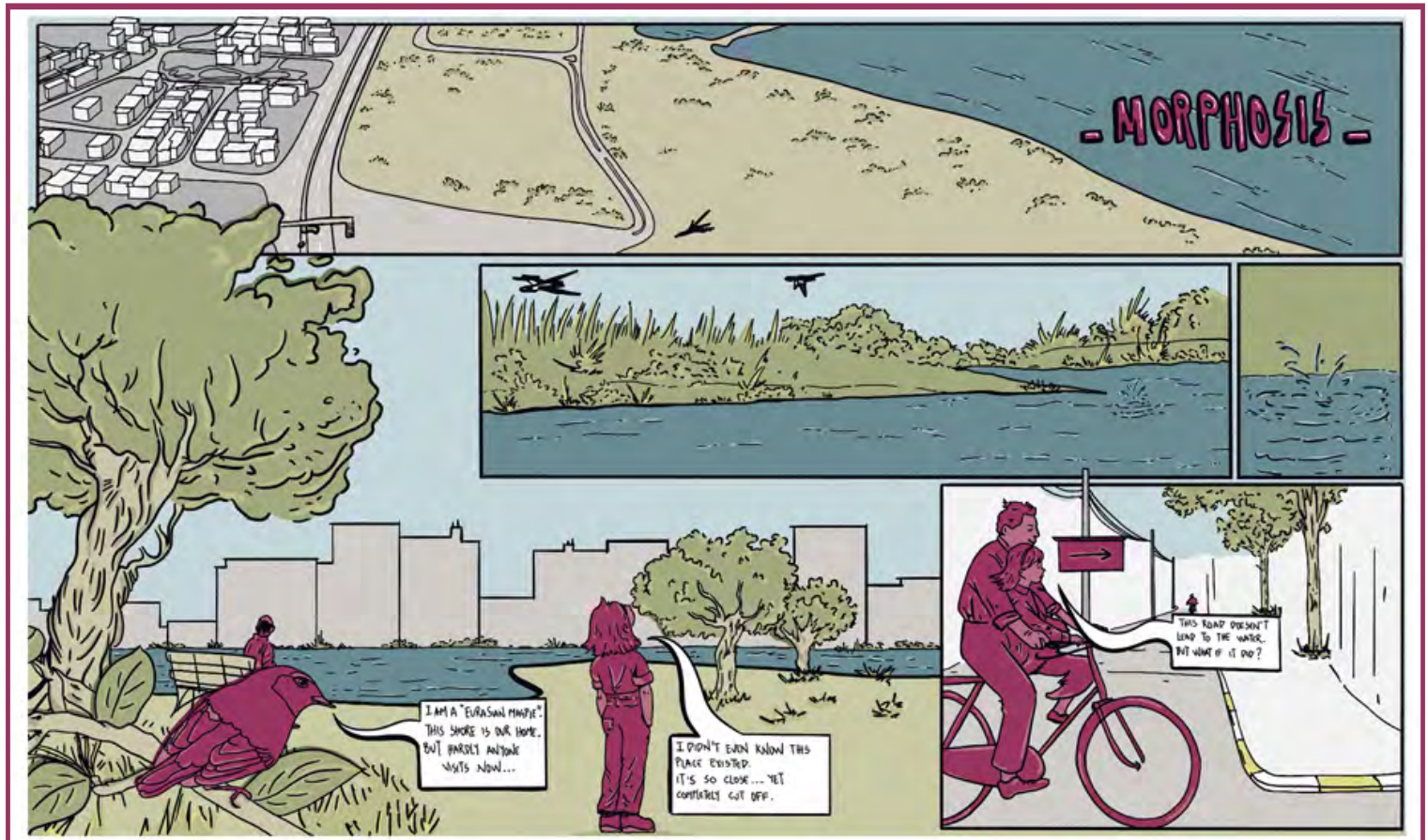




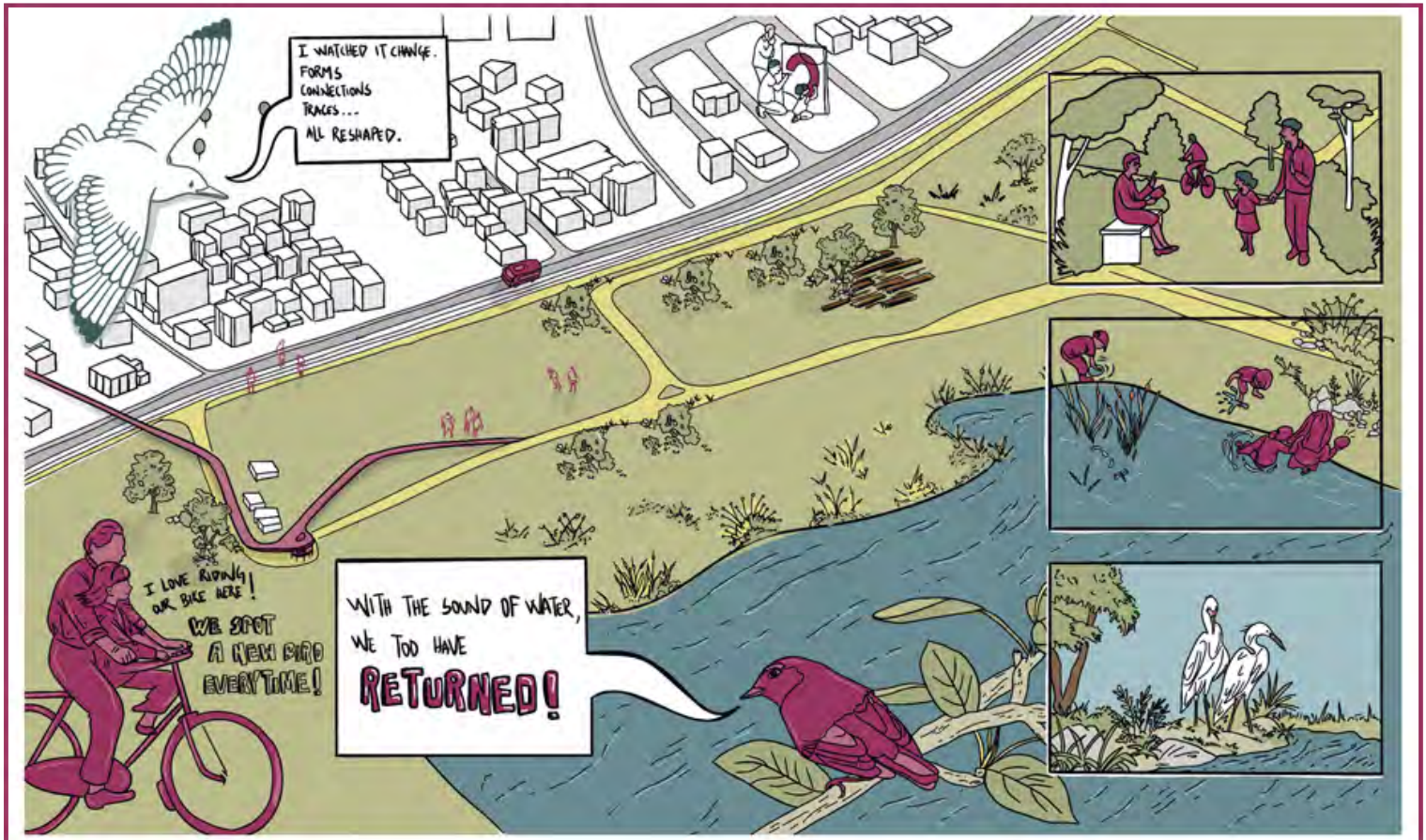
# MORPHOSIS



**“We transform a barrier into a threshold—where biodiversity thrives and communities gather.”**



# MORPHOSIS



“A new landscape of fairness: where ecological richness meets social inclusion.”

# + CURRENT SITUATION ANALYSIS - KEY ISSUES

An assessment of the project area reveals that the most critical issue is the **physical and functional disconnection** between Ulus Neighborhood and Büyükçekmece Lake. The Çatalca Road, a **high-speed and heavily trafficked vehicular corridor**, acts as a significant barrier, severely limiting residents' safe and comfortable access to the lakeside Nature Park.

This disconnection weakens not only physical access but also **social and ecological continuity**. Residents are unable to reach the park and, at the same time, suffer from a **lack of quality open and public spaces** within the neighborhood. The **scarcity of community gathering areas**, along with the poor functionality and physical condition of the existing ones, restricts public life and social interaction.

Moreover, the internal circulation within the neighborhood prioritizes motorized vehicles. The **absence or inadequacy of pedestrian sidewalks** significantly reduces walkability and overall urban livability. In addition, the **lack and fragmentation of pedestrian and bicycle networks** limit opportunities for sustainable mobility.

In this context, **strategic spatial interventions** are required to enhance both physical and social integration. **Reconfiguring the transition** between the neighborhood and the lake, revitalizing public spaces, and establishing a pedestrian-oriented mobility infrastructure are essential steps toward creating a **more inclusive and livable urban environment**.



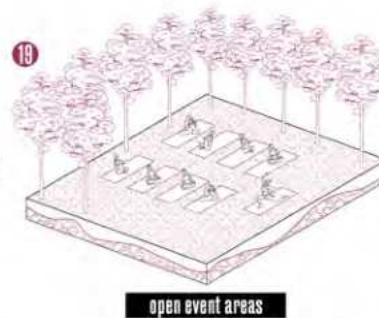
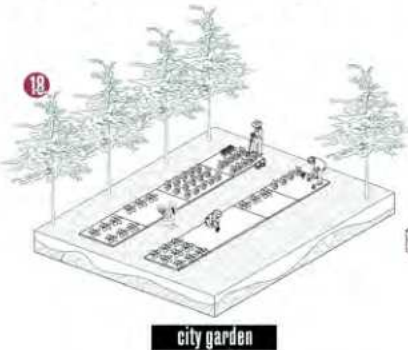
# + FIRST PHASE



- 1-Reduction of Çatalca road from double lane to single lane.
- 2-Reducing speed by adding speed breakers to Çatalca road.
- 3-Fully pedestrianizing Atatürk and Bayrak Avenues by closing them to all motor vehicle traffic.
- 4-Widening or adding sidewalks on neighborhood roads.
- 5-Installing electric vehicle charging stations in the project area.
- 6-Constructing bicycle stations in Ulus Neighborhood and around Büyükçekmece Lake.
- 7-Creating mini forest areas with local species

- 8-Building wooden structural outdoor classroom spaces in schools and parks.
- 9-Planting local tree species to increase biodiversity and create shade areas.
- 10-Establishment of a natural walking route.
- 11-Addition of mobile landscape elements along main axes.
- 12-Establishment of rain gardens in selected pilot sites
- 13-Placement of public panels to promote awareness of the water cycle.
- 14-Establishment of planted bio-swales in pilot regions

- 15-Creation of vegetation strips to prevent coastal erosion.
- 16-Installation of floating trash barrier systems to prevent surface waste from entering the inner parts of the lake.
- 17-Establishment of segregation and composting stations at the neighborhood scale.
- 18-Establishment of neighborhood-based community gardens.
- 19-Installation of modular stage, sports, and relaxation systems in existing vacant spaces.
- 20-Utilization of urban voids as emergency gathering areas.



Creating an art route where art events are planned with local artists, a route where wooden cabins and benches are placed to listen to the sounds of nature, organizing themed folk festivals every three months, designing wooden book cabinets and placing them in certain areas, organizing reading days and book exchange events are targeted.

A nature education trail was created around the lake with signs introducing local species, audio narration via QR codes, and digital guidance. The aim was to install outdoor exhibition boards documenting seasonal biodiversity on the lake shore and to create interactive learning spaces for student groups.

It is important to establish and operate a city and children's council where the ideas of the city dwellers are collected to determine the decisions to be taken on behalf of the city.

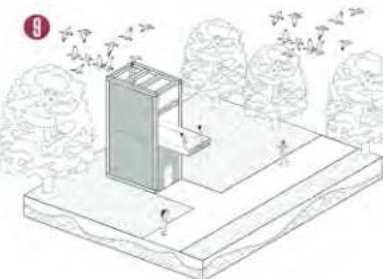
# + SECOND PHASE



- 1-Reducing Catalca Road from two lanes to one lane through a permanent median arrangement.
- 2-Fully pedestrianizing Atatürk and Bayrak Avenues by closing them to all motor vehicle traffic.
- 3-Establishing Park and Ride (P+R) facilities at the entrances of the project area.
- 4-Establishing a water school on the lake shore where water movement can be observed and learned, with an educational program that includes collecting water samples for analysis.

- 5-Establishing a soil school on the lake shore where soil movement can be experienced and learned.
- 6-Installing microscope stations for observing plankton and water insects living in the lake.
- 7-Establishing urban workshops that provide training on climate change, ways to make individual impacts, and environmental resilience.
- 8-Planting local tree species in the neighborhood and around the lake

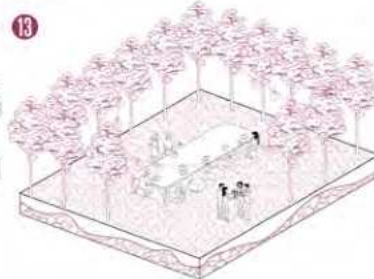
- 9-Incorporation of bird observation structures into bird migration corridors.
- 10-Establishment of pollinator-supportive areas.
- 11-Establishment of an ecological outdoor library and micro stages.
- 12-Adding biodiversity information boards to walking axes
- 13-Establishing a city table where city dwellers can gather and spend time



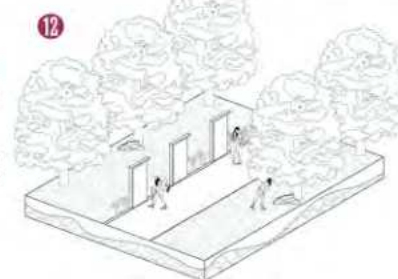
bird watching towers



catalca road



city table



information boards

Within the scope of the project; it is aimed to update and archive the ecological inventory of the area periodically in order to protect the biodiversity of the area. It is planned to establish Park and Ride (P+R) facilities at the entrances of the project area in order to reduce vehicle entry to the project area and reduce carbon emissions. In order to support the coming together of the citizens, a route planner was created in the city application where users can add their own routes and a city application was created to share the calendar of events.

In order to support active transportation, a gamified transportation campaign was prepared that encourages walking for short distances and public transportation for long distances, and integrates a step counter to reward users. In order to concretize carbon emissions and raise awareness of users, it is aimed to display the Passenger km/CO<sub>2</sub> indicator on the digital board and apply color coding to the limits.

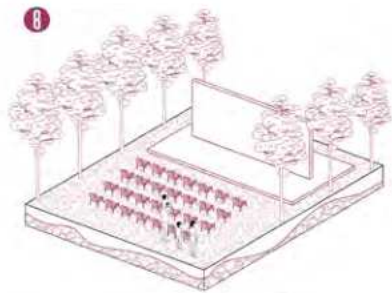
# + THIRD PHASE



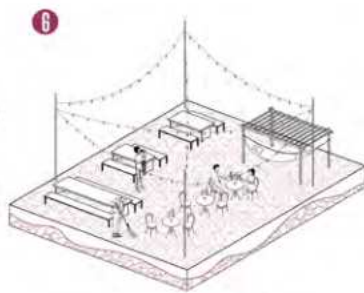
1-Pedestrianizing the project area in Ulus Neighborhood by closing it to motor vehicle traffic.  
 2-Establishing a seed museum where local seeds are stored and educational programs are held.  
 3-Incorporating Atatürk and Bayrak Avenues into the ecological education route.

4-Planting local tree species in the neighborhood and around the lake to increase biodiversity and create shade areas  
 5-Addition of mobile landscape elements along main axes.  
 6-Replacement of existing impermeable surfaces with permeable surfaces.

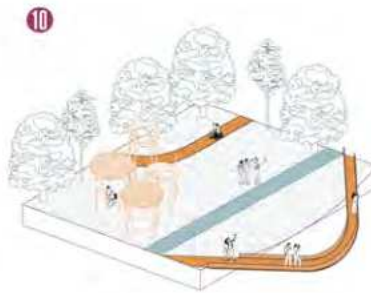
7-Conversion of the Solmaz Logistics Center into a city museum.  
 8-Establishment of an open-air cinema, organization of monthly events.  
 9-Establishing a city market where products from the city market will be sold  
 10-Completion of the city overpass, pier and lake surrounding routes



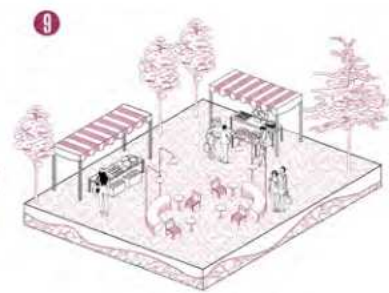
open air cinema



picnic areas



walking areas



city market

As part of the project, aiming to reduce car dependency and lower carbon emissions. The installation and regular maintenance of electric vehicle charging stations were planned throughout the area. A wooden-structured Seed Museum was introduced to preserve local seeds and communicate their cultivation processes to the public. Atatürk and Bayrak Avenues were transformed into ecological corridors, creating an integrated green network that connects directly to the Nature Park.

The ecological inventory of the area is planned to be periodically updated, accompanied by continuous afforestation efforts. Around the lake, water harvesting methods are employed to establish a natural water cycle. Additionally, the former Solmaz Logistics facility was repurposed as a City Museum, turning a previously inaccessible site into a valuable public space.

P<sub>1</sub>



### Reducing Çatalca road to a single lane:

Reducing lanes reduces fuel consumption by reducing vehicle speed. It can reduce vehicle traffic on the applied axis by 10-25%. In this way, an average of 100-250 tons of CO<sub>2</sub>/year emission reduction is achieved per 1 km.



### Water Management:

The water cycle has been improved, underground water resources have been supported and water waste has been significantly reduced by establishing natural irrigation systems in and around the lake, rainwater harvesting and the use of permeable soil. These practices contribute to both the protection of the ecosystem and the efficient use of water.



### Tree planting, park creation and creation of pollinator zones:

Tree planting is very important because each tree can absorb up to 20 kg of CO<sub>2</sub> per year. The creation of pollinator-friendly zones can reduce CO<sub>2</sub> by 1-4 tons per year, even in small areas. This is achieved both through emission reduction and carbon storage (sink).

P<sub>3H2</sub>



### Ensuring Energy Efficiency:

Replacing lighting, one of the areas where cities consume the most energy, with solar-powered LED systems aims to reduce CO<sub>2</sub> emissions by approximately 20 tons per year. In addition, periodic energy efficiency maintenance of buildings in the neighborhood and the widespread use of green roofs are aimed to both save energy and reduce the urban heat island effect.



### Creation of habitat islands with endemic plants:

Native and long-lived plants store carbon in the soil (sink effect). With the increase in biodiversity, chemical input (fertilizer, pesticide) and maintenance decrease. In the long term, carbon fixation capacity increases. It is very important because a 500 m<sup>2</sup> island reduces 3 tons of CO<sub>2</sub>/year.



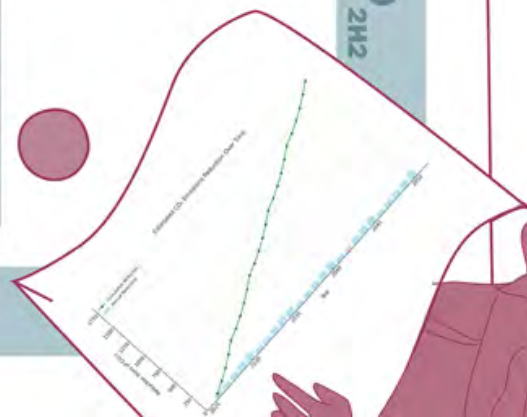
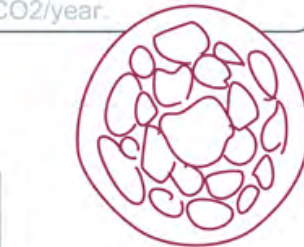
### Establishing a relationship between biodiversity and education:

It is of great importance to create educational areas in order to protect and develop the biodiversity around the lake. In this way, it is aimed to prevent possible environmental damage by raising public awareness.

P<sub>2H1</sub>

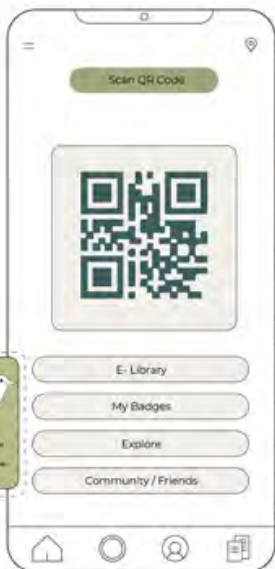
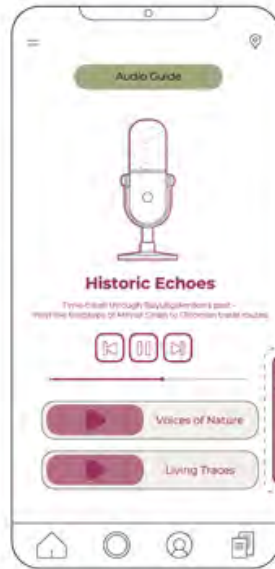
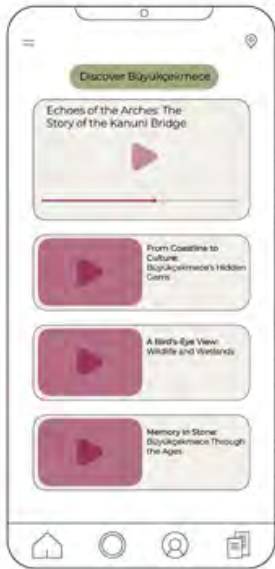
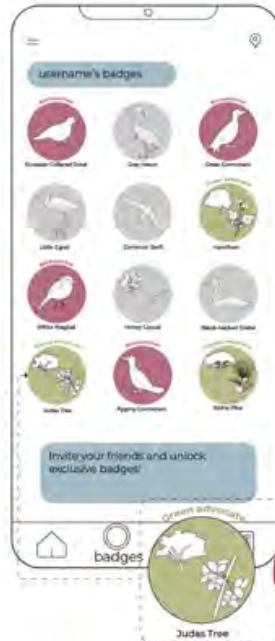
P<sub>2H2</sub>

P<sub>3H1</sub>



# + RECONNECT: CITY APP

With this app, we can explore Büyükçekmece and interact with nature in a whole new way!



- Rewards**
- Free 30-Minute Bike Ride!
  - Free Coffee Treat!
  - E-Book Discount Unlocked!
  - A Tree Planted in Your Name!
  - Bonus Entry to Local Event!
- Badges**
- Eco Explorer
  - Birdwatcher
  - Nature Snapper
  - Calm Seeker
  - Tree Friend
  - Change Maker

