

HUMANITARIAN DESIGN

incorporating holistic health into crisis relief design



How did I get here?

thesis question

What impact can architecture and design have on the healing process within the context of a refugee camp?

theoretical lens

War.

Rape.

Torture.

Orphaned.

What is our response?

humanitarian design

The process of designing products, services, or systems for populations affected by natural disasters.



testimony



“As a kid from ages 1-7 I worried every day if the the truck would come that would deliver our food.” **ANONYMOUS** When my hometown was destroyed due to violence we were forced to flee our home and start a refugee camp. This was in the jungle near Nepal. The camp was literally in the middle of trees, vegetation, and wildlife with no infrastructure. People were forced to use the bathroom right outside of their dwellings right in front of stranger there was no infrastructure to help. **ANONYMOUS** “I have been roaming aimlessly with my son for 60 days now. Nobody has shown us the way. if I want to apply for asylum, how exactly should I go about it? Where am I supposed to start my life? I cannot live here. How many more days can I live like this?” **ANONYMOUS** Having the opportunity to receive an education completely changed the opportunities I was able to have leaving the camp. I was able to attend a university and start a life after I left the camp. **ANONYMOUS**

altered lens

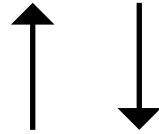


Shigeru Ban



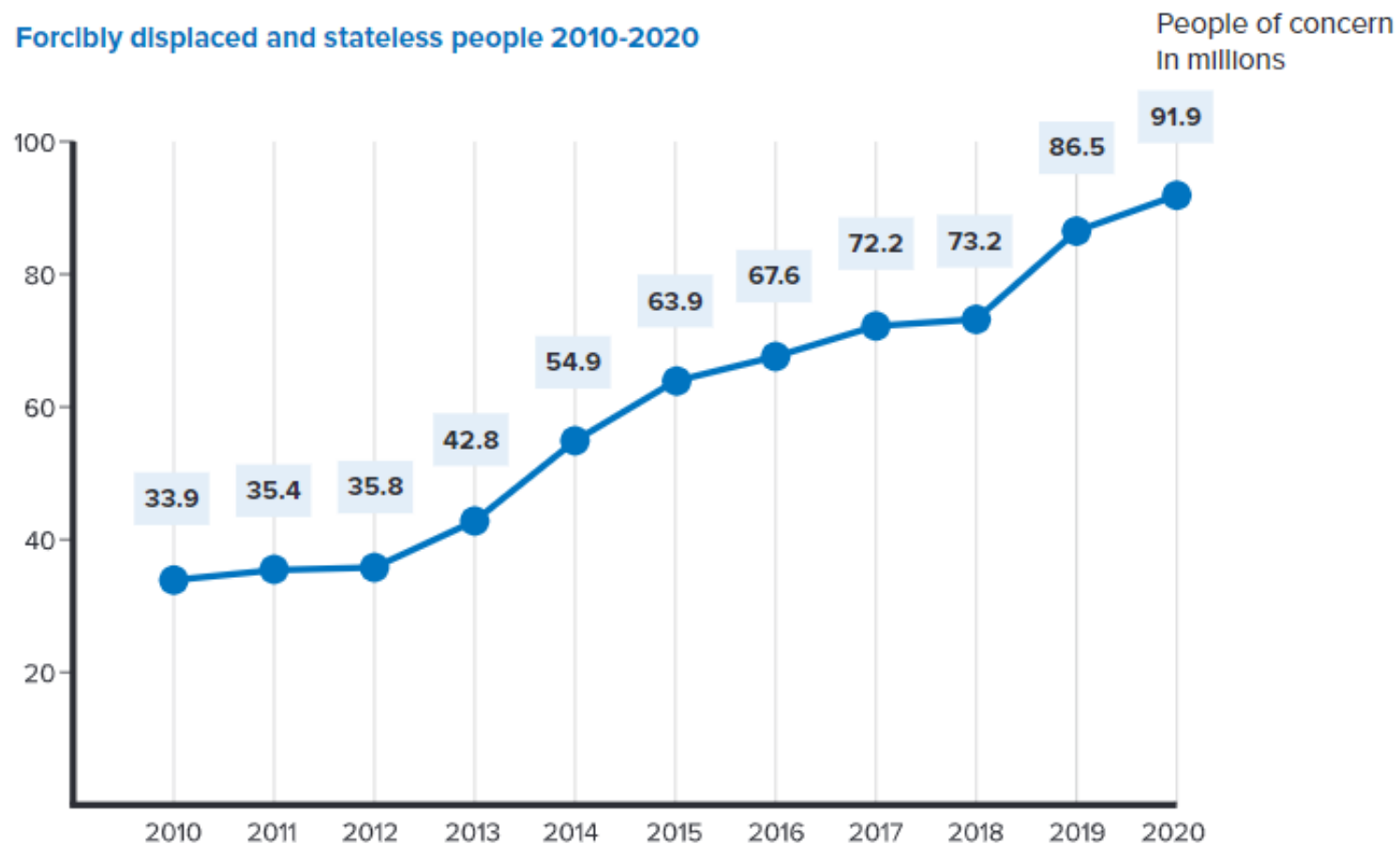
tension

Quantity. Efficiency. Cost.



Sustainable. Long Term. Truly Helpful.

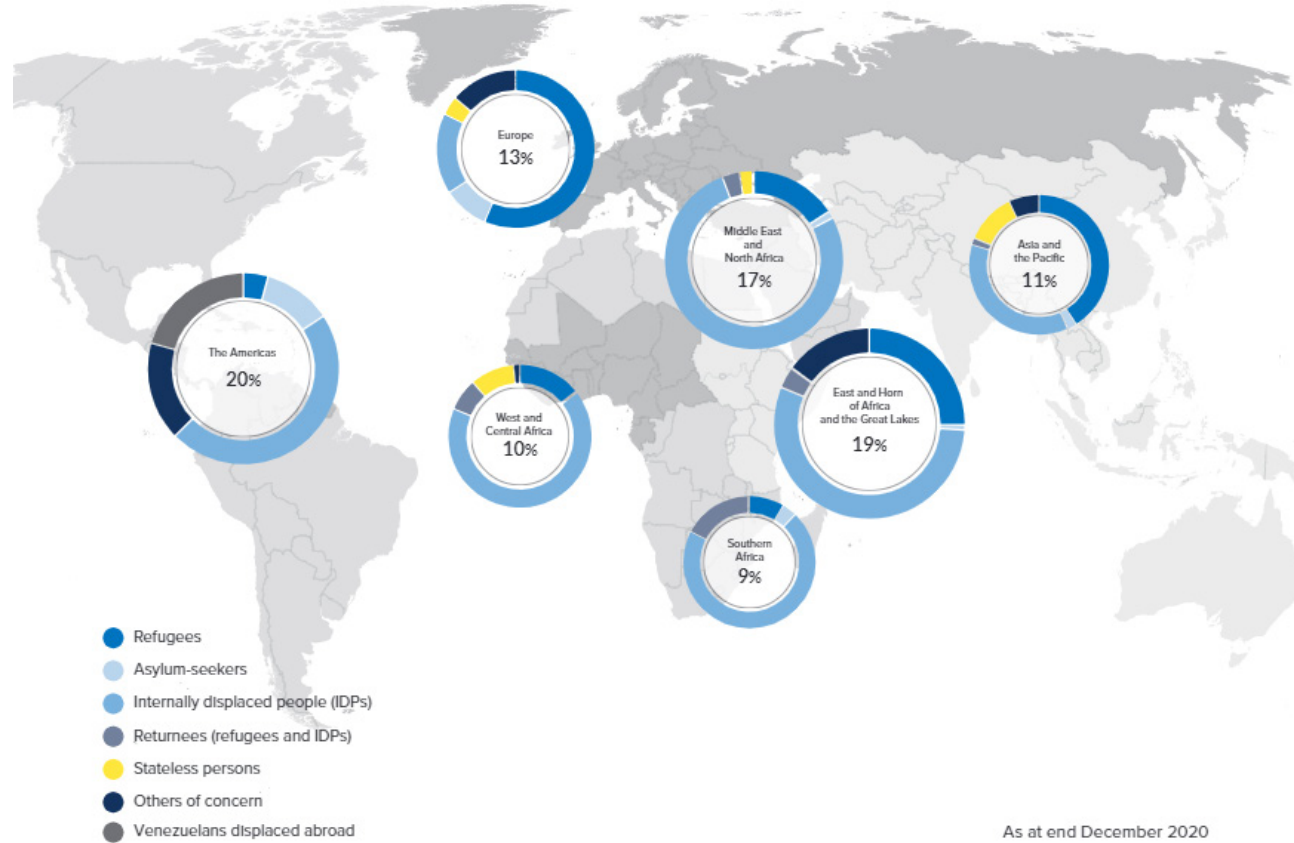
Forcibly displaced and stateless people 2010-2020



Forcibly Displaced People

- Asylum Seekers
- Internally displaced
- Stateless
- Migrants
- Refugees

Forcibly displaced and stateless people across seven regions

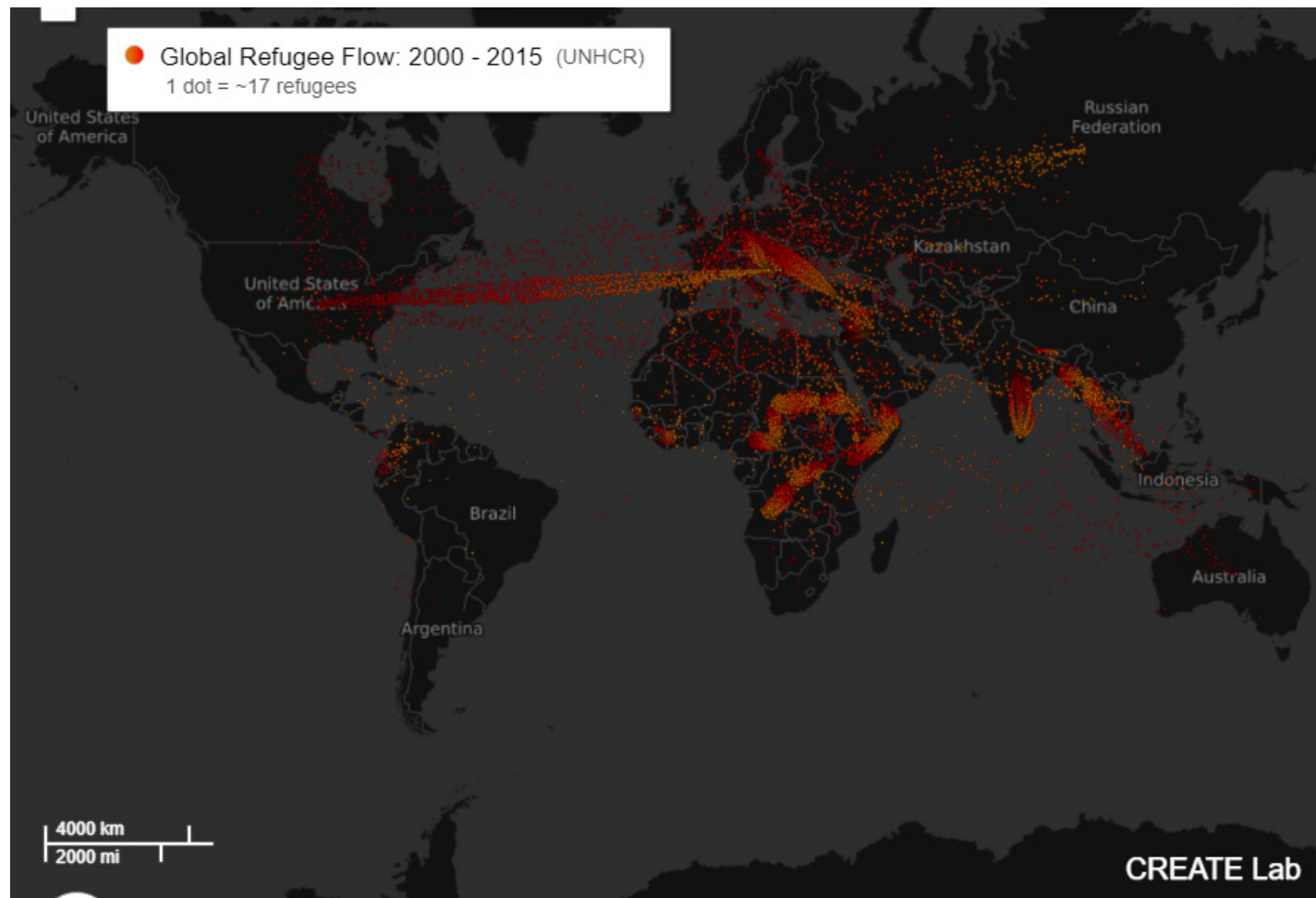


As at end December 2020

who is a refugee?

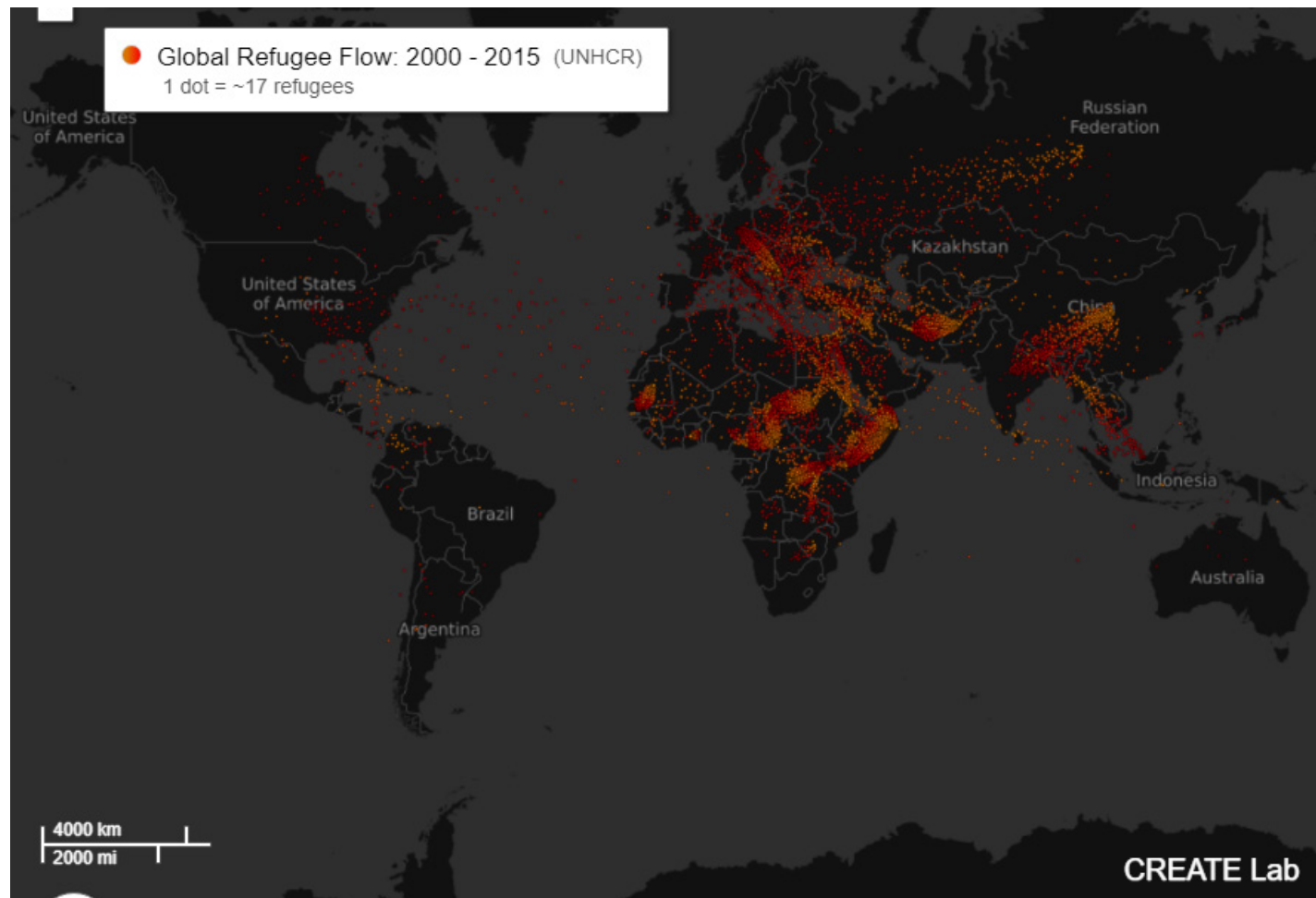


refugee flow



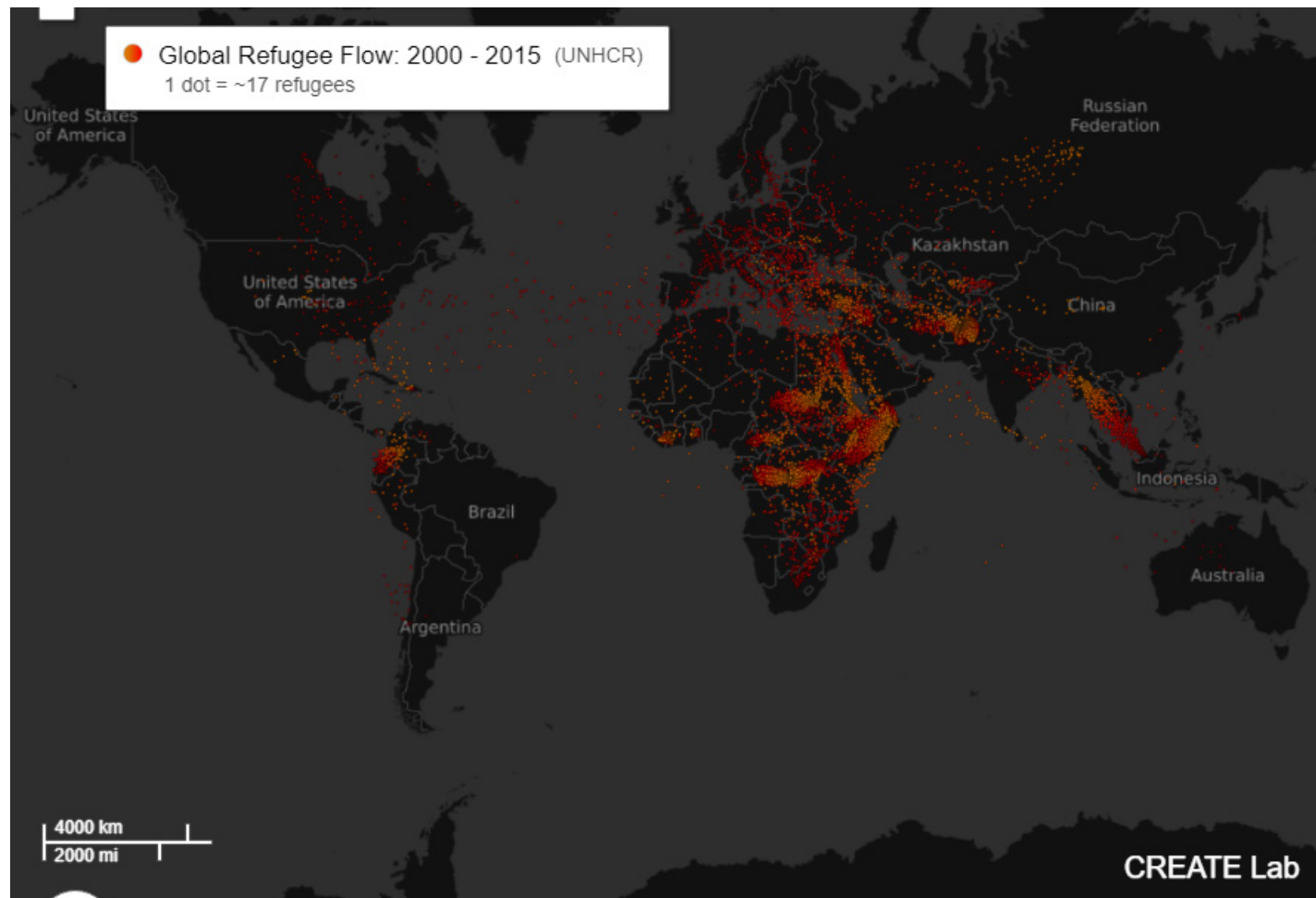
2006

refugee flow



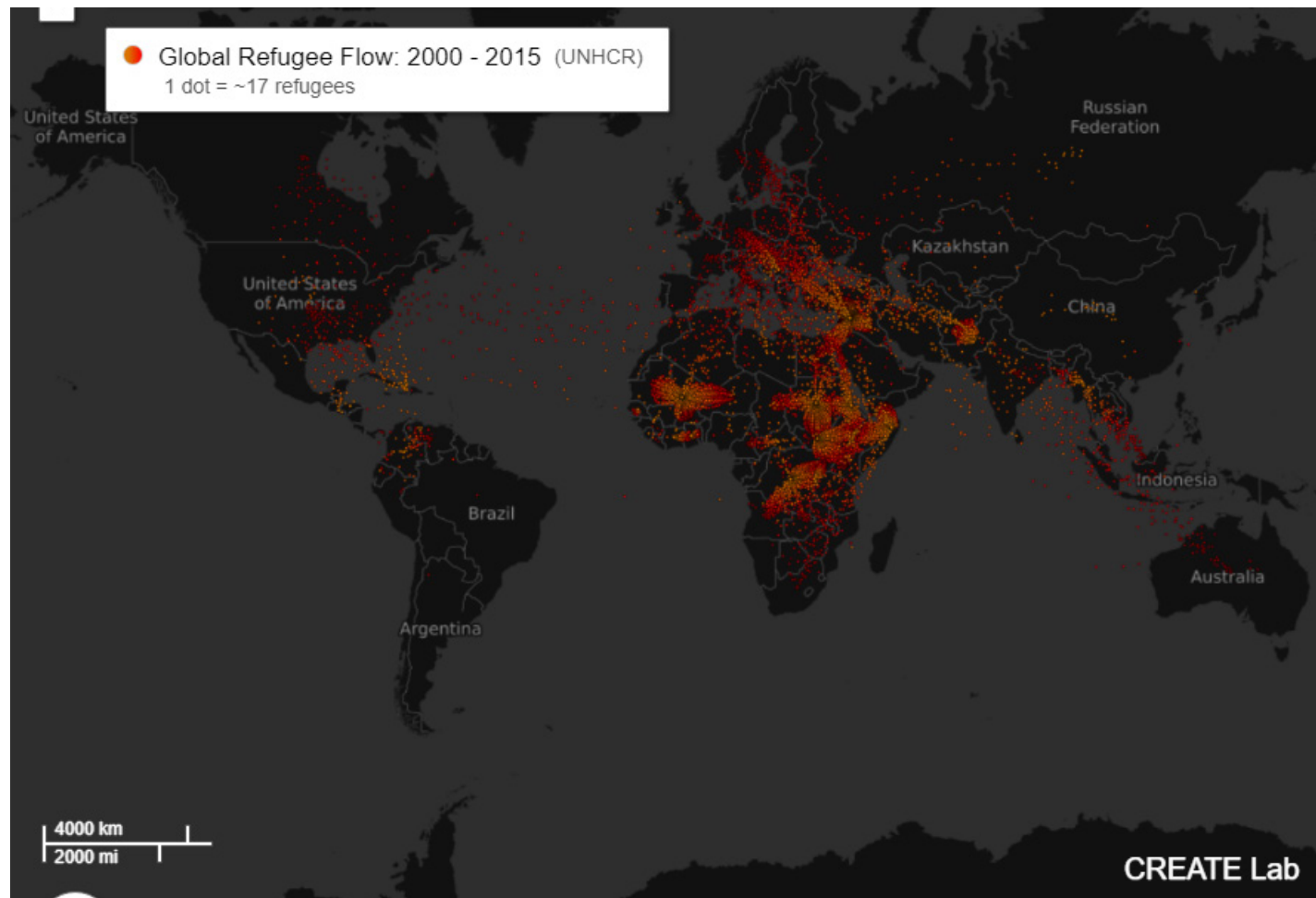
2008

refugee flow



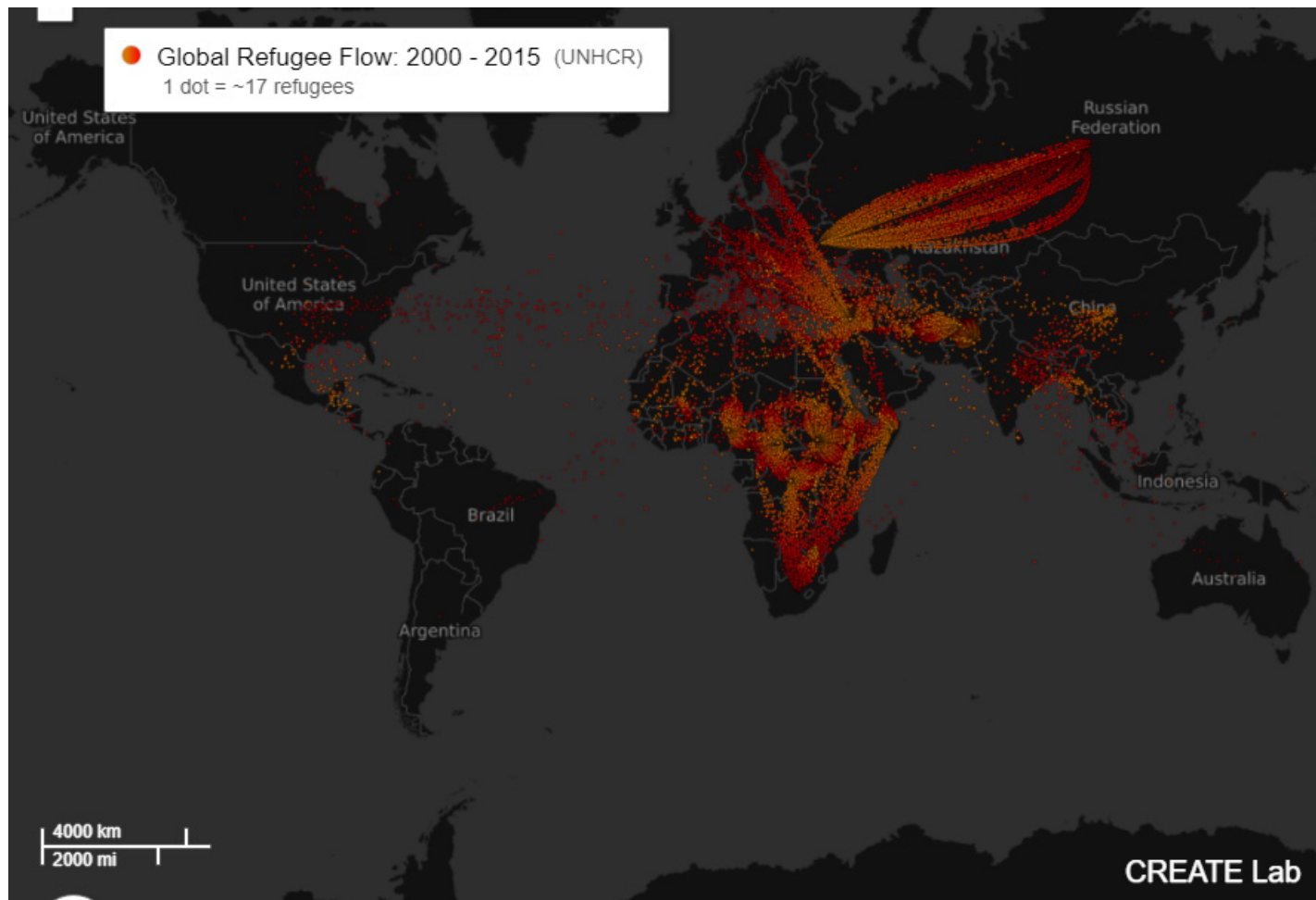
2010

refugee flow



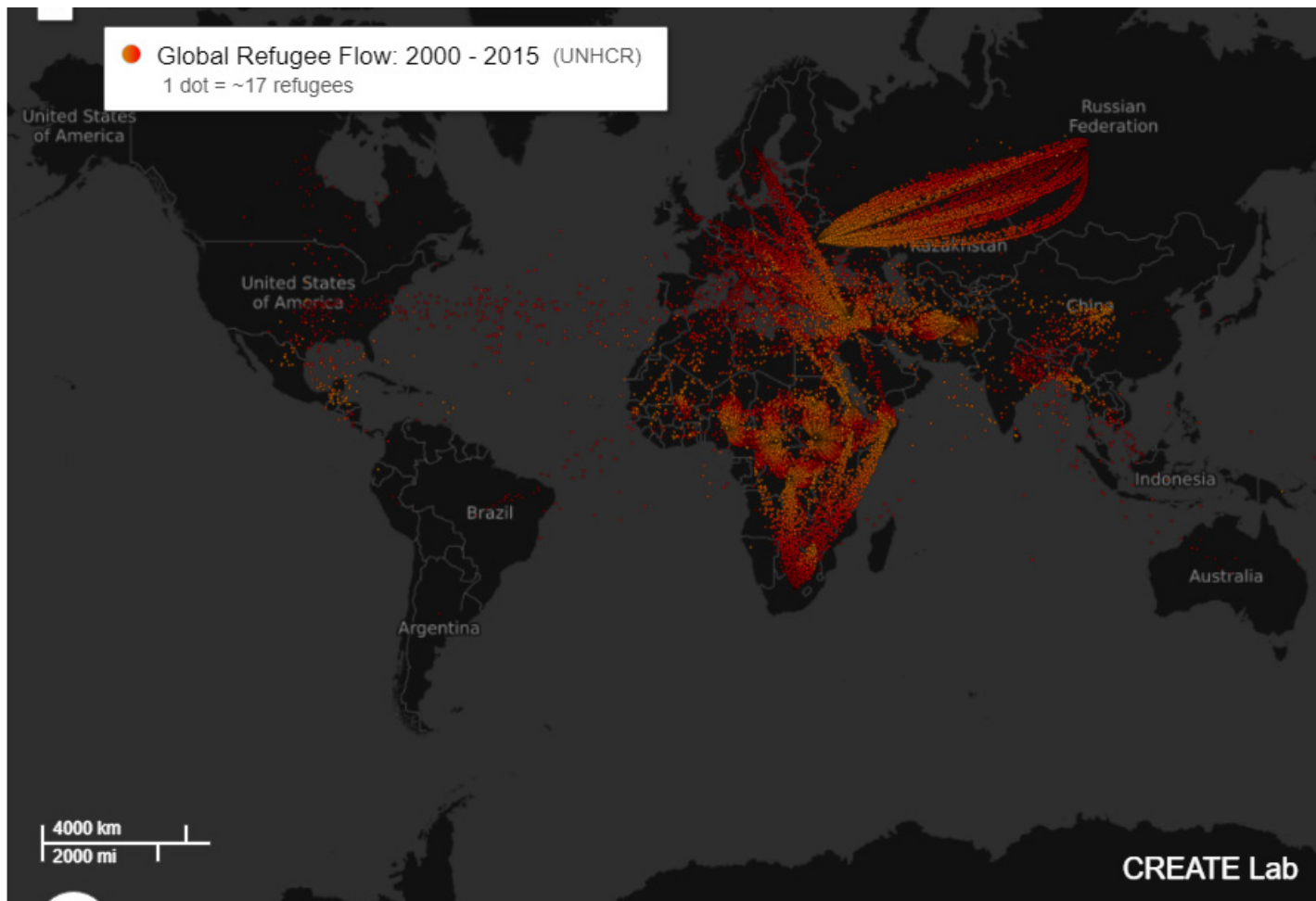
2012

refugee flow



2014

refugee flow



2016

ABOUT:

Who: Tutapona
Where: Uganda
What: Emotional Healing
Why: Individuals Restored

VALUES:

Christ Centered
Courage
Integrity
People Focused
Excellence

PROGRAMS:



The GROW Program



The HEROES Journey



Healthy Habits



Individual Support



Capacity Building, MHPSS Training



Continuing Education & Community Outreach



Programmatic results



Our Theory of Change

testimony



testimonies

Daryna felt lost in a new city and surrounding after fleeing conflict in her hometown in Ukraine. To make things even harder, she became a first time mother during this period as well. But after attending the GROW program, she feels resilient, and is motivated to work for a future for her family. **DARYNA** Rawan felt ashamed at returning to school after missing several years as he was older than all his peers. He struggled with feeling angry and defeated. But after attending the GROW program, he is motivated to work for a future for himself and his family, and has learned how to have authentic hope! **RAWAN** Judi had feelings of worthlessness, and even contemplated suicide, until she heard about Tutapona's one-on-one support through her children attending the Heroes Journey. She found the strength to continue, and now finds joy in being with her family! **JUDI** Jamilla felt alone with no where to turn after fleeing from Syria, and losing two of her children. Then one day, Tutapona staff came to visit her in her tent, and invited her to attend a GROW program. She learn about forgiveness, and how that forgiveness can set her free! Now, she feels lighter, happier, and closer to God. **JAMILLA** Aliyah felt like she had failed her family when she was unable to provide for them after arriving in Uganda. She began isolating herself, and considered ending her life. After attending the Tutapona's programming, she has learned ways to cope with her emotions, and has built a community of people she trusts and can talk to . **ALIYAH** Revind felt alone, and she didn't know how to deal with the emotions she was facing. After attending the Heroes Journey, she learned the power of belief, and now she knows that God is always with her, no matter what she is facing! Revin is a hero! **REVIN** Jowan started to feel afraid and ashamed at a young age. After participating in the Heroes Journey program, he is now excited about life everyday! **JOWAN**

project overview

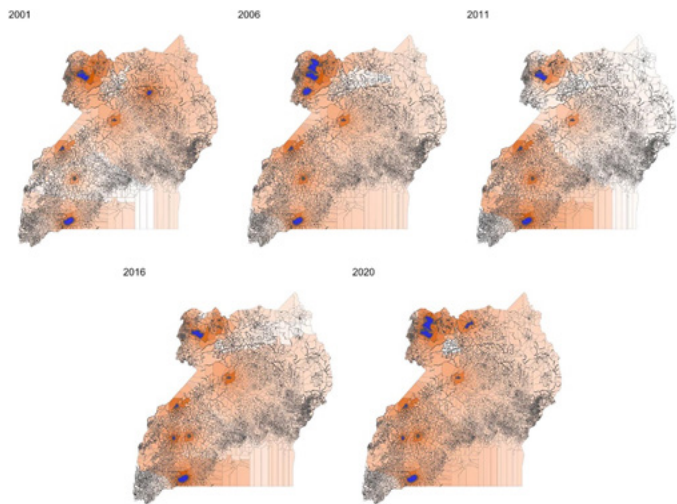


Africa



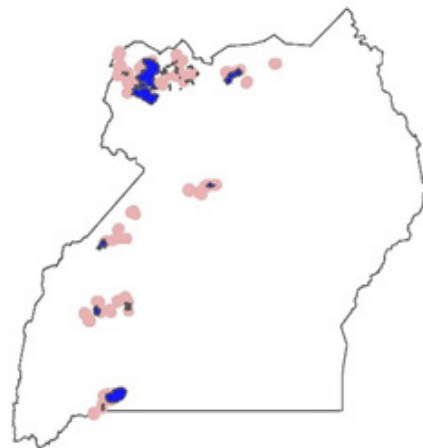
Uganda

project overview

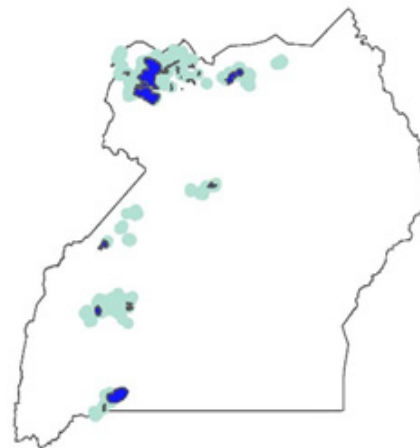


Refugee Density Map

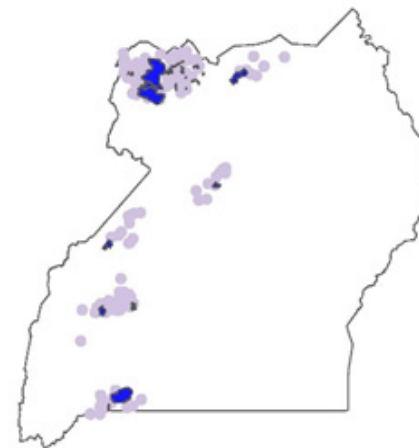
Livelihood Grants



Environmental Projects

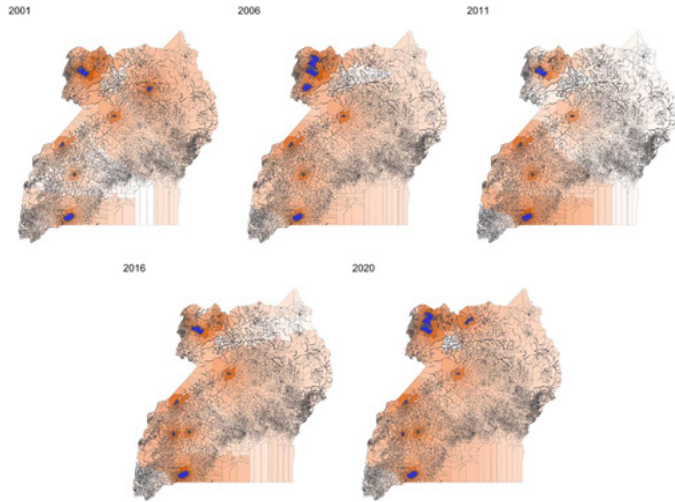


Infrastructural Improvements



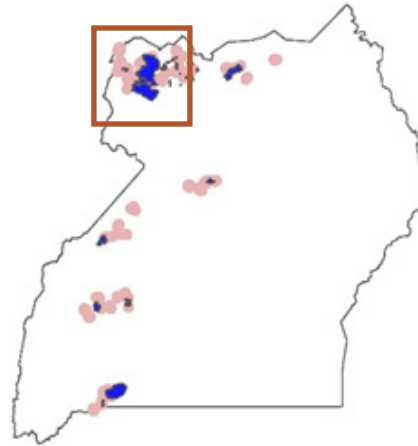
World Bank Work Zones

project overview

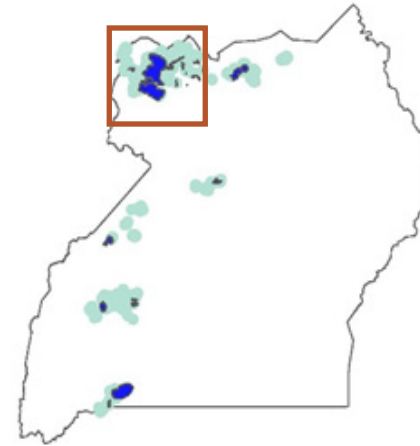


Refugee Density Map

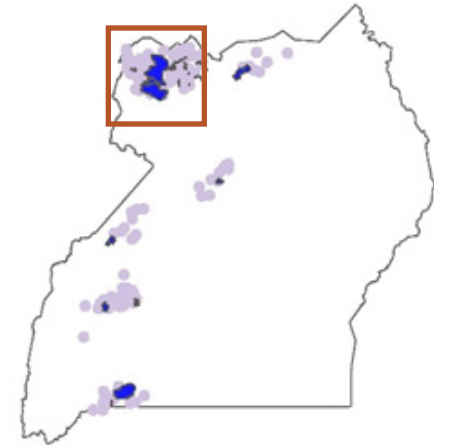
Livelihood Grants



Environmental Projects



Infrastructural Improvements

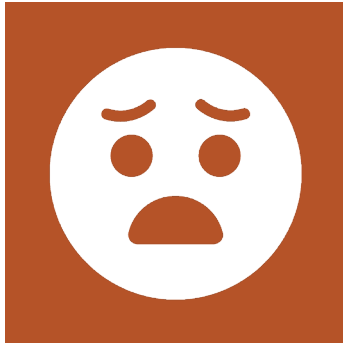


World Bank Work Zones

current site



project goals



Decrease Fear



Incorporate
Holistic Health
Strategies



Circular Design



Sustainability

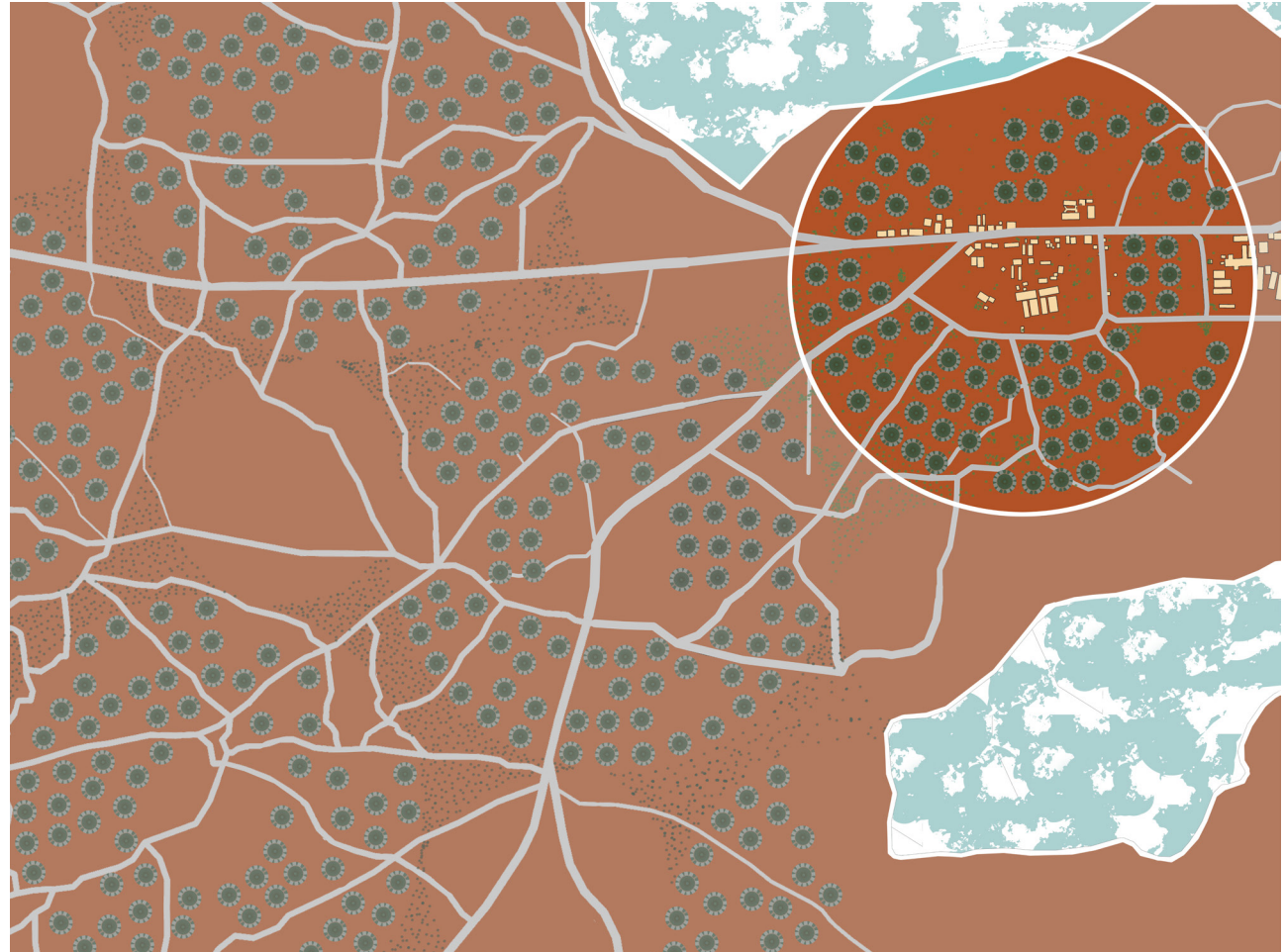


Walkable
Distances

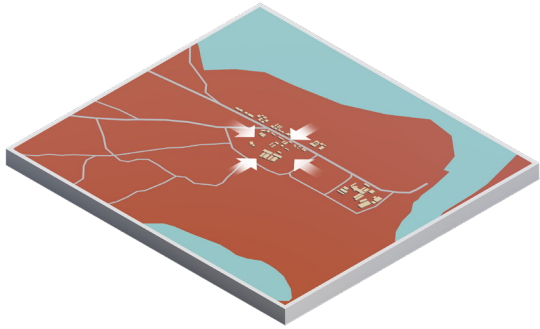


Equity

master plan - site plan



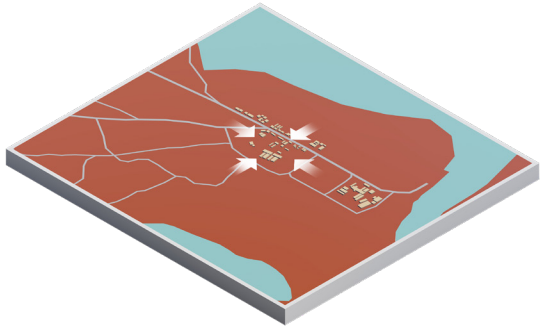
process



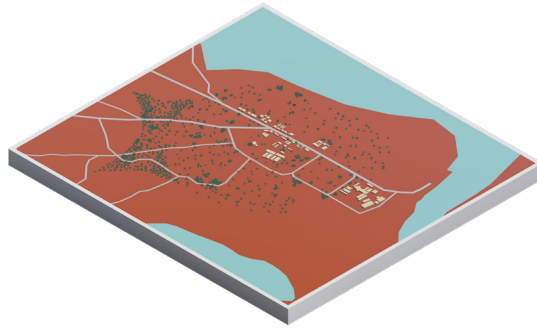
Consolidation



process



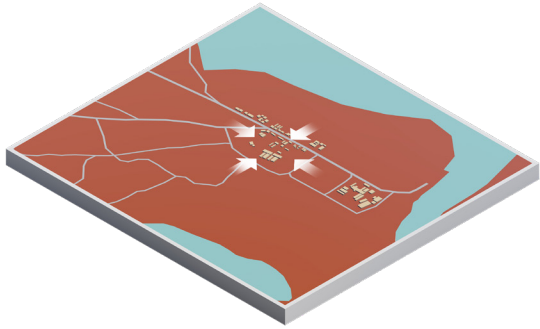
Consolidation



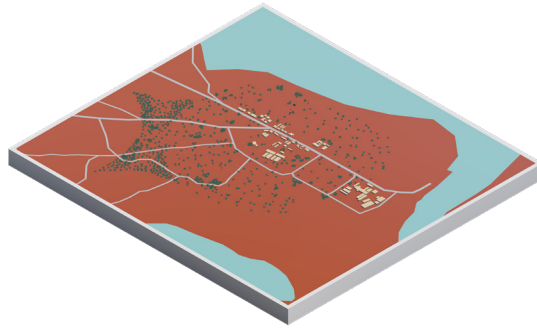
Vegetation



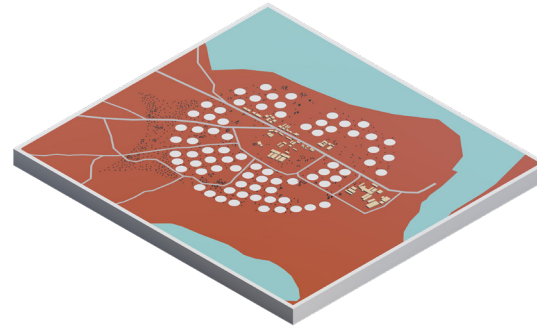
process



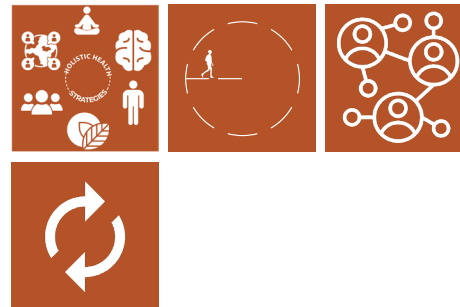
Consolidation



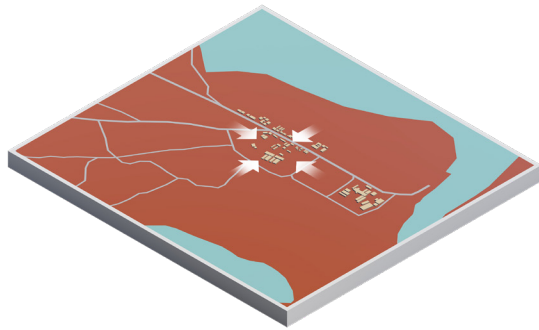
Vegetation



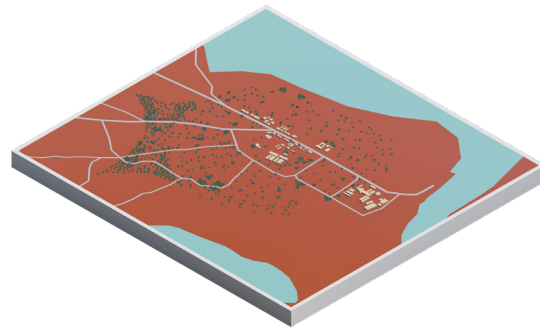
Cluster Placement



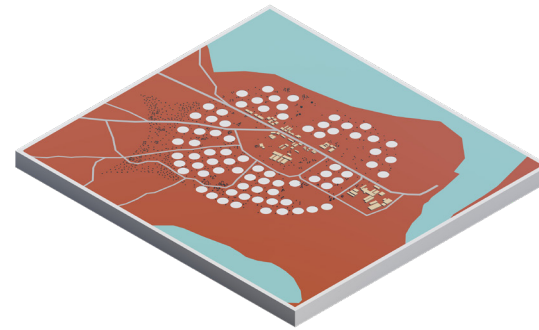
process



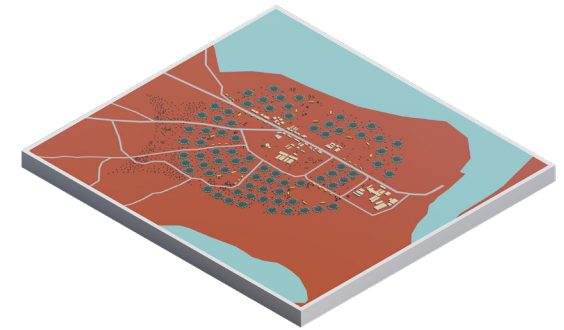
Consolidation



Vegetation

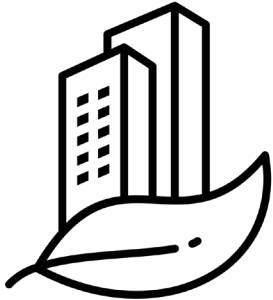


Cluster Placement

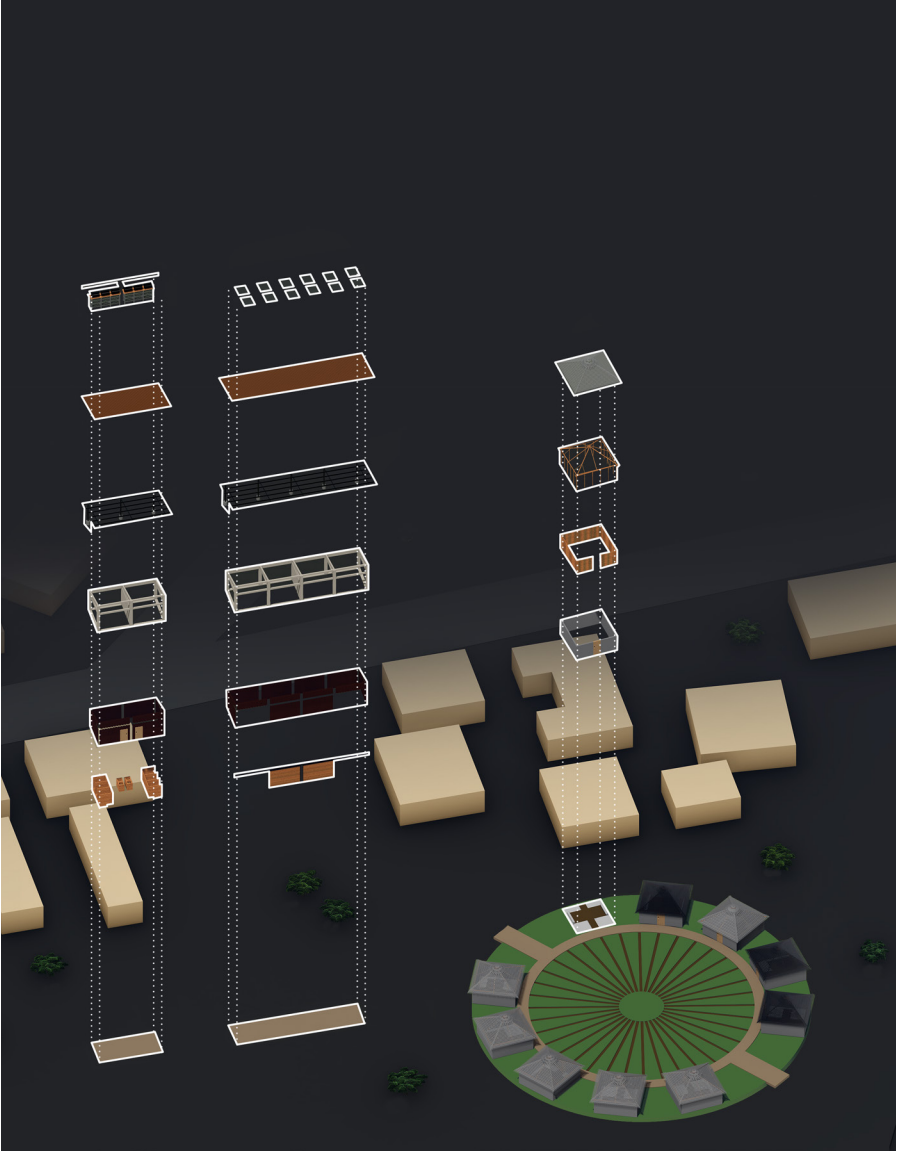


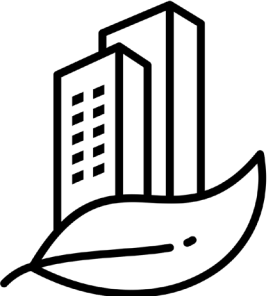
Open Spaces



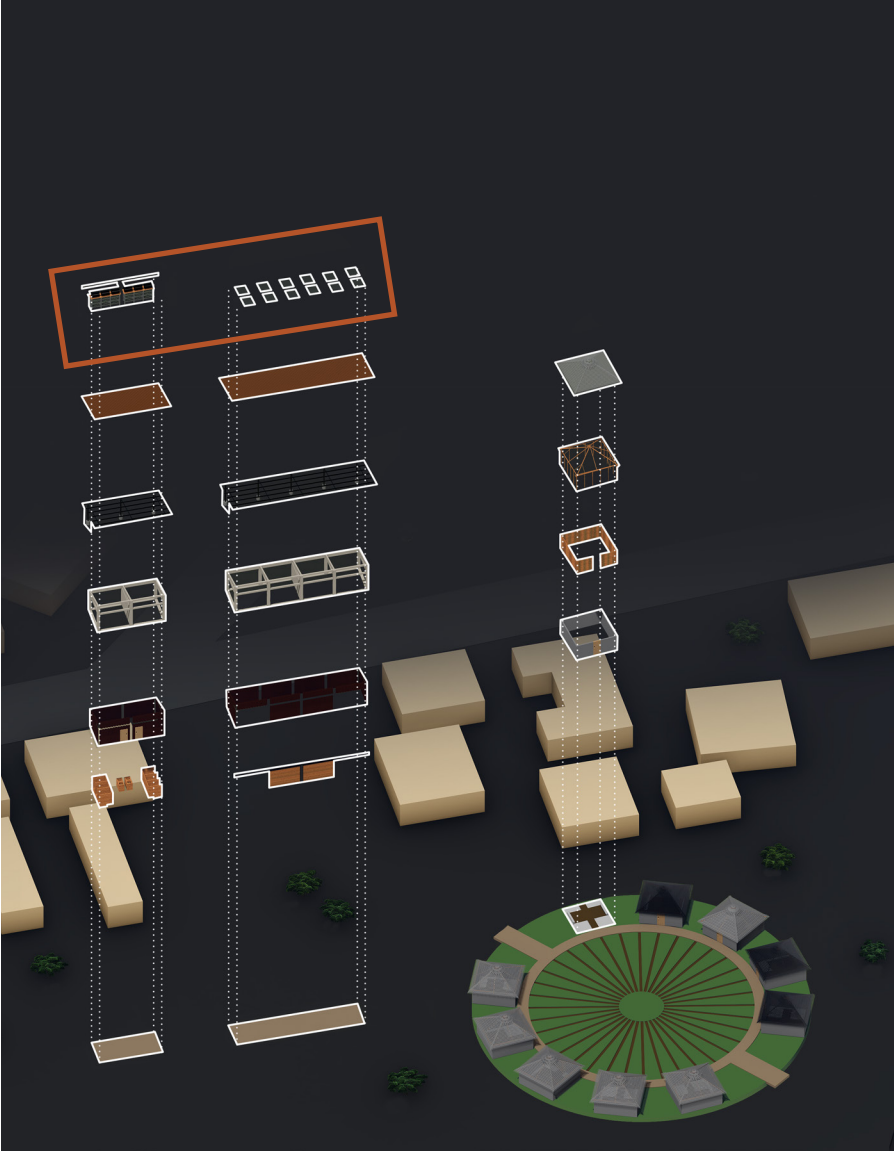


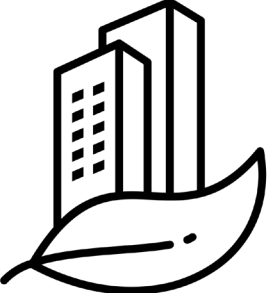
Passive
Design



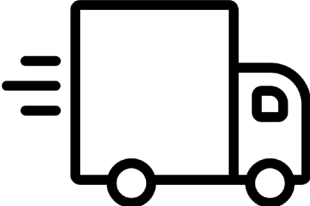


Passive
Design

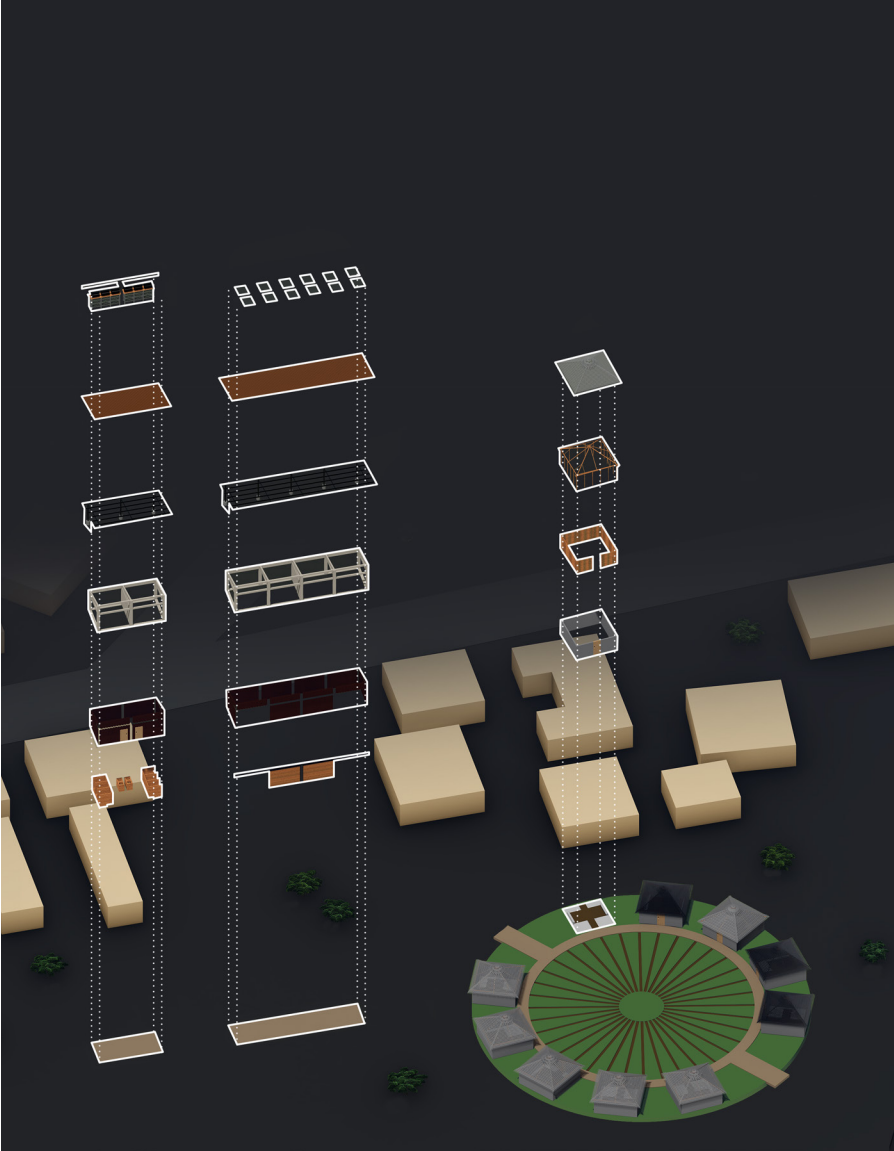




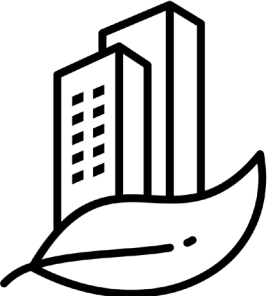
Passive Design



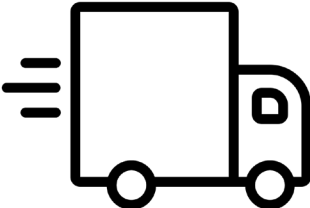
Decrease embodied energy



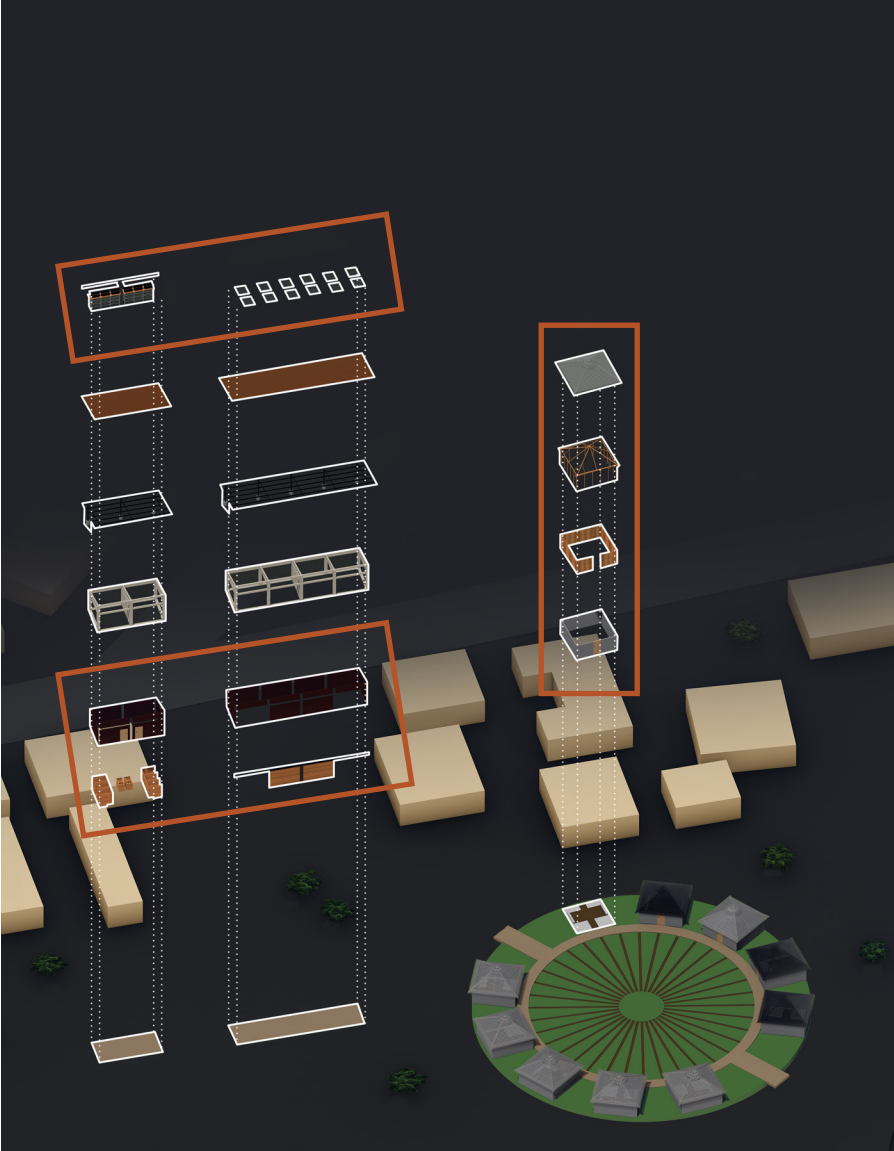
construction/materials



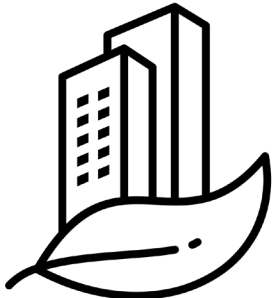
Passive Design



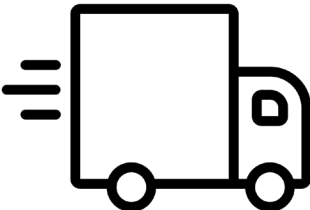
Decrease embodied energy



construction/materials



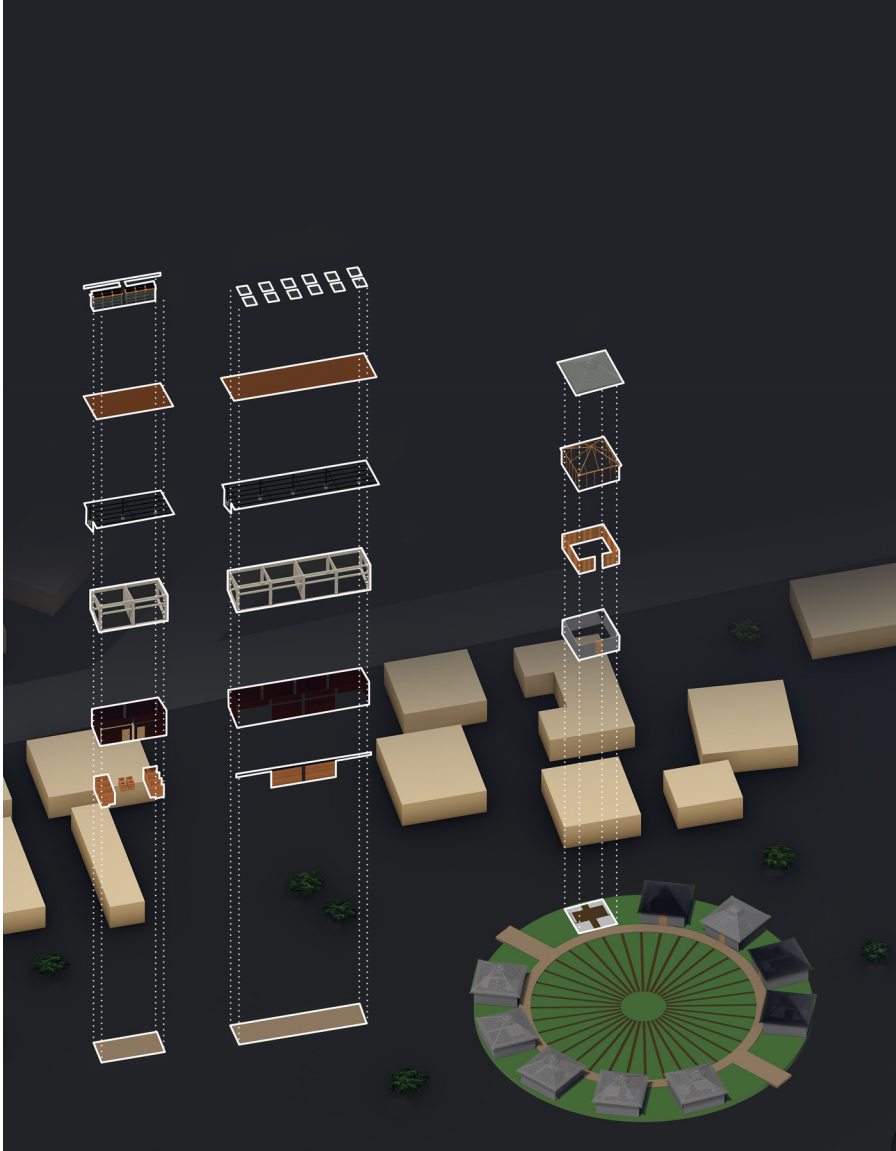
Passive Design



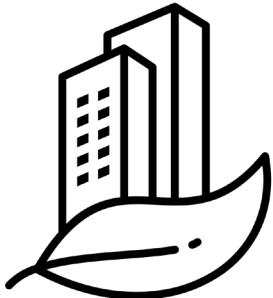
Decrease embodied energy



Locally Sourced



construction/materials



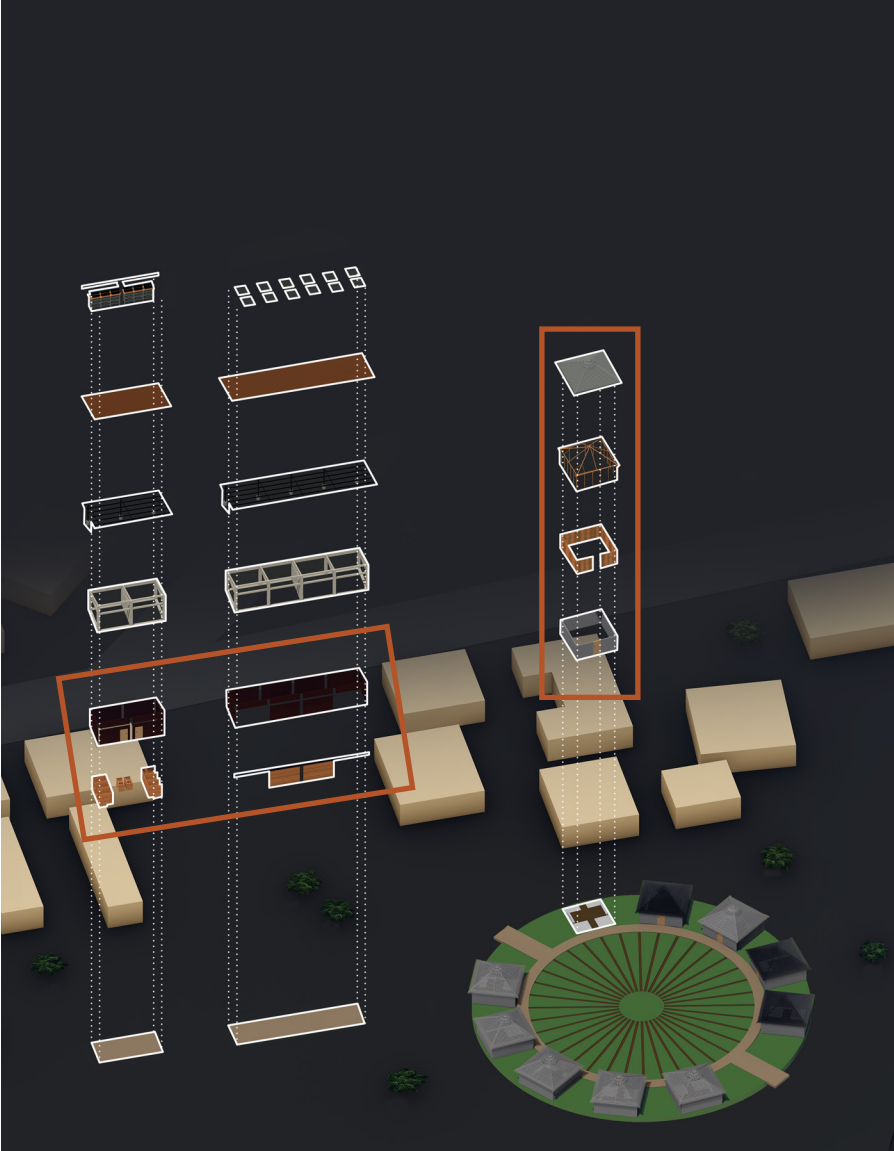
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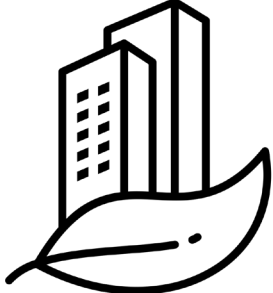
Decrease embodied energy



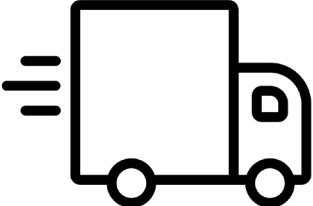
Locally Sourced



construction/materials



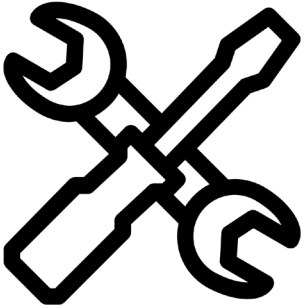
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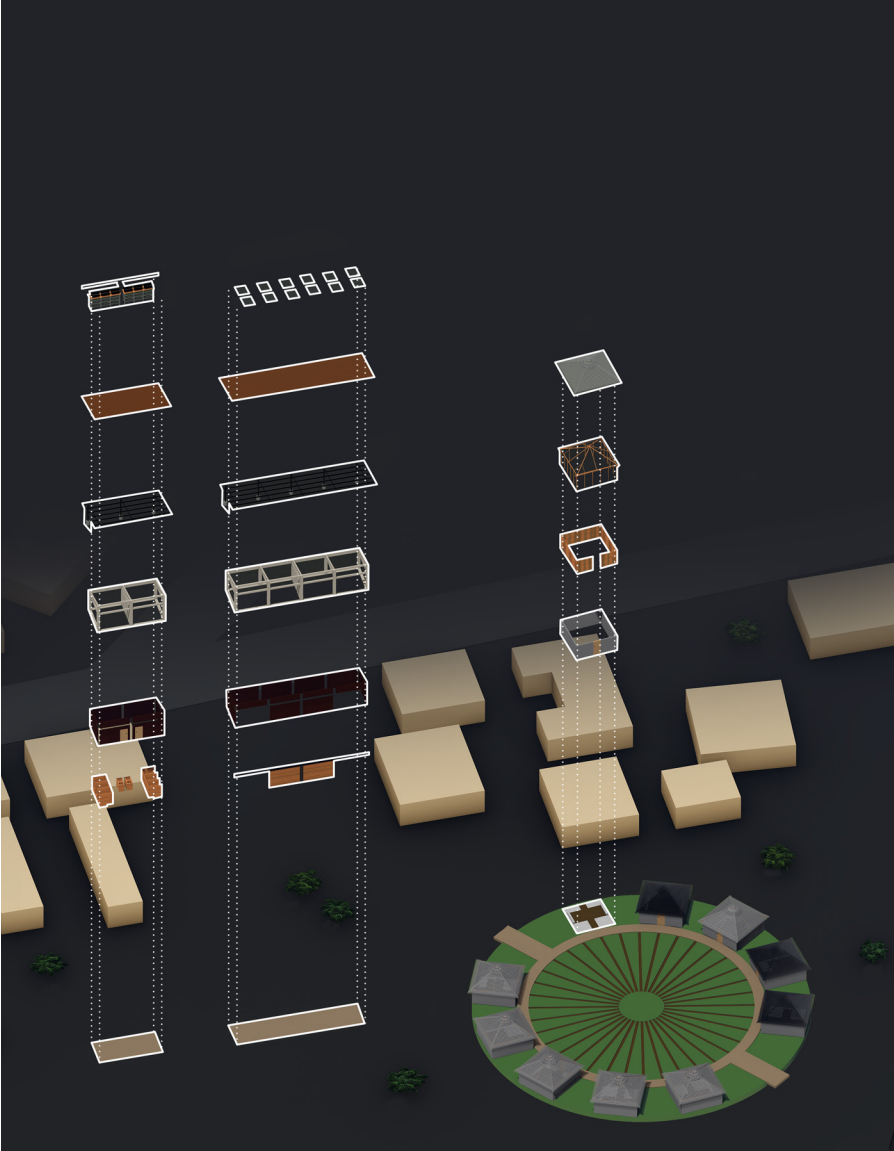
Decrease embodied energy



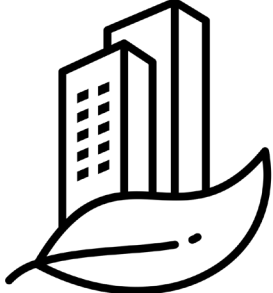
Locally Sourced



Simple Construction



construction/materials



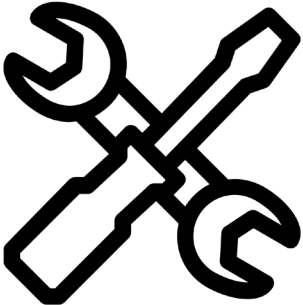
Passive Design



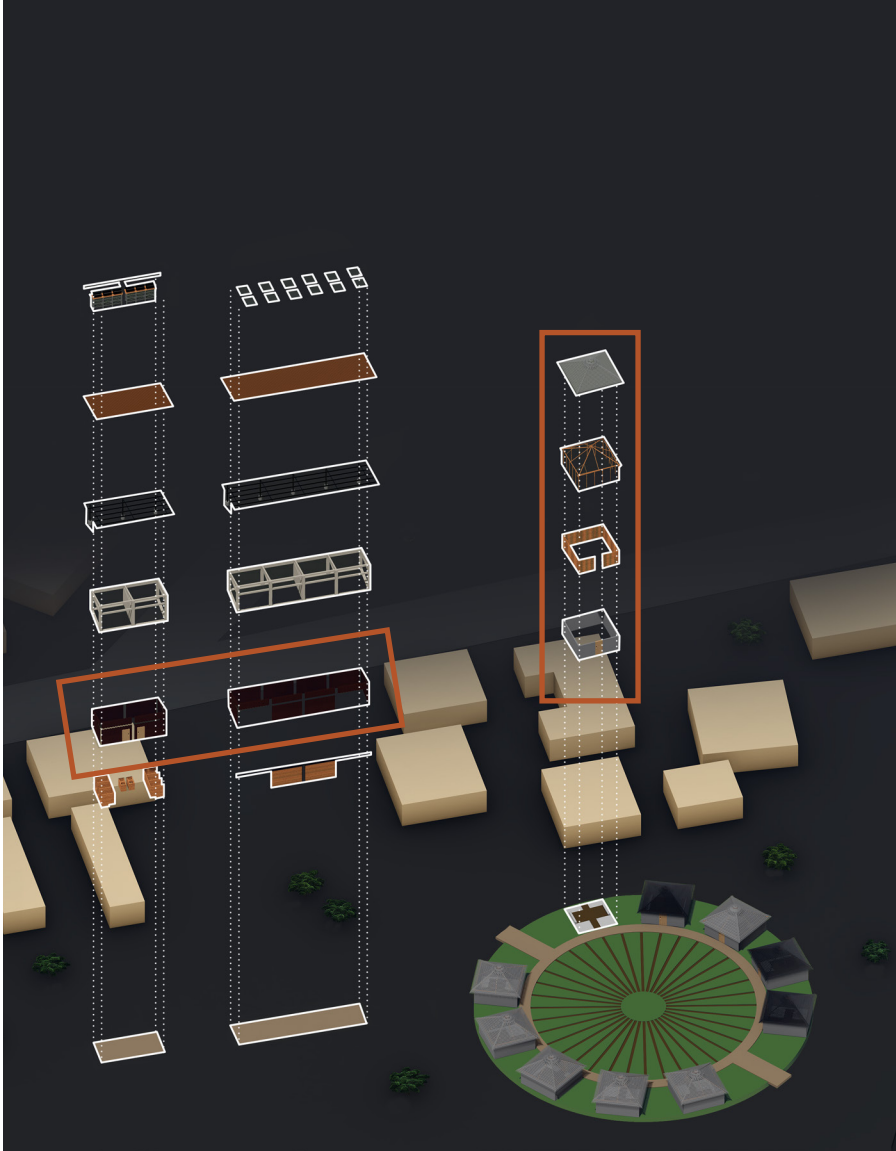
Decrease embodied energy



Locally Sourced



Simple Construction

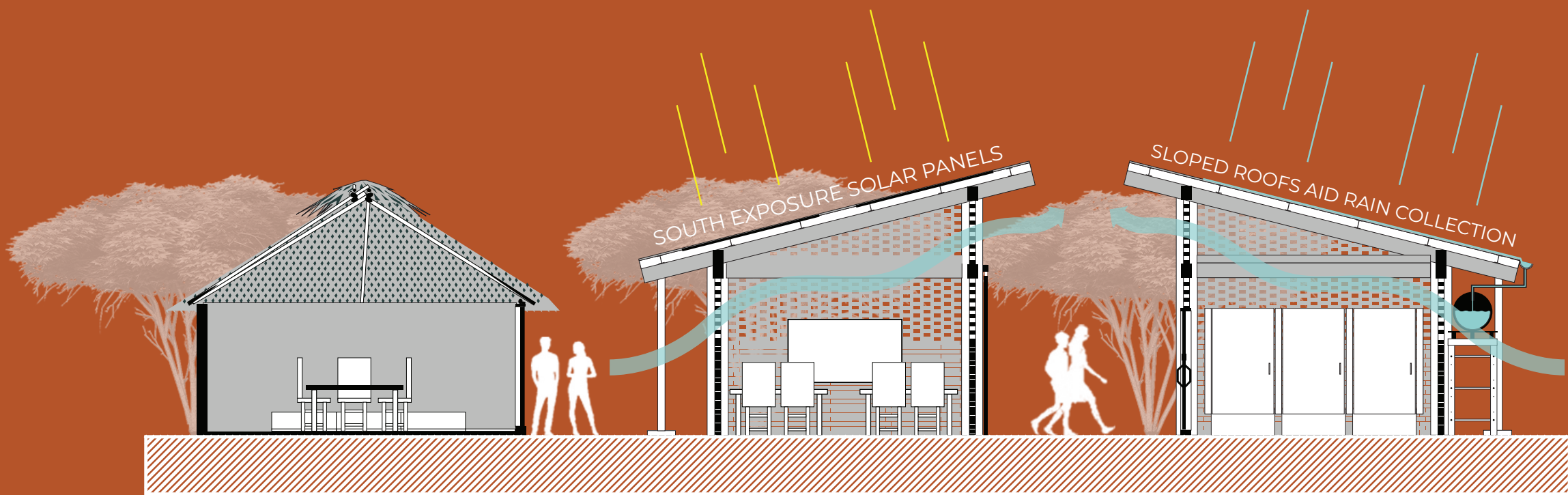


primitive construction

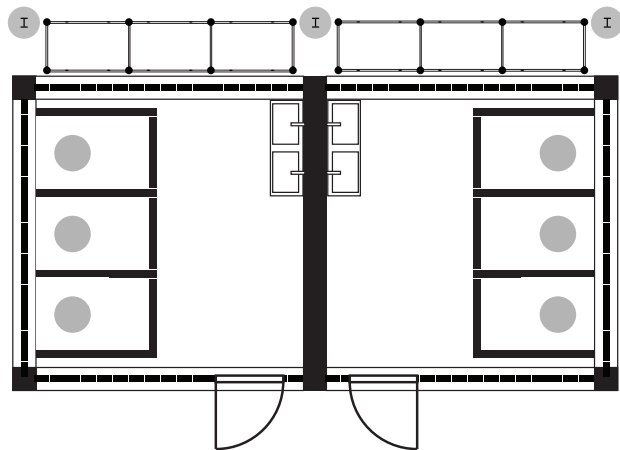




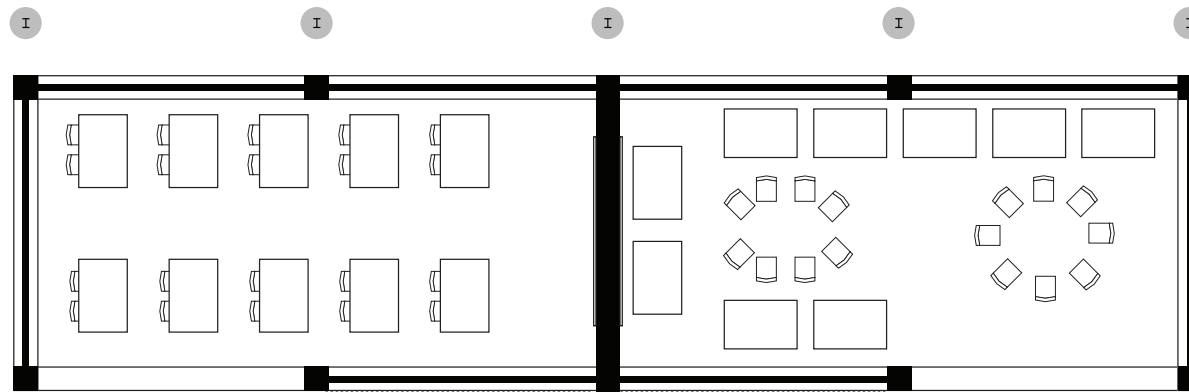
passive/sustainable design



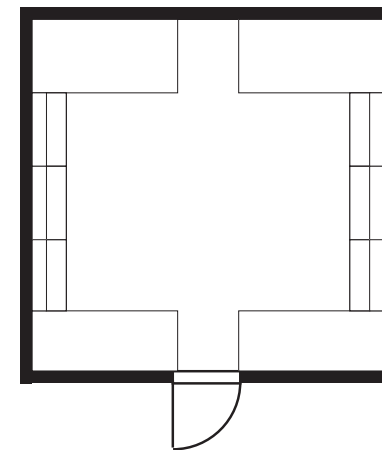
floor plans



Rest Room

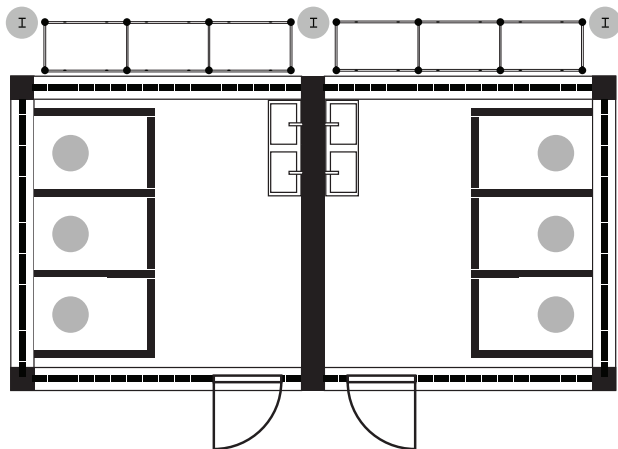


School/Multi Use Space

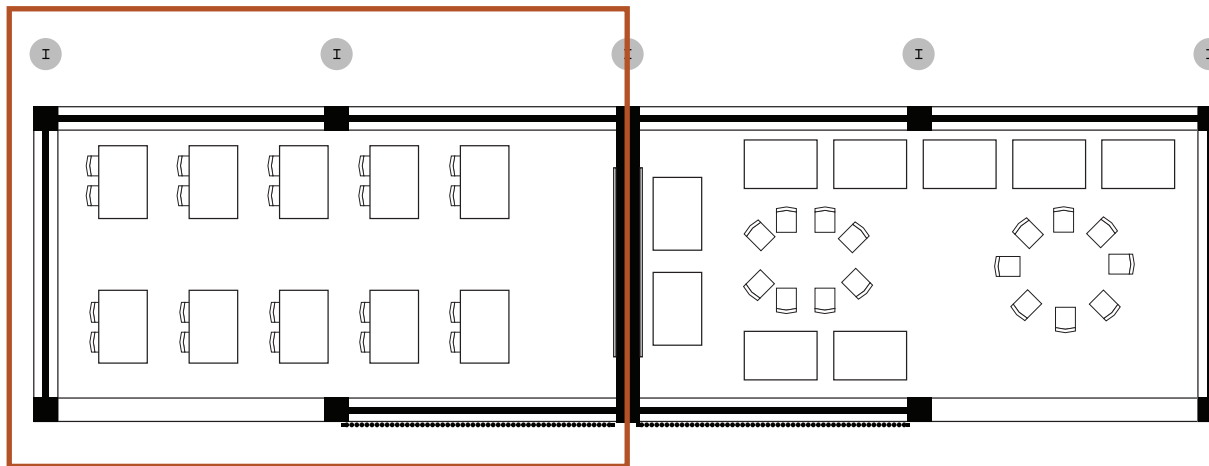


Dwellings

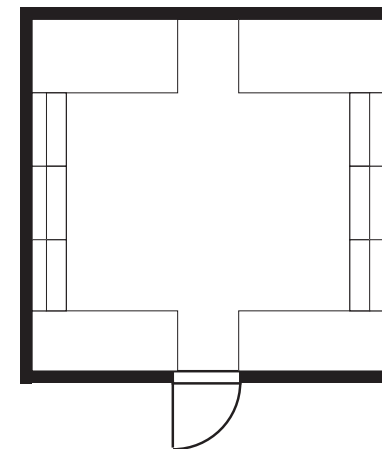
floor plans



Rest Room



School/Multi Use Space



Dwellings



$$e^{-ax} = \sqrt{1-x^2}$$
$$f(x) = a_0 + \sum_{n=1}^{\infty} (a_n \cos nx + b_n \sin nx)$$
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
$$\sum_{n=1}^{\infty} (x-n)(x-n-1)$$

conclusion



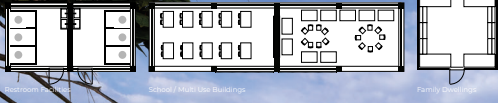
HUMANITARIAN DESIGN

incorporating holistic healing into crisis relief design



FLOOR PLANS

The floor plans are structured into three primary site types. A school, restroom, and outdoor space. These structures are placed throughout the site to foster a sense of community and education. Restrooms are placed throughout the site to foster a sense of community and education.



PROCESS



The floor plan and construction process are designed to be flexible and adaptable. The site is designed to be flexible and adaptable. The site is designed to be flexible and adaptable.



RHINO REFUGEE CAMP

West Nile Region | Uganda | Africa

PROCESS

Urban design strategies of consolidating and considering space are being used to manage growth for the future.

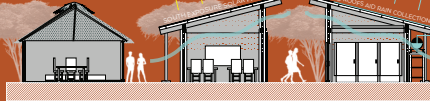
The vegetation is staying similar to the existing context with the exception of large tree ways that connect one cluster to another cluster. This provides ample space for habitat and animal migration to not be impeded on.

The housing clusters are placed in a way to allow for holistic health strategies to flow throughout the master plan. Space is left open for schools, restrooms, outdoor sports, etc.

The schools and rest rooms were strategically placed. The schools frame outdoor spaces and the restrooms are located near the road ways to facilitate maintenance and upkeep.

SUSTAINABILITY

These buildings are efficient and light on the environment. The single buildings are equipped with solar panels and the restrooms have water collection basins. These ensure that some of the building functions can continue without being connected to a power or electrical grid.

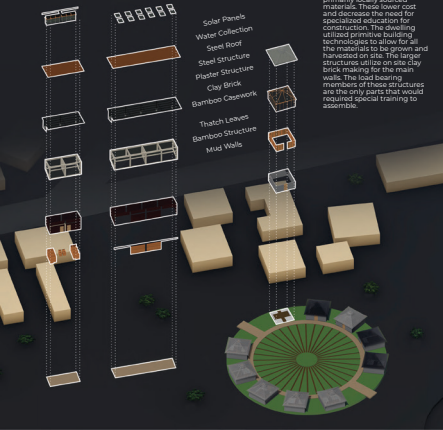


CIRCULAR DESIGN

The building materials are predominately utilizing local materials found on the site. The dwellings are made from mud, bamboo and various grasses. The schools and restrooms utilize a special brick making technique by using the clay in the soil as a building material.

COMPOSITION

The building is composed of primarily locally sourced materials. These lower cost and decrease the need for specialized education for construction. The dwelling utilized primitive building techniques to allow for all the materials to be grown and harvested on site. The larger structure utilized clay brick making for the main walls. The best building members of these structures are the only ones that would require special training to assemble.



SITE PLAN

Rhino Camp is located in the West Nile region of Uganda, Africa. The camp is home to a diverse people group from many forcibly displaced people from the surrounding countries. The site is located on the banks of the West Nile river. This provides them with access to farmland and a lot of trees used for shading.



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