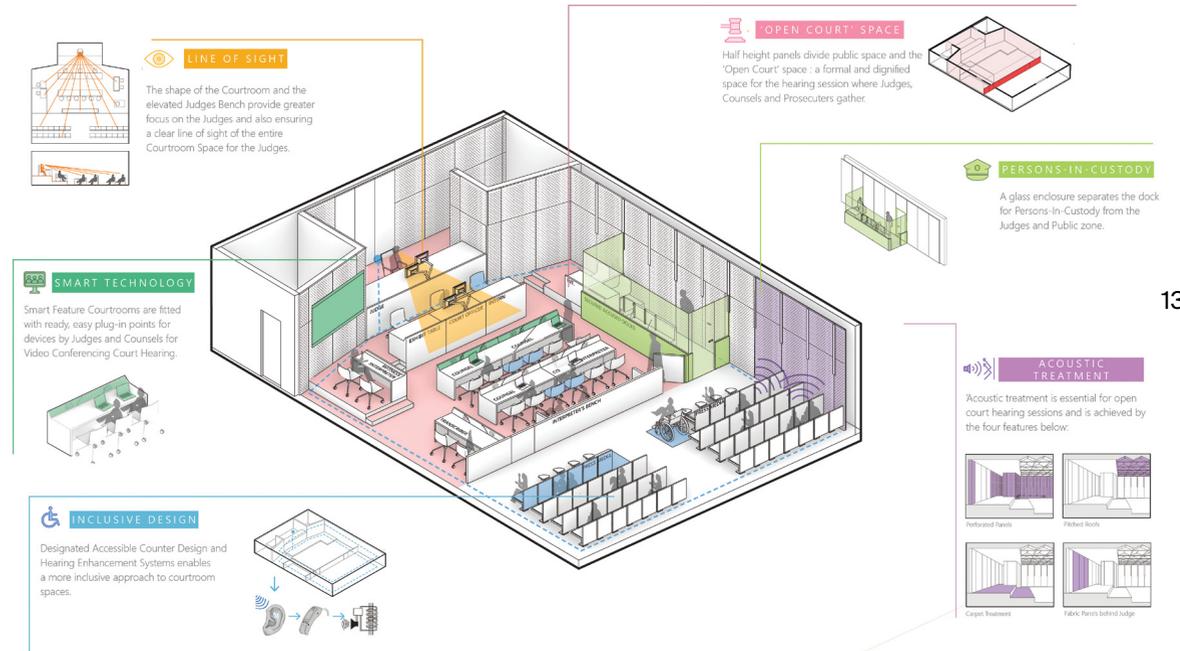
12

**11-13 SMART AND ACCESSIBLE**  
 Each courtroom was designed to offer a pleasant experience for all. Acoustic features such as a pitched roof and perforated panels ensure proceedings can be clearly heard. There are easy plug-in points for devices and video-conferencing facilities. Designated accessible counter designs and hearing enhancement systems also ensure the courtroom is inclusive by design.

and the environment that nurtures and promotes innovation more than almost any other city around the world. There is also a commitment to create and foster high-rise buildings that are environmentally responsive. This is why we were able to rethink the State Courts as towers that integrate landscaping so well. We were able to create something unique because of the land pressures that Singapore faces, and how it chooses to boldly confront this issue instead of being limited by it. We are incredibly grateful to have been able to participate in this process.

**CW** The breakthrough in high-rise courthouse typology in Singapore began with this State Courts Towers, and the challenges we faced while adapting from a typical low-rise to a new super high-rise courthouse typology, is indeed an achievement. The State Courts Towers is a

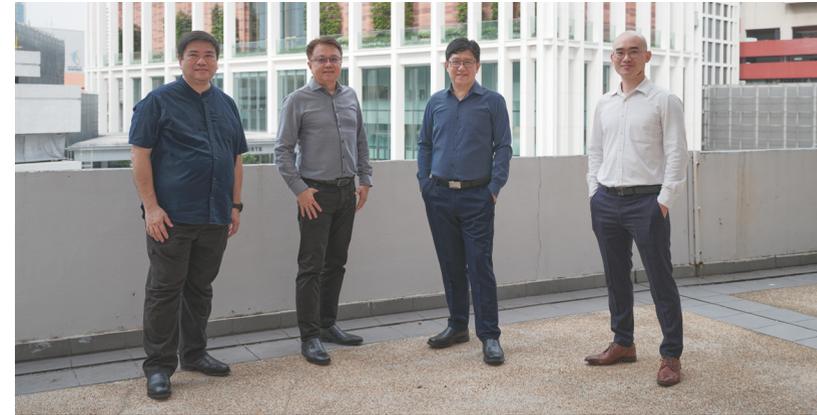
massive building, considering that it is built on a location with various existing conditions and a fully developed environment. We have successfully integrated the building into the urban fabric. By splitting the building into two towers, the appearance of the building is softened. Combined with the lush greenery that is integrated into the building and its unique open facade, the towers have become a public building with a positive impact on the Singapore cityscape and for its surrounding residents. Not forgetting, the towers are also pleasantly lit with designated lighting schemes at night to present a welcoming sight. Our atypical approach towards high-rise design has rejuvenated the Singapore skyline and set a design precedent for future public buildings. This is something that we are proud of.



13



14



(L-R) Ar. Tan Hooi Ong, Ar. Colin Wu, Ar. Tan Shao Yen, and Ar. Ng Say Chyuan (CPG Consultants); Christopher Lee (Serie + Multiply Consultants).

CPG has a long history of designing civic buildings in Singapore. What are some key considerations to bear in mind when designing such buildings and how might these towers reflect the evolving needs of such institutions?

**CW** Any public or civic building should serve the community. As architects specialising in institutional and civic building typology, we design and plan with people at heart. The approach should be true to its function, while also responding sensitively to the context and site. As a public space, the design outcome should integrate well into its surroundings and enhance the urban environment of the community, such that people can freely visit, respond to, and identify with it.

**14 A NEW ICON**  
The towers' high-rise form rethinks the traditional courthouse design for contemporary times. Its innovative design that does away with a traditional facade brings forth new ideas for high-rise, high-density architecture and offers Singapore a striking new symbol for its justice system.

#### ABOUT THE DESIGNER

Serie + Multiply Consultants is a collaboration between Serie Architects and Multiply Architects. Established in 2013, the collaborative design practice has designed and realised several high-profile public, institutional, and community projects in Singapore and Southeast Asia. This includes the new Singapore State Courts, Oasis Terraces, NET Zero School of Design & Environment 4, National University of Singapore, One Pearl Bank, and the redevelopment of Singapore Science Park 1. The practice has also won the coveted World Architecture Festival Prize for Best Mixed-use Building (2019), the Blue Print Award for Best Public-Use Project, DAM International Highrise Award 2022, and World Architecture Network Design Awards 2022.

CPG Consultants is a multidisciplinary design, development, and management services provider for the infrastructure and building industry. It is a subsidiary of CPG Corporation, the corporatised entity of the Public Works Department of Singapore. Ar. Colin Wu is a Senior Vice President of the Architecture Group and has overseen and led many of its landmark and award-winning projects in Singapore over the last 30 years, namely the Gardens by the Bay, the National Museum of Singapore, Mandai Crematorium, Jurong Lake Gardens, and the upcoming Johor Bahru-Singapore Rapid Transit System. His ability to envision and lead mega and highly complex projects from design inception to completion has helped CPG to garner many awards for its projects, including being recognised thrice by the President's Design Award.

## TEBET

## ECO

## PARK

## IMPACT AREAS

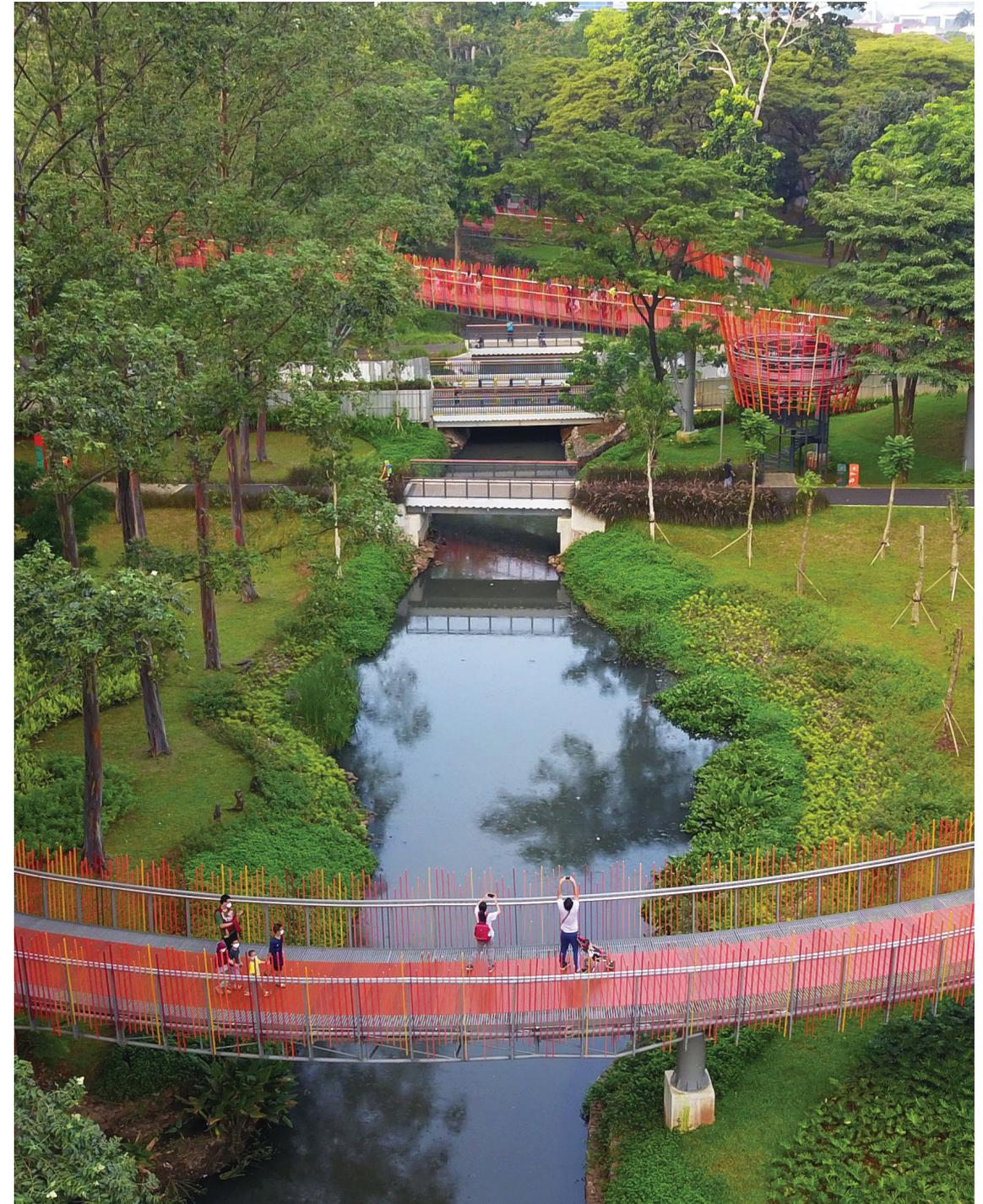
- \* Raising Quality of Life
- \* Making Ground-breaking Design Achievements

An ageing public facility. A polluted waterway. A site for dumping waste. This is what a park in Tebet, a district of South Jakarta, was to the people who lived around it for over a decade. Today, the 7.3-hectare green area known as Tebet Eco Park not only draws in a high volume of visitors daily but also attracts fish, birds, and other wildlife.

What spurred the transformation is a revitalisation of the park that went beyond a cosmetic upgrade. An existing 714-metre-long waterway canal made of rubble and concrete was re-naturalised into a meandering river with wetlands that can better manage frequent flooding during large storms while cleaning the water. A new bridge now links the park, which is divided into two by a busy road, while rising beneath the existing mature trees to offer the experience of walking amidst the canopy. New spaces were created to bring visitors closer to nature, including a community lawn, a thematic garden, a large playground, and more.

The multi-layered design by SIURA Studio, led by Anton Siura, has refreshed the park and regenerated it into an ecological asset for the city. As one of the first landscape projects in Jakarta to employ an ecological design approach, the park has also planted a seed for more sustainable designs to grow across the city and even beyond.

- 1 MORE THAN AN UPGRADE  
The revitalisation of this ageing park in Tebet went beyond a cosmetic makeover. It was redesigned to be more adaptable to the challenges of climate change and meet the needs of its surrounding community.



## JURY CITATION:

In just 15 months, a once neglected and degraded public park in South Jakarta beset with a host of environmental and social problems was transformed into a large and vibrant park embraced by the local community.

The intensity and process of the revitalisation and regeneration of Tebet Eco Park was astounding given its seemingly insurmountable challenges – the degraded condition of the site, tight time constraints, and a lack of local precedents for such restorative solutions. Tebet Eco Park is a successful prototype for a more nature-based, sustainable, and regenerative approach to public parks in Jakarta, minimising the impact of flooding with good design.

The park revitalisation has had a strong impact on the community, with greater visitor comfort, higher programme engagement, and the provision of a safe and inclusive space for everyone.

The Jury commends the project for its reflection of resourcefulness, the return of natural resources to the city and its people, and its reinvention of a park now beloved and well-used by the community.

## NOMINATOR CITATION:

Anies Rasyid Baswedan  
Governor, Jakarta Provincial Government (2017–2022)

Jakarta is a fast-growing megapolitan with complex urban fabrics and networks. With a population of more than 10 million, it has multifaceted citizens who need further lifestyle elaboration beyond the home and workplace. There is a general need for spaces that accommodate outdoor and social activities and a third space with designated communal purposes to interact and thrive as a society – transcending cultural, economic, and social barriers. Therefore, it is important to acknowledge the pivotal role of public open spaces that not only cater to social needs, but also provide ecological value. From the many efforts to reinvigorate Jakarta's open spaces, Tebet Eco Park stands out as one of the most successful examples of park revitalisation.

Tebet Eco Park is a project that represents the value of a collaborative and holistic design approach. It is a real testament to a significant commitment made by Jakarta and the city's stakeholders to ensure that the community participates actively, while also engaging experts in a multidisciplinary approach. Resultingly, it succeeded in tackling the site challenges by reducing the risk of flooding with river re-naturalisation. It also provides a wide range of recreational, educational, and social activities and programmes for the community. It is an inviting blue-green open space that is accessible by people of all ages, backgrounds, and conditions; a space that truly connects people with nature.

I believe Tebet Eco Park has a greater impact beyond Jakarta city. A week after the opening, it received more than 60,000 visitors per day who came from regions outside of Jakarta. The park has even sparked the curiosity of international visitors. The success of this park is a profound message that this is the right direction towards building a more liveable and healthier city – socially, economically, and environmentally. This park has set an example that will continue to inspire more sustainable and impactful public park projects to come.

## LANDSCAPE ARCHITECT:

SIURA Studio Pte Ltd  
*Anton Siura*  
*Febrianty Madyansari*  
*Chandra Savitri*  
*Yudistira Dwi Nugraha*

## INDONESIA ARCHITECT FIRM:

Studio Sae  
*Ario Danar Andito*  
*Subiakto*  
*Alvin Praditya*  
*Indira Odityasari*

## QUANTITY SURVEYOR:

PT Lantera Sejahtera Indonesia  
*Peter Robinson*

## ARBORICULTURIST:

PT Ruang Hijau  
*Faries Fadhil Al Ahmar*

## INFRASTRUCTURE ENGINEER:

PT Wahana Krida Konsulindo  
*Akhid Sidqi*  
*Beny Indrawan*  
*Mirna Kristiyanto*

## VISUAL IDENTITY AND BRANDING:

Suka Studio  
*Faddy Ravydera Monterey*

## CONSTRUCTION MANAGEMENT:

PT Disiplan Consult  
*Imam Hartawan*

## MAIN CONTRACTOR:

PT Idealand Cipta Hijau  
*Wiwiek Dwi Endah Hertoto*

## CLIENT:

PT Award Global Infinity  
*Wibowo Muljono*

## DKI Jakarta Park and Forest Service

*Suzi Marsitawati*  
*Hendrianto*

The park in Tebet existed for decades prior to this project. Had you visited it before and how did your team become involved in its revitalisation?

Anton Siura (AS): Our involvement started after we won a competition organised by the Jakarta government in 2019 to revitalise the city's Rangunan Bio Park. We were subsequently recommended to carry out a similar project for the park in Tebet. That was when I visited it for the first time. Its water canals were polluted and there was even a garbage collection corner piling up with rubbish. But at the same time, I was so impressed by the park's beautiful and mature trees. It was also prominently located between a residential area and a commercial street, and many people were using the park even though it was not ideal. These things convinced me that the park had a lot of potential to unlock through a design transformation.

Beyond simply upgrading an ageing park, your team sought to transform it into one that "promotes climate resilience and returns natural resources to the city and its people". Why was this important?

AS We believe that it is crucial to consider the long-term impact of any project that we take on. In the case of this ageing park, merely upgrading it would have brought about short-term benefits but failed to address its sustainability and resilience for future generations of park users.

Prior to the revitalisation, the park was prone to flooding for hours after it rained, which damaged the existing natural resources and infrastructure. We wanted to showcase how an ecological design approach could create a more resilient park

## 2 A GREEN LUNG

The park is surrounded by a residential area and a commercial street, and was already popular with people. This convinced SIURA Studio of the impact it could make by transforming it into an ecological asset for the city.

that adapts to climate change. While we have carried this out in our park projects in Singapore, it is new in Jakarta. I was eager to lend my expertise to create a prototype. We wanted to create a space that would benefit the community, support local wildlife, and become an ecological asset.

In these ways, the park could help the people of Jakarta reconnect with nature. As their city is full of concrete and is known for traffic jams, our park could offer the people a healthier environment, especially for those who work and live around it.

A key feature of the project was the re-naturalisation of an existing canal that runs through the park. As this was one of the first such projects in Jakarta, what challenges did your team face?

AS One of the biggest challenges was a lack of established guidelines or best practices to follow. We had to use our projects completed in Singapore to convince the local consultants and government departments that this was a tried and tested solution that can work for Jakarta too. We thought it would be difficult for the locals to re-naturalise a river for the first

time, but it went quite smoothly because many of the construction workers come from villages in Indonesia. They may not know how to read our technical drawings, but they are familiar with these ways of working with nature.

Another challenge was that I could not travel to Jakarta to supervise the project due to the pandemic. But I did video calls to demonstrate how things should be done and had a local consultant to translate the designs to the workers. It was our first time supervising a project over video.





3

Various meetings were conducted to involve the different communities and residents who use the park. How did their input influence the final design and contribute to its success?

AS Prior to the project's execution, the government had conducted focus group discussions and summarised the communities' needs and wants into a report that we referenced to create our design. They helped convince stakeholders, who were more willing to accept design features that met what the community wanted.

For example, we could remove the garbage collection corner from the park because many residents wanted it gone. Our proposal to naturalise the canal was also accepted because it addressed complaints from the community that it was

smelly and bred mosquitoes. We provided a large playground and kept many existing trees because these were popular requests too. Ultimately, these inputs helped to create a park that is not just visually appealing but also functional and beneficial for the surrounding residents and communities who use it.

Tell us more about how the park is designed for people as well as nature. How have people responded to this new kind of park in Jakarta?

AS We made sure the park incorporated design elements that would benefit not just the community but also nature. For example, we constructed wetlands and planted specific vegetation to filter the incoming polluted grey water and provide habitats for



flora and fauna. Visitors to the park can now see fish, frogs, and birds. In addition, we designed a path that loops around the park so visitors can interact with nature while they exercise. They can experience nine different zones, including gardens, lawns, wetlands, and forests. The park design thus balances human needs and the environment, while also contributing to the health and wellbeing of both.

Based on our research into parks in Jakarta, Tebet Eco Park is unique because many of such existing spaces in the city do not offer a recreational space within a natural setting. They are mostly gardens with no wildlife or concrete plazas with monuments. But the pandemic showed how people want more spaces with natural

### 3 RENATURALISING A RIVER

A key project feature was transforming a 714-metre-long concrete canal into a meandering river. This increased its storage capacity and enhanced the park's ability to better manage runoffs during heavy rains. A more biodiverse ecosystem created along the river also cleans the water and turns it into a welcoming space for visitors and wildlife.



4

### SITE PLAN



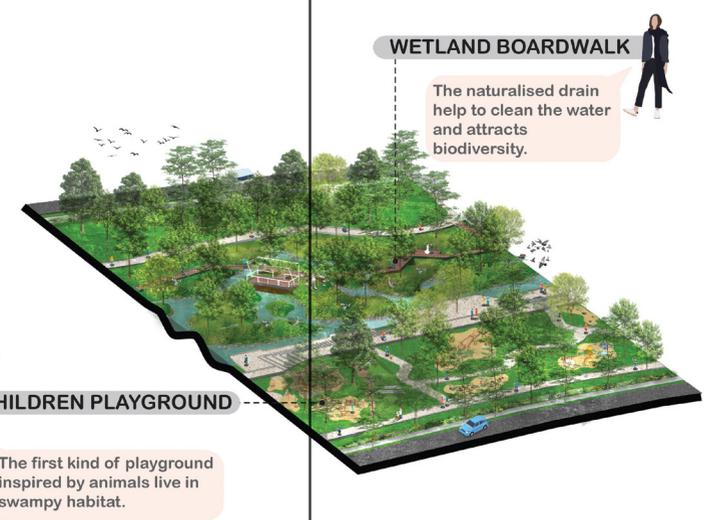
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**4-5 BRIDGING CONNECTIONS**  
 A new bridge links the north and south of the park that is divided by a road. Its curving design rises up to just beneath existing tree canopies, bringing about the experience of walking amidst the leaves. The pathway is also barrier-free and accessible to all.

NORTH PARK

6

SOUTH PARK



features. This is why the park has become very popular. I've visited it multiple times since its opening and have seen many happy faces. Many visitors also post on social media to invite others to visit the park. It has created a strong sense of belonging, not only among the Tebet community but also the rest of Jakarta.

The project involved a multidisciplinary team of architects, engineers, arborists, surveyors, cost consultants, and more. How did your team harness this diversity and what benefits did this bring?

AS In Jakarta, unlike in Singapore, it is not so common to have a multidisciplinary team working on a project. I wanted to change that and the first thing I told the client was we needed everyone – architects, engineers, arborists, surveyors, and consultants – to work together from the start. This was crucial for the park's success because each discipline brought their unique perspective and skillset to create a well-rounded solution.

After all, we did not want to just upgrade the park and ignore the canal and roads that run through it. These are managed by government agencies beyond the Park and Forest Service, and our multidisciplinary team helped to address their different requirements. We worked with the Water Resources Agency to re-naturalise the canal. We also worked with the Transportation and Highways Agency to design a bridge that links the

6-9 A PARK FOR ALL  
The park was designed with various zones that offer visitors different ways to enjoy nature. Features include an arrival pavilion that houses food stalls; a community lawn for gatherings and events; a wetland boardwalk to get up close with the river; and a playground with equipment inspired by the animals that live in swampy habitats.

“When your design can be enjoyed by thousands of people and bring happiness to them, it feels like your hard work has paid off.”

7



8

## IMPACT FACT

100 percent of unhealthy trees as well as concrete and stone rubble from the existing park were reused for furniture and bioengineering respectively.



9



(L-R) Anton Siura and Febrianty Madyansari

#### ABOUT THE DESIGNER

SIURA Studio is an urban design and landscape architecture studio based in Singapore that focuses on urban resilience and innovative design approaches, each tailored for site-specific contexts. The studio's collaborative design process is influenced by climatic, environmental, and cultural considerations. SIURA Studio prioritises urban regeneration and eco-sustainable planning as the core of its practice. Its creative design process is consistently guided by compelling narratives to create impactful projects that benefit the land, communities, environments, and cities.

Anton Siura is an accredited landscape architect and Principal of SIURA Studio. Throughout his design career, Anton has played a major role in urban design and landscape architecture projects across Singapore, Indonesia, and beyond. Prior to establishing SIURA Studio, he played a key role in the design process of numerous award-winning projects such as the Punggol Promenade, Bidadari Park, and Kampung Admiralty. Anton has also taught landscape architecture design studios at the Nanyang Academy of Fine Arts and the National University of Singapore.

Anton seeks innovative solutions for global issues such as climate change, biodiversity loss, and inclusive social space. He prioritises natural assets and cultural contexts, which enables him to execute projects that are highly impactful in regenerating urban space while emphasising design functionality and aesthetics.

park, which is divided by a road, to create a cohesive experience.

Notwithstanding the pandemic, the project was completed in just 15 months. This is extremely fast given its scale and complexity. How did your team pull it off?

AS When I was informed that the project needed to be completed in a year, I was pessimistic about whether it could be achieved. In Singapore, such projects usually take 18 to 24 months, and that is already considered very fast. But we eventually finished it in 15 months because of effective project management and everyone's commitment to making the project work.

Our very dedicated multidisciplinary team helped to identify the risks and issues from the concept design stage to its construction. As designers, we worked very hard to ensure our drawings were clear to avoid any unnecessary clarifications. During the construction phase, we worked with the local contractors to make necessary design changes without affecting the timeline. What was also key was the immense trust the client and local consultants had in us. This gave us freedom to execute the design and it sped up the approval process. Everyone was committed to our design vision because they had seen how well such parks had been done in Singapore.

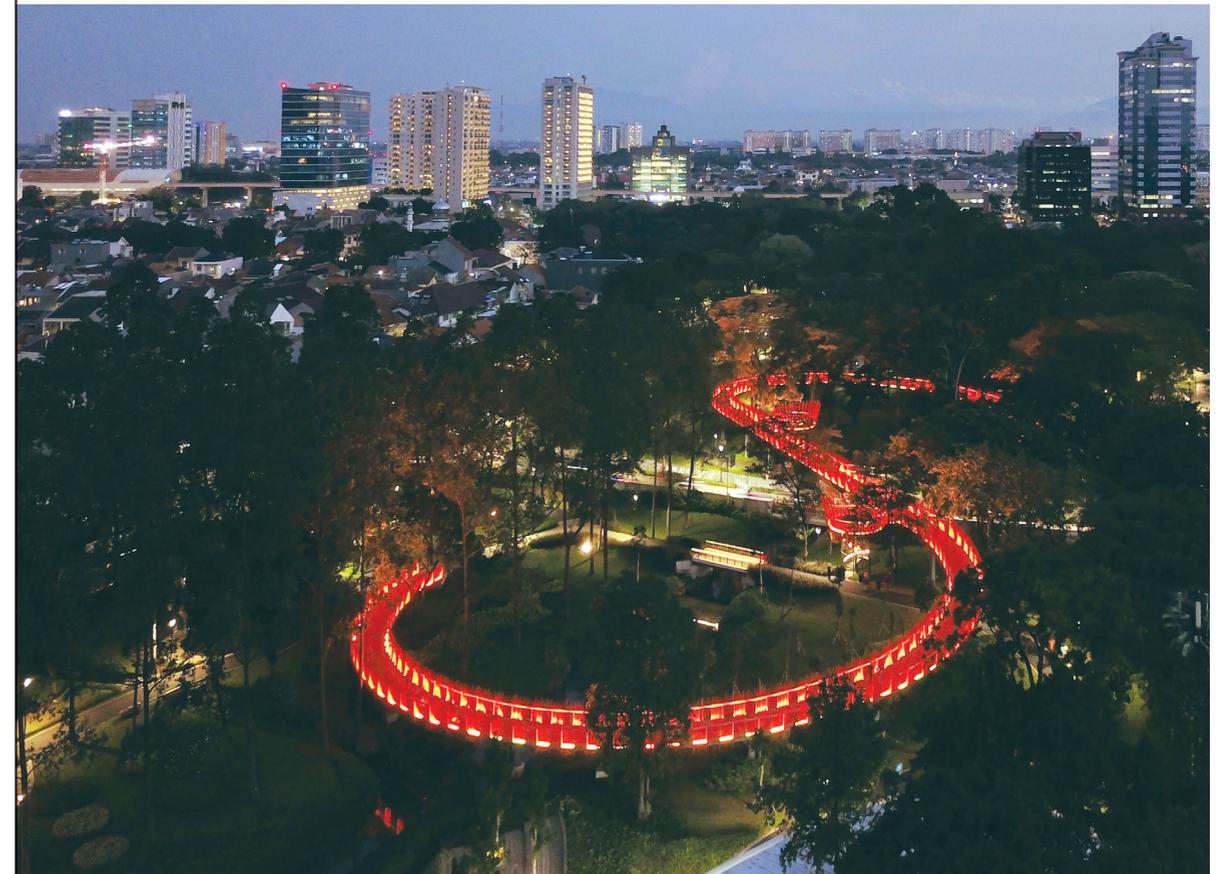
The park received a record high count of 60,000 visitors in one day on 22 May 2022. It has also won several design awards. What facet of the project are you most proud of?

AS When your design can be enjoyed by thousands of people and bring happiness to them, it feels like your hard work has paid off. The bonus is we were also able to showcase to Jakarta the impact of adopting an ecological approach to designing parks. Since the project's completion, government officials from other cities in Indonesia have expressed an interest in adopting a similar approach for their parks. This will hopefully create more opportunities for designers.

Should more cities adopt the model of Tebet Eco Park?

AS I believe it is an excellent model for other parks in Jakarta and beyond. Its ecological design approach is gaining popularity around the world and also becoming more important with increasing urbanisation. As cities become more built up, green spaces become a luxury. Thus, we have to maximise the remaining natural assets. Just as we seek to maximise occupancy when we design a mall or hotel, we should make sure our park designs tick multiple checkboxes of needs, including ecological, environmental, social, and recreational needs. Tebet Eco Park tries to accommodate all these needs. It not only caters to nature and people, but has also become the new face of Tebet.

10 A MODEL PARK  
The success of Tebet Eco Park's ecological design approach offers a shining example of how cities can create new natural assets even as they urbanise.



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 DesignZ, SUTD

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 DesignZ, SUTD

## 2020

### DESIGNER OF THE YEAR

KELLEY CHENG  
The Press Room

AR. KHOO PENG BENG &  
AR. BELINDA HUANG  
ARC Studio Architecture  
+ Urbanism Pte Ltd

### DESIGN OF THE YEAR

AIRMESH PAVILION  
AirLab @ Singapore University of  
Technology & Design  
Zhejiang University

CLOISTER HOUSE  
Formwerkz Architects

ETANIA GREEN SCHOOL  
Billion Bricks Ltd

EYEYAH!  
EYEYAH!

GOODLIFE! MAKAN  
DP Architects Pte Ltd

JEWEL CHANGI AIRPORT  
Safdie Architects  
In collaboration with  
RSP Architects Planners &  
Engineers (Pte) Ltd

KAMPUNG ADMIRALTY  
WOHA Architects Pte Ltd

SPARKLETOTS LARGE PRESCHOOL  
AT PUNGGOL  
LAUD Architects Pte Ltd

THE [NOT-SO] CONVENIENCE STORE  
Kinetic Singapore

## 2018

### DESIGNER OF THE YEAR

AR. ANGELENE CHAN  
DP Architects Pte Ltd

HANS TAN  
Hans Tan Studio

### DESIGN OF THE YEAR

CHINA FUZHOU JIN NIU SHAN  
TRANS-URBAN CONNECTOR  
LOOK Architects Pte Ltd

MEDIACORP CAMPUS  
Maki & Associates  
In collaboration with  
DP Architects Pte Ltd

OASIA HOTEL DOWNTOWN  
WOHA Architects Pte Ltd

SINGAPORE CHANGI  
AIRPORT TERMINAL 4  
Changi Airport Group (S) Pte Ltd

THE FUTURE OF US PAVILION  
SUTD Advanced  
Architecture Laboratory

THE TEMBUSU  
ARC Studio Architecture  
+ Urbanism Pte Ltd

THE WAREHOUSE HOTEL  
Asylum Creative Pte Ltd

WEATHERHYDE  
Billion Bricks Ltd

WHO CARES? TRANSFORMING THE  
CAREGIVING EXPERIENCE  
IN SINGAPORE  
fuelfor

## 2016

### DESIGNER OF THE YEAR

DR HOSSEIN REZAI  
Web Structures

AR. RENE TAN  
RT+Q Architects Pte Ltd

AR. RAYMOND WOO  
Raymond Woo &  
Associates Architects

### DESIGN OF THE YEAR

BYND ARTISAN  
&Larry Pte Ltd

ENABLING VILLAGE  
WOHA Architects Pte Ltd

HP OFFICEJET PRO 8720  
ALL-IN-ONE PRINTER  
HP Inc, Global Experience  
Design (Singapore Studio)

NATIONAL DESIGN CENTRE  
SCDA Architects Pte Ltd

SAFETICET  
NSP Tech Pte Ltd

SAMSUNG ADDWASH  
Samsung Electronics Pte Ltd

SKYTERRACE @ DAWSON  
SCDA Architects Pte Ltd

SKYVILLE @ DAWSON  
WOHA Architects Pte Ltd

VSCAN ACCESS  
GE Healthcare  
In collaboration with  
Chemistry Form Pte Ltd (Singapore)

WAH SON @ SELETAR  
AEROSPACE PARK  
ipli Architects

## 2015

### DESIGNER OF THE YEAR

DR COLIN K. OKASHIMO  
Colin K. Okashimo and Associates

AR. FRANKLIN PO SUI SENG  
Tierra Design (S) Pte Ltd

AR. SIEW MAN KOK  
MKPL Architects Pte Ltd

### DESIGN OF THE YEAR

AIR\* SMART MASKS AND  
MICRO VENTILATORS  
Innospars Pte Ltd  
In collaboration with  
STUCK Design Pte Ltd

ARCHITECT'S OFFICE  
AT KIM YAM ROAD  
Park + Associates Pte Ltd

DECK - PEOPLE, PLACE, PHOTOGRAPHY  
LAUD Architects Pte Ltd

DITA, THE ANSWER EARPHONES  
Project Perfection Pte Ltd  
(Dita Audio)

FUGUE 1, 3, 5, 7 -  
ARCHIFEST PAVILION 2014  
HCF and Associates

LIBRARY@ORCHARD  
Singapore Polytechnic  
In collaboration with  
DIA Brand Consultants Pte Ltd,  
New Space Architects Pte Ltd,  
National Library Board

NATIONAL GALLERY SINGAPORE  
Studio Milou Singapore Pte Ltd  
and CPG Consultants Pte Ltd

THE CATERPILLAR'S COVE CHILD  
DEVELOPMENT AND STUDY CENTRE  
Lekker Architects Pte Ltd

THE OLIV  
W Architects Pte Ltd

POUR  
Hans Tan Studio

PROLOGUE COLLECTION  
Outofstock Pte Ltd

RUBBISH FAMZINE SERIES  
Kinetic Singapore  
In collaboration with Holycrap.sg

SUNRAY WOODCRAFT  
CONSTRUCTION HEADQUARTERS  
DP Architects Pte Ltd

## 2014

DESIGNER OF THE YEAR

LARRY PEH  
& Larry Pte Ltd

AR. TAN KOK HIANG  
Forum Architects Pte Ltd

PETER TAY  
Peter Tay Studio

DESIGN OF THE YEAR

A GUIDE TO THE FLORA AND  
FAUNA OF THE WORLD  
H55  
In collaboration with  
Institute of Critical Zoologists

BUCCANEER 3D PRINTER  
Pirate3DP Pte Ltd

EYELET FLIP  
Nanyang Optical Co Pte Ltd

JURONG ECO-GARDEN  
Atelier Dreiseitl Asia Pte Ltd  
(Now known as Henning Larsen)

KENT VALE  
MKPL Architects Pte Ltd

OUYI REFRIGERATOR  
Electrolux S.E.A Pte Ltd

RABBIT & THE TORTOISE  
COLLECTION  
Studio Juju

SANDCRAWLER  
Aedas Pte Ltd

SOUND BLASTER ROAR SR20  
Creative Technology Pte Ltd

SUTD GRIDSHELL  
SUTD City Form Lab

T HOUSE  
Linghao Architects

## 2013

DESIGNER OF THE YEAR

PATRICK CHIA  
Squeeze Design  
Design Incubation Centre  
d.lab

AR. RICHARD K. F. HO  
RichardHO Architects

ALFIE LEONG  
The Little Voice Pte Ltd

PANN LIM  
Kinetic Singapore

HARIJANTO SETIAWAN  
Boenga Pte Ltd

AR. YIP YUEN HONG  
ipli Architects

DESIGN OF THE YEAR

BEING TOGETHER: FAMILY &  
PORTRAITS - PHOTOGRAPHING  
WITH JOHN CLANG  
Kingsmen Exhibits Pte Ltd  
In collaboration with  
Clang Photography, Inc

DELL INSPIRON 23:  
ALL-IN-ONE PC  
Dell Global BV (Singapore Branch)  
Experience Design Group

GARDENS BY THE BAY  
(BAY SOUTH GARDEN)  
Gardens by the Bay

INITIAL 'SIGNATURE' RANGE  
Orcadesign Consultants

LUCKY SHOPHOUSE  
CHANG Architects

PARKROYAL ON PICKERING  
WOHA Architects Pte Ltd

SATAY BY THE BAY  
Linghao Architects

SINGAPORE ICONS  
Supermama

SNAPWARE ECO FLIP  
World Kitchen (Asia Pacific) Pte Ltd

## 2012

DESIGNER OF THE YEAR

HANSON HO  
H55

AR. TAN CHENG SIONG  
ARCHURBAN Architects  
Planners Pte Ltd

VOON WONG  
Viewport Studio  
(Formerly VW+BS)

YANG YEO  
Wieden+Kennedy (China)  
(Formerly with JWT, Shanghai)

DESIGN OF THE YEAR

19 SUNSET PLACE  
ipli Architects

BISHAN-ANG MO KIO PARK  
Atelier Dreiseitl Asia Pte Ltd  
(Now known as Henning Larsen)

THE BROWSING COPY PROJECT  
A Beautiful Design

BUILDING AS A BODY  
kwodrent  
In collaboration with  
Zarch Collaboratives Pte Ltd

DELL ALL-IN-ONE  
DESKTOP PC FAMILY  
Dell Global BV (Singapore Branch)  
Experience Design Group

MARTIN NO. 38  
Kerry Hill Architects Pte Ltd

PELÉ SPORTS TRINITY 3E  
Pelé Sports Innovation Team

SPOTTED NYONYA  
COLLECTION  
Hans Tan Studio

WONDER BOX  
Spacedge Designs

## 2011

DESIGNER OF THE YEAR

AR. CHAN SAU YAN SONNY  
CSYA Pte Ltd

TANG GUAN BEE (RETIRED)  
Tangguanbee Architects

DESIGN OF THE YEAR

26 CABLE ROAD  
ipli Architects

1000 SINGAPORES -  
A MODEL OF THE  
COMPACT CITY  
Ar. Khoo Peng Beng  
Ar. Belinda Huang  
Assoc. Prof. Erik G. L'Heureux  
Assist. Prof. Florian Schaetz

DYSON DIGITAL MOTOR  
Dyson

KHOO TECK PUAT HOSPITAL  
CPG Consultants Pte Ltd

MARINA BAY SANDS  
INTEGRATED RESORT,  
SINGAPORE  
Moshe Safdie International LLC  
Boston Massachusetts  
In collaboration with  
Aedas Pte Ltd

PRYDE GROUP BICYCLE  
DESIGN DEVELOPMENT  
BMW Group  
DesignworksUSA (Singapore)  
(Now known as Designworks,  
a BMW Group Company)

SCHOOL OF THE ARTS  
WOHA Architects Pte Ltd

STATE THEATRE CENTRE  
OF WESTERN AUSTRALIA  
Kerry Hill Architects Pte Ltd

STREETWAVE SWAVEBOARD  
Streetwave Pte Ltd

UNDERScore MAGAZINE  
Hjgher

## 2010

DESIGNER OF THE YEAR

JOHN CLANG  
Clang Photography, Inc

LATE DR KERRY HILL  
Kerry Hill Architects Pte Ltd

DESIGN OF THE YEAR

BARTLE BOGLE HEGARTY  
(SHANGHAI)  
Asylum Creative Pte Ltd

BLACK FOREST TABLE  
Outofstock

LIGHTING MASTERPLAN FOR  
SINGAPORE CITY CENTRE  
Lighting Planners Associates

OBJECTS AROUND  
THE TABLESCAPE  
d.lab, Design Incubation Centre,  
National University of Singapore

THE PINNACLE@DUXTON  
ARC Studio Architecture  
+ Urbanism Pte Ltd  
In collaboration with  
RSP Architects Planners &  
Engineers (Pte) Ltd

QUEST FOR IMMORTALITY -  
THE WORLD OF ANCIENT EGYPT  
Gsmprjct Creation Pte Ltd

SENNHEISER EARPHONES  
BMW Group  
DesignworksUSA (Singapore)  
(Now known as Designworks,  
a BMW Group Company)

STADIUM MRT STATION  
WOHA Architects Pte Ltd

THE TREE  
FARM

## 2009

DESIGNER OF THE YEAR

KOICHIRO IKEBUCHI  
Atelier Ikebuchi Pte Ltd

CHRIS LEE  
Asylum Creative Pte Ltd

AR. LOOK BOON GEE  
LOOK Architects Pte Ltd

THAM KHAI MENG  
Ogilvy & Mather  
(Formerly with Ogilvy  
& Mather (New York))

DESIGN OF THE YEAR

GENEXIS THEATRE,  
FUSIONOPOLIS  
Arup and WOHA Architects Pte Ltd

HENDERSON WAVES  
RSP Architects Planners  
& Engineers (Pte) Ltd  
IJP Corporation Ltd (UK)

THE MET (BANGKOK, THAILAND)  
WOHA Architects Pte Ltd

PAPER FOLD  
Exit Design

REPUBLIC POLYTECHNIC  
Maki & Associates  
In association with  
DP Architects Pte Ltd

URBAND ORIGAMI  
Nanyang Optical Co Pte Ltd

X-HALO BREATH THERMOMETER  
Philips Design

## 2008

DESIGNER OF THE YEAR

EDMUND WEE  
Epigram Books  
Epigram Design  
(Formerly Epigram Pte Ltd)

AR. WONG MUN SUMM &  
AR. RICHARD HASSELL  
WOHA Architects Pte Ltd

NATHAN YONG  
Nathan Yong Design Pte Ltd  
(Formerly with Air Division Pte Ltd)

DESIGN OF THE YEAR

16 JALAN ELOK  
CHANG Architects

BBH OFFICE IN  
A WAREHOUSE  
Ministry of Design Pte Ltd

EUBIQ POWER  
OUTLET SYSTEM  
Eubiq Pte Ltd

LASALLE COLLEGE  
OF THE ARTS  
RSP Architects Planners  
& Engineers (Pte) Ltd

NATIONAL MUSEUM  
OF SINGAPORE  
CPG Consultants Pte Ltd  
In collaboration with  
W Architects Pte Ltd

NAUMI, SINGAPORE  
Eco-id Architects Pte Ltd

NEW MAJESTIC HOTEL,  
FRONT LAWN  
Atelier Dreiseitl Asia Pte Ltd  
(Now known as Henning Larsen)

## 2007

DESIGNER OF THE YEAR

WILLIAM CHAN, MELVIN CHEE,  
ALVIN TAN & JACKSON TAN  
PHUNK

ENG SIAK LOY

CASEY GAN & LIM SWE TING  
Cicada Pte Ltd

ANDREW GN  
Andrew Gn Designs (Paris)

LIM SAU HOONG  
(Formerly with 10AM  
Communications Pte Ltd)

AR. MOK WEI WEI  
W Architects Pte Ltd

DESIGN OF THE YEAR

0501  
The Finger Players

1 MOULMEIN RISE  
WOHA Architects Pte Ltd

BISHAN COMMUNITY LIBRARY  
LOOK Architects Pte Ltd

DELL 966 ALL-IN-ONE  
PHOTO PRINTER  
Dell Global BV (Singapore Branch)  
Experience Design Group

PAGE ONE BOOKSTORE  
AT VIVOCITY  
Kay Ngee Tan Architects

PEDIGUARD™  
PSB Technologies Pte Ltd  
(Now known as XentiQ Pte Ltd)

PHILIPS SINGAPORE  
LEARNING CENTRE  
Phillips Design

## 2006

DESIGNER OF THE YEAR

AR. CHAN SOO KHIAN  
SCDA Architects Pte Ltd

THESEUS CHAN  
WORK Pte Ltd

DESIGN OF THE YEAR

6 SPECIAL EXHIBITIONS  
AT THE ASIAN CIVILISATIONS  
MUSEUM (EMPRESS PLACE)  
Asian Civilisations Museum

CHURCH OF ST MARY  
OF THE ANGELS  
WOHA Architects Pte Ltd

ESPLANADE -  
THEATRES ON THE BAY  
DP Architects Pte Ltd  
In association with  
Michael Wilford  
& Partners (London)

FULLERTON HOTEL  
AND ONE FULLERTON  
Architects 61 Pte Ltd

HP DESKJET 460  
MOBILE PRINTER  
Hewlett-Packard (Singapore)  
In association with  
Philips Design

MINI HABITAT  
Kingsmen Exhibits Pte Ltd

NEW MAJESTIC HOTEL  
Ministry of Design Pte Ltd  
In association with  
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RETHINKING DESIGN AND  
ITS IMPACT ON THE WORLD

Gan Jia Jun

LEONARD NG KEOK POH

1 Ivan Loh  
2-3, 5-6, 9, 11 Henning Larsen  
4, 7 Henning Larsen, Shiang Han Lim  
8, 12 Henning Larsen, Finbarr Fallon  
10 Henning Larsen, Lim Wei Xiang

AR. TAN KAY NGEE

1 Ivan Loh  
2, 6, 10, 13 Nishikawa Masao  
3, 5, 8-9, 12 Dennis Gilbert  
4 Kay Ngee Tan Architects  
7 Tan Kay Chin  
11 Jeremy San

CAPITASPRING

1, 4-7, 9-11 Finbarr Fallon  
2 Bjarke Ingels Group  
3, 8 CapitaLand  
Profile Ivan Loh

HACK CARE: TIPS & TRICKS FOR  
A DEMENTIA-FRIENDLY HOME

1-4, 6-7, 11 KHOOGJ  
5, 8-9, 10 Lekker Architects  
Profile Ivan Loh

R FOR REPAIR

1, 22  
2-21  
Profile

KHOOGJ  
Iceberg7  
Ivan Loh

SINGAPORE PAVILION,  
EXPO 2020 DUBAI

1, 3, 12  
2, 5, 6-10  
4  
11, 13-14  
Profile

Urban Redevelopment Authority  
Patrick Bingham-Hall  
WOHA  
Marc Goodwin  
Ivan Loh

STATE COURTS TOWERS

1-3, 5, 14  
4, 6-8, 11-12  
9, 10, 13  
Profile

Finbarr Fallon  
KHOOGJ  
CPG Consultants  
Ivan Loh, Serie Architects

TEBET ECO PARK

1-4, 7, 10  
5-6  
8  
9  
Profile

Rahmat Illahi  
SIURA Studio  
Haryo Bimo  
Nur Hepsanti  
Ivan Loh

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Prof. Kristin L. Wood  
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Debra Langley

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CONSULTANCY  
H55

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PRODUCTION  
Couple  
Pico Art International Pte Ltd

EXHIBITION VENUE PARTNERS  
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AC Dominie LLP

PUBLICATION WRITER  
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Hanson Ho

TROPHY PRODUCTION  
United Sports Industries Pte Ltd

VIDEO PRODUCTION  
Wormwood Films

