The 5th LafargeHolcim Awards AsiaPac

A SPECIAL REPORT BY

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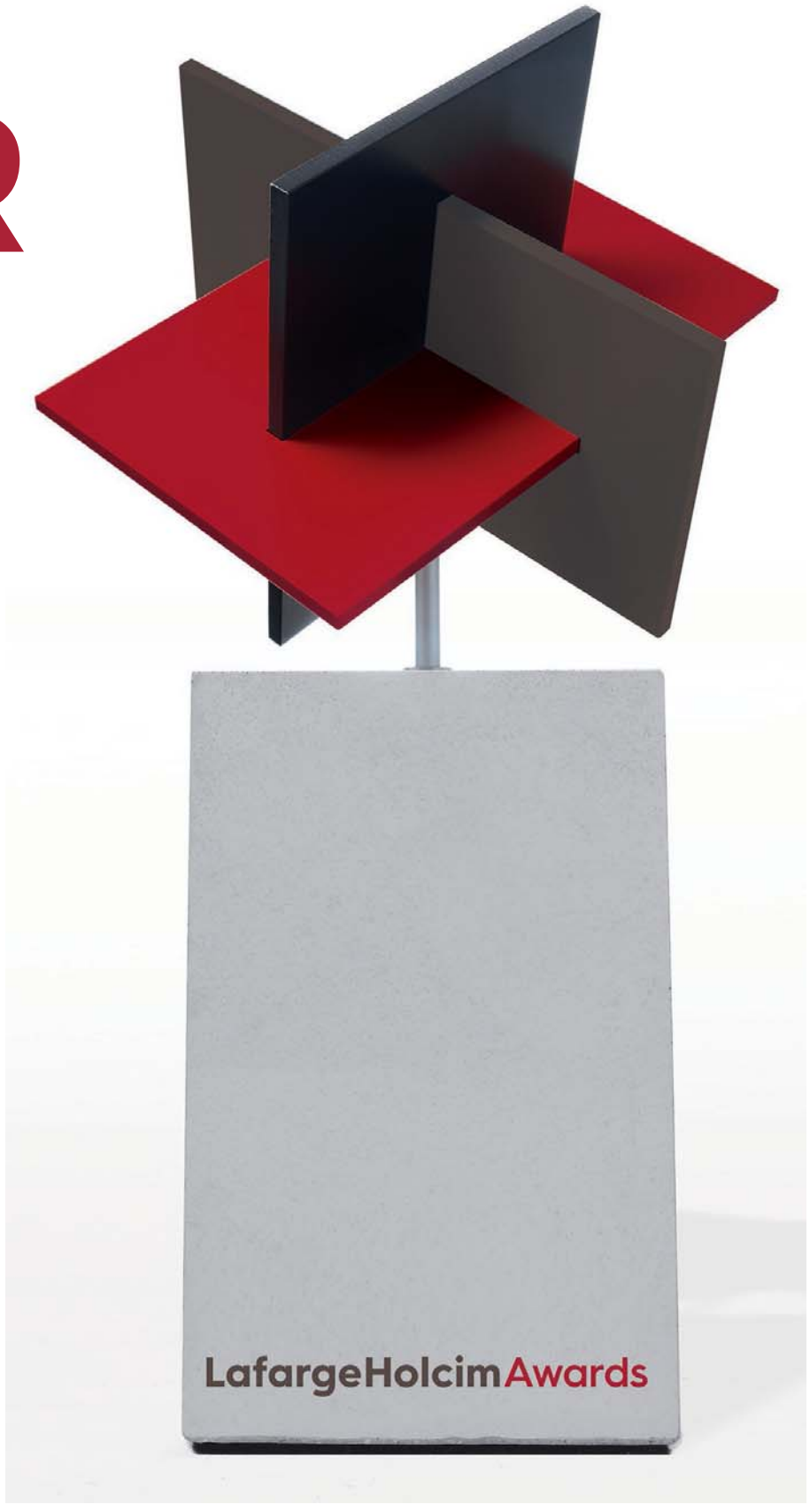
SO THE WORLD BUILDS BETTER



Known as the world's most significant competition in sustainable design, the LafargeHolcim Awards, which is into its fifth cycle, has recently chosen its regional winners for Asia Pacific.

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Shifting perceptions

KENNY YAP | THE EDGE

Schwarz (right) and Atkinson

BY **NATALIE KHOO**

When people talk about sustainability, what is the first thing that comes to mind? In the past, it would probably be buildings with a lot of greenery and open spaces. Well, that was then.

"[Previously], you call something sustainable when it is green, literally. You put a bit of greenery on the roof, and it is called sustainable. Those days are over.

"Today, if you want a building to be recognised as sustainable, it has to live up to the five target issues that the LafargeHolcim Foundation considers as sustainable construction from a holistic perspective," says Edward Schwarz, general manager of the LafargeHolcim Foundation for Sustainable Construction, Switzerland, who was in Kuala Lumpur for the recently concluded LafargeHolcim Awards 2017 Asia Pacific held on Nov 23.

The five target issues are progress (innovation and transferability), people (ethical standards and social inclusion), planet (resource and environmental performance), prosperity (economic viability and compatibility) and place (contextual and aesthetic impact).

They also serve as the basis for the adjudication process of the LafargeHolcim Awards competition.

"Generally, you can say that the construction has to make lives better somehow. It is about bringing [in] natural light and ventilation, using energy in the best way possible, as well as recycling. It is about how you build and how people are encouraged to use the staircase and not elevators," adds Schwarz.

The LafargeHolcim Awards for sustainable design is organised by the LafargeHolcim Foundation. Each cycle spans three years and it is currently into its fifth cycle.

"Because we are not specialists in construction, we work with experts from renowned universities around the world. Of course, sustainability or sustainable construction will not be the same in Bangladesh as, say, in Canada, thus we need the local support as well. So we have members on the Foundation's Board who are from all over the world to help keep us on the right track," offers Schwarz.

Meanwhile, LafargeHolcim Foundation board member and founding CEO of the Green Building Council of Australia Maria Atkinson AM notes that there is a need to keep up the momentum for sustainable construction to ensure whatever that is built will have a positive social impact and ultimately conserve resources.

Sustainability, she offers, is about balancing the environmental, social and economic aspects of a project. "The question to ask is whether we are building the right building for the future," says Atkinson.

"I would like to see the industry be more innovative and do things differently. We would like to see a lot more radical sustainable revolution. The industry needs to innovate; they need to set up buildings that can be there in the next 100 or 300 years," she adds.

According to Schwarz, it is ultimately about building better so that people can live better, and that means it has to be sustainable.

MOHD SUHAIMI MOHAMED YUSUF | THE EDGE

Playing a part in sustainable construction

Sustainable development is a growing concern worldwide and Lafarge Malaysia wants to contribute its part.

"We have a role in promoting sustainability by operating in a sustainable manner from start to end and through the materials we produce," said president and CEO of Lafarge Malaysia Thierry Legrand.

For instance, Lafarge Malaysia has developed Hydromedia, an environmentally sustainable concrete solution that was awarded the Best New Product (Building Material-Concrete) in the Best @ Show Awards by Greenbuild Asia 2012. This fast-draining concrete solution rapidly drains and channels storm water off streets, car parks, driveways and pavements, with the potential of being harvested and reused elsewhere, thus avoiding water ponding and floods.

"Materials suppliers should also be involved in the beginning of the project, at the design stage so that we can recommend the right materials for the right applications," he adds.

However, while the choice of materials is very important in sustainable construction, the design of the building is even more crucial because the main impact of a building on the environment is in the usage of the building such as from its lighting, cooling, and heating systems.

Hence the significance of the LafargeHolcim Awards, Legrand stresses. The LafargeHolcim Awards' which is into its fifth cycle, promotes sustainable construction through sustainable design.

Legrand believes the objective of the LafargeHolcim Awards encompasses more than just what the industry has and can do. "The entries can be built with other materials other than concrete because at the end of the day, it is about sustainable designs," he says.

The awards at a glance

What is it about?

The competition's objective is to seek building solutions and visions that go beyond convention to address the challenges of sustainability. Each competition cycle spans three years, from announcement to completion with a total of US$2 million (RM8.2 million) in prize money to be won. It is currently into its fifth cycle.

Awards organiser The LafargeHolcim Foundation for Sustainable Construction was created in 2003 to raise awareness of the important roles of architecture, engineering, urban planning and the building industry in achieving a sustainable future.

The competition first goes through the regional phase where independent juries supported by partner universities of the Foundation evaluate submissions in each of the five regions: Europe, North America, Latin America, Middle East and Africa, and Asia Pacific.

Projects in the main category that received Gold, Silver or Bronze in their respective regions automatically qualify for the Global LafargeHolcim Awards.

Categories

The main category is open to projects that are in the advanced stage of design with a high probability of execution (no restrictions to who may participate).

The Next Generation category is to seek out visions and bold ideas from young professionals and students (exclusively for authors younger than 30 years of age).

Evaluation

Based on five target issues:
Progress — innovation and transferability
People — ethical standards and social inclusion
Planet — resource and environmental performance
Prosperity — economic viability and compatibility
Place — contextual and aesthetic impact

Number of entries

As many as 5,085 projects from authors in 121 countries to be realised across 131 countries have been received in the current fifth cycle. Of that, 1,836 projects passed the formal and quality checks and were assessed by five independent regional juries, hosted by partner universities of the Foundation.

Timeline of the fifth cycle

- Submissions from July 4, 2016 to March 21, 2017
- Announcement of regional winners: September 2017 to November 2017
- Announcement of global winners: March 2018
- The sixth competition will open for entries in mid-2019

Prize money

REGIONAL
Main category
Gold — US$100,000 (RM412,540)
Silver — US$50,000 (RM206,270)
Bronze — US$30,000 (RM123,762)
Acknowledgement prizes — US$20,000 (RM82,508)

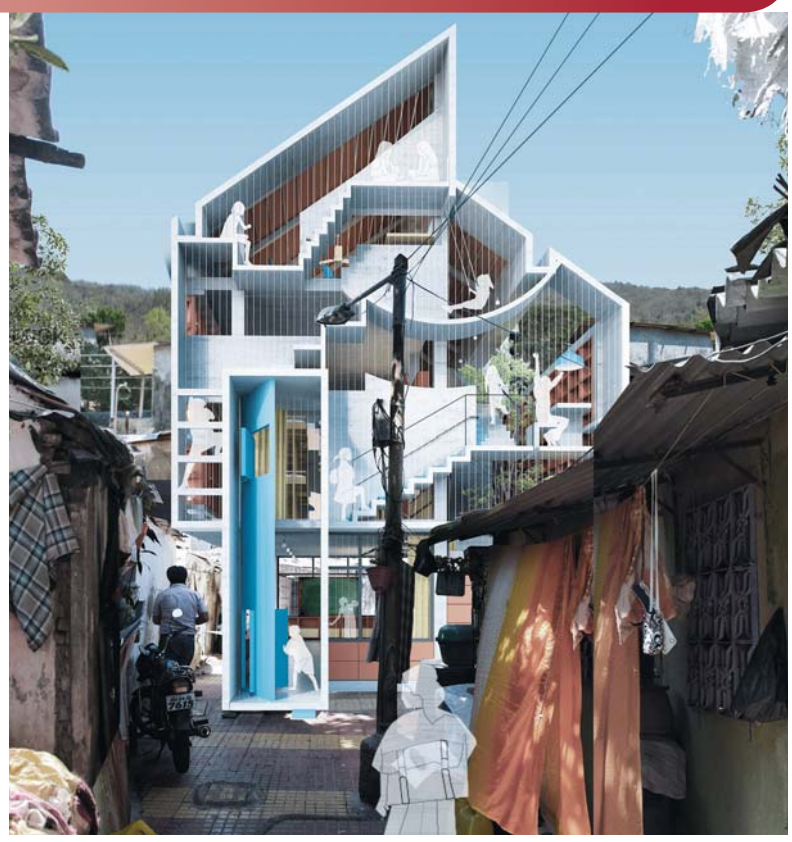
Next Generation category
First prize — US$25,000 (RM103,135)
Second prize — US$20,000 (RM82,508)
Third prize — US$15,000 (RM61,881)
Fourth prize — US$10,000 (RM41,254)

GLOBAL
Gold — US$200,000 (RM821,160)
Silver — US$100,000 (RM412,540)
Bronze — US$50,000 (RM206,270)

WINNER: GOLD

Achieving much with limited means

White Rabbit Home for marginalised children, Thane, India



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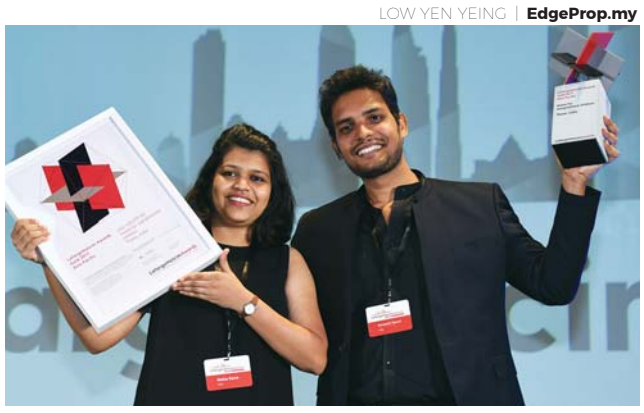

Neha (left) and Avneesh won the gold prize.

Many a time when we see a beautiful building, we admire the way it captures our attention, but do we ask whether the building impacts society and how it has changed the lives of those living in and around it?

The Gold Award winner of the LafargeHolcim Awards 2017 for Asia Pacific has, in its proposed design aesthetics and components, aimed to change the lives of the children who will be residing in it.

Designed by architects Avneesh Tiwari and Neha Rane of atArchitecture based in Mumbai, India, the project known as White Rabbit is to replace the current home for marginalised children located in Thane, India.

What's interesting is that every single component of the project has a function that addresses the five target issues of LafargeHolcim Foundation's focal points for evaluation of the award submissions.

At a media briefing following the awards night on Nov 23, Neha shared that the proposed project revolved very much around three main factors — the emotion, efficiency and environmental impact this project creates.

"This home was designed for children who are three to 16 years of age. The residents of this shelter are missing freedom and stability [in life] so this shelter aims to improve their lives and emotions," said Neha. The building will replace the existing facility, which is prone to floods and lacking in ventilation. It will be home to 30 children.

White Rabbit features three levels. The ground floor is planned as an open space for community activities including for senior citizens, for women's development activities and for a crèche. It is designed like a veranda that opens up to a private courtyard on the north side and partly to the adjoining lanes on the other three sides, covered by a first floor overhang.

"The middle floor is for the children to sleep in so it is more enclosed, personal and private, while the top floor will be used as storage space, study area and the caretaker's sleeping area. The top floor will shelter the children's living space from the direct sun," shared Avneesh.

The north facade is essentially a dead wall shared with an adjoining house. On the south side, there is a vertical nursery planted to reduce the heat coming into the living areas. The green wall can be installed using adjustable terracotta louvres for easy maintenance of the plants. Sun shades made out of thin folded plates of concrete located on the east and west create private recreational areas, effectively giving an additional 25 sq m of usable space.

The head of jury of the LafargeHolcim Awards 2017 in Asia Pacific and chair of Architectural Design, Faculty of Architecture, Building and Planning, University of Melbourne Australia Donald Bates noted that White Rabbit paid a lot of attention not just to details but details that do many things simultaneously.

"Every sq m or cubic cm tries to do something like shading the sun but at the same time storing a book; or provide privacy but at the same time provide a space for children's learning and exploration; or a rainwater harvesting system that is part of the structure.

"At the end of the day, it is all about improving lives through architectural intervention. The project is trying to use limited means for an expansion of possibilities."

WINNER: SILVER

Creating a space to raise literacy

Microlibrary Learning centre, Bandung, Indonesia

"Although reading is a scary thing for many, if we pair a well-designed building that can bring people together with community programmes, they will come," said Daliana Surywinata of SHAU Architects.

Daliana was talking about the Microlibrary, a learning centre in Bandung, Indonesia that was designed together with fellow architect from SHAU, Florian Heinzelmann.

Microlibrary, she noted, is not made up of a singular project but is a campaign to raise literacy by means of unique architecture and empowerment.

"[In 2030], Indonesia is expected to be one of the top five global economies. Yet our infrastructure is far from [being of a top global economy's]. It also needs to improve its Human Development Index. At SHAU, we like to think about the society — what [are the issues] going on in the world and how we can address these issues," shared Daliana.

She explained that in Indonesia, central libraries are not popular mainly because they are not easily accessible. Hence, the architects want to bring libraries closer to the community. In 2016, two Microlibraries were completed in Bandung.

The first pilot project in Taman Bima, Bandung was made by upcycling used ice cream buckets while the pattern of the facade is a coding of a message by Mayor Ridwan Kamil — "buku adalah jendela dunia" or "books are the windows to the world".

Meanwhile, Heinzelmann shared that four more Microlibraries are being planned. One of it is the Fibonacci Microlibrary in Taman Tegalega in Bandung, Indonesia, which emerged the Silver winner at the recent LafargeHolcim Awards 2017 for Asia Pacific.

"The Fibonacci Microlibrary is parametrically designed with spirally arrayed structure blends. At first sight, users do not perceive it as a library, but when they enter, they can just pick a spot and start reading. The three spiral rooms host a kiosk, a musholla and two toilets," said Heinzelmann.

In their submission for the LafargeHolcim Awards, it was proposed that the Fibonacci Microlibrary will be built using a combination of lightweight concrete structure, green roof, moss ceiling and artificial grass carpet.

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An artist's impression of Microlibrary

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Heinzelmann (left) and Surywinata were the recipients of the Silver winner at the Awards.

The green surface of the park is continued into all the horizontal surfaces in the library, which will allow visitors to experience going through a sequence of open and semi-open green spaces. The open pavilion also allows visitors to enter from any direction and offers cross-ventilation and natural lighting.

The head of the LafargeHolcim Awards 2017 Asia Pacific jury and chair of Architectural Design, Faculty of Architecture, Building and Planning of University of Melbourne, Australia Donald Bates notes that this project has put together simple components in creative ways and has achieved complexity with minimal means.

"In terms of its design, it's not a singular design repeated a hundred times. Every building responds to the needs of the local community in the urban context," said Bates. The jury noted that by multiplying small, inviting, reading spaces without replicating a single design structure, it constructs a territorial project reinforcing literacy and defining community.

SHAU Architects intends to build 100 Microlibraries in Indonesia.

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WINNER: BRONZE

New life for a polluted swamp

Floating University BRAC University campus, Dhaka, Bangladesh

What can one possibly do with a piece of polluted swamp land?

In Dhaka, Bangladesh, Singapore-based WOHA has come up with the design for a university campus that floats on a pond — and what's more, the overall design supports the cleaning of the pond.

Rapid urbanisation has resulted in the displacement of the city's water bodies, vegetation, wildlife and open, civic spaces, resulting in a dusty, harsh environment, and the site for the BRAC (Building Resources Across Communities) University campus site was no exception.

"It was a stinky muddy pond in the middle of the neighbourhood but we decided to make use of the space and designed the BRAC University campus building to be above the pond," said Richard Hassell and Sim Choon Heok, architects at WOHA Singapore.

"The new campus aims to bring back some of the lost biodiversity in the city, as well as to create a conducive space for learning and for human interaction," added Hassell at a media briefing following the awards night of the LafargeHolcim Awards 2017 for Asia Pacific where the BRAC University campus proposal received the Bronze Award.

To attract the lost biodiversity in the area to return, the proposal offers vertical gardens and edge-stacked planters with plants that attract insects and other animals. The team also suggested a roof lawn with fruit trees that could attract pollinating bees, as well as form a bird habitat.

"We will also have water features that recreate an ecosystem with local plants, forming a habitat that supports biodiversity," Hassell said.

The jury for the awards observed that sustainability is deeply integrated into the building design, from thermal zoning to serious reductions in the use of energy and water. The swamp itself is first turned into a bio-retention pond. "Particularly commendable is the way a single building is conceived as a larger rejuvenation project for the city," the jury stated.

Given the urban lake site, the vision is to present an innovative and sustainable inner city campus that exemplifies tropical design strategies in response to the hot, humid, monsoon climate while demonstrating the sensitive integration of nature and architecture. The main design strategy is to create two distinct programmatic strata by floating the academia above the lake and revealing a campus park below, which is the public interface and heart of the university.

The jury believes that the project will set a new benchmark for sustainability in Asia as the design remediates a natural area in the city, allowing both the university and the public to inhabit the site.

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The author of the project aims to bring back some of the lost biodiversity to the city.

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Project authors from WOHA (from left) Hassell, Sim and Jalal Ahmed received the prize from head of jury of the Lafarge-Holcim Awards 2017 in Asia Pacific Donald Bates on Nov 23.

ACKNOWLEDGEMENT PRIZES

Catenary Arches
Rayong, Thailand

Main author: Boonserm Premthada (architect) from Bangkok Project Studio, Bangkok, Thailand

Catenary Arches or the Ban Chang Town Hall is a community hub in a Thai village in Rayong which is designed to multiply opportunities for cultural and community activities in the village. The building is a series of concrete catenary arches curving in different directions. With an open-air design, it is intended to be functionally vague to host varied activities.

The jury enjoyed the playfulness of this surreal pavilion. They also appreciated that the community leaders and architect have worked together to gain support for the project from locals and the public sector.

Growing Grassroots
Parung, West Java, Indonesia

Main authors: Muhammad Kamil (architect) and Brahmastyo Puji (architect) from pppooolll, Jakarta, Indonesia

The project is a training centre for young farmers interested in organic agriculture in Parung, West Java. The training centre is mainly made of locally available materials such as bamboo, which the jury very much appreciated.

The jury also liked the effort of the organisation Urban Poor Consortium to build a training centre as a form of counterpoise to unrestrained real estate development that more often than not compromises agricultural land in favour of urban growth.

Maximize the Minimum
Beijing, China

Main authors: Yue Zhang (academic), Liying Wu (student), Peiming Li (student), Cong Nie (student), Mengxing Cao (architect), Yue Wang (architect) from Tsinghua University, Bejing, China, and Shimeng Hao (academic) from Beijing Univeristy of Civil Engineering and Architecture

Located in Beijing's west downtown district, Maximize the Minimum is an urban regeneration project of a high-density informal habitat in the Baitasi historic neighbourhood.

Instead of replacing existing buildings with new construction, the proposed scheme empowers local stakeholders and on-site residents to upgrade infrastructure and public services, while encouraging them to improve their housing and workshop units themselves.

The jury appreciated its aim to support the low-income populations in their effort to remain on site, as well as the methods used to identify the needs of inhabitants through door-to-door interviews and meetings. The responses were translated into the comprehensive upgrading proposal for the improvement of infrastructure, public services and living spaces.

Water Collective
Thecho, Nepal

Main authors: Miho Mazereeuw (director and associate professor), David Moses (research scientist), Aditya Barve (research scientist), Larisa Ovalles (research associate) and Hugh Magee (graduate student) from Massachusetts Institute of Technology, Urban Risk Lab, Cambridge, USA

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The proposal is for a multi-functional public space to be built on the former site of a guest house that was destroyed during an earthquake in 2015. The project features a water tank as its centre to collect and store rain water, which is filtered into safe water for the community. Above the tank is a community space that can also be used as an emergency shelter.

This project is highly appreciated by the jury because the space is equally suitable for everyday life as well as times of crisis. The social and infrastructural solution is also highly transferable.

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NEXTGEN — WINNER: 1st PRIZE

Powered by the community

Low-rise, high density Participatory village transformation, Guming, Nanning, China

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An artist impression of Guming Village.

About 20km west from Nanning, China lies a heritage village called Guming. "It is rather quiet and tired with the majority of the villagers made up of old people, because the younger ones have left the village to seek a better life in cities. The village's lack of economic activities offer very limited job opportunities," said Mengyuan Zhu, a student from Southeast University in Nanjing who had developed a design model for transforming and revitalising the village.

Zhu's proposed design won first prize in the Next Generation category of the LafargeHolcim Awards 2017 for Asia Pacific. The Next Generation category is open to students and professionals of up to 30 years of age. This category seeks visionary projects and bold ideas, and gives young professionals public exposure and a platform to gain recognition.

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Co-author Fei Yu and Zhu (right).

Zhu and her team were determined to modernise the village by adopting the self-renewal pattern based on two aspects —independent involvement and community empowerment.

She explained that independent involvement focuses on the requirements of the villagers and encourages self-expression and public participation.

Meanwhile, community empowerment aims to optimise the industrial structure, strengthen the villagers' sense of belonging and improve their living and working environment.

"The final target is to accelerate the sustainable development of Guming village," Zhu noted.

She emphasised the village's unique characteristics and resources utilisation such as the Zhuang Culture, its herb forest, weaving and rammed earth construction, and encouraged more relevant activities to increase income, all of which will eventually enhance their quality of life.

She said a proposed herbal products experience centre, the ecological restaurant, the homestay and guest house, the centre for weaving, the culture museum, the farmers and flea market, and the tourist centre are all part of the overall masterplan for Guming Village over the next 20 years.

The jury appreciated the delivery of how modernisation might evolve within the context of a rural village, without taking recourse to tabula rasa strategies.

The jury also like the fact that the project offers a discourse on how to bridge the gap between historic preservation and the need to modernise, as well as measures taken to promote a form of habitation based on low-rise, high-density structures as opposed to high-rise, high-density responses — that could well evolve as a transferable model for future urbanisation in general, whether in China or other regions of the world.

NEXTGEN — WINNER: 2nd PRIZE

The making of a genius loci

Sacred and Profane Water treatment infrastructure, Varanasi, India

Water is the source of all life. And in India, many depend on the 2,525km-long holy Ganga or Ganges River. However, the once-pristine waters are severely polluted. To this, architect Vedhant Maharaj has proposed to clean the polluted river through a national network of localised infrastructures.

"By implementing a network of rehabilitation infrastructures along the river at all polluting tributaries, a 5,000km-long infrastructural system, which adapts to various city conditions, is created," says Vedhant, who is an architect with Rebel Base Collective, based in Johannesburg, South Africa.

At the LafargeHolcim Awards 2017 for Asia Pacific, Vedhant's proposed design for such an infrastructure in the city of Varanasi, on the banks of the Ganges River in North India, brought home the second prize in the Next Generation category.

He said it will create a prototype that forms a catalyst for cleaning the whole river.

The Next Generation category is open to students and professionals of up to 30 years of age with emphasis on visionary projects and bold ideas.

According to Vedhant's proposed water treatment infrastructure, the river water is filtered through a series of charcoal and plant gabion walls. It then enters a "safe-water" stream along the river's edge. The design is a response to the heritage, vernacular, sacred and ecological conditions of Varanasi.

Meanwhile, the built form fits into the heritage fabric of the majestic millennia-old stepped promenade of the city by mimicking its sacred form. This respects Varanasi's aesthetic quality and creates a gentle unimposing infrastructure into an old sacred city.

"The building responds to the changing conditions both spatially and systematically. Floating wetlands are accessible all year round when the building becomes submerged. The wetlands and gabions gain ecological efficiency over time as plants grow in them. The building ages in a way that allows it to merge into the natural heritage," he says.

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Vedhant's proposed design attempts to treat the highly polluted Ganga River in India.

Also included at the site are a number of treated water bodies that facilitate safe and convenient consumption as well as the practical, recreational and ritual uses of water.

The jury said the proposal is not about the treatment of the highly polluted water, but most importantly "the making of a genius loci, uniting the sacred with the profane".

The jury was also impressed with the skilful presentation of the project's ideas and greatly appreciated the clarity and beauty of the submitted drawings that intelligently refer to Indian traditions while acknowledging the present.

The jury valued the author's objective to regard infrastructure as more than a mere servant to utility — to be reclaimed as a truly public resource and thus a matter of design.

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NEXTGEN — WINNER: 3rd PRIZE

More than just a school

School Hub Vocational training facility, Ruteng, Indonesia

Taking on the challenge to design a school that functions more than a school has led young architects Andi Subagio, Danna Rasyad Priyatna and Theodorus Alryano Deotama at SASO, Jakarta, Indonesia to come up with an award-winning proposal for the vocational teaching and learning facility in Ruteng on the island of Flores in Indonesia.

Their proposed design offers to turn the town's existing temporary school barrack as well as the state's current educational curriculum into not just a vocational school but a community hub for the city, offering event spaces, a visitor centre and a testing ground for local construction materials, among others. The proposed project received the third prize in the Next Generation category of the LafargeHolcim Awards 2017 for Asia Pacific.

"The school currently produces 'batako' or bricks of poor quality. However, the people in the city [still] buy because there are no better options available.

"With the development of this school, both architects and contractors can increase the quality of 'batako' or bricks and set the quality benchmark for the whole of Ruteng," said Andi, who is the main author of the vocational training facility.

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(From left) Danna, Andi and Theodorus at the awards ceremony.

He added that flores bamboo is one of the best building materials in the world. "Unfortunately, it is rarely known and utilised due to the lack of skills and knowledge.

"Hence, the development of this building will encourage a major use of bamboo materials to raise awareness among people.

"Furthermore, to share the functional skills with the people of Ruteng, the construction of the school will be based on an open participatory method," added Andi.

Noting that the school is currently managed by a non-profit institution with very limited funds, the architects believe that there is a need for the school to be self-sufficient by organising events on the school grounds.

"Following the rise in living standards, the city will also have increased demands for new building technology and public services, which the vocational school could supply. In addition, the school will generate well-educated young people who can contribute to better future city developments," said Andi.

The jury commended the young architects' ethical posture and their courage to engage with existing challenges where problems are perceived as opportunities to not only create a vocational school but also a centre strongly connected to the community at large.

The proposed structures explore local materials and assembly techniques, developed by both students and teachers to create a hub that could contribute to the town's economic long-term livelihood.

According to the jury, this is a project with a clear thesis and a strong conviction that architecture can play a role in community building.

The most encouraging feature of the project is the idea to empower local craftsmen, through education and vocational training, with a focus on sustainable construction and the promotion of local materials.

NEXTGEN — WINNER: 4th PRIZE

Restoring balance to the ecosystem

Meta(bio)lism Exploring resilient ecosystems, Taichung, Taiwan

Dashu town in Taichung, Taiwan is known for its high-quality clay or kaolin soil, which owes its formation largely to Gaoping River's erosion of the weathered rocks on the upstream banks of the river, moving downstream and eventually settling on the plains in Dashu.

However, the overdevelopment of Dashu town has encroached into the flood plains, and consequently embankments have to be built as protection from the routine floods from the overflowing Gaoping River.

"The embankments are highly problematic, not only because they are not able to efficiently halt the floods, but also because they obstruct the people from mining the kaolin soil efficiently and from developing a sustainable industry for the town," explains Tzu-Jung Huang, a student of Feng Chia University in Taichung City,

This has prompted the search for alternative proposals to the current and future development of the clay-mining town by the river to which Huang has responded with a proposal called "Meta(bio)lism", which won the fourth prize in the Next Generation category of the LafargeHolcim Awards 2017 for Asia Pacific. This category emphasises visionary projects and bold ideas and is open to students and professionals of up to 30 years of age.

At a media presentation following the awards presentation on Nov 23, Huang said the objective of the proposal was to explore the relationship between human construction and natural ecosystems. Hence, in Meta(bio)lism, he has proposed an energy and resource re-use strategy as well as a masonry system that people can adapt under the effects of extreme weather, while creating new industrial opportunities for Dashu.

"The use of the performative landscape device in the proposal will not only redirect flood waters but also allow a more efficient and sustainable mining of the kaolin soil.

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Huang said the objective of the proposal was to explore the relationship between human construction and natural ecosystems.

"Through the intervention of Meta(bio)lism, the ecosystem will be restored to a sustainable balance over time, and people in Dashu will rediscover their relationship with nature — one that is both harmonious and prosperous," added Huang.

According to the awards jury, material stocks and flows are addressed at multiple scales, ranging from studies of local materials, such as clay, to the investigation of construction assemblies for roof structures at the building scale as well as examinations of urban patterns at the territorial scale.

The jury found that the project revealed a deep sensibility for social, technical and environmental concerns — all combined and transformed into a stunning research for an architecture of the future.

The jury was also impressed by the scheme's exuberant deployment of architectural and technical means — both analogue and digital — to explore a broad range of important themes related to sustainable construction.

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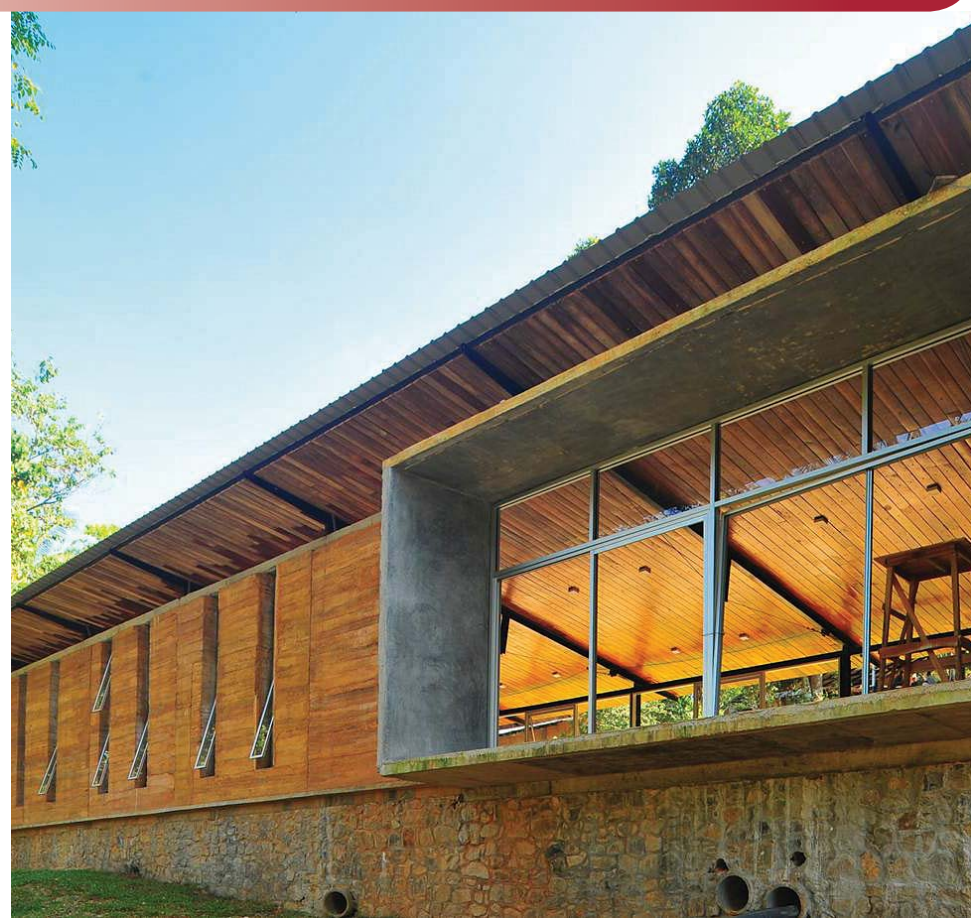
SPECIAL REPORT

BUILDING BETTER RECOGNITION

Where the focus is on the building process

Post-war Collective Colombo, Sri Lanka

Community library and social recuperation



LAFARGEHOLCIM FOUNDATION

Milinda (below) designed a community library built with the support of former army personnel.

LOW YEN YEING | EdgeProp.my

Over the years, more than 200 projects worldwide have been recognised at the LafargeHolcim Awards. More than half of these winning projects have been built or are scheduled for completion soon.

To underscore the fact that the LafargeHolcim Awards is never just about building "castles in the air" but about tangible measures that can be taken to advance the science of construction, a new award has been initiated in 2017 — the LafargeHolcim Building Better Recognition award.

The award is given to a winning project from previous competition cycles which has been realised and has stood the test of time as a particularly successful example of sustainable building.

The inaugural winner for Building Better Recognition Asia Pacific went to Robust Architecture Workshop, Colombo, Sri Lanka, for its project called Post-War Collective, a community library and social recuperation project. It was the Bronze winner of the Regional LafargeHolcim Awards 2014 for Asia Pacific and then emerged the Silver winner at the Global LafargeHolcim Awards 2015.

The main author of the project, Milinda Pathiraja, designed the community library in Ambepussa, Sri Lanka, which was then built with the support of former army personnel who were engaged in the nation's civil war. It shows that "turning swords into ploughshares" can be realised even today. The construction methods were selected specifically to help transition members of the army to civil life. A regional army squadron, with the assistance of the local community, constructed the building.

The approach focuses as much on the building process as on the building's physical aspects, to celebrate a specific understanding of sustainable architecture derived from the very structure of its making.

The library, completed in 2015, was the first LafargeHolcim Awards recipient to host its prize handover ceremony in the winning building itself.

The jury was impressed that it outlines a set of tangible measures, ranging from the introduction of an educational programme to the deployment of particular construction techniques.

Today, the library is a reality for soldiers at camp and neighbourhood children alike. It is also the source of knowledge for veterans and the local community.

MALAYSIA'S SUCCESS

Giving joy through architecture

BY **NATALIE KHOO**

PICTURES COURTESY OF KEN YEANG

Suasana Putrajaya's main component is the central promenade, which aligns in an axis to the Millennium Monument — also designed by Yeang's firm.

Yeang: It is in our company's DNA... We do super-green buildings automatically.

Designing a sustainable building comes with challenges, including the cost. One can expect to pay 5% to 15% more to build a certified green property before one can reap the benefits that can be translated into savings in water and electricity bills.

However, it is something that architect Datuk Ken Yeang and his firm T.R. Hamzah and Yeang just take in their stride as their designs, Yeang says, are green by default.

"It is in our company's DNA. It is in our design process and second nature to us. We do super-green buildings automatically," he shares.

However, sustainability is merely one element that influences their designs.

"Our work is primarily driven by our goal to give pleasure and joy to the users of the buildings we design, in their public realm. We seek to make people happy. If we are able to make their users and visitors happy, we have fulfilled our role as architects," he explains.

Their passion is reflected in its projects including Suasana Putrajaya, a mixed-use development at Precinct 2, Putrajaya, which earned Yeang the Bronze award at the LafargeHolcim Awards Asia Pacific in 2012.

Located along Putrajaya Boulevard, Suasana Putrajaya comprises two 14-storey blocks of offices, each with a 7-storey podium consisting of retail units and offices.

One of the project's main components is the central promenade, which aligns in an axis to the Millennium Monument — also designed by Yeang's firm — by the waterfront.

The promenade between both towers consists of a landscaped plaza with wide green open spaces, seating pavilions, linear planting areas, relaxation zones and temporal event spaces. The goal is to provide a pleasurable public realm for people, Yeang explains.

The Green Building Index-rated building uses an experimental sunshade that is made from an outer glass-skin with a white fritted pattern that gives solar shading to the inner skin.

"The inner skin is vertical while the outer skin is faceted and shaped like the face of a diamond, which is a metaphor for the building's configuration. The white fritted design also reduces solar insolation into the building and has the traditional 'songket' pattern that provides the crucial Malay cultural link to an otherwise contemporary building," Yeang describes.

The promenade's shop fronts also have similarly-patterned extended shaded glass. "Informally-shaped planters lie amid the seating area while the landscaping was designed based on ecological studies of the locality's native fauna and flora," he adds.

The project is a showcase of sustainable responses to technological, environmental, socio-economic and cultural issues affecting contemporary building and construction.

What does Yeang hope to see in the Malaysia architectural scene in the next decade?

"There is immense talent in Malaysia. It will be great if the nation's inherent talents get the world recognition they deserve. I see my role today as helping the existing architect profession and the young achieve due recognition. It seems it just requires engendering their self-confidence so they can fly," he concludes.

Regional winners 2017

Asia Pacific

Gold
White Rabbit, home for marginalised children (India)

Main author(s)
Avneesh Tiwari and Neha Rane – atArchitecture, Mumbai, India

Silver
Microlibrary, learning centre (Indonesia)

Main author(s)
Florian Heinzelmann and Daliana Suryawinata – SHAU, Bandung, Indonesia

Bronze
Floating University, BRAC University campus (Bangladesh)

Main author(s)
Mun Summ Wong – WOHA, Singapore

Further author(s)
Richard Hassell and Sim Choon Heok – WOHA, Singapore; Jalal Ahmed – J.A. Architects, Dhaka, Bangladesh; Wolfgang Kessling – Transsolar Energietechnik, Munich, Germany

Next Generation
Asia Pacific

First prize
Low-rise, high-density, participatory village transformation (Nanning, China)

Main author(s)
Mengyuan Zhu – Southeast University, Nanjing, China

Further author(s)
Xing Yifan, Yu Fei and Pei Yifei – Southeast University, Nanjing, China

Second prize
Sacred and Profane, water treatment infrastructure (India)

Main author(s)
Vedhant Maharaj – Rebel Base Collective, Johannesburg, South Africa

Third prize
School Hub, vocational training facility (Indonesia)

Main author(s)
Andi Subagio – SASO, Jakarta, Indonesia

Further author(s)
Danna Rasyad Priyatna – SASO, Jakarta, Indonesia and Theodorus Alryano Deotama – Jakarta, Indonesia

Fourth prize
Meta(bio)lism, exploring resilient ecosystems (Taiwan)

Main author(s)
Tzu-Jung Huang – Feng Chia University, Taichung, Taiwan

North America

Gold
Grassroots Microgrid, bottom-up neighborhood planning (Detroit, USA)

Main author(s)
Constance C. Bodurow – studio[Ci], Detroit, USA

Silver
Stacked, modular midrise housing (Vancouver, Canada)

Main author(s)
Cynthia Wilson and Oliver Lang – LWPAC + Intelligent City, Vancouver, Canada

Bronze
Global Flora, net-zero greenhouse for Wellesley College (Boston, USA)

Main author(s)
Sheila Kennedy and Frano Violich – Kennedy & Violich Architecture, Boston, USA

Next Generation
North America

First prize
Cooling Roof, prototype for an evaporative roof for radiant cooling (Cherry Valley, California, USA)

Main author(s)
Georgina Baronian – Princeton University, Princeton, USA

Second prize
Relational Urbanism, protocol for agent-based neighborhood transformation (Vancouver, Canada)

Main author(s)
Jason Heinrich – University of British Columbia (UBC), Vancouver, Canada

Third prize
Synanthropic Suburbia, retrofitting residential neighborhoods (Markham, Ontario, Canada)

Main author(s)
Sarah Gunawan – University of Waterloo, School of Architecture, Waterloo, Canada

Fourth prize
Airflow Carving, climate control experiments for enhanced comfort levels (Boston, USA)

Main author(s)
Peteris Lazovskis – Harvard University, Cambridge, USA

Latin America

Gold
Hydropuncture, publicly accessible water retention and treatment complex (Mexico City, Mexico)

Main author(s)
Manuel Perló Cohen and Loreta Castro Reguera – Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico

Silver
Community Capital, neighborhood center in Paraisópolis (São Paulo, Brazil)

Main author(s)
Sol Camacho Davalos – Raddar, São Paulo, Brazil; Jonathan Franklin – Exxpon, São Paulo, Brazil

Bronze
Urban Circulatory System, sanitation system in informal communities (Rio de Janeiro, Brazil)

Main author(s)
Eva Pfannes and Sylvain Hartenberg – Ooze Architects, Rotterdam, Netherlands

Next Generation
Latin America

First prize
Territorial Figure, tidal energy landscape (Punta Loyola, Argentina)

Main author(s)
Stefano Romagnoli, Juan Cruz Serafini and Tomás Pont Apóstolo – Universidad Nacional de Córdoba, Córdoba, Argentina

Second prize
Clearwater Revival, public baths and sewage treatment plant (Cerro de Pasco, Peru)

Main author(s)
Boris Lefevre – Marseille, France

Third prize
Service Points, public facility towers (Córdoba, Argentina)

Main author(s)
Ángela Ferrero, María Augustina Nieto, María Belén Pizarro, Seizen Uehara and Lucía Uribe Echevarria – Universidad Nacional de Córdoba, Córdoba, Argentina

Fourth prize
Revealing Infrastructure, multipurpose telecommunication towers (Medellín, Columbia)

Main author(s)
Alejandro Vargas Marulanda, Daniel Felipe Zuluaga Londoño and Iojann Restrepo García – Universidad Nacional de Colombia – Sede Medellín, Medellín, Colombia

Europe

Gold
Logistics Framework, adaptable structure for a garbage collection company (Brussels, Belgium)

Main author(s)
Ana Castillo, Jan Terwecoren, Lieven De Groote and Annekatrien Verdick – TETRA architecten, Brussels

Gold
Mix-City, urban integration of an existing concrete mixing facility (Brussels, Belgium)

Main author(s)
Wes Degreef, Ken De Cooman, Nicolas Coeckelberghs, Laurens Bekemans and Jasper Poesen – BC architects & studies, Brussels, Belgium

Bronze
Air Rights, zero energy development units on parking lots (London, United Kingdom)

Further Author(s)
Bill Dunster – ZEDfactory, London, United Kingdom

Next Generation
Europe

First prize
Ecommunity, converting a factory into housing (Lodz, Poland)

Main author(s)
Malgorzata Mader – Lodz University of Technology, Lodz, Poland

Second prize
Modern Sanctuary, monastery conversion for a behavioral addictions rehabilitation facility (Otyn, Poland)

Main author(s)
Jakub Grabowski – Gdynia, Poland

Third prize
Liquid Era, new spatial concepts for the city of the future (Kazan, Russia)

Main author(s)
Anna Andronova – Kazan State University of Architecture & Engineering, Kazan, Russia

Fourth prize
Slow Burn, fire cistern and forest shelter (Collobrieres, France)

Main author(s)
Frédéric Bouvier – Renens, Renens, Switzerland

Middle East Africa

Gold
Legacy Restored, religious and secular complex (Dandaji, Niger)

Main author(s)
Mariam Kamara – atelier masomi, Niger; Yasaman Esmaili – studio chahar, Iran

Silver
Weaving and Stamping, elementary school and craft training center (Ait Benhaddou, Morocco)

Main author(s)
Fatima-azzahra Bendahmane – Ecoactiva, Casablanca, Morocco

Bronze
Pavilion Re-claimed, adaptive reuse for refugee education (El Marj, Lebanon)

Main author(s)
Joana Dabaj – CatalyticAction, Tripoli, Lebanon; Riccardo Conti and Matteo Zerbi – CatalyticAction, London, United Kingdom

Next Generation
Middle East Africa

First prize
Brick-Works, brick kiln and incremental development project (Soshanguve, South Africa)

Main author(s)
Heidi van Eeden – University of Pretoria, Pretoria, South Africa

Second prize
Recovering Aleppo, rubble recycling units (Aleppo, Syria)

Main author(s)
Nour Madi – American University of Beirut (AUB), Beirut, Lebanon; Jad Melki and Ghaith Abi Ghanem – GHAITH&JAD Architecture and Design, Beirut, Lebanon

Third prize
(In)formal Pattern Language, designing processes for informal settlements (Cairo, Egypt)

Main author(s)
Nada Nafeh – The American University in Cairo, Cairo, Egypt

Fourth prize
Steps of Amman, urban stair and library (Amman, Jordan)

Main author(s)
Noor Marji – German Jordanian University, Amman, Jordan