



# Curitiba

TEAM #35

RIVER ANTS

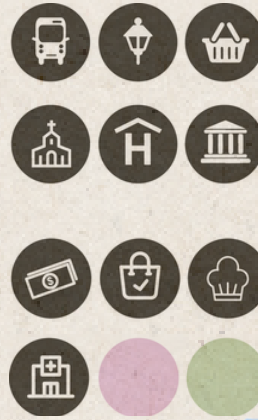
## INDEX

- Diagnosis
- Concept
- Project

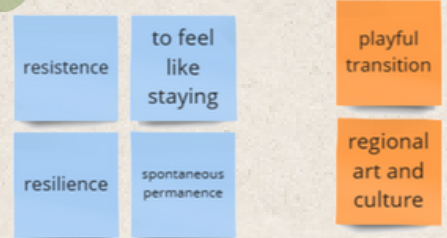
SOCIAL-INNOVATIVE-COMUNITY-REGENERATIVE

Curitiba-Paraná-Brazil

# Urban Context



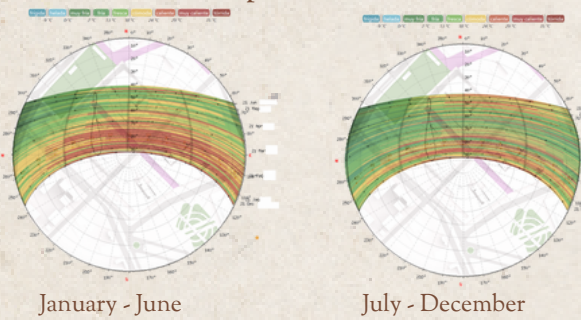
This mixed street, which is partially pedestrianized, serves as a vital link between General Osorio Square and the primary pedestrian avenue, connecting to Rua Barbosa Square and the public transport system. It primarily hosts a variety of commercial establishments, including shops, pharmacies, barbershops, hotels, and more.



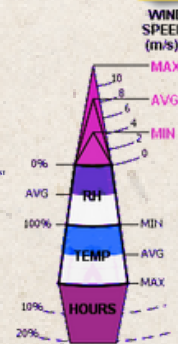
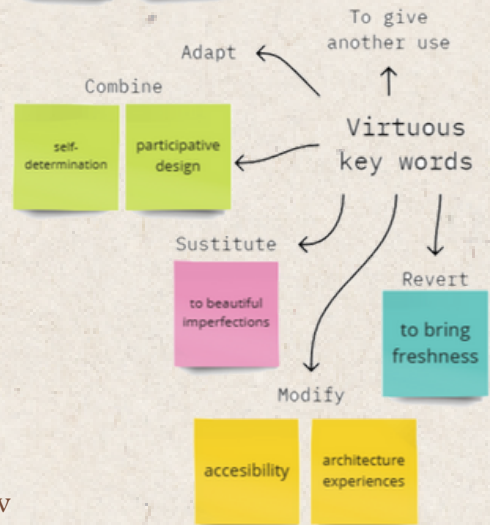
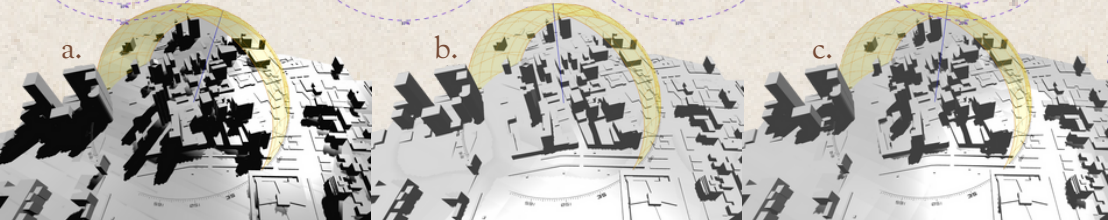
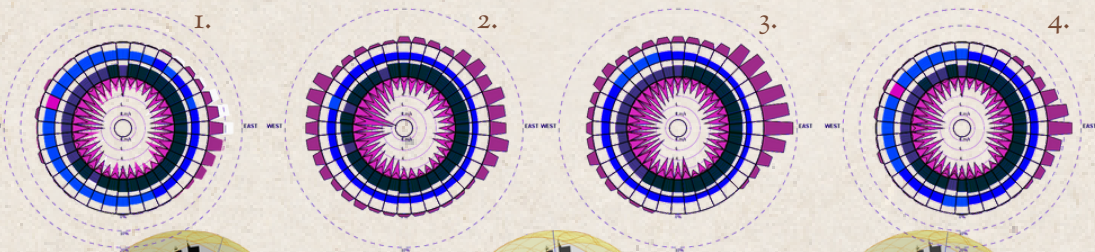
# Environment Context

Stereographic Sun Chart with temperatures

In Curitiba, the summers are warm and mostly cloudy; the winters are short, cool, and partly cloudy; and it is wet year round. Over the course of the year, the temperature typically varies from 10 °C to 26 °C and is rarely below 26 °C or above 30 °C.



Wind Wheel Charts



- 1. spring
- 2. summer
- 3. autumn
- 4. winter

- a. Winter solstice
- b. Summer solstice
- c. Autumn/Fall Equinox

## Historical Context

Curitiba's location can be traced back to its roots in the gold exploitation routes. In 1637, Vila Velha was established, and in 1693, the town of Vila de Nossa Senhora da Luz e Bon Jesus dos Pinhais was founded. The town's significance grew along the tropeiro routes. During the 19th century, Curitiba saw significant expansion, driven by the trade in yerba mate. Key urban planning milestones include the Taulois Plan of 1855 and the Agache Plan of 1943.



Transition to permanence

Adapt

Vicious key words

Substitute

linear monotony structures on pathways

linear pathways  
garden built-up areas

Modify

Revert

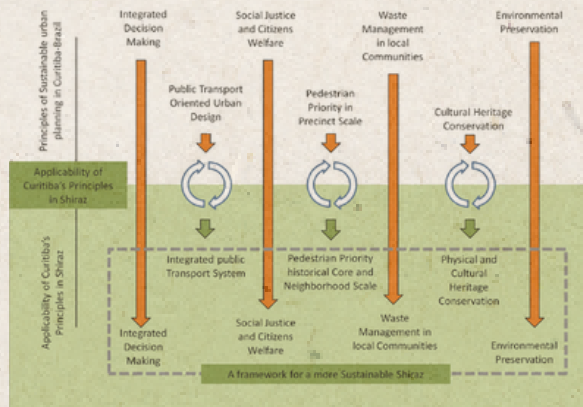
heat island effect



## Social Context

In Curitiba, the population is predominantly of Portuguese-Brazilian descent, with Roman Catholicism as the predominant religion. The state is responsible for overseeing primary and secondary education. Paraná, as a state in Brazil, plays a significant role in coffee production.

One noteworthy social influence in the region is the Grass Roots movement, which aims to mobilize individuals to take action and influence outcomes. This movement combines community efforts with political strategies, as detailed in the chart below, and emphasizes strong sustainable principles.



Curitiba boasts a rich, diverse culture shaped by its international residents, offering tourists a wide range of cultural experiences.

European influences strongly permeate the city's art scene, and Curitiba actively supports and celebrates the arts through programs and events that nurture emerging talents. The city features excellent movie theaters and iconic theaters, such as the Guaíra Theater, hosting various festivals and renowned artists.



# CONCEPT

Being Curitiban

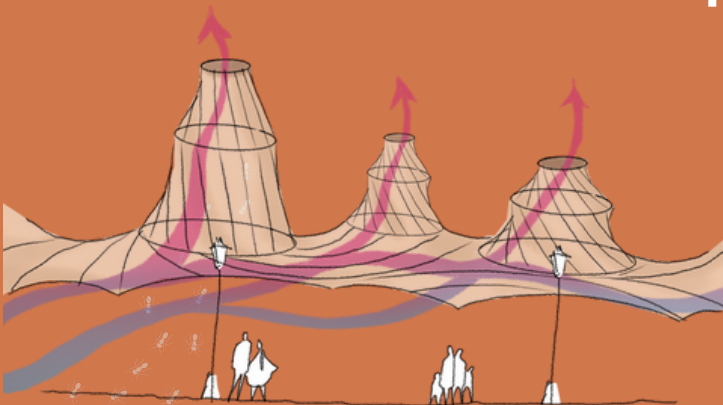
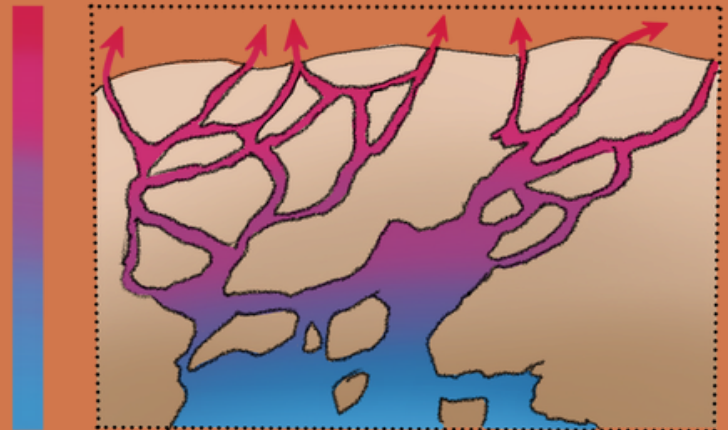
## River Ants

This avenue has as a heat island effect; density, materials and orientation reduce shadows despite the height of nearby buildings.



“If parks are Curitiba’s oceans (Raquel Seco), then the avenue must be the river that connects them (Plaza Barbosa y Plaza Osorio), behaving like the lungs of the city, we developed this connecting nodes which main function is like an anthill throwing out heat waves coming from below and providing shelter to nearest pedestrians”.

As previously mentioned, the people of Curitiba exhibit a profound sense of belonging, leading them to actively engage in the decision-making processes concerning their city. This active involvement informs our strategies, which prioritize the revitalization of public spaces and their transformation from mere transitional areas to sites of spontaneous permanence and a strong sense of community attachment.



## DESIGN STRATEGIES

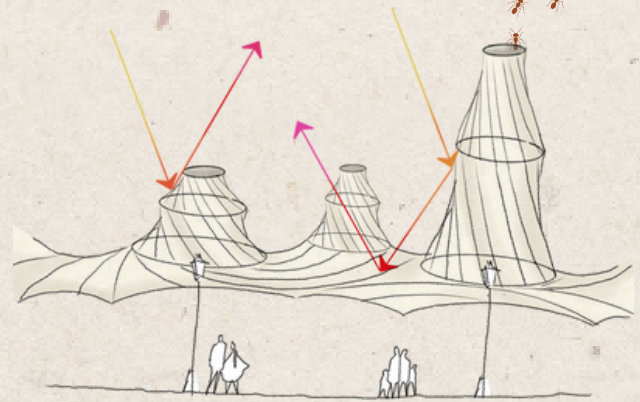
- Anthill - weave the shadow and breathe 1
- Holistic experiences 2
- Attunement - spontaneous permanence 3

# Strategic Intervention

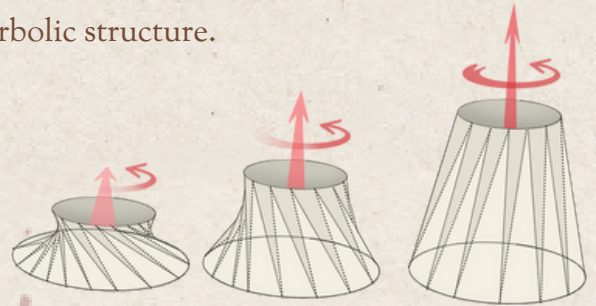
## 1. ANTHILL

*He states that "[...] the right to the city is like a cry and a demand [...].[and] [...] cannot be conceived of as a simple visiting right or as a return to traditional cities. It can only be formulated as a transformed and renewed right to urban life" (Lefebvre. 1996 [1968]: 158).*

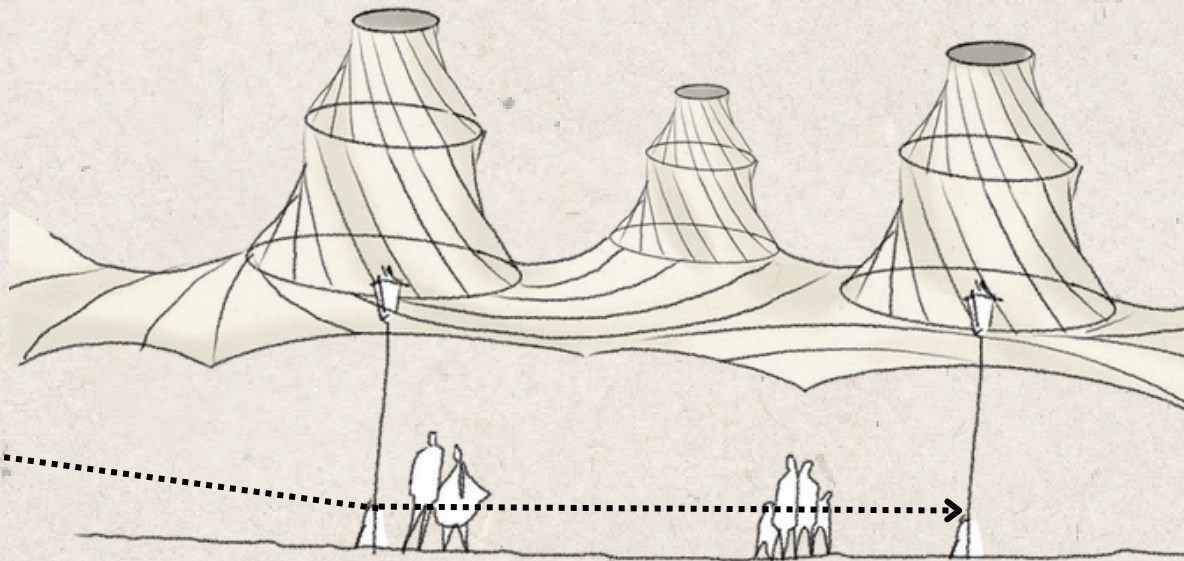
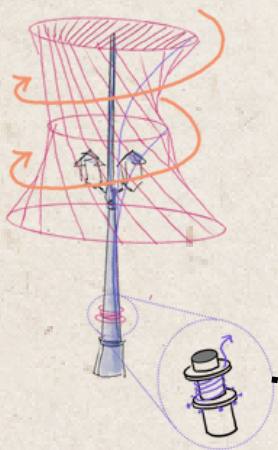
This proposal is composed by a set of floating diaphragms working as pipelines of an anthill, providing a line of execution of hot air. These structures also provide protection to the street and pedestrians from solar incidence through the elevation of these diaphragms.



To solve the dynamic structure, achieving a constant protection from the sun, we developed a translational surface with a rigid axis, to make it look like an hyperbolic structure.



The rotation of the structural rings will fold the translational surface of the anthill. It can make it either larger and thinner or shorter and denser, depending on the desired experience.



Now citizens can control the structure.

This parameter shouldn't be static, because of a series of wheels attached to existent luminaries.

# Strategic Intervention



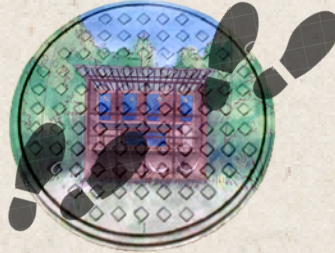
## 2. HOLISTIC EXPERIENCES

*“Identidade, autoestima, sentimento de pertencimento a algo. Tudo tem a ver com os pontos de referência que todos nós temos em relação para a nossa cidade.”*

*Lerner, 2005.*

Transforming the senses and meanings of public space, using it as a platform for cultural expression and awareness. Recognizing the value on all street elements, as they are mirrors of our identity.

**LOOK AT ART CLOSELY AND FAR AWAY**



**ART IN THE STREET AND ON YOUR FEET**



By enabling citizen participation in shaping the aesthetics of city elements, the space can foster a sense of ownership, belonging and engagement between individuals and their environment, as they actively contribute to modify their city. Several artists from Curitiba will be agrouped to join the change of visuals on the streets they walk through, they win recognition and popularity and pedestrians win a beautiful panoramic view.



# Strategic Intervention



## 3. ATTUNEMENT

*A good city is like a good party - people stay longer than really necessary, because they are enjoying themselves.*

*Jan Gehl*

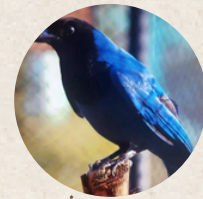
Slow down the walking transitions allow citizens a more joyful dynamic of their day enabling them to join the cultural and artistic heritage that this proposal means to take out of buildings and join the streets for a wider view and to reach more audience

## MULTISPECIES DESIGN



The structure above the surface fosters a dynamic relationship between the architectural element and the diverse interactions of multiple species.

The upper infrastructure's design offers a non-linear pathway for various animal species, allowing different kinds of fauna to interact within the same space and at the same level.



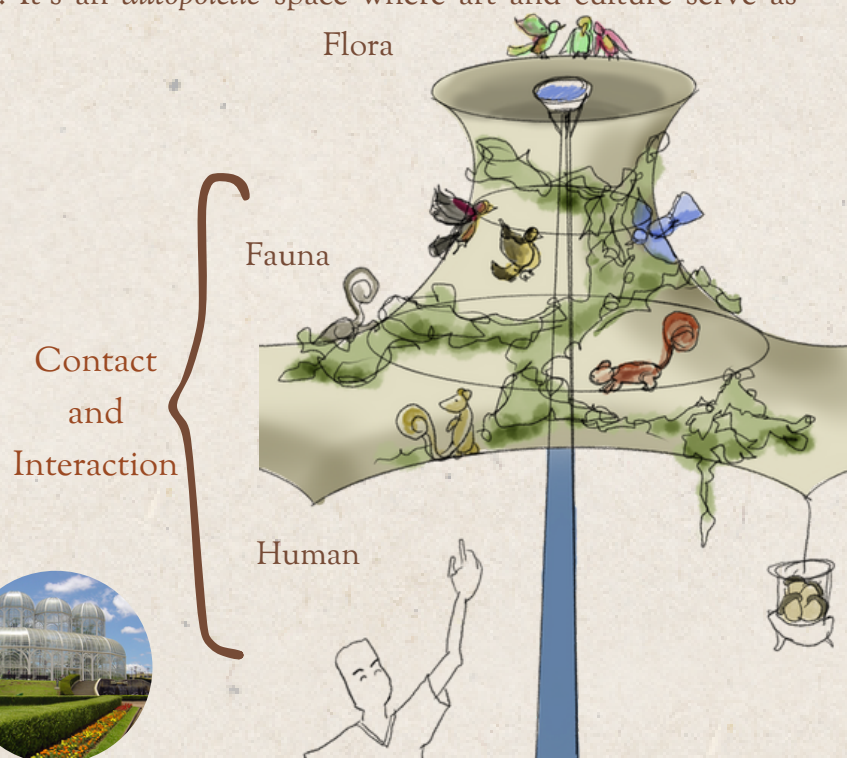
The interaction among the structure, the flora and fauna will provide an environment that encourages different species to connect. To be a good neighbor, not only as a human but as a living being.

All of us can share the attunement of the space.

Interactions beneath and above the membrane should naturally emerge, forming a *self-generating* system, where components are capable of self-creation. It's an *autopoietic* space where art and culture serve as motivators for being out on the streets.

In order to achieve a trully attunement, with multispecies the intervention provides a new way to bring nature day by day. Considering the facilities underground, the approach must lift from the ground.

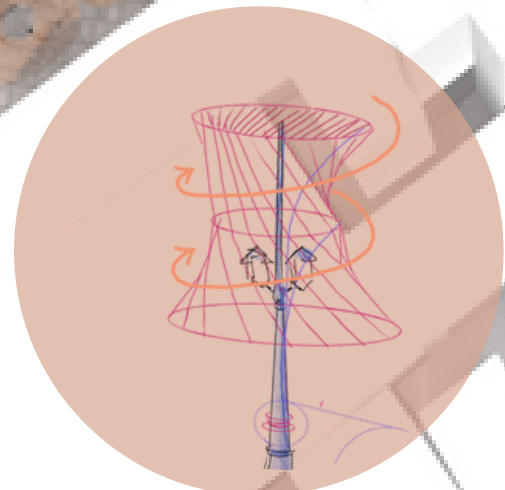
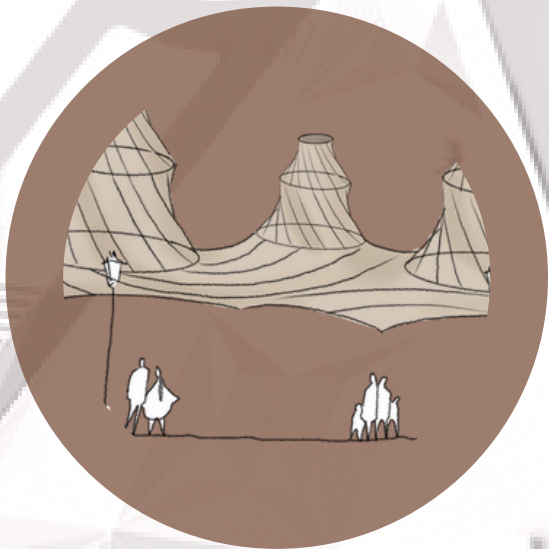
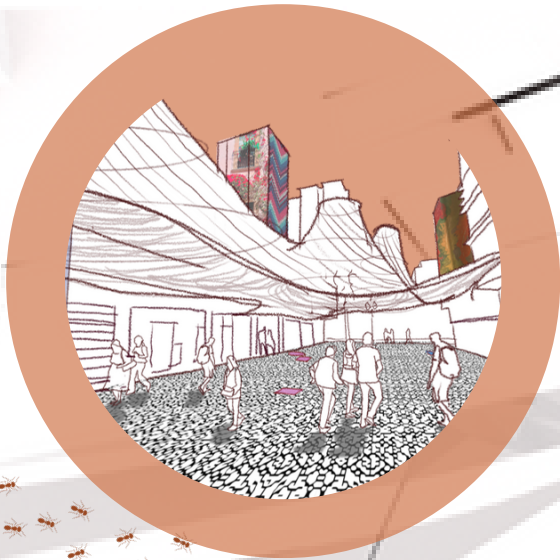
Embodied by a mesh, these new suprastructure will be the "container" of nature. Between the holes under the mesh, a climbing plant has to find a way to connect.





# PROJECT

Being Curitiban

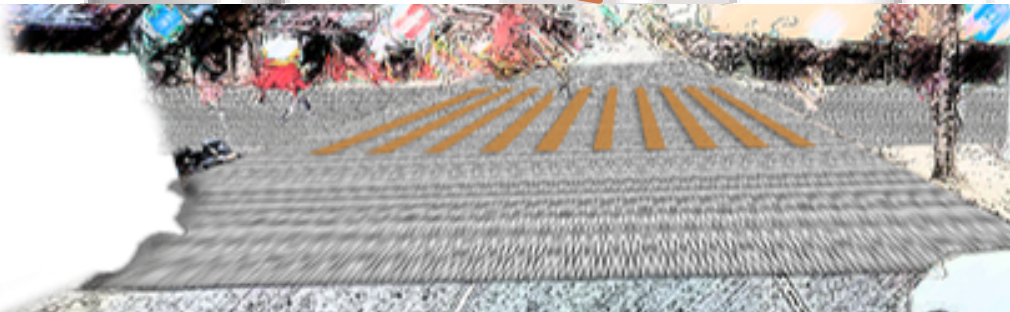
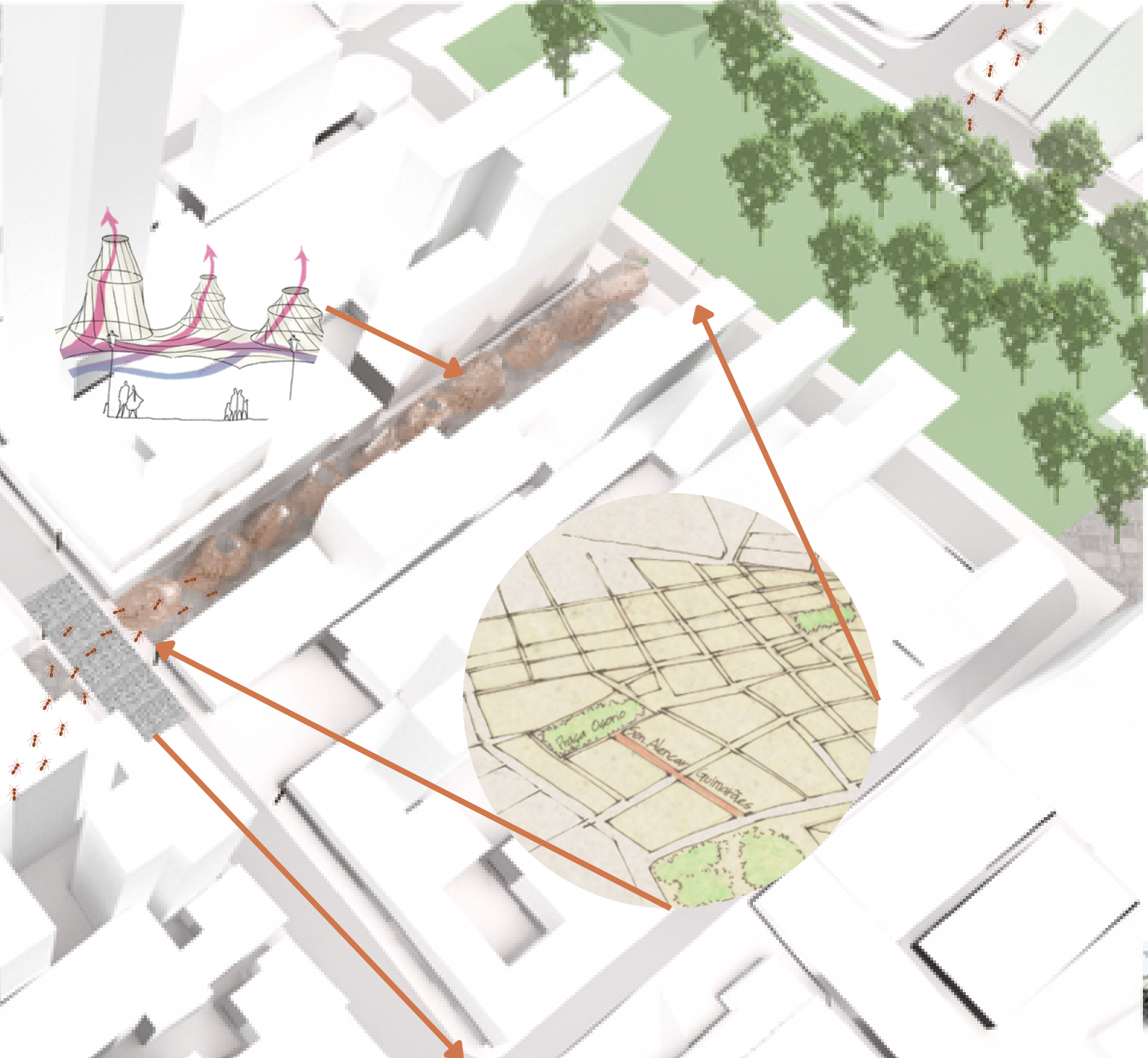






# PROJECT

Being Curitiba



Change of texture

# Story-Telling

The people of Curitiba are the life force of the city, animating its streets and fortifying its structures. This vitality drew our inspiration from anthills, where like humans, social insects grapple with daily decisions and trade-offs for the greater good of their community.

Historically Curitiba has been a model of green and sustainable urbanism since 1995 when the architect and governor Jaime Lerner began to plan and develop tactical urbanism on Paraná with remarkable success.

However, as cities evolve, so do their inhabitants. While tactical urbanism has thrived, there have been challenges, like the emerging problem of the "Heat Island Effect" on Rua Senator Alenca, a phenomenon that occurs when urban and built-up areas experience significantly high temperatures.

This street houses various service establishments, with one side having asphalt emulsion for cars, and the other side featuring grey concrete with gravel. In between are some luminaries and built-up gardeners made of concrete. We observed the dominance of concrete as a material contributing to the heat island effect and identified a recurring linear pattern that needed to be broken.

Our intuitive diagnostic of the physical facts begins with the main question "how can we get all those vicious relations of space to transform into virtuous relationships?" We could see some potential on those vicious problems and got to design having those in mind.

First, we made a mind map of the vicious facts and on the other hand the possibilities of transformation. Inspired by the resilience and adaptability of ants, who build colonies with breathable towers, we adopted biomimetic design.

Ants became our solution, since they build up the colony and let air pass through breathing towers, this would be adjustable according to the situation each citizen faces while passing through, and THIS was another problem, we wanted citizens to feel like they belong on that space, so we added the term of "spontaneous permanence". How could we inspire that? The artistic and cultural heritage of Curitiba made us realize that street art could be part of our virtuous cycle letting local artists take over the place and break the monotony of the street, we included hanging local plants for cooling and transformed our concept into a multi-species living structure.

Our vision was to turn the challenging spatial relationships into harmonious, virtuous cycles, creating a recreational space where citizens could feel a sense of spontaneous belonging.

