Folding And Filling



- The public market design of street renovation based on the concept of "ecological flow space"



THE PROJECT

In the urban renewal of Curitiba, Brazil, we propose the "Foldand-Fill" concept, integrating ecology with functionality. Starting from the local climate, we introduce the "Forest Light" idea, preserving the original landscape while utilizing green energy technologies and photovoltaic designs to harness and control natural light, creating a comfortable and energy-efficient environment. The design emphasizes rainwater harvesting and urban circularity, using umbrella-like structures to collect rainwater, providing a stable water source, and enhancing the market's ecological charm. Spatially, we adopt foldable and modular strategies to accommodate diverse needs. Streets feature expandable partitions, while markets utilize detachable modular spaces, enhancing space utilization and fostering cultural exchange. Additionally, we focus on social harmony, using color schemes and spatial nodes to eliminate racial discrimination, elevate vulnerable groups, and foster an inclusive and supportive public space. In summary, this design aims to innovatively blend ecology with functionality, creating a green, energy-efficient, flexible, and socially significant public market, infusing new vitality into Curitiba's urban renewal.



CITY OF CURITIBA



It is a city in southern Brazil and the capital of the state of Paran á . Curitiba's urban planning is considered one of the models of urban planning in the world, with its public transport system, waste management and recycling, green exchange projects, people-centered planning, etc. Ranked by the United Nations as "the city with the highest standard of living index in Brazil"

CITIZEN CULTURE



Curitiba's government seeks to create a sustainable mindset within the population,making them feel identified and proud with the city and their surroundings, inviting them to participate on ecological activities such as recycling and to take care of the green spaces.

CLIMATE

The climate is cool and pleasant, with an average annual temperature of 16° C and an average annual precipitation of 1412 mm.



ANALYSIS OF SITE PROBLEMS

MIXED TRAFFIC

Mixed traffic of people and vehicles not only has safety hazards but also has low traffic efficiency

CHAOTIC ROADS

The roads in the site are chaotic, which is not conducive to the development of business.

INSUFFICIENT PARKING SPACE

The insufficiency of parking space further aggravates the chaos of traffic flow

ENVIRONMENTALLY FRIENDLY

The waste of vendors is piled up at will, which is not conducive to being ecofriendly.



CURRENT SITUATION ANALYSIS

SITE ANALYSIS





BLOCK RETROFIT DESIGN



URBAN PLANNING



On the pavement with graffiti, the placement of architectural sketches and landscape nodes can promote the retention of people, leisure and entertainment, and promote the development of surrounding commerce



Similar to the BRT bus system, it uses a threeway system, except that the street is in the middle and the traffic on both sides

The benches can relieve pedestrians' fatigue, and pedestrians can rest and gather there, with the aim of drawing people's attention to the street and bringing in more customers.





On Sunday, vehicle access will be restricted on PADRE ANCHIETA STREET, exclusively for residents and suppliers. The landscape not only enhances the beauty of the entire street, but also purifies the air in places with a lot of people, and can also be sold as a commodity Modular Customization The foldable and detachable structure allows each vendor to decorate all sides, showcasing their unique brand or style, while still maintaining a cohesive market design.





Space Optimization: The diamond-shaped folding structure makes efficient use of limited space.

ESIGN STRATEGIES Installation

One a foldable diamond-shaped mobile stall

Creating Resting Zones: The S-shaped and round seating areas offer clearly defined spots for rest, allowing pedestrians to take breaks while exploring the market, contributing to a more leisurely and enjoyable environment.







Installation Two

RAINWATER HARVESTING SCHEME

WATER TANK

•Water Cycle Utilization: collecting rainwater; inspiration from bird nests.

GN STRATEGIES

•Foldable and Collapsible: can be fully foldable and collapsible.

•Transparent Biodegradable Membrane transparent, biodegradable material; rain protection.





Installation THREE Modular design

