HEATHER A RULE

PORTFOLIO | SELECTED WORKS

PUBLIC SPACE for WOMEN

re-thinking public space in support of women and education

Fall 2015 | Prof. Fernando Lara
Final Project | a project for women in Ecuador

EMPOWERING WOMEN

Can changes in the built environment improve the conditions of the women in a community? A study of the public space in several communities in the province of Imbabura in Ecuador looks at the who, how and when communities use their public spaces. This study was based on a series of participatory drawing exercises with six communities. In conjunction with the Area of Social Responsibility of Expoflores, we worked on understanding and identifying the needs of each community.

Two issues were repetitively identified in the workshops. (1) Most women lack an education beyond 1st grade and therefore cannot read or write and (2) Women want to improve their livelihoods by selling their embroidered merchandise. These two concerns work against each other in that without an education women are not able to fully enter the commercial market.

From the information gathered in the workshops a speculative public space project was developed. Re-thinking the public space with special attention given to how it can serve the needs of women. The proposed re-thinking of public spaces incorporates adult education through local handicrafts. Utilizing a coop system in a shared community space, women are given the physical spaces in which these functions can occur.

PROGRAM SPACES
identified as integral for a public space that is supportive of women

COMMUNITY MAPPING

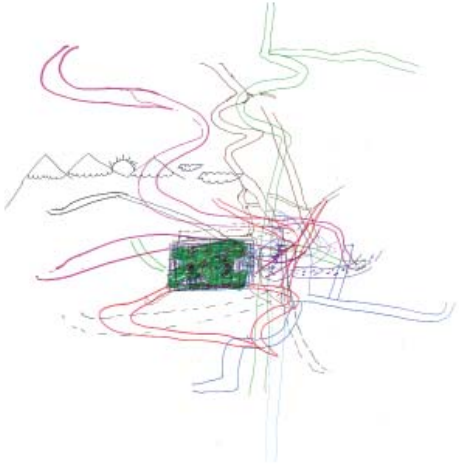
Analysis of the drawings done during workshops in Ecuador, mostly with women in rural communities North of Quito, the capital city.

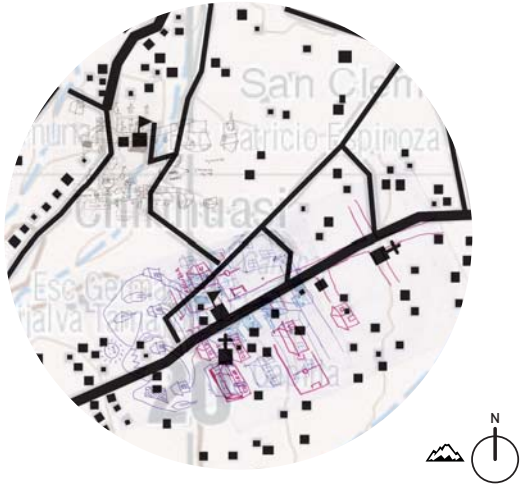
OVERLAY
CANCHA AS THE LITERAL + FIGURATIVE CENTER OF THE COMMUNITY kancha [kichwa] space of gathering

PATHS
FROM THE CANCHA OUT
built and maintained by mingas

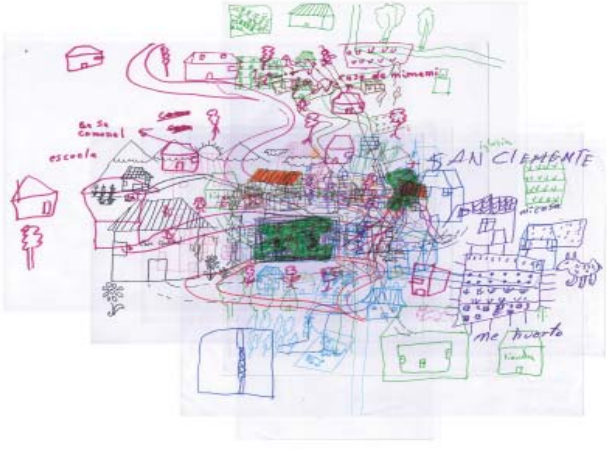
COMPARISON
drawings vs reality

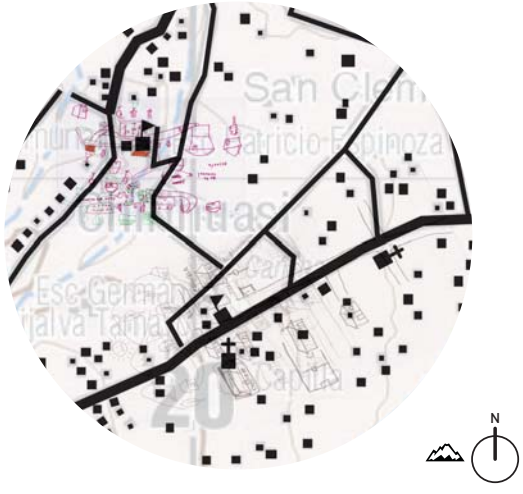
CHIRIHUASI





SAN CLEMENTE





[these are a sample of the six communities I worked with]

COMMUNITY MAPPING

Analysis of participant drawings. These diagrams show the difference between the space documented in workshop participants drawings (in green) and the additional physical spaces that exist in the community (in orange) that are not recorded in any participant drawings.

SAN CLEMENTE IMBABURA, ECUADOR

LEGEND

APPEAR IN PARTICIPANT DRAWINGS

DO NOT APPEAR IN PARTICIPANT DRAWINGS

CHIRIHUASI IMBABURA, ECUADOR

LEGEND

APPEAR IN PARTICIPANT DRAWINGS

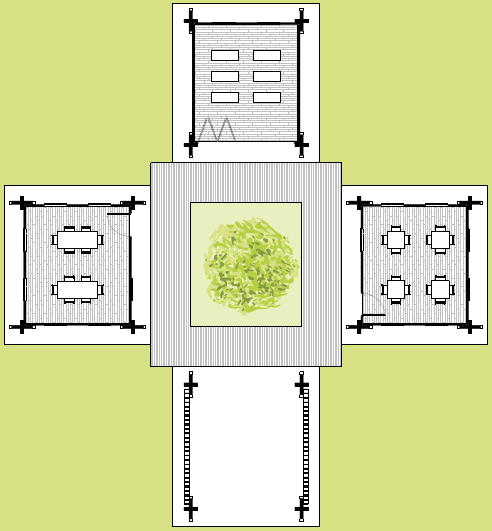
DO NOT APPEAR IN PARTICIPANT DRAWINGS

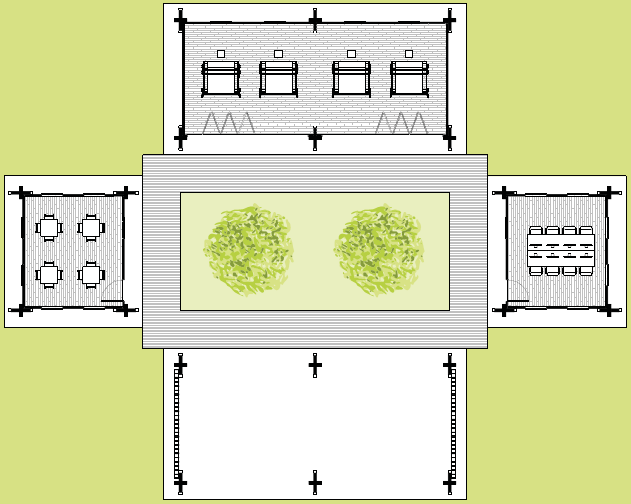
KANCHA [a gathering space]

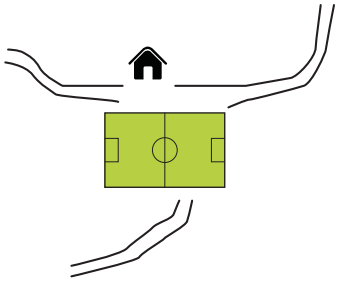
BUILDING MODULES

Pre-designed system that is expandable and always centered around a courtyard. Each community would choose and construct a unit size based on their needs.

MODULAR + EXPANDABLE



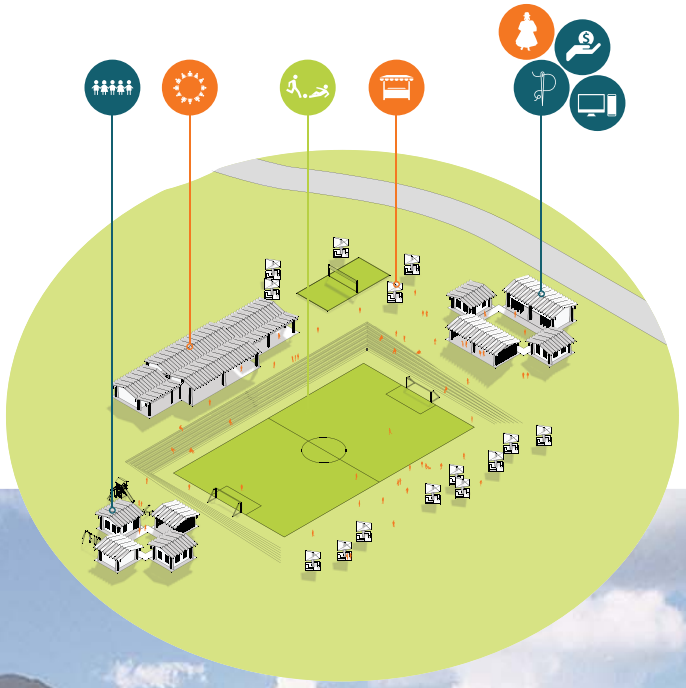




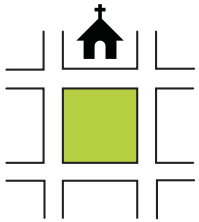
RURAL

CANCHA
as gathering space
associated with Casa Comunal or School

A less structured spatial arrangement is typical of rural public spaces. These are typically arranged with the cancha - a soccer field in it's modern day form - is the central and multi-functional gathering sace.



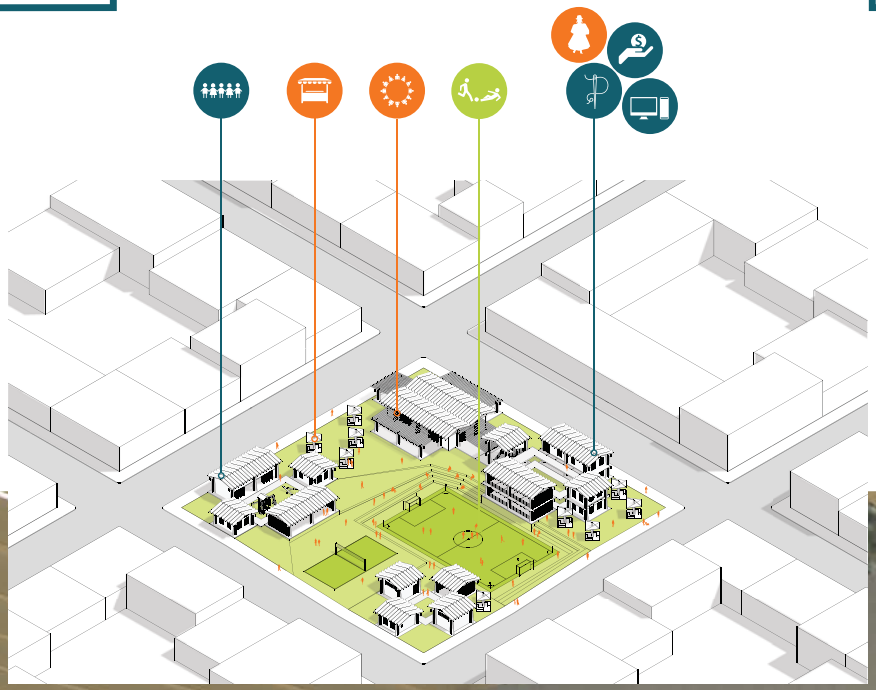
RURAL cancha + pavilions



URBAN

PLAZAS
as gathering space
associated with Church

A public space in a more urban setting is bounded by streets and more structured. In ancient times the public plaza had an association with the town church.



URBAN community center

BUILDING MODULES

Each module is designed around it's own courtyard. This central gathering space representing the communal importance of collaboration and community life.

Modules can be design to accomodate multiple program typologies as illustrated in these renderings.

DAYCARE courtyard design

ARTISAN CENTER courtyard

COLONIA AEREOPUERTO

a new live/work neighborhood around public & private urban courtyards

Fall 2014 | Prof. Wilfried Wang
Studio | Mixed-Use Neighborhood in Mexico City
Project Partner: Jessica Mills
selected for ISSUE: 011
UT School of Architecture Student Work Publication

MIXED-USE, MEDIUM-DENSITY

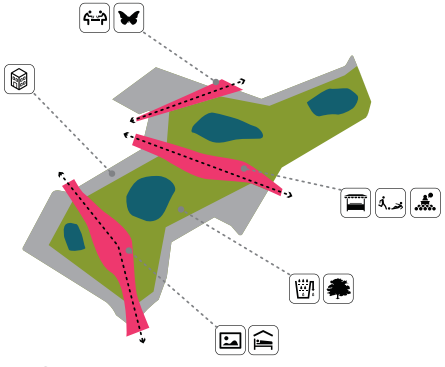
As Mexico City will have a new airport in the next 15 years, our project proposes the re-development of the old site with a series of parks and green spaces. These green spaces offset the future loss of permeable ground with the construction of Foster and Romero's new airport. The parks that we imagine mirror the large urban park at the west of the city: Chapultepec Park. Our scheme uses deliberately smaller scale parks to maximize the benefit for more people in the surrounding area. Alongside the parks and green spaces, the urban scheme is such that it integrates the new fabric with the existing surrounding neighborhoods. While eventually arriving to the consideration of a larger site, our studio was structured to design from the bottom up, beginning with brick screen studies and culminating in an urban design plan.

**Project work was equally divided. This project was collaboration at its finest, to the point where every decision had dual authors and just about every graphic was touched by both my partner and I.*

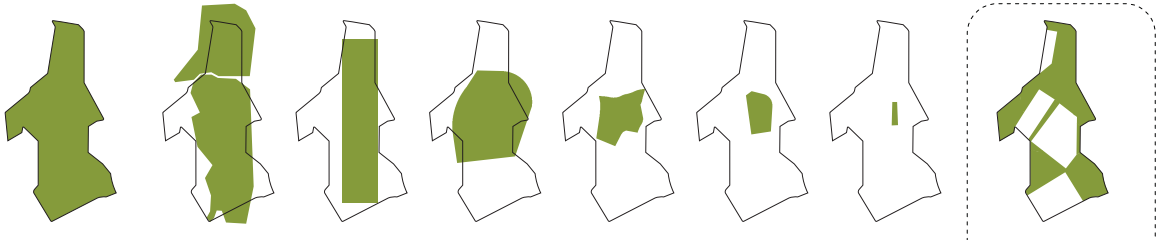
Interior Courtyard

Street Facade

A GREEN BELT FOR MEXICO CITY



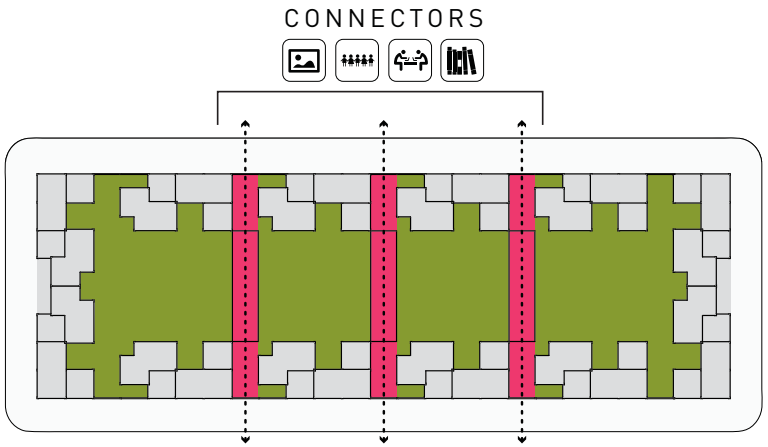
Public Services



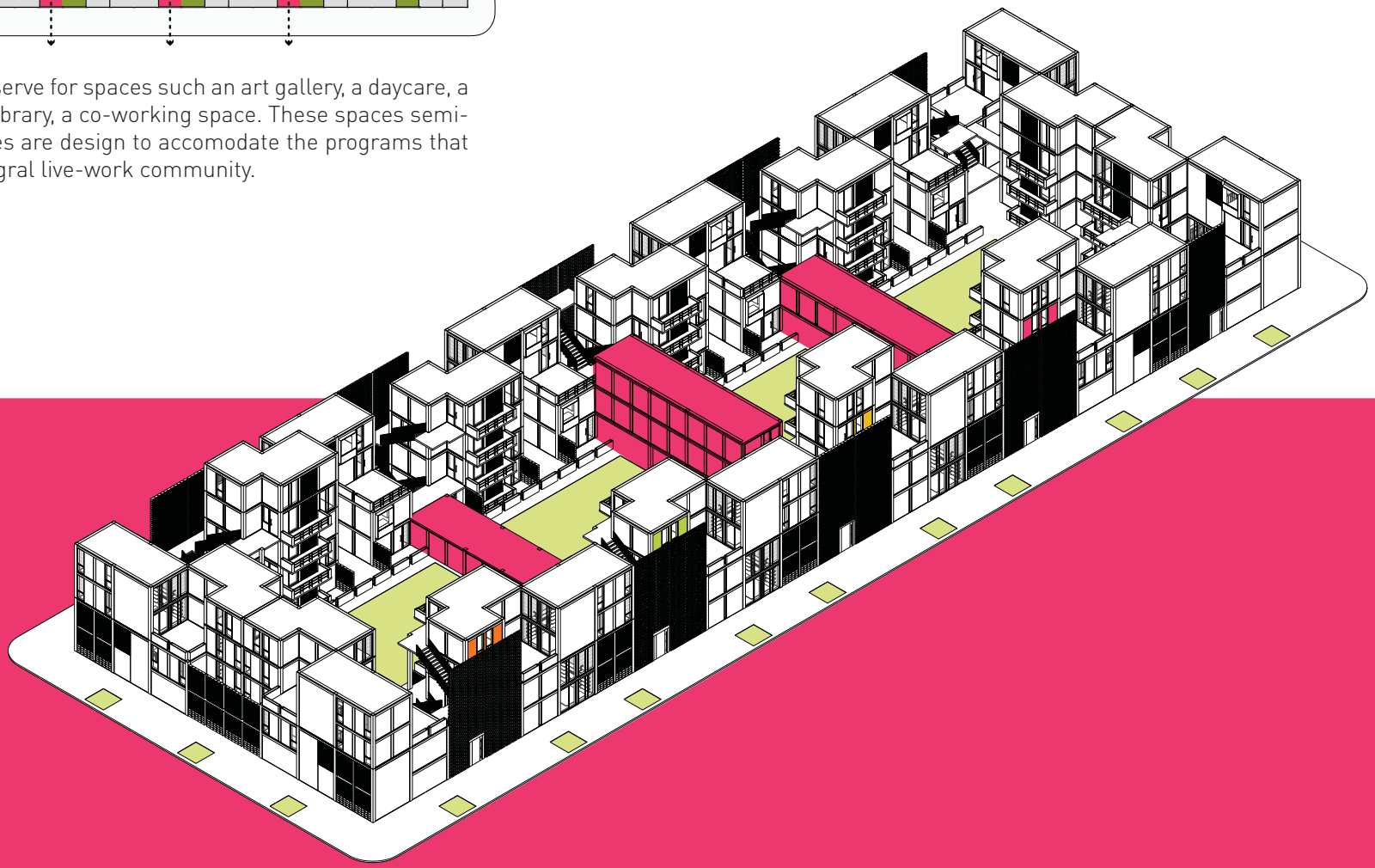
Park Area Comparison

URBAN STRATEGY

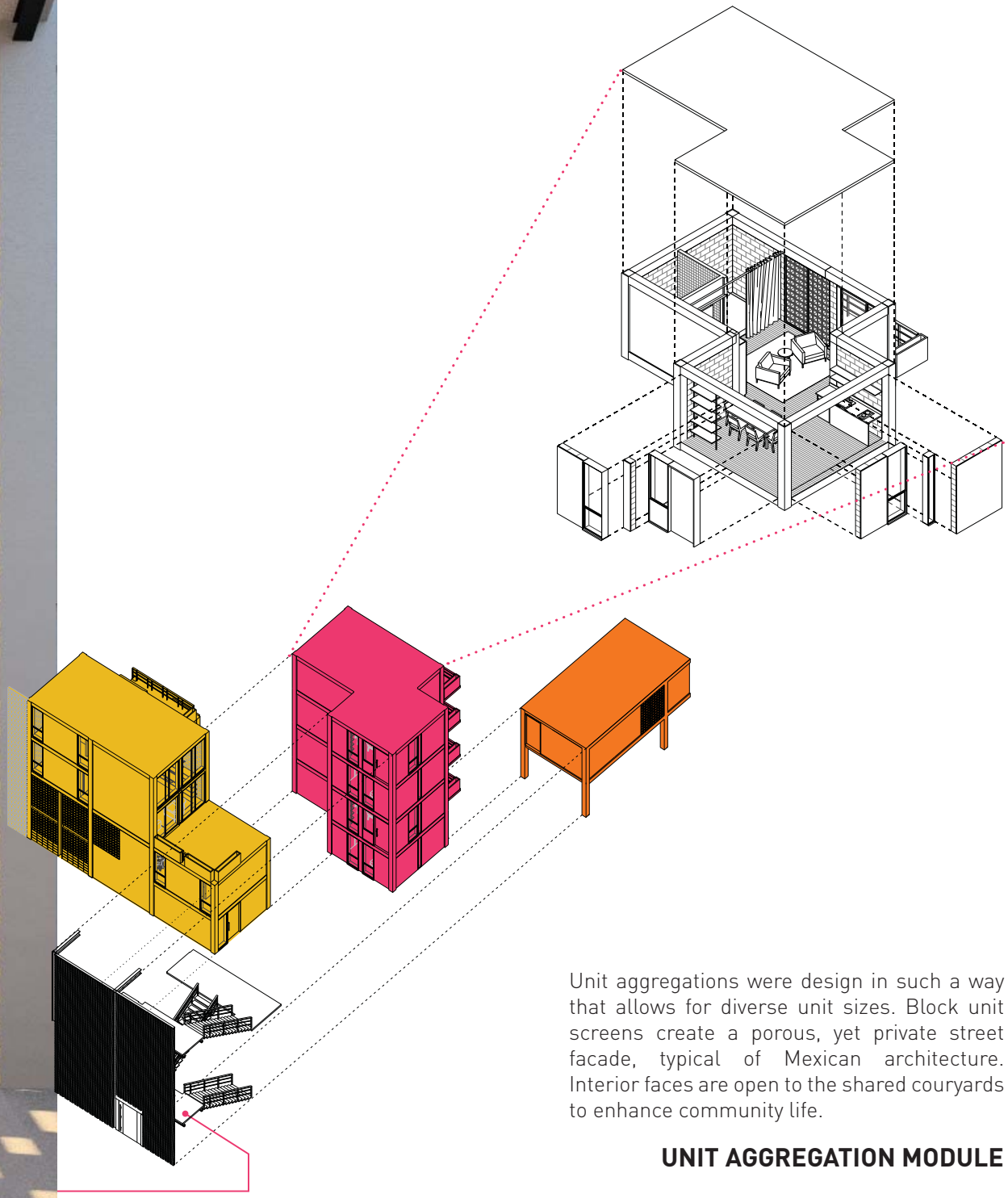
Multiple types of block aggregations create variety within the system for more diverse neighborhoods These blocks border large urban courtyards serving the public programs.



Connectors serve for spaces such an art gallery, a daycare, a community library, a co-working space. These spaces semi-private spaces are design to accomodate the programs that create a integral live-work community.



TYPICAL COURTYARD BLOCK



Unit aggregations were design in such a way that allows for diverse unit sizes. Block unit screens create a porous, yet private street facade, typical of Mexican architecture. Interior faces are open to the shared couryards to enhance community life.

UNIT AGGREGATION MODULE

FRAME of REFERENCE

an indoor/outdoor classroom for butterfly gardening workshops

Fall 2012 | Prof. Matt Fajkus
Studio | Architecture as a driver for sustainable change

"Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family."

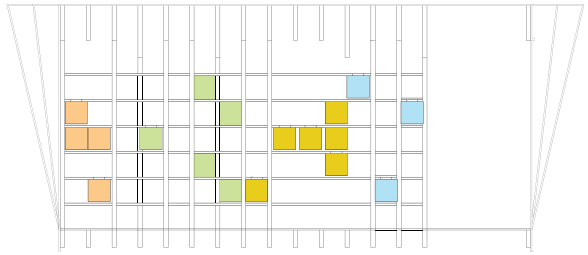
Kofi Annan

BUTTERFLY PAVILION

The premise of education to advance knowledge has not changed. It is within this frame that we consider education today. In the twenty-first century education requires flexibility of both space and individual. Lessons are framed within multiple contexts to accommodate individual learning strengths, creating equal ground. Progressive education raises awareness and teaches us to seek solutions for the issues that surround us. Being sited on an urban college campus allows the program to draw from populations of various ages and backgrounds. Each group having different interest levels, learning styles and time they can commit to further their education. A sustainably choreographed educational program and site bring awareness to a local issue and will generate knowledge that can be spread globally.

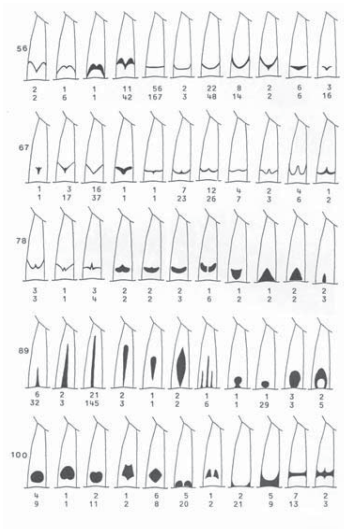
FLEXIBILITY [within a system]

METAMORPHOSIS STAGES



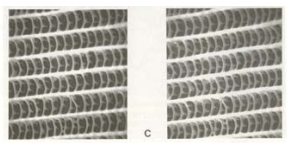
MODULAR BUTTERFLY WALL
[individual boxes respond to metamorphic stage needs of environment and shade]

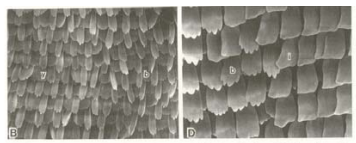
BUTTERFLY WINGS [sources of inspiration]



[combination of small number of themes]

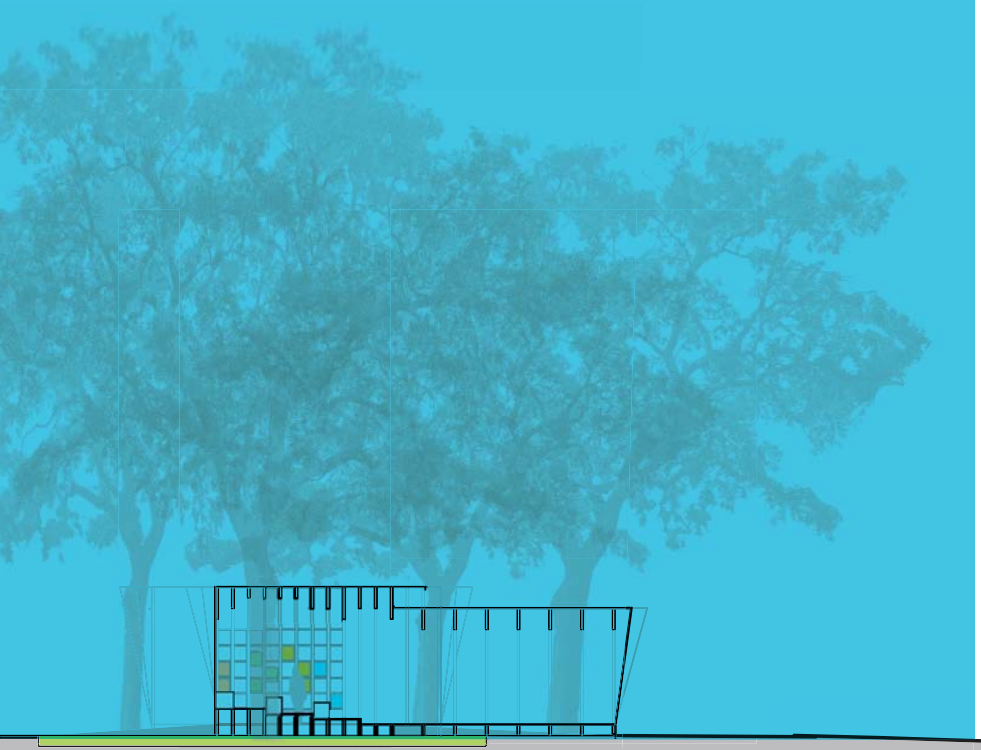
WING PATTERNS
[complex patterns arise from the superposition of simpler component parts]





SITE APPROACH

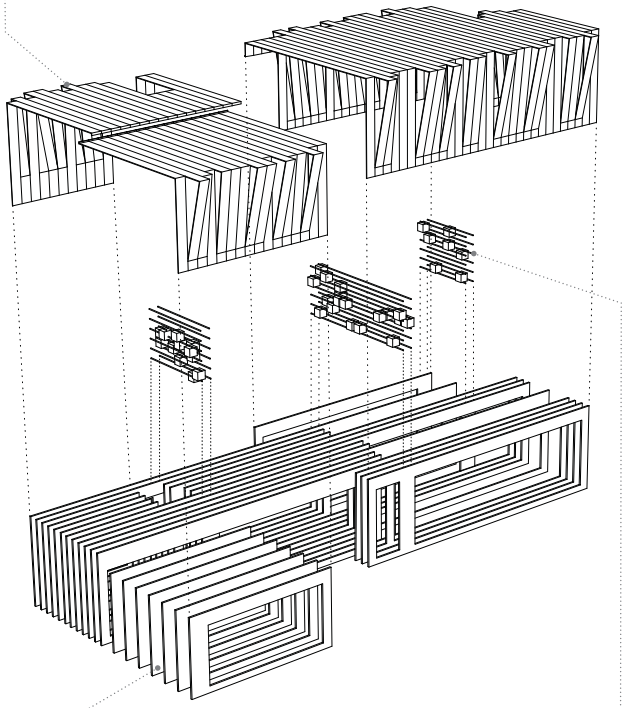
As an antidote to the hard lined site the classroom pavilion sites itself lightly and minimally respecting existing site layouts and paths of travel. It serves as a contrast to the harshness of the Harry Ransom building by becoming a soft activator in a harsh environment, creating a welcoming space. The minimal enclosure allows greater contact to nature through increased exposure to light and air.



SECTION looking north

1. STORAGE
2. OFFICE
3. CLASSROOM
4. MODULAR BUTTERFLY WALL
5. TRANSITIONAL PORCH
6. COVERED AUDITORIUM
7. GATHERING SPACE

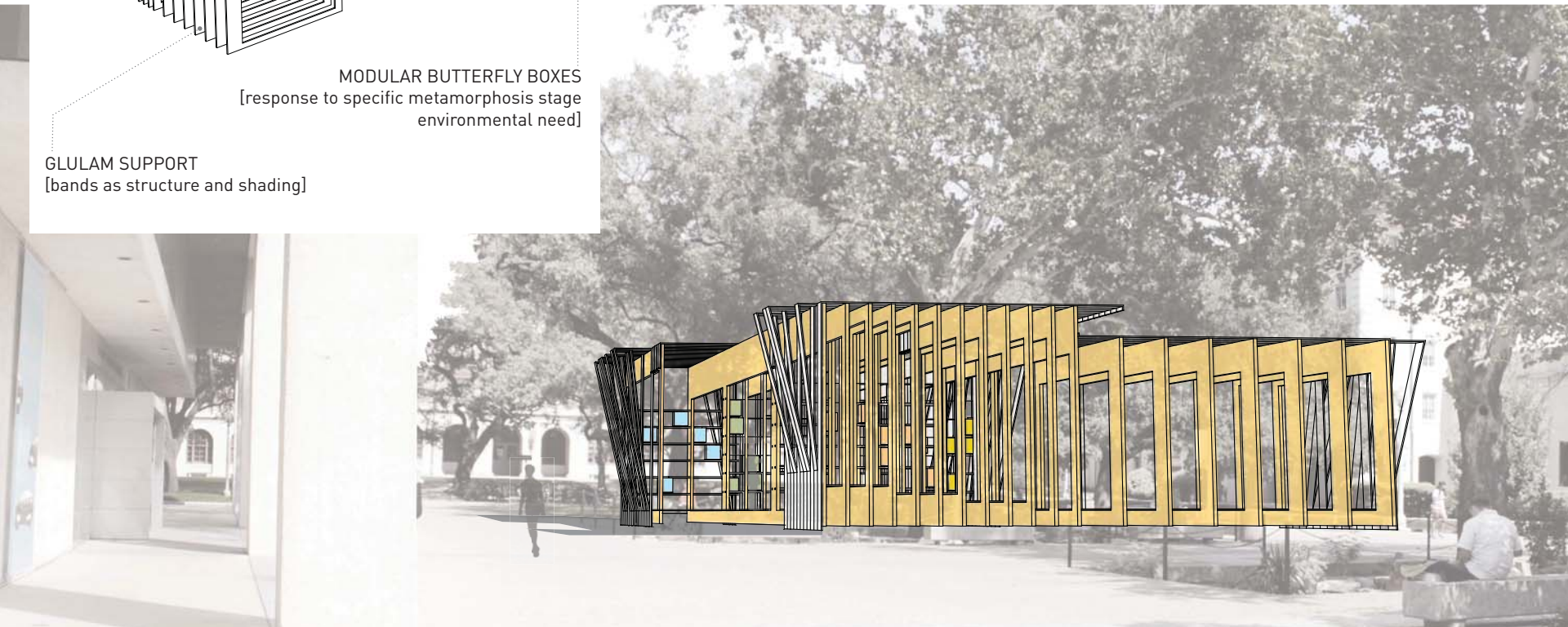
ROOF SKIN
[variation responding to cover and shading]



MODULAR BUTTERFLY BOXES
[response to specific metamorphosis stage environmental need]

GLULAM SUPPORT
[bands as structure and shading]

BUTTERFLY DISPLAY WALKWAY



ANDES HUT for COTOPAXI

climate + design as drivers of an integrated design approach

Fall 2013 | Prof. Petra Liedl

Studio | an off-grid mountain climber acclimatization hut

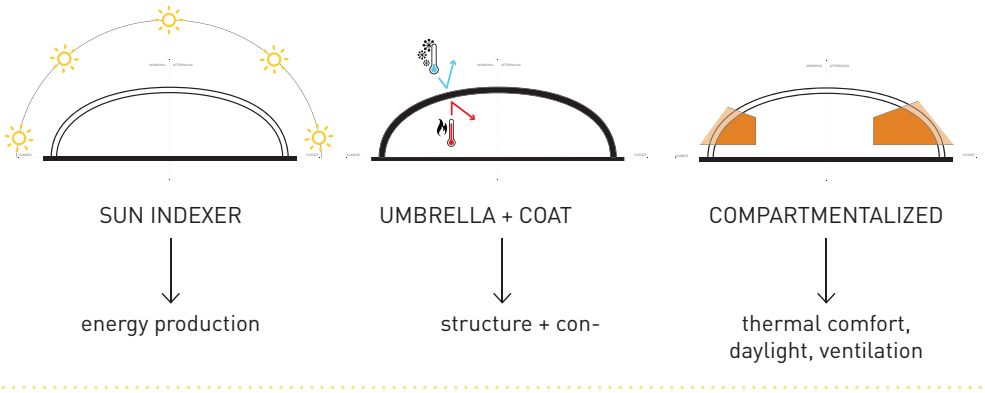
INTEGRATED DESIGN

The Andes Hut is located on Cotopaxi, a volcano in the Andes mountains of Ecuador on the equator and at an altitude of 20,000 ft above sea level. This off-the-grid mountain climbers' acclimatization hut creates a space for climbers to prepare for their ascend to the peak.

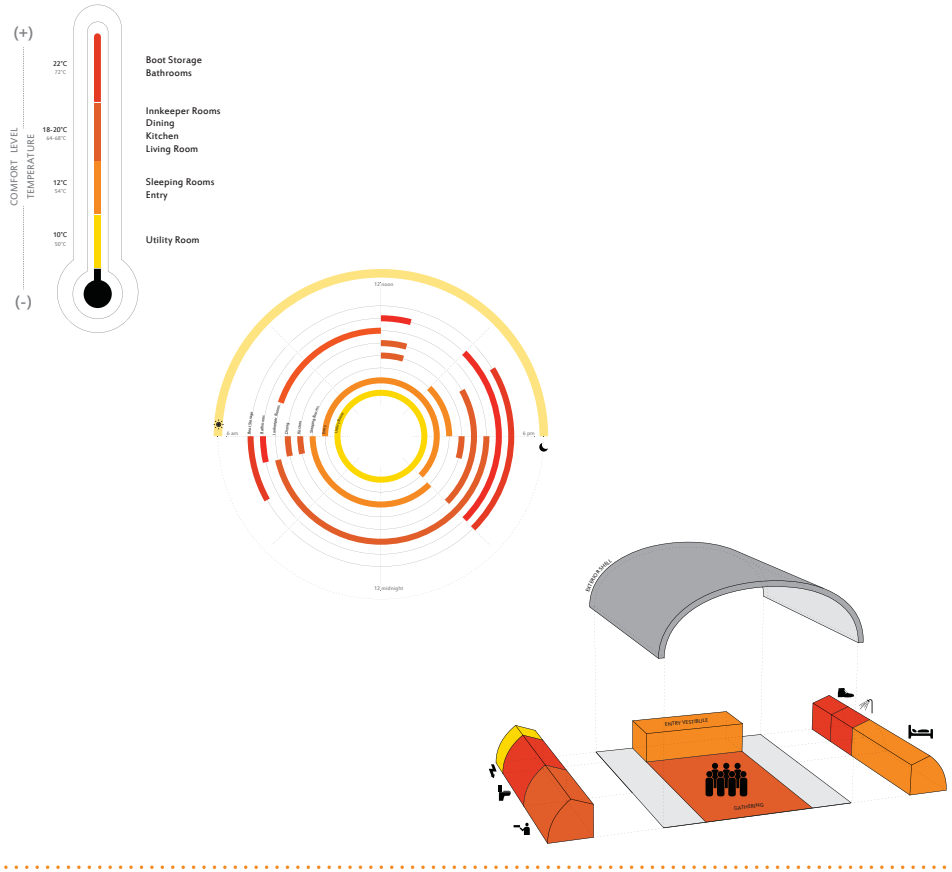
A holistic design was the result of carefully accounting for the local climate conditions, the desired thermal comfort and off-the-grid energy generation. Site specific climate data was used to calculate energy demand and generation. With the assistance of climate and energy analysis tools the Andes Hut provides a space for climbers that is both functional and beautiful.

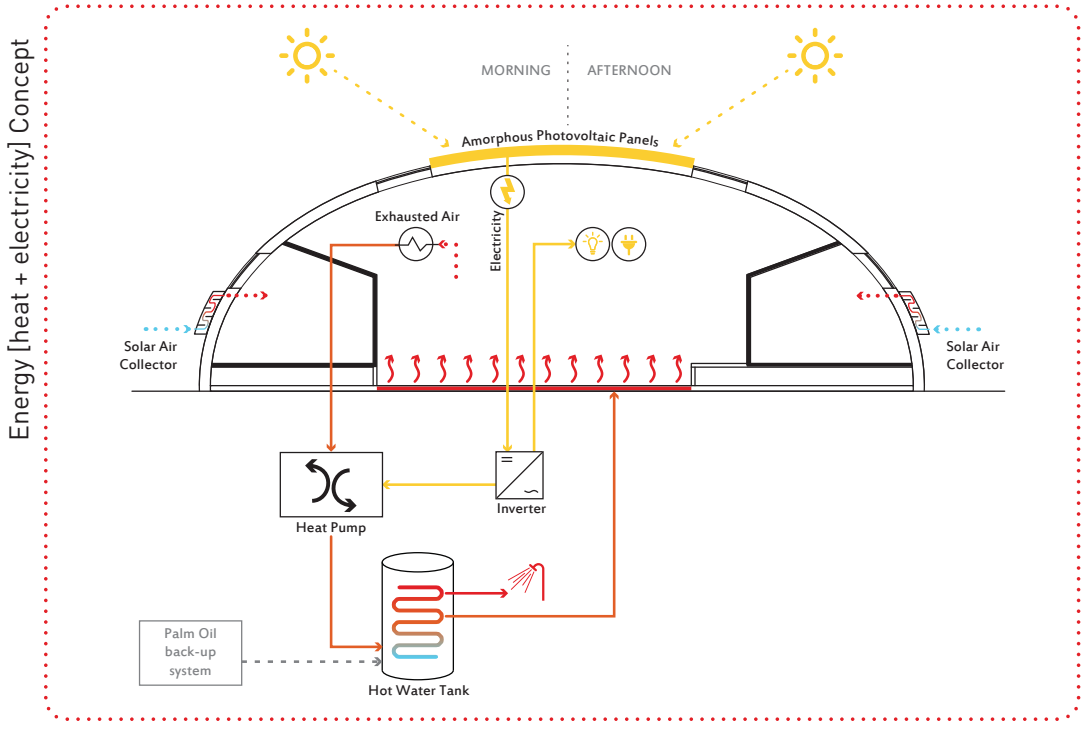
Site specific climate data was used for all analysis and design. Climate analysis was done utilizing Climate Tool. Energy demand was analyzed with eQuest.

Design Concept



Thermal Comfort Concept



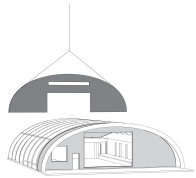


DESIGN + THERMAL COMFORT + ENERGY = **INTEGRATED CONCEPT**

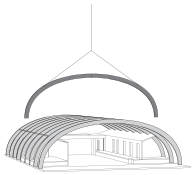
Sequencing + Delivery

7
Roof Shell
unitized roof panels

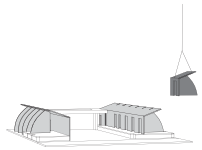
6
End Walls
insulated wood panels



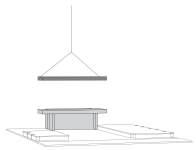
5
Glulam Arches
wood structure



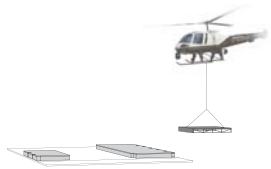
4
Rooms
glulam wood panels



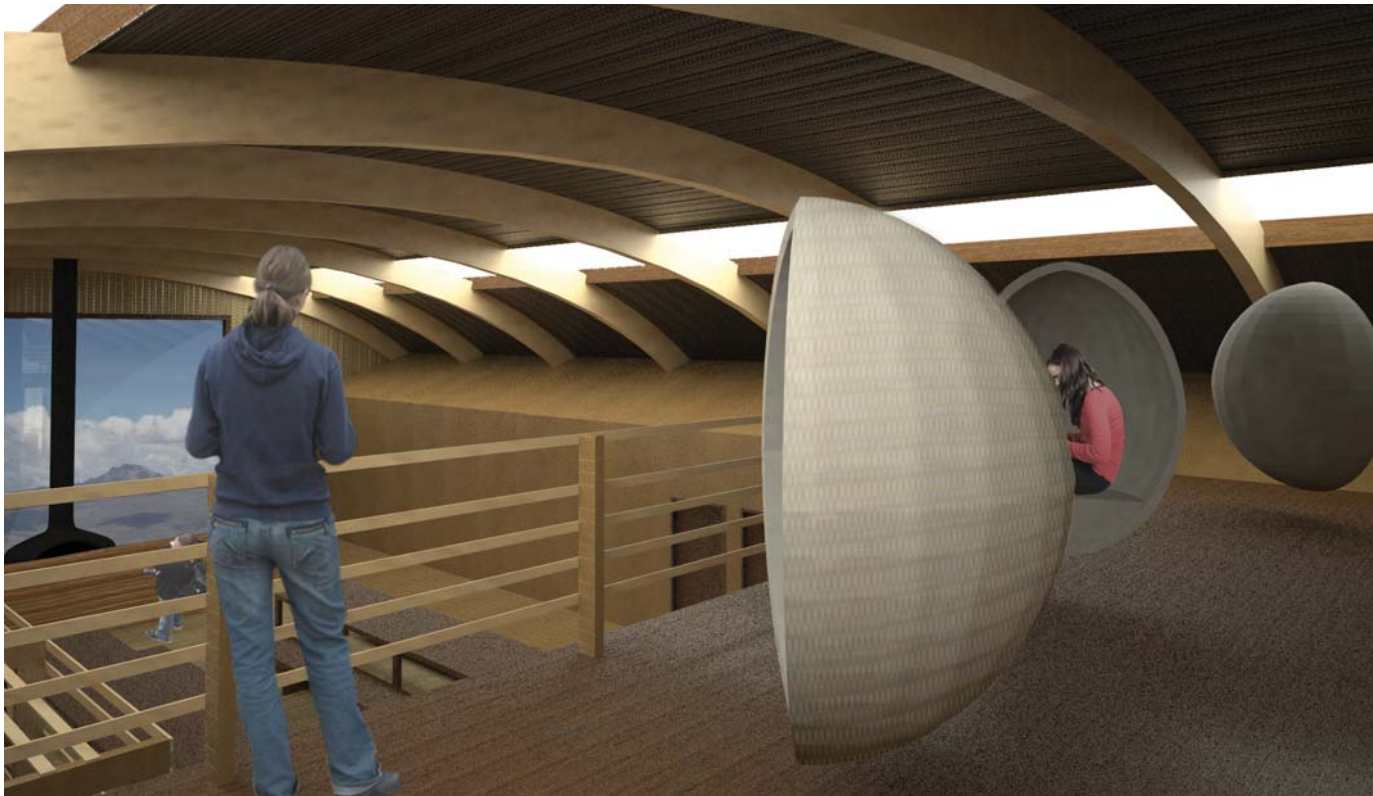
3
Entry Vestibule
insulated wood panels



2
Raised Floors
truss supported



1
Floor
cast-on-site concrete with
radiant floor system



The compact and low profile design creates a secure acclimatization hut that subtly sits within the landscape. The consistent sun at the equator provides an ideal source for solar energy captured through solar panels and solar air systems to condition interior spaces. Each space is conditioned according to time and use to create a welcoming hut for mountain climbers preparing to ascend Cotopaxi.

1 **entry** 10m²
2 **boot storage** 13m2
3 **male washroom** 12m²
4 **female washroom** 12m²
5 **sleep rooms** 13m²
6 **hearth living room** 53m²
7 **dining area** 52m²
8 **kitchen** 18m²
9 **utility room** 13m²
10 **female restroom** 12m²
11 **male restroom** 12m²
12 **innkeeper bathroom** 9m²
13 **innkeeper bedroom** 7m²
14 **innkeeper living/dining** 34m
15 **terrace** 70m²
16 **interior balcony** 20m²