

# MAYUKWAYUKWA REFUGEE CAMP

A SUSTAINABLE DEVELOPMENT CENTER IN ZAMBIA

10.000€ + CONSTRUCTION



a competition by  
 **ARCHSTORMING**  
ARCHITECTURE COMPETITIONS

in support of  
**PROVS**

 **UNHCR**  
The UN Refugee Agency



## MAYUKWAYUKWA

A SUSTAINABLE DEVELOPMENT CENTER IN ZAMBIA

introduction	3
Mayukwayukwa refugee camp	4
the NGO: PROVS A.C.	5
the challenge	6
plot	6
program	8
materials and building techniques	9
modularity	11
volunteer trip	11
competition details	12

a competition by



in support of





## INTRODUCTION

**Zambia has been generous host to Angolan refugees since 1966** when the Angolan revolution against the Portuguese spread to the east of the country forcing people to flee for safety in neighboring Zambia. By the end of that year there were nearly 4,000 Angolan refugees in Zambia's Western and North-Western Provinces and the Zambian government responded by establishing a settlement in each province: Mayukwayukwa in Western Province and Lwatembo in North Western. Both were

designed as agricultural settlements where refugees were assigned plots of land and expected to be self-supporting. Lwatembo proved to be inappropriate and it was closed. **Mayukwayukwa remains as the oldest refugee settlement in Africa.**

Almost 60 years later, Zambia is still receiving refugees from a long list of countries, with a predominance of Congolese, Burundians and Somalis. There are a total of about 105,000 refugees in camps and settlements in Zambia of which 65,000 are Congolese and 20,000 are Angolan.

Since the creation of those camps, several NGOs

have been actively working in creating community development programs among refugees in response to their requests. They operate along with UNHCR and the Zambian Government making sure that their dignity, worth, and possibility to improve are assured.

**This architecture competition, in partnership with the NGO PROVS A.C. will look for designs to build a new Sustainable Development Center in Mayukwayukwa, with the focus on using local and sustainable materials and easy-to-build construction techniques that can be replicable by the refugees when building their own houses. We are looking for a building that can become a reference for the whole community.**



## MAYUKWAYUKWA REFUGEE CAMP

The Mayukwayukwa refugee settlement **was established in 1966** and is located in Western Province of Zambia, about 75km away from Kaoma District. As of December 2021, the Mayukwayukwa settlement had a population of **21,183 refugees and former refugees** from Angola, the Democratic Republic of Congo, Rwanda, Burundi and Somalia, many of whom were born there and have lived

in Mayukwayukwa their whole lives.

The population can be divided between former refugees, mostly Angolans that decided to stay in the settlement even after the civil war in their country finished in 2002, and newly arrived refugees that predominantly come from the Democratic Republic of Congo and Burundi.

The first group live in the old town, a group of 10 villages close to the administrative centre of the settlement located near its entrance. As would be expected **these old villages are now very well established with the style of mud-brick houses and mature fruit trees** commonly found in permanent Zambian villages.

Newly arrived refugees are located in several extensions where they are given individual plots to build houses based on a grid system. **One of these extensions, approximately 10km away from the administrative centre, is called Shibanga, and it is where the new Sustainable Development Center will be built.**

As a refugee settlement, **the economy of Mayukwayukwa is based on agricultural production**, and for that purpose, each family is given 2.5 hectares of land for cultivation which is mostly used for the production of maize, cassava, groundnuts and beans.



## THE NGO: PROVS A.C.

When talking about the operation of a refugee settlement, there are several involved parties: at the center are the refugees and host communities who are involved in the daily life and management of the resources. And on the other side are the government institutions, refugee organizations and related NGOs.

NGOs are increasingly assuming tasks that earlier were the operation of the host government. NGOs' closeness

to the refugee population and local grassroots coupled with their emphasis on self-help and independence from government institutions are well placed to integrate their activities with the basic needs of the refugees and local people.

And this closeness to both refugees and local hosts is one of the most important pillars of **PROVS**, a Mexican NGO founded in 2008 that is convinced in changing the humanitarian aid model. They want to move to a more sustainable model where they not only assist but also **provide tools and capabilities for the beneficiaries themselves to be the promoters of economic and social development in their communities.**

Their mission is to put into action simple, innovative and sustainable technologies and practices in order to improve the standard of living of vulnerable people by generating housing opportunities and integral community development.

In Mayukwayukwa, they are in charge of the International Cooperation Program (ICP), a project in collaboration with UNHCR, UNDP and the Government of Zambia that **organizes volunteer trips to the refugee camp in order to carry out specific projects** in areas such as health, education, engineering, infrastructure, among others. Their final goal is to promote refugee's integral development so they can improve their living conditions.



Coordinates:  
[click to open map](#)  
**24.182414 ,**  
**-14.624926**

## THE CHALLENGE

The new Sustainable Development Center in Mayukwayukwa will be built in **Shibanga**, an extension of the original settlement located 10 km south of it. These extensions are part of a resettlement scheme that aims to reduce population density in the original refugee camp by giving families bigger and better plots. Settlers are able to build new homes in plots that are more appropriate for farming, vegetable-cultivation and pisciculture activities.

Of course, creating new neighborhoods that are less densely populated mean new challenges in terms of water and electricity supply, as well as the provision of key infrastructure such as schools or hospitals.

**In this context is where the new Sustainable Development Center will have a crucial role. Newly arrived families will be able to attend courses and workshops. They will learn about constructive methods to build their own houses and our goal is that the Center itself can serve as an example to teach them about these techniques.**

### 1. PLOT

The Center will be placed right in the middle of the refugee resettlement extension, in an area reserved for services that will use the whole community. **The plot assigned for this project has a dimension of 120 m x 120 m.**

Since these extensions are still under development, access to the site is through dirt roads. The closest main road is one coming from North to South, at around 200 meters from the project's plot.

We can find a **radio tower and a handpump** (borehole)





for water supply right next to the plot. Since Mayukwayukwa is really big, there are more than 100 handpumps located all around it. Each one provides water service within 400 to 600 meters.

One of the main characteristics of the site is that **we can already find a building under construction in it.** It is a **10x10m space** that PROVS started to build back in 2018 and 2019. They built the foundations and even raised the walls. They used concrete blocks made in situ as the main material. Unfortunately, COVID paralyzed the construction and it has remained like this until today. They hope to finish it once the construction of the Sustainable Development Center starts and their

goal is to integrate this 10x10m space into the program of the center. The interior of the building is divided into three cubicles that will be used as bathrooms and a big multipurpose space. Since foundations and walls are already built, what's left to do is the roof, installation of windows/doors, and finishes.

**The site is completely flat**, which will make the construction much easier.

Deforestation is an increasing problem in tropical regions, and Zambia is no exception. Mayukwayukwa's low-density urbanization strategy has had a huge impact in the area's natural forest. When families are

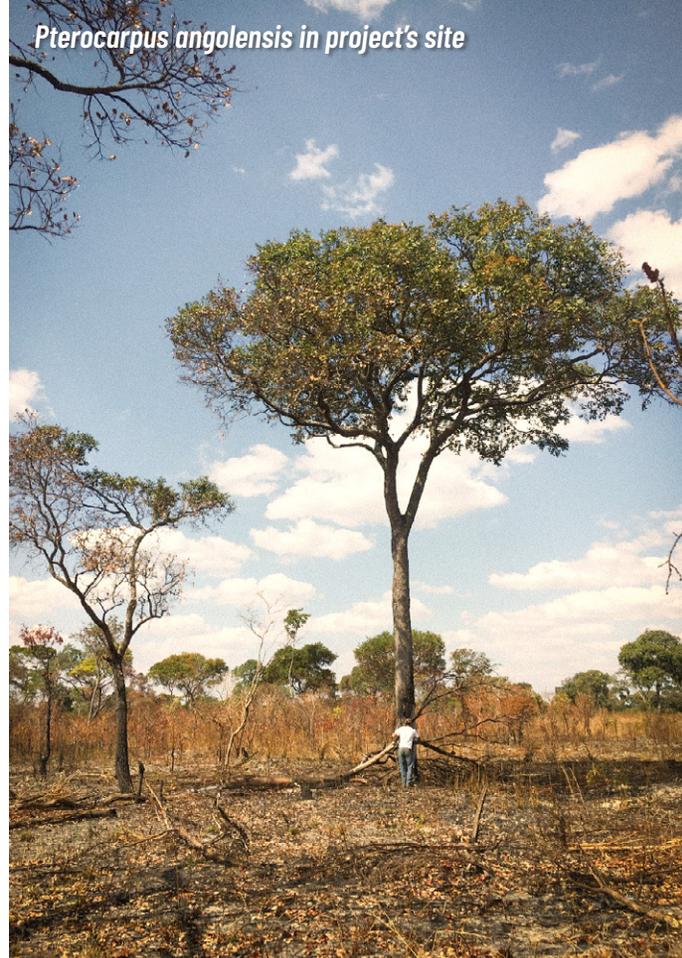
given plots to cultivate their food, trees are immediately cut down. This is inevitable in some cases, but it should be prevented whenever possible. Also, forestry extension policies should take place.

The NGO PROVS has been unceasingly working against deforestation and illegal logging, and they would like that, in this project, **the majority of the plot's biggest trees can be preserved.** This way they can show local people that it is not necessary to cut down all the trees of a plot when building something.

The most common tree species in the plot is the *Pterocarpus angolensis*, a beautiful tree native to Southern Africa that typically grows to 16 - 19m tall.



Shibanga's main road



*Pterocarpus angolensis* in project's site



Existing building under construction

## 2. PROGRAM

The new Sustainable Development Center will have three main functions:

- **Host volunteers, staff and NGO members** that travel to Mayukwayukwa to perform development and supporting activities, as well as to do research.
- **Organize workshops and courses** to teach the different kind of economic activities that habitants can perform to improve their quality of life, as well as to show how to add value to the already performed activities.
- **Support local authorities in the implementation of programs and activities** for personal, social,

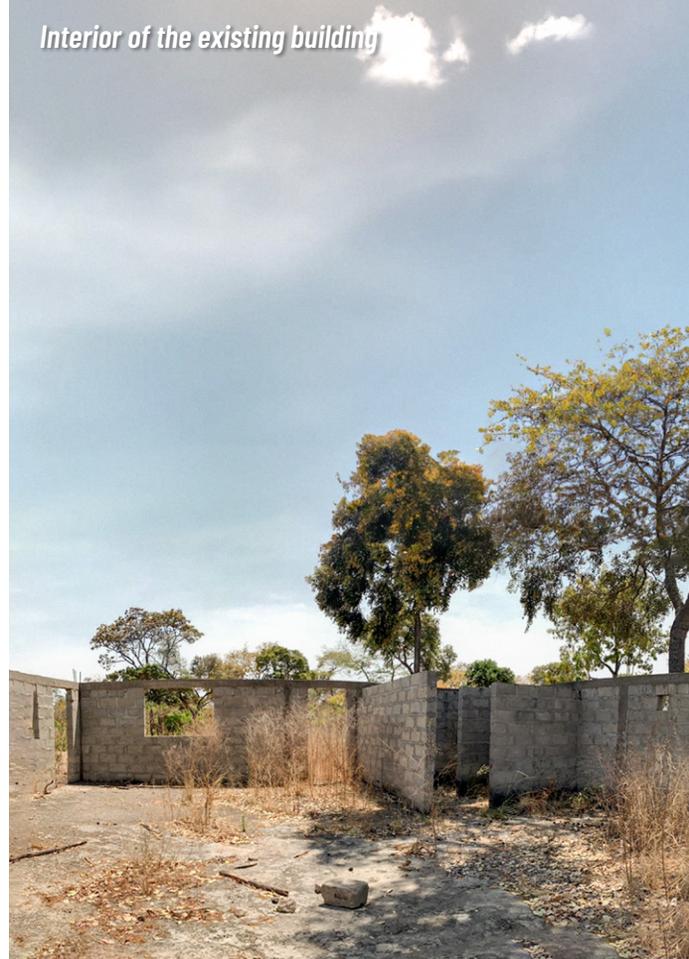
economic and technological development.

In order to reach these goals, the NGO proposes the following program for the new building:

- **Volunteer bedrooms:** six (6) bedrooms for volunteers with a minimum capacity of 6 volunteers per room. Each volunteer will have an individual bed. The recommended size for each bedroom is 30 m<sup>2</sup>.
- **Classrooms/multipurpose:** the center will need three (3) new classrooms where workshops and courses will take place. They need flexibility of use and a capacity of approximately 25 people each

one. Although the size of the space is open to each participant, we recommend to keep them below 40 m<sup>2</sup>. Besides these 3 new classrooms, you will also have to integrate into the project the 10 x 10m multipurpose space that is under construction.

- **Office/meeting room:** a small space, no bigger than 10 m<sup>2</sup> for the Center's staff.
- **Kitchen and dining area:** the center will have a covered porch area for the kitchen and the dining space. It will be covered but open (low walls or no walls). They will use wood stoves and the kitchen will be a space where cooking workshops and courses will take place. A size of 50 m<sup>2</sup> is recommended
- **Bathrooms:** we can already find 3 cubicles for



bathrooms in the building under construction. The center will have another 3 new cubicles in a different place. The under-construction bathrooms will be used for one gender and the new ones for the other one.

- **Storage room:** a small room (no more than 6 m<sup>2</sup>) to store materials and supplies.
- **Orchard and farm:** the new Sustainable Development Center will offer courses of several topics, including agriculture and livestock. For that reason, it would be really useful to have an area for orchards as well as a small farm where refugees can not only learn but also use the money generated from these activities to support the center.

- **Exterior spaces:** the plot where the center will be built is quite big (14.400 m<sup>2</sup>). This means that there will be a lot of exterior spaces. Some of them will be used as orchards but the major part will just be natural open areas that the NGO would like to preserve. Part of the activities will be held in the exterior, that's why having natural shade from the trees will be important.

The sizes of the areas described in the program are approximate. They can slightly vary depending on each project. Despite that, we don't recommend increasing the given numbers too much. Remember that an NGO will be building this and the budget is very limited.

### 3. MATERIALS AND BUILDING TECHNIQUES

One of the most important aspects of this project is that **the construction will be mostly carried out by volunteers**. There will be professional workers on site leading the construction but the goal is that this can become a **participatory construction**. This means that everyone will be welcome to join and most importantly, to learn from the used building techniques in order to apply them in their own houses. This is very important to consider in the design of the project, because it means that we must use **easy-to-**



*Police post next to the site built with concrete blocks*



*Typical adobe brick house with thatched roof in Mayukwaykwa*



*Typical adobe house with metal roof in Mayukwaykwa*

**build construction techniques.** The proposed method must be easily understood by both volunteers and refugees that will be using it in their future houses.

We want to **avoid complex structures** that require specialized labor or heavy equipment.

The NGO PROVS is very focused on sustainable architecture, and this project won't be an exception. For the construction, they will be using **locally available materials such as clay (adobe), wood, stones, steel, concrete, or straw.** Bamboo can be used for wall panels or woven mats, but not structurally. Foundations are normally done using concrete, stones

or earthbags filled with cement and earth. Walls can be made out of adobe (more economic) or concrete blocks (more resistant). Wood and steel can be used for the roof structure, although steel is more expensive. Lastly, we can find two types of roofing: thatched roofs (very common in houses) or metal sheet roofs. Participants are free to use innovative construction systems and bring new ideas, but always keeping in mind that a local team of builders will have to easily understand and apply those systems. In the same way, new materials can be proposed as long as they are easy to find in the area and affordable for an NGO.

Since Shibanga still doesn't have electricity, **solar**

**panels** will have to be considered in your proposals. The water provision must be covered by a **water tank of 10.000 liters** or smaller tanks that altogether have a similar capacity. Although there's a borehole next to the plot that will provide water, **rainwater collection systems** can also be interesting to explore.

Remember that **passive architecture strategies** can really help in terms of energy efficiency. A sufficient number of windows to make the most of daylight or providing good ventilation will be important.

Any other idea that adds value to the building in terms of sustainability will be positively evaluated.



## 4. MODULARITY

One of the main challenges for NGOs is getting the necessary funds to build their projects. A modular design that can be built in phases can really help them achieve that goal.

When designing your project, make sure you keep in mind that the construction should be divisible into 3 - 4 different phases.

In the same way, we will be looking for **flexible spaces that can have several functions**. Since the Center will be built in phases, maybe a classroom will have to serve as meeting room or dining room until those spaces are

actually built.

## 5. VOLUNTEER TRIP

PROVS organizes volunteer trips to the sites where they normally work. **Volunteers are able to help in constructions, participate in workshops and get involved in programs with the local people.**

The construction of the new Sustainable Development Center will be carried out by local volunteers from the refugee settlement and by international volunteers that will travel to the site in a trip organized by the NGO.

**The next trip will take place in 2023.** Although the exact dates and details are still not fixed, the most probable is that it will be around June/July. Volunteers will be able to travel to Mayukwayukwa and stay in the camp while they participate in the construction of the new Center.

**Everyone is welcome to join this volunteer experience.** Once the NGO sets all the details, they will publish all the information including the program and how to register. We will send the information to all the participants of the competition.

## AWARDS

Prizes totaling 10.000€ + CONSTRUCTION, broken down as follows:

### 1st PRIZE

6.000 € + PROJECT CONSTRUCTION

+ official book + exhibitions and articles + certificate

### 2nd PRIZE

2.000 €

+ official book + exhibitions and articles + certificate

### 3rd PRIZE

1.000 €

+ official book + exhibitions and articles + certificate

### SPECIAL HONORABLE MENTION

500 €

+ official book + exhibitions and articles + certificate

### SPECIAL HONORABLE MENTION

500 €

+ official book + exhibitions and articles+ certificate

### +10 HONORABLE MENTIONS

+ official book + exhibitions and articles + certificate

In addition, the winning projects and finalists will be published in magazines, blogs or architecture web pages, social networks or the Archstorming website. A digital certificate of participation will be given to all contestants.

## CALENDAR

OCT. 26, 2022	Early registration begins
NOV. 23, 2022	Early registration closes
NOV. 24, 2022	Regular registration begins
DEC. 21, 2022	Regular registration closes
DEC. 22, 2022	Advanced registration begins
JAN. 18, 2023	Advanced registration closes
JAN. 19, 2023	Late registration begins
<b>FEBRUARY 15, 2023</b>	<b>Submission deadline</b>
FEB. 16 - MARCH 14, 2023	Jury decision
MARCH 15, 2023	Winners announced

\*No submissions will be accepted after the general deadline indicated above: 23:59:59 Los Angeles time (UCT / GMT-7) or PDT.

## ELEGIBILITY

Any architecture student or professional architect can participate in MAYUKWAYUKWA: a Sustainable Development Center in Zambia, regardless of their nationality. Likewise, people from other disciplines can also participate, such as engineers, philosophers, sociologists, photographers, etc. It is not necessary to have an architect on the team, although it is recommended.

Teams may be formed by a maximum of four (4) members and a minimum of one (1).

All team members must be 18 years of age or older. The registration fee must be paid per team, regardless of the number of members (1-4 people). If a team or participant wants to participate with more than one proposal, it will be necessary to register twice (or as many times as proposals will be submitted), paying the full price corresponding to each registration.

Under no circumstances may jurors, the organization or persons directly related to the jury participate in this competition.

## SUBMISSION MATERIALS

Participants must submit **two (2) A1 format boards (594x841 mm or 23.4x33.1 inches)** oriented either landscape or portrait with the registration number in the lower right corner.

The content of the boards is open, as long as the idea that the participants want to communicate is clearly expressed. However, it is important to detail the proposal with the materials and constructive systems thought. The boards must be delivered in JPEG or JPG format and the file name must be the registration number provided by the Archstorming Team (eg 432465423-1.jpg and 432465423-2.jpg for the two boards)

In addition, **one (1) description of the project** no longer than 400 words must be submitted. It must be submitted in PDF format and the file name must be the registration number provided by the Archstorming Team (eg 432465423.pdf)

All the materials must be submitted in the Submit section on the Archstorming's website.

<http://www.archstorming.com/submit.html>

## EVALUATION CRITERIA

The jury will evaluate the projects based on the objectives stated in the pages 6, 7, 8, 9, 10 and 11 of this briefing. Specifically, it will be evaluated if the project meets the requirements in program, building techniques, materials and sustainability.

The jury is free to add other criteria that they consider important for the creation of the learning center.

A minimum of 50 proposals will be selected for the final round. Among these finalists, the jury will choose the winner, the second and third place, the 2 special honorable mentions, and the 10 honorable mentions.

## FAQ

You can check the most common questions in the corresponding section on the Archstorming website:

<http://www.archstorming.com/faq.html>

Also, during the competition, all questions sent by email will be answered individually and uploaded to the section of the website mentioned above.

# REGISTRATION

To register, fill the registration form in the correspondent page of our website.

<http://www.archstorming.com/register.html>

Once you complete it, you will be redirected to the payment page. Fill the details and complete the payment in order to finish your registration.

Visa, Mastercard, Discover and American Express credit or debit cards may be used. The Archstorming team will not have access to credit card details. Please provide the information on the card as it appears on it.

Likewise, payments are accepted through Paypal.

Registration fees will depend on the registration date, and will evolve as follows:

EARLY REGISTRATION: 60€ + VAT

REGULAR REGISTRATION: 80€ + VAT

ADVANCED REGISTRATION: 100€ + VAT

LATE REGISTRATION: 120€ + VAT

VAT: 21%

Registration process must be completed on the official Archstorming website. In order for the registration to be successful, the team must pay the fee corresponding to the registration date. Once the registration and payment process have been completed, there will be no refunds.

Immediately after registration and payment, the Archstorming Team will send a confirmation email to the address entered in the payment form. It will include the work material (pictures, site plans, etc.), as well as the registration number. This number must be placed in a visible spot on the team's competition board, preferably the lower right corner.

At the time of submission of the proposals, the registration number will be required to identify the team.

## NOTES

All the projects that win a monetary prize will become property of Archstorming, and therefore give Archstorming all rights to the materials from that moment on. Archstorming reserves the rights to use any of the participating projects for exhibitions and publications, digital or paper catalogues and dossiers.

Archstorming will publish all materials given appropriate attributes to the authors.

Archstorming reserves the right to modify the proposals and text in order to better adapt them to any publication format, without changing the essence of the proposal itself.

The participant is responsible for using copyright-free images. Archstorming is not responsible for the use of protected images by the participants.

Archstorming reserves the right to make any changes in the rules of the competition (dates, requirements, etc.). It is the obligation of the participants to check on a regular basis the website of Archstorming to verify if the Terms and Conditions or the competition information have been modified.

PROVS A.C. is in charge of the project construction. Archstorming is collaborating with the project but not responsible of the construction. If for any reason they finally cannot build it, Archstorming will not be responsible of the fact.

The breach of the norms and terms defined in this briefing or in the Terms and Conditions of the website of Archstorming will result in the immediate disqualification of the team without any refund of the payments made.

Archstorming reserves the right to cancel this contest in case it does not reach a minimum number of participants, defined in the Terms and Conditions. In that case, Archstorming will return the full amount of registration fees to the participants enrolled at the time of cancellation.

<http://www.archstorming.com/terms.html>