FUTURARC

The Voice of Green Architecture in Asia-Pacific

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1Q 2019 | volume 64

A Rural-Urban Dichotomy

Inside: **Dhaka and Manila:** The Story of Migrants | **China and India:** Typo-morphologies in Urban and Rural Conditions | **The Digital Bridge:** Connecting Villages to Cities | **Sanjay Puri**, Principal Architect, Sanjay Puri Architects

With projects from **Brazil, China, India, Indonesia, Sri Lanka** and **Vietnam**

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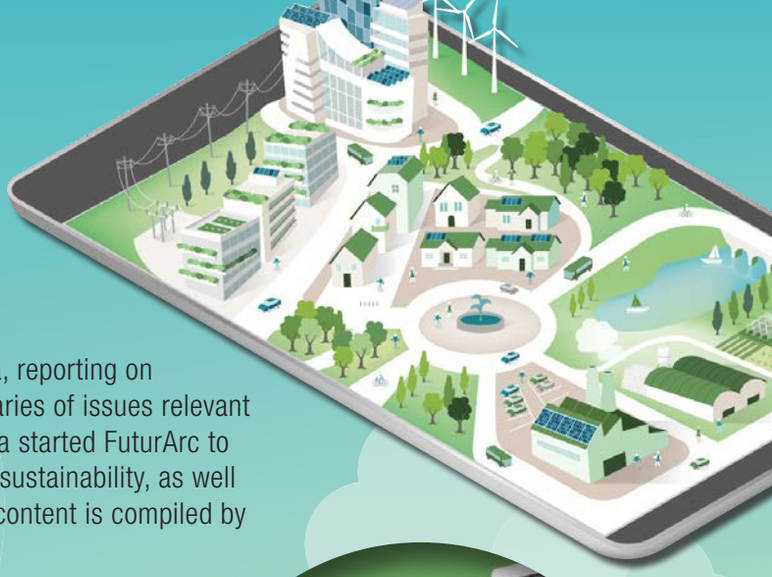

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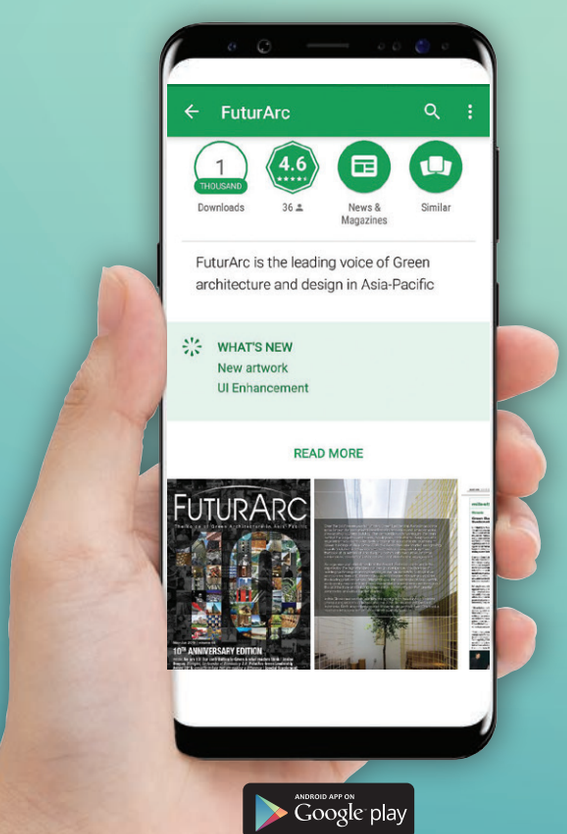

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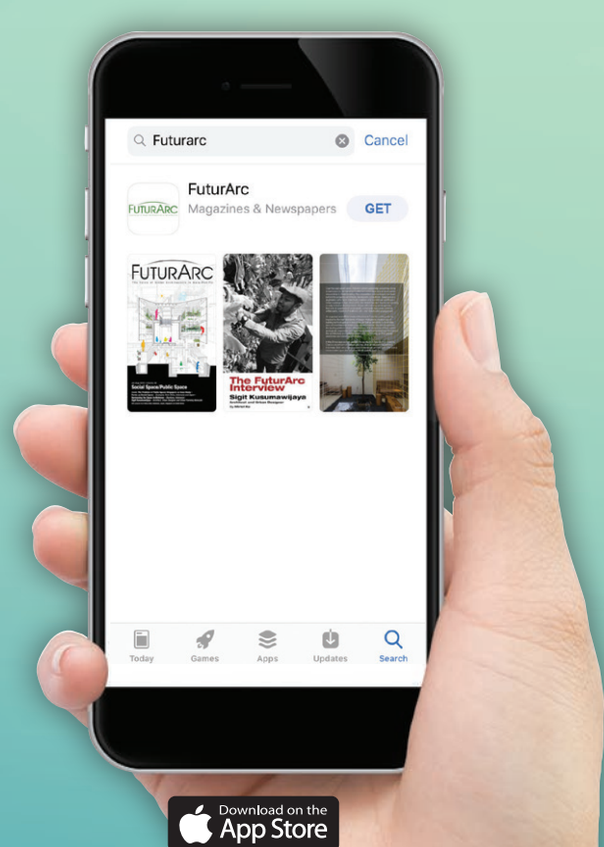

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BCI ASIA

Letter from the editor

Dear *FuturArc* Readers,

The story of Asian urbanisation is now well known. Our cities are growing fast, and to power this growth, the largest rural-urban migration seen in human history is underway. Millions have moved, and continue to do so—from small towns and villages to large metropolitan centres, such as Manila, Dhaka and Ho Chi Minh City. This flow creates a dichotomy: the city and the countryside are evolving into two distinct conditions. The gains of one (the city) have proven to be the loss of the other (the rural settlement), in terms of human and financial capitals.

In an article published in an earlier issue of this magazine ("Two Places, One Space" in *FuturArc*, Sep-Oct 2018), the idea of a hard-edged dichotomy was contested. Matias Echanove and Rahul Srivastava argued that migrant populations in cities in India are very much connected to the villages they left behind, that there is a two-way traffic of people, money and ideas.

In this issue, coverage of cities like Dhaka (page 32) and Manila (page 42) sheds light on life in the city, where migrants have no spatial legitimacy. Life happens in leftover spaces with little or no supporting infrastructure. It could be argued that migrants are subsidising the city and its accumulation of wealth, simply by not demanding their fair share of space and services.

As we delved into the topic, we found no examples of cities that valued this interstitial existence. The only positive example in this issue, the Nantou Old Town Regeneration in Shenzhen, China, shows how a growing city incorporates peri-urban villages, turning them into urban villages (page 48). But this is not about dealing with migrant populations as such. If there are good examples out there, we did not find them. It is likely that this absence of projects is a reflection of the priorities on the ground.

There is interestingly no shortage of projects from the countryside. These are mostly prototypes of housing and community buildings. There is even an entire village (Jackfruit Village, page 88) that shows how the old ways blend in with new techniques. These rural projects tell us that materiality and community participation are important. A cynic might say that the bamboo and thatched architecture reflects a city-dweller's view of what is important to rural settings; ask the villagers and they might opt for steel and glass instead. We choose to see these projects, however, as important experiments on a future state of affairs. Someday, when the urbanisation pendulum swings back to favour the rural condition, these projects will show us how to combine the low-impact charm of the village with the convenience and comfort of the city.

The topic of rural-urban dichotomy is hard to generalise. We've learnt that. But we hope that, in the pages ahead, you will see snapshots of life on the fringes. Here, design plays a role; the typo-morphologies we see suggest this. But the question is bigger than what designers or planners can do. This needs the firm hand of policy. And on that, it feels as if we have barely begun.

Dr Nirmal Kishnani
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Cover image: Nantou Old Town Regeneration | Axonometric diagram of the first floor of the Main Venue and Dajiala Stage; image courtesy of UABB; URBANUS; Wu Qingshan

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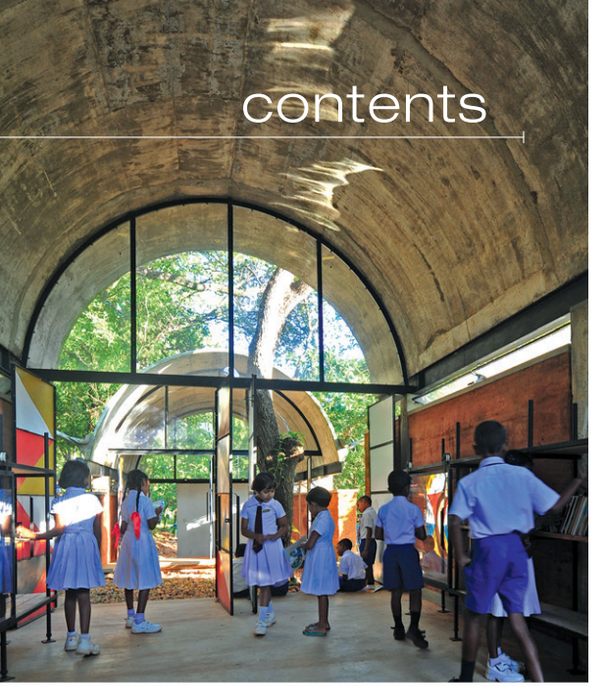

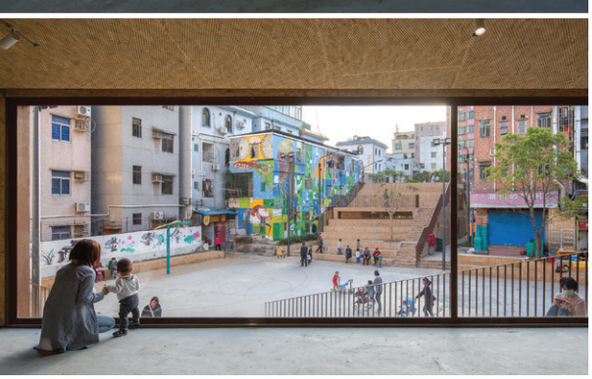

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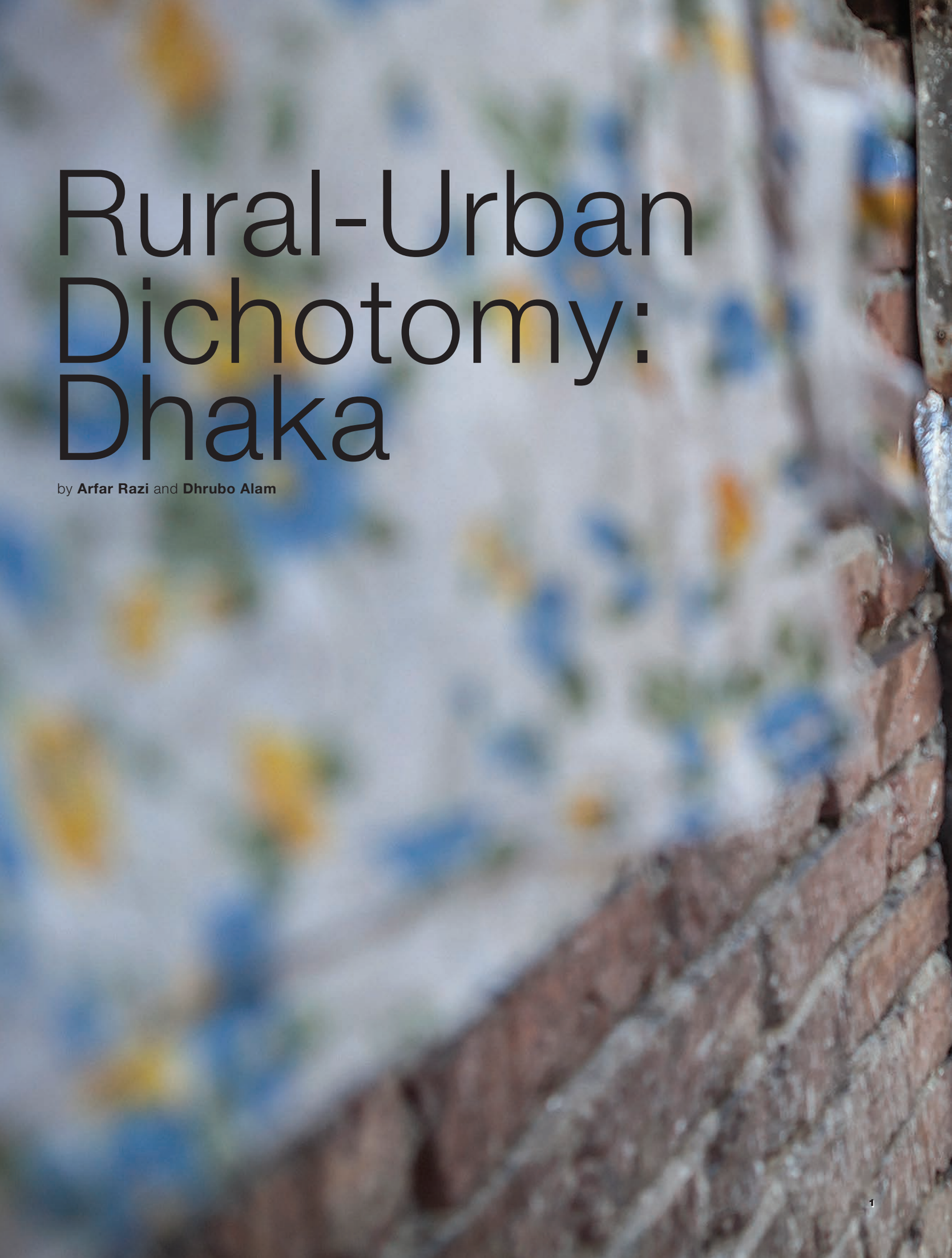

Rural-Urban Dichotomy: China & India

by **Heather Banerd**

Photo by GaudiLab/Shutterstock.com

Rural-Urban Dichotomy: The Digital Bridge

by **Dr Jalel Sager**

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5

Photos by Wiliam Miranda, iindigo

How can global society strengthen its rural areas and reverse a decline in countries such as the United States that is now more than a century old? Slowing down urban migration and building up skills and opportunity for rural inhabitants is an oft-cited goal for many sustainability thinkers. In one example, Amory Lovins told this journal all the way back in 2010 (*FuturArc* 3Q 2010 issue) was that stopping urbanisation was the key to China's environmental recovery.

Yet, while the intention is laudable as well as logical, the mechanics of such a change remain unclear. Is it even possible to arrest a dynamic with such enormous momentum? Is it desirable? Cities have long been understood as engines of economic growth for nations. The American Jane Jacobs, one of our best urban thinkers, in *Cities and the Wealth of Nations,* argued that economic growth springs from the cities, fundamentally, where true industrial creation takes hold, rather than from the nation. The Belgian historian Henri Pirenne, meanwhile, in *Medieval Cities: Their Origins and the Revival of Trade*, traces the progress of Western civilisation to the fundamental trading function, especially for long-distance trade, played by the city.

So the question really becomes whether or not the pastoral restoration has any basis as a solution under the current system of global capitalism—whether it is consistent with a possible future that may come about short of a revolution in the way we eat, work and produce. Plenty of Green thinking may be faulted for ignoring system dynamics and the path dependencies of the industrial system we have inherited. One example is the understandable desire to throw a renewable technology such as solar panels or wind turbines at every environmental issue that arises in the energy world. In a deeply intertwined and evolved global production matrix, however, it is often coal that produces the energy to fabricate our favourite renewable technologies—and there are energetic reasons why it is still difficult to produce solar panels with solar energy. The co-evolution of the city and the country carries some of the same difficulties: the two have evolved functions that are difficult to do away with in the name of restoring some kind of balance to the flows of people, money and information between the two.

THE MANY VERSUS THE FEW

There are, however, intriguing opportunities in the realm of information. American economist Paul Krugman won the Nobel Prize for Economics in 2008 in part for his work on economic mechanisms such as "increasing returns" and "network effects", which in short both relate to the benefits of concentration and scale—the very things cities do well.

"I recall a conversation at one conference on the new growth theory, in which a fairly eminent economist challenged some of us, in belligerent tones, for any evidence that increasing returns and positive external economies actually play any important role. I think I replied, 'Cities'—to be greeted with a stare of incomprehension," (Krugman, 2010).

In his work, Krugman addresses an older idea of why economic activity clusters in certain areas: "information spillover" states what might seem, and probably is, a rather obvious mechanism: regional clusters in given industries occur because firms locate close to one another to benefit from tricks of the trade that are "in the air", according to English economist Alfred Marshall. Workers serve as the primary carriers for said information. A closely related aspect of clustering is the availability of labour trained in a given art or craft.

If we assume that dynamics of concentration and scale have presented difficult obstacles in rural transformation, we may ask to what extent new digital economies have changed the potential for urban-rural readjustment. The ecological dynamic has been apparent to philosophers at least since the 19th century, when the German thinker Karl Marx decried the "metabolic rift" between country and city. In a rather prescient burst of writing in the second volume of his *Capital*, Marx outlined what he considered to be a debilitating series of transactions, with the city receiving all the goods and materials of the countryside, which creates an enormous build-up of waste and disrupts the natural harmony or "recycling" of said materials. In turn, the countryside is deprived of its culture and interest for the average citizen, becoming a dispirited and bereft place, exploited ecologically and psychologically. We find traces of this situation today in both developing and developed countries, and it accounts for much of the impetus behind the desire on the part of planners to rebalance city and country, or strengthen rural areas.

These ideas are not new. From Le Corbusier to the English planner Ebenezer Howard's *Garden Cities of To-Morrow*, published in 1902, a synthesis of the best aspects of city and country (think culture plus nature) has long been an object of future-oriented planners. Yet these efforts often encounter highly difficult opposing dynamics. Those interested in cities with open green spaces often find urban land far too valuable for anyone but the wealthiest to leave undeveloped. Ruralists with ideas of creating remote outputs of culture and industry, on the other hand, often find themselves blocked by the types of effects economists Krugman and Marshall speak about—namely increasing returns, network effects and information spillover. All of these speak to the difficulty of arranging concentrated centres of activity in sparsely populated areas where services and amenities may be few, and the people hard to retain. The example of Brasilia, the capital of Brazil created from nothing in 1960, looms large. Despite the success of that city from a monumental perspective, as an example of human industry, the organic aspects of the lived experience in Brasilia often fell short of expectations, likely due to its lack of any real evolved history and function as a city.

So we must ask ourselves once again, as the 21st century continues to slip down upon a world with a changing political and natural climate, what is possible? In particular, what can we do to help heal the "metabolic rift" now plaguing the entire planet, grown so large that it now threatens our most basic

Dr Jalel Sager is the founding director of the Berkeley – Hub for Energy Access (B-HEAR), a centre for open innovation in California's Bay Area that brings together private companies and academia to accelerate energy access efforts.

In 2014, he co-founded New Sun Road, a benefit company that develops cloud technologies for energy access, including management and control of distributed energy resources, where he serves as CEO. From 2015 to 2017, he coordinated and served as lead author for a joint Harvard-Berkeley energy policy planning study for the Mekong region, sponsored by USAID. In 2012, he co-founded the CAL-RAE decentralised energy research network at UC-Berkeley, while teaching courses on ecological economics and microgrids in the Energy and Resources Group (ERG), where he currently serves as Research Associate.

In 2007, Dr Sager co-founded the Vietnam Green Building Council (VGBC), where he was named by *FuturArc* magazine as one of 18 leading positive influences on Asia's built environment.

1 Jalel Sager, CEO of New Sun Road, watches **2, 3, 5** rural students use computers for the first time at Aldea Llano Grande (March 2018). **4** Attendees at the event included Guatemala's Minister of Education, Oscar Hugo Lopez; executives from Microsoft; local and departmental officials; and the local community.

CHILDREN VILLAGE

by **Y-Jean Mun-Delsalle**

Winner of the RIBA International Prize 2018 for the world's best new building, awarded every two years to a development that embodies design excellence and architectural ambition and delivers meaningful social impact, Children Village was designed by Brazilian architectural firms Rosenbaum and Aleph Zero.

This student housing complex is for 540 children of settlers, caboclos and indigenous people coming from remote areas of the country, some travelling many hours by boat, to study at Canuanã School—the nation's largest boarding school—on the edge of the rainforest in central Brazil. The project aims to answer the question of whether it is possible to have a genuinely rural model of development that is just as innovative and sustainable yet distinct from the urban model. It does not require the abandonment of tradition in favour of modernity, but acts as a bridge between the two, embracing the history and indigenous cultures of Brazil, while combining the wisdom of local resources and techniques with contemporary aesthetics.

One reality in villages is that the profession of architect does not exist, but by rethinking the role of architecture and redefining the programme of a rural boarding school, Rosenbaum and Aleph Zero have demonstrated what architects can do in a place that supposedly has no need for them. Gustavo Utrabo, partner of Aleph Zero, says, "Architecture always looks to exciting knowledge and projects it into the future. It's the only way to move forward. Every place needs an architectural perspective. Rural areas shouldn't be different. We design the spaces that shape our society and this is endless." In a reaction against concrete, generic and mass-produced buildings prevalent in villages worldwide, Children Village shows that it is possible to have a highly specific vernacular housing type based on structures that have gradually been adapted over the ages to their climate and location, one that responds to indigenous ideals of beauty while in keeping with the times.

The idea was to use "architecture as a tool for social transformation, a tool that transcends construction and creates a deep connection between young people and their ancestors and knowledge. The space facilitates the interaction between public and private, and socialising between the collective, nature and the individual, reconnecting children and young people to their origins and with their surrounding ecosystem," notes Marcelo Rosenbaum, director of Rosenbaum. Ultimately, the design sought to increase the students' self-esteem, individuality and sense of belonging (that they did not feel in their previous living quarters), thereby improving overall academic performance. The architects have succeeded in establishing a home away from home, as the children have made the building their own.

1 External view

Photo by Cristobal Palma and Estudio Palma

LIBRARY, BORALUKANDA PRIMARY

2

Boralukanda Primary is one of many schools in remote Sri Lanka with little or no support, funds, or other forms of assistance to upgrade their physical infrastructure and build additional—and necessary—facilities to improve the quality of teaching and learning. For example, having a proper place to keep and read books, and maybe eventually housing a basic computer and Internet set-up, would help broaden the children's horizon and improve their chances of having access to a better education.

Located in the farming village of Dewahuwa, this primary school has been in operation for more than half a decade, but it still does not have a dedicated space to house a library and related reading activities. While providing a reading and library space for Boralukanda Primary, this project also seeks to explore a process and typology of building, which can be extended to provide alternative spatial infrastructure for many such rural schools that operate within less advantageous economic, institutional and cultural milieus.

1 The architects wanted the building to emerge from the earthiness of the landscape and soil **2** The children now have a comfortable space to read and study **3** Section

3

1

EXPANDABLE HOUSE

The expandable house (*rumah tambah* in Bahasa Indonesia, or *rubah* for short) is a component of the Tropical Town project, and is designed as a sustainable response to the challenges of rapidly developing cities in monsoon Asia.

The expandable house adjusts to the fluctuating patterns of resource consumption and expenditure, or metabolism, of its residents. This includes the influx of young migrants from all over Indonesia—so how would the city accommodate this inflow by way of housing, amenities, etc.? In practical terms, this means understanding the patterns of household income generation and expenditure, water, energy and food consumption, as well as waste production. *Rumah tambah* focuses on the challenge of housing by allowing the base to be flexibly configured. A prototype of the expandable house has been constructed in Batam, with the support of the community of Kampung Tua Melayu, where a field laboratory is located.

1 Roof lifting sequences

SIX PRINCIPLES

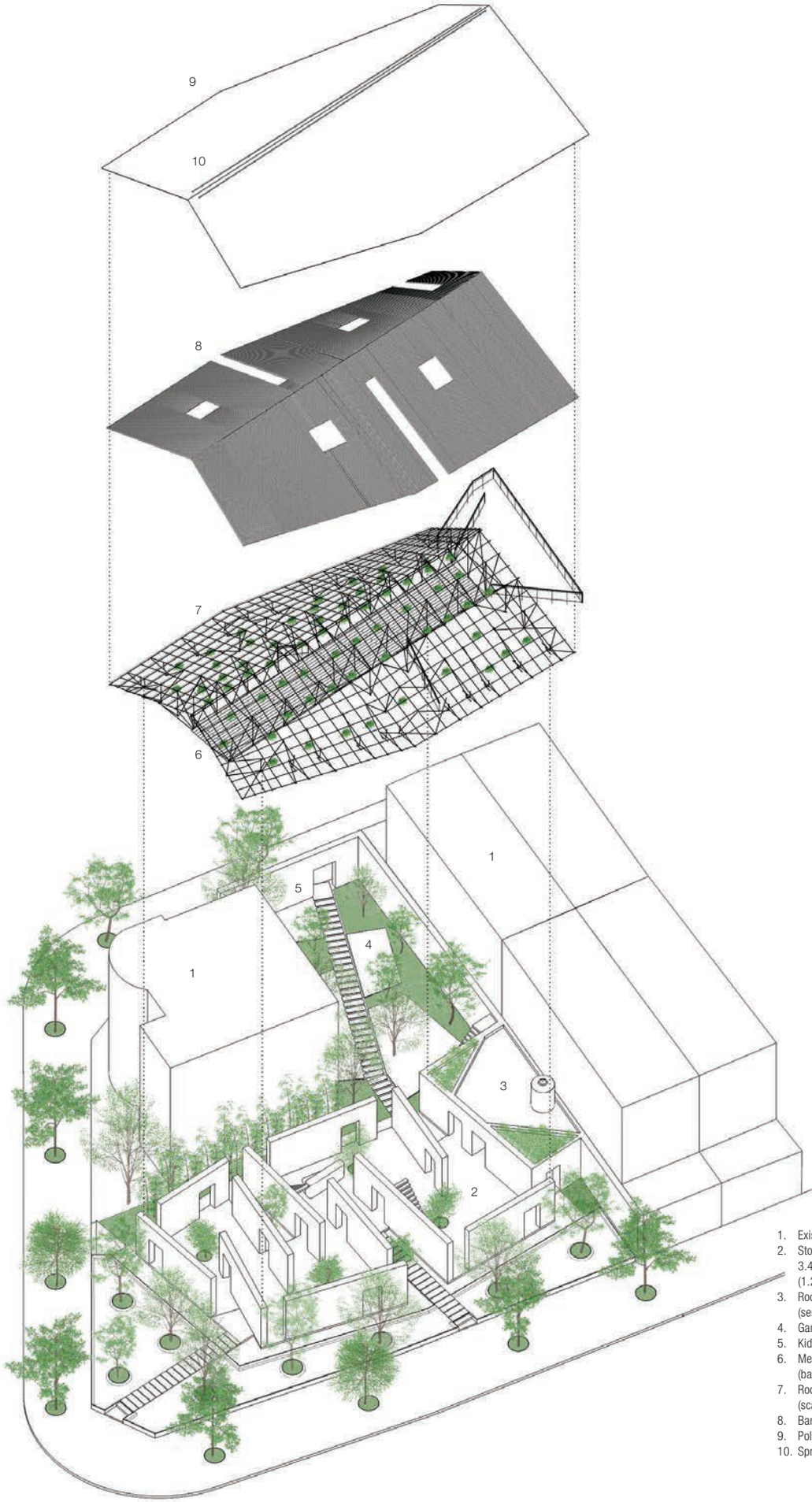
The expandable house is designed around six principles:

1) Seeding

Seeding common technologies (rainwater and septic tanks, filters, sensors), material strategies (renewable, available, emergent) and spatial planning parameters (street widths, density standards) to catalyse the growth of variable built fabrics and diverse tropical towns.

2) Sandwich Section

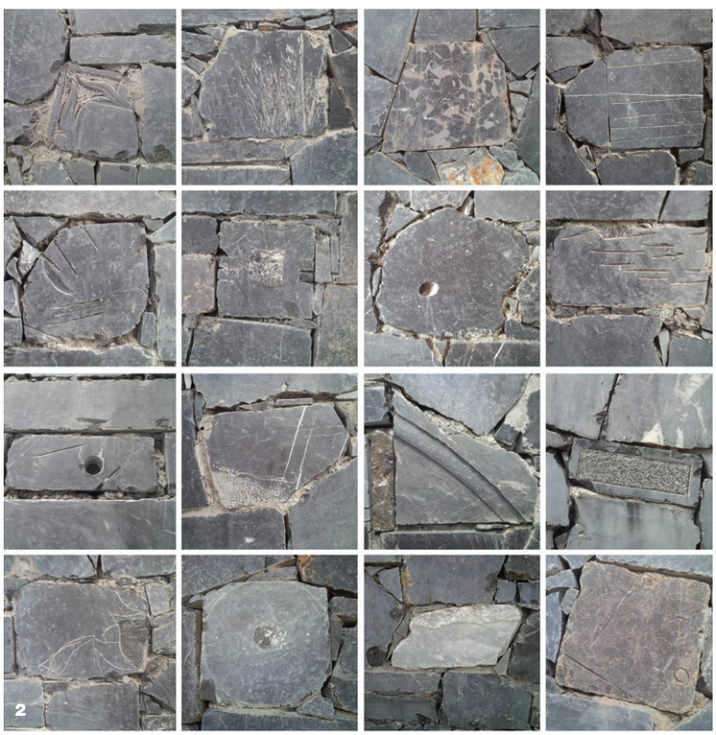
A hoistable roof and fixed foundations (the 'bread') that can support up to three additional floors (the 'filling'), allowing for flexible financing, where the developer or state housing agency provides the roof and foundations, and the residents construct extra space as their circumstances require and budget



1. Existing building
2. Stone walls (40cm thick, 3.4m high) with doors (1.2m x 2.2m)
3. Rooftop garden + stage (service/kitchen beneath)
4. Garden
5. Kid's playground
6. Mezzanine floor (bamboo)
7. Roofing structure (scaffolding, d= 4.2cm)
8. Bamboo (d=4–5cm)
9. Polycarbonate sheets
10. Sprinkler & mist sprayer

1

S SPACE



2

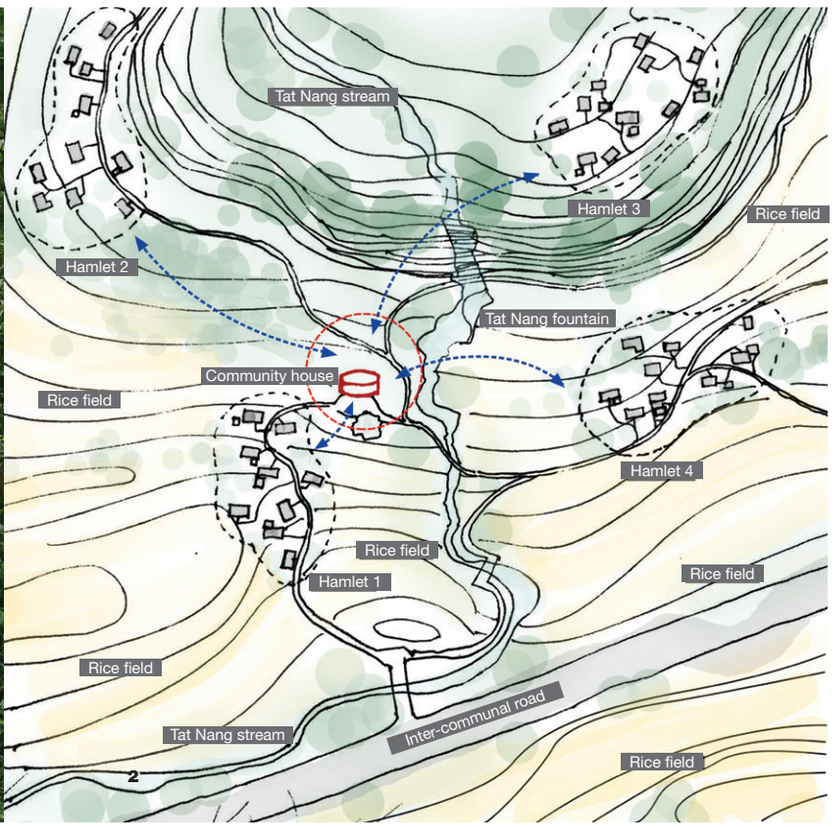
Made up of stark stonewalls, steel pipes (granted a second life from construction scaffolding) and bamboo, the S Space serves as an 'open' space for the community with a focus on culture and the arts. The project is located in a new emerging urban area with a high construction density in Dong Van town, Ha Nam province. The architects were inspired by the beauty of the national landscape of Kem Trong, situated between the two provinces of Ha Nam and Ninh Binh, where illegal rock mining is gradually turning the place to ruins. As such, the S Space was constructed out of waste—rock debris from Kem Trong; discarded rocks from trade villages and construction sites—to express the nostalgia for the languishing natural ecosystem and the loss of rocky resources with historical value in Vietnam.

3

1 Axonometric diagram of the project's programme **2** Wall segments made from debris and discarded stones from Kem Trong **3** Conceptual drawing

1

CHIENG YEN COMMUNITY HOUSE



Chieng Yen is a commune surrounded by an old-growth forest that lies along the boundary between Van Ho district (Son La province) and Mai Chau district (Hoa Binh Province). The site is a masterpiece of nature, with breathtaking landscape, hot water streams and so on. The climate and scenery seem compelling enough to turn the area into a community-based tourism hotspot but limited access has made it tough. Although home to five major ethnic groups, they tend to keep to themselves in their own areas separately; the community's cultural diversification is not necessarily celebrated.

As such, Chieng Yen Community House was built with the intention of creating a space—a common house of sorts and information centre—for the different groups to come together to share and let the various cultural and traditional handicrafts and practices be known; and possibly where tourism activities could also take place. Nestled amidst a picturesque setting of the forest greenery and waterfall, it seeks to attract and promote social resources, as well as to inspire the local communities of the surrounding areas—potentially encouraging a sustainable development of culture, economy and construction, leveraging architecture-based vernacular wisdom. The project itself aims to contribute positively to the activities and livelihoods of the local communities.

The process of site selection and design was carefully considered to ensure that the building would be easily accessible to local inhabitants and tourists, and also become a landmark.

The shape of the community house was inspired by the headscarf of the local ethnic groups and the typical traditional house. The project applies Green

1 The project is set amidst forest greenery and waterfall **2** Building location

1

JACKFRUIT VILLAGE

Covering a total area of 1.7 hectares and surrounded by a lake in the south and southwest, the existing development site is home to 38 jackfruit trees and 13 pomelo trees, typical of rural areas in northern Vietnam.

The main idea was to have the nucleus of the project—the ancestral house that will serve as a place of worship and meditation as well as a community space—to be located in the centre, and the residential units spreading out from the middle, hugging close to the surrounding trees, and making the most of the shade for the common yards.

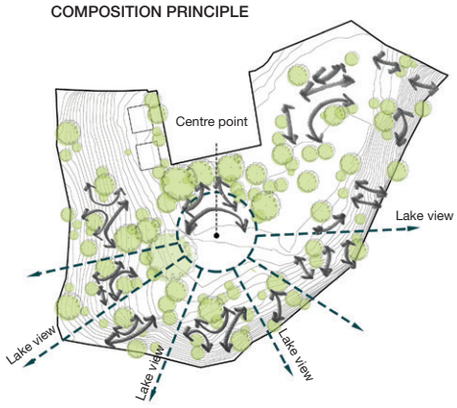
Based on the topography, the ground floors are elevated to avoid pests like termites, reducing humidity as well as allowing for natural surface drainage. Living spaces are arranged according to the landscape and vegetation, closely associated with nature. Applying a VAC model (VAC in Vietnamese stands for *vuon*, *ao*, *chuong* that means garden, pond, livestock pen) with an existing fruit-tree garden, cage fish farming along with a livestock farm, abundantly supplies clean, organic food for the workers and users during the whole process, from construction to operation. The project uses a five-chamber septic tank and wetlands technology to treat waste water for irrigation and toilet. The ecosystems create a closed cycle that can be self-sufficient, renewable and maintainable in the long term. The buildings with their alternately solid and hollow spaces make them seem transparent, maintaining a harmonious relationship between the built and natural elements.

This project incorporates local, eco-friendly materials alongside modern technology (to create a new architectural morphology but still user-friendly and sustainable): adobe bricks and broad thatched roofs, which offer shading and mitigate solar radiation; wood; bamboo; and leaves are the main materials. Due to difficulties in transporting materials to the site, earth bricks were made from soil from the foundation excavation process. Bamboo and palm leaves were purchased and treated on-site, minimising transportation costs and time.

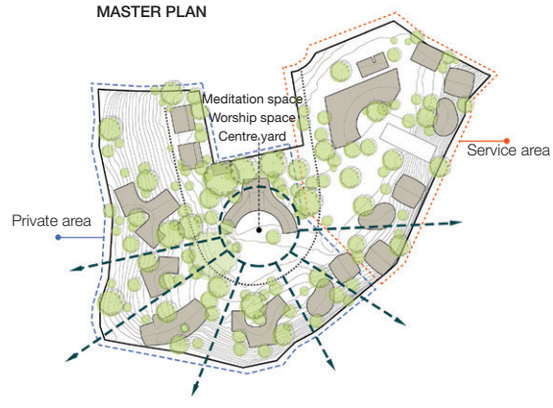
The progress from design to completion has been extremely difficult. The materials needed to undergo changes and improvement due to the specificity of the project. Even though the project design was created on new ideas and solutions, it still had to be based on available elements, which was a huge challenge that required the architects and construction engineers to work closely together.

1 Aerial view of the ancestral house **2** Concept diagrams

76 existing big trees surround the lake. The terrain is highest in the centre and gets lower towards the lake.



Nuclear centre: maximises the retained big trees. Houses respond naturally to the trees with respective views to the lake.



Jackfruit Village

2

Active acoustic window – an open window with sound protection

Cities grower denser by the day and noise pollution is becoming a major issue in the building sector. With innovation, Technal, an established aluminium systems brand, has created the Active Acoustic Window.

This sliding window concept provides acoustic insulation to airborne noise even when a window is open. It is an asset for residents who wish to ventilate a space while maintaining tranquility. Its patented system, developed in partnership with the GAMBA Acoustique Group and the Mechanical and Acoustic Laboratory of CNRS, is based on the combination of 'passive' and 'active' technologies.

For a window with a 10-centimetre opening and 44.2/14/10 acoustic glazing, this reduction can reach 25 decibels, that is, an average of 300 times less noise inside. This minimises the need to shut the windows in warm weather, or if one is living in highly urbanised areas such as in the city centre or near a main highway.

The 'active/passive' system is fully integrated into the aluminium profiles that are similar in style to a traditional joinery system. For more information, please visit **www.technal.asia**.

State-of-the-art brush technology for wooden floor effects

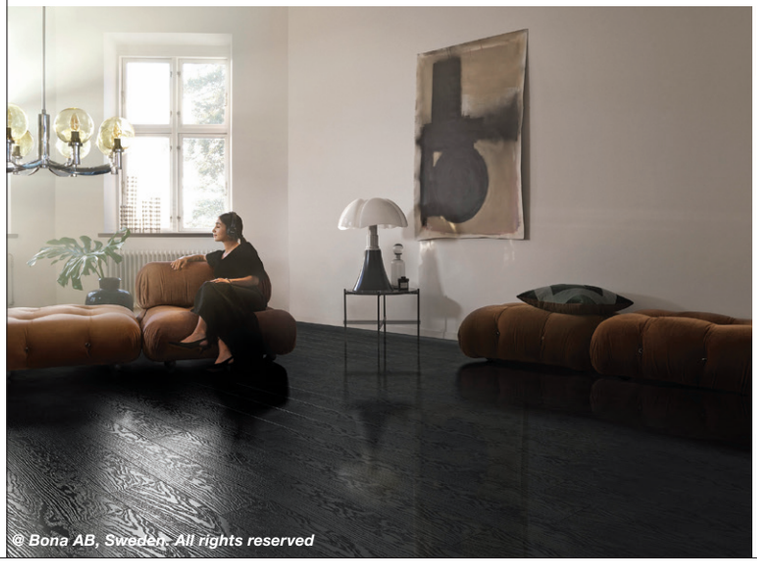
Bona, a leading firm in wooden floor treatment, introduces a new brush technology that enhances the natural character of wood and creates contemporary designs with ease.

With a century-long industry expertise in wooden floors, Bona has developed an innovative system for creating modern flooring effects as a part of the Bona Inspiration concept—a floor styling programme that offers guidance in flooring trends. The Bona Brush Technology is a distinctive system that allows contractors to renovate existing floors to create elegant and stylish effects, recreate the latest engineered floor trends, or simply restore the natural beauty of the original floors. From texture and contrasts to eye-catching two-colour effects, the design possibilities are endless when combined with Bona's wide range of oils and finishes.

Bona Brush Technology comprises wire brush attachments that are compatible with Bona FlexiSand 1.9. The heads are mounted onto the Bona Power Drive NEB through a simple snap-lock mechanism, which is then attached to the Bona FlexiSand for a fast, easy, direction-free sanding and brushing process. The counter-rotating cylindrical wire heads brush down to remove the soft wood, allowing the coloured oil to settle between the grain.

For edges and hard-to-reach areas, Bona introduces the new Bona SupraFlex all-in-one edge tool. Suitable for both brushing and sanding of wood and other substrates, Bona SupraFlex is the ideal companion to the Bona Power Drive NEB.

About the company
A family-owned company founded in 1919, Bona delivers products for installation, maintenance and restauration of wooden floors. The company's headquarters is in Malmö, Sweden, and is globally represented by 17 subsidiaries and 70 distributors. For more information, please visit **www.bona.com**.



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KASTELLO Collection: driven by design, powered by technology

Thoughtfully crafted, the KASTELLO Collection weaves technological and sustainable features into a modern classic design. It bridges aesthetics with functionality to bring about a full range of contemporary products that is built to last.

Together with American Standard's signature design elements—flared out silhouettes, defined edges, bespoke details—the KASTELLO Collection makes for an ideal chic accompaniment to any luxurious bathroom environment. Besides showcasing beauty through symmetrical curves and angles, the customised design is also central to functionality and comfort, while the ergonomic lines of the faucet emphasises performance and style.

The KASTELLO Collection one-piece toilet boasts the latest in hygiene technologies with power features that offer users convenience and assurance.

- **SiphonMax with Power Rim flush technology:** Effectively removes both heavy and light waste with twin torrents of water from two openings.
- **Aqua Ceramic:** Engineered to prevent the accumulation of dirt and dark rings from forming on ceramic surfaces, allowing the toilet to remain smooth and polished for a long time.
- **Double Vortex:** Maximises flushing performance while minimising water usage.
- **ArmorLid with EasyLift:** Enhances durability with excellent resistance to scratches, impacts and discoloration.
- **ComfortClean:** Effectively kills E. coli bacteria, maintaining hygiene.

About the company
Backed by over 140 years of pioneering legacy, American Standard endeavours to raise the standard of living by delivering bathroom solutions that are beautiful, purposeful and safe for everyone. For more information, please visit **americanstandard-apac.com**.

BCI ASIA AWARDS 2019

RECOGNISING THE LEADERS IN ARCHITECTURE & CONSTRUCTION

INDONESIA 23 APRIL 2019 RAFFLES JAKARTA

HONG KONG 17 MAY 2019 ROSEWOOD HONG KONG

VIETNAM 31 MAY 2019 SHERATON SAIGON HOTEL & TOWERS

SINGAPORE 7 JUNE 2019 FAIRMONT SINGAPORE

PHILIPPINES 14 JUNE 2019 GRAND HYATT MANILA

THAILAND 18 JUNE 2019 CENTARA GRAND BANGKOK

MALAYSIA 21 JUNE 2019 JW MARRIOTT HOTEL KUALA LUMPUR

BCI ASIA AWARDS

The annual BCI Asia Awards—now into its 15th year—recognises developers and architecture firms that have built and designed the greatest volume of buildings in seven Asian markets: Hong Kong SAR, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. This event seeks to encourage the creation of socially-responsible architecture, and remains one of the most coveted awards in the regional building industry while serving as a platform for domestic and international networking among elite architecture firms, property developers, manufacturers and service providers.

FuturArc Green Leadership Award

FuturArc Green Leadership Award seeks out ecologically responsible buildings in Asia, recognising the team behind a completed project (architects, developers, consultants, contractors, etc.) who has collectively raised the bar of what a Green building is in Asia. Projects are judged on how the project delivers specific, measurable outcomes, based on the criteria of resilience; wellness; embeddedness; ecosystems; and replicability.

FuturArc Prize

FuturArc Prize aims to encourage and generate forward-thinking, innovative design ideas for Asia. The competition has been the leading platform for professionals and students who are passionate about the environment to envision a more sustainable future. Every year, FuturArc Prize has reached out to thousands of professionals and students from the region and beyond to propose ideas based on a different brief or challenge.

BCI Asia Interior Design Awards

This competition awards excellent interior designs of projects located in the seven BCI Asia markets: Hong Kong; Indonesia; Thailand; Malaysia; Philippines; Singapore and Vietnam. It seeks interior architectural designs that stand out aesthetically, functionally and ergonomically, based on the criteria of spatial design; comfort; aesthetics; innovation; and realisation efficiency.

BCI Asia Top Ten Architects & Developers

The BCI Asia Top Ten Architects and Developers Awards identify firms with the greatest aggregate value of projects under construction during the last full calendar year by the extent of their sustainability and confirmed Green building ratings. The criteria for the Top Ten Architects also include projects from the pre-tender stages to recognise early-stage Green design efforts.

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Philippines	PHP 2,000	PHP 1,500	PHP 1,400	PHP 2,000
Singapore	SGD 60	SGD 45	SGD 42	SGD 60
Thailand	THB 1,160	THB 870	THB 812	THB 1,160
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- ☐ Malaysia Green Building Confederation
- ☐ China Green Building Council - Hong Kong Chapter
- ☐ Philippine Green Building Council
- ☐ Vietnam Green Building Council
- ☐ World Green Building Council Asia Pacific Network
- ☐ Architects Association of Macau
- ☐ Hong Kong Green Building Council
- ☐ Ethos India
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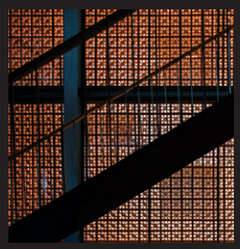

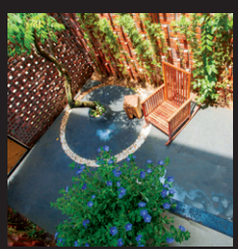

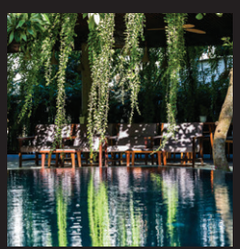
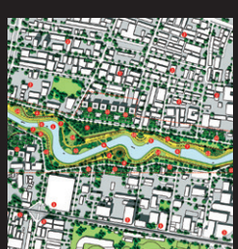
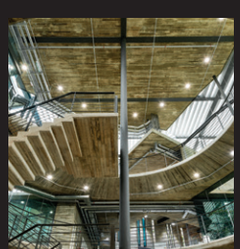
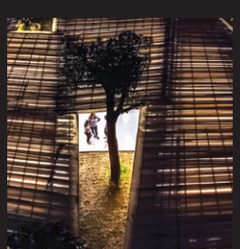
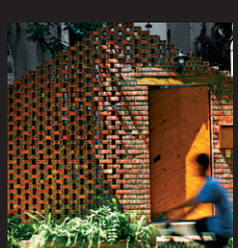
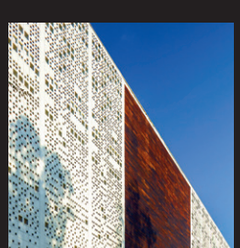

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The Voice of Green Architecture in Asia-Pacific

Next Issue:
FuturArc 2nd Quarter 2019

Green Awards

Coming up next—our most awaited Green Awards issue!

Look out for the winning entries from FuturArc Prize and FuturArc Green Leadership Award 2019, as well as a showcase of other Asia-Pacific projects with strong Green concepts and passive designs.

If you have projects to nominate, please send an email with a brief profile and photos to c.lim@futurarc.com by end March 2019.

Winning entries from the 2018 cycle of FuturArc Prize and FuturArc Green Leadership Award

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