

STUDIOS



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Francis Kere

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Lycée Schorge/Burkina Institute Of Technology (BIT)



Demetre Anastassakis

São Francisco Settlement

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Moradas Da Saude Settlementt



Kunle Adeyemi

Makoko Floating School

Waterfront Atlas

Minne Floating School



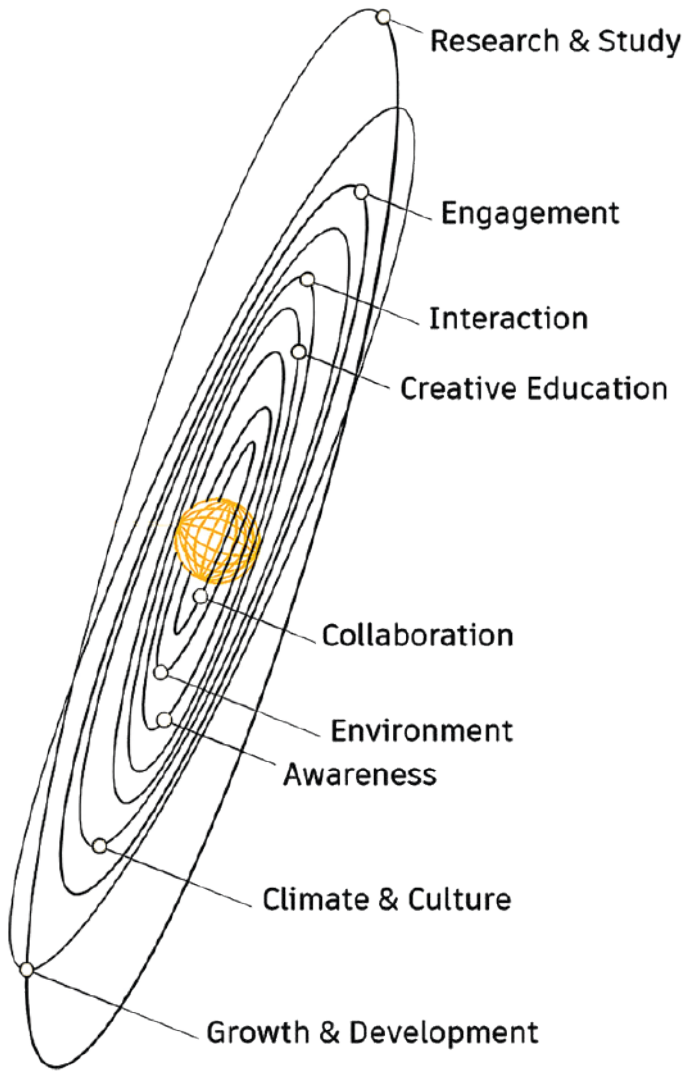
HOME

TOWN



COMMUNITY

WE PURSUE TO INCREASE **BELONGING**



ORKID STUDIO

Orkid studio creates high quality, healthy and dignified buildings, through an exceptional end-to-end design and construction process, which use local materials and promote opportunities for women. They believe that everyone deserves good design. As Africa's urban centres grow rapidly, the subsequent burden on buildings and public infrastructure is a very real and urgent challenge. A well-designed built environment is critical to public health, economic growth and environmental resilience. Their unique end-to-end design and construction service is bringing a new approach to healthier, more dignified and human-centred architecture, and a high quality, efficient and socially-focused construction.



The Mutende Project II
Nakuru Project
Community Primary School For Girls

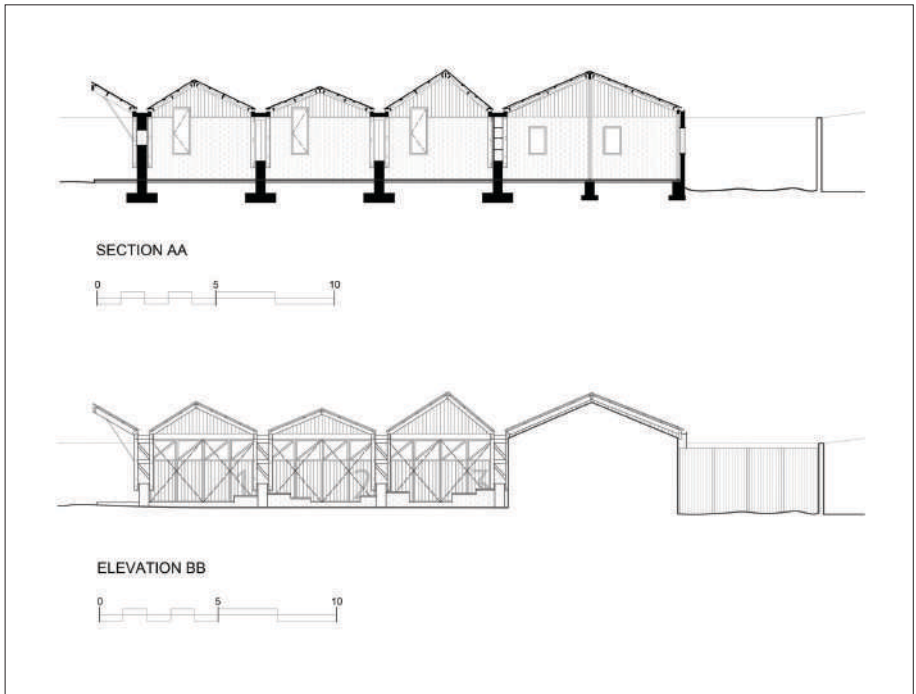


The Mutende Project II

Chingola, Zambia 2013

The Mutende offer opportunities for orphans and abandoned children to be cared for in a loving, family environment, whilst the school provides education to many more of the local children. The school contains lots of facilities for children. These new facilities have almost doubled the existing study space and enable the school to provide education for significantly more children in the area. With a simply L-shaped classroom block already on the site, the new structure mimics the existing roof pitch at the rear of the site before cascading forwards below a variably-pitched concertinaed canopy. Designed to give the impression of a single foil sheet folding out towards the entrance, the roof cantilevers out and welcomes visitors into the shaded space below. Instead of a concrete slab foundation, the timber structure sits on large reinforced concrete pads. Fired mud-brick walls wrap around the structure like a skin, dividing spaces accordingly. Components of the building such as this sit off the primary structure, bearing no structural loads, and therefore capable of operating on a more flexible schedule within the full programme of works.





The Mutende Project II, Chingola, Zambia 2013



In an effort to counteract degradation due to termite infestation, the timber structure is set off the foundation pads and a clear 800mm above floor level. Working throughout term time, the Orkid studio team were able to engage with the children, teachers and local community to discuss their vision for the school and changes were made throughout in order to provide spaces which responded to the daily life of the school. The form of the new structure creates a new courtyard space at the heart of the school. To celebrate this space and the transition into the large covered canopy of the new build, the perimeter masonry footing rises up around the column bases to craft informal seating at both child and adult heights. Large graphic lettering and numbers playfully identify each classroom and large gutter trays extend into the courtyard creating water collection points below and housing electrical service cores within the channels below.



Nakuru Project

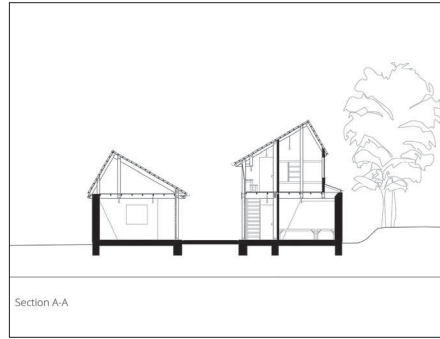
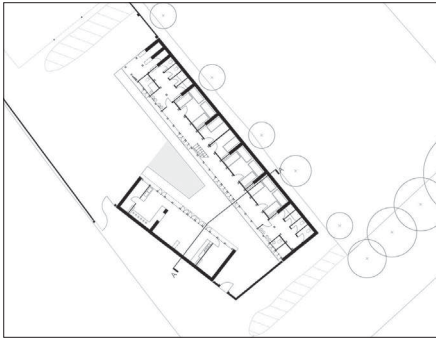
Nakuru, Kenya 2014

Orkid studio, has recently completed a new home which will house local disadvantaged and abandoned children. Challenging the typology of the typical African orphanage where children sleep in mass in large dormitories, the new home limits each room to just four children providing ample space and natural light, and is characterised by a range of different social spaces from open communal areas to quiet nooks and crannies offering space to study, read or simply relax. The studio operates with the belief that the process of design and construction can be a tool for affecting social change and empowering people through the sharing of skills and knowledge on site. The local area is widely populated with stone and concrete houses, many of which are typically left incomplete as their owners struggle to fund the materials to complete each phase. In response, the new home, known as the St Jerome's Centre, is made from earthbags, utilizing the large quantities of soil generated from foundation, sanitation and rainwater storage excavation. The local soil, which has around %20 clay content, is packed into everyday grain bags and laid like oversized bricks to create deep, durable walls which also effectively absorb heat from the sun, helping regulate temperatures during the cooler nights.





Nkuru Project, Nakuru, Kenya 2014



The dwelling also features a timber cladding made from pillar cores, a by-product of veneer processing and a material which is often discarded as waste. Additionally, a rainwater harvesting system and integrated community tap provide a unique source of clean running water. Completed in just eight weeks and with added help from a small group of architecture students representing schools across the UK, there were as many as seventy people on site each day, including local women who worked alongside their male counterparts for an equal wage, setting a rare precedent for employment in the area. Many of the team, men and women, have since been approached for work in direct connection with the project, including a couple of commissions to build more earthbag homes and help pass on these skills to others. The new home also features a timber cladding made from pillar cores, a by-product of veneer processing and a material which is often discarded as waste. Additionally, a rainwater harvesting system and integrated community tap provide a unique source of clean running water. Nakuru has been a fantastic project to be involved with, and the studio is delighted to support such an inspiring and expedient build.



Community Primary School For Girls

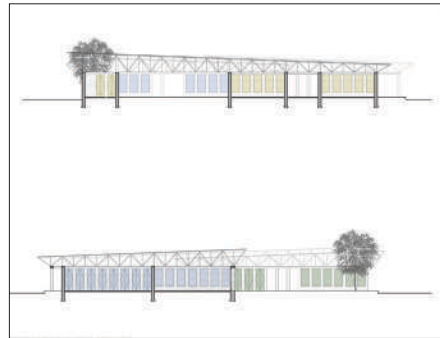
Kenema, Sierra Leone 2016

Swawou School Foundation is a UK registered charity that raises funds and support for the Swawou Layout Community Primary School for Girls. The primary school is based in a small community – Swawou Layout – on the outskirts of Kenema town, eastern Sierra Leone. Swawou provides free quality primary education to girls from disadvantaged backgrounds. Swawou is based on the child friendly school model, where the rights of the girls are respected and celebrated. This group doesn't believe in the use of corporal punishment, they have low teacher pupil ratios and provide free school lunches. This has resulted in a happy and safe environment for the girls, where they have the confidence and encouragement to thrive. The Swawou Foundation sought to provide extensive new learning facilities for up to 120 young girls from the local area. The building was voted the 'best school in Sierra Leone' on a national radio station before it even had a roof on. Yet, just four weeks from completion, and with the final roof sheets still uninstalled, progress was brought to a halt and site closed as the first confirmed cases of the Ebola virus hit the region. Even then, misguided rumours of witchcraft, curses and political playmaking were in circulation. This period was characterised by mixed feelings of fear and confusion, nobody really knew how to protect themselves let alone understand what was going on. This resulted in the abandonment of the school for a few years.





Community Primary School For Girls, Kenema, Sierra Leone 2016



Architects have often found a clear cause for intervention when faced with natural or manmade disasters, helping rebuild fallen towns and cities or offering up solutions to populations displaced and without shelter. However, when the disaster itself is formless, an invisible threat of devastating proportions, is there any role at all that architecture can play? The Ebola epidemic may not have torn down buildings or left people without a home, yet the extent of social and economic reconciliation that it has left in its wake is vast. In January 2016 work resumed on the school building which had become badly overgrown with weeds and long grasses. Following many new challenges and difficulties, a building that had stood neglected and forlorn for two years now stands proud and gleaming in the west African sun. It's a long way ahead to get this wonderful country fully back on its feet and striding forwards, and further still to transforming its global image, however, in this case a new building has opened its doors to a cohort of excited young school students, offering new jobs to the local community, and might just stand for something far more than the materials it's built from.



OBSERVATION

Architecture

- Existing buildings Renovation based on the local resources
- Considering unusual circumstances
- Finding alternative solutions

Community

- Local communities divided in two groups [volunteers who gather funds, local people who share their skills]
- Using knowledge of the local people

Creativity

- Community ideas involvement in renovate design process
- Children/teenagers participation in the drawing ideas for their own school
- Using modern education system

Education

- Providing deprived areas with academic standards
- Arrangement of activities for students in the areas

URKO SANCHEZ STUDIO

Urko Sanchez Architect's projects range in size, complexity and function. In all cases, however, the focus is on the client and the context, with a tailor-crafted approach to each unique project. Commercial projects include hotels, office buildings, industrial spaces, and residential developments amongst others. Urko Sanchez Architects specializes in Design, Master Planning, Construction Management and Quality Control. In addition, they are passionate about social improvement, contributing as often as possible to projects that target disadvantaged communities with needful and innovative interventions so Two of the projects are in collaboration with SOS, an international children's charity.



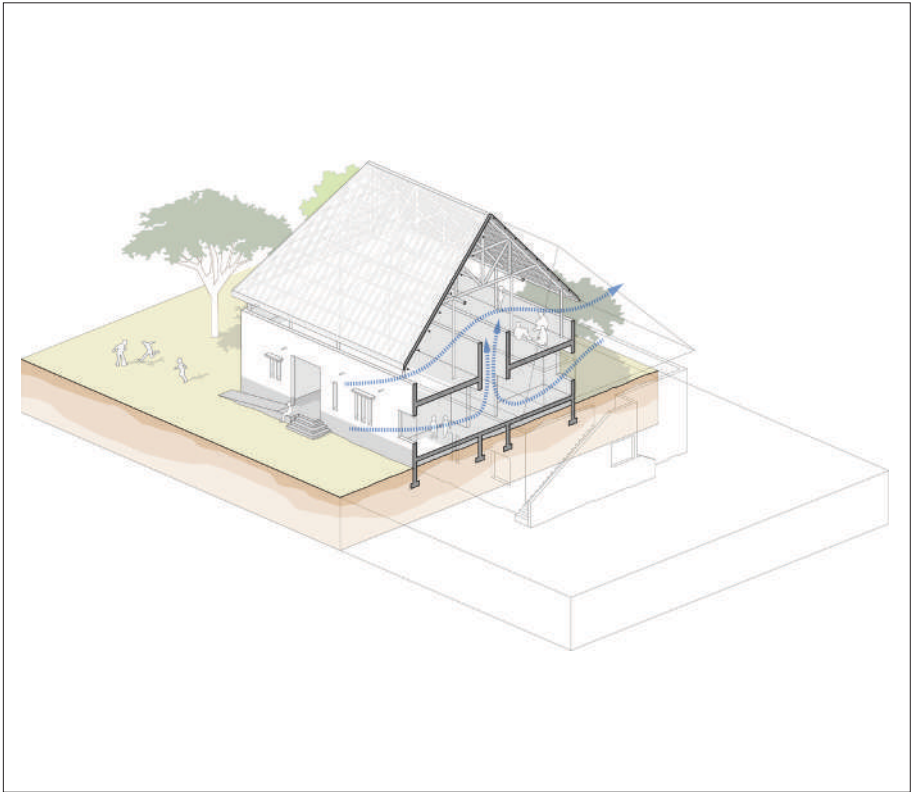
**Anidan Shelter House And Pediatric Clinic
SOS Childrens Village
SOS PPrimary School**

Anidan Shelter House And Pediatric Clinic

Lamu, Kenya 2007

In the design of this shelter ,because of economical situations, the studio used local materials and natural ventilation, including huge makuti roofs to cool down the buildings and to generate open spaces via rooftop terraces for classes. The structures require low maintenance and are environmentally sound; So they positioned them with respect to the trees to create an atmosphere for children to meet under and play. Nowadays, as the needs of the organization have increased, a Children Hospital and an Art Workshop have been also built within the plot. The assignment of the project was to construct a shelter house in Lamu island, housing approximately 200 orphans. The children's clinic is located on the outskirts of Lamu where there had previously been no medical assistance. The initial layout was for three buildings – separate dormitories for girls and boys, and an administration office which also housed a kitchen and dining area. Since 2008 the medical centre has offered pediatric assistance to more than 105,000 patients, with more than 4,200 children requiring admission. The Hospital has an emergency triage ward, a priest's room, two pediatric consultants, two admissions wards, pharmacy, laboratory, a radiography and ecographic unit.







The budget of this project and its extensions were quite restricted, so the studio focused on using locally available materials – coral stone, mangrove poles, lime and makuti. The designers explored local technology and materials to produce a highly functional and an amazingly visual sound development. The project responds well to the hot and humid climate of the region. This was a conscious effort in order to avoid heavy energy consumption. High ceilings ensure high volumes and good air movement within the spaces. Local crafted high pitched and seemingly floating makuti roof limits the direct sunlight to the clinic space. Air movement within the rooms is enhanced via a long alleyway that is open to the roof and works like a chimney, drawing cool air in and hot air out. The heavy wall construction of the local available coral stone reduces heat gain into the building and has very small and controlled fenestration. The verandas to the front and the back of the building are not only an adaptation of the Swahili infamous baraza, but shade the windows that open to these spaces.



SOS Primary School

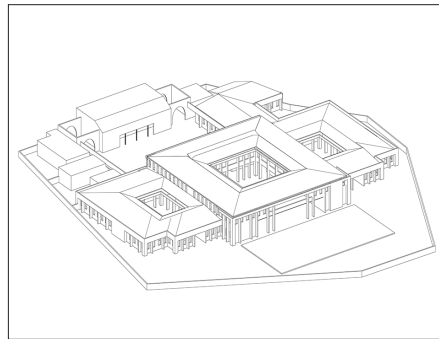
Hargeisa, Somaliland 2011

Out of a five-acre plot in Somaliland, the studio built this primary school with courtyards as the most distinguishing characteristic. The classrooms are centred around two of them, and the third serves as a reception and administration area with a library. They left as much of the plot as possible as is, in order to create a playground and sports facility for the children. The studio also needed to maximize the use of water as there isn't much in this particular area. A complete rain harvesting system is designed to collect the water from the roofs. Most students, amongst them also some from Somalia, come from very poor backgrounds but their ability to finish their secondary education was not stifled, as many of them are given scholarships by SOS Children's Villages. Children in Somalia are exposed to incredibly high levels of violence in their daily lives. It is not uncommon for them to be confronted with dead bodies in the streets of Mogadishu. The psychological effects that such images may have on the mental development of a child are evident. Schooling is available only to a very limited number of children in Somalia. In fact, Somalia is one of the countries with the lowest school enrolment rates in the entire world. A Somali child aged 12-7 has only about a one in five chance of attending school.





SOS Primary School, Hargeisa, Somaliland 2011



The SOS school also has a nursery, the nursery has around 90 children. The nursery has 3 classrooms with 30 children each, aged from 3 to 5 years. There is also a fourth room which is being used for preparatory classes for children over five, until a primary school can be established. A third of community children are accepted into the nursery through a scholarship programme. The SOS Secondary School at Hargeisa teaches the IGCSE curriculum and hopes to receive a licence to start teaching IGCSE A-levels for the oldest pupils. Academic achievement at the school is high, with the school taking first place in the Somaliland National Examination results. Recently 10 scholarships were awarded to top students who went on to study medicine. For the future, the school has a target to offer 30 per cent of pupils places under a scholarship programme. The school also hopes to improve results for English by employing new teachers and introducing the latest techniques.

SOS Children's Village

Tadjoura, Djibouti 2014

Djibouti is located in the Horn of Africa, which suffers from persistent droughts and severe scarcities. The studio was approached by SOS Kinderdorf to design a residential compound of 15 houses where to run their family-strengthening programmes. With its open spaces and maze-like network of streets the SOS Children's Village is designed to foster a sense of community for the orphaned and in-need children who live there. We learnt about SOS systems, about the community where the project would take place, their nomadic traditions and the extreme climate of the region. They searched for traditional housing references in similar cultural and climatic environments and chose these conditions: It is a medina for children – A safe environment, with no cars, where the narrow streets and squares become places to play, It is a medina with plenty of open spaces – public and private spaces are clearly defined. And in the private, the inside and outside areas melt, allowing residents to maintain certain outdoors living. It is a medina with lots of vegetation – where the inhabitants are encouraged to take care of their plants and benefit from the result. With these conditions in mind, they decided that building the homes in a very local way – narrow streets that would shade one another, providing natural ventilation and corridors of wind flow – was the right way to go.





SOS Children's Village, Tadjoura, Djibouti 2014



In the end, what the designers did was to develop and design a small village with open, pedestrian-only streets and playing fields for children and teenagers, almost an internal playground of gingerbread-house elements and slides. The houses in this village are closed to the outside; they look inwards, protecting residents from the elements, while providing privacy and excellent ventilation. In terms of distribution, all houses follow the same scheme but are arranged in different ways, placed close to each other giving shade one another and generating alleys between them in an apparent disordered way. Natural ventilation and sun shading was intensely studied, introducing natural ventilation towers where needed. Tall wind-catcher towers ensure the entire compound is well-ventilated. Each block has also been oriented to make the most of natural air and light, with some sitting together so that the roof of one block creates a terrace for another. Materials were simple: cement blocks, RC structure & Cemcrete. The overall permeability of the complex is reinforced in the interiors by the absence of doors in the openings and by use of the traditional mashrabiya, the latticework historically used in Arabic homes to provide ventilation as well as privacy.



OBSERVATION

Architecture

- Adding extensions
- Spare spaces Design for future extensions

Community

- Programming for children/teenager as the main subject
- Assistance of volunteers in the process

Creativity

- Traditional building methods for the projects
- Ideas from traditional houses in the similar areas
- Using the environment to build natural ventilation

Education

- Decreases in the amount of children's mental damage
- Engagement of different educational activities

RURAL STUDIO

This studio is a part of the Auburn University that offers courses for architecture students to get hands on experience in design and construction. The architect and founder Samuel Mockbee felt that architects have a strong ethical responsibility and the students chose projects for the community or individuals in the deprived area of Hale County, Alabama. In the beginning the studio was relying on donations both in the form of funds and materials. This usually meant that students were working with unconventional materials such as: cardboard, carpet tiles, tires or even parts of an old barn. Studio's project usually grow from experiments with materials at hand.



Glass Chapel
/Akron Boys & Girls Club2/Akron Boys & Girls Club1
Greensboro Boys & Girls Club
Faunsdale Community Center



Glass Chapel

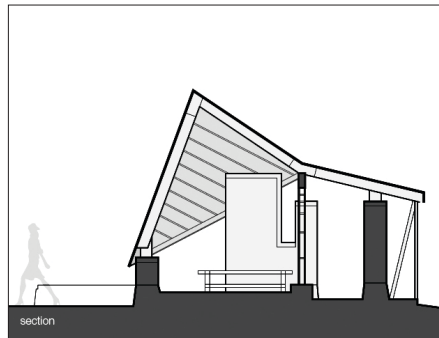
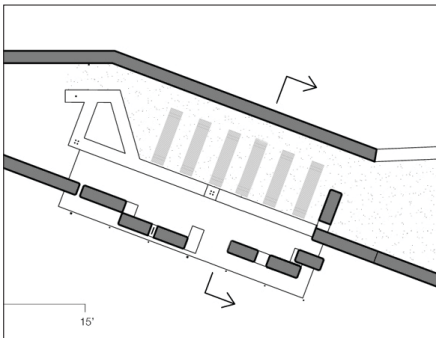
Mason's Bend, Alabama 2000

Glass Chapel is one of many structures that Auburn University's Rural Studio has developed for local, low-income communities. Due to a lack of funds and resources, the project makes use of inexpensive and recycled materials; such as a roof and façade of recycled car windows, demonstrating how to transform industrial waste into architectural opportunities. After researching the needs of Masons Bend's citizens, the studio proposed a public, multifunctional, open-air space on a privately owned site. While the site is awkward and small, it addresses and adjoins the three extended families that make up the community. Design addresses the privately owned, yet publicly accessible space. The form resists a specific building typology, instead smoothly hybridizing vernacular chapel and barn forms. Innovative material reuse and improvised construction techniques further blends vernacular formal language into a new, local language.





Glass Chapel, Mason's Bend, Alabama 2000



Scaling effect Composition of walls and roofs make the space and site appear larger. From the front approach, rammed earth walls taper away and down toward the ground at each end to force a perspective on the eye. The barn-like roof breaks into two parts: the thin aluminum sheets and the pristine automotive glass skylight. This effect also takes place as you approach and leave the building parallel to these tapered walls. Materials and Construction to achieve maximum effect with a small budget, the building uses alternative and cheap material sources. The rammed earth has a timeless character. The automotive glass feels pristine and contemporary.



Akron Boys & Girls Club 1

Akron, AL 2001

Akron Boys & Girls Club 2

Akron, AL 2007

Greensboro Boys & Girls Club

Greensboro, AL 2012

The Boys and Girls Club 1 has helped to revive Akron's social and economic fortunes. The original red brick shell of the store was retained and cleaned, forming an evocatively weathered envelope for the building's new role. An extension clad in corrugated steel panels and containing a small classroom, computer lab, bathroom and utility room wraps around the edge of the brick box. But the project served a hard lesson for the community and the Rural Studio. Owned by a private citizen, who had initially promised but ultimately refused to hand over the building to the town, a situation that made funding from the National Boys & Girls Organization impossible: the building has fallen unused and unloved into disrepair. The ongoing community concern over the welfare and protection of the children of Akron, where drug-use and dropout rates are high, prompted the studio to design and build a second Boys & Girls Club that would qualify for membership. The team decided to build on a centrally located site. In this location, the social hub and central meeting place for the community, the new Boys & Girls Club would invite communal interactions and contribute to the urban fabric of the existing buildings. The building was designed to be composed of two forms :a stud-framed building for the clubhouse and a lamella structure to act as a covered pavilion for the basketball court.





Akron Boys & Girls Club 2, Akron, AL 2007



Akron Boys & Girls Club 2, Akron, AL 2007



Greensboro Boys & Girls Club, Greensboro, AL 2012



The Salvation Army Boys & Girls Club of Greensboro offers young people what they need and want most, adults who respect and listen to them; a safe environment where they can have fun and be themselves; and interesting, constructive activities that channel youthful energy into challenging pursuits. The Greensboro Boys & Girls Club is a response to a need within the community for after-school programs. The organization provides educational assistance and recreational activities to local children ranging in age from kindergarten through high school. Adjacent to the Armory's gymnasium, the new 5,100 square foot building serves as the learning center for the club and consists of a large classroom space, computer lab, snack area, administrative office, restrooms, and multiple sheltered outdoor spaces. In an effort to utilize locally available resources and common building practices, the Boys & Girls Club facility is built of lightweight wood frame construction in the iconic gabled shape. Following a concept of maximizing the potential of wood, all structural elements are composed of common lumber and oriented strand board including multiple box beams spanning large openings.



Faunsdale Community Center

Faunsdale, AL 2017

The Community Center is just one of the over 200 projects Rural Studios has constructed for the Hale County community in west Alabama. Faunsdale, Alabama, is a small historical town located fourteen miles south of Rural Studio's Newbern headquarters. The Faunsdale Foundation, a nonprofit dedicated to protecting and promoting the historic and cultural heritage of Faunsdale, approached Rural Studio to help transform one of the oldest buildings in the downtown into a new community center. Originally a doctor's office, and then later City Hall, the 1905 building has been adapted and given a new life as the Faunsdale Community Center. They hope the new space will strengthen and empower the community by providing new resources such as high-speed internet access and opportunities for new programs like after-school tutoring, music classes and local celebrations. The existing floor and roof needed to be replaced, but much of the heartwood pine flooring and ceiling joists were salvageable and reused in the design. The salvaged lumber is almost twice as strong as dimensional lumber sold today.





Greensboro Boys & Girls Club, Greensboro, AL 2012



In order to accommodate the new community center, three of the four walls were kept as a shell, allowing the completely new, independent structure to be inserted inside from the back. The interior of the building is an open space, which can be easily changed by furniture to adapt to whatever is happening in the community center. The chairs are stackable and can easily be stored away when more space is needed. Similarly, the tables are foldable and have integrated casters, easily moved by one person. The Community Center is a multi-use space, so it was important the furniture was flexible, based on event needs. The new back wall is composed all of glass, creating both a visual and physical connection to the courtyard behind the building. The courtyard acts as an extension of the building itself, allowing the two to come together and be used as one large, open space. The front accommodates necessities – a kitchenette and restroom – as well as a small, intimate alcove that looks out onto the street.



OBSERVATION

Architecture

- Finding the areas that have more potential to changes
- Focus on the resistance buildings function
- Changing the usage of the existing buildings

Community

- 2 Groups including: students of the rural areas and construction workers
- Funding helpful local volunteers

Creativity

- Recognize which parts of the community are easier to cooperate in improving the development
- Education programs

Education

- Additional activities include sports, art classes
- After school activities, creative workshops, competitions

2 < 1 + 1 STUDIO

2<1+1 Architects is a practice that shines a light on disadvantaged communities by collaborating with local people, NGOs, and other institutions. Founded by Hoang Thuc Hao in 2003, the firm focuses on community architecture, embracing the core idea that buildings can create not just space, but also improve well-being. Hoang Thuc Hao work in rural communities, highlights the role that architects can play in such contexts. By understanding and adapting to local conditions, he has achieved a remarkable degree of architectural innovation. As part of the process, villagers are involved and thus empowered in the improvement of their environment.



Suoi Re Village Community House
Sentia School
Da Hop Kindergarten And Primary School

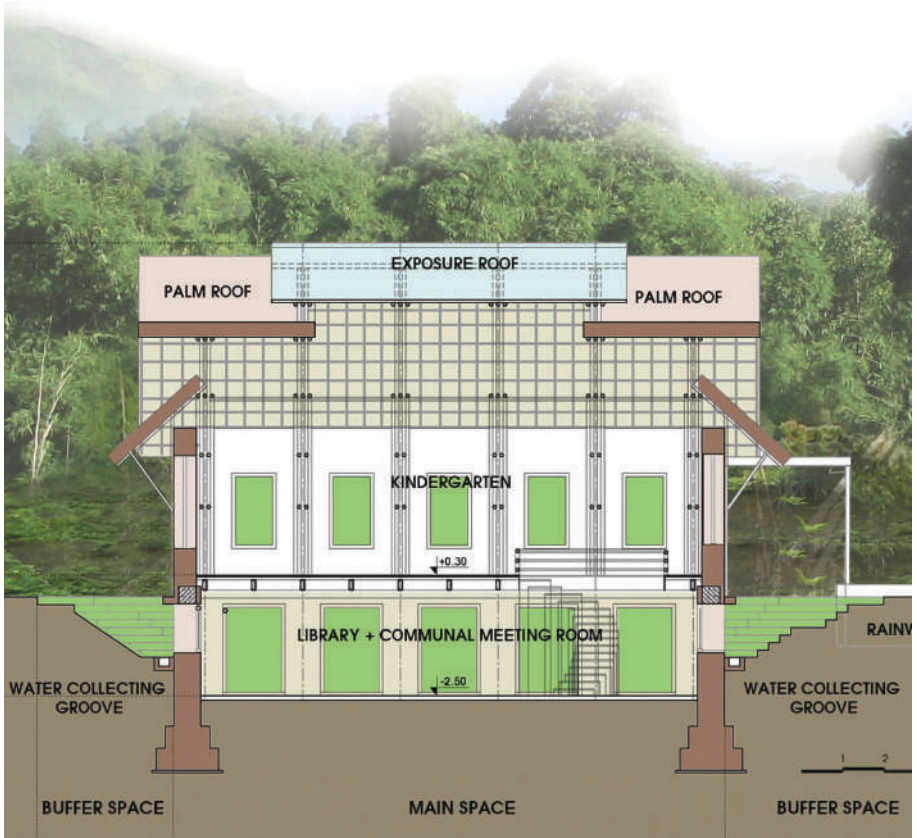


Suoi Re Village Community House

Vietnam 2010

At the project's site – Suoi Re village, all the year round, most villagers have to travel to town to earn their living. Those who stay stick to their farming job to survive. They don't have any time to care about education or the cultural and spiritual enrichment of their own as well as of their children. In the remote villages, the spaces for communal activities, kindergartens, health care stations, libraries seem to be luxuries. If there is any of those, it is very temporary, formalistic and identity. Multi-functional community house was created in this context. It has good Feng Shui, leans on mountains, avoids storms, flash floods and faces towards the valley. The overall spatial structure is organized in chain. Front space is the open courtyard, where holds the outdoor activities. The main living space lies in the middle part, consisting of two floors. Upstairs is a kindergarten which combines with library. Ground floor is designed to fit the concave slopes, utilizing geothermal. It can avoid east northern monsoon and collect east-southern monsoon. Space leads to the mountain and bamboo forest. On the ground floor, villagers gather, doing the sidelines. Especially, young children and the elderly may be staying here during the very cold or hot times of the years.





Suoi Re Village Community House, Vietnam 2010



The idea of having a convection wind tunnel, the ellipsoid open space, the grass steps, slopes taper, exposure roof make all those connect with the front and the back, the interior and the exterior, the upstairs and the downstairs, creating a continuous chain of open space. Therefore, morphological of the house has inherited the structure of five-room traditional house of Kinh people as well as traditional stilt house of Muong people. Structure idea is simple, economical, utilizing the availability of local materials and following this principle: unity in diversity contrast. Ground floor is made of rugged-stone wall, bamboo doors, fine-bamboo ceiling those make people feel warm and balance in the house. Upstairs is made of brown and smooth rammed-soil wall with heavy stones beneath, bamboo frames, palm leaves roof. Solar cell system, filter rainwater collection tanks, geothermal, monsoon, power-saving LEDs, five-compartment septic tanks which is not polluted. They are the test solutions of green architecture, energy efficient and friendly environment. The villagers build their own homes. They will enjoy the efficiency of space and the utility of each element: stone, earth, bamboo, leaves, air, wind, sun, jungle sounds.

Sentia School

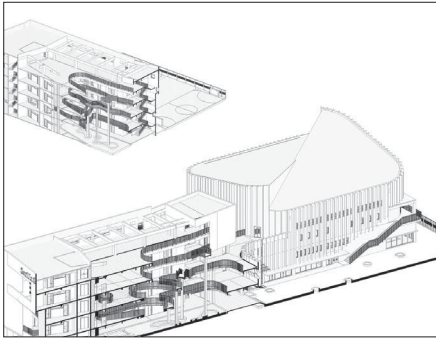
Hanoi, Vietnam 2018

The site of school is located in Hanoi, which is asymmetric and surrounded by lots of tower blocks. The school comprises a kindergarten, primary, and secondary school. It not only has separated playgrounds divided by ages but also a common playground, which could be used by everyone. To fit in the asymmetric site and create playgrounds separately, the school is designed with a zigzag form through the site. Series of continuous spaces which like a loop combined with a flexible bridge corridor system creating serial changes and unexpected views for the users. By this design, classrooms are oriented to the North and South and maximize collecting of natural light and ventilation. The sports field, gymnasium and canteen are placed at the end of wind direction, as a result noises are effectively reduced. The shape of the building represents the growth journey of a child and main functions are arranged by the path which is appropriated with the age. The start of the path is a block serving for kindergarten. The following block is for primary school in the lower floors and secondary school in the upper floors. The fifth floor is served for artistic activities, music and research. A series of playful gardens are interposing between study blocks and rooftop garden with diversified type of plants, not only help to stimulate pupils' interest in biology but also can be considered as an effective solution for heat-insulating and air filter. With the purpose of forming an attractive and lively school, the window system on the facade are designed in different size and colors.





Sentia School, Hanoi, Vietnam 2018



With the purpose of forming an attractive and lively school, the window system on the facade are designed in different size and colors. It is also arranged randomly making an interesting and childlike look for the pupils. Additionally, there are colorful canopy system above each window which create shadow and prevent classrooms from oblique sunlight. The color of the school is in a neutral white and brown. Furthermore, the cheerful colors of the louver system outside the swimming hall and canteen also add playfulness and creativity to the appearance. Besides, the main playground in between the blocks not only helps to collect natural light and ventilation but also play as a buffer zone for noises. With the roof garden and green playground, the school looks like a green center among surrounding tower blocks, creates an eye-catching point of view from the above. The campus of Sentia The Global School provides a secure and stimulating environment in which each student is enabled to recognize and achieve his or her fullest potential. The sprawling lush and landscaped campus has a majestic infrastructure that provides the finest learning environment.

Da Hop Kindergarten and Primary School

Thành Phố Hòa Bình, Vietnam 2019

The site of Da Hop School is located in Hoa Binh province, the northern mountainous region of Vietnam, with a design towards friendliness, harmony with culture, nature and people. Overall the school is extremely lively with interesting diverse spaces, the classrooms overlooking the surrounding mountains, where children can freely explore and experience surprises, increasing joy when go to school. The priority being for young children to learn while playing, the design focuses on the movement with the blocks interlocking with the rhythm, connected by a covered bridge corridor, convenient and safe for children movement. The school includes many versatile spaces: practice rooms, skill rooms, theaters, 4-season swimming pools, indoor and outdoor stadiums, aquatic gardens, ... interwoven with playgrounds and lawns, which meet the comprehensive development needs of children. The main axis in the North-South direction optimizes ventilation and natural lighting. The building has multi-colored eco-roof insulation, noise-proof, combined with rainwater gutters, making use of watering plants in the school yard. Along with solutions to increase room comfort: the sun-blocking layer on the main face of the South; the balcony with openings in the West and Northwest cover the sun and wind effectively. Un-burnt bricks minimize heat transfer as well as increase sound absorption and noise reduction.





Da Hop Kindergarten And Primary School, Thành Phố Hòa Bình, Vietnam 2019



Architects and client's wish is to create a cozy home for nurturing children. Growing up in a familiar, friendly context, these kids have experienced gradual memories, slowly entering their soul throughout the school journey, developing loves for their homeland and the spirituality in place. As the architects explain, the priority being for young children to learn while playing, the design focuses on the movement with the blocks interlocking with the rhythm, connected by a covered bridge corridor, convenient and safe for children movement and playing. In the design of the school, 2<1+1 Architects offers a conceptual transformation of both the movements of its occupants and the surrounding landforms. The design team organizes a collection of volumes which rhythmically interlock, the undulating roofscape mimicking the movements of a traditional vietnamese children's game. All these features managed to make this school a fun and unique environment for children to learn and play at, all while staying safe.



OBSERVATION

Architecture

- Multi-functional spaces
- Exclusive places for specific groups of community

Community

- Children and specially students, form the biggest part of community
- The elderly was the second group of people to form the community

Creativity

- Making more appealing educational system for the children
- Combination of academics and games

Education

- Mostly located in the deprived areas
- Accessible schooling system

NADER KHALILI

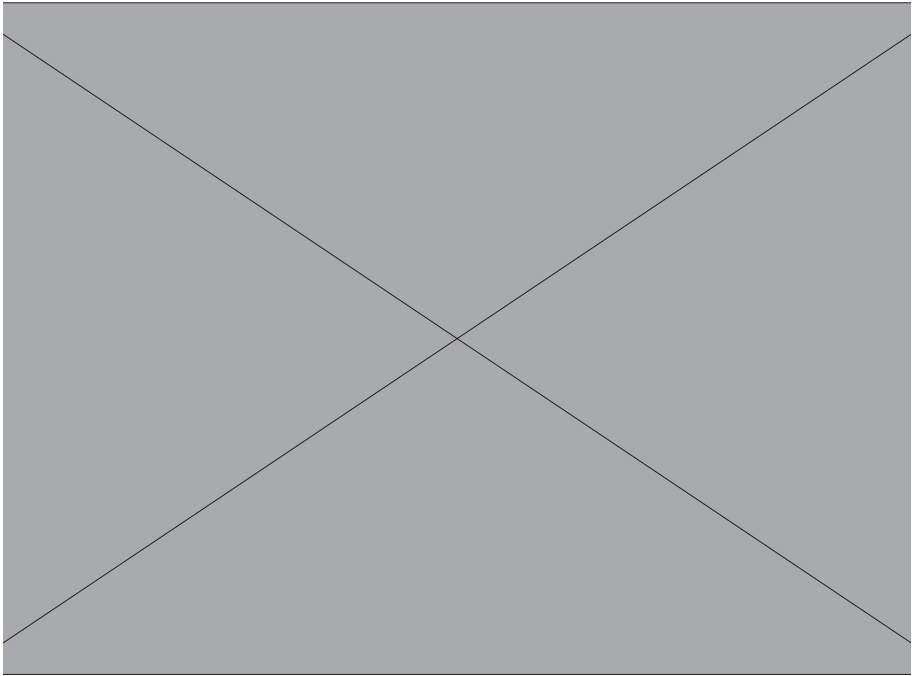
Nader Khalili was an Iranian-born architect. He is best known for his inventive structures that incorporated a range of atypical building materials to provide shelter in the developing world and emergency contexts. He received his philosophical and architectural education in Iran, Turkey and the United States. In 1970 he was licensed by the State of California and practiced architecture in the U.S. and around the world. His designs are heavily inspired by traditional arid house designs in his homeland Iran. He was involved with Earth Architecture and ThirdWorld Development since 1975, and was a U.N. consultant for Earth Architecture. Khalili was known for his system known as Ceramic Houses method called Superadobe.



Floating In The Sky School For Orphans
Langbos Children's Center
Presence In Hormoz2/Presence In Hormoz1

Method

Superadobe technology has been published by NASA, endorsed by the United Nations, featured in countless world media outlets, and awarded the prestigious Aga Khan Award for Architecture in 2004. It comes from years of meditation, hands-on research and development. Inspired by traditional earth architecture in the deserts of Iran and adapted for modern usage. Simplified so that anyone can build. Long or short sandbags are filled with moistened earth and arranged in layers or long coils. Strands of barbed wire are placed between each layer of sandbag to act as both mortar and reinforcement. Stabilizers such as cement, lime, or asphalt emulsion may be added. Similar to how a potter stacks coils of clay to make a vessel, builders stack coils of earth for make a structure. The SuperAdobe building system can be used for structural arches, domes and vaults, or conventional rectilinear shapes. The same method can build silos, landscaping elements, or infrastructure like dams, cisterns, roads, bridges, and for stabilizing shorelines and watercourses. All SuperAdobe structures can last several years but to make a structure permanent, the builder must plaster over the sandbag structure. This protects from erosion due to water and weather. It also provides a pleasing finish that can be painted or left its natural color. Once the corbelled dome is complete, it can be covered in several different kinds of exterior treatments, usually plaster. Khalili developed a system that used %85 earth and %15 cement plaster and which is then covered by "reptile", a veneer of grapefruit sized balls of cement and earth.

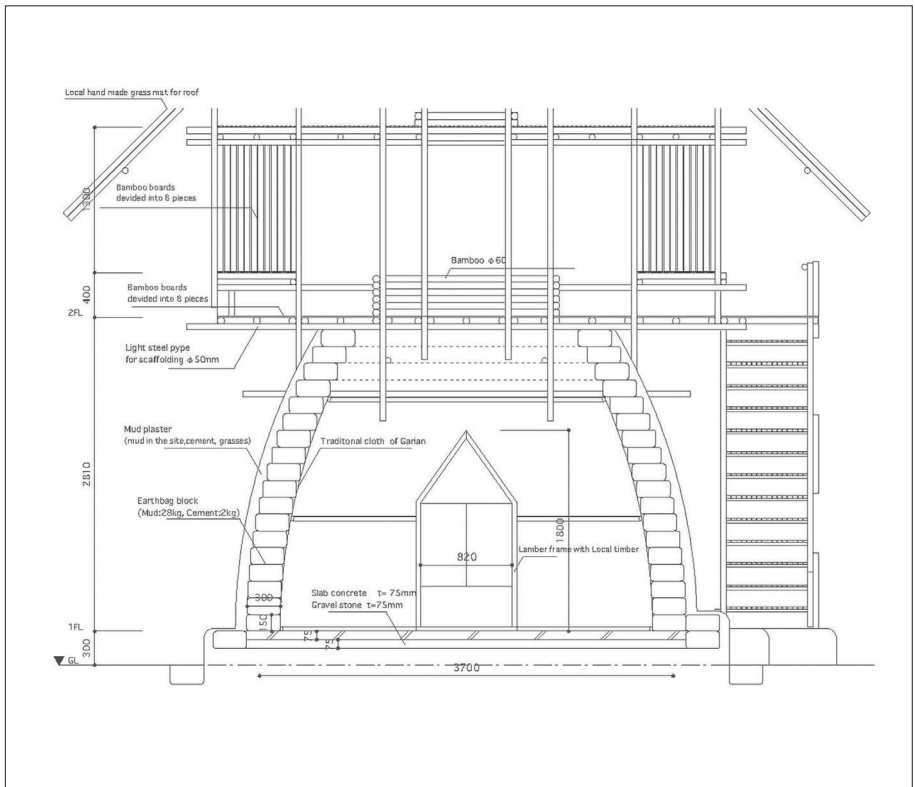




Floating In The Sky School For Orphans by Kikuma Watanabe Bangkok, Thailand 2013

The main goal of this project was to help alleviate poverty in Shangkhauri village, Thailand, located near the border of Myanmar. There are roughly 150,000 Burmese refugees in nine official camps on the Thai-Burma border, some of whom have been residing there for more than 25 years. Since the outbreak of violence, many children have grown up in these camps notoriously plagued by poverty, attracting NGOs and volunteer efforts to alleviate poverty and educate out-of-school children. They are so poor that they cannot raise their children themselves. Among the recent projects is a 1,300 foot-long, handmade wood bridge that was constructed by Burmese refugees completed last September. Shops, cafes, and restaurants have since sprouted up to meet the demand from a growing number of visitors and the local community. The School Floating in the Sky is one of these innovative projects that cater to the town's immigrants and orphans. At first the teacher asked the children to draw the dream of the school building. One of them drew a flying ship. The team adapted this idea, and translated his drawing into the architectural design.





Floating In The Sky School For Orphans, Bangkok, Thailand 2013



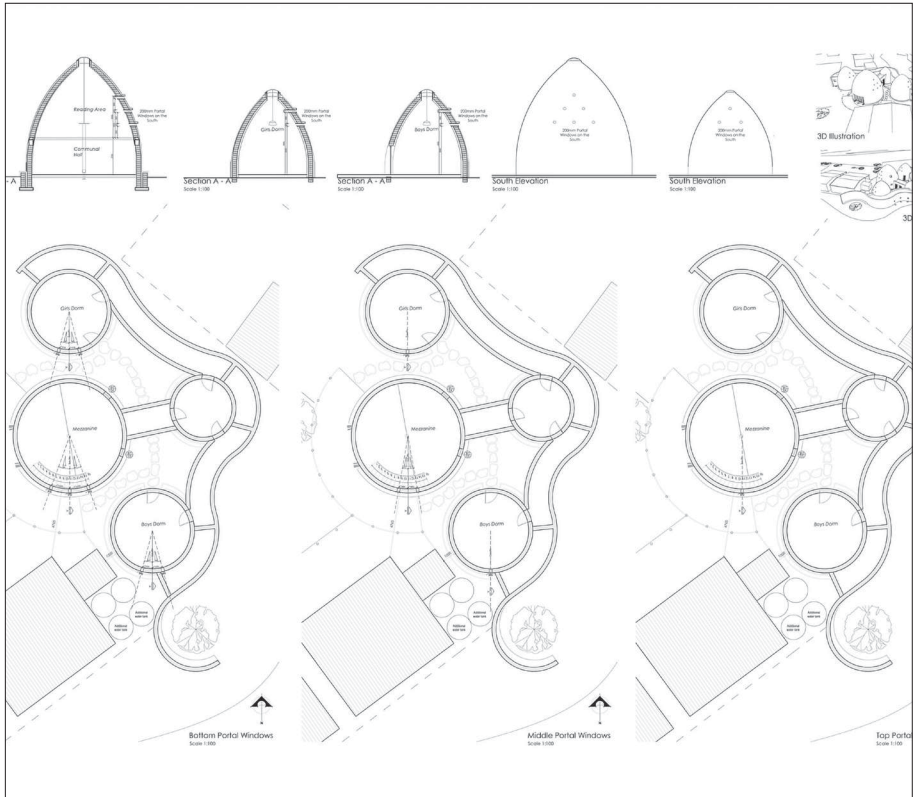
The image was adapted into two main architectural components: the round, earthbag volumes on the ground and the other, a light steel structure finished with bamboo and a grass roof. The earthbag domes are thought of as a «launching pad» that supplies the ship with the energy of Mother Earth and the upper steel building as the ship that is soaring in the sky. The round volumes create a warm interior, fostering a sense of comfort for the children in prayer dome and classroom of earth. The floating level above functions as a buddhist room and learning area. A gentle breeze flows through the thatched roof, giving the feeling of being in a ship. The upper floor connects to the lower earthbag domes through two openings. Since its completion, the school has become a place for the community to enjoy studying, playing, and praying. Earthbag buildings evolved from military bunker construction techniques and temporary flood-control dike-building methods into low-tech, enduring, and affordable housing solutions. This type of architecture can be designed to suit a wide variety of climates and also combines well with other natural building materials to create hybrid structures.



Langbos Children's Center by Jason Erlank Architects Eastern Cape, South Africa 2018

As a non-profit organisation, Intsikelelo have been working directly with the Langbos community in the rural Eastern Cape of South Africa since 2015. Langbos is an undeveloped "informal settlement" with no formal housing, running water, roads, or electricity. Their work in Langbos began with community meetings and a door-to-door census to listen and learn from the community. From this research, a number of projects have been designed and realized including the construction of the Langbos Children's Centre in 2018, which trained and employed local community members to construct a sustainably-designed centre to provide support to vulnerable children and families in Langbos. SUPERADOBE was chosen as way to involve the local community and make the best use of limited material resources on site. The team of "community builders" included men and women of all ages working together to learn new skills and overcome challenges throughout the project. Aside from a competitive wage and the satisfaction of uplifting their community, they were also provided with health support and professional development, including free trips to the local clinic and CV writing.





Langbos Children's Center, Eastern Cape, South Africa 2018



The center has an off-grid design, utilizing solar power for electricity and water heating, as well as a unique gutter around the base of the domes to harvest rainwater. Greywater from the centre is also directed into an adjacent community garden, which is managed by Langbos residents. The dense, monolithic Superadobe walls provide high thermal mass to aid in natural heating and cooling, keeping the domes warm in winter and cool in summer. Using Superadobe allowed the team to train, feed, and employ 30 Langbos residents for over 35,000 hours of paid work to complete the construction. The project was able to provide these basic necessities to the local community and focus on addressing the social problems in the area caused by poverty and unemployment symptomatic of seasonal work related to the citrus industry. The project was successful on so many levels and most rewarding was seeing the interaction between 3 generations of a single family on site. The young school kids witnessing their siblings, parents and grandparents construct and complete a building, none of which had any construction background.



Presence In Hormoz 1 by ZAV Architects

Hormoz, Iran 2017

Presence In Hormoz 2 by ZAV Architects

Hormoz, Iran 2020

“Hormuz Red Soil” has been a matter of tension for a long time and it still is perceived by many locals as plundering of their island’s natural resources. The client of the project has entered the island in 2014, but Hormuzians burned some parts of his construction. Afterwards he decided to have a more calculated presence in Hormuz. Due to limitations of resources and Hormoz community, a new function and way of construction was needed. The first series of project that were planned to be executed based on environmental and simple implementation features was going to target a sort of Hormoz-oriented tourism base: A community center, a tourist center, a passenger station, a series of bicycle rental stations, cafes and restaurants, a waste recycling center, a variety of tourist accommodation centers, urban public spaces. First, a community center was set up temporarily to gain the participation of Hormuzians. After consideration of local and international case studies, the team decided that Nader Khalili’s SUPERADOBE could be appropriated and retrofitted with more contemporary solutions to be used in Hormoz. Afterwards a cultural center containing: tourist information, café, and event management center planned to be built. “Rong” was the name that we chose for this complex. Rong is an urban space that people can walk on it.





Presence In Hormoz 2, Hormoz, Iran 2020



This project is a series of urban developments by an institution that hired ZAV Architects, to empower the local community of the island. Its second phase is a multipurpose cultural residence called Majara (adventure) that ties together the lives of locals and visitors, culturally and economically. It brings together the owners of land from the neighboring port of Bandar Abbas who organize an annual land-art event in Hormoz, the investors from Tehran, and the local Hormuzians as partners in the project. The project is a multitude of small-scale domes built with the super-adobe technique of Nader Khalili, using rammed earth and sand. Under the economic distress of sanctions, increasing the GDP generates social change, which in this project is achieved by: 1. Building economically, to the benefit of the client. 2. Earmarking a bigger share of the budget to labor costs rather than expensive imported materials, to the benefit of the local population, empowering them by offering training for construction skills. 3. An adaptive and future-proof spatial scenario that can respond to unpredicted need, to the benefit of the client and the island. 4. Using materials and human resources from Iran, to reduce construction and transportation costs and increase the GDP, to the benefit of the whole country.



OBSERVATION

Architecture

- Inventive structures that incorporated a range of atypical building materials
- Permanent structure

Community

- Arrangement group of skilled local workers
- Trained local people with the method and use their help in future extensions

Creativity

- Engagement local people in the renovation design processes
- Create hybrid structures

Education

- Multi-functional coaching system
- The school has become a place for the community to enjoy study, playing and activities

FRANCIS KERE

Diébédo Francis Kéré is an architect who was born April 1965, 10 in Gando, Burkina Faso. He was the first child in the village to be sent to school as his father, the village chief, wanted his eldest son to learn how to read and translate his letters. Since no school existed in Gando, Kéré had to leave his family when he was 7 years old to live with his uncle in the city. After finishing his education, he became a carpenter and received a scholarship from the Carl Duisberg Society to do an apprenticeship in Germany as a supervisor in development aid. After completing the apprenticeship, he went on to study architecture at the Technical University of Berlin.

A portrait of a middle-aged Black man with short hair, smiling slightly. He is wearing a blue button-down shirt and a dark blue quilted scarf. His arms are crossed. The background is a plain, light-colored wall.

**/Gando Primary School/Gando Teacher's Housing
Gando Primary School Extension/Gando Primary School Library
Freie Waldorfschule Weilheim
Lycée Schorge/Burkina Institute Of Technology**

Method

Francis Kéré is an internationally renowned Burkinabè architect, recognised for his pioneering approach to design and sustainable modes of construction. His vocation to become an architect comes from a personal commitment to serve the community he grew up in, and a belief in the transformative potential of beauty. Since 1985, he has been living in Berlin, Germany, where he and his friends set up the association Schulbausteine für Gando (now Kéré Foundation e.V); which loosely translates as «Building Blocks for Gando», to fund the construction of a primary school for his village. His objective was to combine the knowledge he had gained in Europe, with traditional building methods from Burkina Faso. He completed his studies and built the first school in Gando as his diploma project in 2004, while also opening his own architectural office Kéré Architecture. It all started with a simple project, Gando Primary School. He wanted to provide a learning space for the children in his own village, so they don't need to walk and travel long distance just to go to school. After the succession of the first project, there were requests and needs for the other projects from all over the village. Kéré and his team started new projects to fulfill the needs of the village. Gando School Extension, Gando School Library, Gando Teachers Housing, Gando Secondary School and etc. After a while this method became popular between the nearby villages as well.





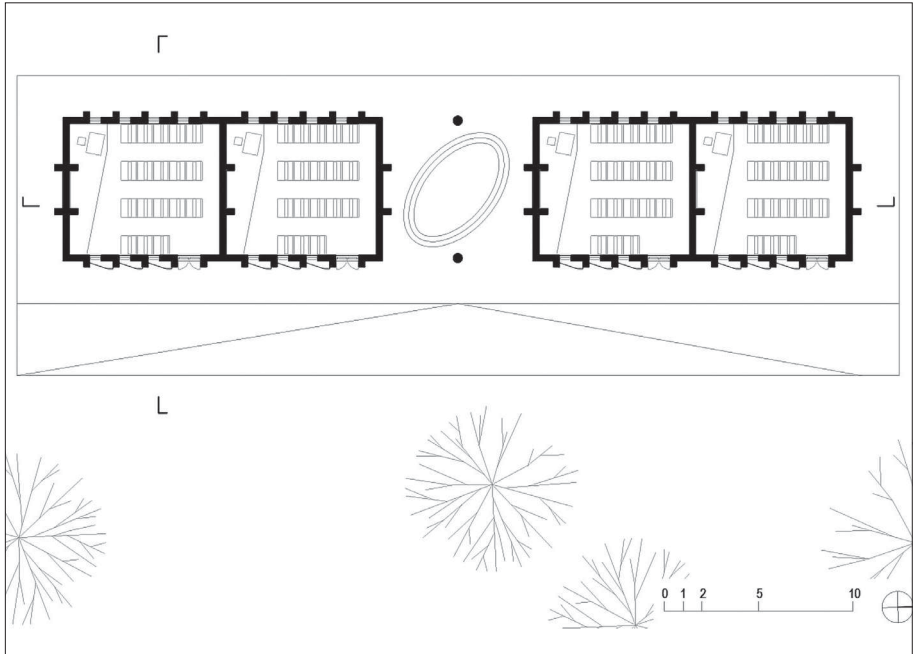
Gando Project

Gando, Burkino Faso 2001-2010

Primary School And Teacher's Housing

Completed in 2001, the Gando Primary School was built to expand the sparse network of schools in the province of Boulgou, in the east of Burkina Faso. In Burkina Faso, corrugated metal roofs are popular but they absorb the sunlight and overheat the interior spaces. Kéré's solution was to pull the roof of the Gando Primary School away from the learning space. A drystacked brick ceiling is introduced in between, allowing for maximum ventilation: cool air is pulled in from the interior windows, while hot air is released out through perforations in the clay roof. The Gando Teachers' Houses were designed to attract qualified teachers from city towards remote, rural areas of the country, at Gando Primary School. The houses are made up of a series of adaptable modules, comparable in size to the surrounding vernacular typology, which can be combined in various ways into larger composites, depending on evolving needs. The six units are arranged in a wide arc to the south of the school complex. This curvilinear layout is reminiscent of a traditional Burkinabè compound. The succession of these projects was to involve the community in construction. The simplicity of the design and use of materials made the model adoptable and adaptable by members of the community who plan on building their homes.





Gando Teacher's Housing, Gando, Burkino Faso 2004



Gando Teacher's Housing, Gando, Burkino Faso 2004



Gando Primary School Library, Gando, Burkino Faso 2010



Primary School Extension And Library

Two years after the completion of the Gando Primary School, there was demand from more than 260 children from Gando and the surrounding region to attend the school. It was apparent that an extension was needed to service the educational needs of these students. With support from surrounding villages, the extension was built using local labor and materials. This extension features four additional classrooms and a sunken seating area in the middle where students can enjoy shade between classes. It is built out of the same materials and construction techniques, but with notable upgrades, like vaulted ceiling. The Gando Library is conceived as a space in which to complement the standardized school curriculum with traditional teachings between elders and children, and as the result of the great succession of Gando Primary School and its Extension in Gando and nearby towns. In addition to providing an educational space for children, the library is also intended as a resource center for the village as a whole.



Freie Waldorfschule Weilheim

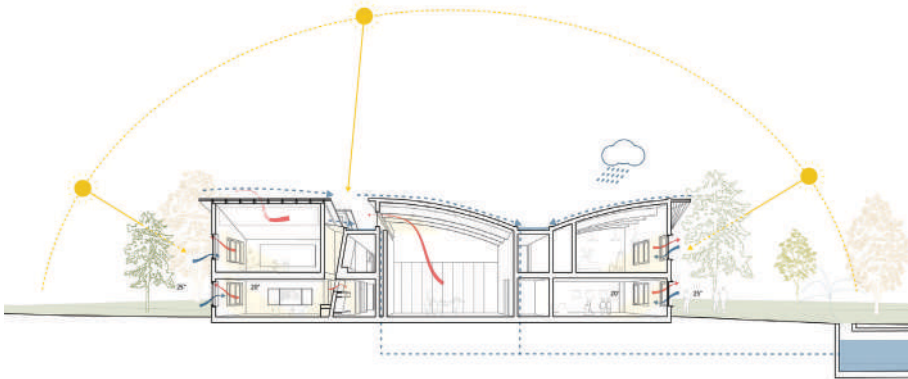
Weilheim, Germany 2017 -

This project stems from the initiative of a community of parents and teachers aspiring to create a unique environment for the teaching of Waldorf pedagogy. With its rich experience building educational infrastructures in a variety of cultural and geographical landscapes, Kéré Architecture was chosen for its ability to go beyond standard German models and its experience working collaboratively with the demands of a community. On the former “strawberry field”, Kéré’s design plan provides for two groups of buildings, one arranged parallel to the Narbonner Ring and one facing the Hardt landscape. It is planned on the edge of the town of Weilheim in Bavaria, Germany. It will include both a primary and a secondary school, creating an inclusive environment in which children at different stages of their education can learn together and from each other. The project has been divided into several building phases, allowing it to grow incrementally over time according to the community’s needs and resources.





Freie Waldorfschule Weilheim, Weilheim, Germany 2017 -



As in many of Kéré Architecture's projects, the building aims to tackle challenges posed by the outside environment – in this case providing sufficient natural daylight – using elegant and effective strategies. Classrooms on the upper floor obtain additional light through high northfacing windows, while for those on the ground floor it is channeled down through light shafts. These openings also allow for natural ventilation. Working closely with local collaborators, the main school building is planned to be built entirely out of cross laminated timber, sourced from the region. And just like his other projects, the idea is to use materials from the cultivated region to build the school. Classrooms and adjacent uses are arranged organically around two atriums, like houses around a village square, where students can gather between classes to learn and to play. The larger of the two atriums has the possibility of transforming into a theatre, where performances will bring the community together. The actual school buildings will then be further away and protected from the busy road in the direction of the field.



Lycée Schorge Secondary School

Koudougou, Burkina Faso 2016

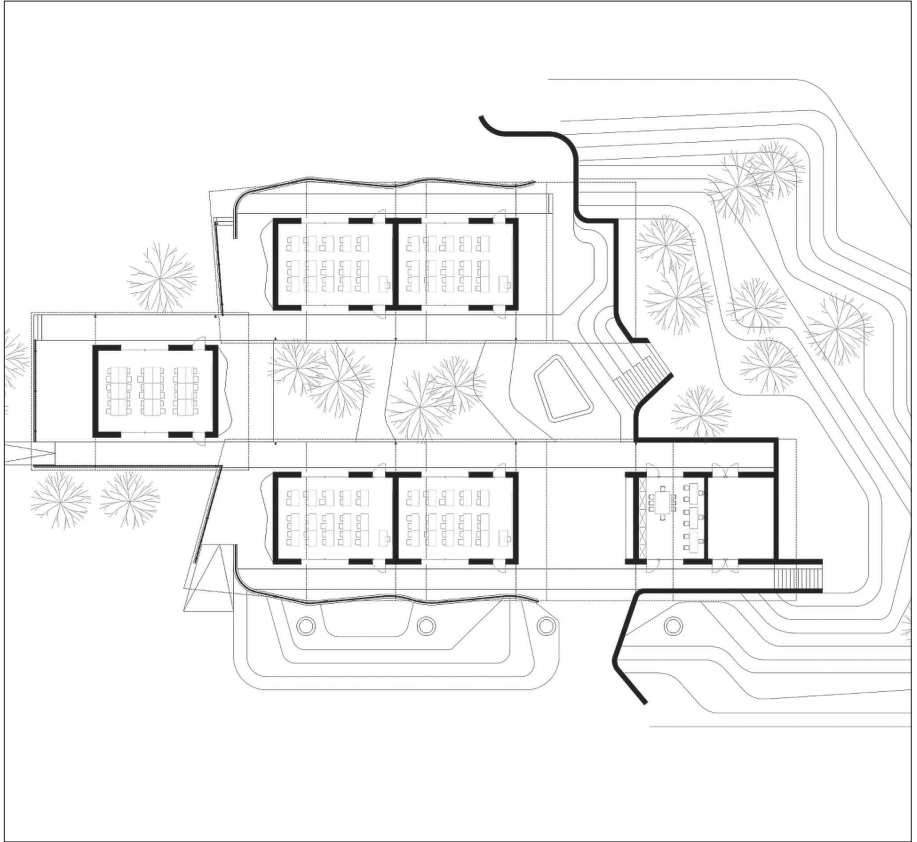
Burkina Institute Of Technology (BIT)

Koudougou, Burkina Faso 2020

Lycée Schorge Secondary School

Located in the third most populated city in Burkina Faso, the Lycée Schorge Secondary School sets a new standard for educational excellence in the region, while providing an inspiring showcase of local building materials applied to an iconic and innovative design. The school consists of nine modules arranged radially around a courtyard, protecting the central space from wind and dust. The walls of each module are built out of locally sourced laterite stone, which lends them their striking deep red color. The material provides an excellent source of thermal mass, absorbing the heavy daytime heat and radiating it at night. A secondary façade made of local eucalyptus wood wraps around the classrooms like a transparent fabric and creates a variety of shaded intermediary spaces between itself and the classrooms where students can gather informally to wait for their classes. In these spaces, the organic vertical elements produce a stunning play of light. Overall, the most important goal of the design is to serve as a catalyst for inspiration for the students, teaching staff, and surrounding community members. The architecture not only functions as a marker in the landscape, it also shows how local materials, in combination with creativity and team-work, can be transformed into something significant with profound lasting effects.





Burkina Institute Of Technology (BIT), Koudougou, Burkina Faso 2020



Burkina Institute Of Technology (BIT)

After a successful collaboration with Kéré Architecture on the construction of the Lycée Schorge Secondary School, the Stern Stewart Institute decided to expand its campus with the commission of a new facility that would allow high school graduates to continue their education. The Burkina Institute of Technology is designed using a system of repeated modules, housing classrooms and auxiliary functions, arranged orthogonally to define a rectangular courtyard. The orthogonal arrangement of modules allows the campus to expand incrementally according to its needs. The modules are staggered, allowing air to flow through the central void, creating a cool space where students can relax and interact. This innovative method meant construction could be completed within a tight timeframe, using large formworks that allowed an entire module to be poured in one session. Although the classrooms need mechanical air conditioning because of the IT equipment, the massive clay walls contribute significantly to cooling down the interior spaces. The repetitive roof profiles create a dynamic rhythm and form a chimney at the back of each module where built-up warm air can be released.



OBSERVATION

Architecture

- Design and sustainable modes of construction
- Buildings are made up as series of adaptable comparable modules

Community

- Stems from the initiative of a community of parents and teachers
- Experience building educational infrastructures in a variety of cultural and geographical landscapes

Creativity

- Increased team work mentality in members
- Creating an inclusive environment at different stages

Education

- Working closely with local collaborators
- Offered suitable conditions and services to teachers in his projects

DEMETRE ANASTASSAKIS

Born in Athens, Greece and during a period of intense immigration and war-stricken Greeks to other countries, Anastassakis and his family moved to Brazil, Nova Iguaçu, Rio de Janeiro. He graduated from the Federal University of Rio de Janeiro and did postgraduate studies in Urban and Regional Planning at COPPE. After establishing his private architecture office in Nova Iguaçu, Anastassakis moved back to Rio and in 1989 and founded Co.Opera.Ativa. a cooperative of architects and social scientists, participated in architectural competitions and public projects. Since then, he has been involved in low-income housing projects across the country, either inside existing slums or in new residential projects provided by the state.



**São Francisco Settlement
Favela Bairro (Favela Neighborhood) Project
Moradas Da Saude Settlement**

Method

This system that he used in São Francisco is the Lego, and not just metaphorically. The dimensions of the white Lego bricks, for example, are comparable to those of a 3×3 real brick in a 1:200 scale. There could be 3×3m or 4.5×3m, and so on and so forth. The traditional common house in Brazil is usually 3×3m. There are studies by the University of São Paulo that claim that this size moderately fits a bed, a dresser etc. The minimum height, by law, is 2.60m. On the other hand, Anastassakis and his team designed and patented a special kind of brick in their projects. In Brazil, they call it bloco ceramico estrutural [structural ceramic brick]. It has holes in it and it is very resistant, almost as resistant as cement. They can even make a slab with this brick. The construction is similar to that of wooden flooring. They place the bricks, the one next to each other, and on the top, they pour the cement. This technique is very good for the mutirão system, because even non-professional builders can very easily make it themselves. In São Francisco they realized that women were the best builders. Also, Demetre, often referred to as the “architect of the poor”, because of his permanent focus on the problem of housing for the low-income population, defended greater space for architects and urban planners to work in this field.





São Francisco Settlement

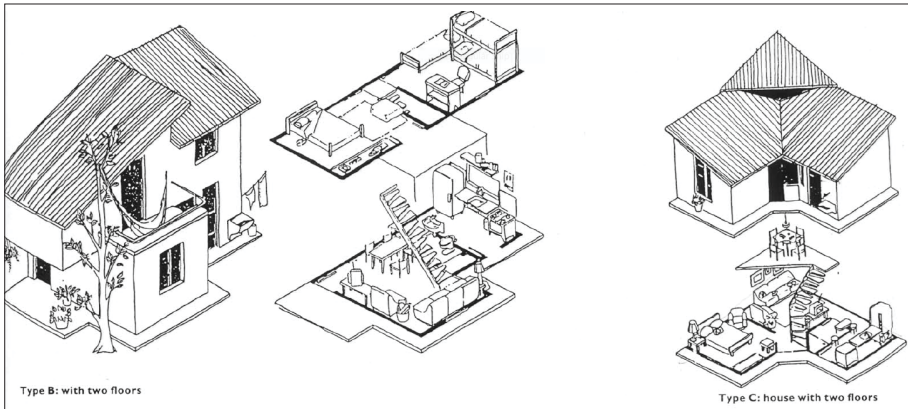
Sao Paulo, Brazil 1991

Favela, in Brazil, is a slum or shantytown located within or on the outskirts of the country's large cities, especially Rio de Janeiro and São Paulo. A favela typically comes into being when squatters occupy vacant land at the edge of a city and construct shanties of salvaged or stolen materials. The favelas are diverse — some have rudimentary infrastructure, while others have homes hooked up to electricity with phones and computers. The Sao Francisco citizens – both from the favelas and those who were renting their apartments – were part of local organizations for 10-20 years, aiming to attain a home. There were 40-30 local organizations then; and when the government ran the municipality, they sponsored the construction and gave them the right to stay in these homes for as long as they lived, as long as they paid a fixed rate each month. That wasn't rent. The building belonged to the city, but as an inhabitant they live there with security, and the lease was passed down through generations.





São Francisco Settlement, Sao Paulo, Brazil 1991



The citizens built the buildings with their own hands. There were no federal sponsorships for the construction. The municipality would give Demetre and his team the money to build, but it wasn't enough. So, the building was completed through the mutirão system. Mutirão means that the future inhabitants of the buildings would participate in the construction. Every family donated sixteen hours a week. The elder women would watch over the children and one of them would cook for everyone. During these communal meals, social relationships would be nurtured as well. It took them only eighteen months to build 600 homes using this system. Every eight, twelve or sixteen houses have a communal space that shuts with a door and at night is used as a parking space. This is similar to the so-called villas built by Portuguese and Italian residents of Brazil.



Favela Bairro (Favela Neighborhood) Project

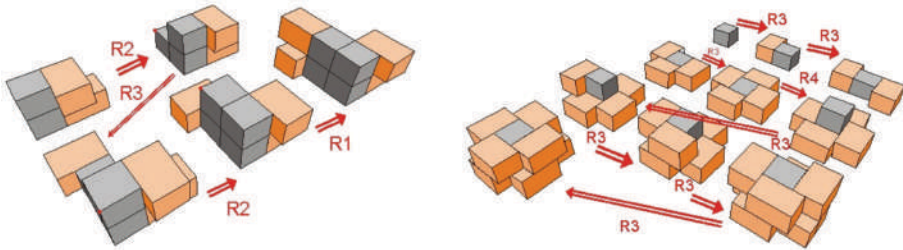
Rio De Janeiro, Brazil 1995

A very important social project that Demetre and his team did in Rio de Janeiro in the '90's was the "Favela Bairro" project. At that time, Anastassakis was president of the Architects Association of Rio de Janeiro [Instituto de Arquitetos do Brasil]. At that time, There were two different approaches concerning the favelas. One of them was from the Peruvian theorist Hernando de Soto and also known as the left wing. It stated that the main goal should be to give out titles of ownership to favela inhabitants and if the inhabitants don't want new housing developments, the government and people in charge can't take it upon themselves – as representatives of the bourgeois class – to construct them for the people who live in the favelas. On the other hand, there was the right wing that wanted to relocate the poor from the favelas in order to attain the land, since this land didn't officially belong to its inhabitants and the constructions had often been built without permits.





Favela Bairro (Favela Neighborhood) Project, Rio De Janeiro, Brazil 1995



But then, there was an in between ideology, that said anything that was built well inside the favela should be salvaged and restored, while making some new adjustments to the structure wherever necessary; such as opening up roads, repairing the sewage installments, building new houses and so on. That was “Favela Bairro’s” main goal, which Demetre and his team tried to accomplish after winning a large national competition. At first the competition was set for 15 favelas, and later it expanded to include 300 more favelas, sponsored by the Inter-American Development Bank. Anastassakis had personally worked on several projects in favelas prior to that competition and continued doing so after he wasn’t the president of the board anymore, when they took part in competitions and designed projects such as the Vigário Geral / Parada de Lucas, the Santo Amaro, Grota in Rio, the Peinha in São Paulo, the Novos Algodos in Salvador, Bahia, the Independência in Petropolis, etc. And that was how his method and the effort he put in building houses for every member of a large community continued its existence.



Moradas Da Saude Settlement

Rio De Janiro, Brazil 2015

Demetre Anastassakis and his team made an interesting survey of opportunities for the implementation of housing in vacant or idle land in the Port Region. Among them, there was one at the top of Morro da Saúde. The Municipal Housing Secretariat then commissioned the team to prepare a project that exemplified its New Alternatives Program. Demetre was excited, made the project, which came to be built by order of SMH, and decided to live in an apartment of the Complex. According Anastassakis' own words: Saúde is São Francisco's cousin. Although in this project, they were dealing with a different type of economic model than the one in São Francisco. The citizens here were property owners and got a loan from the Caixa Econômica Federal, which is the national bank of Brazil. But this project was also for low-income working-class people. The first apartments were bought at the price of 40-35 thousand Reais [10.000 – 8.900 Euros]. But after the project was built, they cost 350 thousand R [89.000 Euros].





Moradas Da Saude Settlement, Rio De Janeiro, Brazil 2015



As it has been said before, this project is so much similar to the São Francisco Project. The project was made on a very low budget so that it could be sold for a low price. It doesn't have any columns, but there was money available for coating over the bricks in the facades. Anastassakis and his team built 150 apartments, trying to not over-congest; and it really became a garden for the city. The Lego system was used here as well. Groups of two or three buildings are attached, having a staircase to share. The outdoor spaces are communal, and in some cases were built into the first floor like verandas. For example, in one building they lost an apartment to make a communal outdoor space on the third floor. The people that live there gather in these spaces and spend time together, they drink beer and make churrasco [barbeque] in the weekends, and they wash clothes on weekdays. This also began as a social living space under Conde's municipality, who had the initiative of the project without sponsoring it.



OBSERVATION

Architecture

- Permanent focus on the problem of housing for the low-income population
- Groups of two or three buildings are attached, having a staircase to share.

Community

- There was an in between ideology, that said anything that was built well inside the Favela
- Social living space under Conde's municipality, who had the initiative of the project without sponsoring it

Creativity

- Generating ideas from simple things like puzzles and combining them with building
- This system that used in São Francisco is the Lego, and not just metaphorically

Education

- A favela typically comes into being when squatters occupy vacant land at the edge of a city
- The team prepare a project that exemplified New Alternatives Program

KUNLÉ ADEYEMI

Adekunle Adeyemi, was born and raised in Kaduna, in the north of Nigeria, 1976. He studied and started his early career in Lagos. He is an architect, designer and development researcher whose works are internationally recognised for originality and innovation. In 2005, he received a post-Professional degree at Princeton University School of Architecture in New Jersey. At that university, Adeyemi investigated together with Peter Eisenman, the rapid urbanization and the role of market economies in developing cities of the Global South, focusing on Lagos. He is the founder and principal of NLÉ – an architecture, design and urbanism practice founded in 2010, for innovating cities and communities.



**Makoko Floating School
Waterfront Atlas
Minne Floating School**

Method

Unpredictable climate changes along the world's most vulnerable coastal communities, have produced some fascinating design solutions that test the resiliency of architectural possibilities and the need for adaptation that will produce these changes. Since Adeyemi was born and raised in Nigeria, he wanted to find a new system of construction in order to design more functional spaces with higher quality and safety. The Floating School is a prototype structure that its main aim is to generate an alternative building system and urban culture for the populations of Africa's coastal regions. The triangular A-frame or pyramid (10m high with a 10m x 10m base), built from locally sourced wood and bamboo and buoyed by recycled plastic barrels, is an ideal shape for tall floating objects on water. It is scalable and adaptable for other uses, such as housing, health clinic, market, an entertainment Centre or an infrastructure hub. The prototype's versatile structure is a safe and economical floating triangular frame that allows flexibility for customisation and completion based on specific needs and capacities.





Makoko Floating School

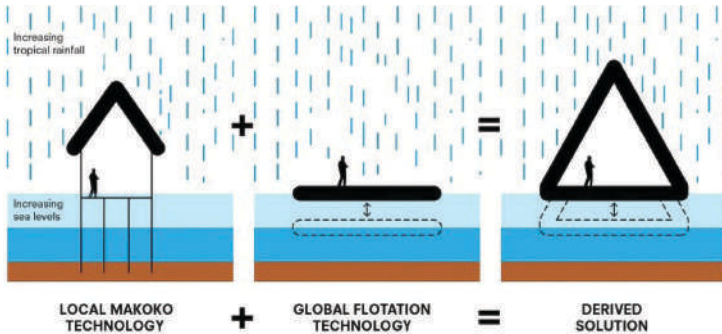
Lagos, Nigeria 2012

The coastal community of Makoko, a slum neighborhood, off the Lagos Lagoon in Lagos, Nigeria is receiving an upgrade to its current solution; which is building homes supported on stilts within the lagoon's waters. NLE Architects, with sponsoring from United Nations Development Program (UNDP) and Heinrich Boell Foundation from Germany, designed the Makoko Floating School. The Makoko Floating School and the total planned projects makes use of local materials and resources to produce architecture that applies to the needs of people and reflects the culture of the community. Wood is used as the main material as the structure, support and finishing for the completed school. The overall composition of the design is a triangular A-Frame section. The classrooms are located on the second tier. They are partially enclosed with adjustable louvered slats. The classrooms are surrounded by public green space, there is a playground below, and the roof contains an additional open-air classroom. NLE has also employed strategies to make the floating architecture sustainable by applying PV cells to the roof and incorporating a rainwater catchment system.






Makoko Floating School, Lagos, Nigeria 2012



Within a week of its successor being awarded the Silver Lion at the 2016 Venice Biennale, the original Makoko Floating School collapsed. Now, almost two years later, Lagos-based writer Allyn Gaestel has investigated the vulnerable coastal community and architect behind the project in a remarkable narrative nonfiction piece, «Things Fall Apart.» Gaestel details the complex moving parts and characters embedded in Makoko Floating School. In the beginning, Adeyemi collaborated with Isi Etomi, a young architect and native Lagosian who compiled a two-volume proposal outlining realistic ways to upgrade the financially distressed neighborhood. As Adeyemi's excitement to create a school on water grew, so did the budget. Eventually, Etomi stepped away from the venture, and so did the funding. But Adeyemi only seemed to work harder—even when police raided Makoko on speedboats, cutting homes down with chainsaws in a violent eviction process. Adeyemi's role became one of not only architect but advocate for the people of Makoko as well. Finally, the school was completed and left under the care of Noah Shemedo, the Makoko liaison and school director.



Waterfront Atlas

Venice, Italy 2016

The impact of rapid urbanisation and economic growth of cities in Africa is now common knowledge, yet it cannot be overemphasised. At the same time the impact of climate change is now day-to-day reality; particularly in coastal African cities that now experience significant increases in sea levels, rainfall and flooding. Waterfront Atlas is a collaborative knowledge platform that brings the local intelligence of aquatic communities like Makoko, Lagos to the world at the 15th International Architecture Exhibition. It aims to identify, gather and cultivate the intelligence of communities and cities by water with a motivation to bridge inequality by improving social, economic and environmental conditions worldwide. It is an opportunity for us to think, build, and live differently, by facing the challenges in this age of rapid urbanisation and climate change. MFS II is an improved iteration of the Makoko Floating School structure, adapted for easy prefabrication, rapid assembly and a wide range of uses. Just as the first prototype sourced local intelligence from the Makoko waterfront community, MFS II has been designed to suit local conditions and a wider waterfront population.





Waterfront Atlas, Venice, Italy 2016



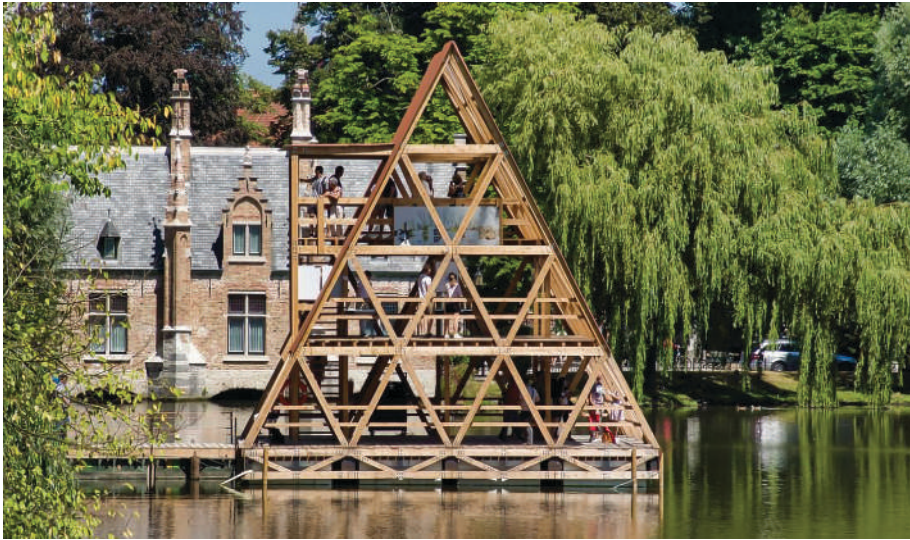
MFS II was assembled in 10 days by 4 builders and was exhibited as Waterfront Atlas at the 15th International Architecture Exhibition, La Biennale di Venezia. It is mobile and prepared to be reassembled at the next Waterfront. The project was awarded the Silver Lion prize, recognised as a “powerful demonstration, be it in Lagos in Venice, that architecture, at once iconic and pragmatic, can amplify the importance of education”. The former is part of an extensive research called ‘african water cities. The design appears triangular in section, constructed with a parallel series of timber A-frames on a platform supported by emptied blue barrels. The three-storey structure contains classrooms at its middle level in enclosed volumes flanked by public green space and a playground below. An additional open-air rooftop classroom is found above. Photovoltaic cells on the roof collect solar energy, which, coupled with water catchment systems, make the dynamic educational facility partially self-sustainable. Slender wooden slats create a shading device along the outer envelope, while with well-ventilated spaces maintain a comfortable interior environment.



Minne Floating School

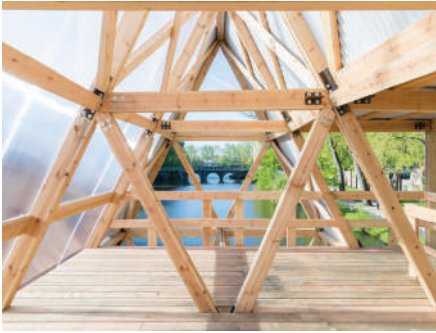
Bruges, Belgium 2018

Located in Bruges in Belgium, in one of the city's finest parks and lake, Minnewater (Lake of Love), MFS III was launched on May, 2018 for the Bruges Triennale 2018 Liquid City exhibition. MFS III or 'Minne Floating School' is NLE's third prototype and second iteration of the Makoko Floating School in Lagos, Nigeria. Following Makoko Floating School (MFS I) built in 2013 and MFS II in Venice 2016, MFS III is a new iteration designed as a fully prefabricated, modular, flat pack, floating building system, with a -25year design life, based on Euro codes for wider regional use. The structure, re-engineered by AECOM and built by Bruges Triennale team and approved by the local engineers, allows further explorations of efficient design, prefabrication and assembly methodologies of MFS as a unique timber floating building solution, adaptable for various uses. MFS III is a platform for research, innovation, education and social interventions for water cultures, 'Learning from Makoko'. The plan was to use it for six months in a limited capacity as an exhibition space, a workshop and a school; programmed by local architecture and design institutions from around the region.





Minne Floating School, Bruges, Belgium 2018



A floating building, not only designed to be able to support the movements of the tides with a solidity suitable to counter floods and severe storms, but also a model of inspiration for thinking about alternatives for renewable energy and solutions for the recovery of land from the sea. MFS III is a flexible and multifunctional structure, which houses a classroom, an exhibition space and a meeting place on the water, overlooking the beautiful scenery of Minnewater. It is a light and floating installation, whose weightlessness will contrast with the city's own brick and which, at night, will light up and function as a lantern and as a meeting point in the city. The floating school proves to be a place of collaboration, in which school pupils of Bruges can take lessons and exhibit their works thanks to an architectural project projected into a «liquid future». It is not only a mobile building structure strong enough to withstand floods or violent storms, but also a source of inspiration that invites us to find new solutions in the field of renewable energies and lands gained by the waters.



OBSERVATION

Architecture

- Prototype structure that its main aim is to generate an alternative building system and urban culture
- Versatile structure is a safe and economical floating triangular frame that allows flexibility for customization

Community

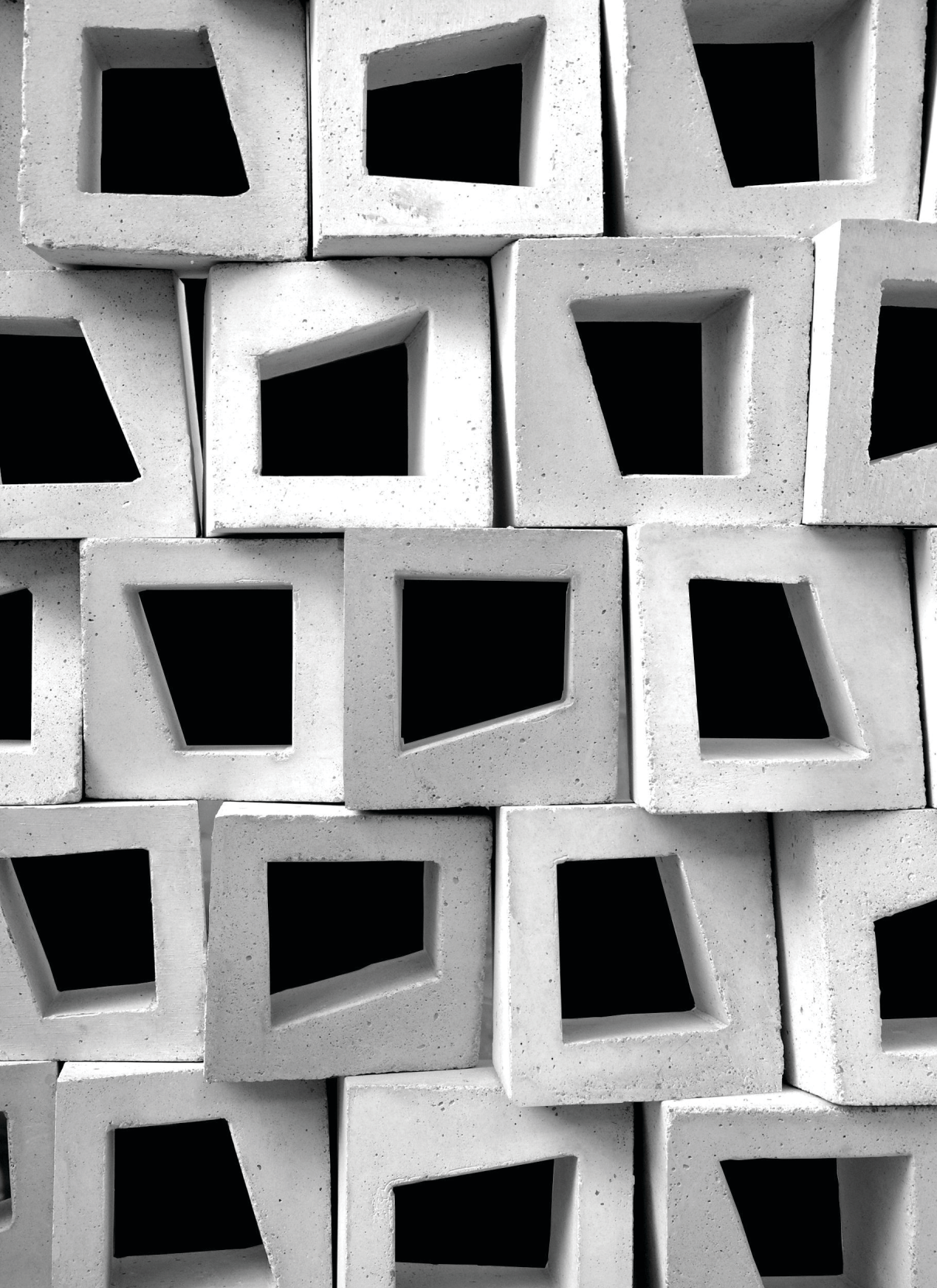
- The impact of rapid urbanization and economic growth of cities
- Making the dynamic educational facility partially self-sustainable

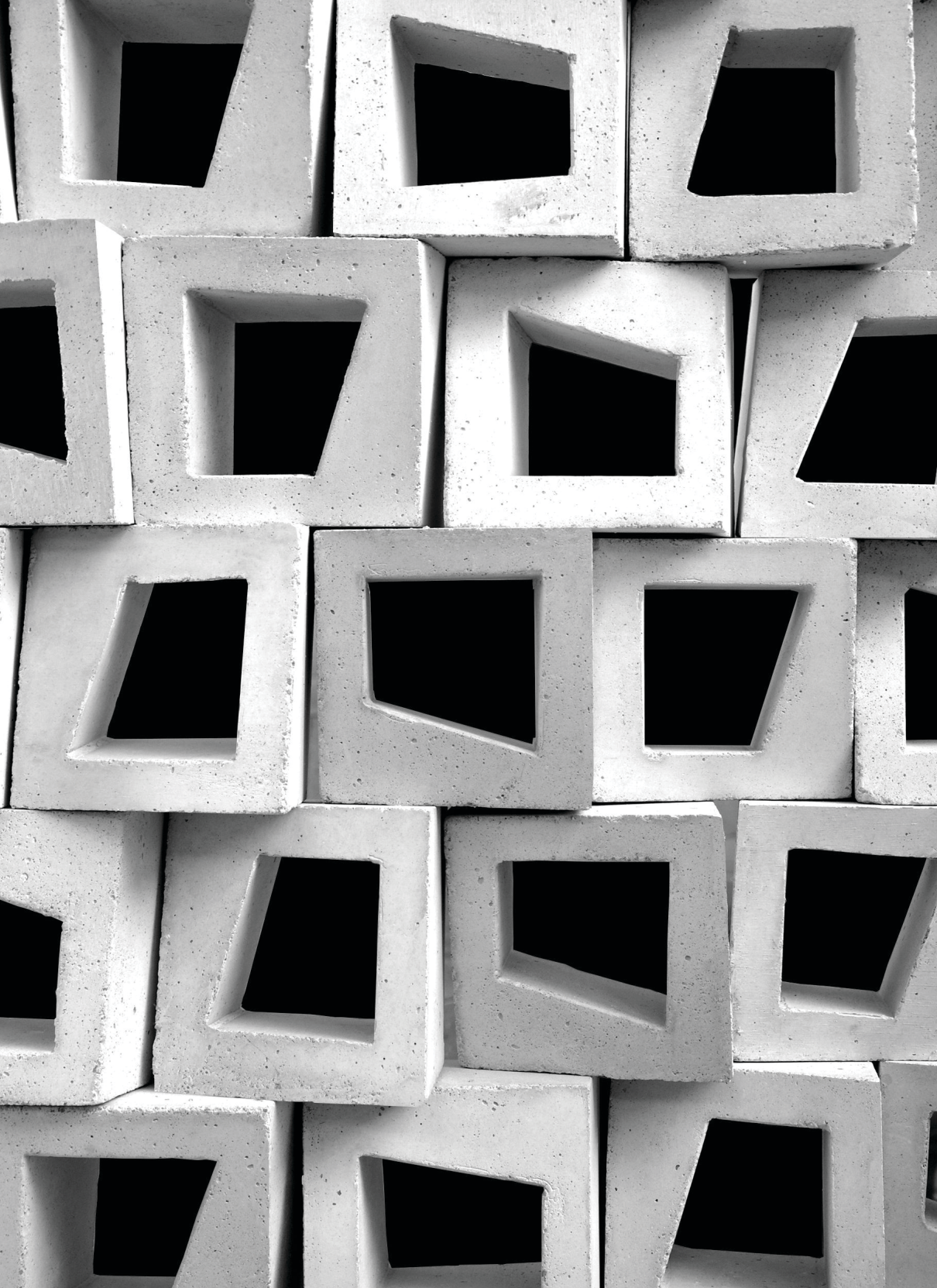
Creativity

- Utilized the disadvantages of culture as a tool to solve the problems
- A model of inspiration for thinking about alternatives for renewable energy

Education

- Spread knowledge through classes, workshops and sessions
- Setting up exhibitions raised awareness about climate change and rapid urbanization.







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