

URBAN ACUPUNCTURE

Can the deliberate use of tactical interventions
reinvigorate informal settlements?

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reinvigorate informal settlements?

A thesis presented in partial fulfillment of the requirements
for the degree **Master** of Architecture in the Department of
Architecture of the Rhode Island School of Design, Providence
Rhode Island.

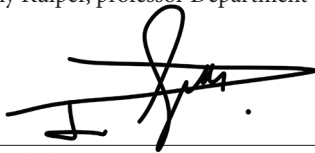
by

Robert Samir Diaz - Vicente

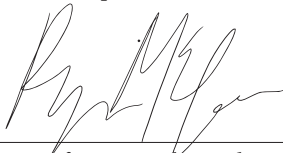
2019

Approved by a Master's Examination Committee:

Amy Kulper, professor Department of Architecture, Thesis Chair



Daniel Ibañez, professor, GSD, RISD, Primary Advisor



Ryan McCafrey, Secondary Advisor

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PREAMBLE

Content
Informal Brief.....
Tactic Brief
Problematique
Composition of a Tactic.....

CONCEPTUAL THEORY

Strategic Placement
Conceptual Structure.....
Fluidity of Program
Maximize Confort Low Energy App.....
Participatory Approach
Modular Application

MATERIAL THEORY

Programatic Flexibility.....
Economically Concious.....
Locally Source
Metamorphic
Tool Box Proposal

PRESEDDENCE

Architectura de Transicion - Pirua
Chacras Project
Post-Earthquake Reconstruction

SITE (S.)

Rocinha, Brazil
Makoko, Nigeria
Rivera Del El Ozama, Rep Dom.

DESIGN DEVELOPMENT

Programmatic organization.....
Heliomorphism.....
Heliomorphic Steps.....
Social/Work Relations.....
Visualization.....

FINAL REMARKS

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INFORMAL_

Informal as an adjective describes having a relaxed, friendly, or unofficial style, manner, or nature. It evokes a sense of familiarity, mundane, yet it can be extraordinary when applied through the eye of a designer. Informality dissolves the structure in place and begins to enable the possibility to reimagine the status quo. Conceptually, I believe that the “informal” dogma could be an effective approach of design that begins to produce meaningful changes within urbanity, creating new systems -- adapted to the societal demands, extreme climate shifts, and the direction of our own discipline.

TACTIC_

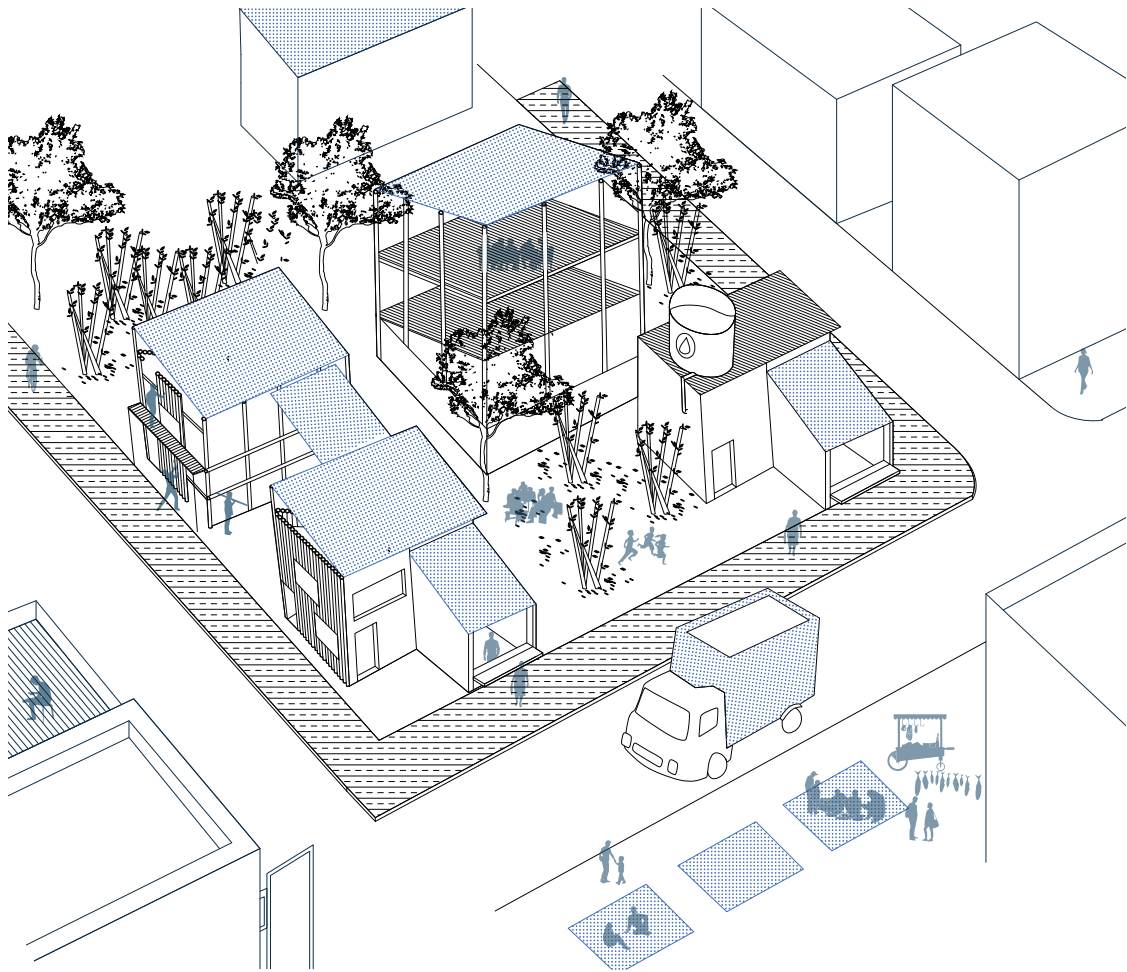
A tactic should situate itself into the site unpossessibly, without overtaking the essence of the context completely. what at first glance seem as disadvantages become monumental sources of potential. Whether it may be the lack of a fix scope/site, the rapidly changing environment, or its distance from the application quickly reverses the narrative to an efficient intervention that can be applied to numerous scenarios. These interventions take advantage of the changing situations, and local resources to serve its core purpose, and what first seems as detachment and neutral, a tactic through its dynamic behavior and absorption of resources rapidly becomes familiar, and local.

URGENCY_

Due to the rapid development of informal settlements, essential urban conditions such as public spaces, infrastructure, and amiable living conditions are lacking from the urban context. These hyperly urban communities lack an overall organizational strategy that preserve their successes i.e. human scale, community interrelations, hyper functionality while addressing its downfalls organic chaotic growth and lack of general systems.

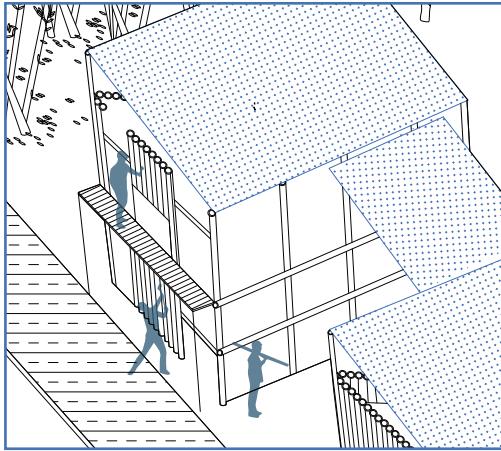
Conventional design and planning used in “formal” urban spaces focus on long lasting strokes of urbanisation, this means that the built geography moves slow, and are designed for this slow pace changing. Informal Settlements are dynamic and perpetually rearranging themselves to suit the needs of the user/s. This calls for informal methods of tactics that address issues such as the relationship between public space, and the existing housing counterpart, waste collection, essential programmatic gaps, energy production, and water management in ways that does not involve removing, cutting or clearing.

Therefore it is necessary to have an alternative mode of intervention that introduces new tactics of addressing informal settlements *problematiques*. The goal is to improve living conditions for the occupants, while still maintaining the experiential essence of the urban fabric within the settlement itself. These interventions would be small in scale, and will start a conversation pertaining to space activation within the informal fabric, and would redefine the language of current spaces.

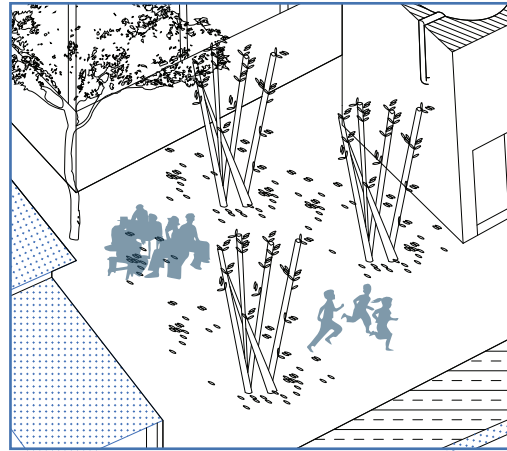


Composition of a Tactic Diagram - These are critical attributes that construct the behavior of a tactic within an informal space.

1. *Easy Assembly*
2. *Locally Sourced*
3. *Metamorphic Strategy*
4. *Community Integration*
5. *Multi-problem Solving*



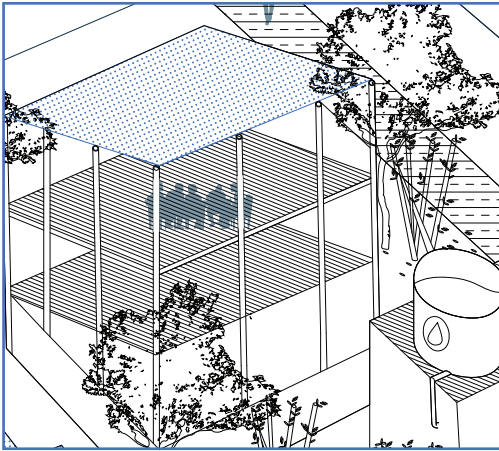
Easy Assembly



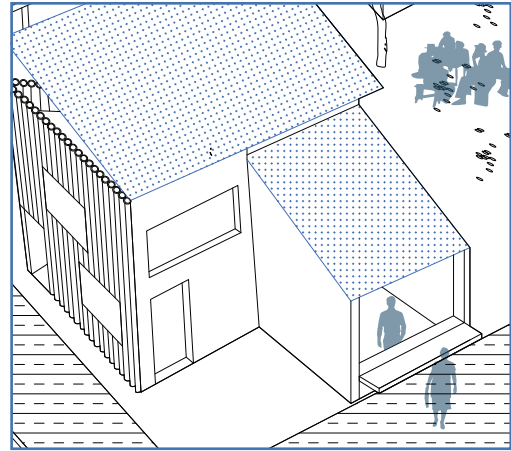
Locally Sourced

Rapid simple assembly of self-built structures can make it easier for communities to shape their physical environment. By using design and construction strategies with participatory schemes, will enable a sense of ownership, and the distribution of knowledge.

Locally sourced, and accessible materials are vital when Applying a materiality to a tactic. It is important to analyze the context the intervention will be occupying in order to select the appropriate materials leading to a more conscious design implementation, and appropriate construction techniques.



Metamorphic Strategy



Community Impact

Both in building typology, and problem solving attributes, the tactic should be able to evolve from an informal temporal implementation of an idea into a more permanent solution for the community tackling several Problematiques within the space it occupies.

Looking beyond the built into a more political, sociological, and ecological spectrum. The tactic should not just appropriate itself from the advantages available within the site, and its surrounding context, but should also stride to create new opportunities for the community generating growth.

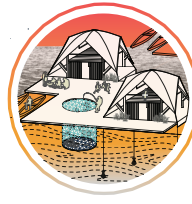
STRATEGIC PAVILLIONS



SINGLE LANE FLOODING



MICRO-COMMONS



FLOWS & RHYTHM



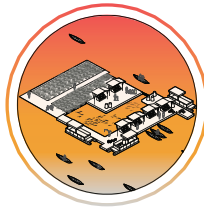
HOT SPOT



REPURPOSE & RECYCLE



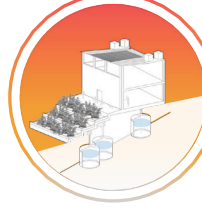
LOCALIZE ECONOMY



ECOLOGICAL REJUVENATION



REPURPOSE WATER



ROOF TYPOLOGY



WATER
COLLECTION



PROGRAM
VERSITILITY



PUBLIC SPACE



IDENTITY



SOLAR HARVESTING



SHADING DEVICE



FOOD & ENERGY

FILTERED TACTICS

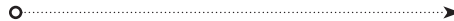
During the first stages of this investigation 9 tactics were designed in order to exemplify the capabilities, and duality of the tactic itself. These were synthesized into one tactic drawing out the most public programmatic applications. This decision was made in compass to the necessity of the three selected sites.

ROOF TYPOLOGY

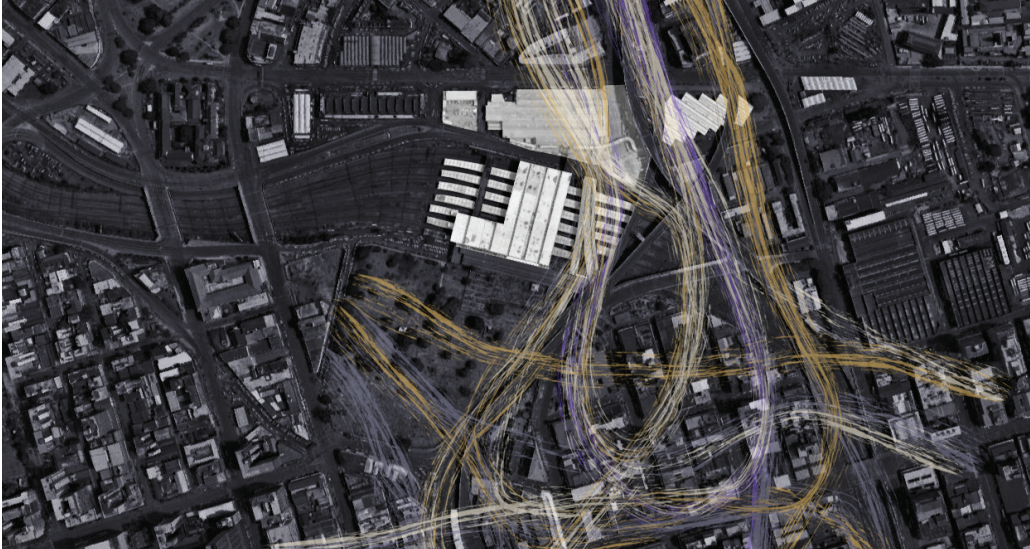
The selected defining factors for the tactic were refined and filtered through the lens of the roof architectural typology. The roof was selected due to its capability to provide shelter with minimum cost, claims a clear programmatic objective, and enhancement of local resources and natural phenomena such as rain, and sun.

PRECEDENCE

The next stage to the research portion was to provide substantial content, and data pertaining to successful modes of interventions that have been utilized within these urban fabrics. precedence, and case studies will provide a foundation to the method of organization, and design of the tactic within the three distinct territories.



Strategic Placement



Circulation Diagram - Flows around and through Warwick Junction

This market conversion is placed strategically within a busy junction that accommodates 460,000 commuters, and houses 5,000 traders. The blend between the informal, and formal reinforces the validity of this informal trade post as it creates solutions for more than cotidial commodity accusions.

Conceptual Foundation



In order to establish a consensus in the selection of precedence, and criteria tactics should abide by, three key elements that describe the implementation of architectural interventions by being more intune with other agents aside from the practice itself were chosen spatial judgement, mutual knowledge and critical awareness.

Spatial judgement refers to the ability to exercise spatial decisions such as spatial intelligence; an attribute that pertain not only to the architectural practice, but also a tool utilized by other fields.

Mutual knowledge addresses Giddens' term which indicates the willingness of spatial agents to both share their knowledge in an open manner while still maintaining mutual respect. This creates a space where the instinct of the amateur is accepted as having equal potential as the established method of the supposed expert.

Lastly critical awareness speaks to the awareness of the opportunities and challenges, freedoms and restrictions presented within a context. This criteria is also self inclusive as it asks the project or tactic to avoid imposing the same solutions onto different places.

“Asiye eTafuleni” (Bring it to the table - Zulu) -
Informal Trade post in Warwick Union
Durban, South Africa

Fluidity Of Program



Early morning Market - Duran

Asiye eTa Fuleni -- A non-governmental organisation that supports informal traders and others who use public spaces for work. Traders often are found at a disadncage due to poor undertanding of urban development, making it difficult to stand up for themselves and their informal bussiness.

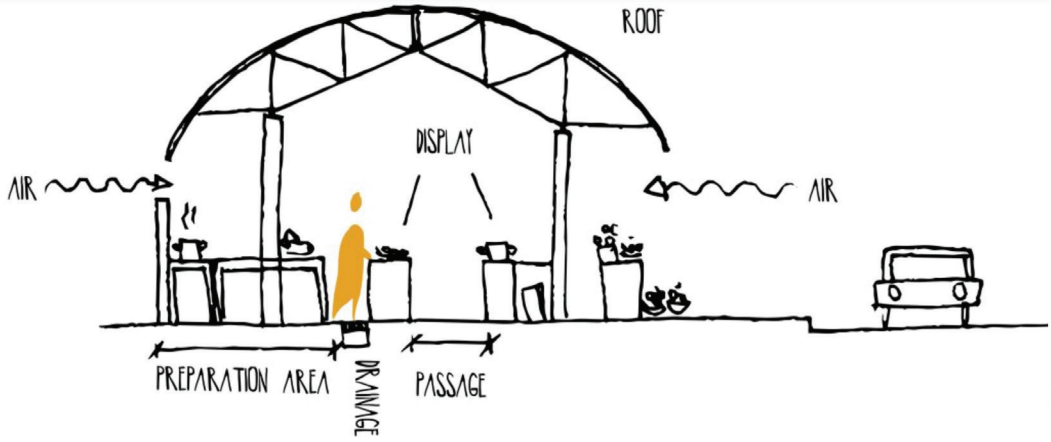
This center behaves as much more than market. Asiye eTafuleni contains learning hubs, trade, informal restaurants, barbers, spatial public centers, and recently has launch an inner city cardboard recycling project. This culturally rich hotspot has become as one of the cities tourist destination providing income for the local community, and changing its identity.

The goal for this project is to create a capacity within this informal sector to provide structure for this informal trade post, allowing this informal economy a foundation in which to claim an identity within the formal urban fabric. This project recognizes the right to conduct trade in a matter that suits long established traditions and values rather than the standards associated with the formal economy.

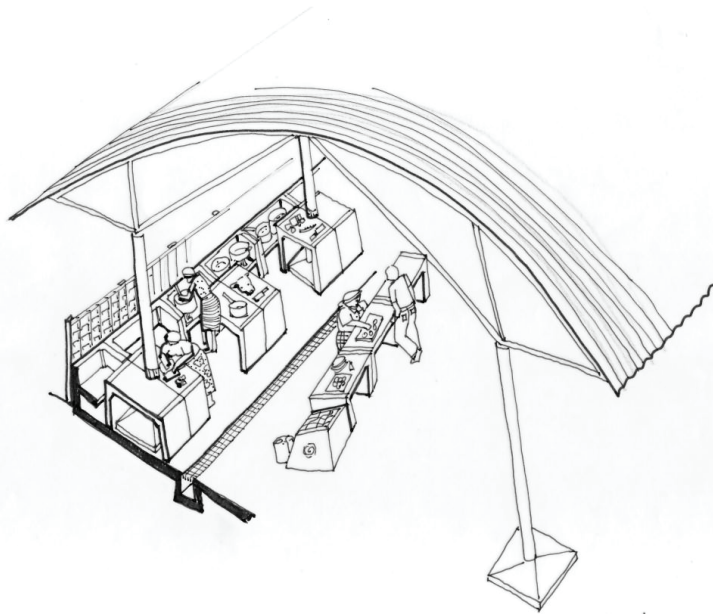


Asiye eTafuleni - Central Plaza

Acute Sustainable Practices

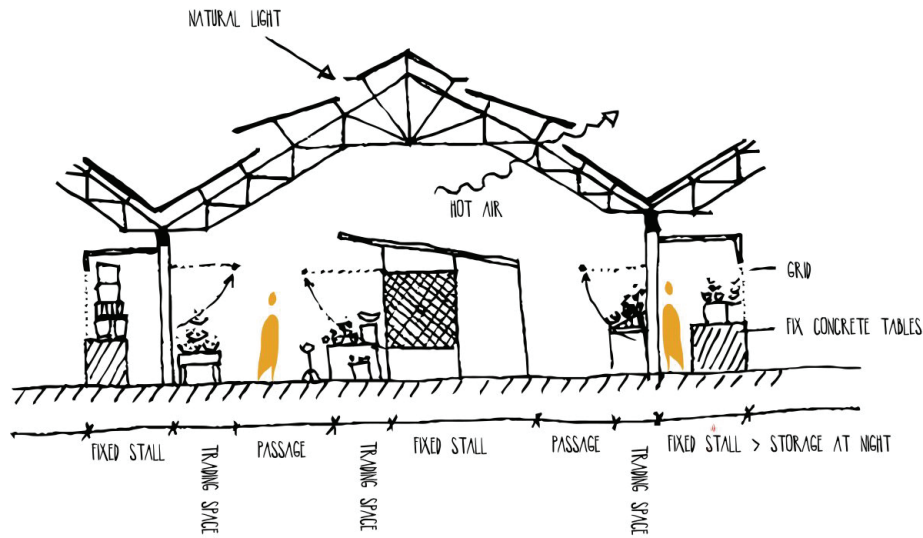


Bovine Head Market - organizational diagram | building functions



Bovine Head Market - perspective programmatic sketch

Participatory Approach



Early Morning Market - organizational diagram \ building functions

Applying bioclimatic and sustainable strategies improve the conditions of habitability within the space. Factors such as the orientation of the construction or solar gains advantages to improve the conditioning within the space. In this way the highly simple structure accommodating the kiosks and vendors within Warwick Junction maximizes the usage of natural light, air ventilation, visual connectivity, and the fluidity of circulation to create a highly functional yet simple in nature built environment.

This project reinforces the belief in principles of consultation + participation as when traders where sympathetically consulted as part of the development process taking place, they were able to improve the outcome for all concerns. This provided the trader with better knowledge of system, and understanding of alternative design methods.

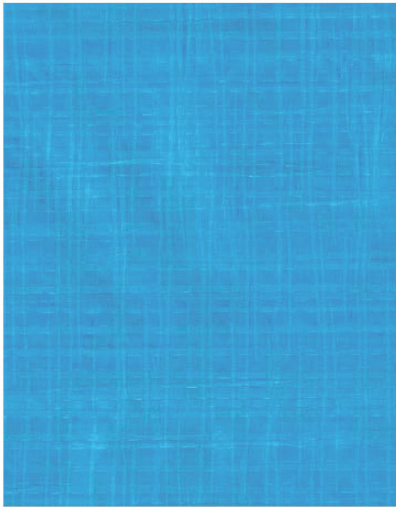


Informal Economy - Vendor

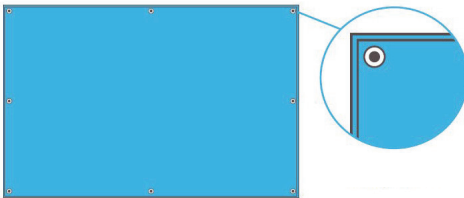


Construction Site II - Tsukuba-shi

Economically Concious



Texture - Model 3000



Plan View -1.8m x 2.7m sheet

A standard 1.8 * 1.8m tarp, the twotatami model 3000, costs ¥400, or around \$4. The 10m * 10m size (62-tatami) costs ¥10,400, roughly \$105. Blue tarps are available at any hardware store in Tokyo, and a great many general or variety stores as well.

Programatic Flexibility

The tarp or “tarpaulin” is dynamic in nature providing the user with multiple programmatic capabilities due to its generic informal characteristics. As a material, it is able to occupy the roll of enclosure as its both water resistant, and a poor heat conductor. functionally, it is able to delegate visually, and physically the division between public and private, what’s dirty, and clean, the permanent, and the ephemeral.

Nurri Kim Japanese photographer, and artist states her work best as she describe the tarp as “a scab that waterproofs, shades, it’s a wall, and it covers a roof”. This fabric is able to transcend scales, applications and is readily accessible for public usage. yet ultimately even as it demonstrates an inevitable urban pathology in which the material has become popular, it is by no means an acceptable presence.

This brings into question not just this synthetic fabric, but the usage of materials that are deemed brute, or unacceptable due to the negative bias they carry, materials typically found within informal settlements. What if the material becomes charged through design with new usages or programmatic representation from informal to informal applications.

This creates or in this case expands its vernacular property of implementation enabling a rebirth while still maintaining the attributes that makes it attractive; cheap, ephemeral, and dynamic



Picnic I - Taito-ku

Through the use of imagery, and data collection this project creates an encyclopedic summary of some of the ten thousand ways in which these tarps are deployed. They capture the major themes that identify wherever the sheets appear in the city: mobility, transient programing, inclosure expedience, and place of gathering.

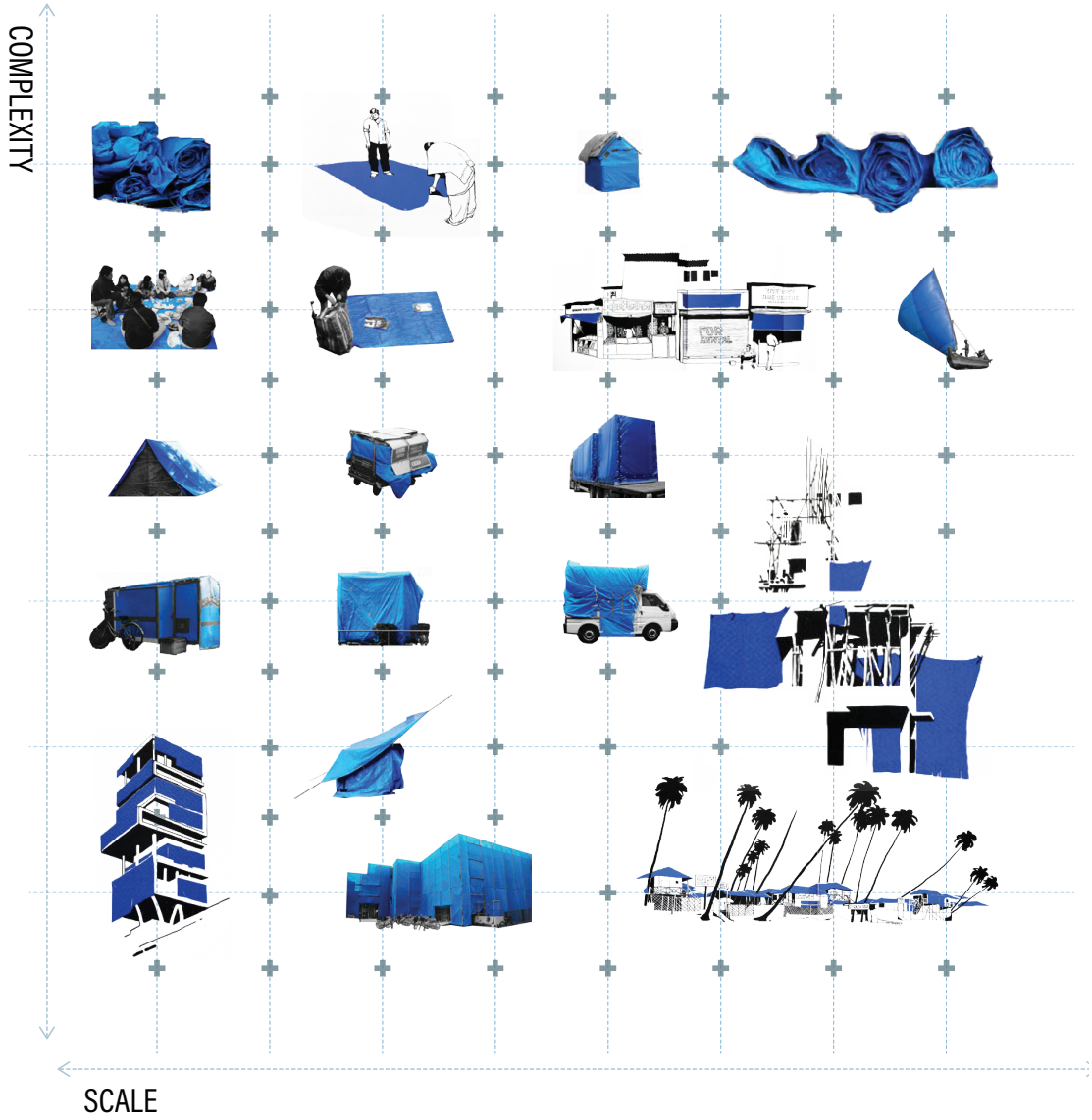


Temporary Shelter (Park) II - Shibuya-ku

In North America, blue tarpaulins have been used to repair and weather proof damaged houses -- permanent dwellings made temporary a problematique. The repackaging of this material outside of the conventional disaster relief practice allows it to take new forms, and programmatic solutions.

Metamorphic

MATERIAL MATRIX



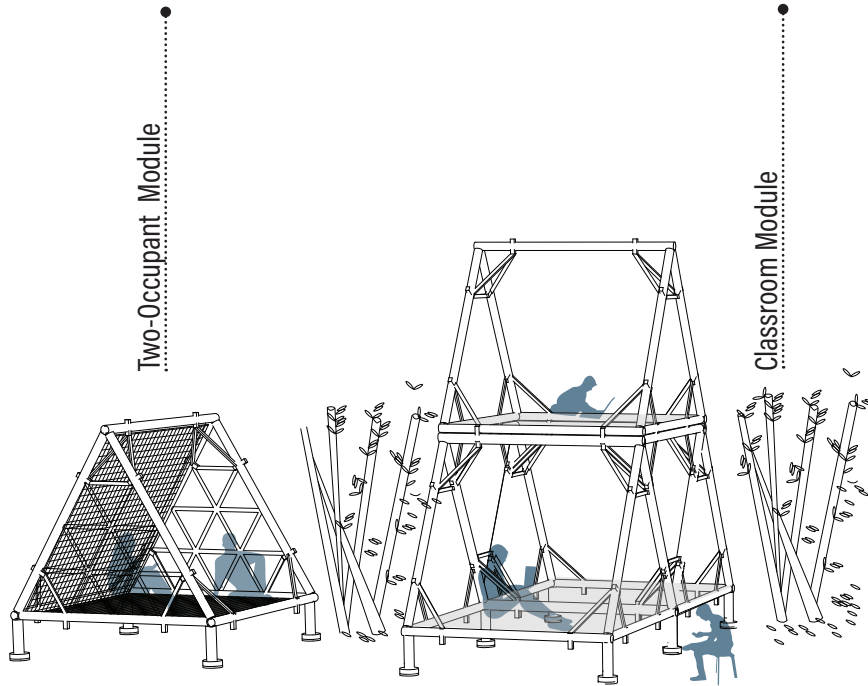
Texture - compacted
Texture - unfolded \ designated program
Temporary Shelter I - pet house
Texture - recycle
Picnic I - gathering
Informal Economy I - public vendor
Informal Economy II - informal formalized
Informal Economy III - sail
Temporary Shelter II - habitus
Temporary Shelter III - compacted
Informal Economy VI - Transportation
Temporary Shelter VI
Temporary Shelter V- playground
Informal Economy V
Formalized Informal I
Formalized Informal II
Temporary Shelter VI
Covered House
Structure
Community

This diagram aims to describe the numerous applications tarpaulin possesses, while simultaneously acknowledging its ability to shift scales, programs, and structure in an unbiased manner. It is also able to combine several iterations simultaneously creating new unique uses and permutations.

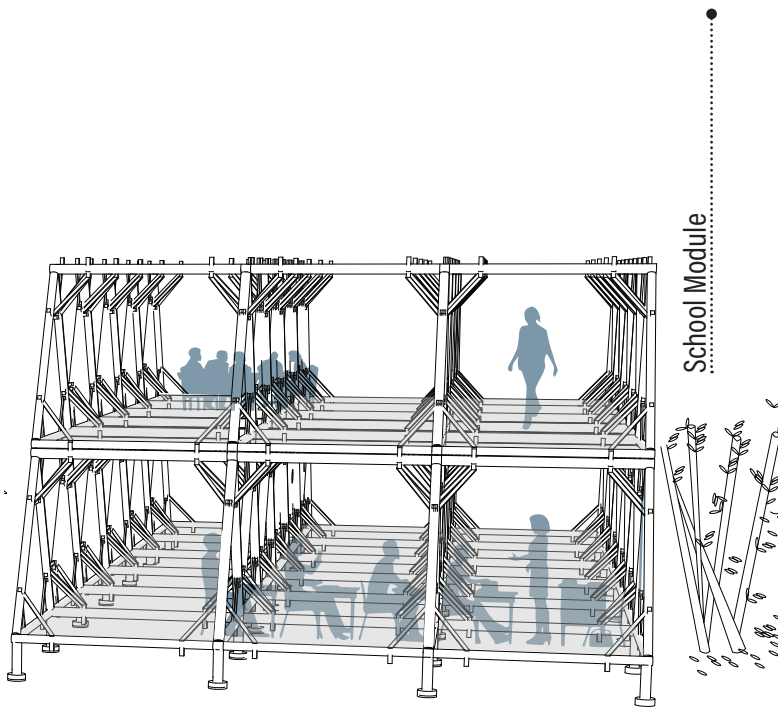
Tool Box Proposal



Storage- Shibuya-ku



Being able in an Ikea fashion to fabricate an specific intervention from a carefully curated set of materials could become a method of deployment for the tactics. the idea of the “*Toolbox*” would potentially possess the ability to shift scales, from serving a family to a whole community as the parts would be able to be assembled to create larger structures. These interventions would vary in programing as well diversifying the urban fabric, while still utilizing the local knowledge, and building typology.



Modular Growth - Diagram + Material List

- Bamboo or Guaua - used as the general structure*
- Caricillo Mat - commonly used as enclosure.*
- Steel Hardware - designed without prefabrication.*
- Dry Wall - asily accessible, and low cost.*
- Industrial Bolts, and Welded Joints*
- Plastic \ Cardboard - enclosing at joints.*
- Recycled Car Tires - sbelter foundation.*

Arquitectura de Transición - Pirua



Refugio - Pirua

A student based design-built from the department of architecture in Pirua University aimed to create a temporary shelter prototype of low cost, resilient, rapid assembly, and utilizes materials belonging to the the region of Pirua.

The problematique focused on a constant unreselve issue in the infrastructure sector due to the prefabricated system of construction without proper design and planning. This issues prevails due to the lack of resources, knowledge, and low quality housing from the government, or privately own organizations. Pirua sits on a highly seismic zone that causes distabalizing of the region due to the lack of shelter, and resources after the earthquake.

This calls for a drastic developing of a prototype that challenges the fundamental status of housing design in the region that both aims to solve the post-disaster housing needs, and begins to develop a new architectural typology that uses the new structure system with multiple application. This project was design with consideration with the limitations that the community, and families within the desert in Pirua have, thus aiming to facilitate design of low cost, materials locally sourced, andn self intuitive assembly.

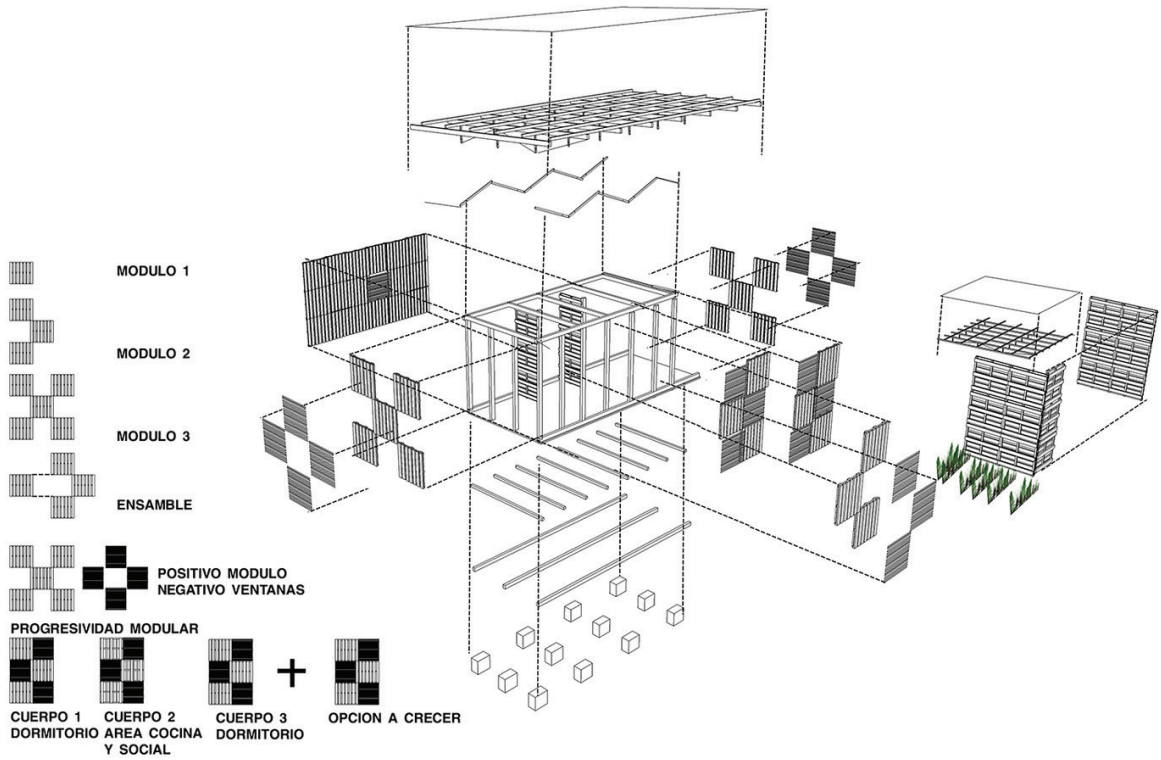
Chacras Project



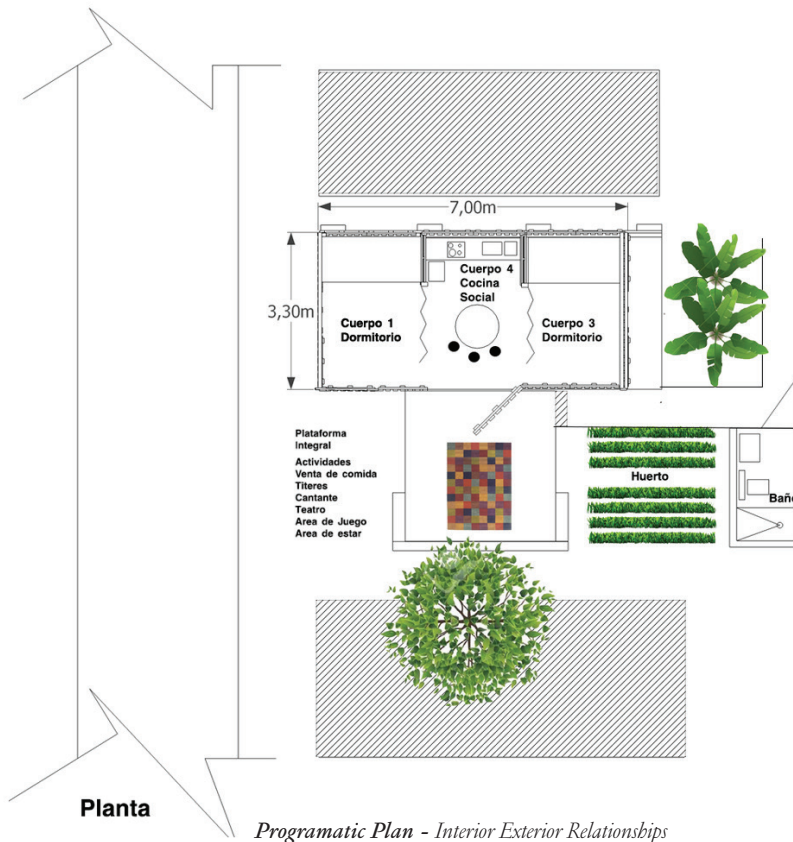
Refugio - Pirua

built in May 2016 during a period of 10 days. Natura Futura Arquitectura along with Cronopios-El Oro (a cultural management collective) proposed an emerging design called out through multiple types of medium seeking out for donated materials, and man power from the community. The building consist of a concrete andn brick foundations an articulated as module facade made from pallets, built with pine wood, usually used to load goods in large warehouses. Sticks and strips are used as structural support. The windows were built with semi-hard wood and recycled waste strips. In the end, zinc plates are used to make the roof.

The design team propose strategies to shore up the family economy, affected by the work stoppage and change of site. Creating a family garden was a first idea to generate a new spirit of livelihood. We included Don Velfor in a process of learning by doing so he can replicate what he learned in basic construction, in order to establish an economic activity within the region. event spaces were proposed to generate revenue, such as selling snacks or lunches.



Modular Axonometric Assembly Drawing - Chacras House



The access platform is a space for social interaction between family members, and with the families of adjacent houses. It serves both to set a table with chairs and lunch, or to lay a carpet or mat and rest. The opening day a cultural event was made: a puppet show with the group Rompecabezas.

Post Earthquake Reconstruction



Refugio - Pirua

After the Ludian earthquake in 2014, most of the local rammed-earth buildings in Guangming Village were destroyed. Villagers chose to build brick–concrete houses during the reconstruction period. However, the price of building materials rapidly increased and became unaffordable for most local villagers.

This project innovates the traditional rammed-earth building technology to provide villagers a safe, economical, comfortable, and sustainable reconstruction strategy that the villagers can afford, own, and pass on to each other, transmitting knowledge.

A prototype house has been built for an aged couple to validate the technology and building performance of the innovative rammed-earth building system.

To improve the seismic performance, the components of the wall are well adjusted using clay, sand, grass, etc. Steel bars and concrete belts are added to the wall to improve structural integrity and to avoid vertical cracking. The concrete belts are hidden in the wall so that the earth facade could be integrated. The quality of the building materials, rammed tools and formwork are increased.

SITE(S)_

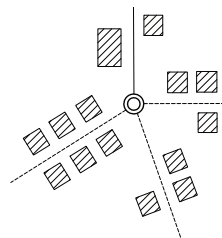
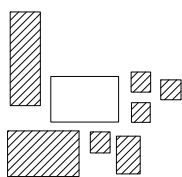
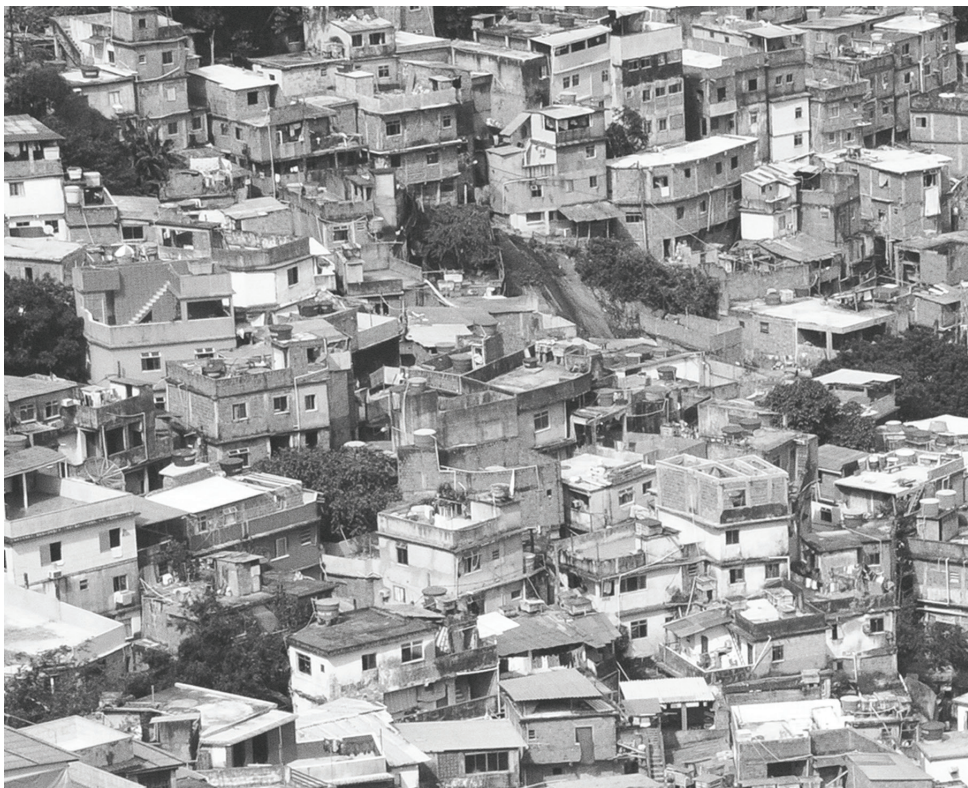
The sites selected to test, and present the efficiency of the tactic are: Rocinha, Makoko, and Rivera del Ozama. These neighborhoods possess recurring similarities and *problematiques* while still contributing distinct characteristics that challenge and shape the idea of the tactic. From drastic topography changes, to establishing a community over a lagoon, the site offers unique extreme conditions that create space for the tactic design to grow and expand.

These spaces also contain site specific architectural typologies, based on external factors and systems that ultimately shape the site composition.

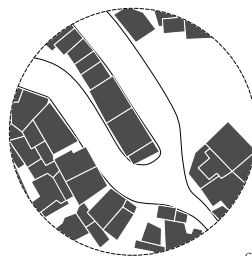
ROSINHA, BRAZIL

22° 59' 18.78" S

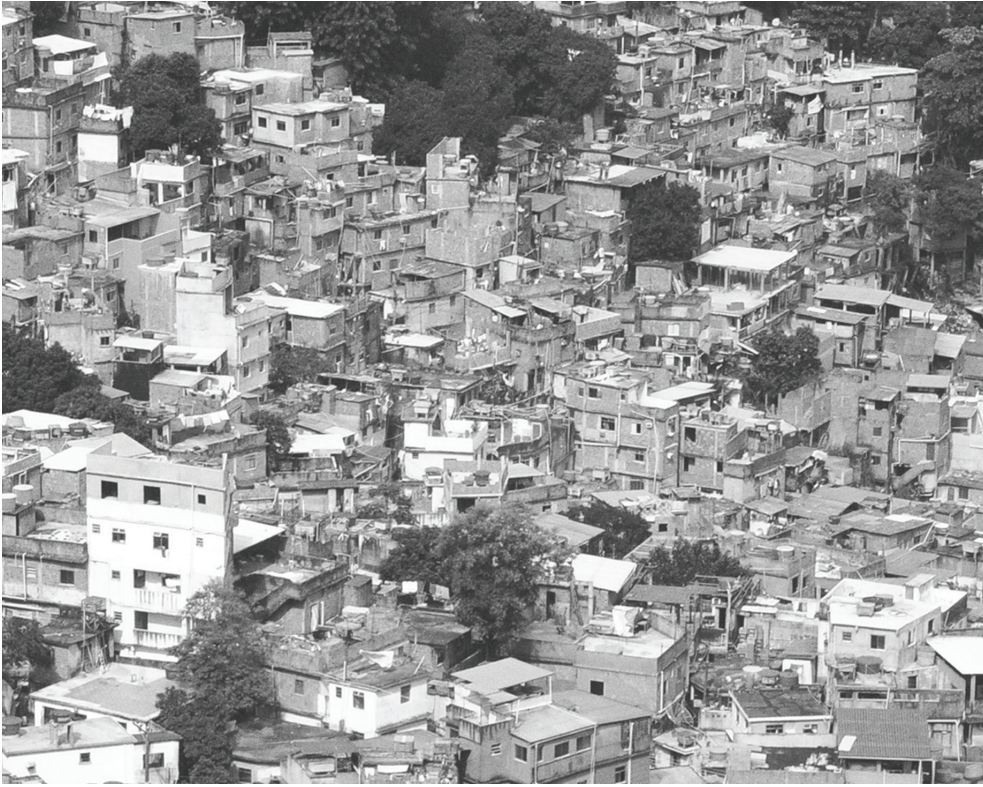
43° 14' 42.11" W



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c(2) +

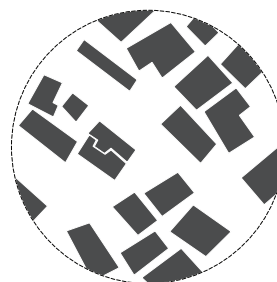
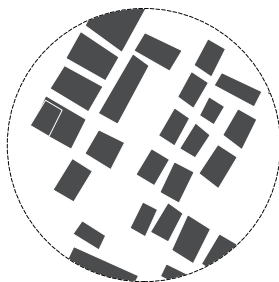
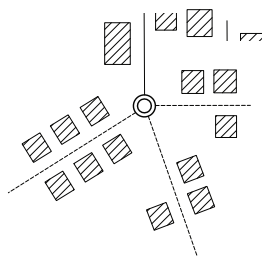
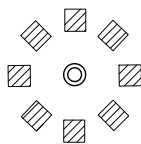


Geographic Area	1.46 km ²
High Density	47,504 Habitants/km ²
Generic urban fabric	
>a(1)	Clustered
>a(2)	Radial
Building Typology	Multi-story structure
Materiality	Mason Brick, concrete pillars floor beams/slab corrugated iron
Typical Dimensions	25'x30'

MAKOKO, NIGERIA

6° 29' 45.85"N

3° 23' 34.39"E



b(1) ©

b(2) +



Geographic Area

0.72 km²

High Density

712 Habitants/km²

Generic urban fabric

>a(1)

Central

>a(2)

Radial

Building Typology

Zinc hut on stilts

Materiality

bamboo, lumber, plank
laminated timber, and
corrugated aluminum

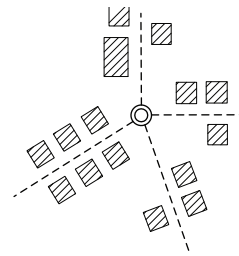
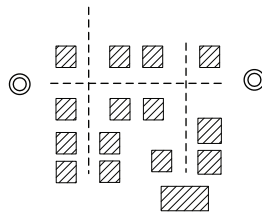
Typical Dimensions

20'x25'

OSAMA, DOM. REP

18° 30' 39.28"N

69° 53' 0.31"W



a(1) ©

a(2) +



Geographic Area

1.30km²

High Density

34,513 Habitants/km²

Generic urban fabric

>a(1)

Axial

>a(2)

Radial

Building Typology

Zinc Hut

Materiality

Cinder block, scrap wood
laminated wood, zinc, and
concrete

Typical Dimensions

25'x30'

PROGRAM_

This programmatic ensemble serves as the foundation for the tactic applied to the three selected sites. The program arrangement, quantity, and scale of the program is subject to variation depending on the site the tactic is operating in. This opens up the tactic to opportunities, challenges and site specific forces.

This tactic aims to supplement the community as is today providing services that current housing, civic buildings, and overall systems do not possess.

Private Program

Classroom 1 x2 - 127 sqft

Classroom 2 x2 - 96 sqft

> Student per room - 20 - 25

> Total number of students + faculty - 90 - 100

Semi-Public Programs

Maker Space - 150 sqft

Water management - 140 sqft

> rain collector fill 16 barrels as water storage

3,200 Litres of water.

- agriculture

- gray water

- drinking water

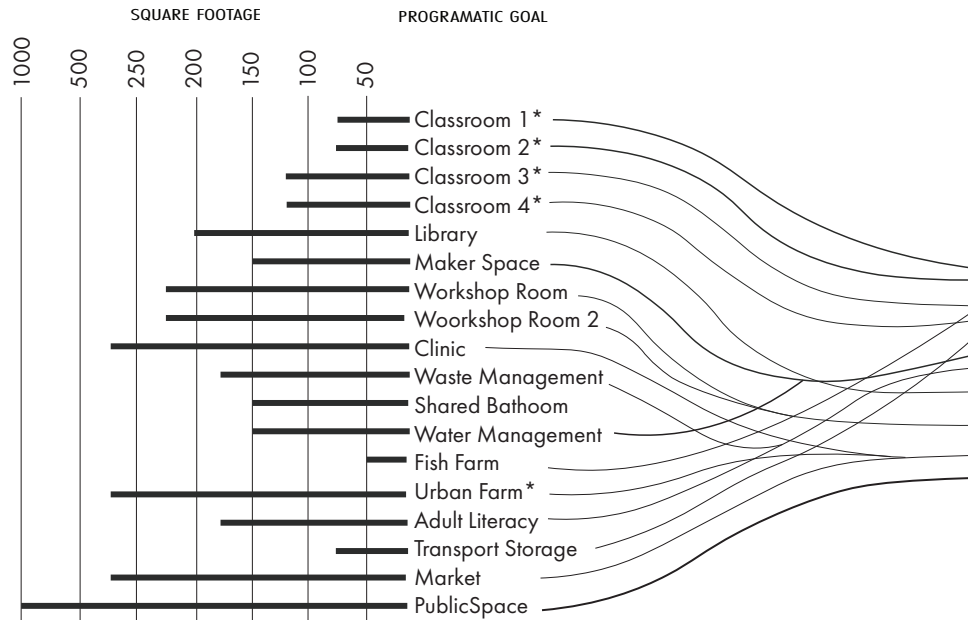
waste management - 166 sqft

> 6 tanks - 5000 Litre tanks creating a system of distillation of natural gas, and soil that can be used for energy, cooking, and farming.

Aquaponics - 40 sqft

> stations are 12 sqft each

demand 275 Gallons tank and will grow approximately 55 edible fish annually each.



Public Programs

Library - 200 sqft

- > Library aims to serve not just the educational institution, but also community sharing spaces with programs such as the workshop and adult literacy in order to create a hands on inclusive philosophy of learning.

Common Workshop x2 - 240 sqft

- > space allocated for the creation and gathering of resources, and industrial economy.

Clinic - 400 sqft

- > Allocated space for NGO, Governmental aid and voluntary resources to serve as a health and sanitation station.

Urban Farm - 400 sqft - raised bed / hanging farming

- > X5 produces 300 pounds of Vegetables and fruits. fueled by shared waste disposal, water management.

Market- 400-1000 sqft

- > space allocated for the sell and trade of goods grown, or made within the community and outside the imports.

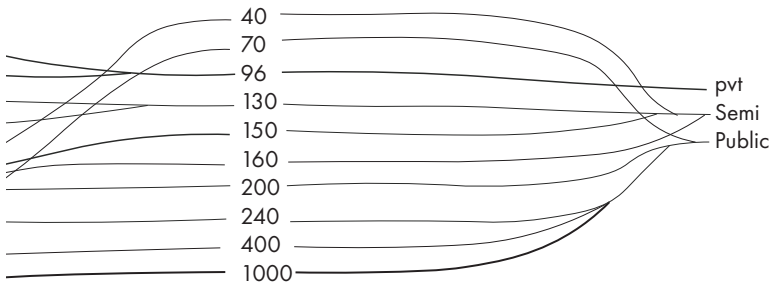
Public Programs

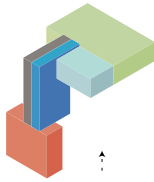
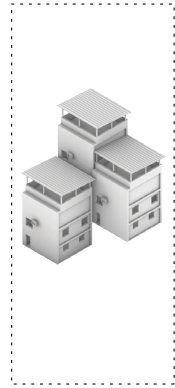
Common Space - 1076 sqft

- > houses many of the previously listed program systems along with community initiated proposal, meeting, and cultural celebrations.

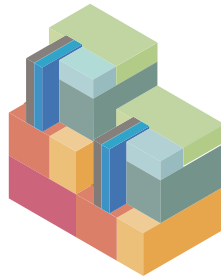
SF

TPOLOGY

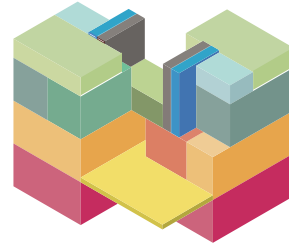




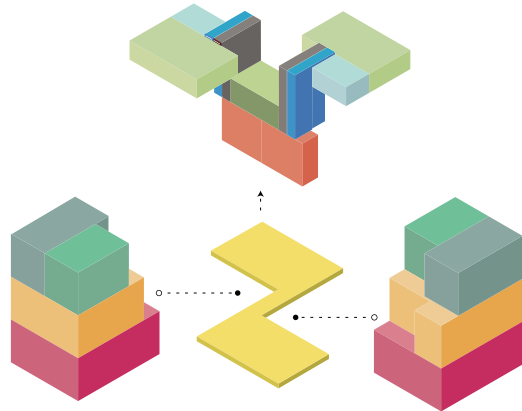
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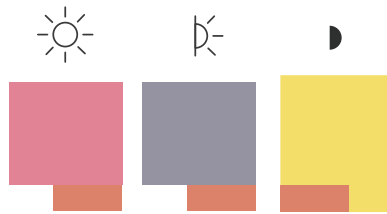
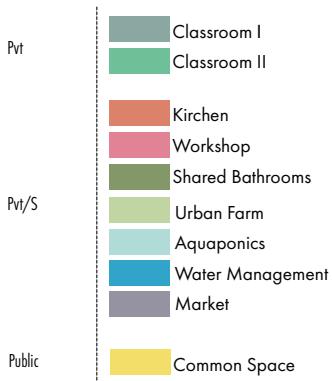
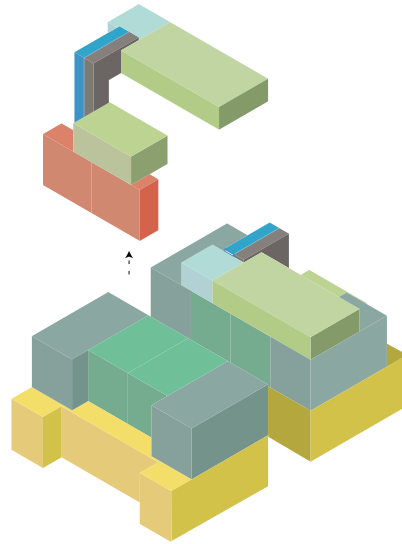
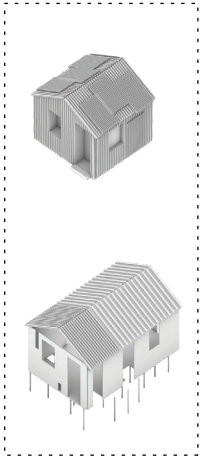
+



Pvt		Classroom I
		Classroom II
		Kirchen
		Workshop
Pvt/S		Shared Bathrooms
		Urban Farm
		Aquaponics
		Water Management
		Market
Public		Common Space



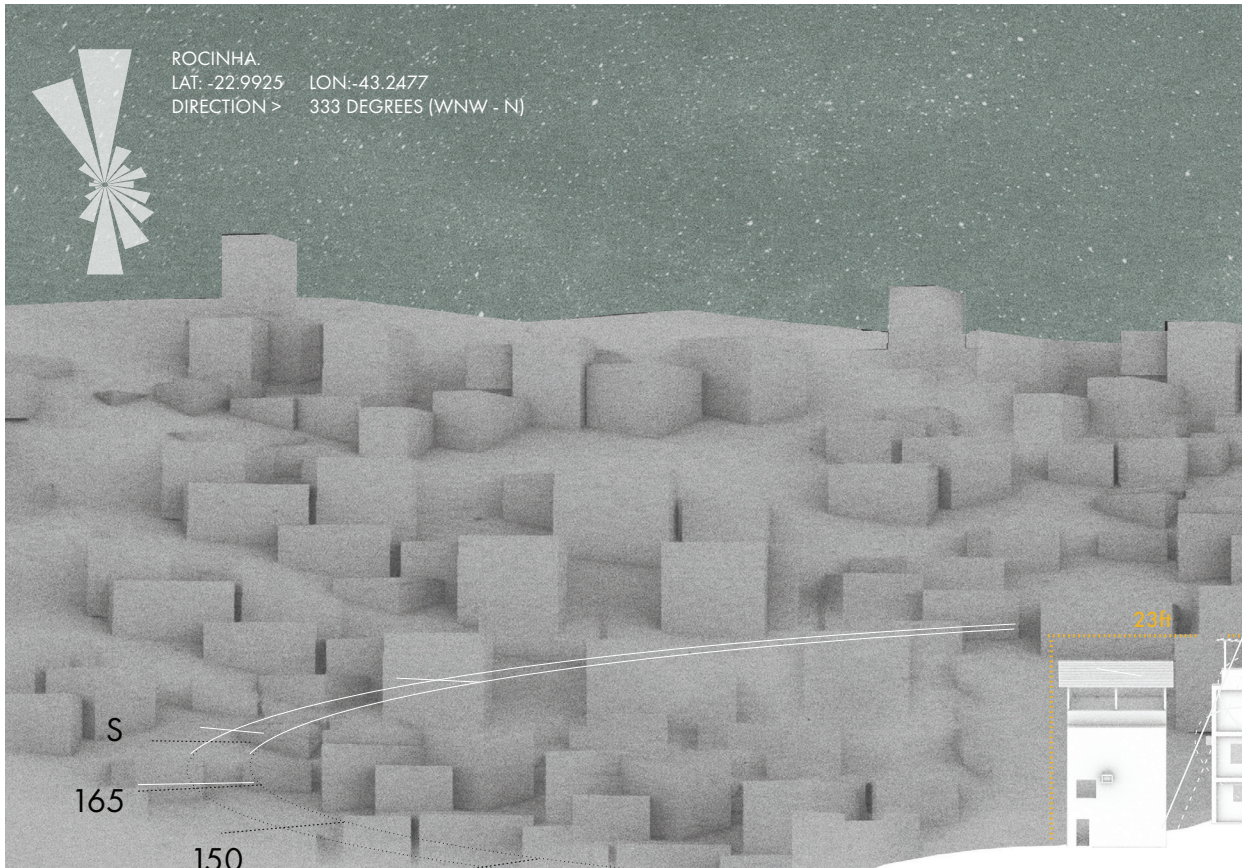
Programmatic Diagram - programmatic relationship and organization for Rocinba



Programmatic Diagram - programmatic relationship and organization for Makoko and Rep. Dom.

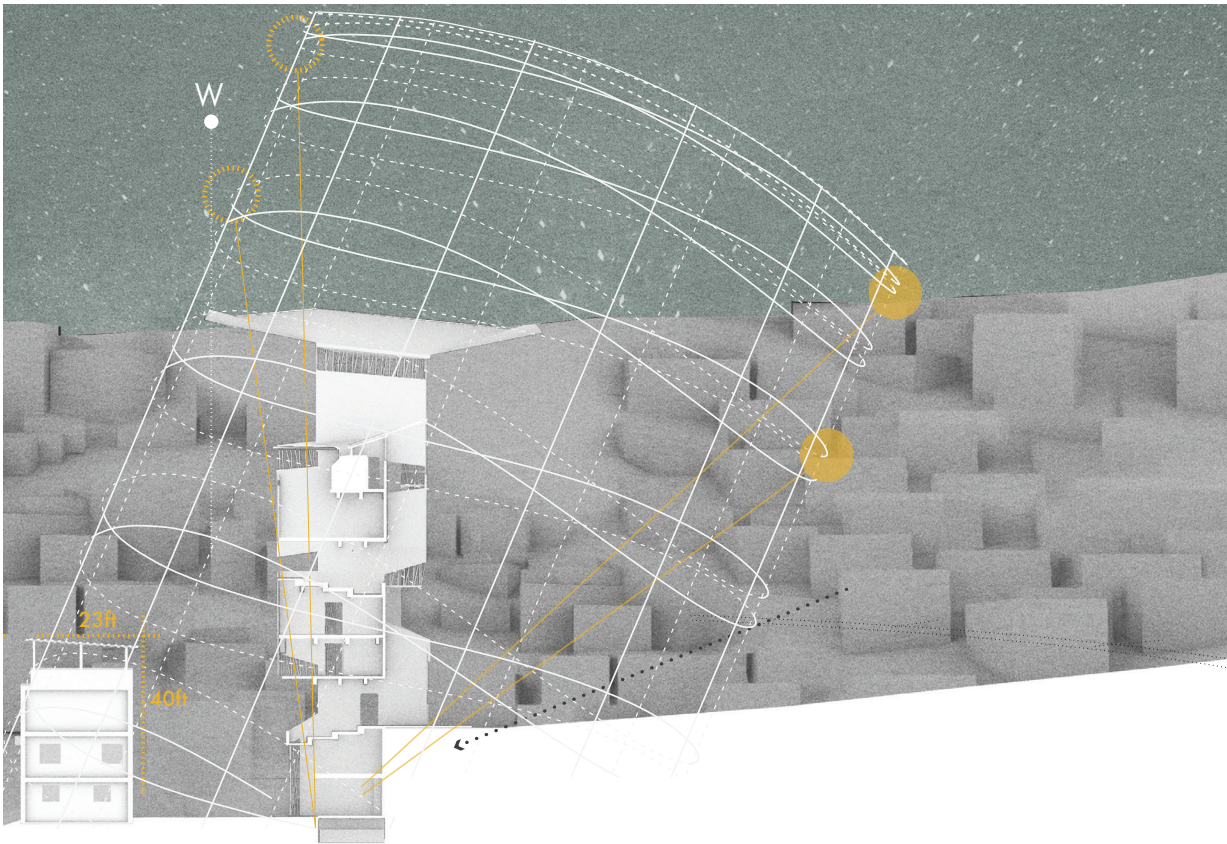
HELIOMORPHISM_

Utilizing water, wind, sun, and as foundation architecture typology as design factors the final design proposition attempts to utilize what was once a stagnant resource within the site, as a crucial opportunity for both the practice and the community. Shaping the structure utilizing the movement of the sun, and atmospheric events that exist within the site the tactic succeed both in program and functional application.



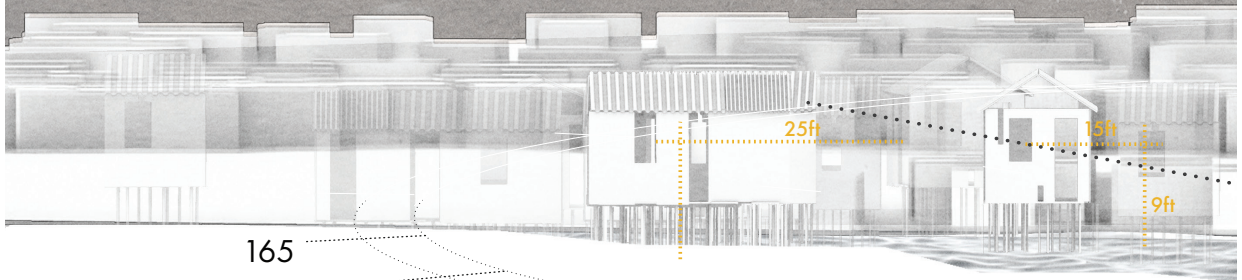
ROCINHA_

The approach utilized for Rocinha strongly depended on the unspoken zoning techniques used by the occupants. From the vertically extended form, to the material selection. The use of solar/water collection led to the shearing and implementation of a membrane that provided both a water reservoir, and shading device. The building also adapted a flexible facade system that perforated the building that aided in natural ventilation.



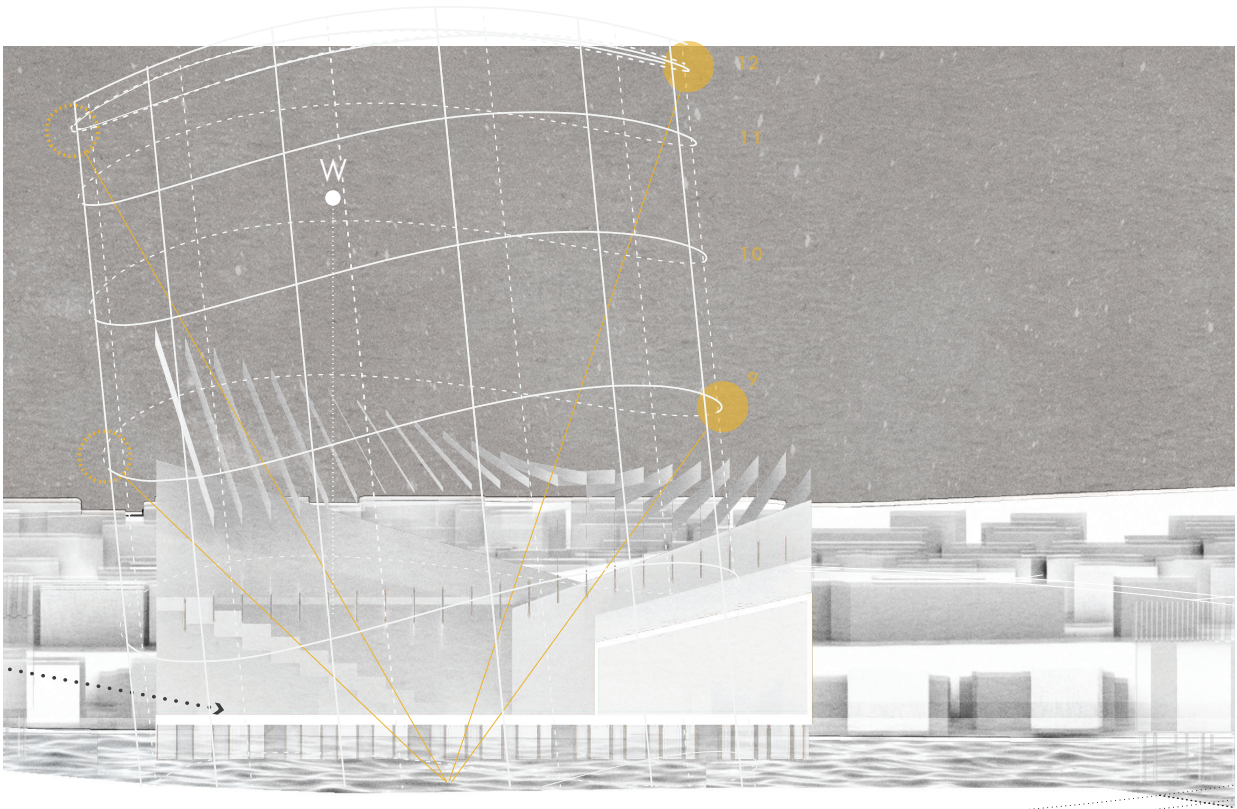


MAKOKO
LAT: 6.944 LON:3.3920
DIRECTION > 237 DEGREES WSW



MAKOKO_

The tactic application in Makoko aimed to create a place a both commerce and leasure while still providing protection from the strong solar radiation from both North and South. the intervention uses 3 masses or chaimbers that create interior spaces for both NGO programing, or trade post while still providing a public gathering place, and shading device through the use of fabrics.



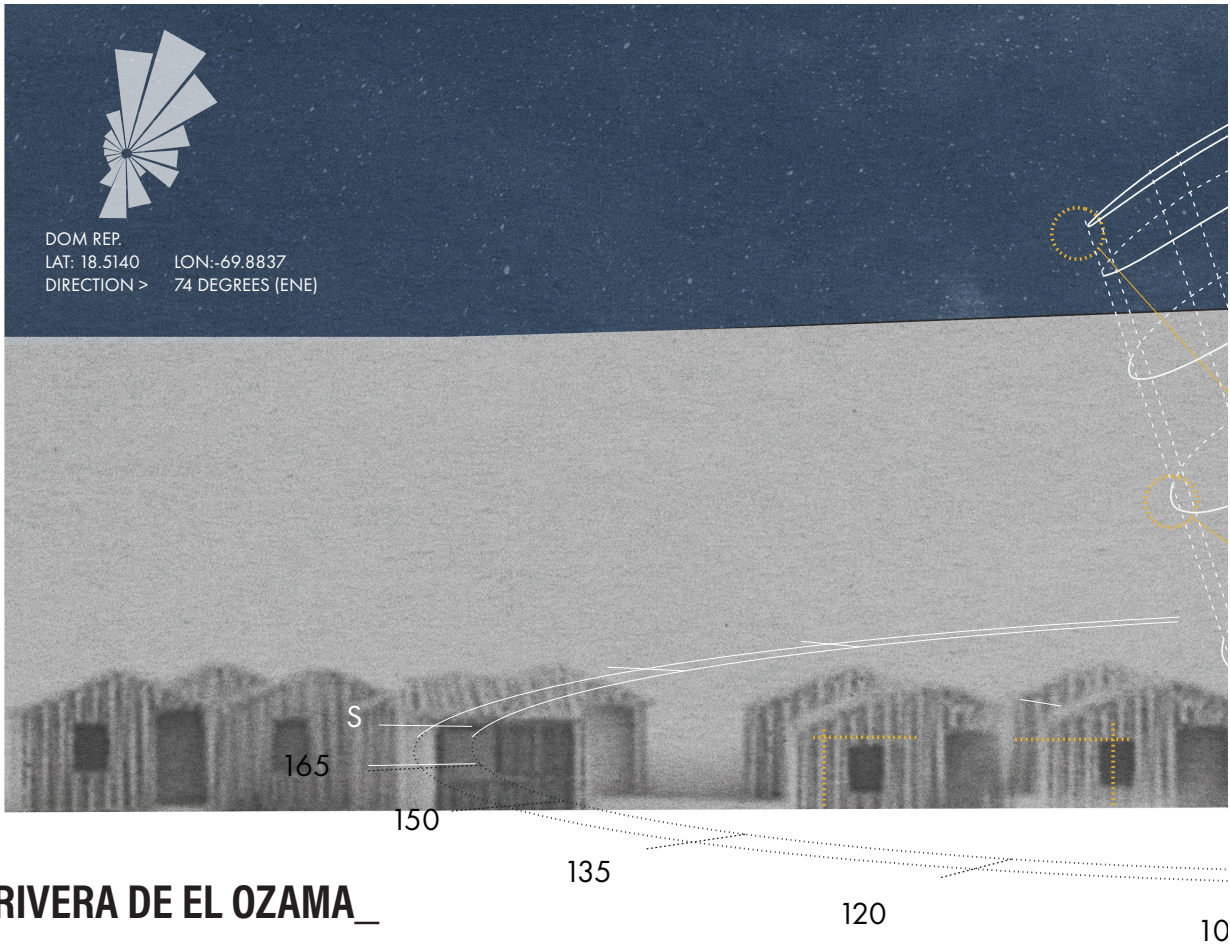
105

E

75

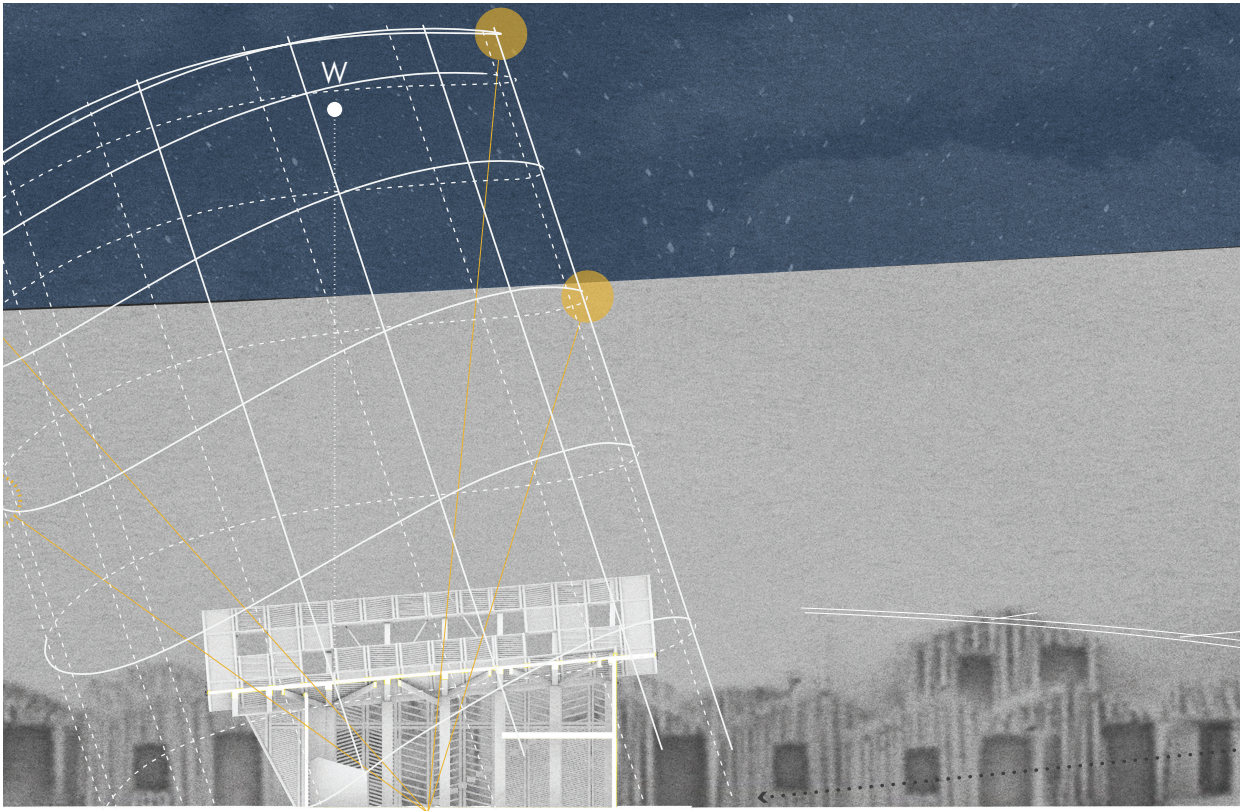


DOM REP.
LAT: 18.5140 LON:-69.8837
DIRECTION > 74 DEGREES (ENE)



RIVERA DE EL OZAMA_

This programatic ensemble begins to simply but elegantly claim program through the use of the roof. The roof/ intervention is made with replasable modular bamboo system that can alter the program occuring underneath. Whether the nesesity is a communal farm, or a space for a satelite school the roof is able to change depending on the need and volume of needed activity.



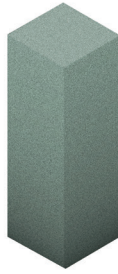
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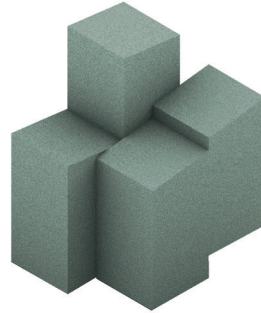


ARCHITECTURAL TYPOLOGY



CLIMMATIC FORM : SLENDER

&

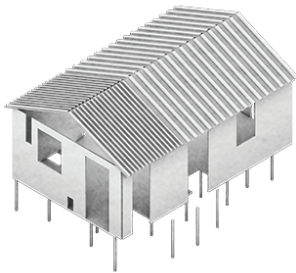


SPATIAL CONFIGURATION : STAGERED

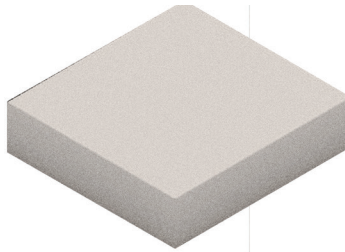
&



SOLAR

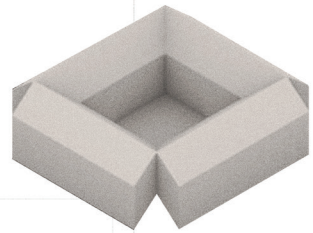


ARCHITECTURAL TYPOLOGY



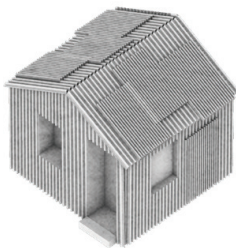
CLIMMATIC FORM : HORIZONTAL

&

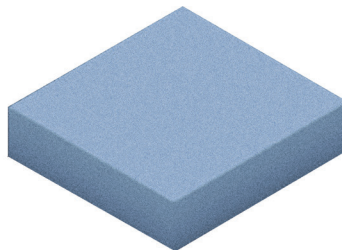


SPATIAL CONFIGURATION : COMMON SPACE

&

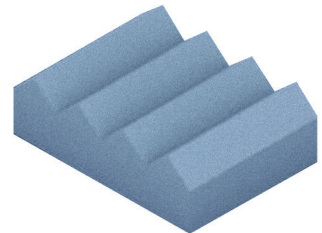


ARCHITECTURAL TYPOLOGY



CLIMMATIC FORM : HORIZONTAL

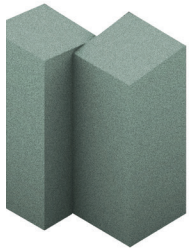
&



SPATIAL CONFIGURATION : CONTINUOUS

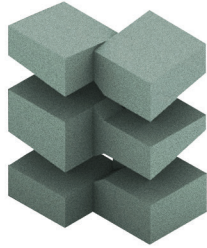
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MATERIAL



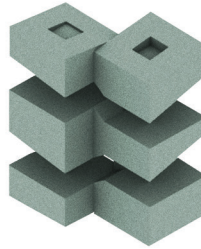
SOLAR RADIATION : SLOPE

&

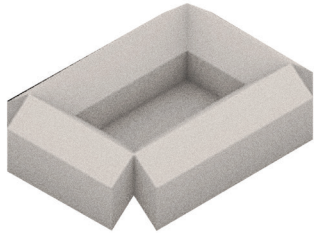
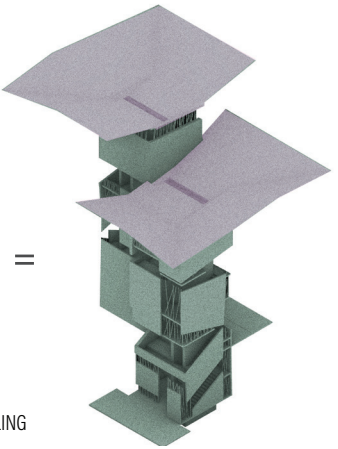


WIND VENTILATION : ENTRY | COMMON SPACE

&

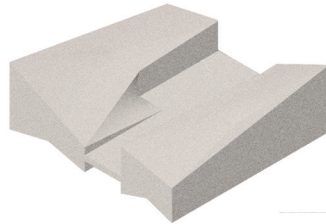


ROOF ADAPTATION : WATER COLLECTION | COOLING



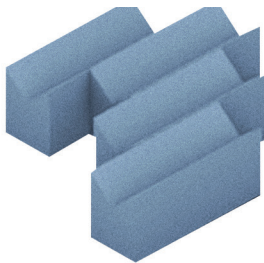
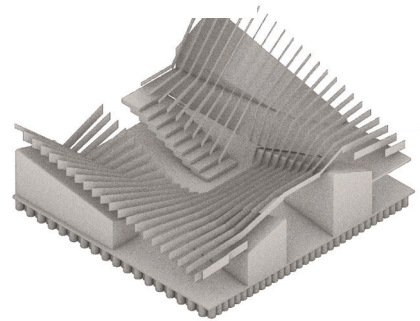
SOLAR RADIATION : EXTENSION

&



ROOF ADAPTATION : SHADING DEVICE | COMMON SPACE

=



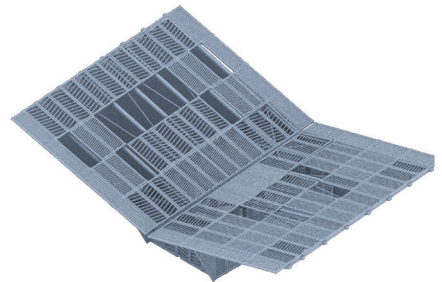
MATERIAL EVOLUTION : WATER COLLECTION | COOLING

&



ROOF ADAPTATION : SLOPE | SHADING DEVICE

=

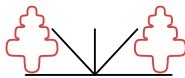


WORK | SOCIAL RELATIONS

MICRO - COMMUNITY



Eyes on the street due to the increase in day/night programming.



Vertical/Horizontal introduction of public space.

Water collection, and treatment for both gray water and irrigation.



Between the two towers 24k can be harvested.



Over crowded pop. Lacking public space.



Gang influence within favela is strong.

Lack of water treatment and management.

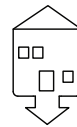


"brain drain" and lack of job investment.

currently only two schools.



health issues/ access to healthy food.

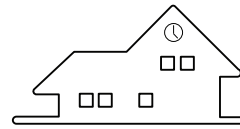


only local clinic is a church. poor ventilat over crowded narrow promote: tuberculosis

MESO - ROSINHA

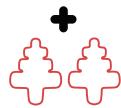


Job opportunities in the botanical, en civic positions increase, bringing aid, a income communities.



Schools, and safe providing hands creating educati

2,393 sq ft would be allocat food market and trade.



Allocate Govern voluntar health a

POST-
PRE -

energy production, and
aid, and wealth to low

1 satellite schools increase
inds own classrooms spaces
icational favela network.

llocated toward
e.



icated space for NGO,
ernmental aid and
ntary resources to serve as a
lth and sanitation station.

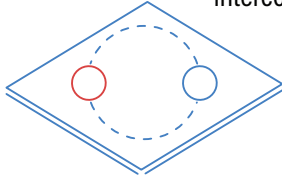


od.

is a local
ntilation,
arrow streets
ulosis.

MACRO - RIO DE JANEIRO

Serve as an example to other favelas and create
interconnectivity between city neighborhood.



Increase in tourism adding to
neighborhood income.



guided tours begin to be
implemented.

Isolated intervention.

MICRO - COMMUNITY



both agricultural, and aquaponics jobs implemented.



Water collection, and treatment for both gray water and irrigation.

Efficient letrines
NG Energy harvest.



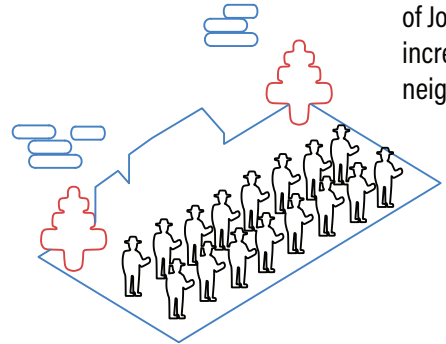
issues of black water
no access to basic sanitation. Drinkable water reached via pipe paid by resident.



Fish industry is dead, imported from mainland sources of food.

MESO - MAKOKO

Multileveled of Jobs/Utiliti increasing in neighborho

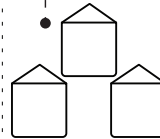


Communal Space allocating commerce, education, basic utilities, and leasure.

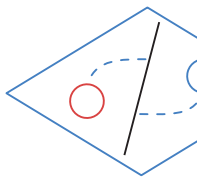


Space organized trade and sale networks of artes goods.

disconnected networks thro
● city boroughs

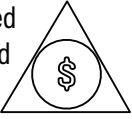


Isolated poorly maintained home infrastructure.



"brain dra and lack o investmer

releved networks
Utilities created
ing income and
orhood value.



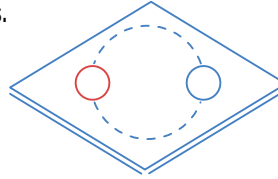
MACRO - LAGOS

Increase in tourism
"Venice of Africa"



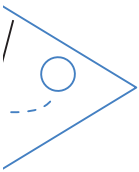
flotation device
infrastructure
adapts to change
in sealevel.

Serve as an example
to other neighborhoods
and slums.



rtisanal

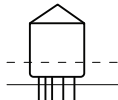
icted service
s throughout
ughs.



1 drain"
ack of job
tment.



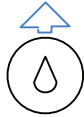
guided tours
begin to be
implemented.



Homes are
fixed on stilts
making them
suseptable to flooding.

Issolated intervention.

MICRO - COMMUNITY



Water collection, and treatment for both gray water and irrigation.

This tactic can store 1.6k gallons of rain water.

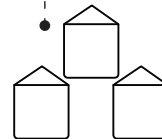
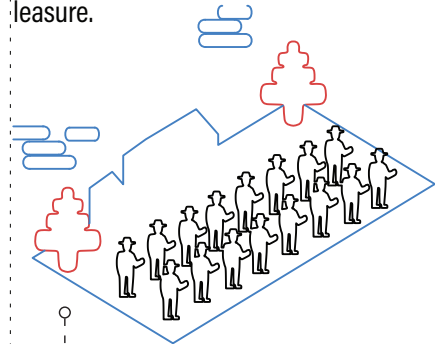


Stagnant water promotes virus such as the dengue and untreated water transmit preventable illnesses.

MESO - RIVERA DE EL OZAMA

Communal Space allocating commerce, education, basic utilities, and leisure.

Tactic creates m of spaces offerin acomodations fo members.

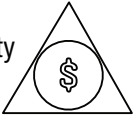


poorly maintained home infrastructure.

Lack of resou hinders intref possibilities.

A

as multiplicity
ffering different
ns for community

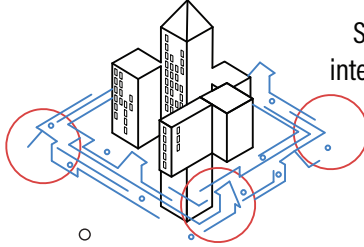


esources
ntrepenurial
ies.



MACRO - SANTO DOMINGO

System of strategically placed
interventions in an ever growing
urbanenvironment.



New Material economy
presedence.



Congregational Community
Hub.



Isolated intervention.

poor performance
material.

VISUALIZATION_

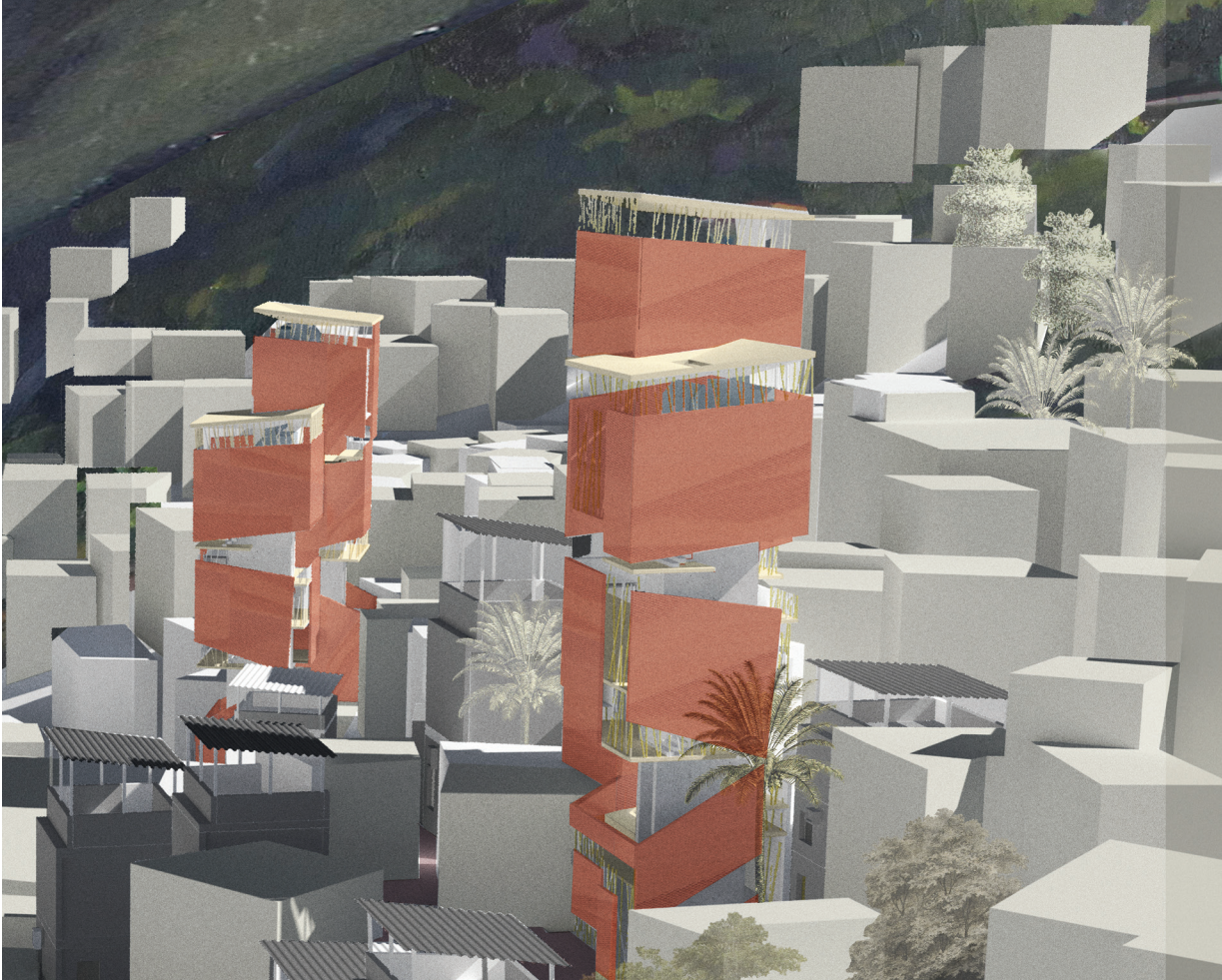
The aesthetic utilize to visualize the tactics applied within the research is meant to reflect the way historically the third world has been depicted; exotic, untainted. The interventions are being portraid in both section, and perspective highlighting their spatial attributes with their context.

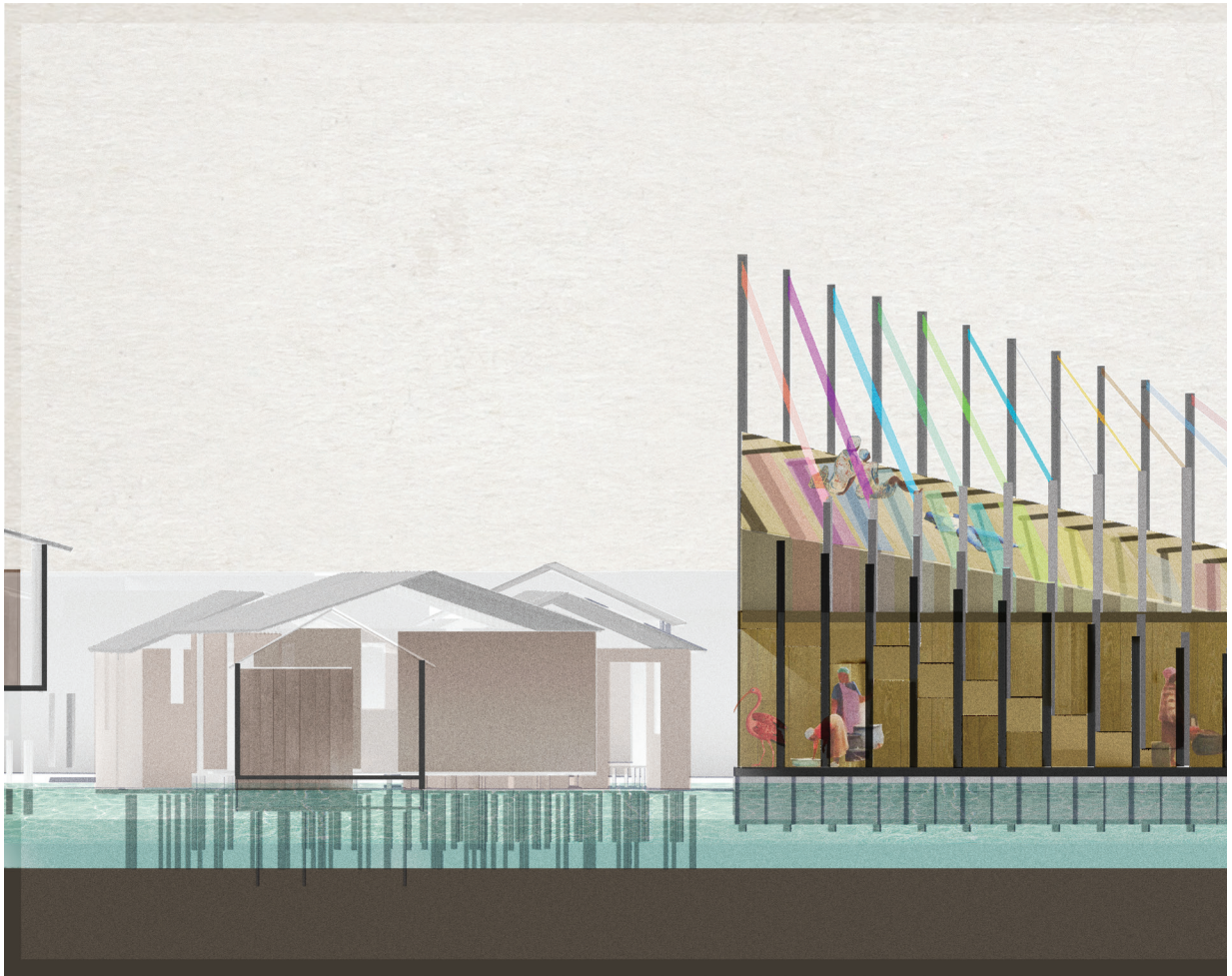


Section Rendering - Spatial/ground relationship within Rocinba Intervention.



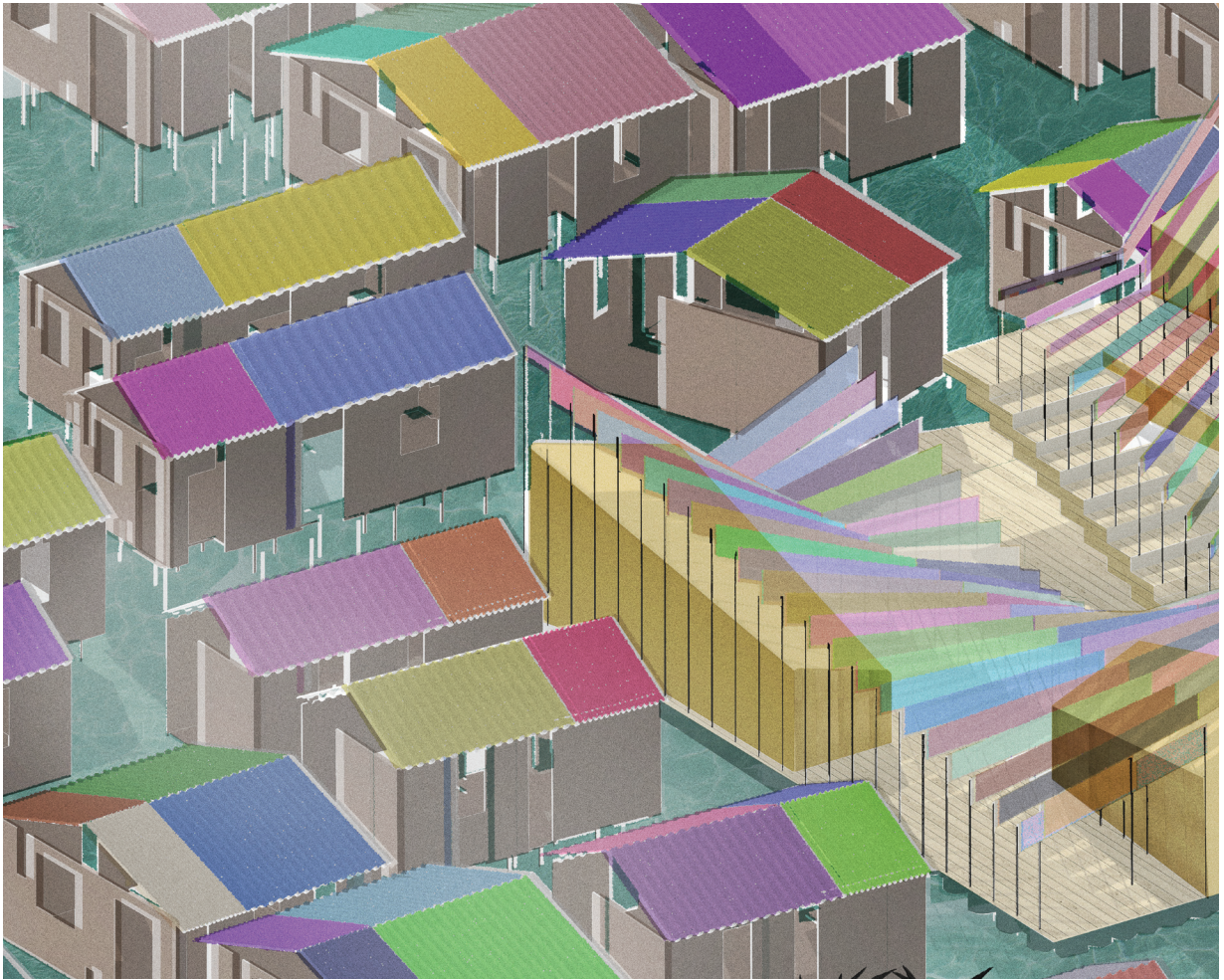
Perspective Rendering - Intervention aggregation within favela.



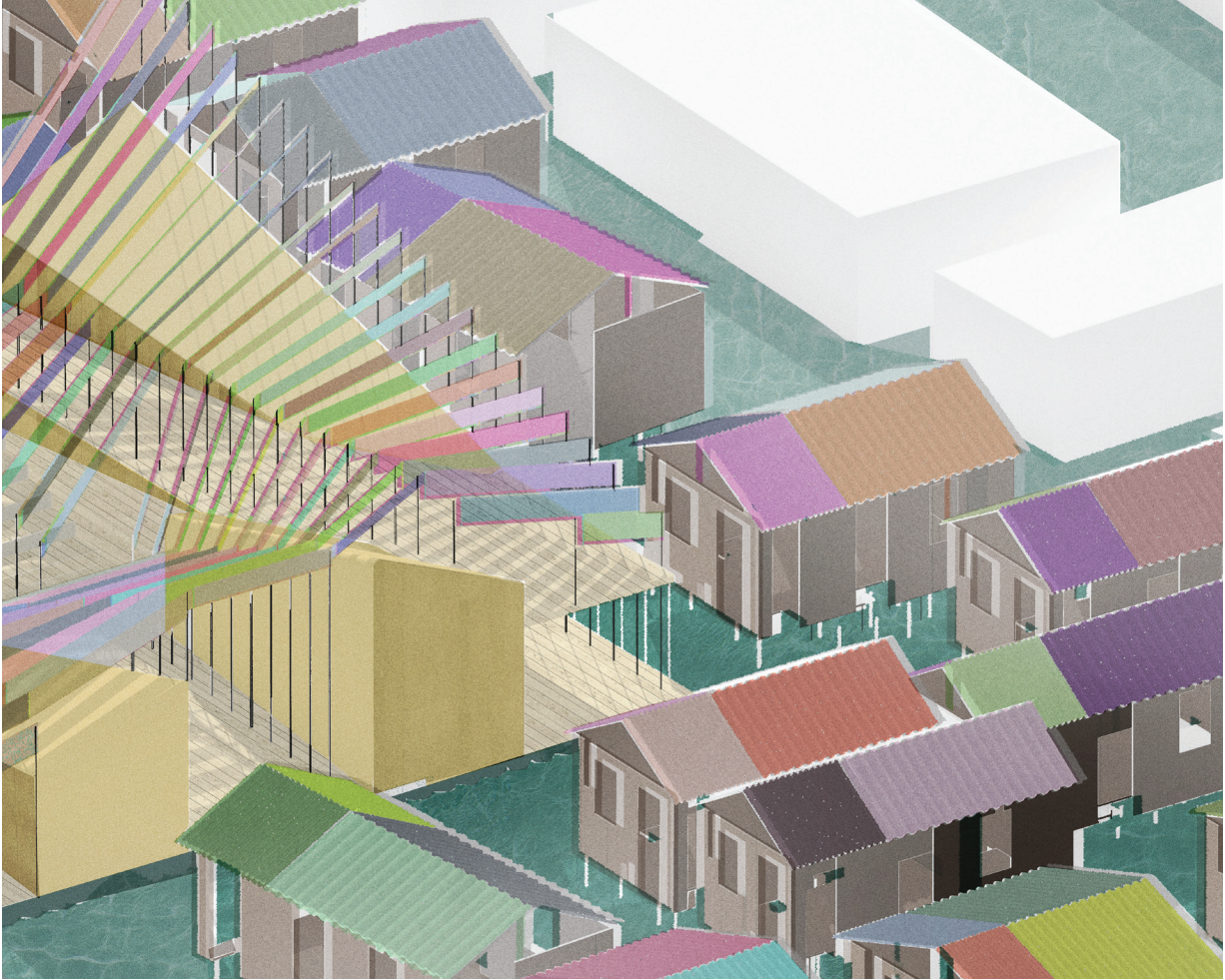


Section Rendering - Commerce, and Leisure.





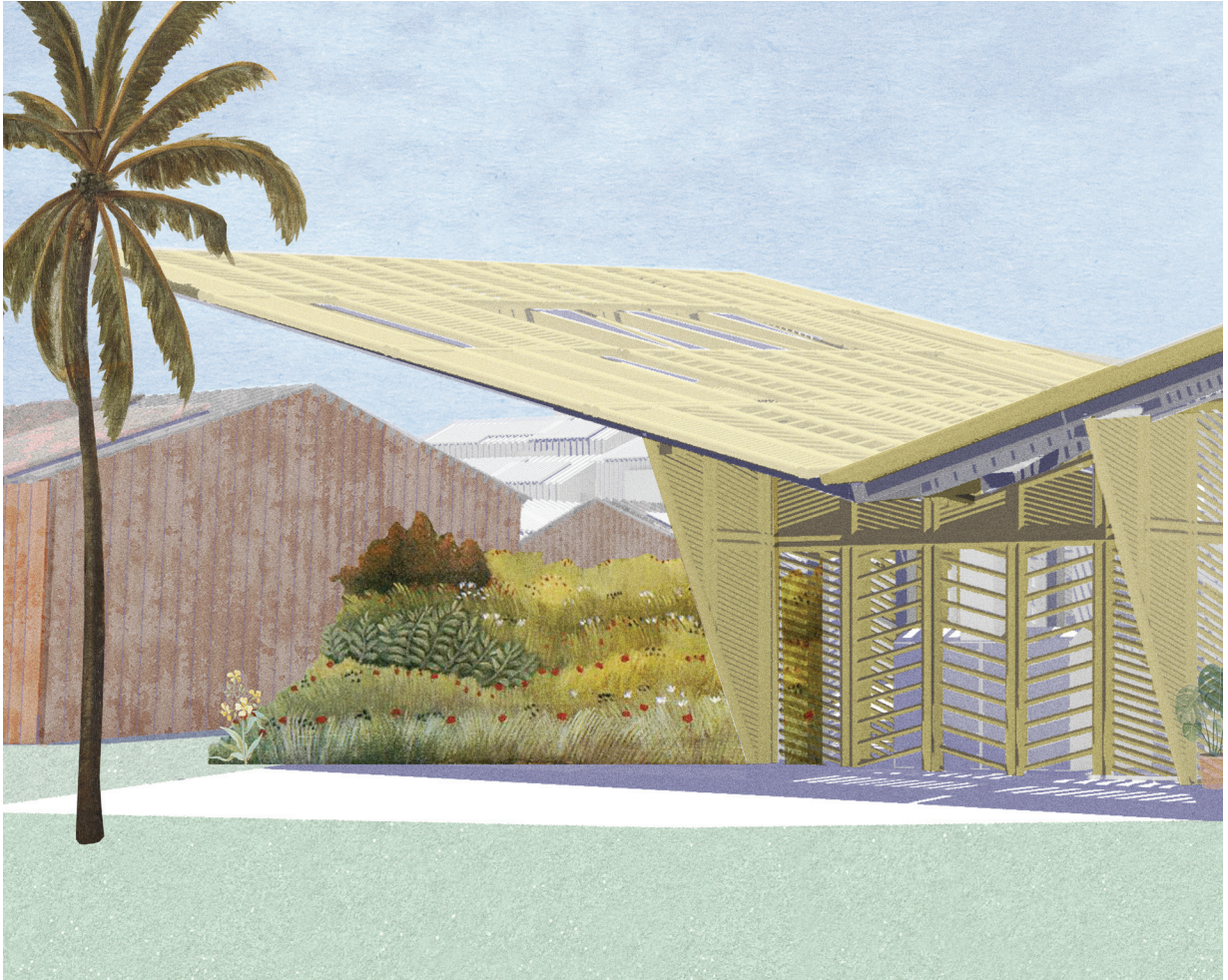
Perspective Rendering - community identity





Section Rendering - Harvest, and Interactions en el barrio





Perspective Rendering - Community hot spot



REST_

The process of tackling a social driven *problematique* of this complexity asked of me at every stage to question both my biases, and intentions. Every phase whether dealing with materiality, or decisions that were community centered the proposition needed to be sensitive to the site, culture, application, and overall operating systems within the scope. This point was brought up in conversation within the final thesis critique. The questioning of the ever uninformed white savior was, and still is a concept I must accept and have to continuously wrestle with as this project continues to evolve. Nevertheless, despite my absence from Dominican Rep. Or the fact that I've never been able to set foot in Makoko or Rocinha, within this project I have strive to achieve a deep understanding of the processes, and systems within these sites creating three comprehensive interventions that aim towards the revitalization of these communities. I still held to my resolve to create genuine change acknowledging the difficult circumstances that abide within and outside the discipline.

ACKNOWLEDGEMENTS_

- Professor | Advisor : Daniel Ibanez
- Second Advisor : Ryan McCaffrey
- Program Director : Amy Kulper
- Graduate Director: Carl Lostritto

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- Mom and Dad
- Chris Soto
- Ramon Vicente
- Cameron Leandri
- David Amdie
- Colin Christiansen
- Jesus Melendez
- Sara Naja
- Sam Westleman
- Wilfred Rodriguez

&

- Tori Deutch

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