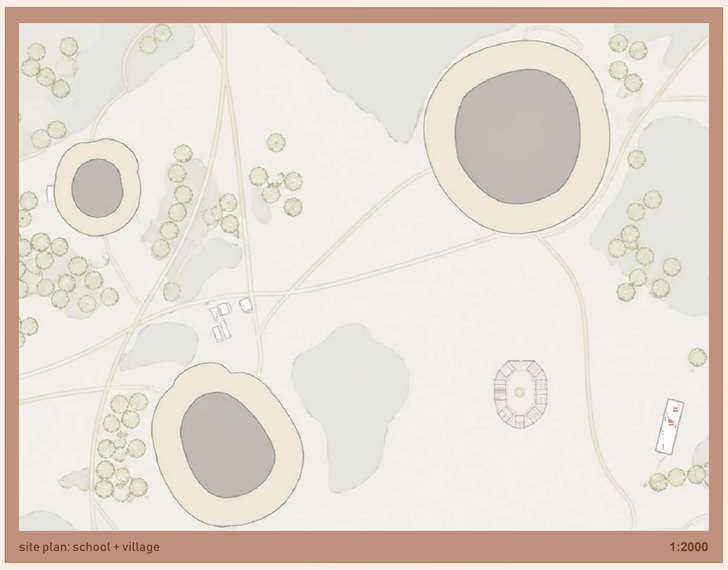
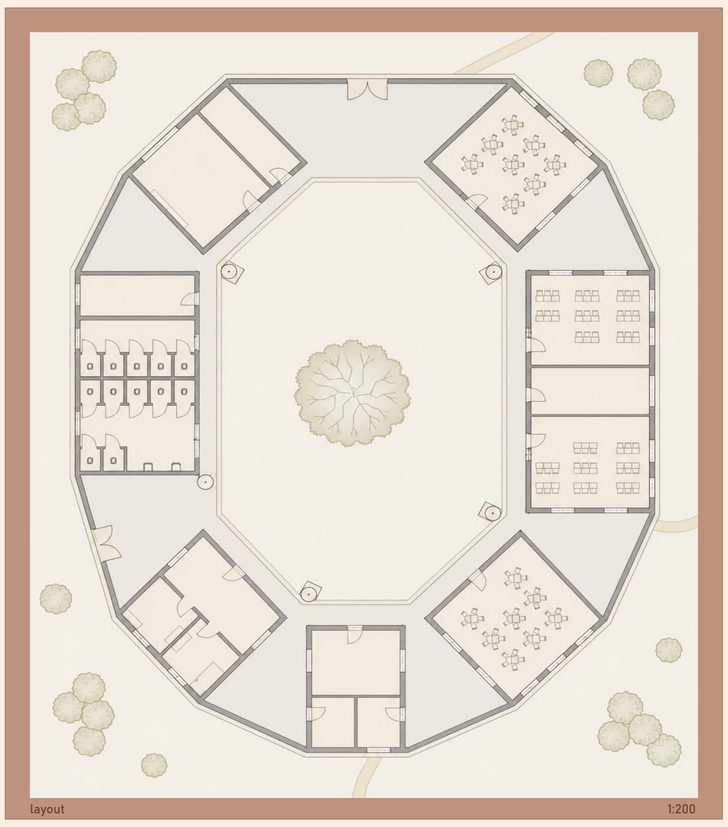
ARCHICAD BILDUNGSVERSION

Maasai Village Preschool and Kindergarten
Olasiti Cultural Boma



site plan: school + village 1:2000



layout 1:200

acacia wood



clay



laterite stone



cow dung

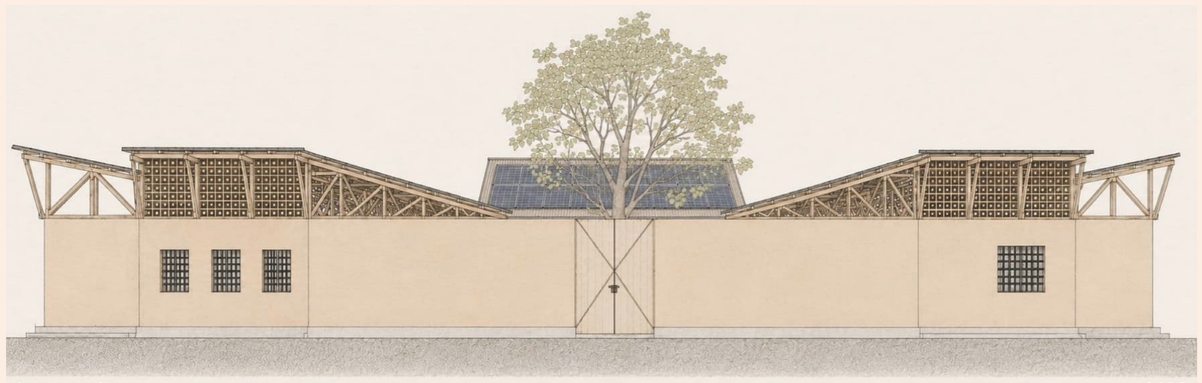


corrugated iron sheets



design concept

The school follows a modular design concept, with each unit fulfilling a specific function.
The buildings are arranged in a tetradecagonal layout around a central courtyard that integrates seamlessly with the existing structures. This open yet sheltered space forms an intuitive and reassuring center for daily activities, supporting learning, play, and community interaction within a natural setting.



view: north 1:100



section B-B 1:100

water concept

Rainwater is harvested from the rooftops and channeled into water tanks situated within the central courtyard. This simple yet highly effective system not only safeguards against flooding and destruction by elephants, but also provides a vital resource for daily use – reinforcing sustainability in a climate-conscious design.





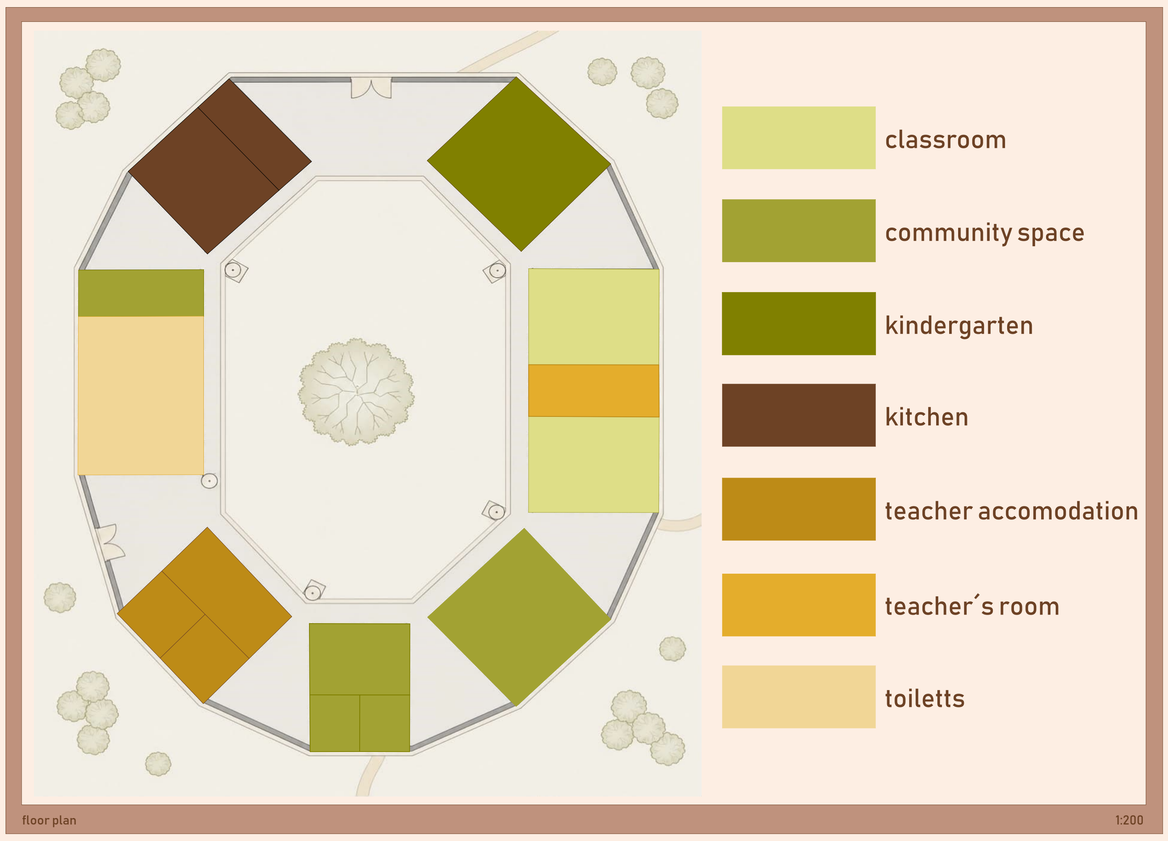




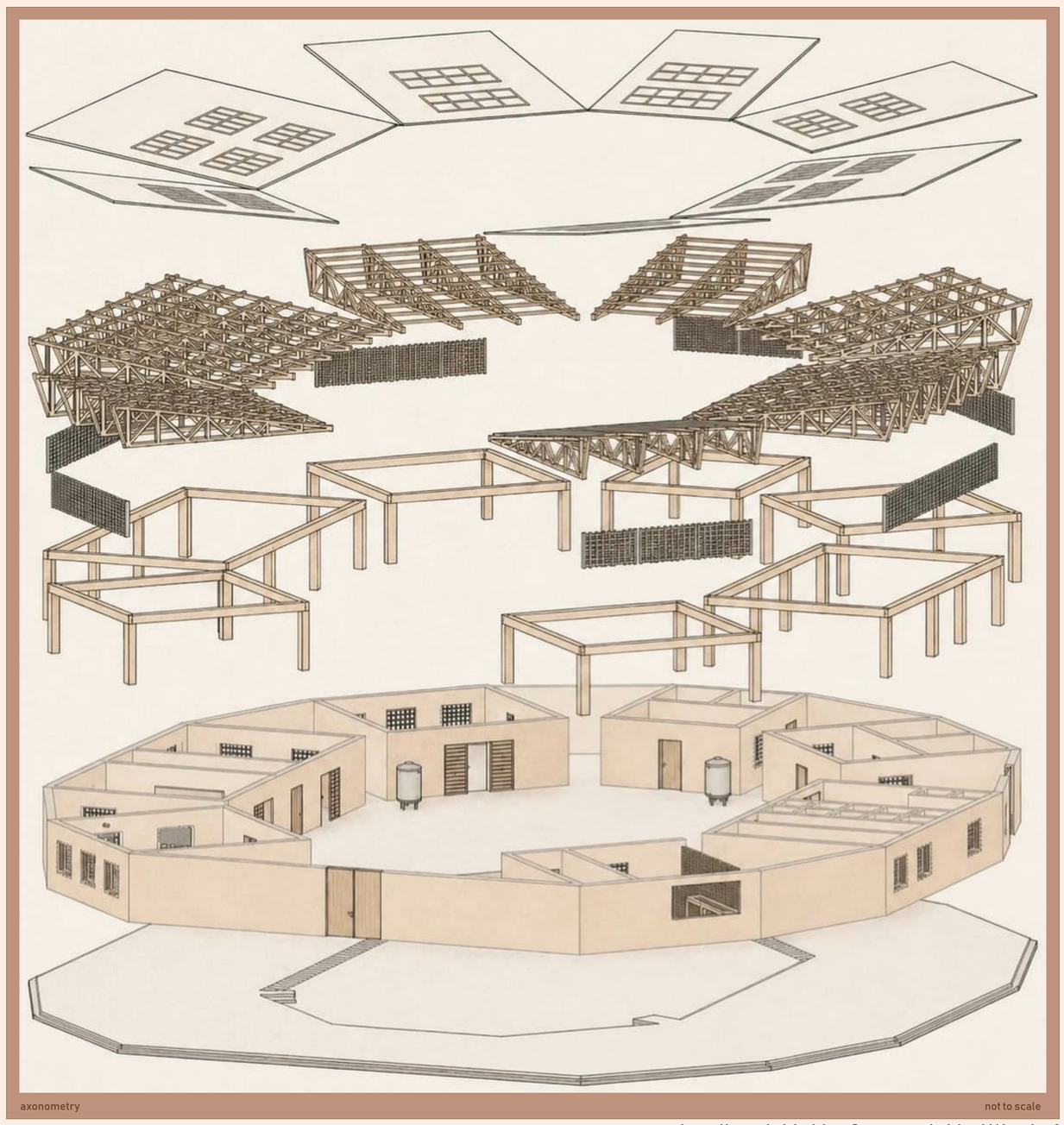
airflow concept

The building's design leverages natural airflow through a carefully planned ventilation strategy. Strategically positioned operable windows and wooden louvers allow cool air to enter, while warm air naturally rises and escapes through openings in the raised roof – creating a chimney effect that ensures continuous air circulation.

The unique geometry of the rooms guides the airflow seamlessly, enhancing thermal comfort without the reliance on mechanical systems. Additionally, the roof structure facilitates extra ventilation, allowing hot air to dissipate efficiently even during peak temperatures.



floor plan 1:200



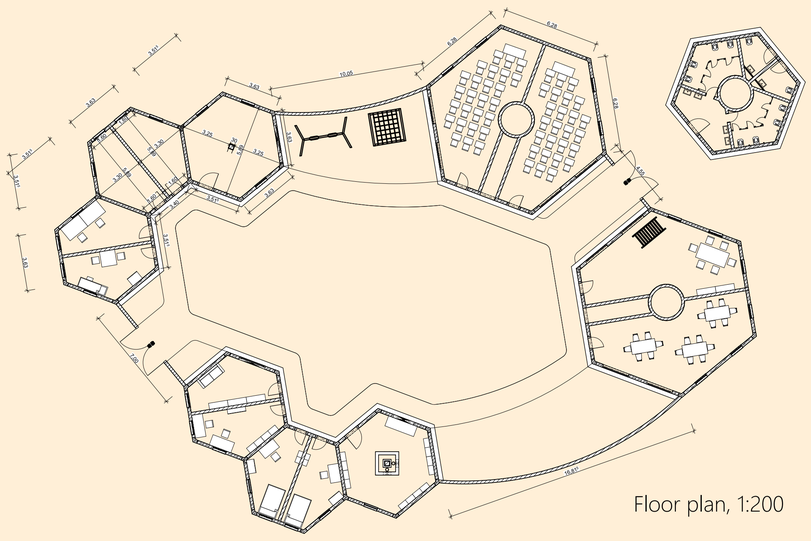
axonometry not to scale

Anneliese Arldt, Lisa Gauernack, Licel Wendorf





Early Childhood Development and Community Center



Floor plan, 1:200

Project Introduction

This project introduces a modular Early Childhood Development and Community Center in Olasiti, Kenya. The design features hexagonal modules arranged around a protected inner courtyard, creating a safe environment for children and a welcoming hub for the community.

Program & Spatial Layout

The facility includes one kindergarten room, two pre-primary classrooms, and a community space. The central courtyard connects all modules and includes a large school garden, where children learn about sustainable agriculture and permaculture. The children can take this knowledge home to their families, helping to improve local self-sufficiency and food security.

Passive Design & Sustainability

The center utilizes passive systems to function efficiently without expensive technology. Large windows maximize daylight to minimize the need for artificial lighting during the day. Fresh air enters through low louver windows in the facade and escapes through openings at the top of the roof, creating a natural chimney effect that cools the spaces. Additionally, the inverted-cone roofs collect rainwater for daily use, while rooftop solar panels provide clean electricity.

Building Materials



Coarse gravel



Acacia wood



Reinforced concrete



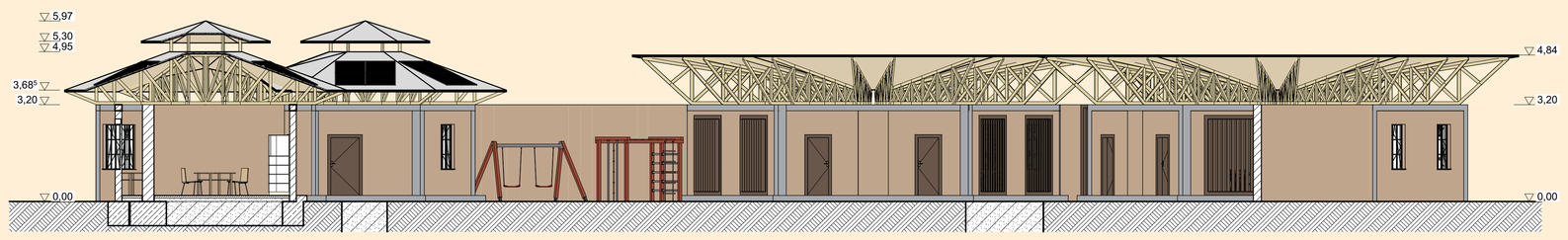
Corrugated iron sheet



Clay masonry

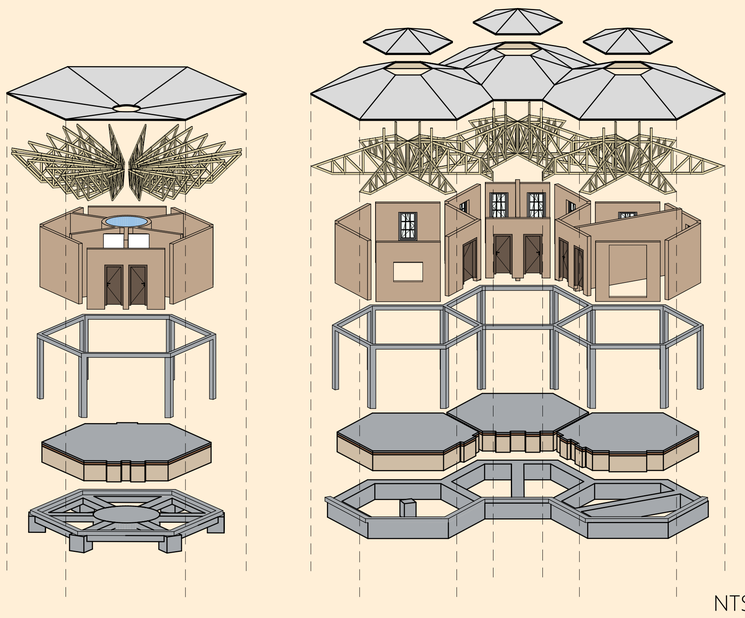


Clay plaster



Elevation / Section, 01-01, 1:100

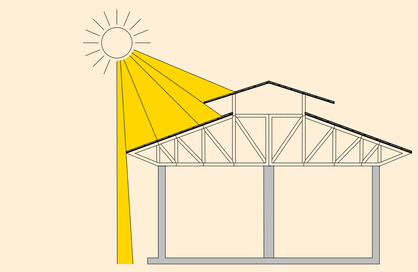
Exploded Axonometry

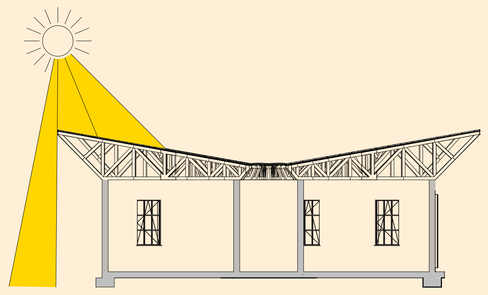


NTS

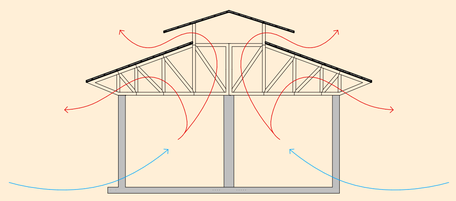
Climate Suitability

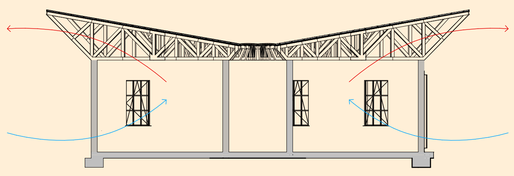
Shading by roof overhang + Solar System



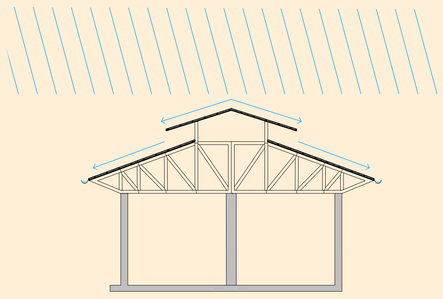


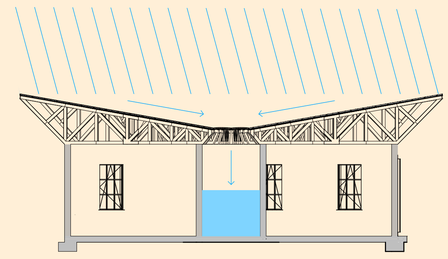
Natural ventilation



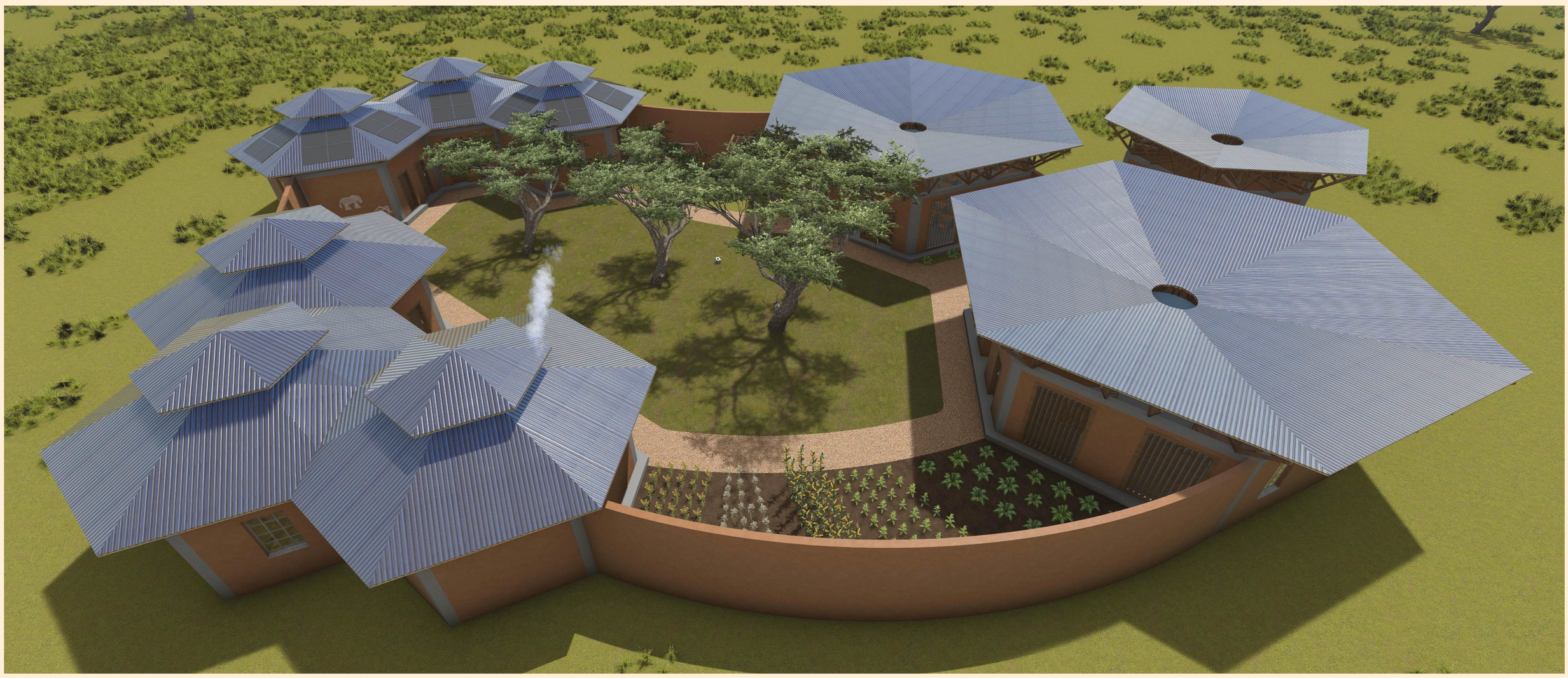


Rainwater harvesting





1:100













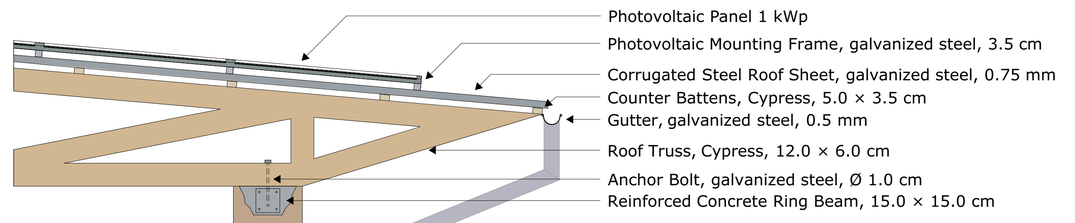


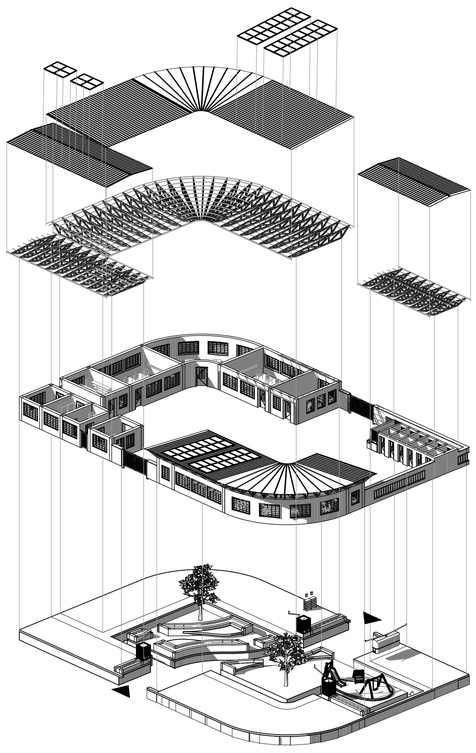
The design is based on a simple and easily maintainable construction system. Rammed earth walls, timber structures, concrete, steel, glass and corrugated metal sheets form a reduced material palette focused on durability, repairability and local availability.

The construction is deliberately low-tech. The rammed earth walls provide thermal mass and support a balanced climate. The roof structure consists of simple timber trusses whose components can be reproduced and replaced if necessary. Clear construction details and a limited number of material transitions reduce technical complexity and simplify maintenance.

Local Materials





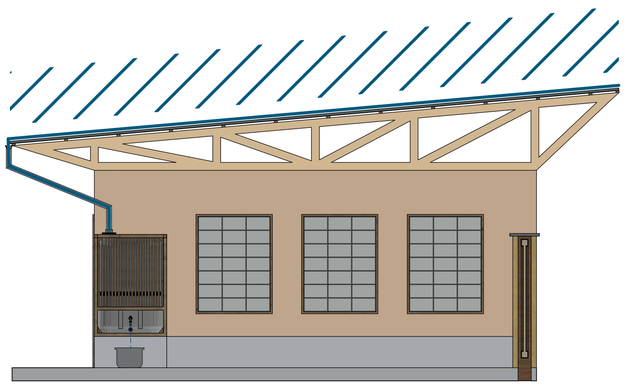


The programme combines two classrooms, a kindergarten room, a community space, a computer lab, a kitchen and sanitary facilities into an open place for learning and gathering. The kitchen and toilets are slightly detached, but remain spatially and functionally integrated into the overall layout.

An ecological school garden extends the educational concept. It serves as a planting school where children can learn about soil, plants and water through practical experience. Rainwater is collected through an integrated harvesting system and stored in tanks. Climbing plants provide shade for the tanks and support passive cooling.

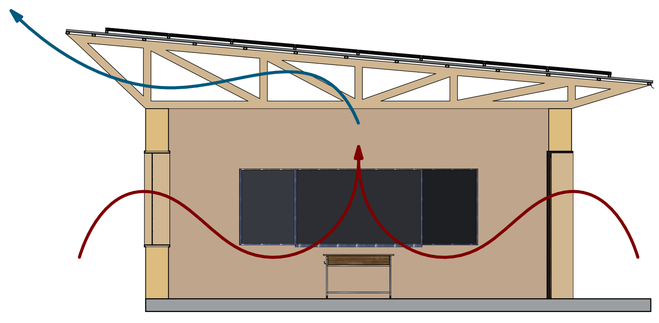
The project understands architecture as a simple, repairable and community-based system. Instead of relying on complex technologies, it creates a durable learning environment that can be maintained, adapted and further developed with local resources.

Acacia Educational & Community Hub



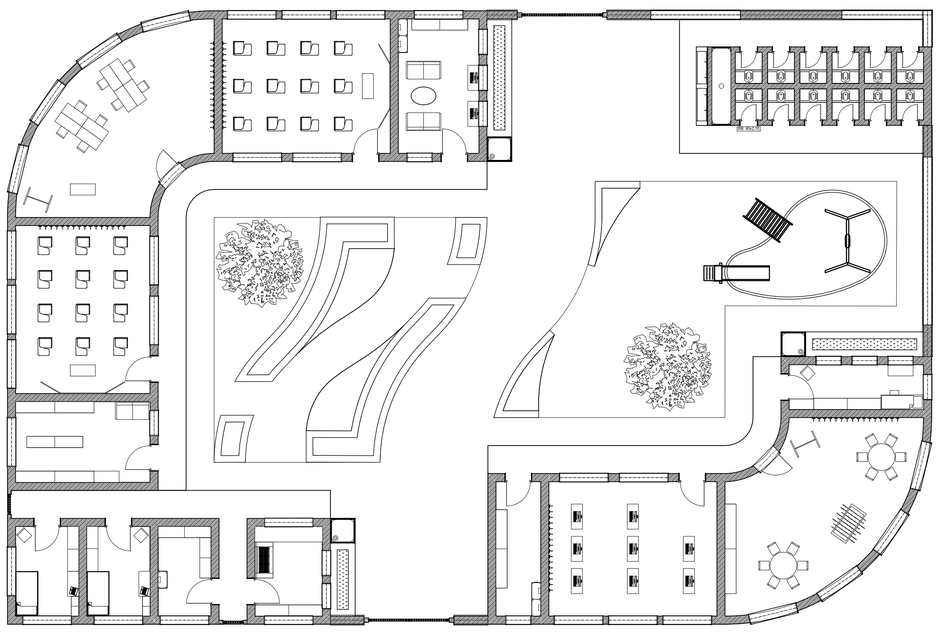
Rainwater Harvesting

All mono-pitch roofs are designed to collect rainwater efficiently. Rainwater is directed into gutters, conveyed through downpipes, and stored in on-site water tanks. A total of three water tanks provide local water storage and supply for the community center.



Natural Ventilation

The open mono-pitch roof enables natural ventilation. Fresh air enters through windows and doors on both sides, while warm air escapes through the open roof, creating a comfortable indoor climate for the classrooms.



by Andreas Körfgen & Justus Reich

I-HTWK







OLASITI CULTURAL BOMA

Poster Design & Visuals:
Hiba Naasan & Wesam Alahmad

Primary School & Kindergarten • Maasai Village of Olasiti, Amboseli, Kenya



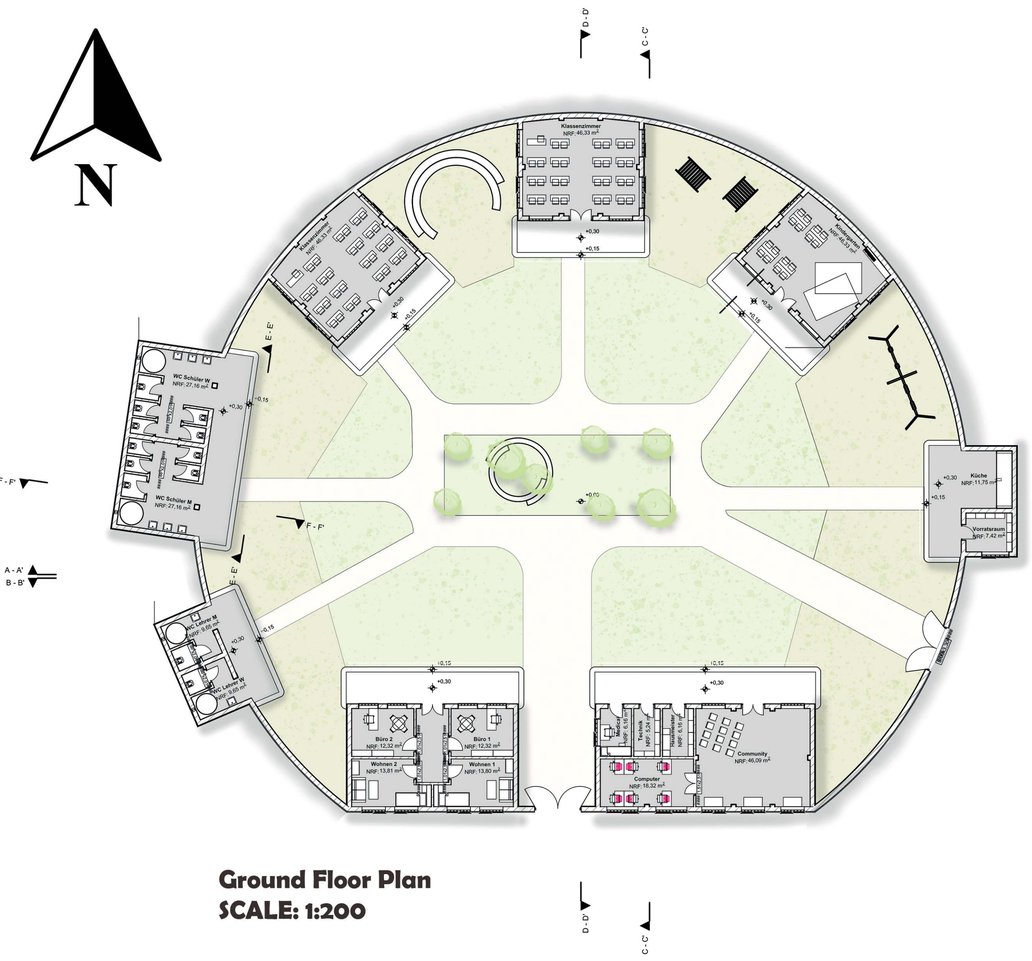
BASIC CONCEPT

A simple and robust school and kindergarten complex that combines regional resources with modern building materials, responds to the local climate, and creates a protected communal learning environment.

DESIGN PRINCIPLES

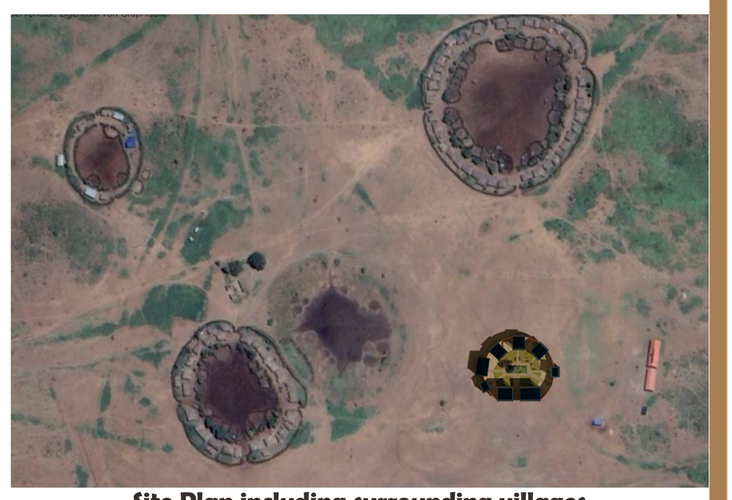
Circular arrangement inspired by the traditional village structure
Buildings positioned along the outer edge
A protected and secure courtyard as the central space

Courtyard with garden and play areas for children
Kitchen designed as a separate building
Teachers' and students' toilets located next to each other



Ground Floor Plan
SCALE: 1:200

Site Plan
Scale 1:500



Site Plan including surrounding villages

CLIMATE & FUNCTION

Cross Ventilation:

Ventilation openings and the roof design improve indoor air circulation and thermal comfort.

Shading:

Bamboo elements provide protection from direct sunlight and harsh weather conditions.

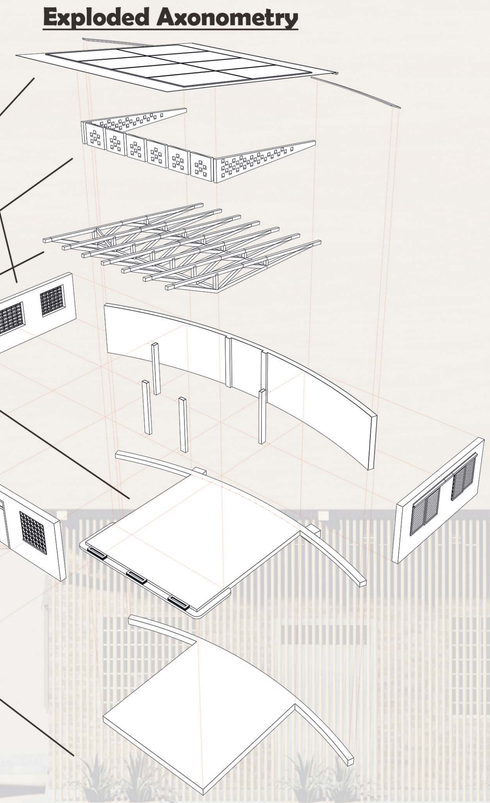
Solar Power & Water:

Rainwater harvesting supplies water for the kitchen, hygiene, and irrigation.
Photovoltaic (PV) panels provide renewable electricity for the facility.

MATERIAL CONCEPT:

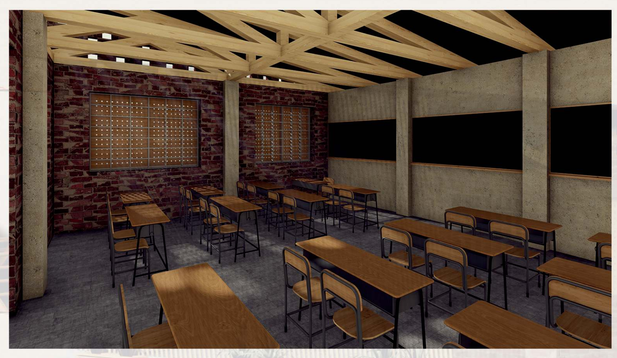
- Corrugated Metal Sheet
- Brick
- Timber
- Plain Concrete
- Bamboo
- Natural Stone

Exploded Axonometry

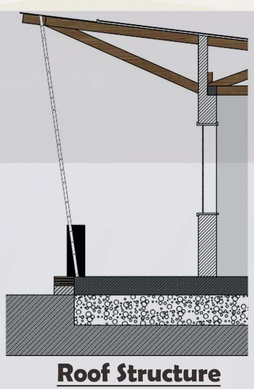




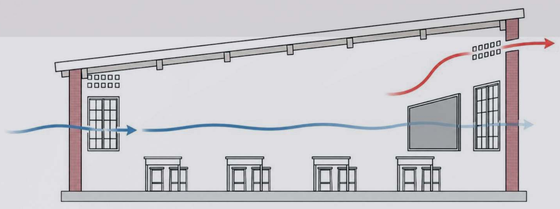
Classroom Facade



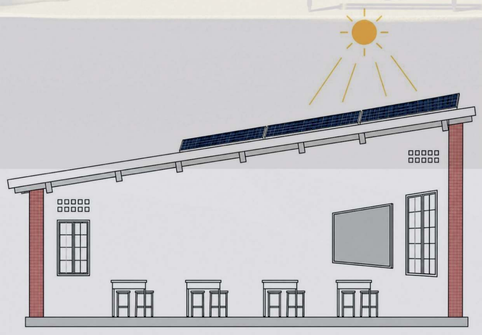
Interior View of Classrooms



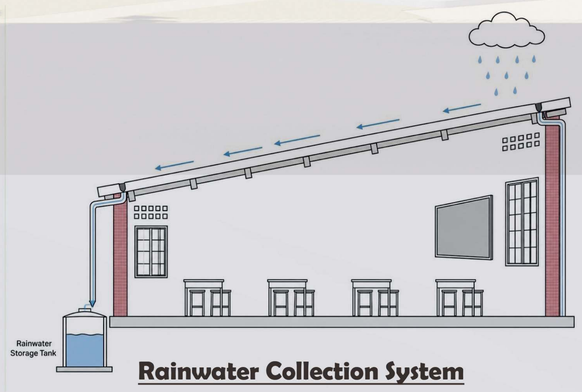
Roof Structure



Natural Ventilation



Photovoltaic System (PV System)



Rainwater Collection System





Projekt Team: Group 5
Hiba Naasan
Wesam Alahmad
Alexandra Greger

• Projekt Hochbau • Prof. Dr. Rossi-Schwarzenbeck • HTWK Leipzig

ARCHICAD BILDUNGSVERSION

Gruppe 7

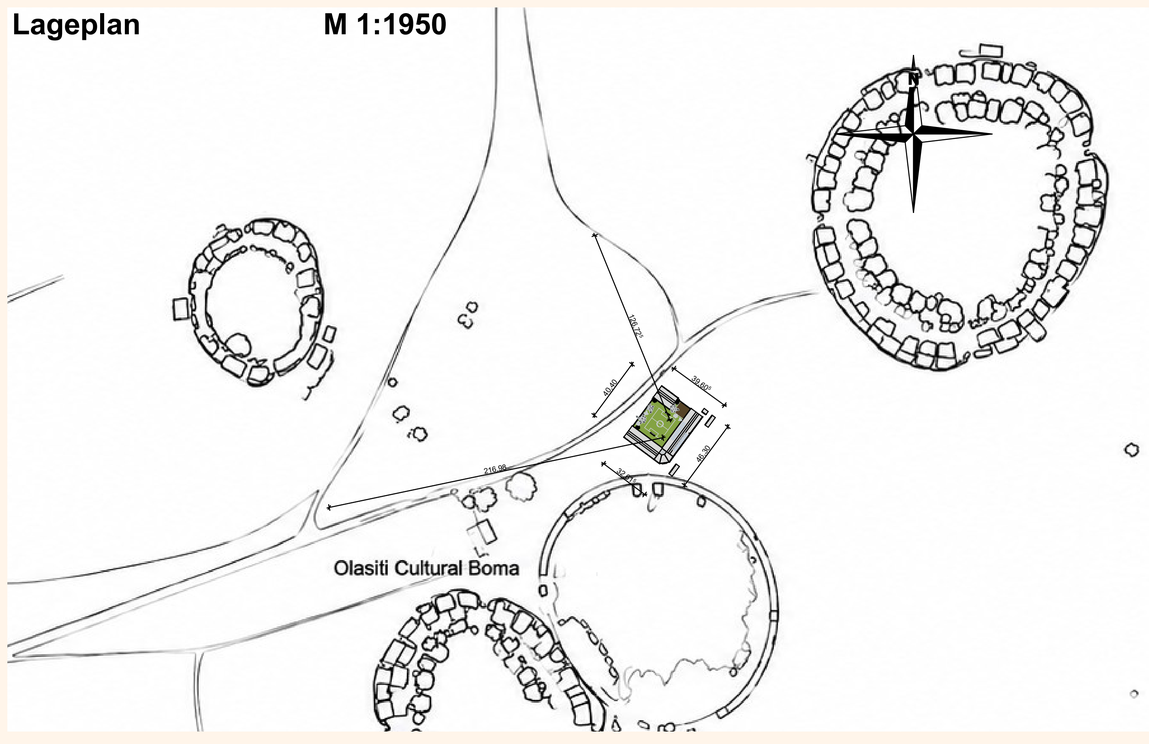
Philipp Donner
Alfred Mäß
Arne Geißler

Neubau Olasiti Community School-Amboseli

Grundriss **M 1:150**



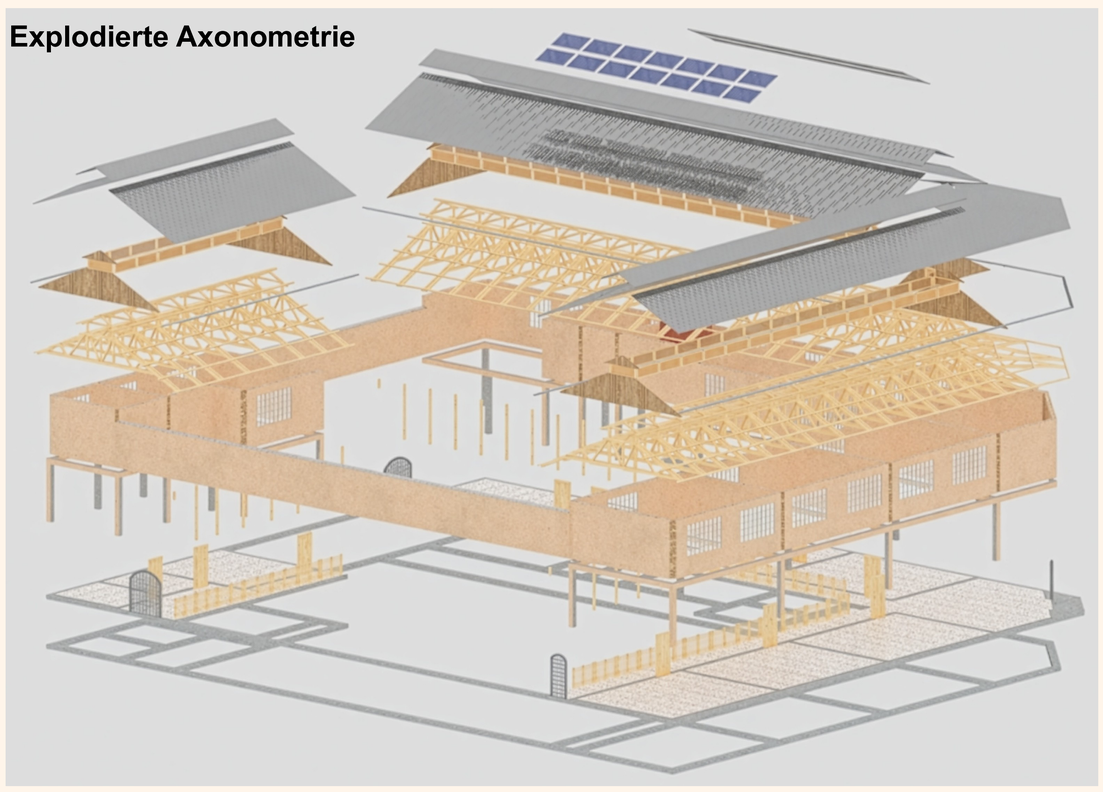
Lageplan **M 1:1950**



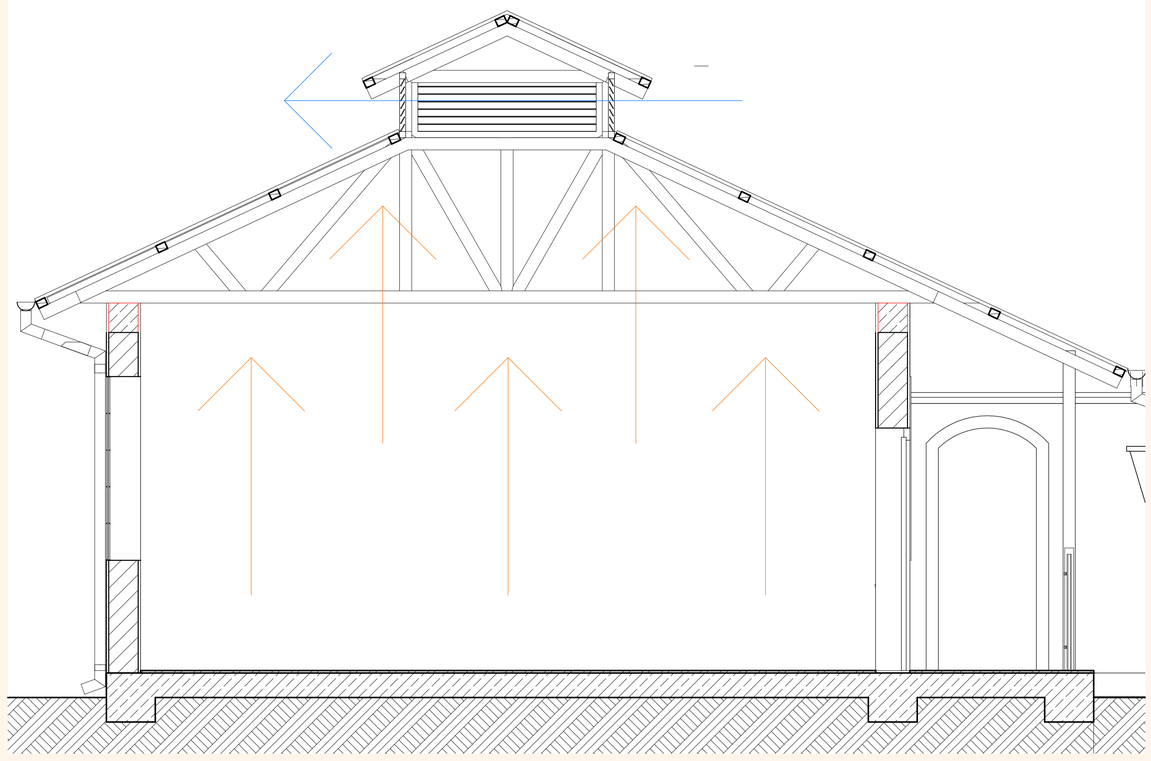
Lüftungskonzept

Eine maximale Deckenhöhe von 5,30m sorgt dafür, dass die warme Luft weit nach oben steigen kann. Dort wird sie anschließend vom Wind, welcher über die Lamellenöffnungen der Dachlaterne hineinströmt, abtransportiert. Je nach Wetterlage, kann der Öffnungswinkel der Lamellen und der damit verbundene Luftstrom mechanisch geregelt werden.

Explodierte Axonometrie



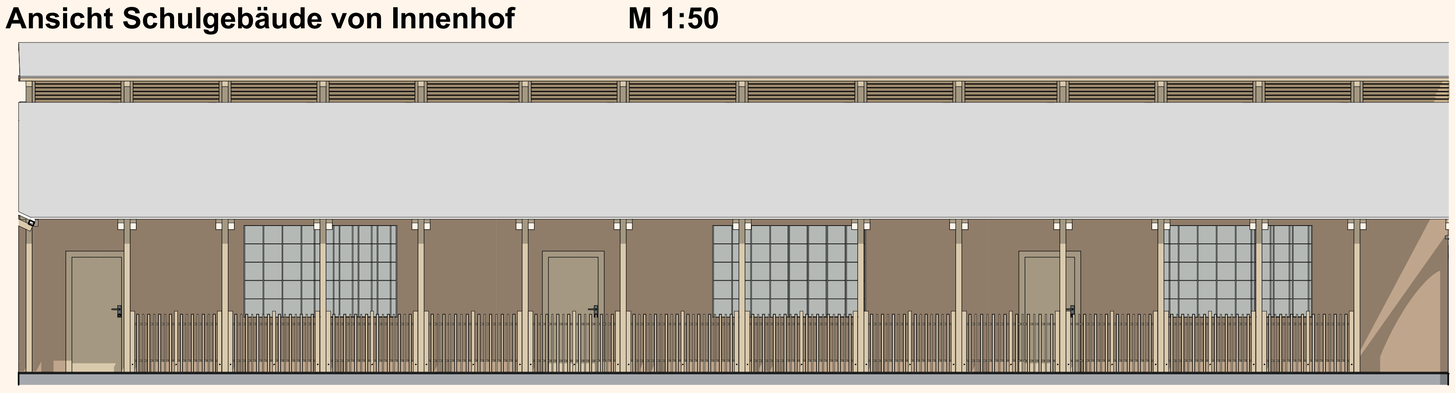
Schnitt Klassenraum **M 1:25**



Außenanlage

Den zentralen Platz der Anlage bildet ein Fußballfeld mit Toren, der nicht nur zum Fußballspielen genutzt werden kann, sondern auch für Veranstaltungen der Community. Des Weiteren befindet sich neben der Lehrerunterkunft ein Schulgarten. Dieser wird zum einen zur Erzeugung von Nahrung genutzt, genau so wie zur Lehre des Pflanzenanbaus.

Ansicht Schulgebäude von Innenhof **M 1:50**





3-D Rendering Schulkomplex

Wasserversorgung

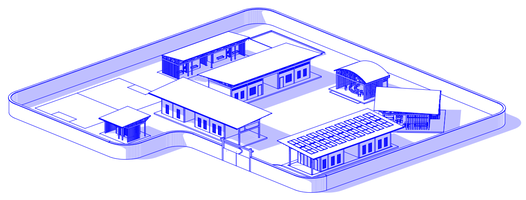
Überall wo eine Wasserversorgung notwendig ist befinden sich Regentonnen, welche das von den Dachflächen abfließende Wasser aufsammeln.
Somit ist für die Wasserversorgung die Installation von Pumpen und die damit verbundene Wartung nicht nötig.

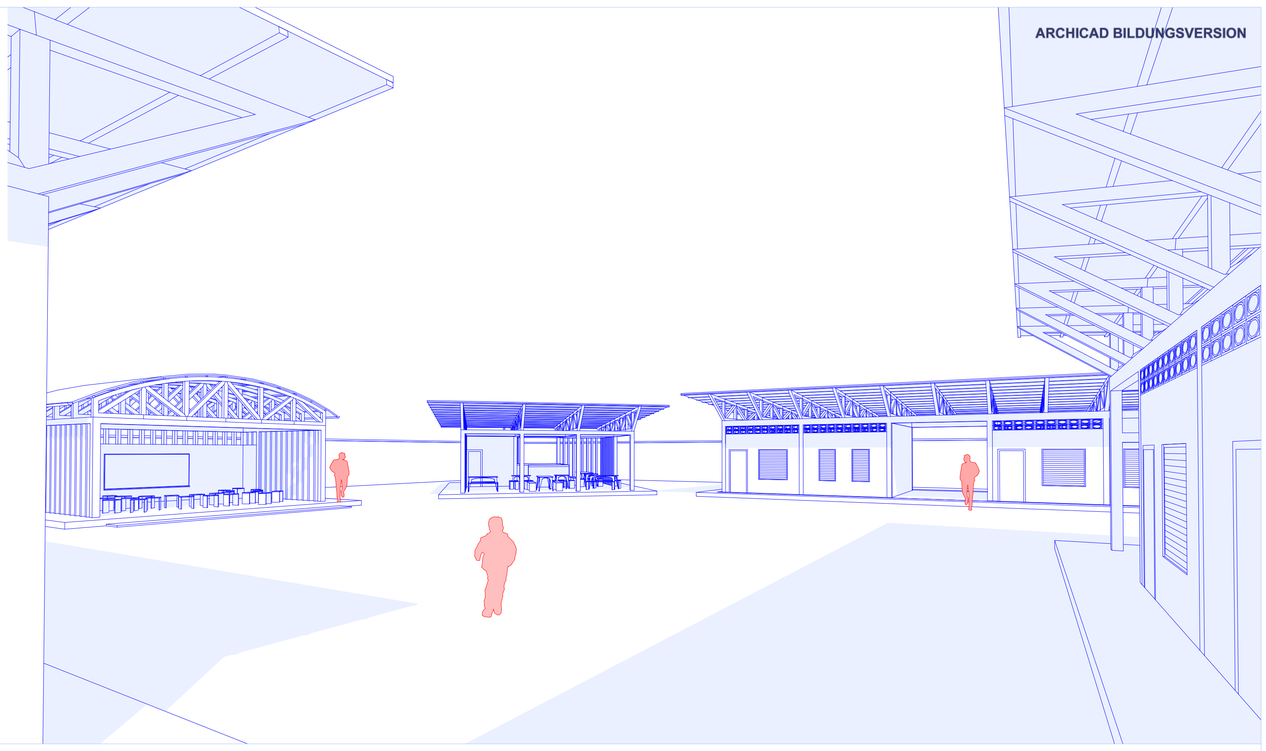


3D-Rendering Blick aus Laubengang auf Innenhof

SCHOOL AND COMMUNITY CENTRE

Olasiti, Amboseli | Kenya

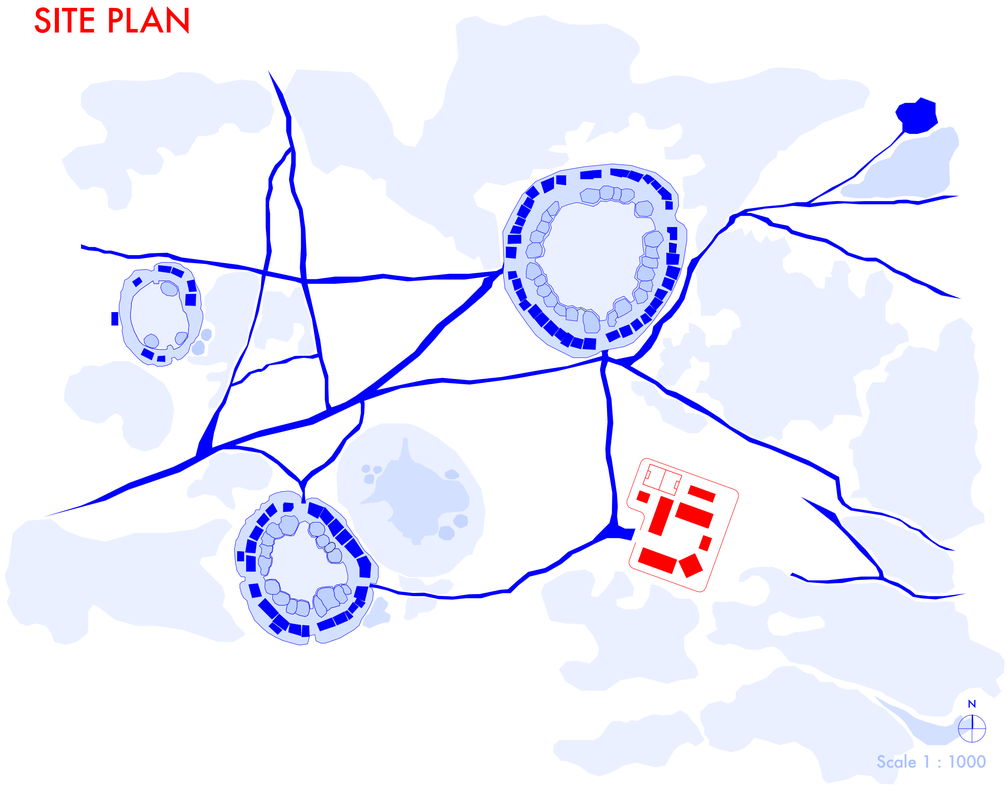




CONCEPT

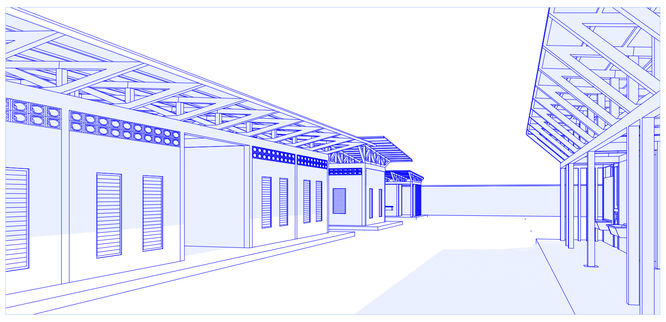
The new school and kindergarten building, which forms part of the community centre in Olasiti, has been designed to be a gathering place for people of all ages. Its clear spatial structures enable flexible and diverse use. A simple, repetitive structural system allows for cost-effective and easy implementation. Particular emphasis is placed on using local and sustainable materials that can be sourced and produced by local workers. This approach strengthens regional value creation, reduces transportation costs and supports the local community. The design incorporates natural ventilation, water harvesting and effective shading to take account of climatic conditions.

SITE PLAN

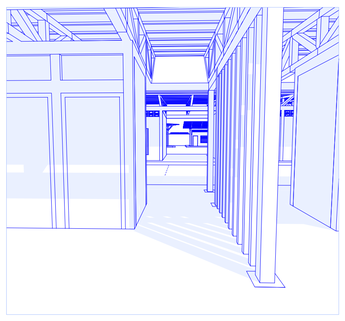


Scale 1 : 1000

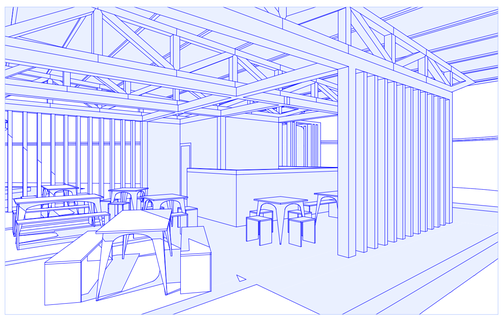
VISUALIZATIONS



BACKYARD



RESTROOMS



KITCHEN | DINING AREA



CLASSROOM

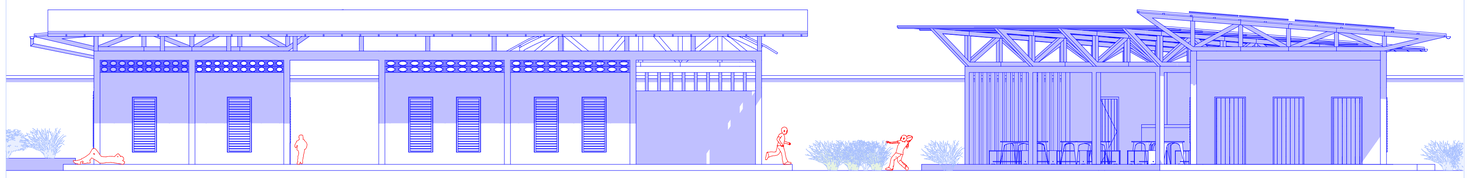
FLOOR PLAN



1	Community Area	8	Teachers' Office / Library
2	Kitchen / Storage	9	Teachers' Room
3	Classroom PP1	10	Staff restrooms
4	Classroom PP2	11	Restrooms
5	Playgroup	12	Playground
6	Computer room	13	Garden
7	Storage / mecial room / technical room		

Scale 1 : 200

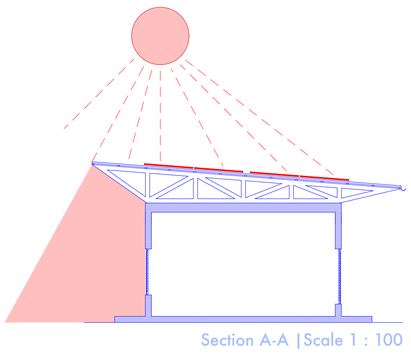
ELEVATION



A-1 | NORTH WEST

Scale 1 : 100

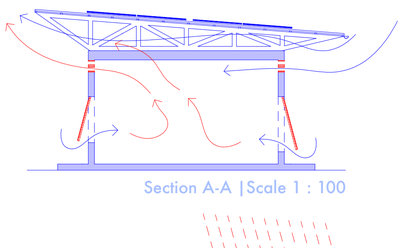
CLIMATE STRATEGIES



SHADING + SOLAR SYSTEM

Deep roof overhangs protect from sunlight. Solar System generates electrcity from the Sun.

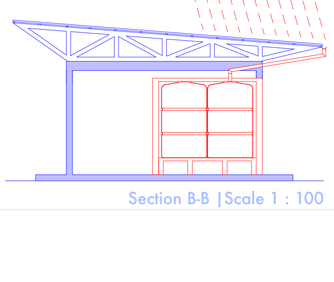
Section A-A | Scale 1 : 100



VENTILATION

Natural Ventilation through ventilation bricks and open structural framework.

Section A-A | Scale 1 : 100

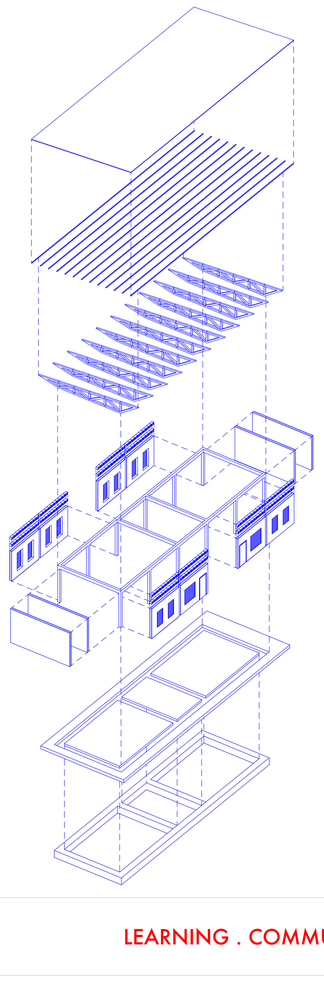


RAINWATER MANAGEMENT

Rainwater is collected and used for irrigation and daily use.

Section B-B | Scale 1 : 100

EXPLODED AXONOMETRIC



Corrugated sheet metal roof

Roof battens

Wooden framework

Reinforced concrete frame
Brick walls

Screed Floor

Reinforced Concrete Strip Foundation

STRUCTURAL DETAIL | MATERIALS

1	Solar panel
2	Corrugated sheet metal
3	Pine Wood Framework
4	Ring beam, reinforced concrete
5	Ventilation brick
6	CEBs | on-site production
7	Earthen plaster | hand-applied
8	Louver system in steel frame
9	Platform | reinforced concrete
10	Strip foundation | reinforced concrete
11	Concrete screed

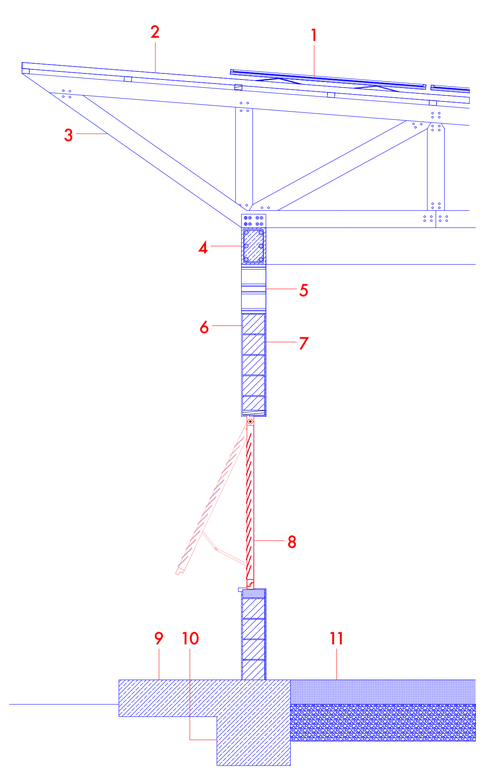
MATERIAL STRATEGY

low environmental impact

local materials

on-site production

short transportation



Scale 1 : 25

LEARNING . COMMUNITY . NATURE

Designed by Valentin Ham & Dominik Steinlein
07/2026

ARCHICAD BILDUNGSVERSION

Kivuli School

Lernen im Schatten – Gemeinschaft im Mittelpunkt.



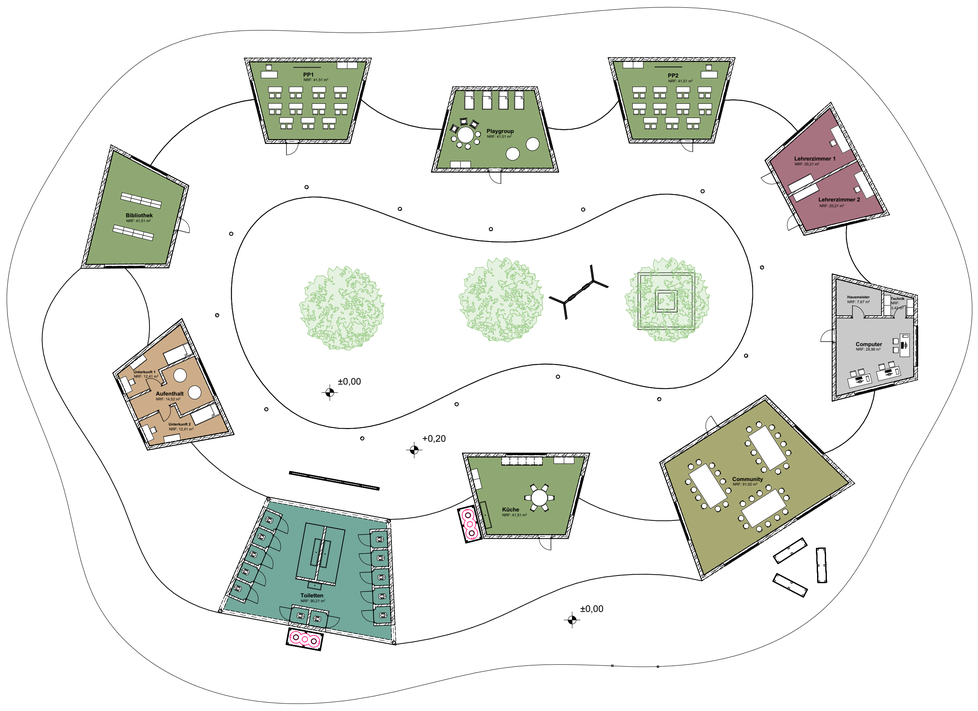
KONZEPT

KIVULI versteht Schule nicht nur als Ort des Lernens, sondern als Mittelpunkt der Gemeinschaft. Die ringförmige Anordnung der Lernmodule schafft einen geschützten Innenhof, der als zentraler Ort für Begegnung, Spiel und gemeinsames Lernen dient.
Der Entwurf reagiert auf die klimatischen Bedingungen Kenias. Großzügige Dachüberstände, umlaufende Holzlamellen und eine natürliche Querlüftung schaffen angenehme Lernbedingungen, ohne dass eine technische Klimatisierung erforderlich ist.
Die Schule basiert auf einem modularen Konzept mit vier Funktionsbereichen:

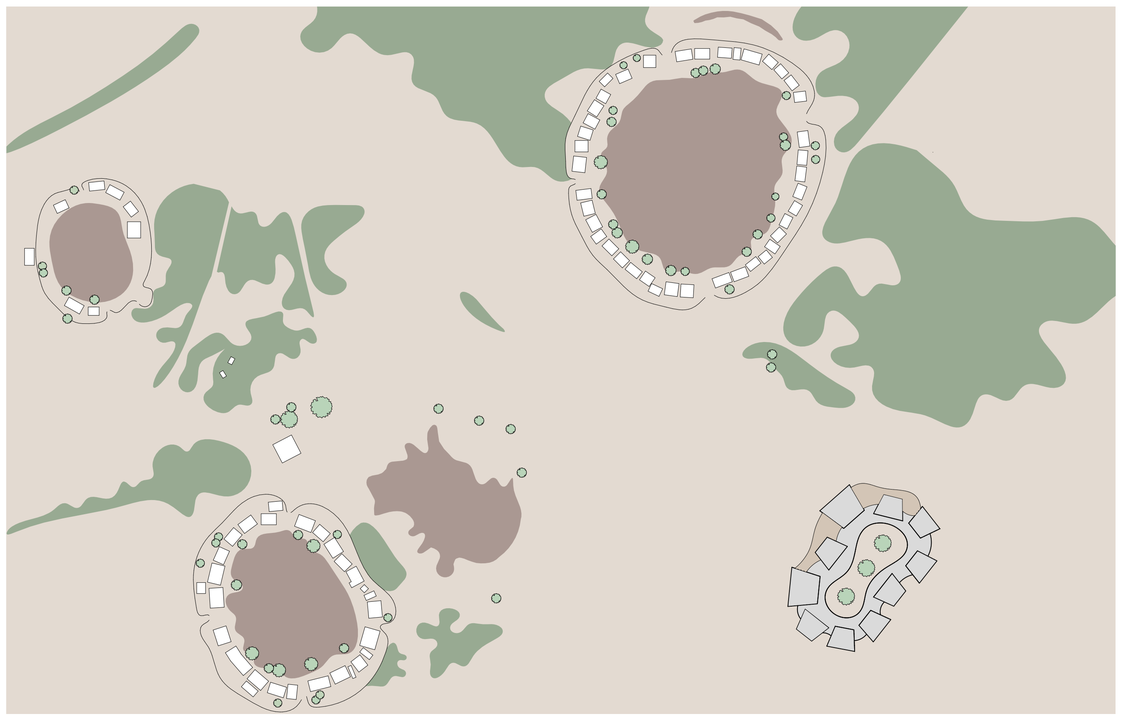
- Lernen (Playgroup, PP1, PP2, Bibliothek),
- Gemeinschaft (Community, Küche, Computerraum),
- Personal (Lehrerzimmer, Unterkunft, Aufenthalt),
- Service (Toiletten, Technik, Hausmeister)

Regionale Materialien wie Sandstein, Lehmputz und Holz ermöglichen eine ressourcenschonende Bauweise und schaffen einen nachhaltigen Lernort mit hoher Identität.

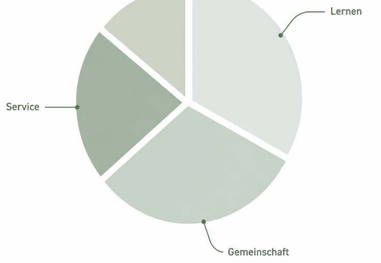
RAUMAUFTEILUNG



LAGEPLAN

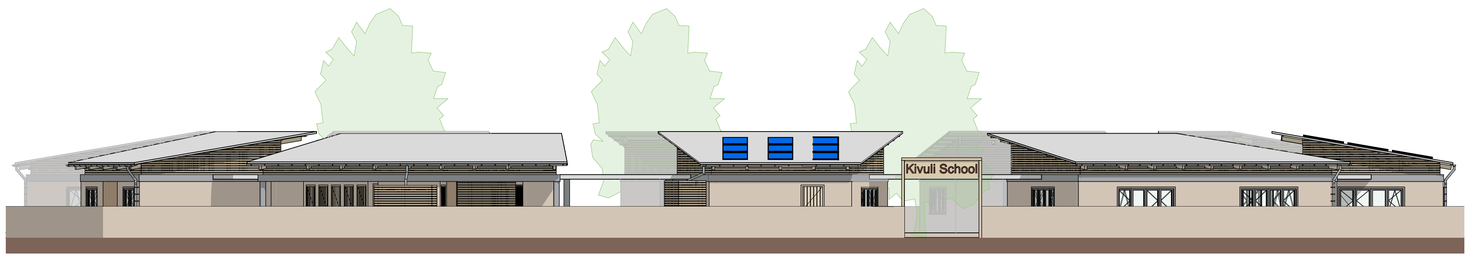


NUTZUNG



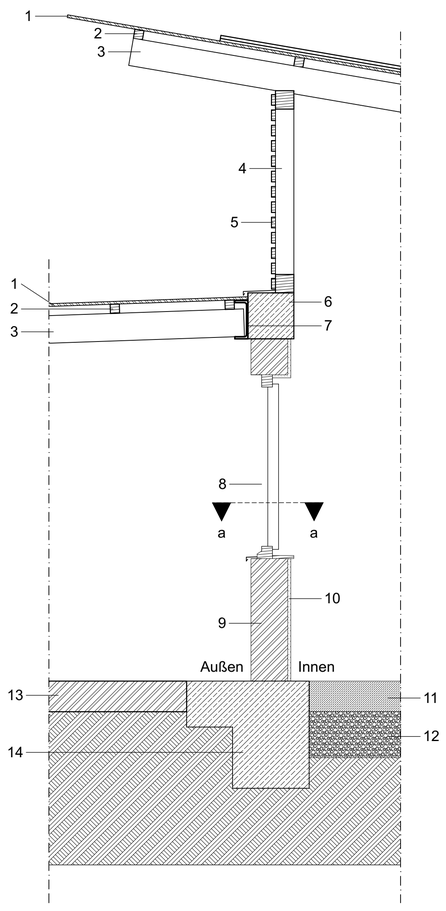
Lernen	166,04 m²
Gemeinschaft	161,51 m²
Personal	79,76 m²
Service	101,30 m²

ANSICHT



FASSADENSCHNITT

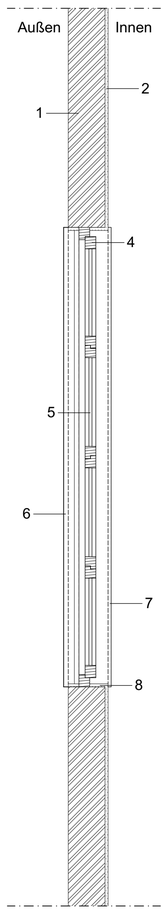
M1:20



1	Wellblech 76/18
2	Koppelpfette 60/60
3	Sparren 120/180
4	Holzunterkonstruktion 120/120
5	Fassadenverkleidung / Holz 21/41
6	Ringbalken 300/300
7	U-Profil 260
8	Fenster 3000/1200 Brüstungshöhe 85 cm
9	Sandstein 240
10	Lehmputz 20
11	Estrich 200
12	Ausgleichsschüttung
13	Sandstein 200
14	Stahlbeton-Streifenfundament

SCHNITT a-a

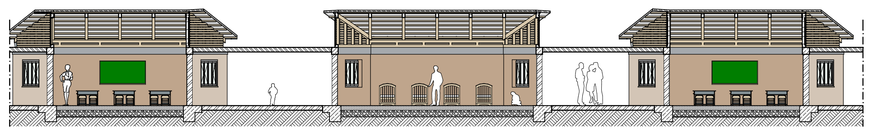
M1:20



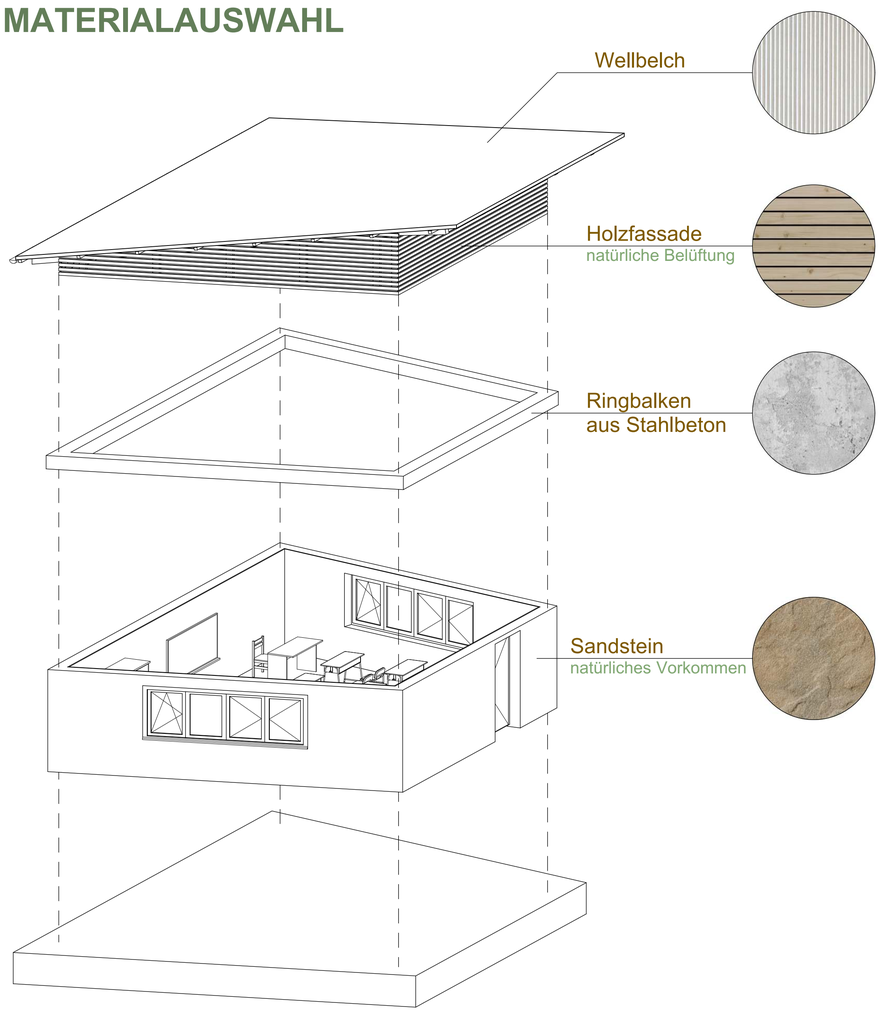
1	Sandstein 240
2	Lehmputz 20
3	Fenster 3000/120 Brüstungshöhe 85 cm
4	Fensterrahmen / Holz 70/80
5	Glasfenster
6	Außenfensterbank / Aluminiumblech
7	Innenfensterbank / Naturstein
8	Laibung / Lehmputz 20

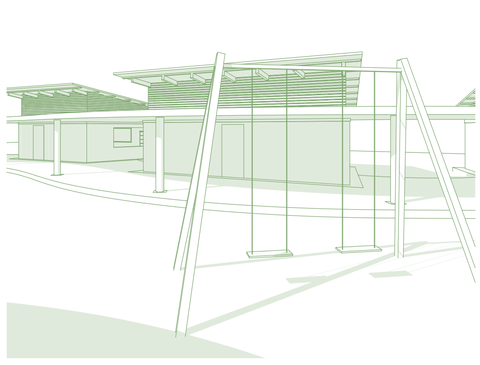
SCHNITT durch Klassenräume

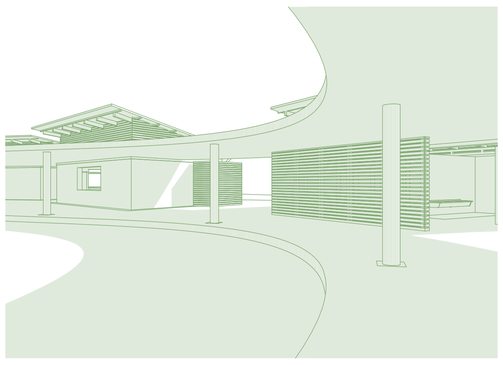
PP1, Playground, PP2

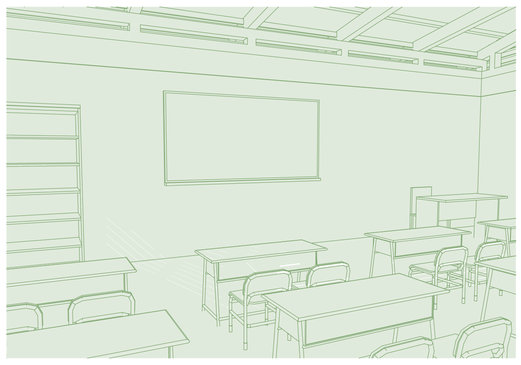


MATERIALAUSWAHL









Entwurf von Tim Heltmann, Niklas Guha und Franka Nowak

KINDERGARTEN COMPLEX · OLASITI CULTURAL BOMA

KINDERGARTEN OLASITI

A sheltered place that gathers around its own centre — the shaded in-between is the real classroom.



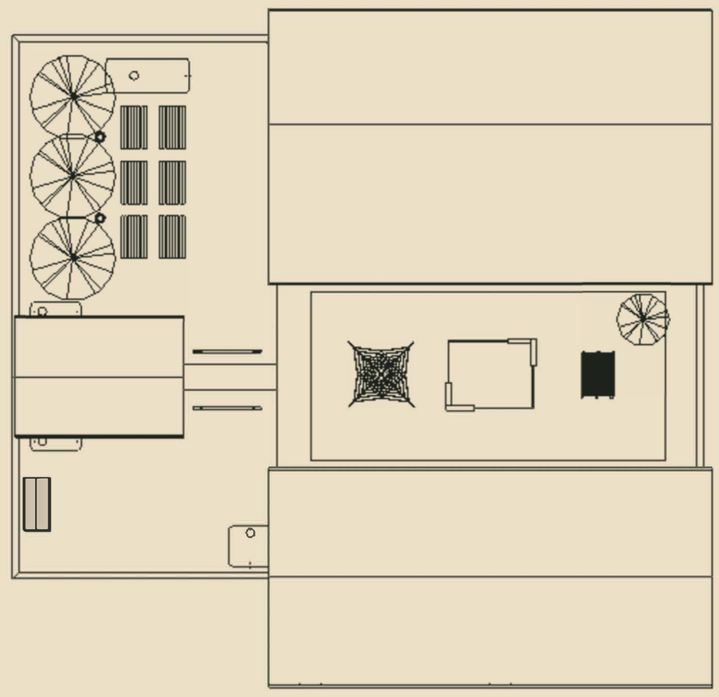
FIG. 01 — CENTRAL COURTYARD, THE HEART OF THE COMPOUND

01 THE IDEA

The kindergarten in Olasiti is not a building set upon the land but a sheltered place that gathers around its own centre. A planted courtyard forms the heart of the compound; classrooms, sanitary and service volumes group around it as low, staggered bodies.

Far-cantilevering roofs and a slatted veranda dissolve the line between inside and outside. The real learning space is the shaded in-between — not the enclosed room.

FIG. 02 — FLOOR PLAN



02 CONSTRUCTION & MATERIAL

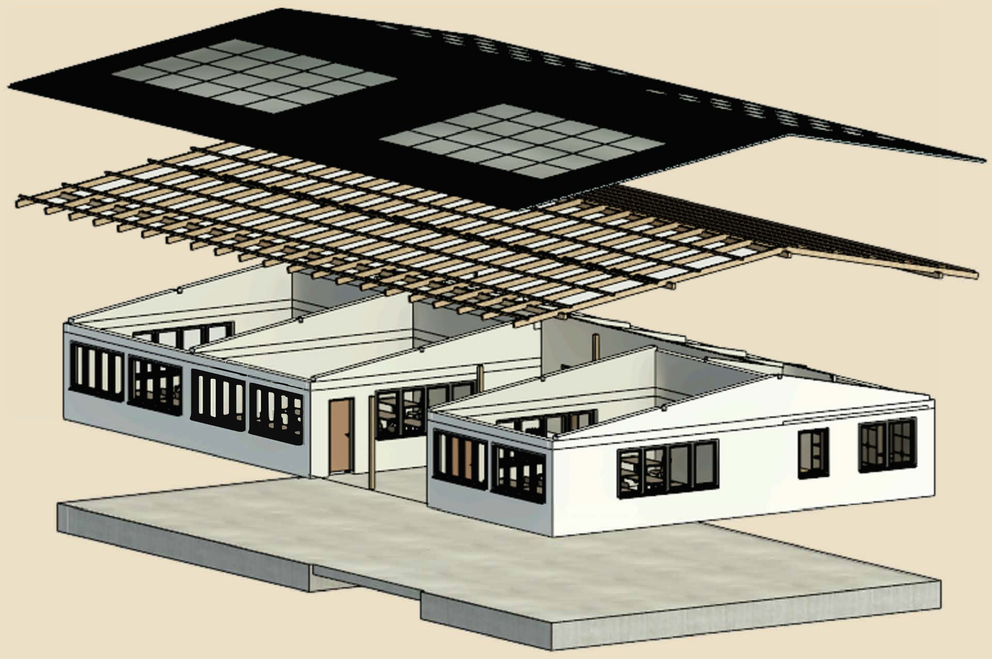


FIG. 03 — EXPLODED AXONOMETRY, MAIN BUILDING

LAYER BY LAYER

- A Sheet-metal roof, wide overhang
- B Timber batten & rafter structure
- C Free-standing PV canopy
- D Rendered mud-brick walls
- E Timber slat screen & veranda
- F Reinforced concrete floor slab

MATERIALS

MUD BRICK / ADOBE · REINFORCED CONCRETE · TIMBER · SHEET METAL · LIME RENDER · RIGID INSULATION



FIG. 04 — PV ROOF + CISTERN

04 SELF-SUFFICIENT

Solid rendered walls of high thermal mass carry a light steel-and-timber roof with wide overhangs. Deep eaves, the slatted veranda and cross-ventilation cool the building passively — entirely without air conditioning.

WATER
Roof surfaces harvest rainwater into a local tanks.

ENERGY
A PV canopy on the roof supplies electricity.

COMFORT
Deep eaves + cross-ventilation cool passively.

COOKING
Hybrid concept: indoor- and outdoorkitchen.



SLATTED VERANDA



DUSK OVER THE YARD



PLAY & CISTERN

TIM PLANER · LOUIS WILKE
SUPERVISION: PROF. DR. M. ROSSI-SCHWARZENBECK

ERRICHTUNG EINES KINDERGARTENKOMPLEXES IN KENIA
MASSAI VILLAGE OLASITI · CULTURAL BOMA