

FOOD FOR THOUGHT

Achieving Youth Consciousness and Involvement in Agroecology through an Immersive Learning Environment

VALERA | ARCH 199.2



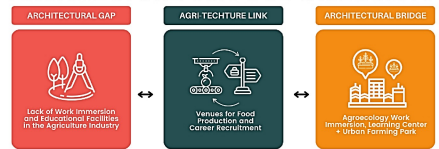
FOOD INSECURE FILIPINO YOUTH WITHIN THE FRAGILE CITY



At the heart of the fragile city are the vulnerable Filipino youth bearing the burden of food insecurity. As they are affected primarily by environmental, institutional, agricultural, health and economic pressures, their vulnerability is exacerbated by their lack of involvement and interest in agriculture. As a result they become part of the statistics. Scholars and the Department of Agriculture acknowledges the significance of the youth stepping up as front liners in food security and nutrition.

How can architecture contribute in preparing the youth to combat food insecurity first hand?

ARCHITECTURE VS. FOOD INSECURITY



Agile education is translated into the design of immersive learning environments.

A hybrid typology between an urban farming park and an agroecology learning facility was seen to have the most potential.

CONTEXTUAL DESIGN APPROACH

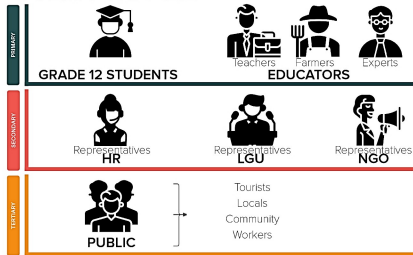
- CONTEXT 1a** | Site: Pampang st., Angeles City, Pampanga
Natural Site Characteristics
This site is approximately more than three hectares, with a generally flat slope, and prone to ground shaking soil. Major sunlight will be coming from the southern portion of the site. The site is covered with minimal existing trees.
- CONTEXT 1b** | Site: Pampang st., Angeles City, Pampanga
Sensory and Circulation Site Characteristics
The site is within a residential - commercial enclave with selected institutional zones. It is adjacent to the Pampang Market and is surrounded by schools. Most of the traffic will be coming from the Pampang street. The expansion site is located at the North-western portion of the site.
- CONTEXT 1c** | Site: Pampang st., Angeles City, Pampanga
Potential Primary Target Market
There are 16 k to 12 high schools within a 2km radius surrounding the site. These schools will be catered to by the proposed intervention.



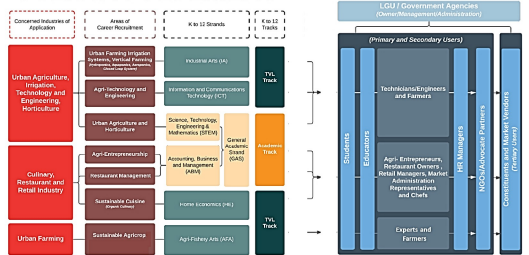
CONTEXT 02 | Agroecology Ecological Farming
The intervention aims to integrate the city-region's farming practices, food system and culinary industry into the education of the youth.

CONTEXT 03 | Work Immersion Set-Up Highly Segregated
Work Immersion Set-ups are highly separated and segregated. Students are categorized in their own bubbles based on profession instead of industries.

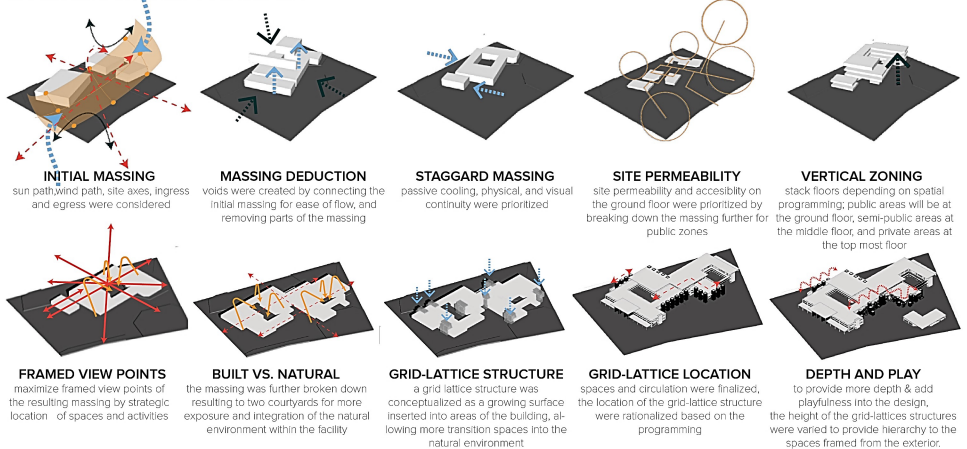
USER PROFILE



USER INVOLVEMENT



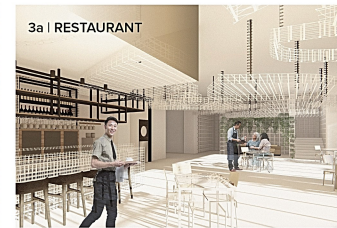
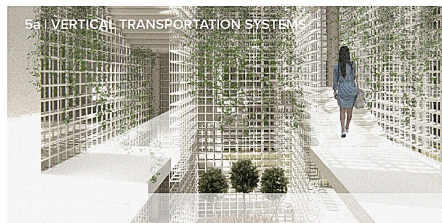
DESIGN MORPHOLOGY



DESIGN CONCEPT | IMMERSE + INTEGRATE



As Agroecology demands for a multisectoral approach in bridging gaps such as food insecurity, to fully immerse is to go from a segregated to an integrated work and learning environment



IMMERSIVE LEARNING & SECTOR - INTEGRATIVE WORK IMMERSION

The overarching integrative and immersive concept is exhibited as each industry of application is scattered throughout and across different levels. The different sectors are bridged together by general learning areas and shared learning corridors of exposure. As exposure breeds interest and familiarity, the design provides the students an increased exposure towards an array of specializations, relevant to the community of Angeles City, Pampanga, which they can choose from for their work immersion.



URBAN AGRI-TECH SECTOR

- 1a | AGRI-TECH ENGINEERING ROOM
- 2b | URBAN FARMING PARK DEMO FARMS
- 2b | GRID - LATTICE STRUCTURES
- 2c | PEST & COMPOST MANAGEMENT AREA
- 2d | INDOOR VERTICAL URBAN FARMING ROOMS
 - HYDROPONICS ROOM
 - AEROPONICS ROOM
 - AQUAPONICS ROOM
- 2e | GREEN ROOF



URBAN FARMING SECTOR

- 2b | URBAN FARMING PARK DEMO FARMS
- 2b | GRID - LATTICE STRUCTURES
- 2c | PEST & COMPOST MANAGEMENT AREA
- 2d | INDOOR VERTICAL URBAN FARMING ROOMS
 - HYDROPONICS ROOM
 - AEROPONICS ROOM
 - AQUAPONICS ROOM
- 2e | GREEN ROOF



CULINARY, RESTAURANT, & RETAIL SECTOR

- 3a | RESTAURANT
- 3b | TEACHING KITCHEN
- 3c | STAGING AREA
- 3d | ORGANIC MARKET
- 3e | POST-HARVESTING AREA
- 3f | PACKAGING AREA



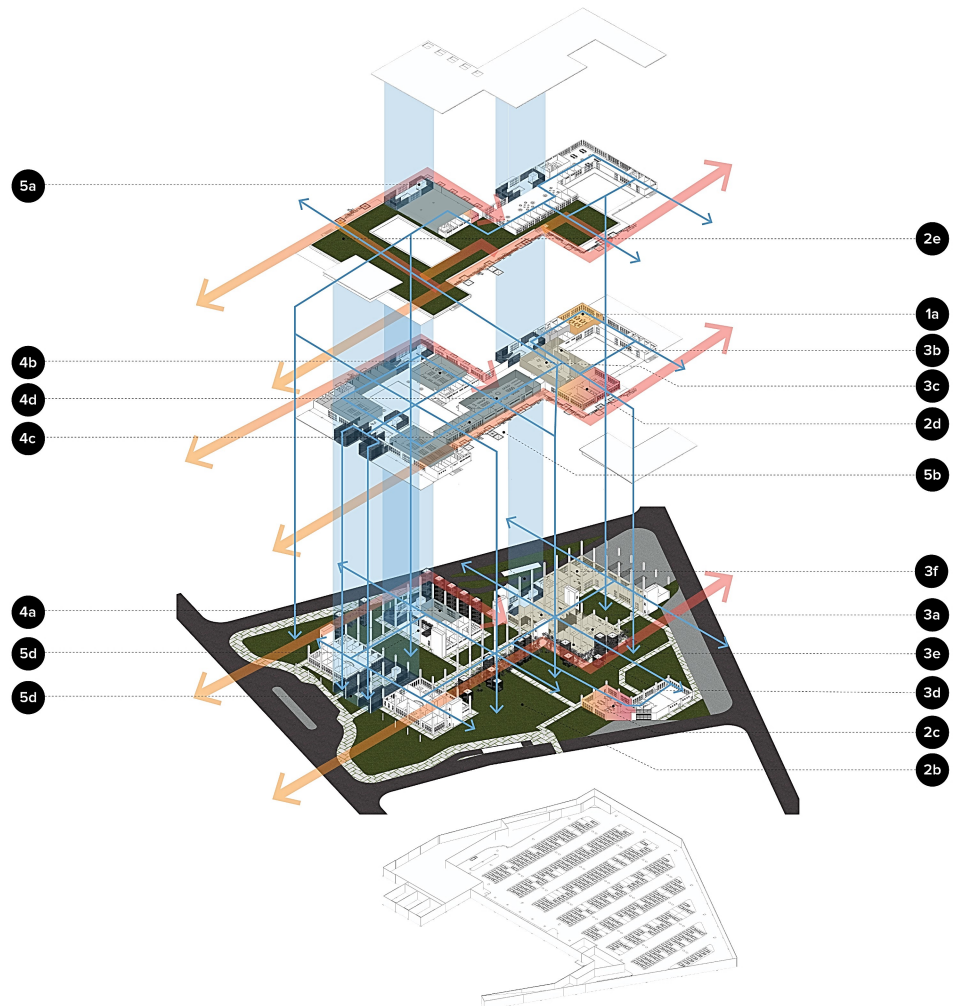
GENERAL LEARNING AREAS

- 4a | MUSEUM
- 4b | MULTIPURPOSE ROOMS
- 4c | BREAK-OUT/CONFERENCE ROOMS
- 4d | LEARNING RESOURCE CENTER
- 4e | ROOF DECK SEMI-OUTDOOR ACTIVITY AREA



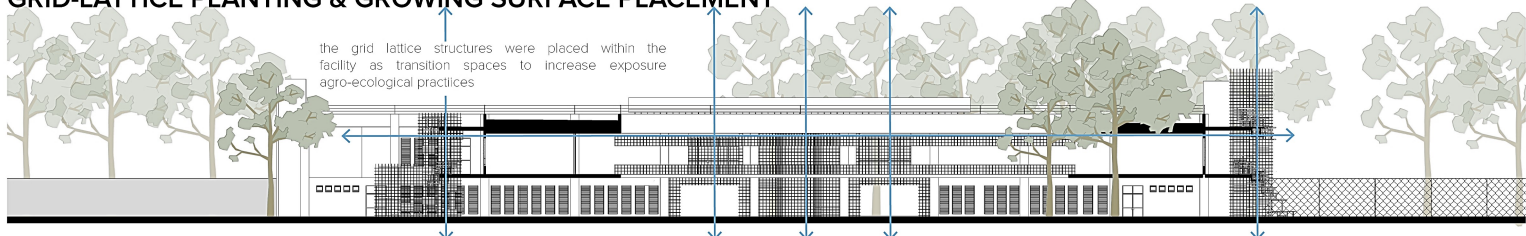
SHARED LEARNING CORRIDORS OF EXPOSURE

- 5a | VERTICAL TRANSPORTATION SYSTEMS
- 5b | BALCONIES
- 5c | CORRIDORS
- 5d | MAIN LOBBY
- 5e | SECONDARY LOBBY/EXHIBITION AREA EXTENSION



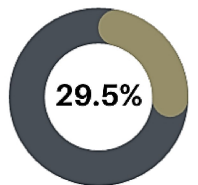
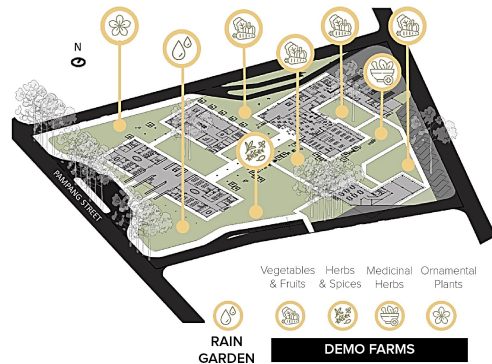
GRID-LATTICE PLANTING & GROWING SURFACE PLACEMENT

the grid lattice structures were placed within the facility as transition spaces to increase exposure agro-ecological practices





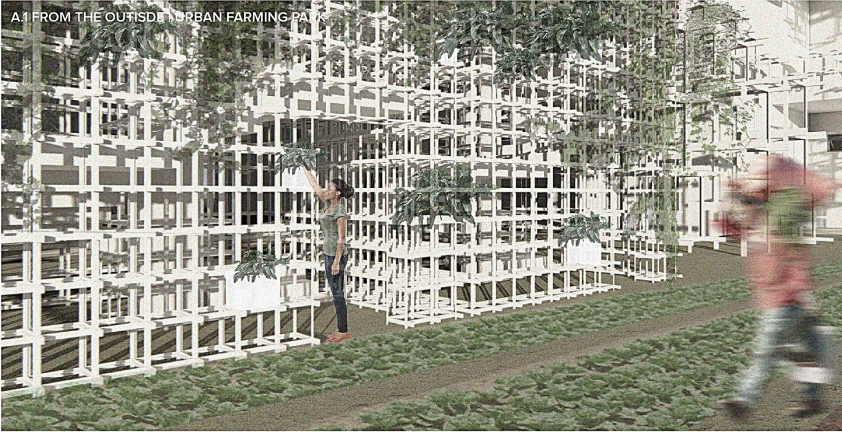
URBAN FARMING PARK



INCREASE IN MAXIMUM GROWING SURFACE

This horizontal urban farming park, together with the green roof and indoor vertical urban farms (hydroponics, aquaponics, and aeroponics), is increased by 29.5% or 7926.48 sqm, through the grid-lattice structures.

A.1 FROM THE OUTSIDE | URBAN FARMING PARK



A.2 FROM THE OUTSIDE | BALCONIES



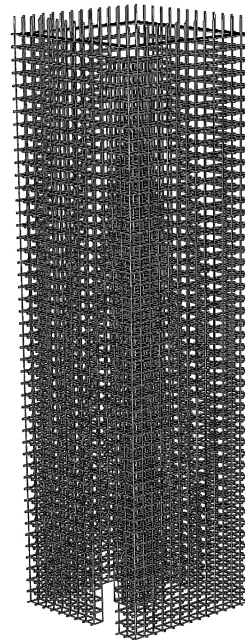
A.3 FROM THE INSIDE | GRID-LATTICE STRUCTURE



GREEN ROOF



OUTDOOR VERTICAL URBAN FARMING PARK



The horizontal urban farming park is given more depth to enhance the further the experience of the users. An outdoor vertical layer was added to the typical horizontal urban farming park through the grid-lattice structure. The elevations will change depending on how the students and educators locate their plant boxes within the grid lattice structure and depending on what type and color of plant is growing providing an immersive learning experience, where the facility in itself is not just a venue for learning but is a tool in itself for learning as it changes depending on the work immersion program of the students and at what stage they are already in.

A Grid-Lattice Structure Planting Surface

PLANT BOX ORIENTATION



PLANT BOX PLACEMENT

- A.1 FROM THE OUTSIDE | URBAN FARMING PARK
- A.2 FROM THE OUTSIDE | BALCONIES
- A.3 FROM THE INSIDE | GRID-LATTICE STRUCTURE

B Rainwater Harvesting System

Apart from the roof gutters, the grid-lattice structures also have an integrated rainwater harvesting system. Rainwater collected from the grid-lattice systems will be filtered through the facility's rainwater cistern with filtration system.

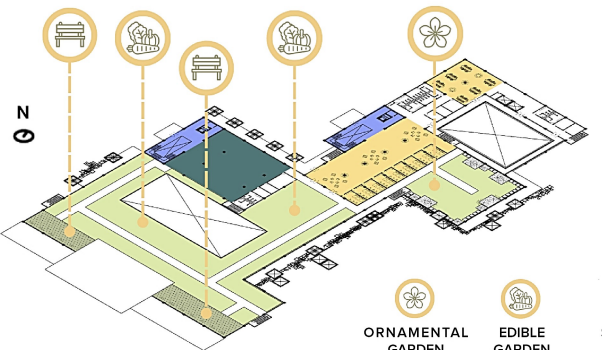
C Staircase

The grid-lattice structure is lined with a vertical transportation system for easy navigation and planting. This will allow the users to maximize the planting surfaces.

D Rainwater Collection Tank

E Pump and Hose - Irrigation System

GREEN ROOF DETAIL



- ORNAMENTAL GARDEN
- EDIBLE GARDEN
- SEATING AREA