

portfolio · 2023



carlos david    arcos jácome

politecnico di milano

## EDUCATION

- 2020** + Architecture - Bachelor Degree  
Architecture and Urban Design School - Central University of Ecuador
- 2020** + Budgeting for social projects  
Network Education - Peru
- 2020** + Academia FPP  
Foundation for progress - Chile
- 2021** + Design of participatory and consultative processes  
"Asuntos del Sur"
- 2021** + Project management using Lean Project  
DualSolutions
- 2021** + Sustainable development and global agendas for the development of citizen initiatives  
Latin American Social Sciences Faculty (FLACSO)
- 2021** + International Cooperation and Financing for Development.  
Ecuadorian Network for International Cooperation and Development
- 2022** + Architecture and Urban Design - Master Degree  
Politecnico di Milano

## EXPERIENCE

- 2020** + Urban research coordinator  
Observatory of the Production of Ecuadorian Territory
- 2020** + Associate consultant for the MCA sustainable settlements development  
Consortium for Research and Development in the Andean Ecoregion
- 2020** + Associated Professor at Social Science area  
Quito Institute of Liberal Arts and Sciences
- 2021** + Coordinator of participatory design for Urban Laboratories  
Habitar Colectivo NGO + Territorial Secretariat of Quito
- 2021** + Architectural designer and specialist in visualization 2D & 3D  
David Hidalgo Zunino architect - Ecuador
- 2021** + Architectural designer and specialist in visualization 2D & 3D  
SAM Design - Ecuador
- 2022** + Internship - Architectural designer of housing projects.  
AMASA architects - Mexico
- 2022** + Urban Design Competition Coordinator & Researcher  
BURO DAP Foundation Development Architecture Planning - Colombia
- 2022** + Academic Internship - Architectural designer and visualization support  
ON-A - Spain
- 2022** + Sustainability Research Assistant  
Alessio Battistella - Politecnico di Milano
- 2023** + Design assistant  
Degli Esposti Architetti

## SOFTWARE

- + MS Office  
Word | Power Point | Excel
- + Adobe CC  
Photoshop | Illustrator | InDesign | Premier Pro | Lightroom
- + 2D / 3D  
Autocad | Revit | Rhinoceros | Sketchup
- + Rendering  
Lumion | Enscape | Vray
- + GIS  
Qgis | Arcgis | Global Mapper

## LANGUAGES & SKILLS

- + English - B2
- + Italian - B2
- + Writing
- + Photography
- + Teaching
- + Branding

### ¿What is an authentic professional?

"...is the one who demands himself more than society commonly tolerates."  
- Helio Piñón.

Hi, my name is Carlos and this portfolio is a brief summary of the most outstanding projects that reflect my passion and dedication to discipline.

¡Thank you for considering my application!

Carlos David Arcos Jácome

[/issuu.com/carlos.d.arcos](https://issuu.com/carlos.d.arcos)

[@carlos.d.arcos](https://www.instagram.com/carlos.d.arcos)

[/carlos.d.arcos.j](https://www.facebook.com/carlos.d.arcos.j)



## ACHIEVEMENTS

- 2017** + Honorable mention in the competition for the Quito Architecture Biennial.  
Architecture and Urban Design School - Central University of Ecuador
- 2018** + 1st place in the design competition "Universal accessibility for the Faculty of Social and Human Sciences"  
Central University of Ecuador
- 2018** + Vice President of the Student Association of the Central University of Ecuador  
Central University of Ecuador  
+ Representative of the Faculty of Architecture and Urbanism at the University
- 2018** Projects Competition 2019  
San Gregorio University of Portoviejo  
+ 1st place in the international competition of regional architecture Oscar Hagerman  
Institute of Mexican Vaults and Regional Technologies
- 2019** + Vice President of the Foundation "Habitar Colectivo"  
Foundation "Habitar Colectivo"
- 2019** + Representative of the Faculty of Architecture and Urbanism at the Quito Architecture Biennial 2020  
Faculty of Architecture and Urbanism - Central University of Ecuador
- 2020** + Honorable mention in the ideas contest "Reactivating Milestones"  
Idea + Action competitions
- 2020** + 1st Place in the International Architecture and Design Competition Conservation  
Center for Manaus, Brazil
- 2021** D & A Publishers  
+ Honorable mention in The Challenge: a look at the Latin American reality  
INNBOX - International contest
- 2020** + Finalist in the Citython Lublin 2021  
EIT Urban Mobility, Polytechnic University of Catalunya and CARNET
- 2021** + 1st Place in the MIVAR Museum - Design Competition  
Construction and Sustainability Studio - Politecnico di Milano
- 2021** + Finalist in the International Architecture and Design Competition: Ghana Innovation Farm  
Young Architect Competitions (YAC)
- 2022** + Selected student for Founded Architecture Workshop - ETSAM, Madrid.  
Politecnico di Milano
- 2022** + 1st place in the ranking of students selected for the Advanced School of Architecture  
Politecnico di Milano

## PUBLICATIONS & CONFERENCES

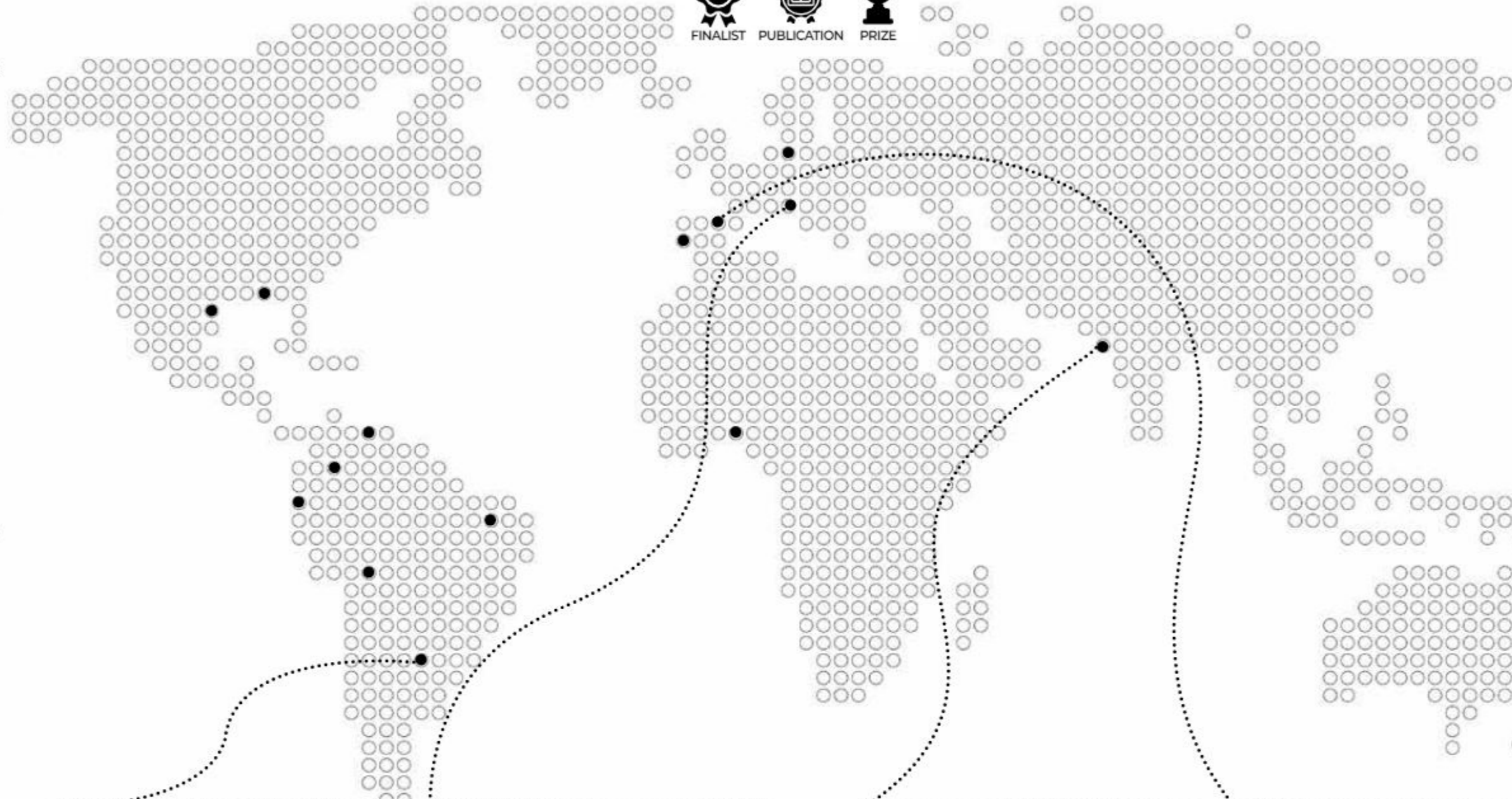
- 2017** + Project distinction in the book "Project and process. An approach to project methodologies"  
Faculty of Architecture and Urbanism - Central University of Ecuador
- 2018** + Co-author of the book "Mancomunidad Chocó Andino. Territory, rights, and duties. Manual for its inhabitants"  
Observatory of the Production of Ecuadorian Territory
- 2019** + Guest lecturer at the 1st National Congress of Young Researchers  
Catholic University of Cuenca
- 2019** + Project selected at the 2nd International Landscape Congress  
Pontifical Catholic University of Ecuador
- 2020** + Academic research published in the book "Territory and Heritage"  
Centre for Social Studies in Latin America
- 2020** + Selected lecturer at the 4th International Congress of Research and Design  
Faculty of Architecture - Technical University of Ambato
- 2020** + Publication of academic research and analysis of architecture works of Quito's historic centre.  
"Transformations" Academic catalogue. Quito Pan American  
Architecture Biennial - XXVI edition
- 2021** + Guest lecturer at the architecture and urbanism program "Actions to improve streets"  
Civilgeenering - Dominican Republic
- 2021** + Collaborative research in the book "Life under quarantine conditions"  
Buro DAP Latin America and Urban Mapping Agency
- 2021** + Guest lecturer at the art and urbanism program "Community development for better cities"  
"Watercolor City" - Radio Victoria
- 2021** + Selected lecturer at the 4th International Congress and Workshop: Resilient Cities  
San Buenaventura University - Cartagena, Colombia
- 2021** + Collaborative research in the book "New fle"  
Buro DAP Latin America
- 2021** + Selected lecturer at the 3rd Congress of Landscape Teaching and Research (III-EEIP)  
Landscape Institute of the School of Architecture - University of  
Cordoba
- 2021** + Selected lecturer at the 7th International Congress of Architecture and Environment: "Diversity and Convergence"  
Pontifical Catholic University of Ecuador
- 2022** + Guest lecturer at the academic event: "Divergences"  
National Organization of Architecture Students



- Collective Residence San Francisco
- Pavilions UNO-YAF
- Information Center for Puhlahua
- Spain Station Reactivation
- Collective Housing "La Tola"
- Public space "La Arcadia"
- Intra-urban Centralities
- Territory, Rights and Duties
- FEDIMETAL Kindergarten "Libertad"
- Project and Process T2
- CCM The building that resists
- Silos Buenos Aires, Arg.

FINALIST PUBLICATION PRIZE

- Universal Accessibility FCSH
- MOVILAT
- IFA-FINSA Education and Landscape
- Territory and Heritage
- Exodus and Collapse
- Quarantine writings
- "Contrasts" Uyuni Salt Flat Shelter
- COAM - Madrid Intervention
- Citython Lublin
- INNBOX The challenge
- Ghana Innovation Farm
- Aurea tower Oaxaca, Mx

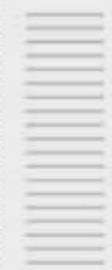


### #SEED FOR CHANGE

Buenos Aires, Argentina

International Design Competition  
(Internship in Mexico)

**Finalist**



### MIVAR MUSEUM INTERVENTION

Milan, Italy

University Design Competition

**1st place**



### OFF-GRID COMMUNITIES

Chennai, India

Academic Workshop

**Advanced School of Architecture**



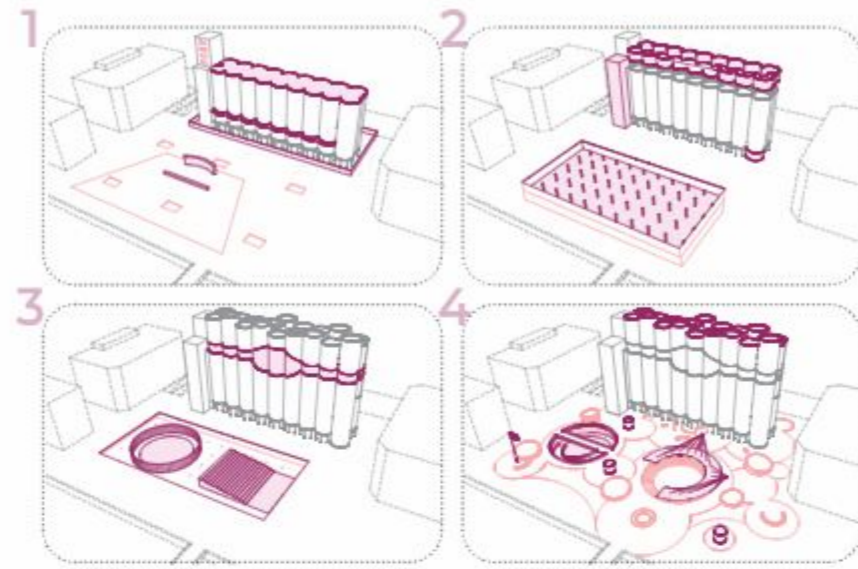
### "DE LA RÍA A LA MONTAÑA"

Galicia, Spain

City Hall Competition  
(Internship in Spain)

**In-progress**





## #SEED FOR CHANGE

*"Witness to the past and a tool for a better future."*

International Design Competition (Internship in Mexico)  
**Finalist**

Year: 2022

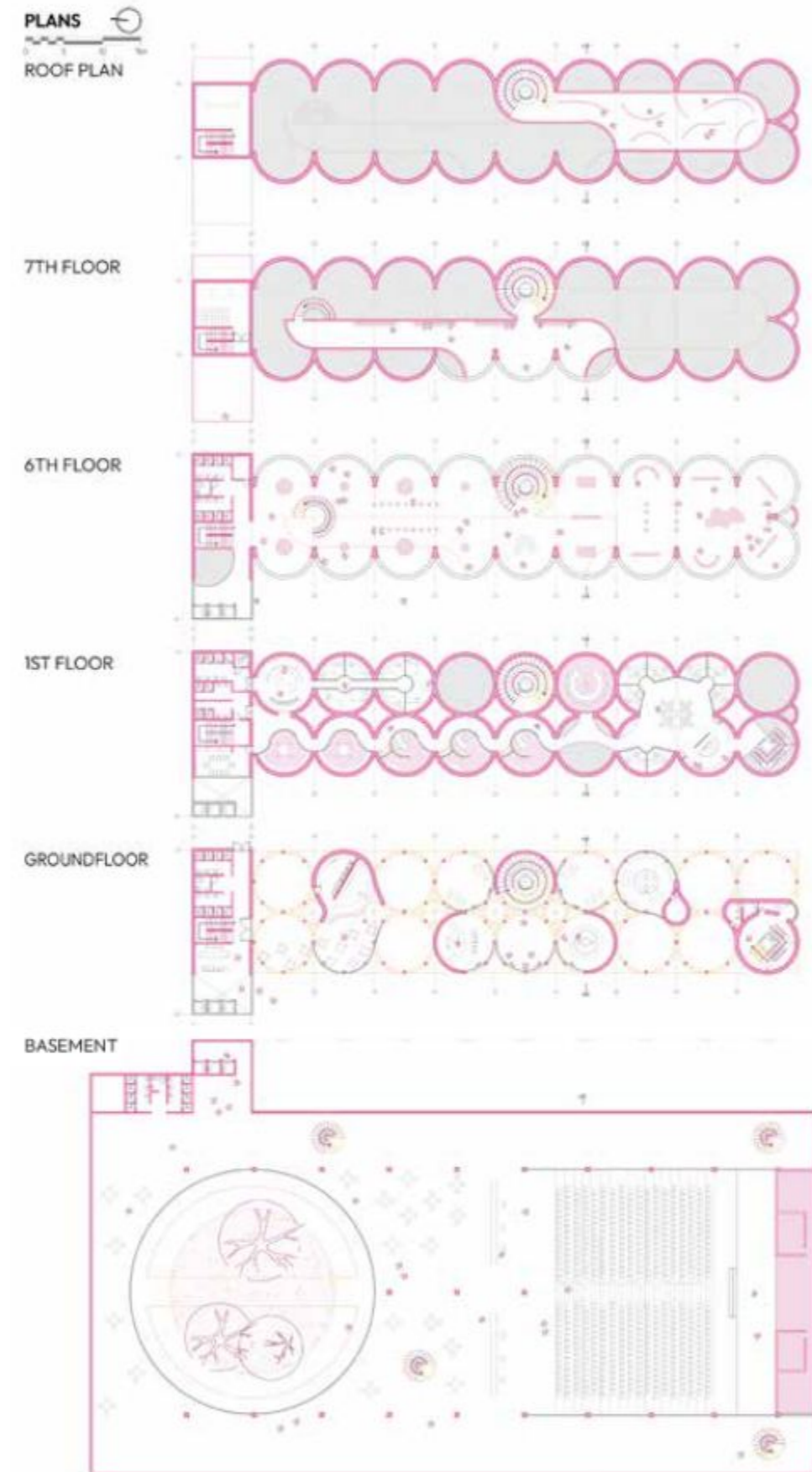
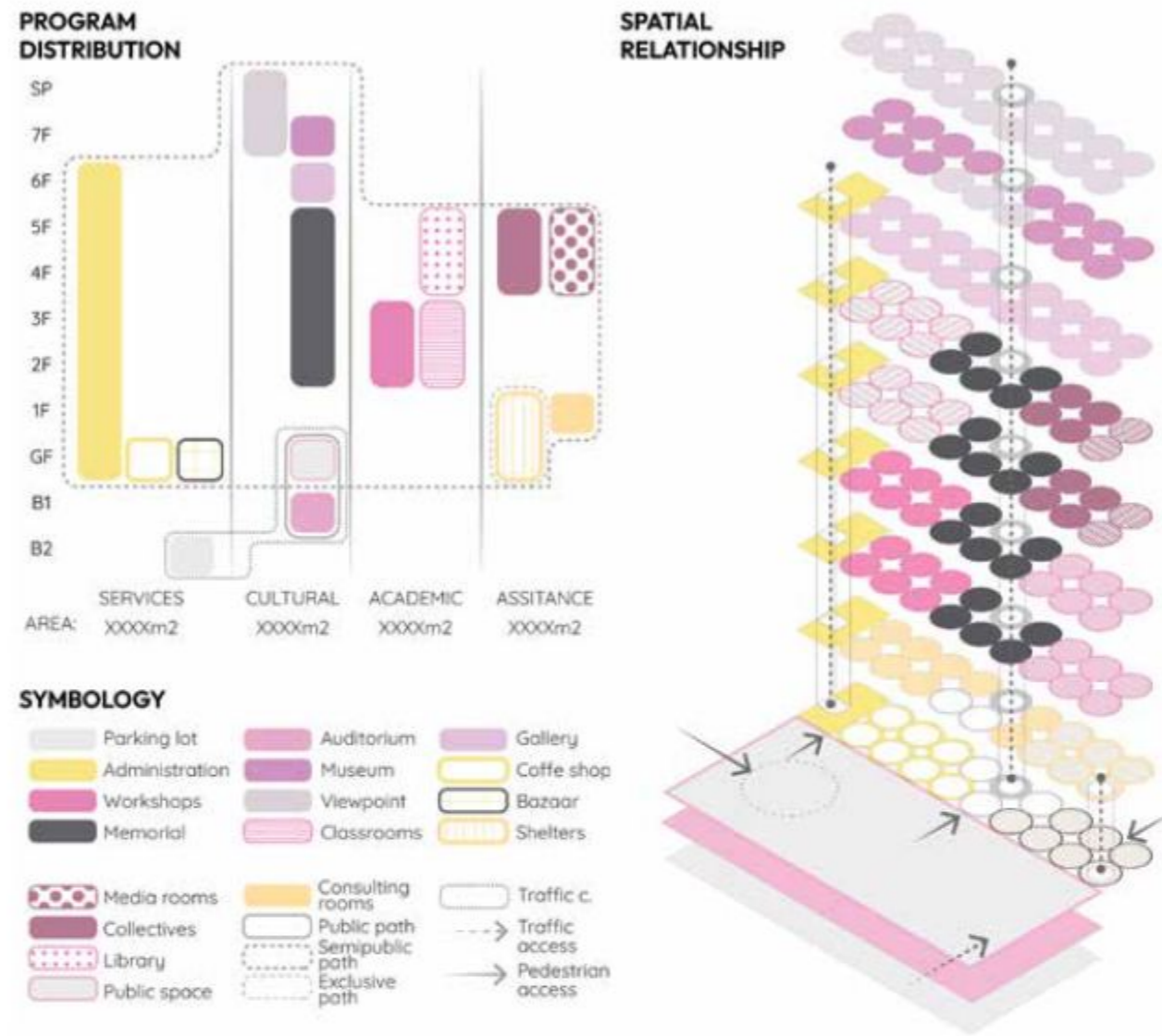
Team: Carlos Arcos, Angel Cruz, María Clara Montoya  
Role: Concept Idea, Research, Diagrams & Illustrations.

In Argentina, for 5 years there was an average of 1 femicide every 30 hours. Of the 1450 femicides presented, only 18.33% had reported their aggressor and only 8.4% obtained favorable judicial measures. As a result, several precursor organizations of the women's rights and exemplary initiatives had emerged in Buenos Aires. It is precisely here, at the top of one of its main urban axes, where #SEEDFORCHANGE project is located.

The program democratizes the spaces by generating public spaces in the front square and underground and connecting them with the ground floor. It is divided into three axes: assistance, academic and cultural, which are complemented by services and administrative spaces distributed throughout the building and relate to various vertical circulations that fit the publicness needs of each programmatic axis.

Consequently, #SEEDFORCHANGE contributes to solve problems in the immediacy, and it is also recognized as the beginning of a cultural change for new generations. Thus, the project shows that, in an era that requires urgent changes, architecture can be a tool to deconstruct and redefine the future.





EXPLOITED AXONOMETRY

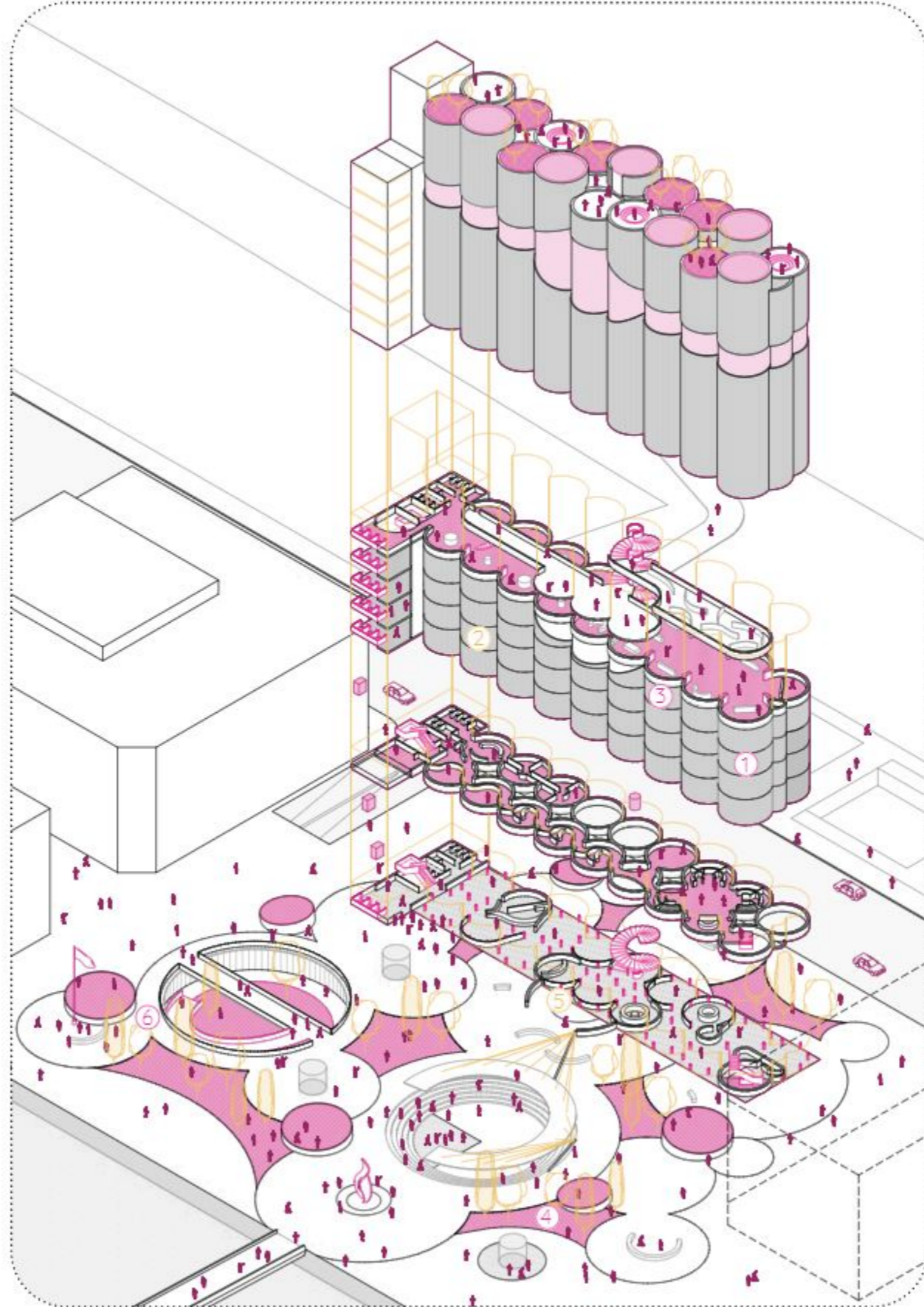
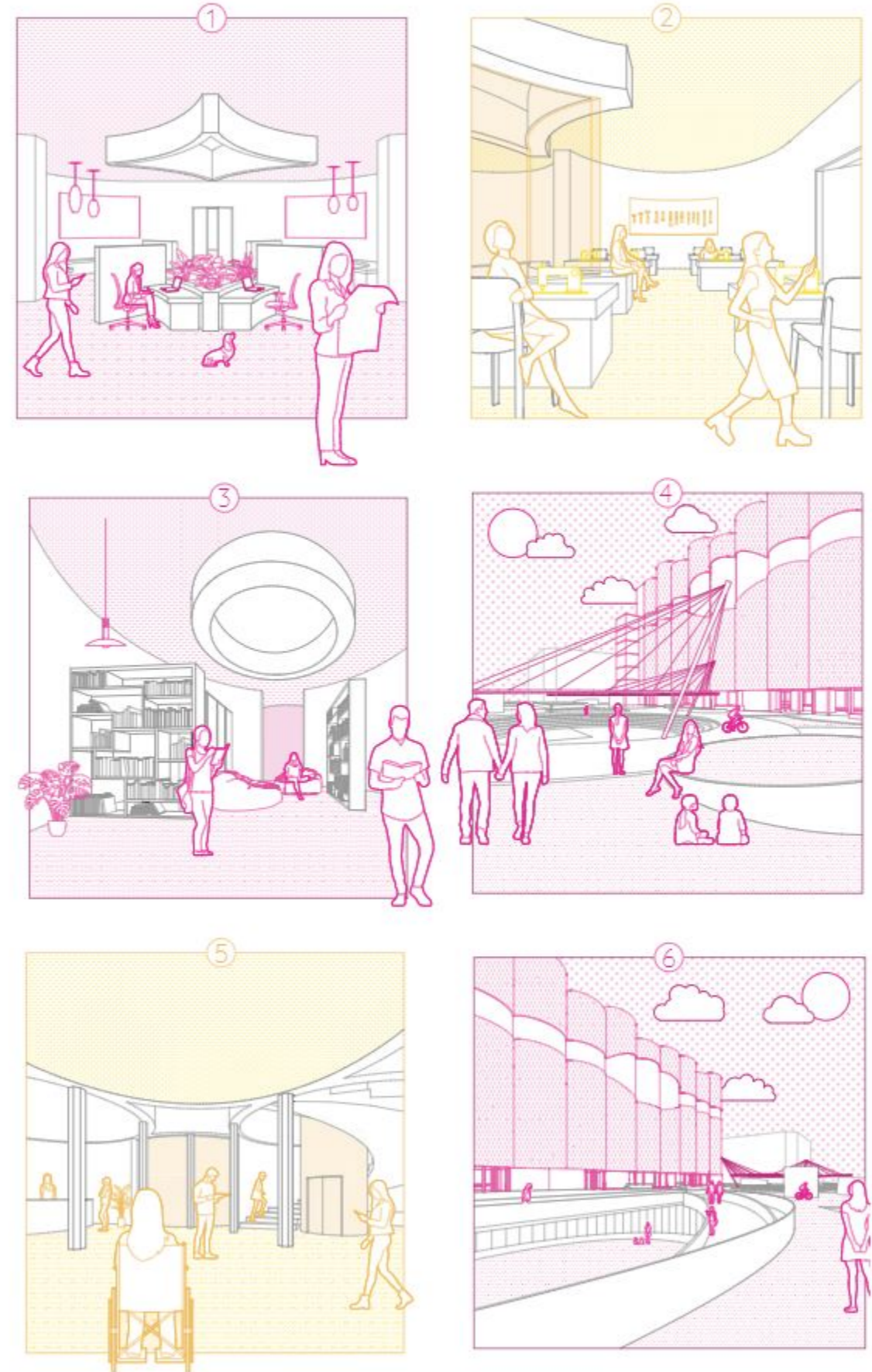
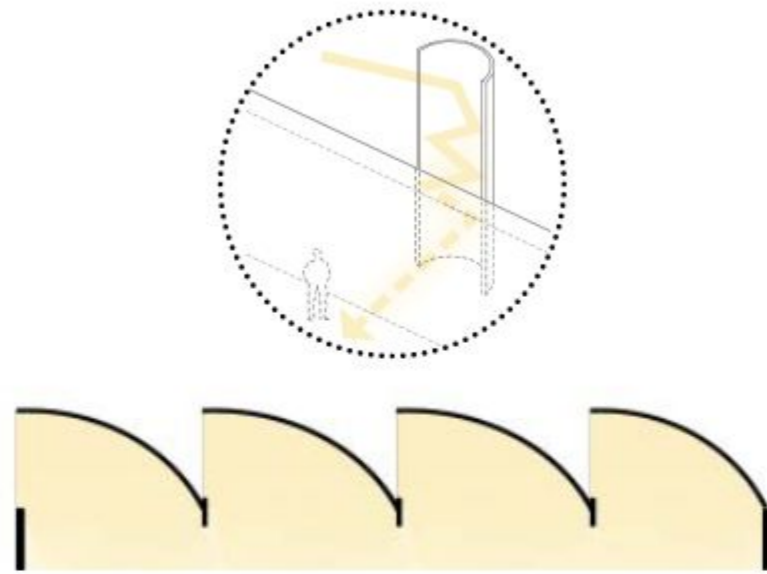


ILLUSTRATION OF SPACES









## MIVAR MUSEUM INTERVENTION

Internal Design Competition

(Construction and Sustainability Studio - Prof. Alessandro Rogora)

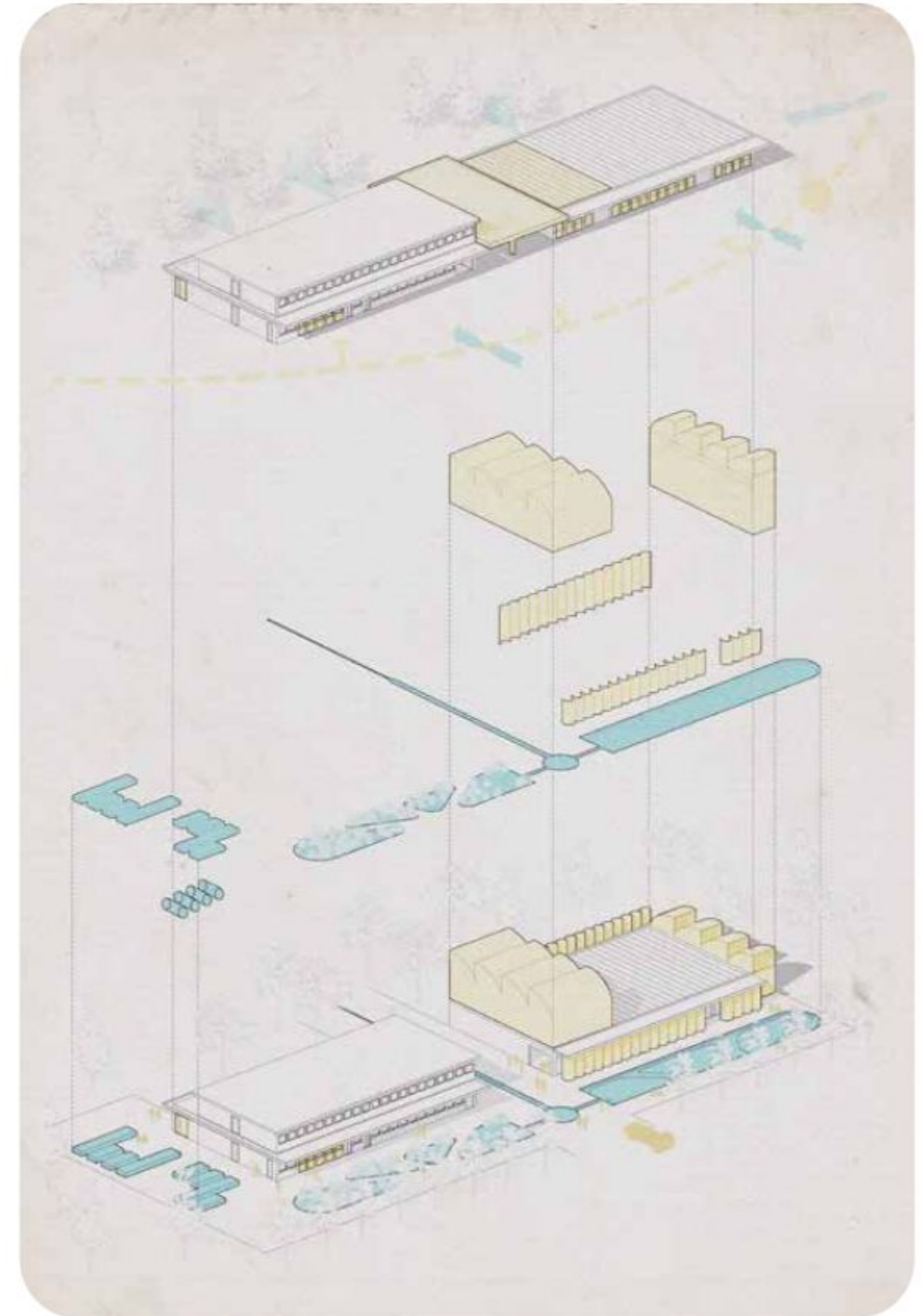
**1st place**

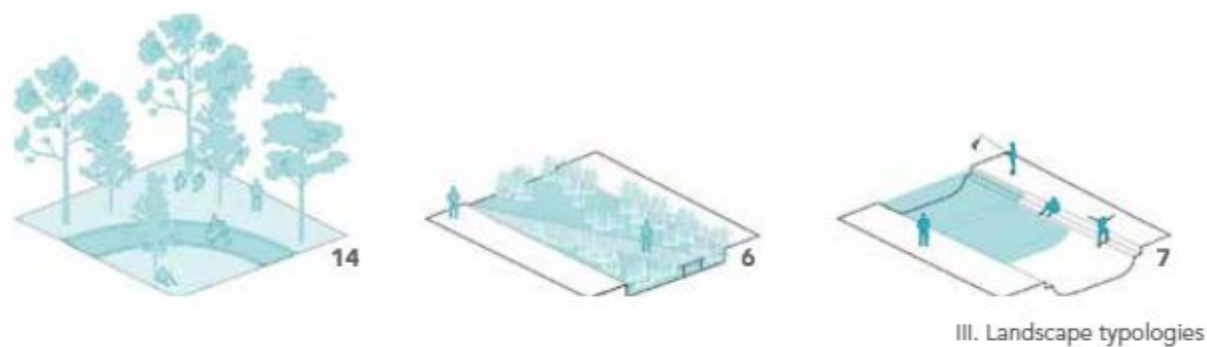
Year: 2021

Team: Carlos Arcos · Rodrigo Velasco · Pavithra Swaminathan

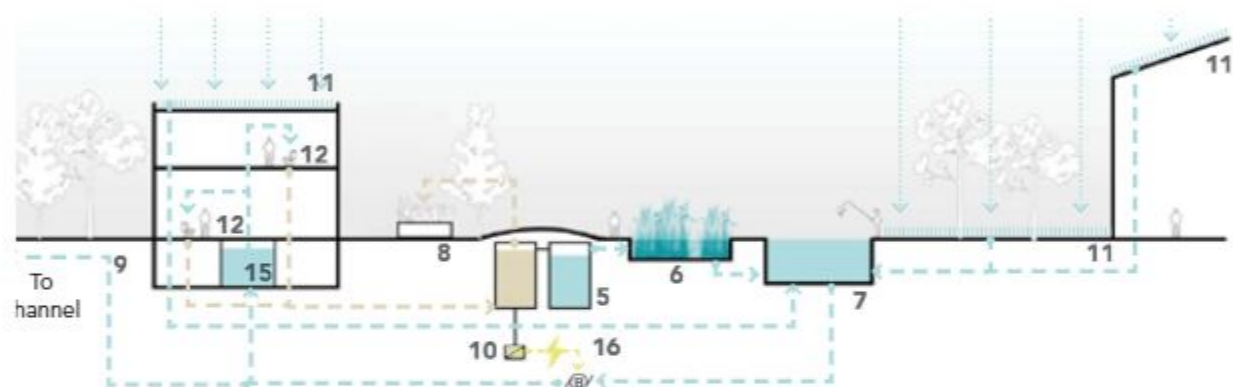
Role: Concept Idea, Sustainable Strategies, Diagrams and Detailed Plans.

Architecture and its static features are forced to change over time and adapt to new circumstances. These are the circumstances of the MIVAR building, a building that over the years has had to adapt to the different needs of its users. The last stage of adaptation will be the most important, as it involves a total change in uses and in the number and type of potential users. Therefore, this requires a reformulation of its spaces and its envelope. Which at the same time implies a reformulation of the amount of light needed for each space. The project strategy takes as its starting point the precise and intelligent control of light input. On one hand, within the building selected to develop administrative and commercial activities, the interior spaces are redistributed and the north facade is slightly modified. So, the spaces whose need for light is higher are located on the edges, and the spaces with less need for light, are located in the center.





III. Landscape typologies

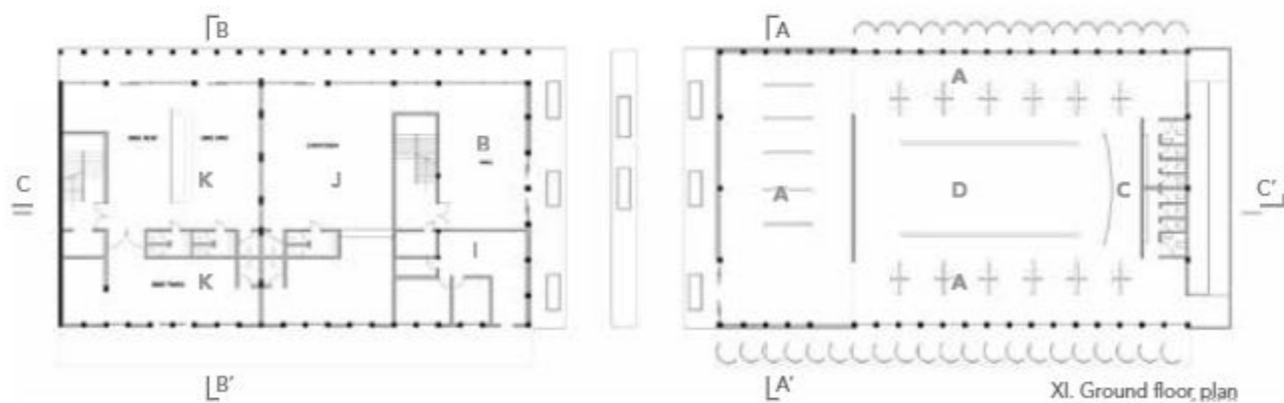


IV. Water sustainability cycle

Sustainability Strategies



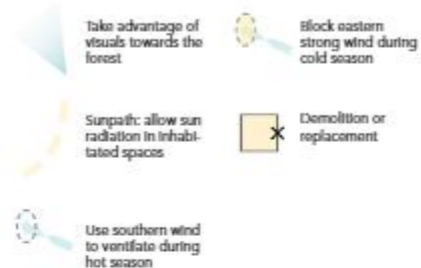
IX. Longitudinal section (C-C)



XI. Ground floor plan

General Plans

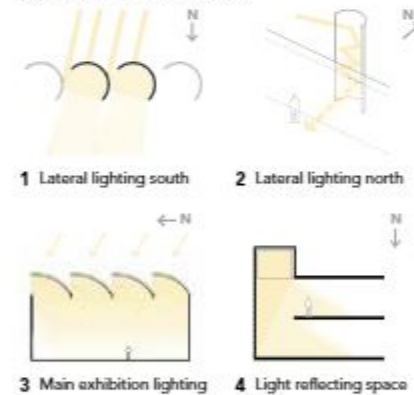
ANALYSIS AND STRATEGIES



ZONING AND LIGHTING

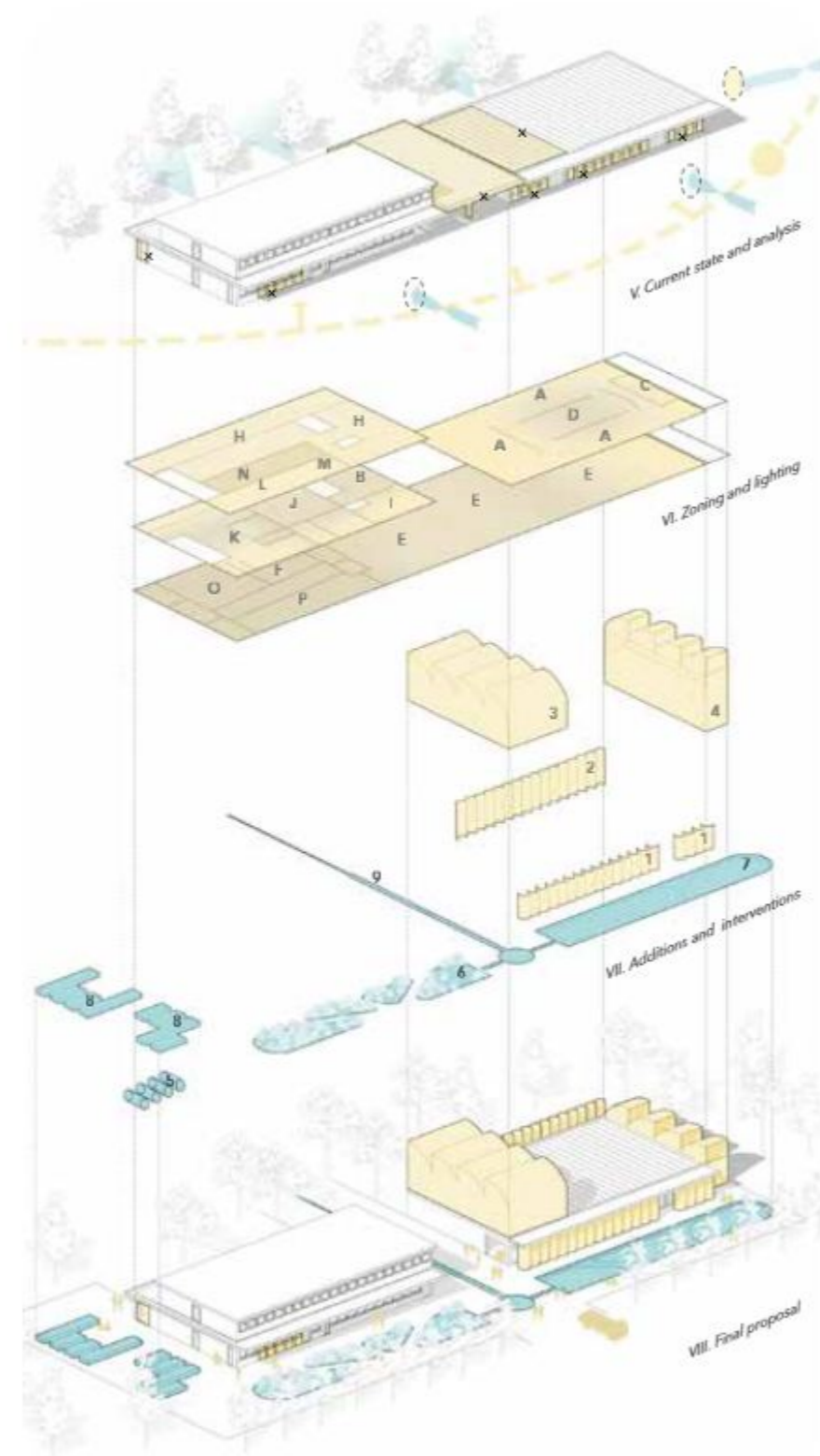
Natural light requirement +	A TV Exhibition	H Library
	B Gallery hall	I Caretaker's apartment
	C Toilets	J Cafeteria
	D Projections	K Bike bar/workshop
	E Radio Exhibition	L Linux group
	F Storage	M Conference room
	G Electrical room	N Wardrobe
		O Electrical room
		P Cistern

LIGHTING ACTIONS



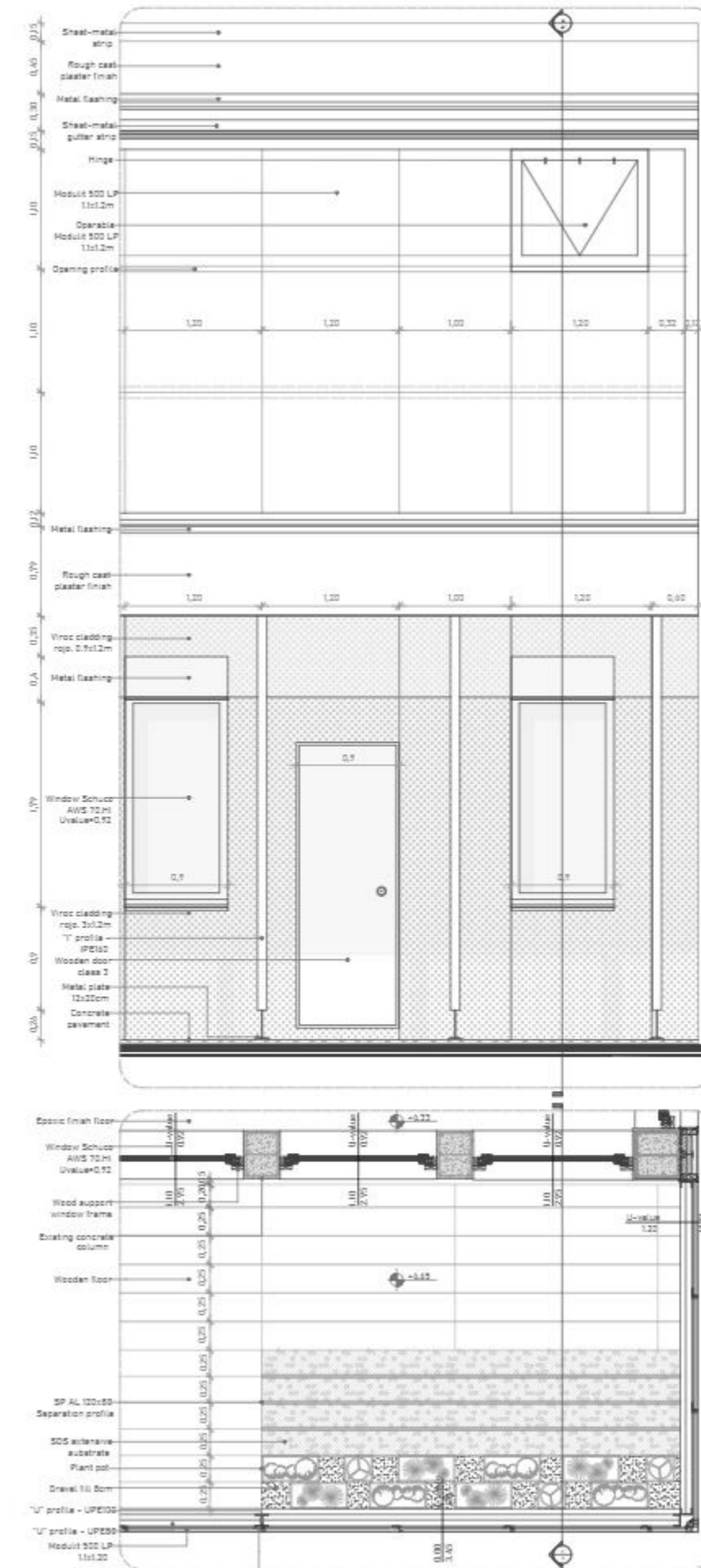
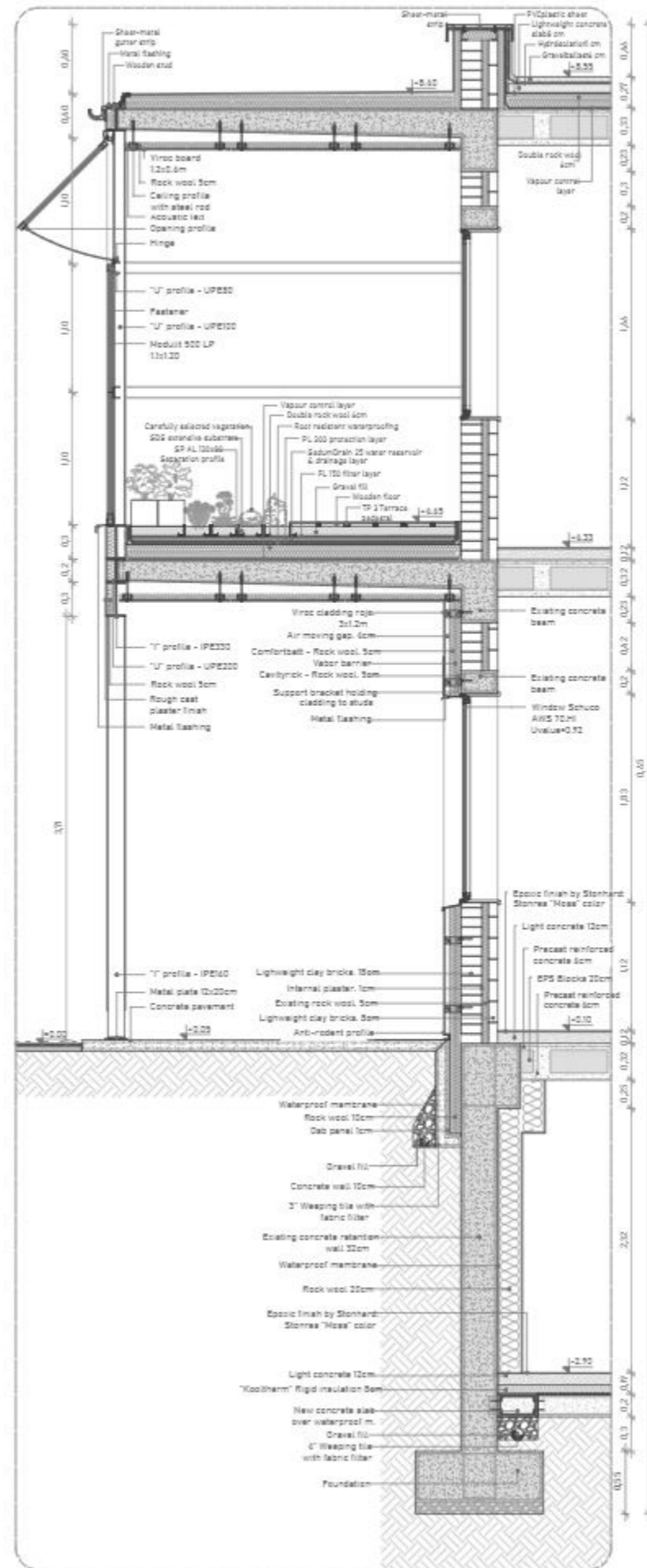
LANDSCAPE AND SUSTAINABILITY

- 5 Biodigester
- 6 Wetland water treatment system
- 7 Pond for water storage
- 8 Vegetable garden
- 9 Ditch in central strip
- 10 Energy generator from metan gas
- 11 Rainwater harvesting
- 12 Use of rainwater for toilets and greenery
- 13 Movement of fence
- 14 Public park
- 15 Cistern
- 16 Pneumatic pump



Bioclimatic Design

Section A



South Facade

First Floor



## OFF-GRID COMMUNITIES

Academic Workshop  
Advanced School of Architecture

Year: 2022

Team: Carlos Arcos - Simon Muller  
Alessia Sassone - Alina Kim  
Umami Zakir - Shiryu Kawamura

Role: Concept Idea, Sustainable Strategies, Architectural Design, Visualization and Kinetic Skin Design.

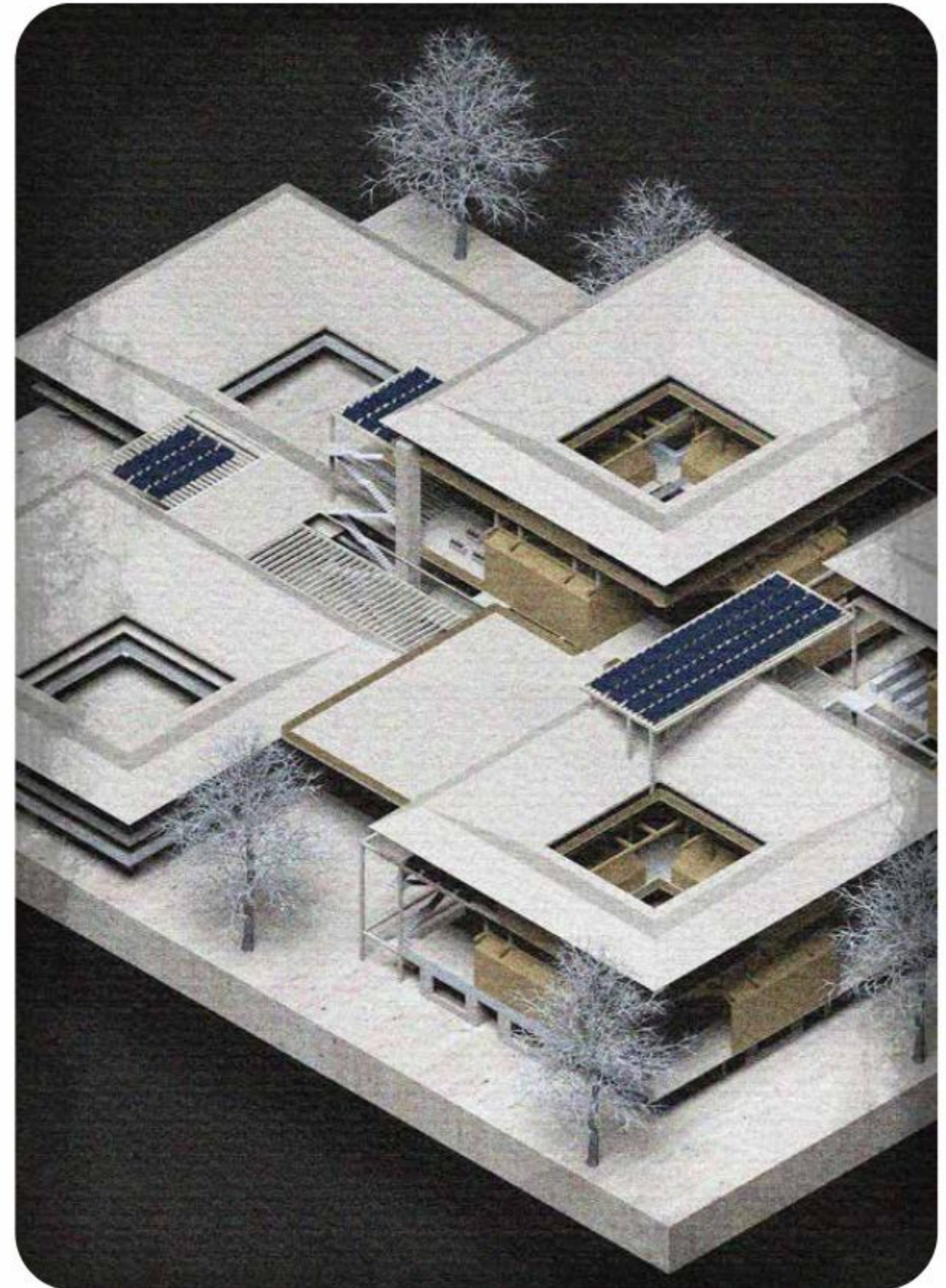
The design strategy devised, particularly for the location in Chennai, India, aims to realize an eco-sustainable housing project, compatible not only with the particular environmental conditions of the area, but also with the difficult social realities of the slums, plagued by both the housing problem and the presence of dangerous diseases such as malaria.

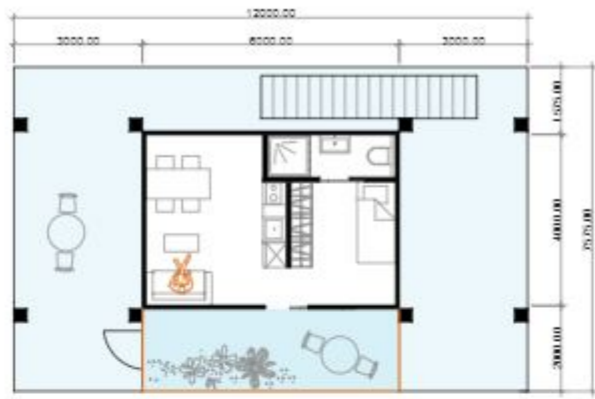
The initial approach was the study of vernacular housing types, which led to an understanding of the useful passive and active strategies to be adopted in the design and also to the local materials with a low environmental impact.

The most detailed part of the design concerns the panel system, that is imagined as breathable and adaptable skin wrapping itself around the skeleton of the living units.

The system, inspired by tradition Jaali screens commonly found in the southern regions of India, is therefore a skin protecting from rain and from direct sunlight, allowing for a shaded and ventilated space within. The panels are reactive, opening and closing depending on the rain and weather directions, but always permitting ventilation and light penetration.

The panel composition consists of a wood skin system, malleable and flexible taking inspiration from typical weaved palm frond cladding used in vernacular tropical housing.

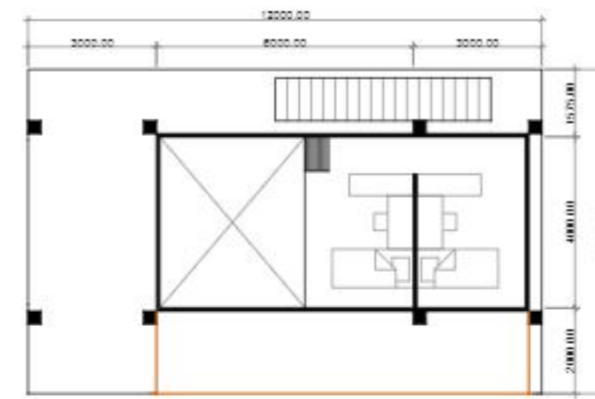




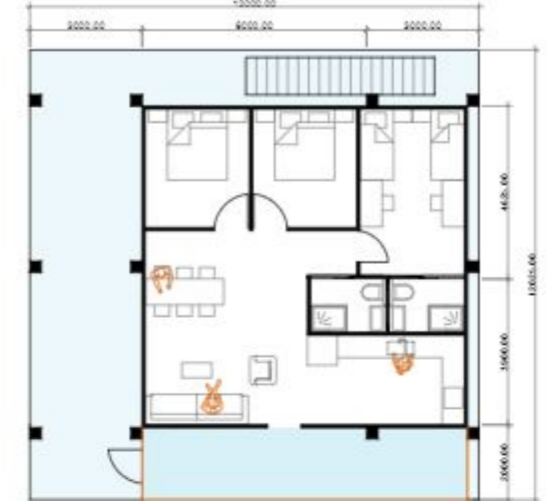
Users: 1  
Size: 24 sqm



Users: 2  
Size: 36 sqm

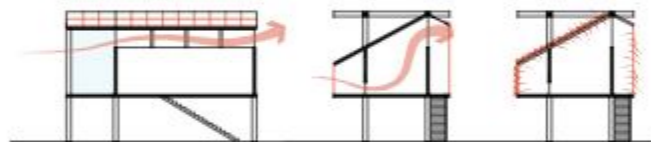
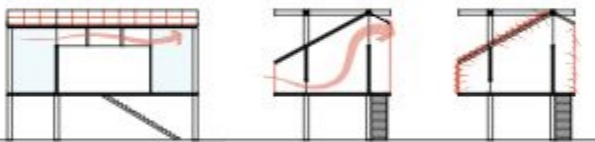


Users: 4  
Size: 60 sqm

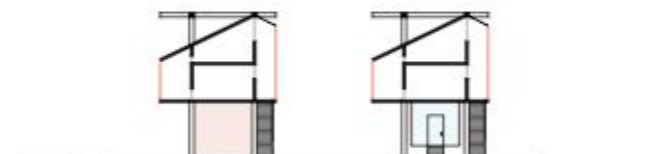
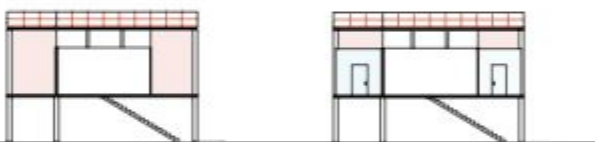


Users: 6  
Size: 77 sqm

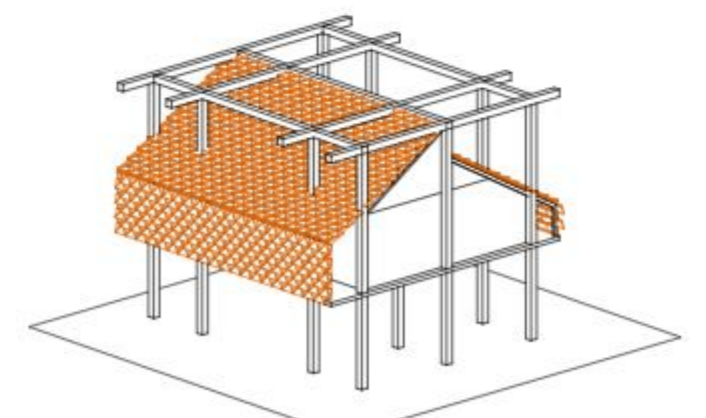
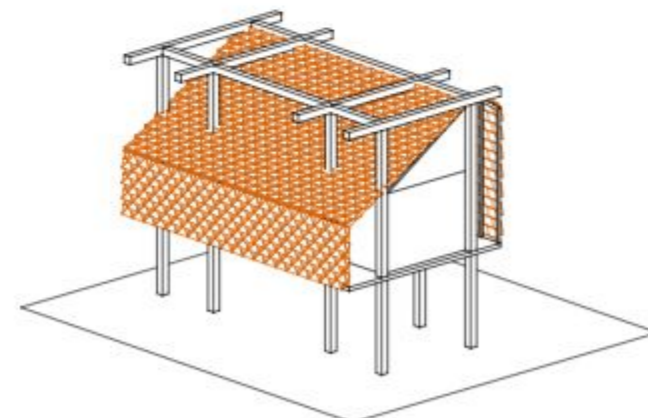
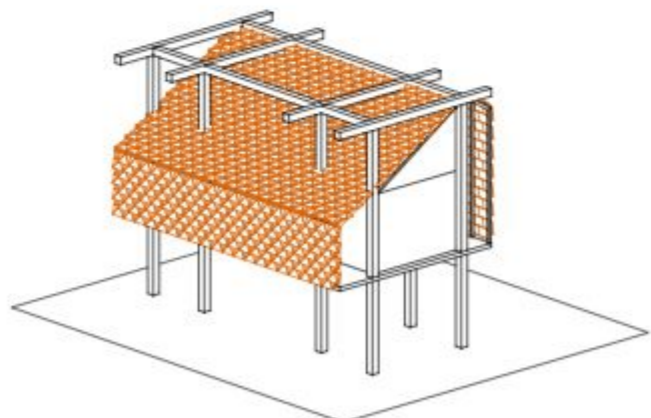
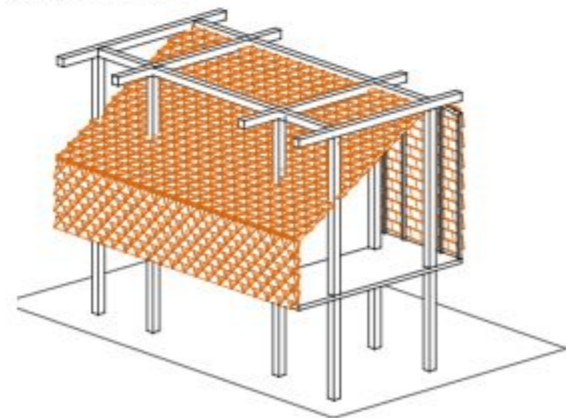
Natural Ventilation



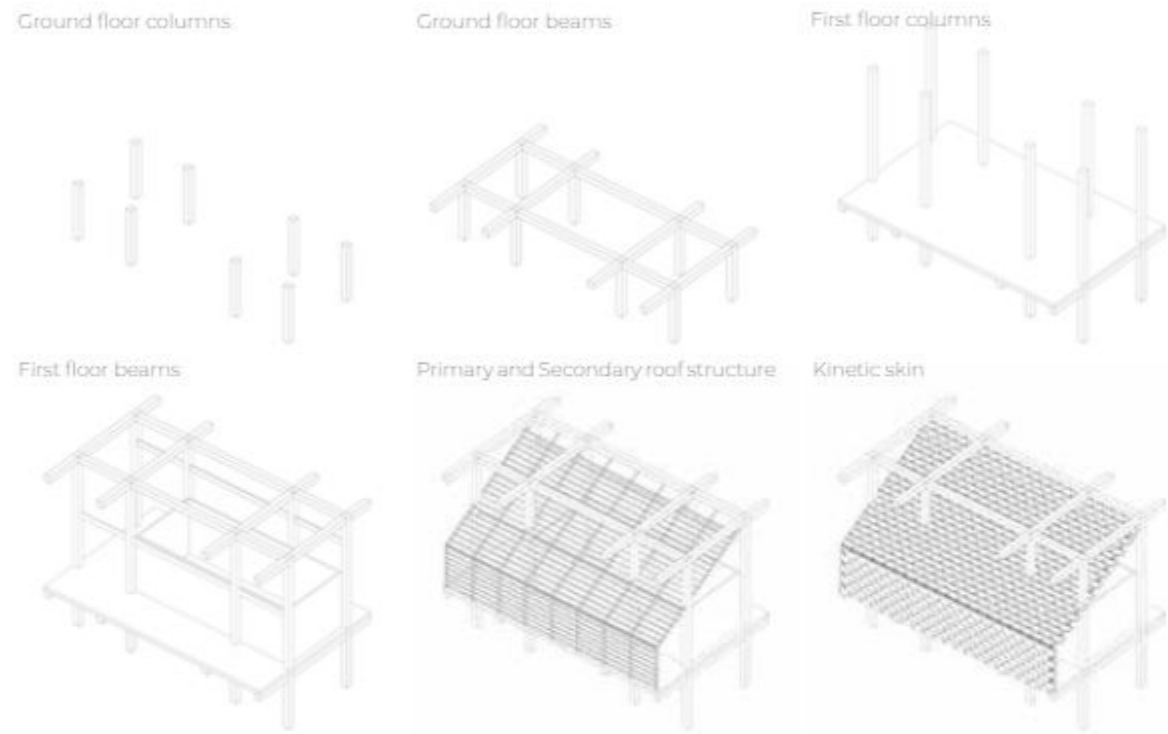
Incremental Housing



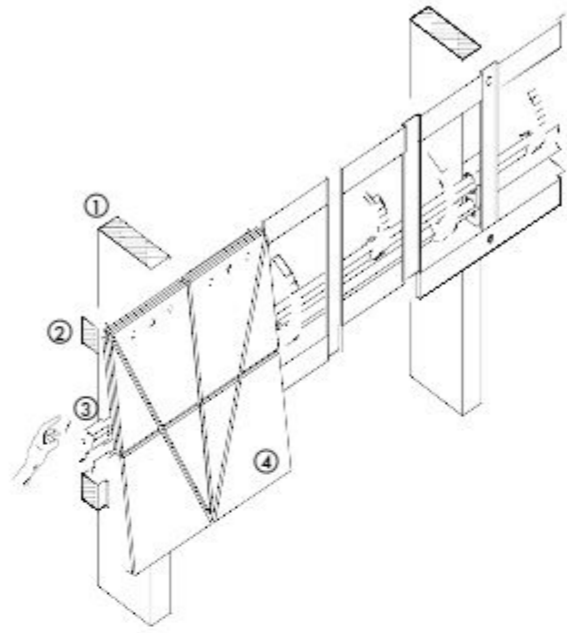
General View



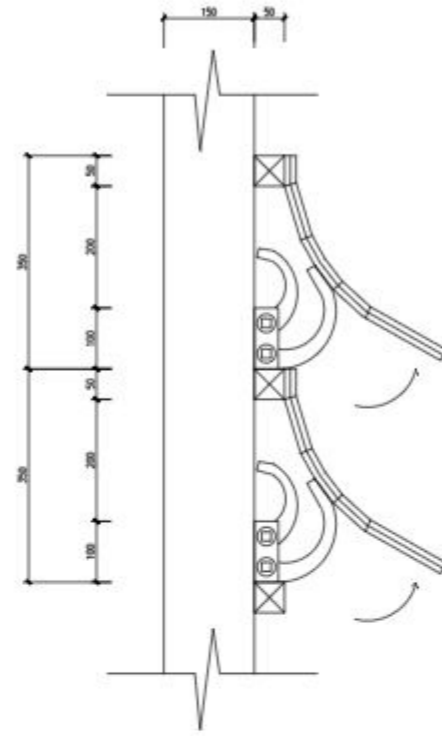
Unit Development



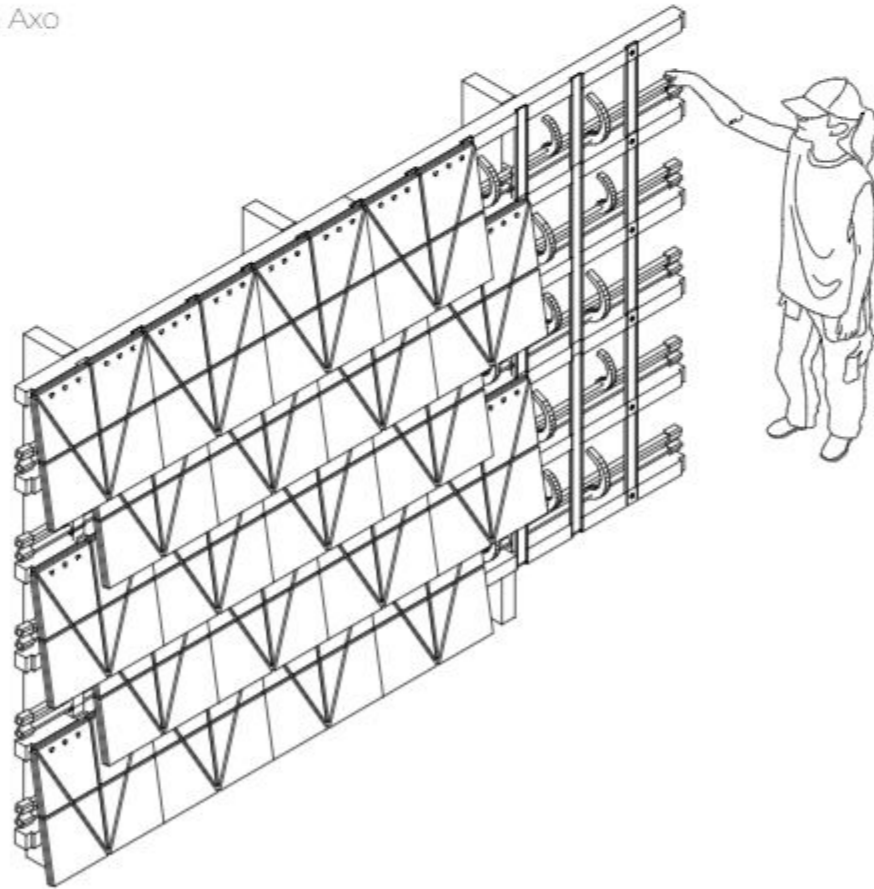
Panel Cam System



Panel Claddin Section



Panel Claddin Axo

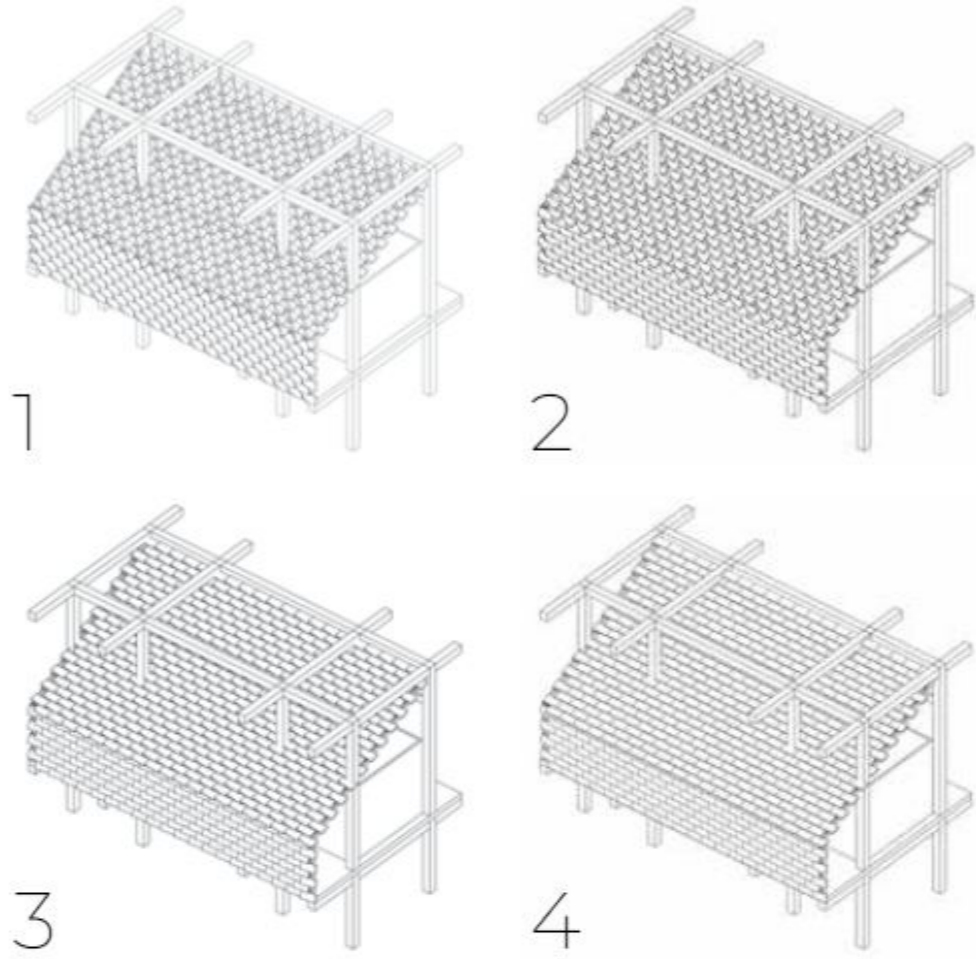


Kinetic Facade Construction

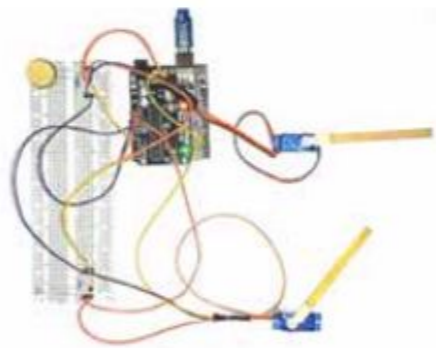


Kinetic Facade Physical Model

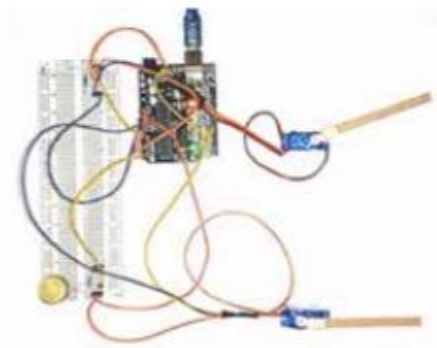
Kinetic facade movement



Elemental movement - Arduino model  
\*generated with the software codification

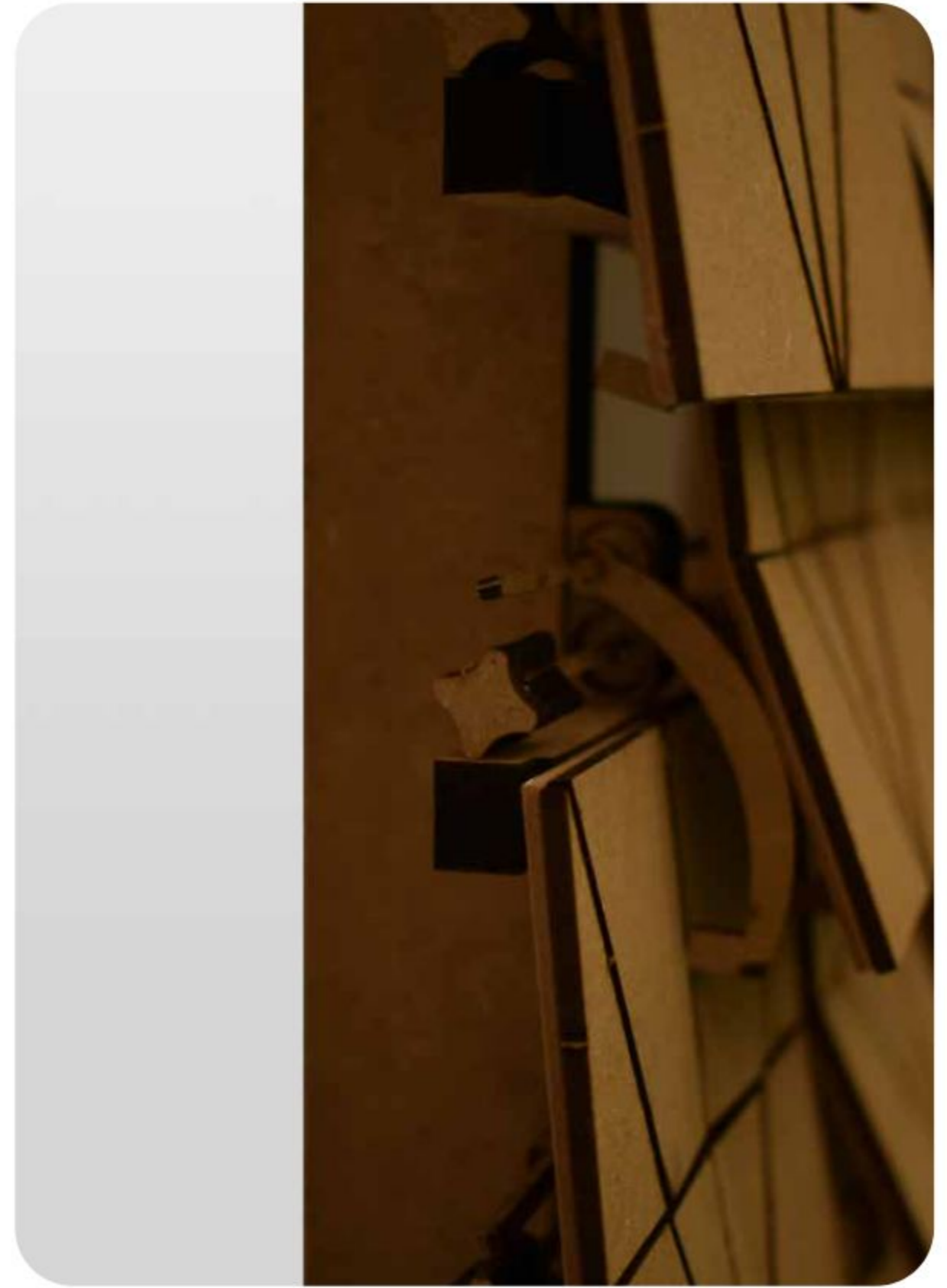


WestWindSpeed : 1  
WestW\_Angle : 0°  
EastWindSpeed : 183  
EastW\_Angle : 32°  
**East predominant wind**



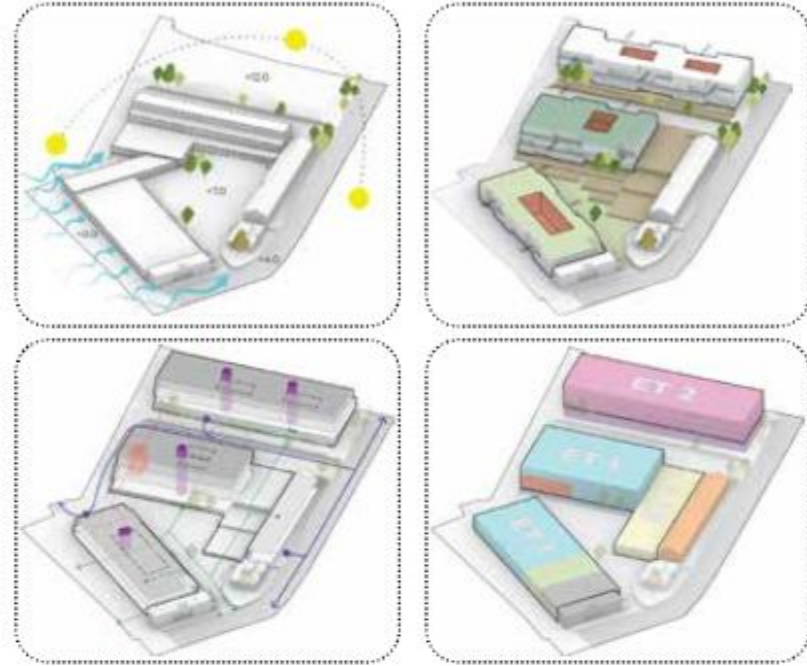
WestWindSpeed : 73  
WestW\_Angle : 12°  
EastWindSpeed : 6  
EastW\_Angle : 1°  
**West predominant wind**

Kinetic Facade Performance



Kinetic Facade Physical Model





## “DE LA RÍA A LA MONTAÑA”

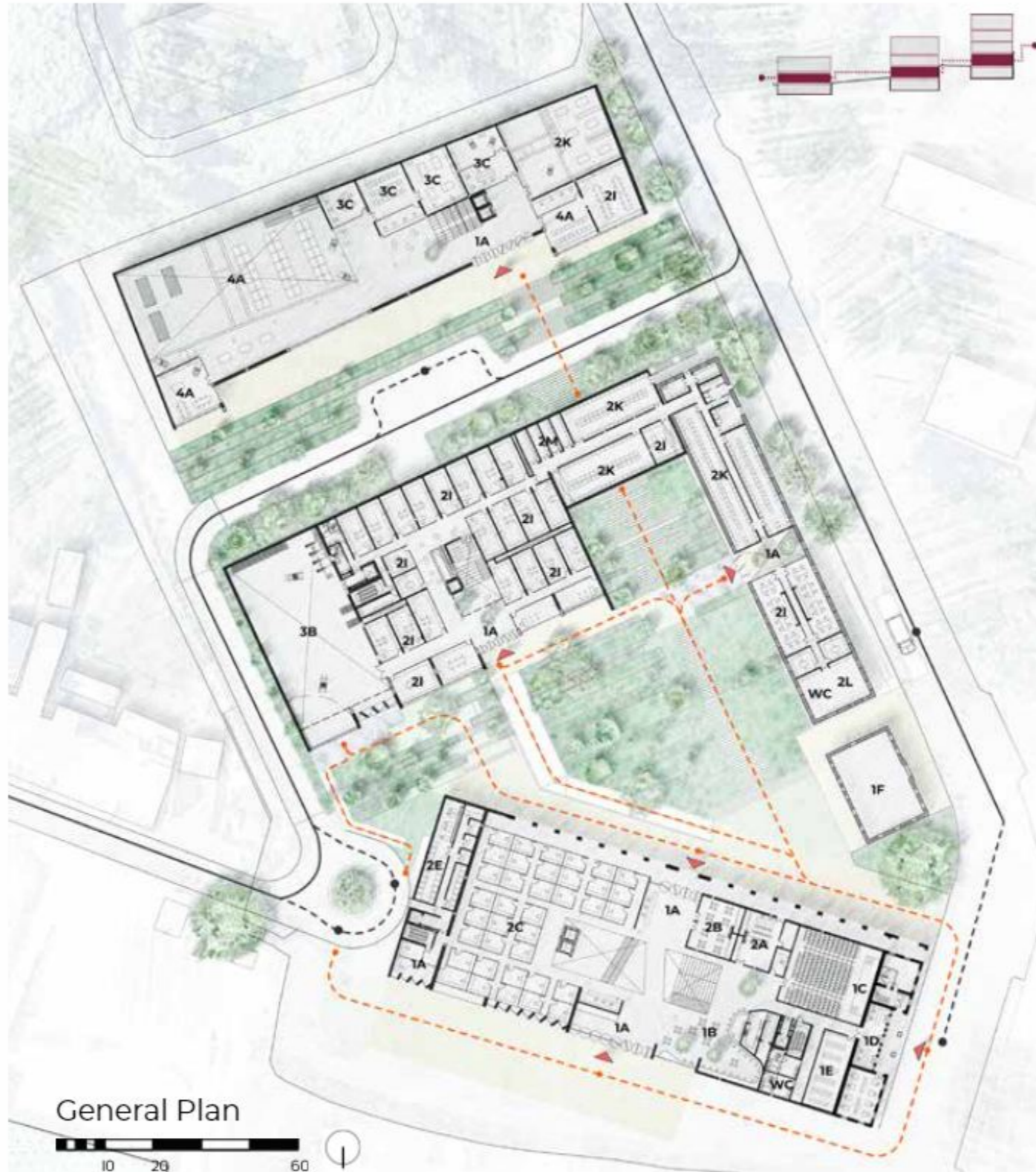
City Hall Competition  
Vigo City Hall, Galicia, Spain  
(In-progress)

Year: 2022

Team: Carlos Arcos · Byron Cadena · Kevin Guerrero  
Role: Sustainable Strategies, Bioclimatic Design,  
Diagrams, General Plans and Details.

This project is located along the banks of the Vigo Estuary and close to the mountains. The buildings are located in the mountain using layers that, like layers of sediment, are integrated into the mountain as if it were a portion of the same that was always there. As the volumes move away from the sea, their form decomposes, generating more voids oriented by the technical needs of the spaces in the architectural program. The composition's heterogeneous voids allow us to glimpse the mountains and integrate the proposed buildings into the existing landscape. As a result, the building merges with the landscape, while visually connecting the two most significant natural elements of Teis: the estuary and the mountain. The proposal arises from an analysis of the environment, local architecture, and its most relevant natural elements. A study that builds upon the existing one in order to provide the foundations for the future of the Marine Research Institute.





General Plan

**PUBLIC USE**

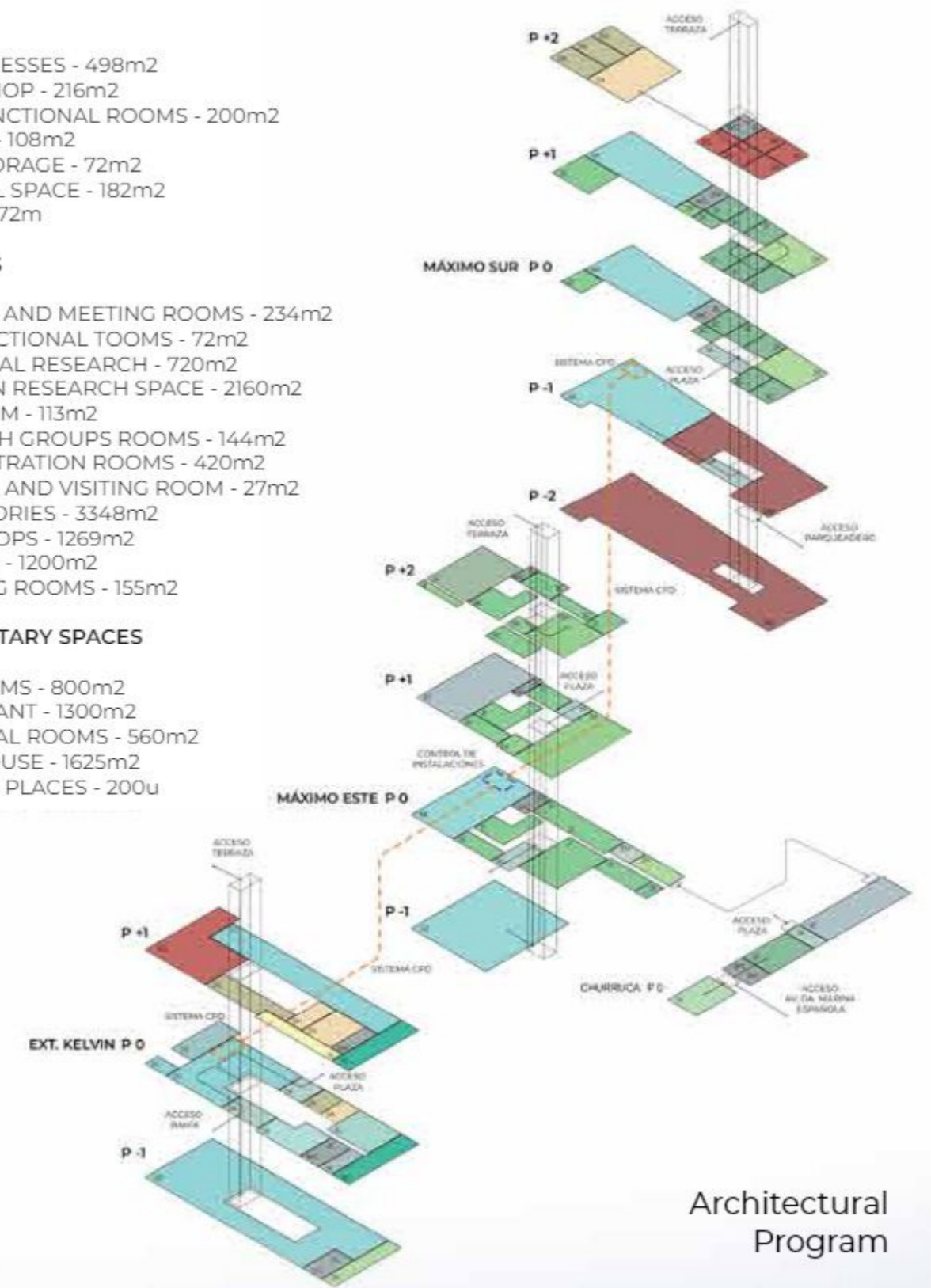
- 1A - HALL ACCESSES - 498m<sup>2</sup>
- 1B - COFFE SHOP - 216m<sup>2</sup>
- 1C - MULTIFUNCTIONAL ROOMS - 200m<sup>2</sup>
- 1D - LIBRARY - 108m<sup>2</sup>
- 1E - BOOK STORAGE - 72m<sup>2</sup>
- 1F - CULTURAL SPACE - 182m<sup>2</sup>
- 1G - ROOMS - 72m<sup>2</sup>

**MAIN SPACES**

- 2A - SEMINAR AND MEETING ROOMS - 234m<sup>2</sup>
- 2B - MULTIFUNCTIONAL TOOMS - 72m<sup>2</sup>
- 2C - INDIVIDUAL RESEARCH - 720m<sup>2</sup>
- 2D - COMMON RESEARCH SPACE - 2160m<sup>2</sup>
- 2E - CDP ROOM - 113m<sup>2</sup>
- 2F - RESEARCH GROUPS ROOMS - 144m<sup>2</sup>
- 2G - ADMINISTRATION ROOMS - 420m<sup>2</sup>
- 2H - COUNCIL AND VISITING ROOM - 27m<sup>2</sup>
- 2I - LABORATORIES - 3348m<sup>2</sup>
- 2J - WORKSHOPS - 1269m<sup>2</sup>
- 2K - STORAGE - 1200m<sup>2</sup>
- 2L - CLEANING ROOMS - 155m<sup>2</sup>

**COMPLEMENTARY SPACES**

- 3A - AQUARIUMS - 800m<sup>2</sup>
- 3B - PILOT PLANT - 1300m<sup>2</sup>
- 3C - TECHNICAL ROOMS - 560m<sup>2</sup>
- 4A - WAREHOUSE - 1625m<sup>2</sup>
- 4B - PARKING PLACES - 200u



Architectural Program



Bioclimatic Design - Section

The sustainability of the building is understood in a global way: energy, water, materials and waste. In addition, a social point of view is integrated that together generates a proposal with high impact reduction that a conventional building implies. This ensures environmental certification A.



**A** 0.21kg CO2 / m2 / year

**PASSIVE SYSTEMS**

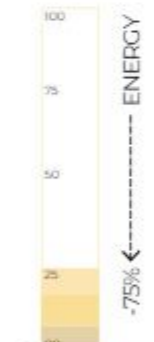
- Thermal Insolation
- Natural Light Collection
- Cross Ventilation
- Optimal Protection Based on Orientation
- Vegetation for Microclimate Generation
- Green House Effect



\*Heating demand is 65% less than the minimum energy efficiency value of a nZEB building.

**ACTIVE SYSTEMS**

- Energy Collection with Solar Panels
- Free-Cooling
- High Efficiency Production Machines
- Fans Ventilation
- Motion Detectors Lights in Common Spaces



\*The use of biomasse in the Galician forest, the use of geothermal energy through the use of wells in the Estuary and photovoltaic capture, is reduced to 96% of energy, achieving an **energy rating building A**.

**CONTEXT-BASED DESIGN**

- Industrial Structure
- Waste Reduction
- Rain Water Reuse
- Recycled Materials
- Materials Optimization
- Permeable Pavements



**SOCIAL WELFARE**

- Interaction Spaces
- Universal Accessibility
- Acoustic Isolated Spaces

\*The parameters of a WELL certification are chosen. In order to guarantee the best benefits for employees, customers and the institution.

Sustainability Strategies

**ROOF**

**C.01** Vegetation cover. Vegetable substrate on concrete layer, geotextile separator layer, waterproofing with double modified elastomeric bituminous sheet, geotextile separator layer, mortar layer, hormipán layer for forming slopes, geotextile separator layer, presotech waterproofing, Felt reed antipuncturing layer and mortar regulation layer without slope, e:3cm

**FACADES AND WALLS**

**F.01** Ventilated facade Equitone. Partition type brooch,

**F.02** Sun protection based on fixed wooden slats in vertical position.

**F.03** Precast concrete block 20cm thick, with external fine mortar plaster and metal splitter with substructure.

**F.04** Ventilated wooden facade. Partition type brooch, with two inner plates of brooch, inner thermal insulation and an outer plate of power panel h2o.

**FLOORS**

**P.01** Interior pavement finish on cement mortar leveling layer minimum thickness 5 cm, impact-proof sound insulation of cross-linked polyethylene sheet thickness 10cm and forged.

**URBANISM**

**U.01** Vegetable soil on soil filling and compacted. With channel and drainage tube of 150mm covered with geotextile layer, with 12cm/m of total surface of holes, in perimeter of the wall on concrete base.

**FORGINGS AND PILLARS**

**E.01** Forged of solid slab of concrete of edge 30cm.

**E.02** Forged of contralaminada madera (CLT) of 12cm on beams of 50cm of corner formed by laminated madera GL-24h.

**E.03** Square section pillar

**E.04** CL-24h Type Laminated Wood Pillar

**CEILINGS**

**FCR.01** Ceiling for installations

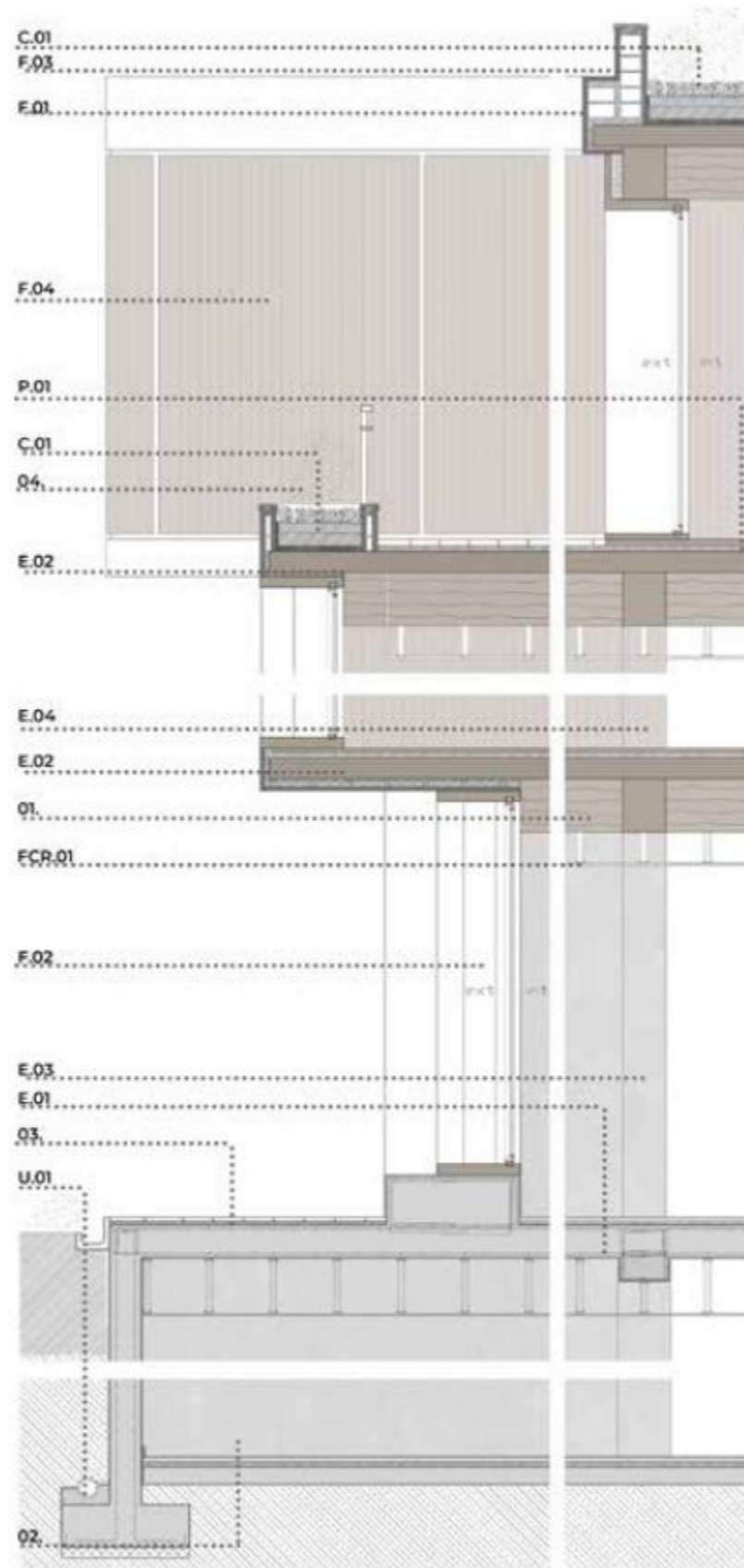
**MAIN MATERIALS**

**01.** Wood used both structurally and constructively. (Local production base)

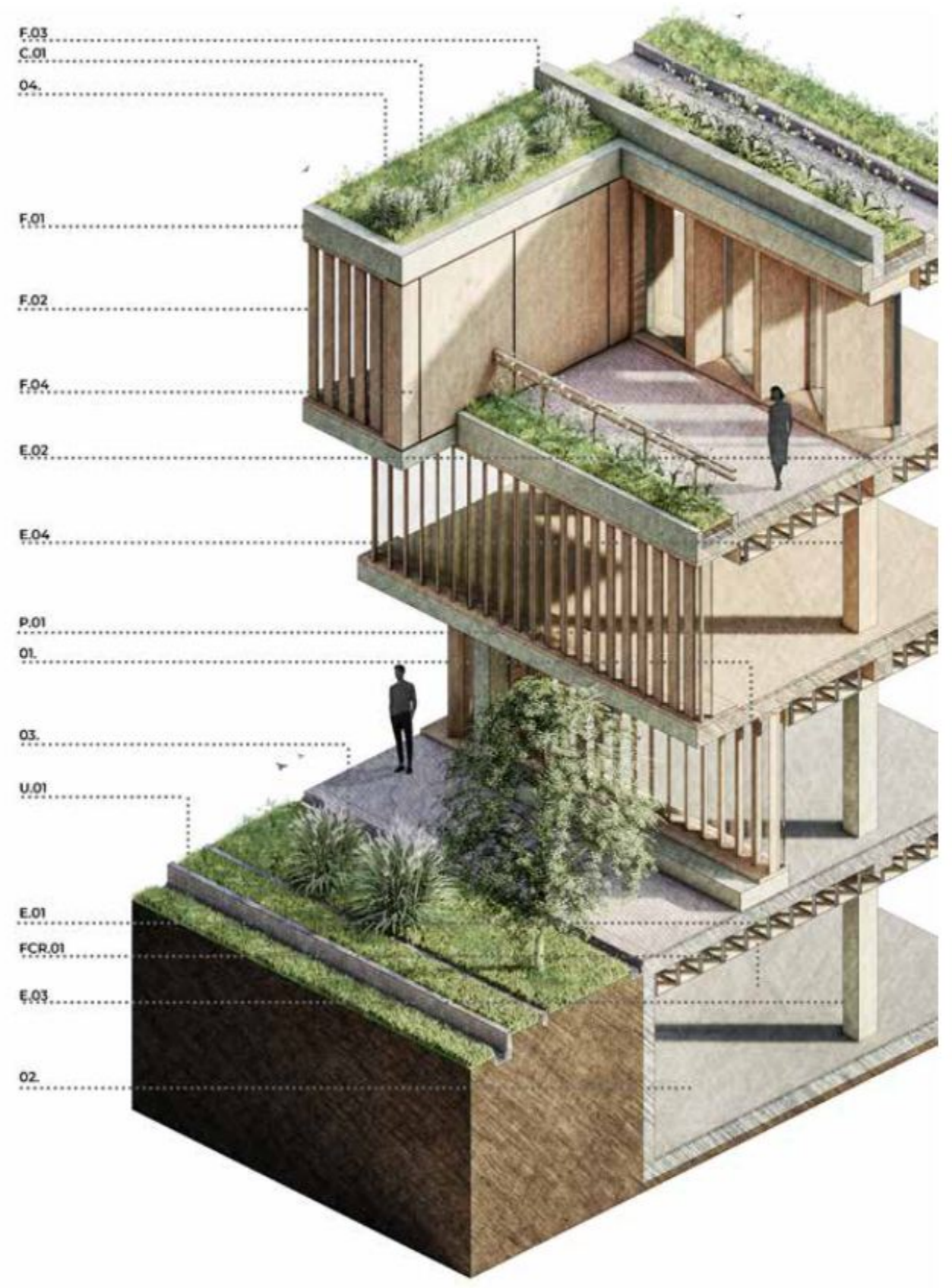
**02.** Concrete Used both structurally and constructively. Solid character of the ground floor.

**03.** Natural stone Used in the ground floor exterior perimeter. Base of the local architecture.

**04.** Vegetation Used throughout the proposal as compositional material and renaturalization of space, using native species such as: Barrón, Criptomera, Thyme.



Facade Detailed Section



Facade Detailed Axo

Symbology







**RESEARCH**

*WRITINGS & PUBLICATIONS*



**Project and Process**  
An Approach to Project Methodologies  
**Quito · Ecuador**

Year: 2017  
Role: Design project selected



**Chocó Andino Commonwealth**  
Territory, Rights and Duties. Manual for its Inhabitants  
**Quito · Ecuador**

Year: 2018  
Role: Research assistant, data visualization, and graphic support



**Life Under Quarantine Conditions**  
Social Isolation Impact on Housing  
**Bogota · Colombia**

Year: 2020  
Role: Research collaborator, data visualization, and graphic support



**New Flexibility of Housing & Public Space**  
Ideas for Post-Covid Habitability  
**Bogota · Colombia**

Year: 2021  
Role: Data visualization, graphic support and content management



**Territory and Heritage**  
1st International Congress of Young Researchers  
**Cuenca · Ecuador**

Year: 2017  
Role: Research article selected



**Transformations 2020**  
Pan American Architecture Bienal  
**Quito · Ecuador**

Year: 2020  
Role: Research article selected



**Landscape Teaching & Research**  
3rd Congress of Landscape, Teaching & Research  
**Corodoba · Argentina**

Year: 2021  
Role: Research article selected



**Off-Grid Communities**  
Eco-Digital Construction for Sustainable Living  
**Milan · Italy**

Year: 2022  
Role: Design project selected



portfolio · 2023



carlos david    arcos jácome

thanks for your time