Winners Announced for "Tiny Library 2023 Architecture Competition"

Archetype team - 21/09/2023

International design competition

With the world constantly evolving, there is a ton of information being formulated out there. Human intellect today is expected to evolve at the same rate for our world to continue our journey into the future. Despite all the information, reading and self-learning remain the most powerful tools available to mankind to consume knowledge. Learning increases awareness, exposure, and productivity, which leads to development. Despite its importance, education is still inaccessible to many communities in remote locations around the world. Self-learning, especially through reading, is crucial for the society's development. It is important to power the growth of like-minded networks. It is necessary to have places promoting education and self-learning to educate the local population within the closest proximity. It will make them accessible to gainful employment opportunities in their home towns and will thereby avoid the need for migration elsewhere.

The competition challenged its participants to rethink and re-imagine the idea of the Library as a 21st-century self-learning and educational incubation space that not only sheds light on conventional means of knowledge

but also encourages its users to interact, share ideas, and grow together. Participants were required to design a Tiny Library optimized for 75 users with engaging multifunctional spaces for all ages and spatial experiences where they were required to choose a site in a rural or remote context for the proposal and the structure should not exceed 300 sq.mt of built-up area.

Volume Zero Competition thanks all the competitors for participating in this competition and for contributing to this competition's research. Participants from more than 50 countries contributed valuable concept ideas to the contest, which was evaluated by a panel of international experts. The winning projects have been awarded a total cash prize of $4,000 distributed to the first 3 team winners.

The esteemed jury for judging this competition consisted of **Puran Kumar** (Studio PKA), **Peter W. Ferretto** (Condition Lab), **Lui Hanxio** (LLLab), **Ahmad Thaneem** (3dor concepts), **Antonio Garza Ferrigno** (Proyecto Reacciona), **Catherine Ranger** (MGS Architects), **Luis Ricardo** (LLLab), **Sebastian Irarrazaval** (Architect).

The top three winners were awarded total prize money of $4,000 while ten entries received Honorable Mentions. Here are the winning entries. The full result for the competition **Tiny Library 2023 Architecture Competition** can be found at volumezerocompetitions.com.

FIRST PLACE

The Ship of Knowledge
BOURGEOIS LECHASSEUR ARCHITECTES | Canada

SECOND PLACE

Reclaiming Progress
Ravisha Rathore and Devesh Uniyal | India

THIRD PLACE

The Seventh Generation Library
Roberta Vasnic and Ian Sanders | United Kingdom

The Seventh Generation Library

VZTL235303020

This library has been designed to be part of its natural setting. Not simply to be located within a Banyan Tree Forest, but to be enveloped by the roots of this unique tree.

The Banyan Tree holds a special place in Indian culture. It is the country's national tree and its aerial root system, climbing downwards from the canopy, offers a means to integrate the library in the local ecosystem.

Building on the indigenous theory of the seventh generation, the library would be constructed predominantly in timber and, over the generations would become wrapped in the roots of the trees above, until it becomes a living part of the forest.

This metaphor carries into the use of the building. As a library located adjacent to the Living Roots Bridge, on the edge of Riwai, in the Meghalaya region of India, its purpose is to establish, enhance and embed knowledge in the community. This knowledge will grow over generations, as the roots cloak the structure, rooting the library into the community and nature.

The building is divided into three primary elements: General knowledge and fiction, a children's section, and an information technology suite. Each element is accessed off a central courtyard which can be used for community events, art and sculpture exhibitions and lectures.

At the end of its useful life, any materials that cannot decompose will be removed and the structure will become fully integrated with the ecosystem as it collapses into ruin and becomes home for plants, bugs and other wildlife.
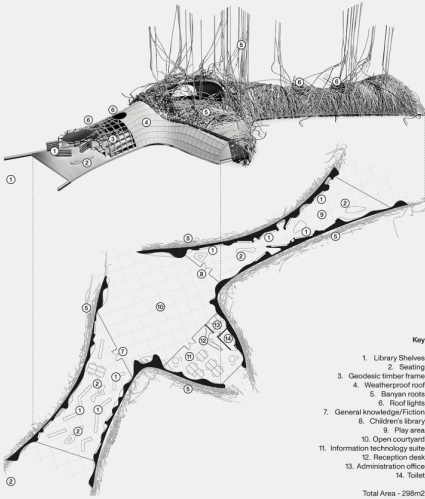
Key
1. Library Shelves
2. Seating
3. Geodesic timber frame
4. Weatherproof roof
5. Banyan roots
6. Roof lights
7. General knowledge/Fiction
8. Children's library
9. Play area
10. Open courtyard
11. Information technology suite
12. Reception desk
13. Administration office
14. Toilet

Total Area - 298m2

Figure references

1. Exploded perspective
2. Plan
3. Location map
4. Site map
5. Section
6. Exterior CGI
7. Elevation
8. Concept model
9. The living roots bridge
10. Banyan roots enveloping building
11. Banyan tree
12. Interior CGI
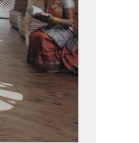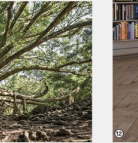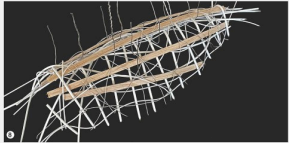
Honourable Mentions:

TRAVELING STORIES

Hidalgo is one of the states with the lowest educational level in Mexico, is neither inclusive nor equitable. There are a lot of communities without electricity and essential needs, let alone access to books and a safe space for learning.

This tiny library, consisting of a series of modular units made from durable materials, emerges as a ephemeral and nomadic set that is flexible, easy to assemble and able to be reconfigured in different ways in order to adapt both to its context and to each community's specific needs. The idea is for the library to tour to the most underserved and underrepresented communities in Hidalgo and for it to operate as a learning pavilion that, rather than being set up on a permanent location, can move to different localities.

This project was originally conceived when thinking of community storytelling, and its transformative power, as a central idea; Hence, the inclusion of a recording module as one of the key components of this project.

Looking to inspire meaningful dialogue and action, this mobile library allows for stories and ideas from individuals to be recorded, documented and spread between otherwise disconnected communities, acting as both a connection and a catalyst that can shed light on the challenges that rural communities face when accessing education.

Stories nurture connection and empower people to become more engaged with their own communities; And just as books are capable of creating moments of reflection and introspection, so too can spoken word, music, film, dance and learning. With this in mind, the Traveling Stories Library aims to create a safe space where all of these activities can take place, almost as a refuge for information, literacy, entertainment and language skills.

The library truck itself also acts as a fundraising campaign for education in Hidalgo. Because of the experiential nature of the project, the library can help communities and state organizations to better understand the systemic barriers to access education and the real impact it has on individuals. Hoping this can lead communities in Hidalgo to seek ways to improve the state's learning spaces.

In order to meet the project's basic functionality needs, the modular design allows for a classic library space configuration, with bookshelves, tables and chairs; However this same modular design can help rethink the library itself as an open reading space that fosters community encounters and blurs the fine between indoors and outdoors.
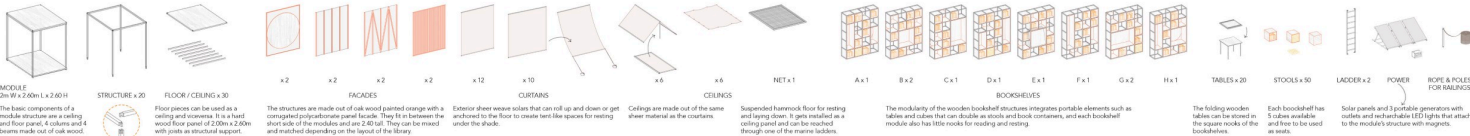
With flexibility at the core of the project's design philosophy, the modular nature paired with the library's easy-to-build structures allows for each pavilion to be completely different. Using a simple build system, the facade panels and ceilings can be placed in many ways and matched to different modules, and the bookshelves and tables can be mixed and matched to create multipurpose layouts that can be freely modified in a way that opens up a world of possibilities for the configuration of the space.

The library can either be set up as an enclosed space (Layout B) or set up so that it is accessible from all sides (Layout C); It can be divided into different rooms and platforms (Layout A) or set up as a single building; It can contain a single function or multiple ones; It can be set up for creative workshop spaces, reading and resting spaces, performance platforms, screening spaces or into a public space for gathering, socializing and connecting. It essentially reshapes itself to better fit the desired learning experience.
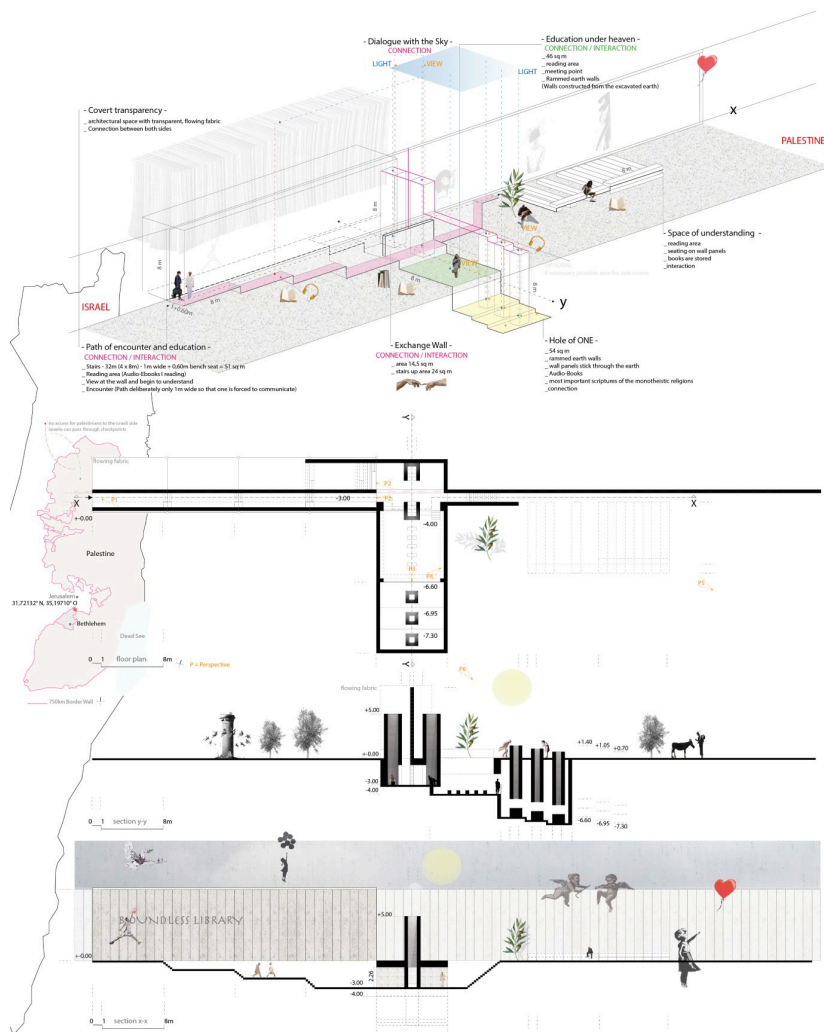

LAYOUT A

LAYOUT B

LAYOUT C

ON THE ROAD

Depending on the setting, the truck can work as an even tinier library for more "on-the-road" situations. The rest of the pieces are stored in the two back modules on the front of the truck, leaving 4 modules available for use even if its current location doesn't allow for a temporary deployment; or if the conditions of the specific community being visited are particularly precarious (For example, roadside communities in Hidalgo).

The library modules were designed based on the maximum size allowed for a semi-trailer in the Official Mexican Standard, which is 12.9m long, and all the truck measurements were taken into account using, in this case, a 12m long truck. After a context and weather analysis, the best months for touring would be February, March and April because of the lower levels of precipitation and friendlier weather. Having researched various social and economic factors, these 13 communities were chosen for the start of the tour:

1 Xochiatipan
2 Huasalingo
3 Tlanchinol
4 Zacualpan
5 Cerro Colorado
6 Acatlán
7 Acaxochitlán
8 San Juan Tizahuapán
9 Yolotepec
10 Zimapán
11 Villa Nueva
12 Jacala
13 Tepehuacán de Guerrero

A

B

C

MODULE
2m W x 2.60m L x 2.60 H

The basic components of a module structure are a ceiling and floor panel, 4 columns and 4 beams made out of oak wood.

STRUCTURE x 20

FLOOR / CEILING x 30

Floor pieces can be used as a ceiling and viceversa. It is a hard wood floor panel of 2.00m x 2.60m with joists as structural support.

x 2   x 2   x 2   x 2   x 12   x 10   x 6   x 6

FACADES

CURTAINS

CEILINGS

NET x 1

The structures are made out of oak wood painted orange with a corrugated polycarbonate panel facade. They fit in between the short side of the modules and are 2.40 tall. They can be mixed and matched depending on the layout of the library.

Exterior sheer weave solars that can roll up and down or get anchored to the floor to create tent-like spaces for resting under the shade.

Ceilings are made out of the same sheer material as the curtains.

Suspended hammock floor for resting and laying down. It gets installed as a ceiling panel and can be reached through one of the marine ladders.

A x 1   B x 2   C x 1   D x 1   E x 1   F x 1   G x 2   H x 1

BOOKSHELVES

The modularity of the wooden bookshelf structures integrates portable elements such as tables and cubes that can double as stools and book containers, and each bookshelf module also has little nooks for reading and resting.

TABLES x 20

STOOLS x 50

LADDER x 2   POWER   ROPE & POLES FOR RAILINGS

The folding wooden tables can be stored in the square nooks of the bookshelves.

Each bookshelf has 5 cubes available and free to be used as seats.

Solar panels and 3 portable generators with outlets and rechargeable LED lights that attach to the module's structure with magnets.

Beyond Borders
The Library at the Border Wall as a Hub for Cultural Exchange

The Tiny Library is located in Bethlehem, on a section of the 750km wall between Palestine and Israel. The library will be a place of **encounter** and **dialogue**, and a symbol of cultural **knowledge exchange**. The library's architecture, deliberately placed on the Palestinian side, allows visitors to make physical and symbolic **connections**. Sharing learning materials aims to bring people together by creating a basis for discussion.The wall is incorporated into the design:

Visitors start on a descending level that allows the wall to disappear from view, covered with transparent fabric, symbolising the opposite of the impenetrable wall. An exchange wall between the two sides allows people from either side to remove the inclined books. So the more they take, the more their knowledge grows and the more they come into actual contact.Two rising prisms are connected by views of the sky. A central open-air area creates space for encounters and the exchange of knowledge. The three most important books of the monotheistic religions are also symbolically presented here and can be experienced via audio books, once back at the top.

Through these encounters and the acquisition of knowledge, mutual understanding and togetherness **Beyond Borders** can be promoted.

Architectural diagrams (left side)

- **Covert transparency -**
  _ architectural space with transparent, flowing fabric
  _ Connection between both sides

- **Dialogue with the Sky -**
  CONNECTION
  LIGHT   _VIEW

- **Education under heaven -**
  CONNECTION / INTERACTION
  LIGHT
  _ 46 sq m
  _ reading area
  _ meeting point
  _ Rammed earth walls
  (Walls constructed from the excavated earth)

PALESTINE

ISRAEL

- **Space of understanding -**
  _ reading area
  _ seating on wall panels
  _ books are stored
  _ interaction

- **Path of encounter and education -**
  CONNECTION / INTERACTION
  _ Stairs - 32m (4 x 8m) · 1m wide + 0.60m bench seat = 51 sq m
  _ Reading area (Audio-Ebooks I reading)
  _ View at the wall and begin to understand
  _ Encounter (Path deliberately only 1m wide so that one is forced to communicate)

- **Exchange Wall -**
  CONNECTION / INTERACTION
  _ area 14,5 sq m
  _ stairs up area 24 sq m

- **Hole of ONE -**
  _ 54 sq m
  _ rammed earth walls
  _ wall panels stick through the earth
  _ Audio-Books
  _ most important scriptures of the monotheistic religions
  _ connection

Maps and plans

Palestine
Jerusalem
Bethlehem
Dead Sea
31,72132° N, 35,197'10° O

750km Border Wall

0 _ 1   floor plan   8m
P = Perspective

flowing fabric:
+0.00
-3.00
-4.00
-6.60
-6.95
-7.30

section y-y
flowing fabric:
+5.00
+1.40 +1.05 +0.70
-3.00
-4.00
-6.60
-6.95
-7.30
0 _ 1   section y-y   8m

BOUNDLESS LIBRARY
+0.00
+5.00
-3.00   2.26
-4.00
0 _ 1   section x-x   8m

one roof library

The library is situated in a remote Kelabit indigenous village in Bario, Sarawak, Malaysia. Perched at 3500 ft above sea level, surrounded by tropical rainforest, reaching this village requires a flight from the nearest town or a 16-hour journey on a dirt road. Due to its isolation, the village faces limited resources and opportunities.
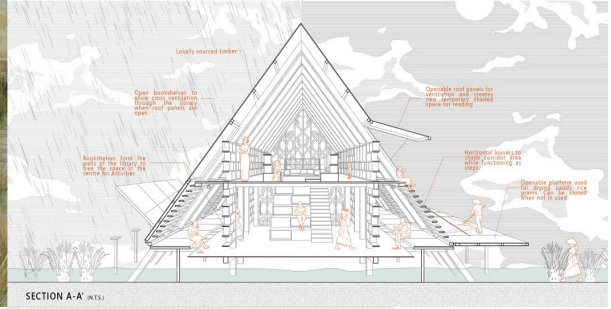
The Kelabit people primarily rely on paddy farming and are known for their famous Bario rice. **Planted amidst the paddy fields, the library offers shade for farmers to rest and read after working in the fields.** While waiting for their rice grains to dry, which requires mixing every 30 minutes, farmers can step in the library and enjoy a book.

The Kelabit community's rich culture and language are under threat, classified as a UNESCO endangered language. With many young Kelabits migrating out of the village and losing their traditions, the library aims to not only **educate the older generation but to preserve the Kelabit language and traditions for the young children.**

The library draws inspiration from the local vernacular architecture of the Longhouse, also known as a '**village under one roof'**. The library is a place not just for farmers and for reading but it intends to accomodate the other villagers activities and cultural practices.

MASSING & CONCEPT DEVELOPMENT

Vernacular Longhouse
Large overhang roofs on wooden stilts.

Extended Roofing
Adaptation from the vernacular longhouse.

Transformable Roof
Creating openings in the roof that transforms into a space.

Sustainability
Openings for natural ventilation flow in the hot and humid climate

Modularity
Modular structure allows for an extension of space in the future.

SECTION A-A' (N.T.S.)

Drying Rice Deck

Videos of a Kelabit teaching the Sape instrument can be recorded here & young Kelabits can borrow the Sape to learn
Music Library Room

Audio Visual Room

This stairs can also be used as a seating area for traditional Kelabit dance performances
Multipurpose Space

Drying Rice Deck

Children Reading Space
(1F Floor)

Multipurpose Space
(GF Floor)

GROUND FLOOR PLAN
1: 200

FIRST FLOOR PLAN
1: 200

Translucent Roof Sheet Panels

Timber Structure

1F Floor

GF Floor

LEGEND
01 Entrance
02 Adult Library & Multipurpose Space
03 Drying Rice Deck
04 Audio Visual Room
05 Music Library Room
06 Childrens Library
07 Digital Space
08 Storage Area

FACADE
The facade is a timber screen pattern inspired by the traditional Kelabit art on the traditional instrument called the 'Sape'.
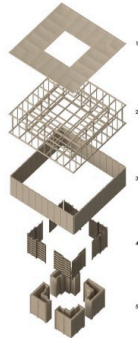
PAPER PAVILION

A tiny library designed for inhabitants of Al-Zaatari refugee community, Jordan.

The simple paper materiality of the construction allows repairs to be made with no previous building experience. The use of paper is also affordable and 100% recyclable, making it both economically and environmentally sustainable.

The pavilion aims to create openly available sanctuaries of knowledge. Architecturally, this translates through the implementation of semi-transparent materials and uninterrupting partitions such as pivot and sliding doors. As opposed to conventional doors, these maintain fluidity as they are never truly open or closed. Semi-transparent paper complements this by reducing visual segregation and introducing light to otherwise poorly lit areas.

Free-flowing porosity can also be observed in plan, where an outer circulation corridor is lined with books and is openly accessible from all sides through revolving doors. This symbolises the access to knowledge being available to all, regardless of geographical and socioeconomic backgrounds. Openness is carried on through to the centre, where a courtyard provides dynamic spaces for community gatherings, interactive learning sessions and screenings.
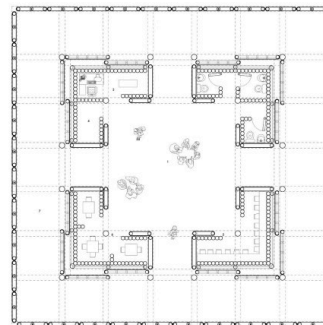
The central courtyard plays a key role in creating more than just a library: the public space stimulates community interaction and the passing on of knowledge through storytelling. This is a vital form of learning, especially within a refugee community where literacy rates are often low. This space, coupled with the diverse backgrounds of people from the community, successfully creates a melting pot of knowledge and a sanctuary for learning.

1. Roof: Protective weatherproof canvas is only non paper material
2. Structure: Rigid card tubing provides structural support
3. External leaf: Pivoting, semi transparent paper doors allow natural light in, eliminating reliance on artificial light
4. Inner leaf: Incorporated sliding displays and book shelves into external walls of core
5. Cores: Housing for amenities, study spaces, admin, storage and digital area

1. Central courtyard
2. Toilet facilities
3. Admin/info desk
4. Storage
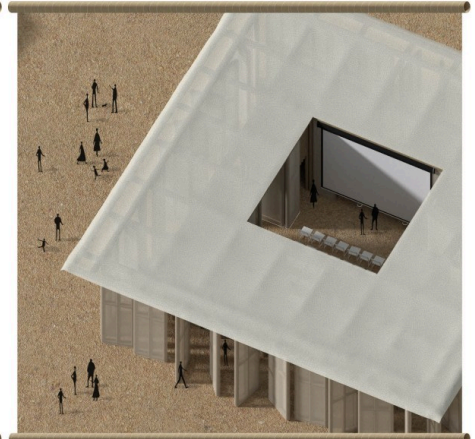5. Digital section
6. Private study space
7. Book shelves + circulation corridor
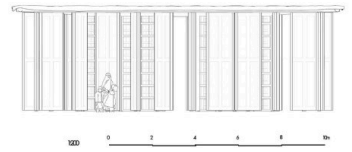
Elevation showing pivoting door facade with book displays behind

Section showing outer circulation corridor and internal community courtyard

The Nomad

Hölch

I

n the boundaryless steppes of Mongolia, lives a great number of nomadic herders. They build portable houses to migrate seasonally among fresh grassland for their livestock. Reading in a library for them, is a precious experience due to their far reach to cities and social infrastructure. Providing a portable library option to them is influential for those who also have to cope with the challenging modern society.

The Nomad is a tiny library/common shelter inspired by traditional Mongolian houses. To make itself belong to Mongolian nomads, its structures with traditional materials are light, local, and modular, creating the aesthetic of Mongolian spirits. The Nomad contributes itself not only as a library for people to learn and develop themselves for a better future but also simultaneously as a communal shelter to reflect on the past, to what they have inherited from their ancestors. Adding a center court and food stock area critically integrated Mongolian life into the building. The Nomad, therefore, is not only a tiny library but a place where nomads broaden their world, rest from long travel and have good memories with their comrade and family.

Vernacular Inspiration
Mongolian yurt as a spatial and material inspiration

Communal spirit
Create outdoor court while keeping traditional circular space characteristic

Sustainability
Passive ventilation through core and abundant natural light from thin exterior skin

Serve extra local needs
Separated stock and reading space vertically Bring culture and lifestyle to the library

Spatial Connection
Tradition and new learning spaces are vertically integrated
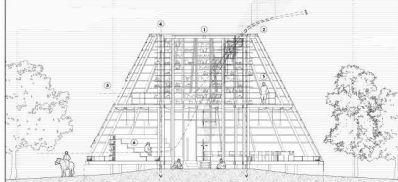
SECTION

1. Glazing Skylight | 2. Ventilation and Smoke Channel
3. Movable Fabric Curtain | 4. Rain Collecting Gutters and Pipes
5. Food Stock | 6. Stepped Seats with Bookshelf and Storage

PLAN

2. Entry | 2. Congregation | 3. Kitchen
4. Meet | 5. Read and Learn | 6. Meditate
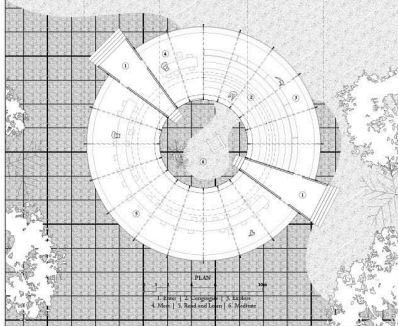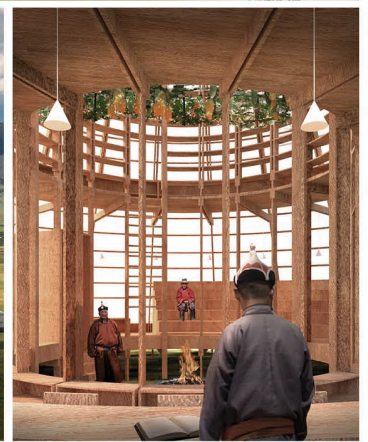
Textile Tome

The Textile Tome, serving as a textile-infused knowledge hub, empowers the Karen community of Mae Hoi Village to actively exchange, celebrate, preserve, and promote their treasured cultural tradition, weaving together their heritage with the outside world.

Mountain areas along the Myanmar-Thailand border where the Karen Communities reside

Site Selection:
Situated 2,100 meters above the sea level, Mae Hoi Village is home to a self-sustaining Karen community – group of refugees resided in the mountains. With approximately 366 residents, they cultivated their unique traditions, language, and clothing style that deeply embedded with their rich cultural heritage. The village is located near the city of Chiang Mai, which holds a strong Thai culture and the history of Northern Thailand.

Issue:
The Karen communities face the challenge of statelessness due to the longstanding political issue with the military. The situation exposes them to discrimination and neglect, resulting in a lack of recorded local history and limited educational opportunities. As a minority in Thailand, the Karen's culture is gradually fading resulted in the disappearance of the alphabets of their language, remaining only the treasured art of weaving. The rapid advancement of technology and the evolving world further widens the gap between them and the mainstream society that could cause further risks to the preservation of their culture.

Proposal:
In the proposed tiny library, the threads of the Karen communities' legacy are intricately woven together with textile-written fabric, symbolizing the unique cultural "language" in an artform that express their identity and heritage to the outside world. The library nurtures a space where the Karen community can gather to share stories, exchange skills and knowledge, and ensure that their cultural tradition continues to thrive.
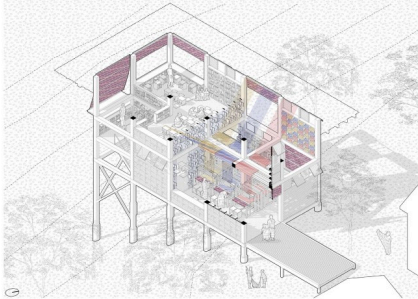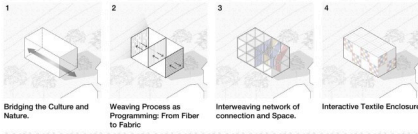
Mae Hoi Village's Clothing Culture

Karen's Textile Making Process

| Harvesting | Reeling | Spinning | Dyeing | Drying | Textile Patterning | Weaving |

Design Strategy
Textile Tome sits at the heart of the Mae Hoi community overlooking the agriculture landscape which offers visitors the opportunity to immerse themselves in the complete process of fabric making (1). The spaces are divided into two major areas, weaving center and the library, that are integrated to the overall experience (2). Symbolizing the interconnected network within the community and their connection to the outside world, the cotton threads are integrated into design elements that weave their way throughout the space and even serve as bookshelves and interactive learning wall (3). Wood, polycarbonate sheets, and the Karen's fabric are used to create the enclosure of the space which results in unique textile-like patterns throughout the day (4).

1 Bridging the Culture and Nature.

2 Weaving Process as Programming: From Fiber to Fabric

3 Interweaving network of connection and Space.

4 Interactive Textile Enclosure.

Knowledge Hub
Provides resources and educational materials to empower the younger generation aspires to bridge the gap between the community and the rapidly evolving world.

Cultural Exchange Plaza
Features communal bleachers that encourages the villagers to gather, engage, and exchange their knowledge.

Cotton Farm and Open Landscape
Promotes the opportunity for the visitors to observe and acknowledge the complete process of textile weaving – from the initial stages of cotton cultivation to the final creation of their intricate textiles.
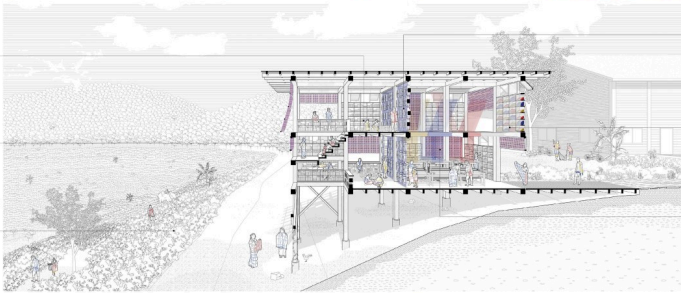
Interactive Threads Wall
Encourages the community to share ideas of patterns and textiles through the interactive threads wall, fostering collaboration and creativity. Together with the books, the board generate endless inspirations.

Textiles Archives
Collecting and preserving the tribe's textiles and yarn for historical and future research purpose, ensuring the preservation of their culture

Weaving Center
Fostering the sense of empowerment within the community, the area becomes the center for cultural revitalization that inspire explorations and celebrates the Karen's heritage through the art of weaving.

| 1st Level | 2nd Level | Roof |
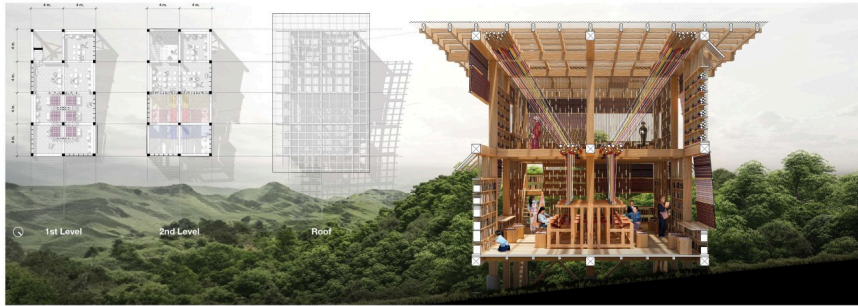
NASIKI (*root.*) yanomamö

ISSUES FACED BY THE YANOMAMI TRIBE

The Yanomami inhabit the Orinoco and Sierra Parima region of southern Venezuela as well as the Amazonian region of Brazil. One of the most remote indigenous communities in the world, numbering over 7000. The Yanomami have been able to preserve many of their traditions and maintain a symbiotic relationship with nature. However, the devastation of the environment, health, social organization and culture of the Yanomami, particularly in the State of Roraima but also in the State of Amazonas, Venezuela, had reached a humanitarian scale and intensity that the Federal Prosecutor of Brazil described as 'genocidal.' These problems followed by illegal mining explosions led to the pollution of rivers and the forest, thus threatening the very existence of ancestral tribes.

SOLUTIONS

Nasiki not only provides a refuge for knowledge but for also cultivating cultural identity and survival of the tribe. Nasiki sustains learning spaces that allow the distinctive connection to nature that the Yanomami tribes deem vital. These spaces include the essential hearth/ central space for exhibitions and storytelling events as well as botanical studies since they know how to use a range of about 500 plants for food and medicine. Fishing, gardening, and gathering studies are also implemented as they nourish themselves partly by these activities. Also, due to the nature of the building materials and the Yanomamis extensive knowledge of construction, Nasiki could become temporary learning shelters used during tribe relocation for emergency situations. Finally, Nasiki provides human rights learning spaces that are undeniable for social justice, specially for these genocidal and dangerous times for the tribe. Nasiki is a set of spaces that would allow the Yanomami communities to dream and prepare for a better tomorrow while embracing their roots and teaching their next generations to do so.
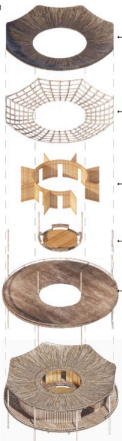
MATERIALITY

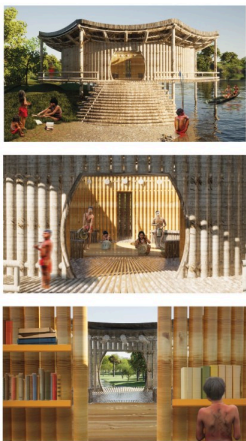- Geonoma baculifera (Palmae) for roof's thatch
- Xylopis sp (Annonaceae) for rafters and tie beams
- Manilkara huberi (Sapotaceae) for posts
- Socratea exorrhiza (Palmae) for walls and thatch supports
- Heteropsis flexuosa (Aracea) for lashing
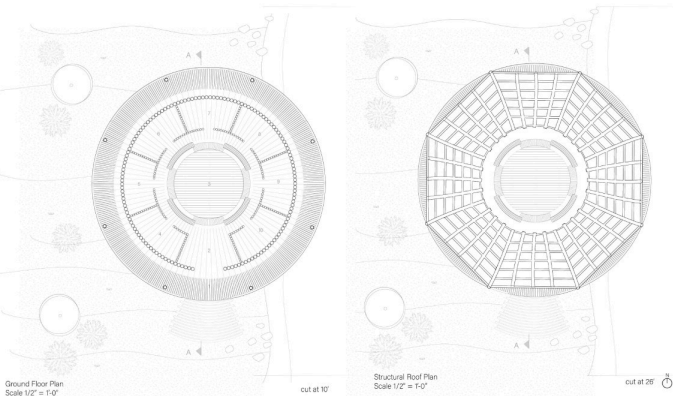
DESIGN CONCEPT


DESIGN PROCESS

The Shabonos are the original Yanomami tribes' communal round houses with curved roof and open central space known as the hearth of the house. The Shabonos were used as a vernacular case study to design contextually and implement passive design strategies. Also, the Orinoco River is purposely used as the main connector for allowing travel possibilities to tribes nearby. For the vernacular design elements, a circle is used as the geometrical configuration of the space since it represents the direct union between heaven and earth. These are present throughout the whole plan. Due to the nature of the site and tropical climate, local, reusable, and sustainable materials are proposed to construct Nasiki. As passive design strategies, cross-ventilation is present through apertures of walls (palm trunks), thermal comfort (thatch roof) and re-circulation of rainwater to the river (floor apertures of central space.)

EXPLODED DIAGRAM

- Thatch Roof
- Roof Structure
- Core of Programmatic Spaces
- Seating Areas around Hearth of Space with Bridges as Connectors.
- Voids for Stormwater Draining to Return to Orinoco River
- Wooden Posts Floor Slabs Attached to Wooden Pilings Driven to Earth

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Ground Floor Plan
Scale 1/2" = 1'-0"
cut at 10'

Structural Roof Plan
Scale 1/2" = 1'-0"
cut at 26'

1. Transitional Space
2. Entryway
3. Hearth/ Multi-use Space with Wooden Posts Seating and Bridges (Storytelling Events and Craft Exhibitions)
4. Arts & Crafts Space
5. Reading Space
6. Connection to Nature Training (Sustainability-focused)
7. Botanical Studies for Nutrition and Medicine
8. Fishing and Gardening Learning Space
9. Human Rights Learning Space
10. Cultural Knowledge and Identity Learning Space

SECTION - VERNACULAR DESIGN ELEMENTS AND PASSIVE DESIGN STRATEGIES
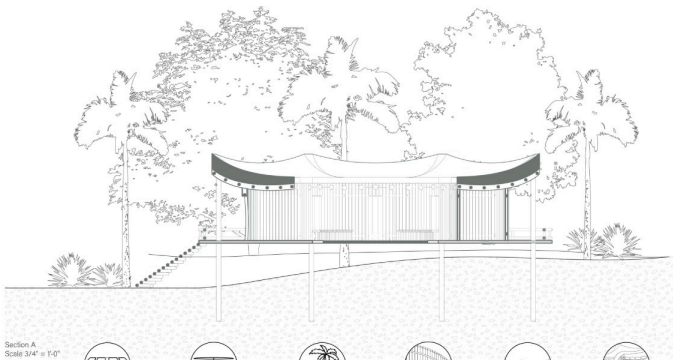
Section A
Scale 3/4" = 1'-0"

- Shabono: communal round house with curved roof and open central space (hearth)
- Circular geometry representing the union between heaven and earth
- Use of local, reusable, and sustainable materials to construct
- Cross-ventilation through apertures of walls (palm trunks) and Bernoulli's principle
- Thermal comfort in cold and hot climates during year (thatch roof)
- Re-circulation of rainwater to the river (floor apertures in central space)

Librarinha

The **Amazon Biome**, with a **hot** and **humid** atmosphere, is covered predominantly by dense, moist **tropical forest** with several types of **vegetation** and at least 6,000 species of trees, as well as floodplain and swamp areas, **bamboos**, and palm trees.

In this Brazilian Amazon context, more than 350 *ribeirinhas* communities (about 4,000 people) live on the banks of rivers in traditional **wooden residences**, located in **isolated places**; their houses are mostly suspended on stilts with respect to the **water** flows. With a **strong bond** with **nature**, the riverside dwellers survive on **artisanal fishing** and **planting**, traveling by **canoes** and **boats**, with **reduced access** to **good-quality services**, especially **education** and **health**.

Using **local building materials** and **techniques**, combined with **contemporary technology** and **architecture**, the **Librarinha** proposal aims to provide this social group with the opportunity to **engage** with distinct **reading** and **learning formats** and **activities** that involve **current** and **ancestral knowledge**. **Social**, **environmental**, and **sustainable** premises (nature and community **respect** and **self-sufficiency** aligned with culturally **accessible resources**) have guided the design of the **floating**, **mutable**, and **flexible** modules.

Amazon biome — Largest rivers

EXPLODED AXON

01. Bamboo (giant or guadua species) collected in winter and traditionally treated (water immersion)

02. Reeds, sisal or similar for the structure lashing

03. Wood plank flooring

04. Reusable floating plastic barrels

05. Woven straw panels connected by eyelets and hooks as sun, wind and rain barriers

06. Pivoting panels for bookshelves and exhibition displays

07. Cover system in plain treated mats and insulation layer

08. Photovoltaic solar panel system

09. Lamps traditionally made of natural straw braid baskets

10. Bluetooth speakers connected to audiovisual

11. Flexible or fixed furniture for benches and tables

12. Natural local heavy rocks used as anchor

FLOOR PLAN POSSIBILITY

01. Audiovisual layout
02. Articulation module
03. Working tables layout
04. Sanitary/Vegetable Garden module
05. Reading and learning activities
06. Open multifunctional module
07. Natural pools

Total: 290sq.m

TRANSPORTATION

CONNECT AND EXPAND

PIVOTING PANELS

ARTICULATION MODULE

SANITARY AND VEGETABLE GARDEN MODULE

SECTION (B-B)

FLEXIBLE FURNITURE

POSSIBLE ARRANGEMENTS

ROOFING COMPONENTS

SOLAR ENERGY SYSTEM

SECTION (A-A)

ELEVATION (E)

SITE LOCATION

Mestia

Site is located in the city of Mestia in Svaneti region, in Georgia(Sakartvelo).
Being regional center and a local tourist center in the mountains, the city has been actively developing recently. Despite the creation of a modern tourist and transport infrastructure there are no large educational institutions and other important elements of the educational system in the region. Young people go to study in big cities, settle there and rarely return to their native places.

In the eastern part of the city there are two bridges over the Mukhra River, which are currently poorly adapted to the pedestrian function and require reconstruction. Laying a new pedestrian route from the city center to the Museum of History and Ethnography would allow connecting the two shores of the city.
The idea of the proposal is to include elements of library functionally in the network of developing transport and tourism infrastructure.

CURRENT STATE OF THE BRIDGES

MESTIA CITY CENTER SCHEME

- City main square
- Bridge 2
- Tower
- Bridge 1
- Museum of history and ethnography

1m   200m
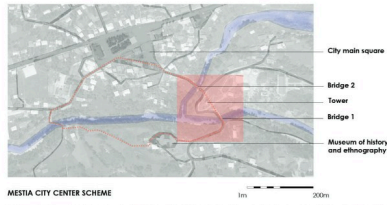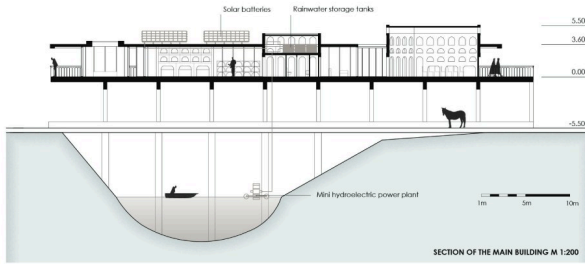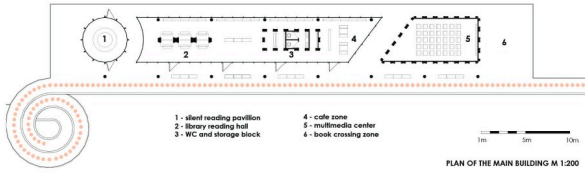
The new buildings are to be constructed above the bridges during its reconstruction process. There are two entries through the bridges. Main functions developed along the route. Main building contains library hall, multimedia center, silent reading pavilion and bookcrossing zone. Further along the route you can get to public agora zone near the tower and then exit through another building. Visitors can get book at one entry road in every reading zone and then return it at the exit.

Outdoor cladding and interior furniture are inspired by traditional svan home environment including details made from wood.
As buildings located above the water it's possible to provide electricity there using portable hydroelectric generator. Also it's appropriate to use a huge roof area to place solar batteries and water collectors.

FRAGMENT OF TRADITIONAL SVAN HOME

BUILT-IN SHELF DESIGN M 1:50

- Shelves
- Built-in desk
- Bench
- Column with wood cladding

MASTERPLAN M 1:1000

1 - main library building
2 - administration
3 - public agora space
4 - the tower

Mulkhra river

1m   25m   50m

PLAN OF THE MAIN BUILDING M 1:200

1 - silent reading pavilion
2 - library reading hall
3 - WC and storage block
4 - cafe zone
5 - multimedia center
6 - book crossing zone

1m   5m   10m

SECTION OF THE MAIN BUILDING M 1:200

Solar batteries   Rainwater storage tanks

5.500
3.600
0.000
-5.500

Mini hydroelectric power plant

1m   5m   10m

AXONOMETRIC SCHEME

SITE LOCATION

AFRICA   ETHIOPIA   AFAR

INTRODUCTION

Afar, Ethiopia is a region known for its rugged and dramatic landscapes, including the Danakil Depression, one of the **hottest and driest places** on the planet. The region is also home to the Afar people, who are known for their **nomadic lifestyles**.

Due to its **remote location** and harsh living conditions, the Afar region has one of the highest illiteracy rates in Ethiopia. According to a report by UNESCO, the **adult literacy rate** in the Afar region is **only 18%**, which is far below the national average of 49%. This can be attributed to limited access to educational resources, poverty, and cultural beliefs that prioritize traditional pastoralist practices over education.

a DAY in the life of the Afar People

YOUNG BOYS

1. Dances
2. Off to School ~3 HRS
3. Too tired to focus
4. Back to home ~3 HRS
5. Homework before sun dies
6. Sleep for the night

LADIES

1. Fatima wakes up
2. Fetches water
3. Tends to the herd
4. Household chores
5. Local Skillsets
5. Sleep for the night

MEN

1. Abubakar wakes up
2. Abubakar heads to salt mine
3. Abubakar works all day 8 HRS
4. Sleeps for the night

Culture

Nomadic Lifestyle
Temporary Homes
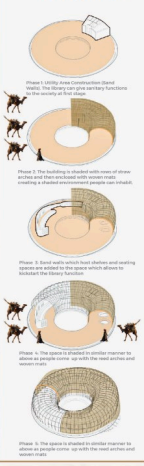Weaving Skills

Concept

Our architectural concept for the tiny library is inspired by the **nomadic lifestyle** of the Afar people. The library is designed to be carried by camels, making it easy for it to reach even the most remote parts of the desert. It can be built in phases, with its simple yet practical design making it easy to add new elements as required.

The project also makes use of **degradable sand walls** that can host functions such as shelves and seating. Once the inhabitants leave the space, the walls will naturally bio degrade, and **mix to the ground leaving no lasting impact on the environment.**
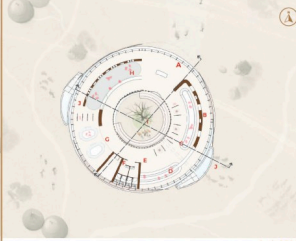
THE NOMADIC LIBRARY

Library Phases

Phase 1: Utility Area Construction (Sand Walls). The library can give sanitary functions to the society at first stage.

Phase 2: The building is shaded with rows of straw arches and then enclosed with woven mats creating a shaded environment people can inhabit.

Phase 3: Sand walls which host shelves and seating spaces are added to the space which allows to kickstart the library function.

Phase 4: The space is shaded in similar manner to above as people come up with the reed arches and woven mats.

Phase 5: The space is shaded in similar manner to above as people come up with the reed arches and woven mats.

SITE PLAN

Scale 1:400

LEGEND
A. Main Entrance
B. Main Library Space
C. Cattle Watering & Shed
D. Interior Courtyard

Scale 1:300

LEGEND
A. Reception (Info Desk)
B. Main Reading Space
C. Private reading spaces
D. Homework Platforms
E. Composting Toilets
F. Storage
G. Digital Pods
H. Community Workspace
I. Library Courtyard
J. Cattle Water Shed

3D VISUALIZATIONS

Design Features

Cattle Water Shed
The library provides drinking water for the society's cattle. A critical non-water collective which is driven to water tacks which are shaded in the sunny season to avoid evaporation.

Hanging Mats
These hanging mats act both as primary screens to provide reading spaces as well as display screens for the weaving walks of the women which will preserve the nomadic weaving the library.

Working Space
The working space is a place for ride mothers to do their weaving, plaster tasks and impart this practical knowledge to the younger generation hence fostering practical skills.

SECTION 1-1   Scale 1:100

Level 2 305

SECTION 2-2   Scale 1:100

North Elevation   Scale 1:100