

# SHENZHEN BIG DIG, SUPER CONNECTIVITY WITH NATURE

BINHAI BOULEVARD TRAFFIC INTEGRATED RENOVATION PROJECT CONSTRUCTION

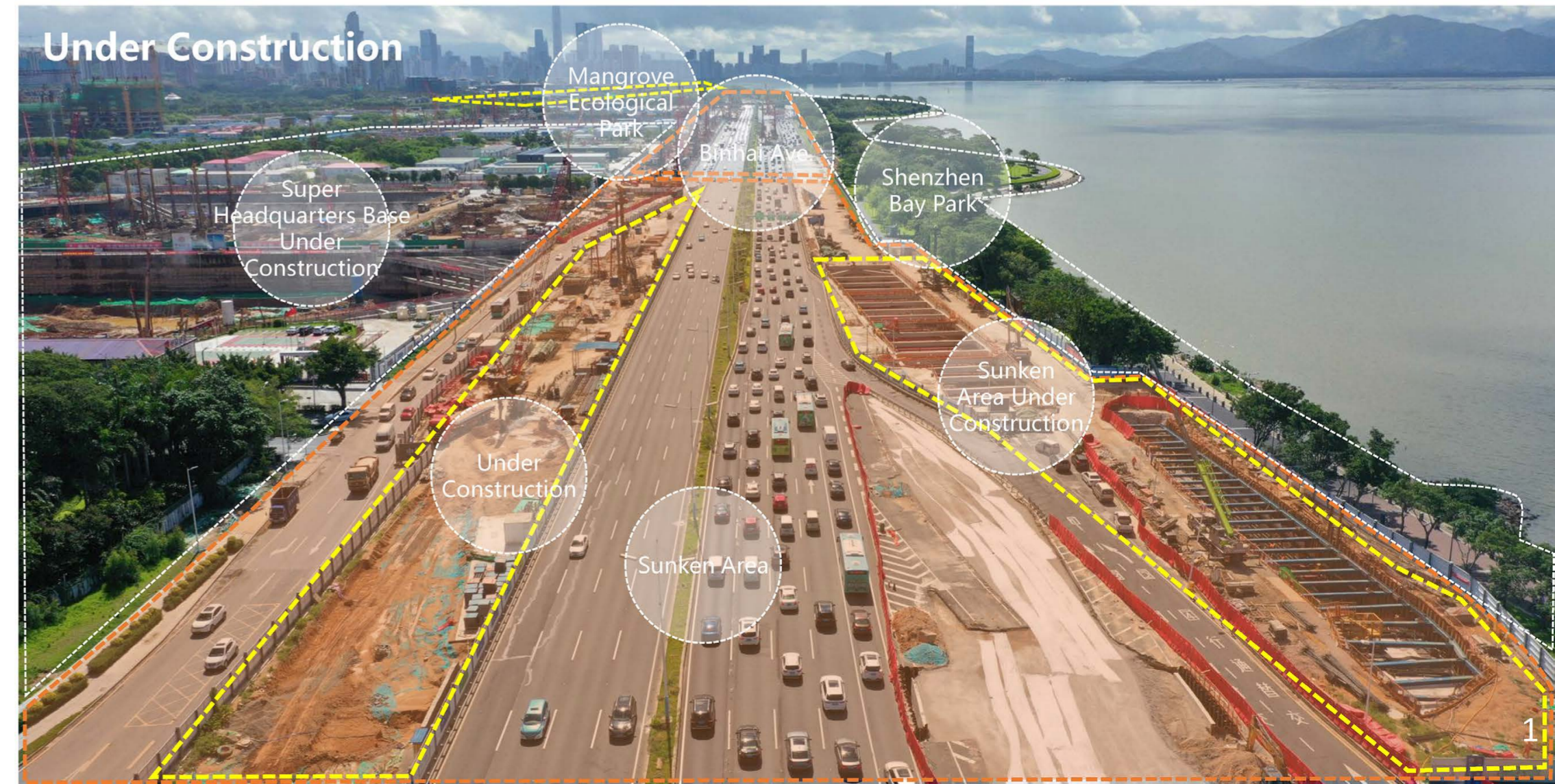
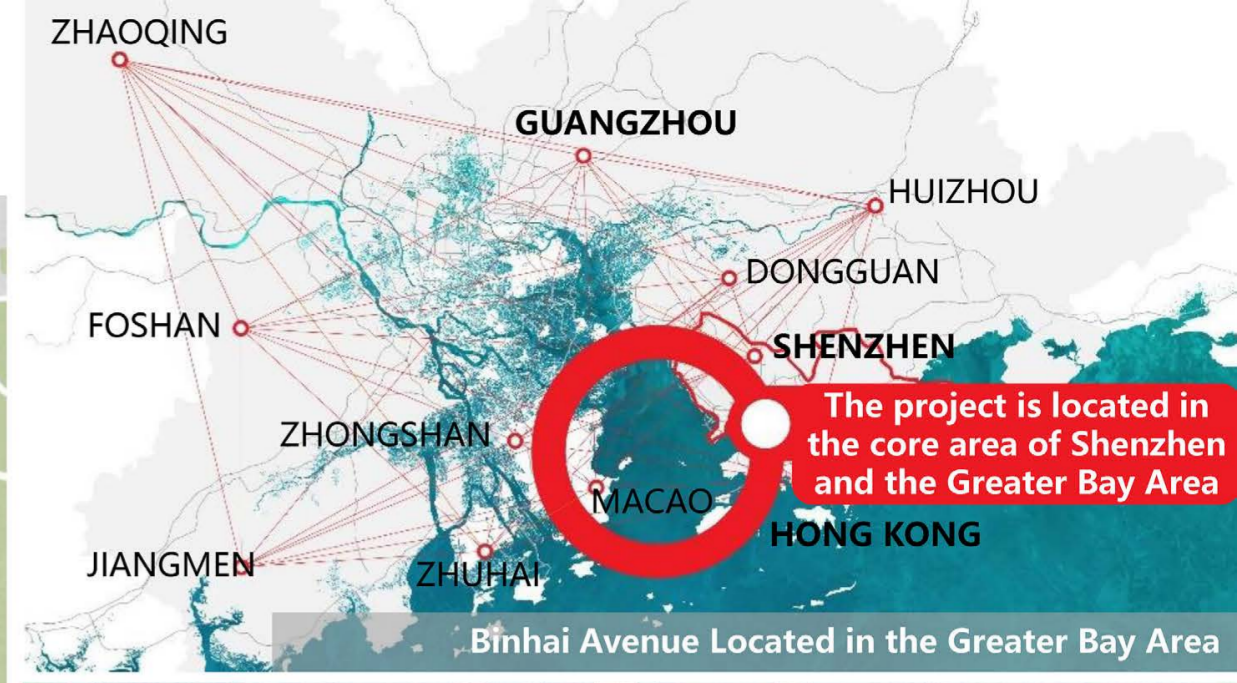
SHENZHEN, CHINA

## GOLDEN COAST LOCATION

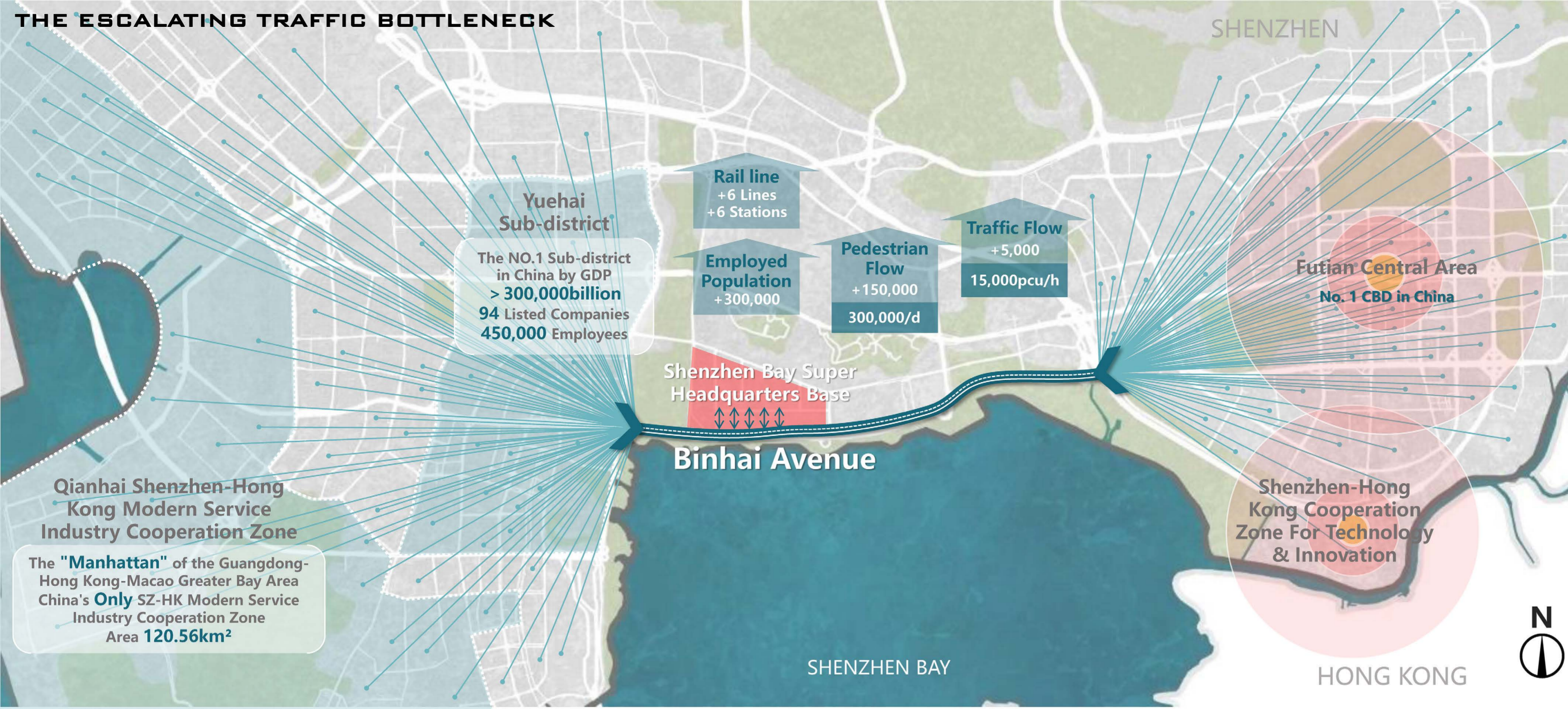


Shenzhen Bay coastline, the natural coast of Shenzhen only accounts for 0.9%, and the number of migratory birds is decreasing year by year.

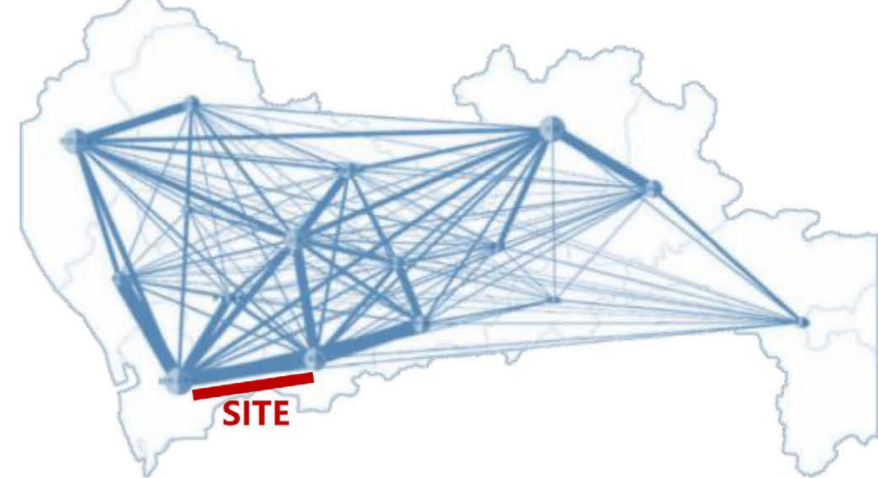
# 0.9%



# THE ESCALATING TRAFFIC BOTTLENECK



# Regional Long-term Traffic Demands Distribution Map



Current traffic flow on Binhai Ave.

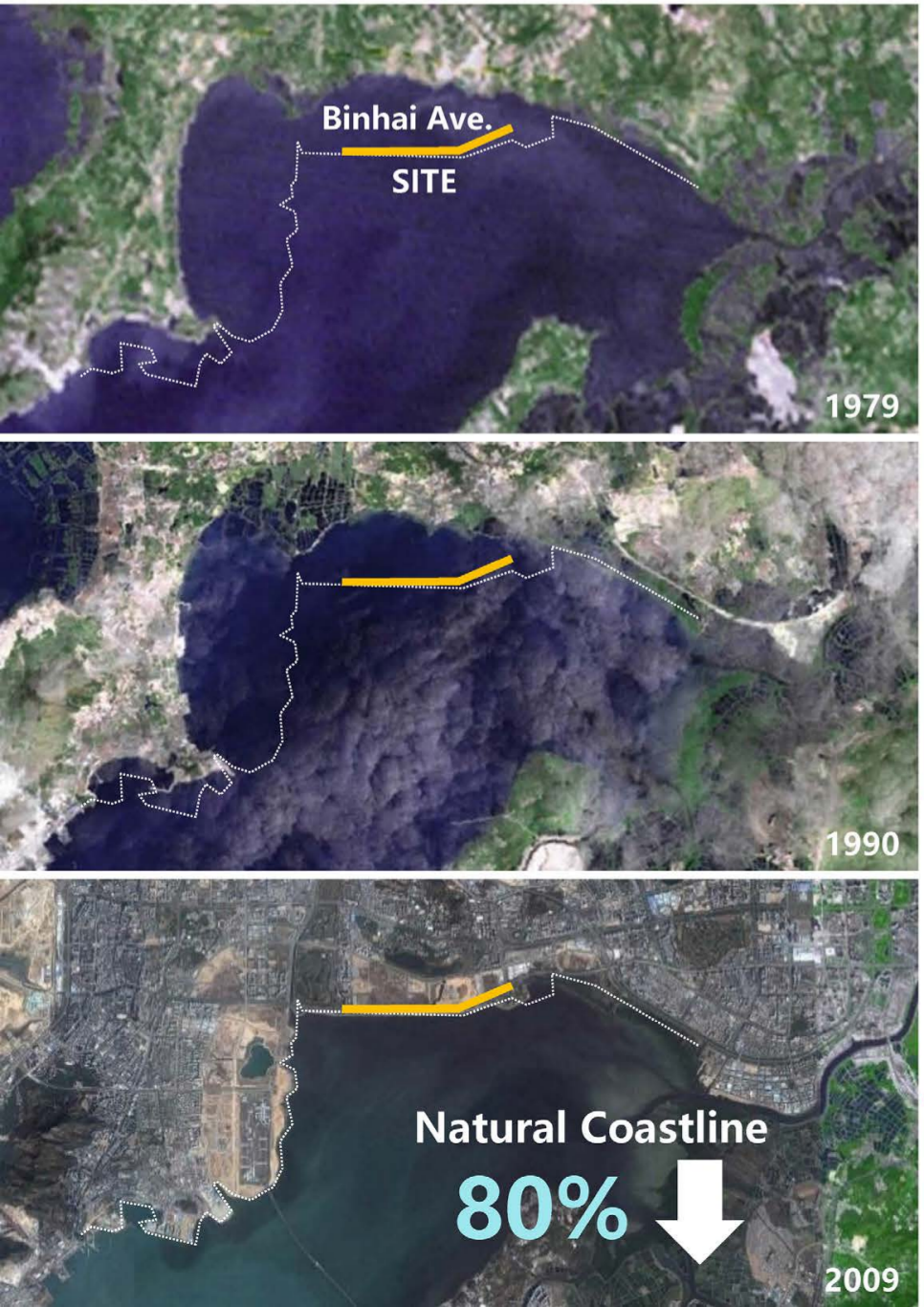


Traffic flow at rail stations along Binhai Ave.

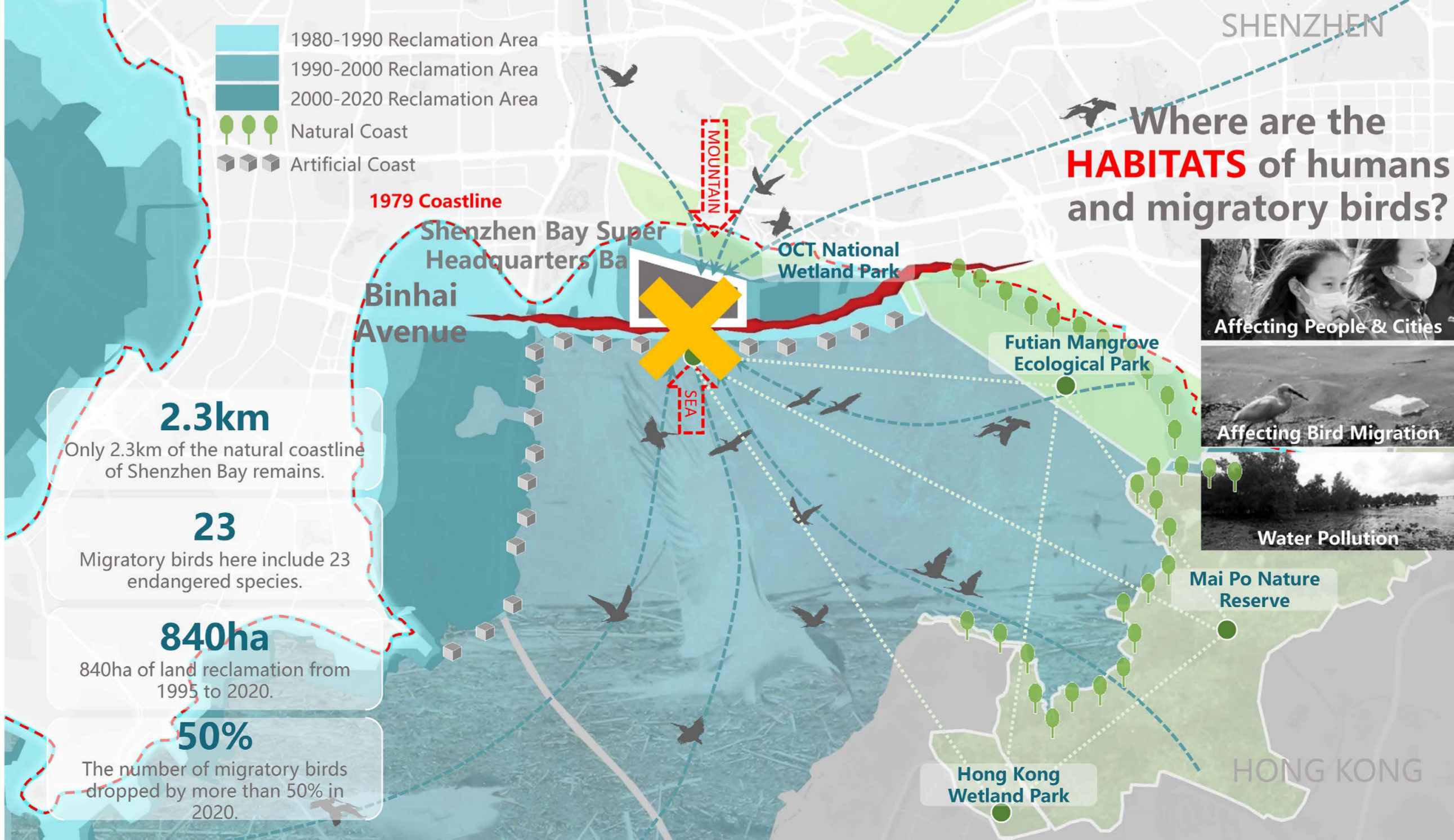


# Coastline Variation Map

Rapid urban development has caused Shenzhen to lose 80% of its natural coastline and 75% of its mangrove forests, resulting in a dramatic change in the city's outline.

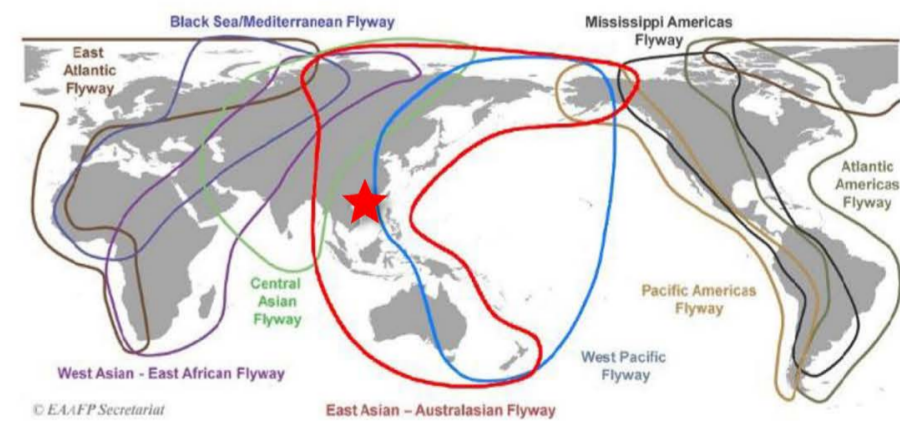


# THE ACCUMULATED ECOLOGICAL DEBT OF 40 YEARS



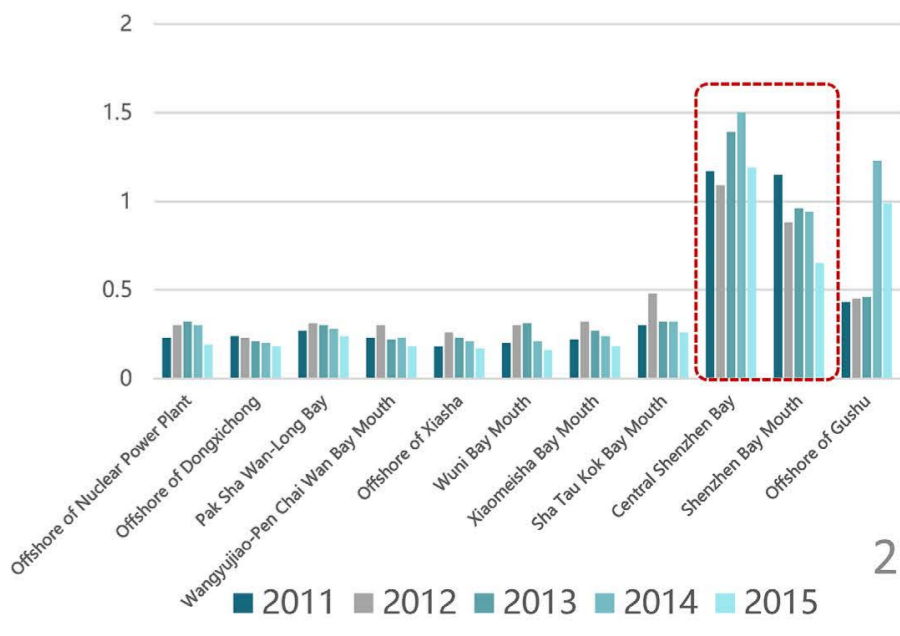
# Migratory Bird Flyways

Shenzhen has the only city center-based national-level mangrove nature reserve in China, and is also an important part of the East Asian-Australasian Flyway. This is the last natural coastline in Shenzhen.

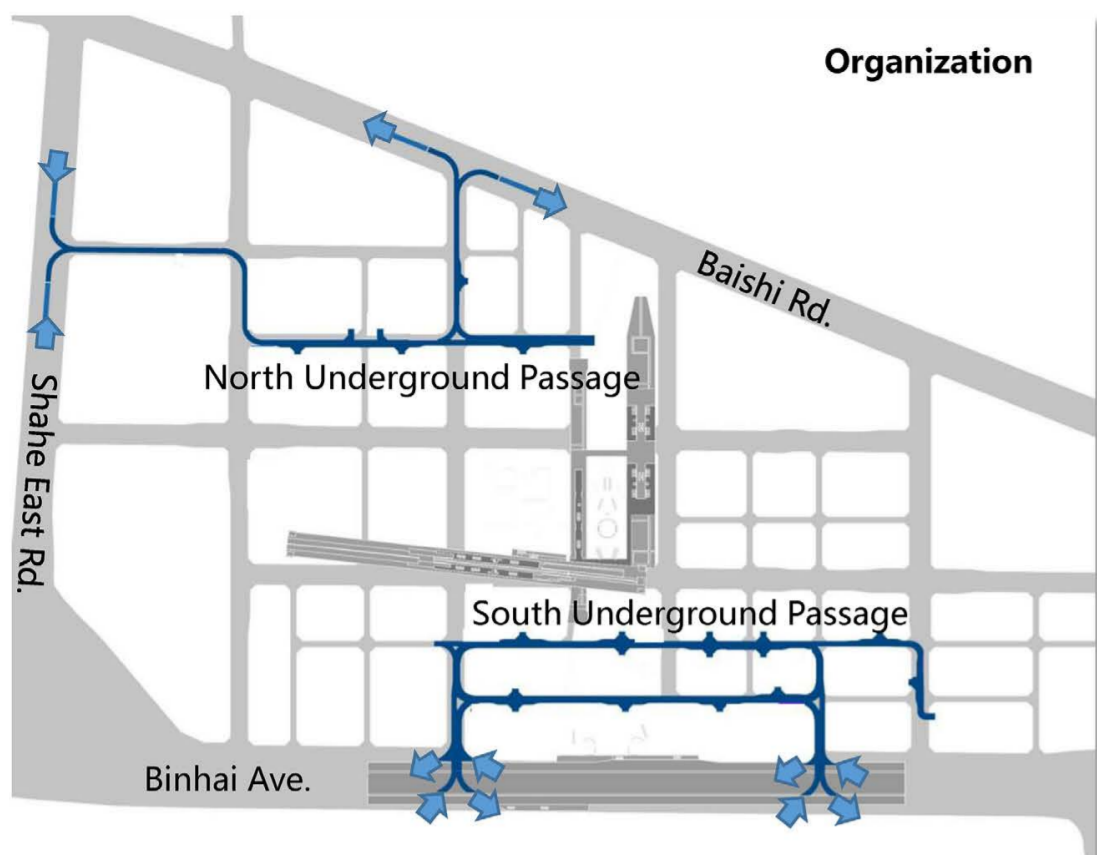


# 2011-2015 Variation Trend of Comprehensive Pollution Index in Shenzhen's Offshore Waters

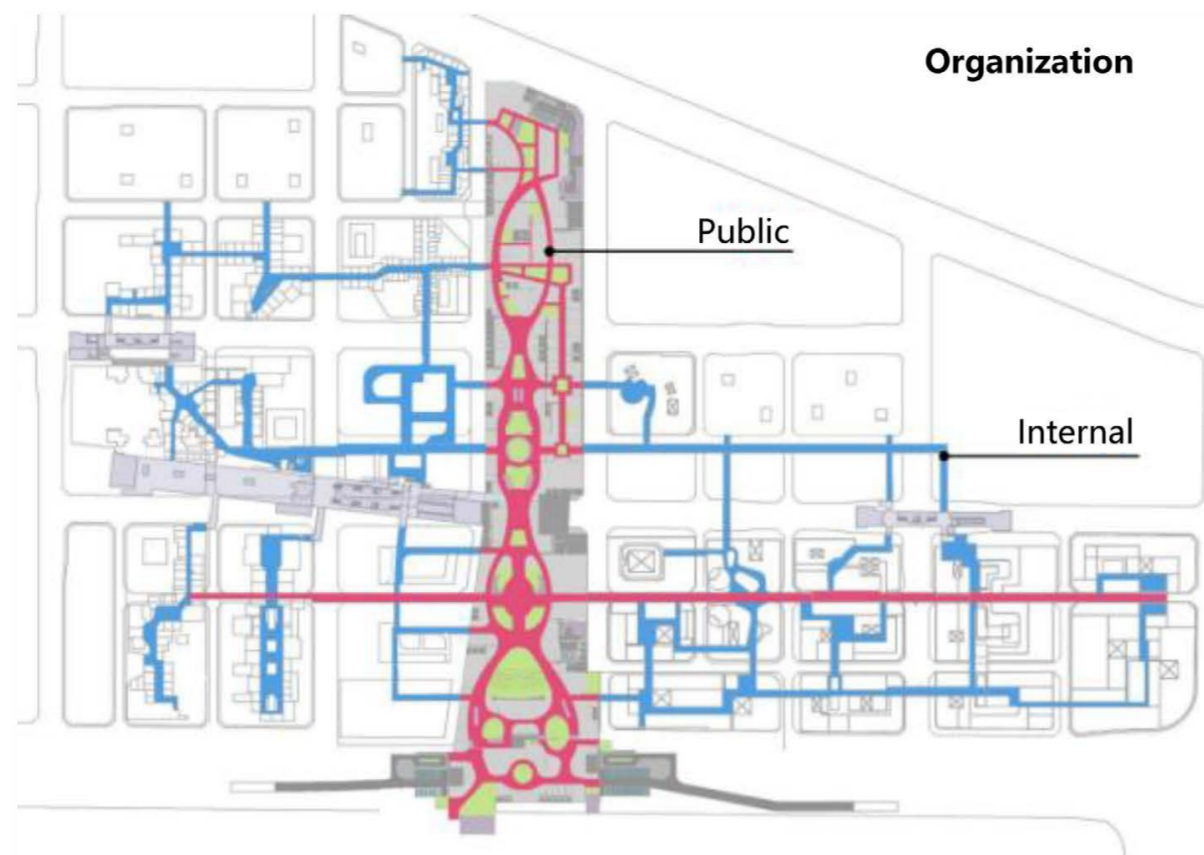
The sea area where the project is located has the highest pollution index.



# MULTI-LAYER VERTICAL THREE-DIMENSIONAL SPACE LINKAGE



The underground vehicle system connected with the Super Headquarters Base.

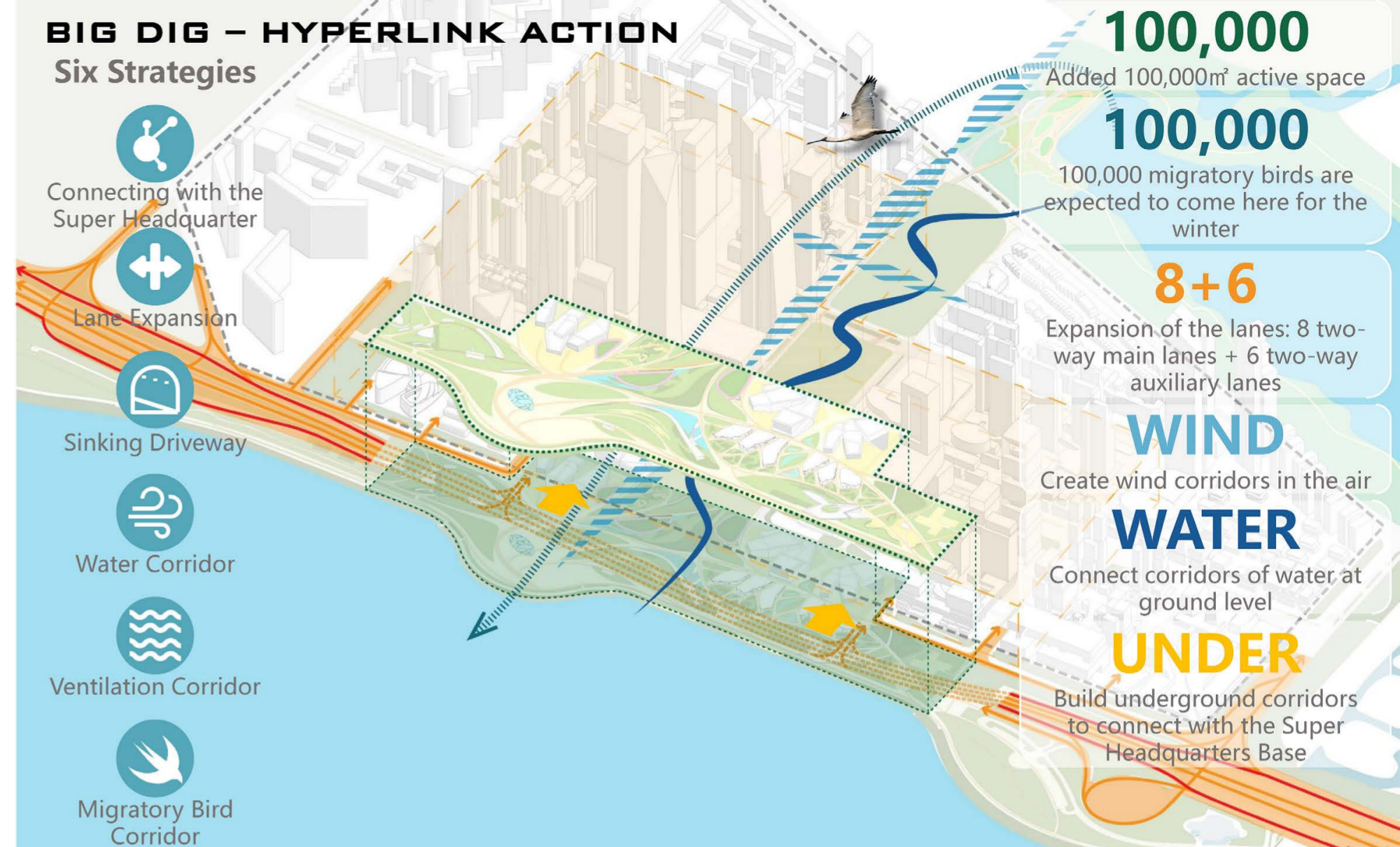


The underground pedestrian system connected with the Super Headquarters Base.

# BIG DIG - HYPERLINK ACTION

## Six Strategies

- Connecting with the Super Headquarter
- Lane Expansion
- Sinking Driveway
- Water Corridor
- Ventilation Corridor
- Migratory Bird Corridor



**100,000**  
Added 100,000m<sup>2</sup> active space

**100,000**  
100,000 migratory birds are expected to come here for the winter

**8+6**  
Expansion of the lanes: 8 two-way main lanes + 6 two-way auxiliary lanes

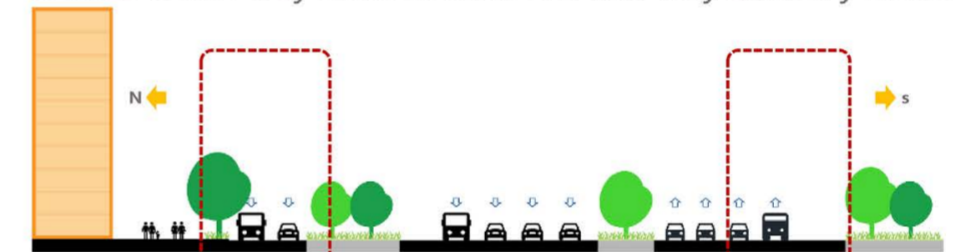
**WIND**  
Create wind corridors in the air

**WATER**  
Connect corridors of water at ground level

**UNDER**  
Build underground corridors to connect with the Super Headquarters Base

## Road Section Reconstruction

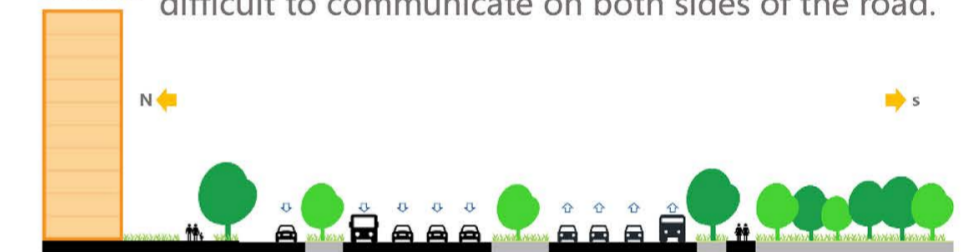
**Before** 8 two-way main lanes and 2 two-way auxiliary lanes.



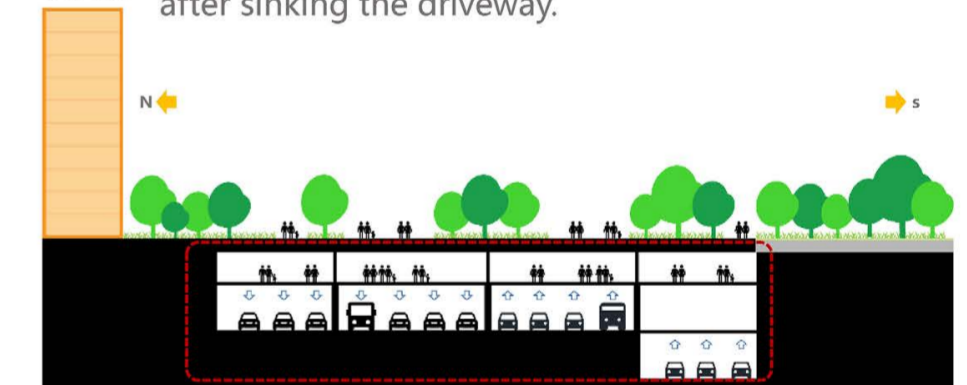
**After** 8 two-way main lanes and 6 two-way auxiliary lanes.



**Before** The ground space is divided by the road, and it is difficult to communicate on both sides of the road.



**After** Return road space to human activity and nature after sinking the driveway.



## SUPER HEADQUARTERS BASE

G-H-M Greater Bay Area, represents the future urban living room

**6km**

The total length of the road is about 6km. The south interface is connected to the underground section of Binhai Avenue, which is connected to the underground parking. The north interface is connected to Shahe East Road and Baishi Road.

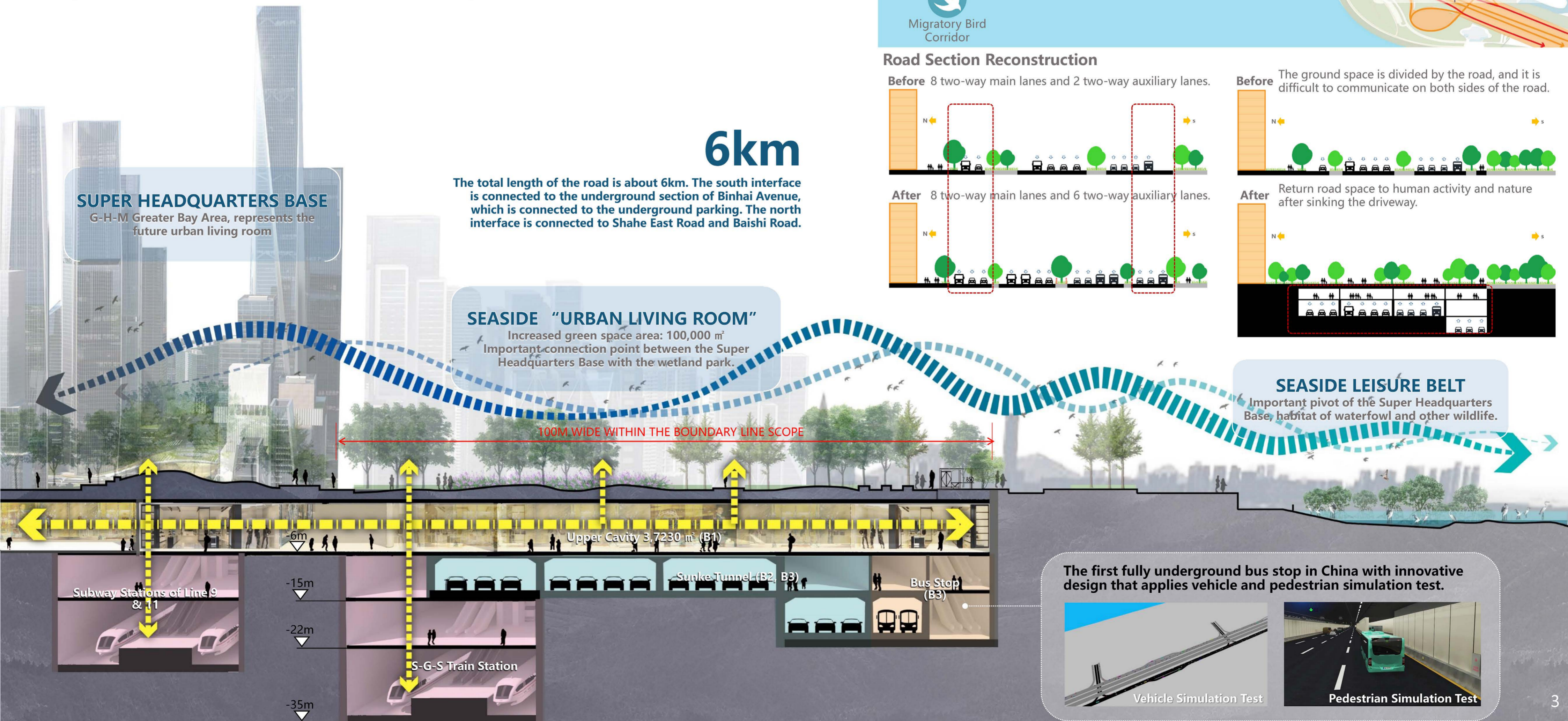
## SEASIDE "URBAN LIVING ROOM"

Increased green space area: 100,000 m<sup>2</sup>  
Important connection point between the Super Headquarters Base with the wetland park.

100M WIDE WITHIN THE BOUNDARY LINE SCOPE

## SEASIDE LEISURE BELT

Important pivot of the Super Headquarters Base, habitat of waterfowl and other wildlife.



The first fully underground bus stop in China with innovative design that applies vehicle and pedestrian simulation test.

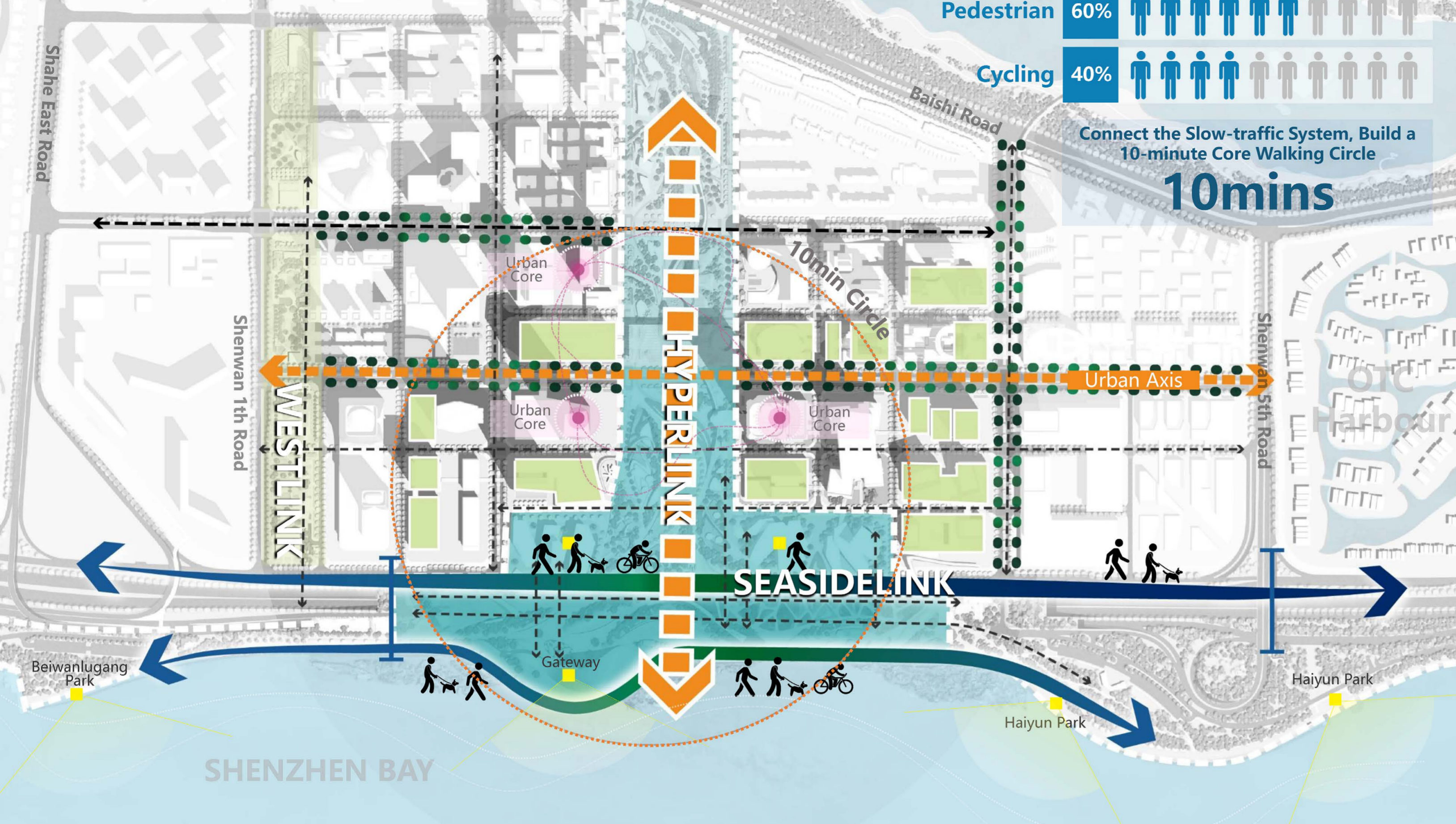


Vehicle Simulation Test



Pedestrian Simulation Test

**HIGHLY ACCESSIBLE 10-MINUTE WALKING CIRCLE**

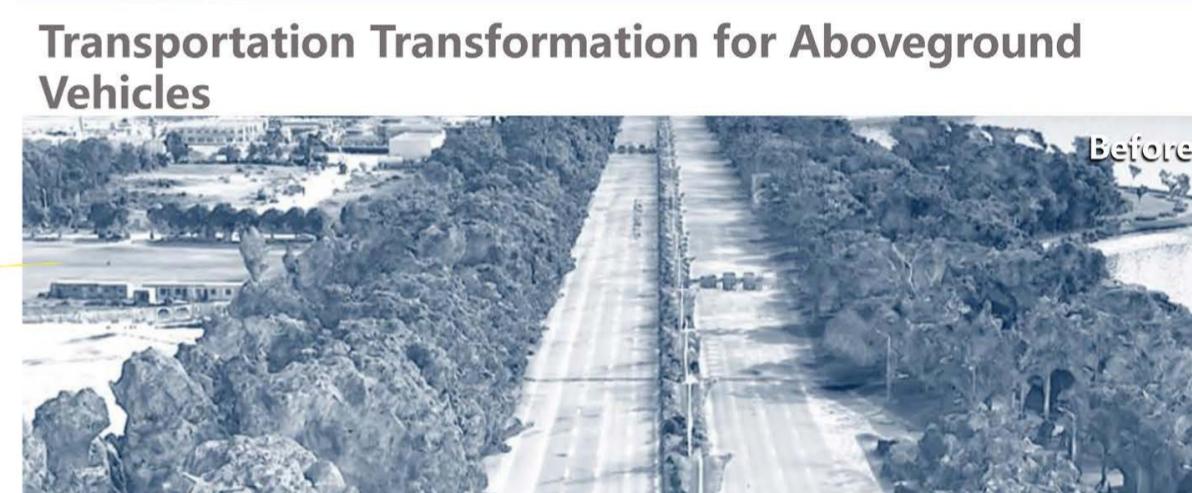
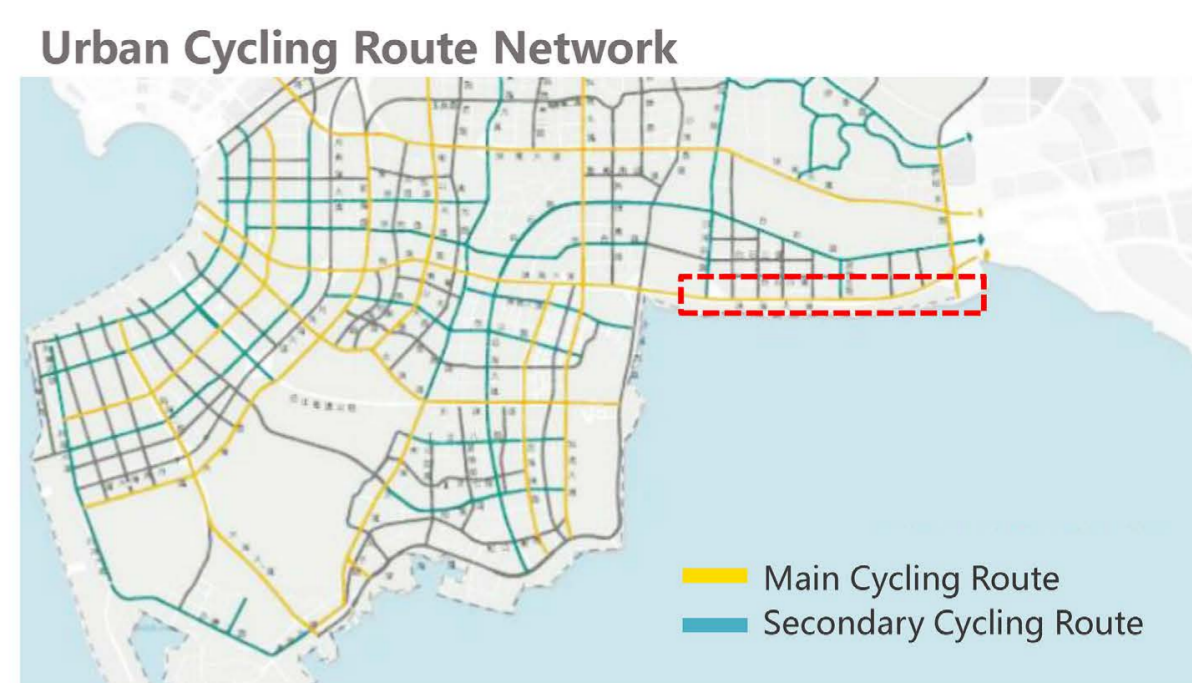


**Pedestrian 60%**

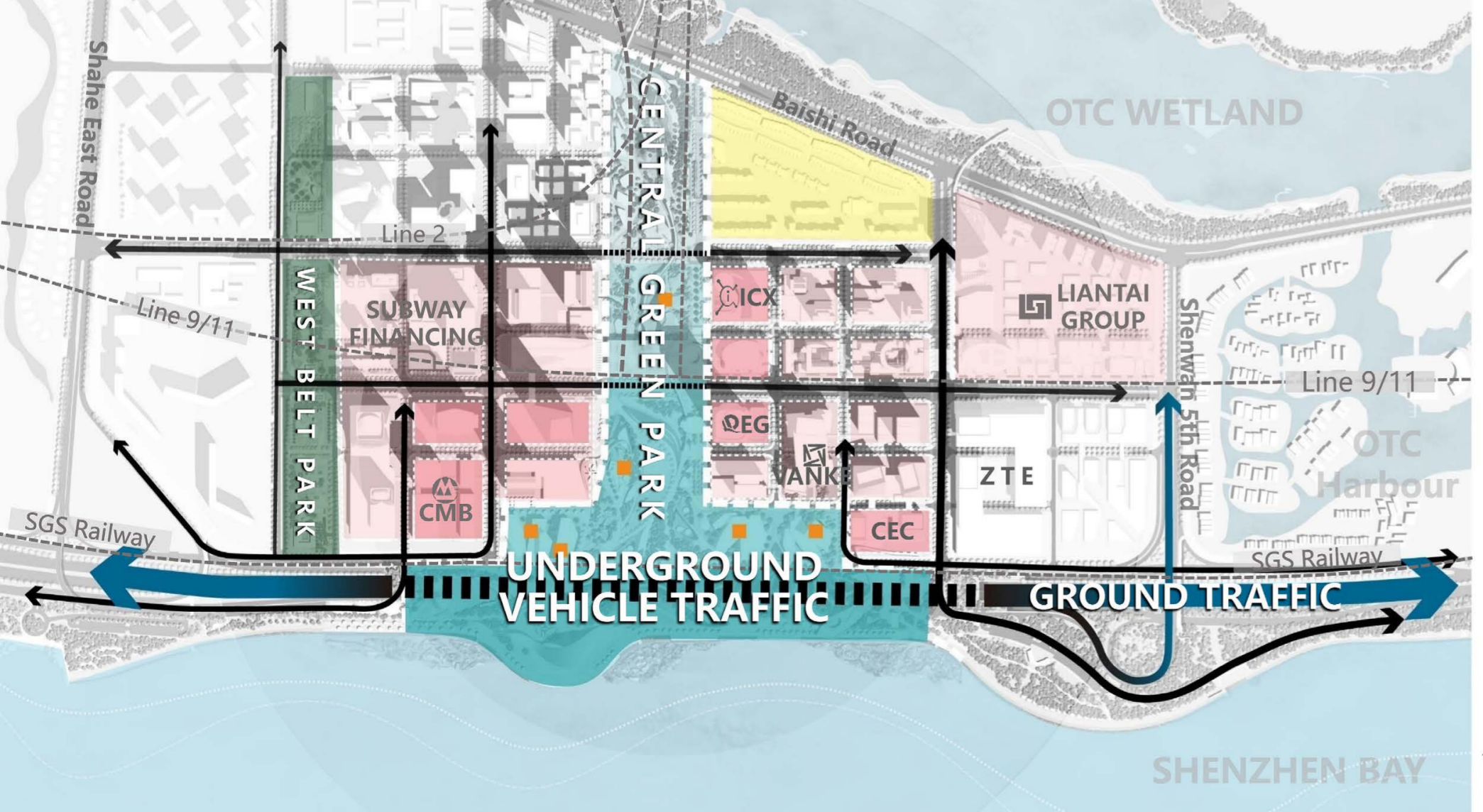
**Cycling 40%**

Connect the Slow-traffic System, Build a 10-minute Core Walking Circle

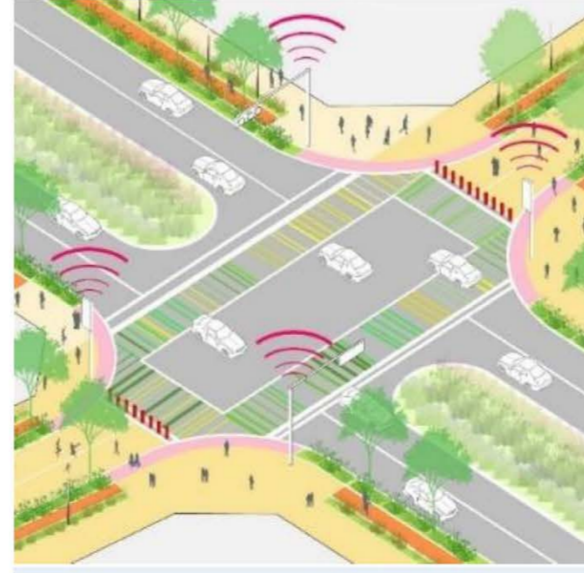
**10mins**



**LANE EXPANSION WITH ZERO IMPACT ON ECOLOGY**



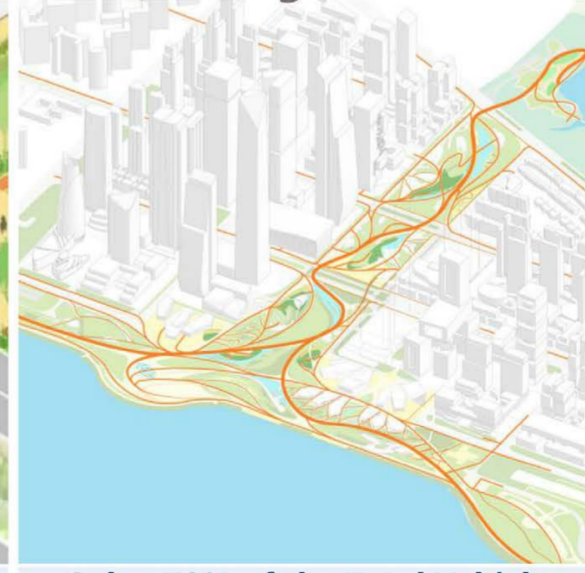
**Barrier-free 0-Elevation**



8 Two-way Main Lanes and 6 Two-way Auxiliary Lanes

**8+6**

**Slow-traffic System Full Coverage**



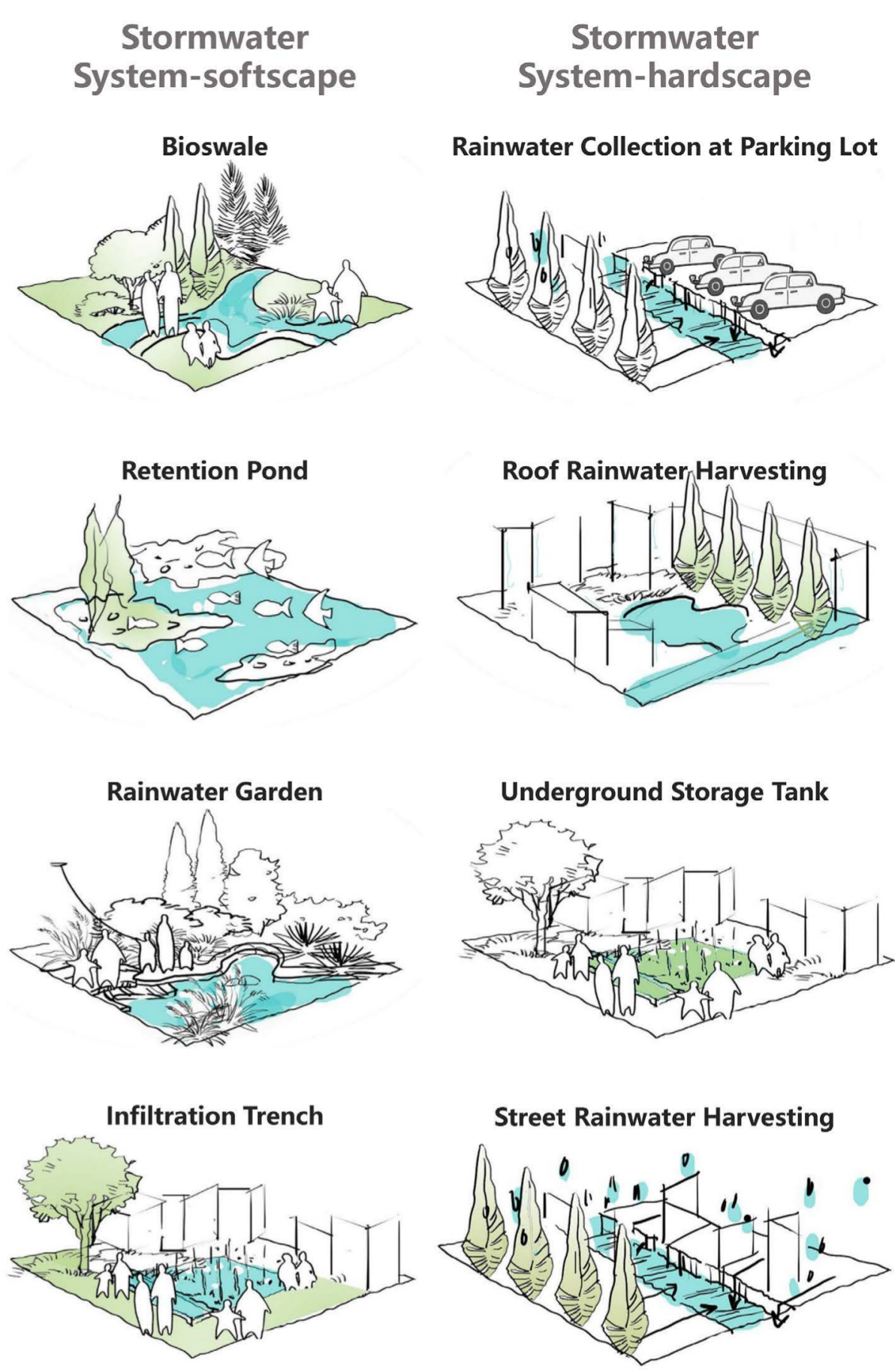
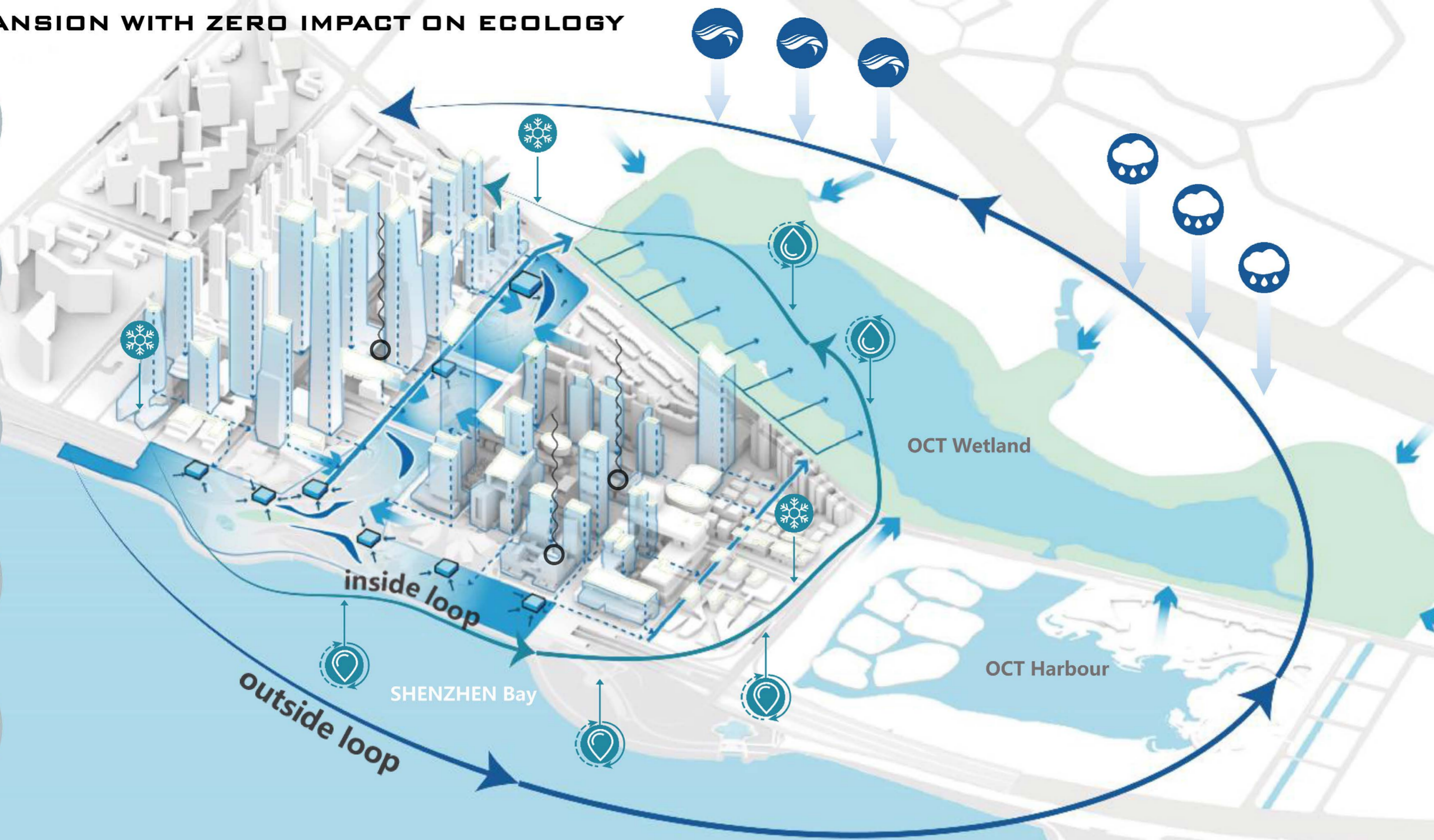
Solve 70% of the Total Vehicle Volume of the Super Headquarters Base

**70%**

- 58% OFFICE** Distributed throughout SIC.
- 16% COMMERCE** Concentrated around the rail station, Baishi 4th Road and Binhai Ave.
- 11% APARTMENT** Distributed in the northwest and northeast area.
- 6% HOTEL** More evenly distributed in SIC.
- 6% CULTURE** More evenly distributed in SIC.



# LANE EXPANSION WITH ZERO IMPACT ON ECOLOGY



**Connect 500,000 m<sup>2</sup> of wetland system.**

- Wetland planting
- Salt water and fresh water
- Birds habitat



**Connect 1,280,000 m<sup>2</sup> of mangroves.**

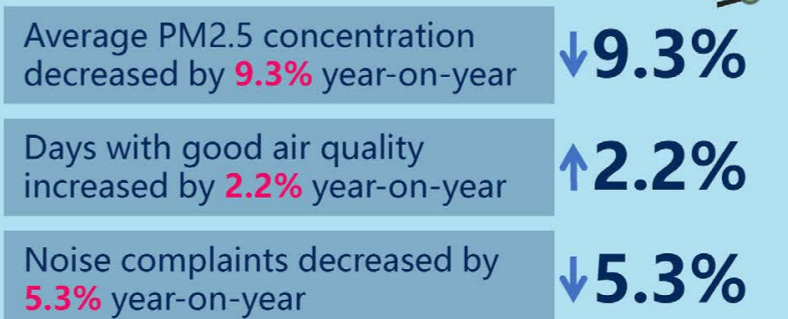
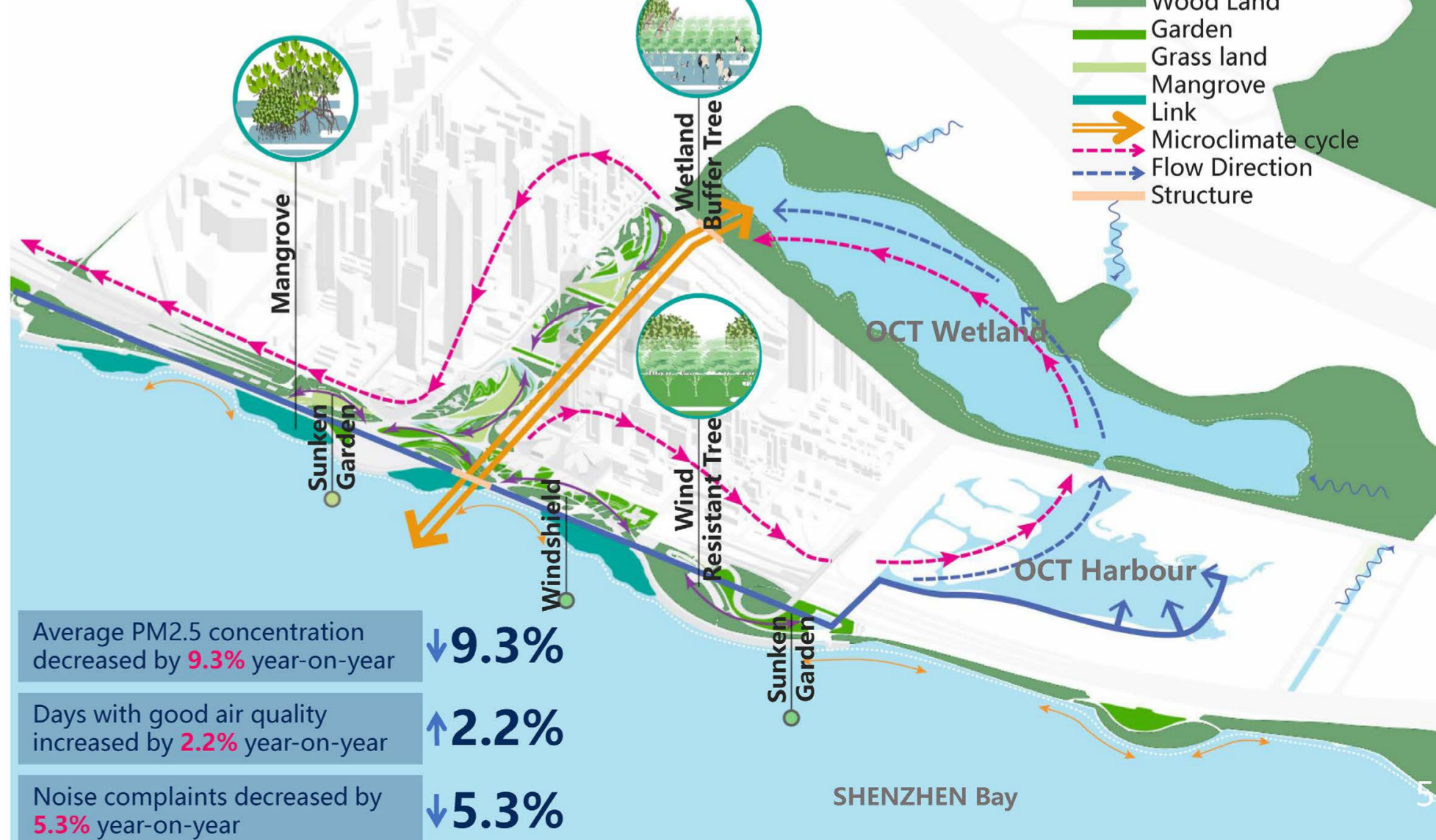
- Tidal flat wetland
- Biological habitat
- Resilient coast design



**Establish 16,3460 m<sup>2</sup> of green space.**

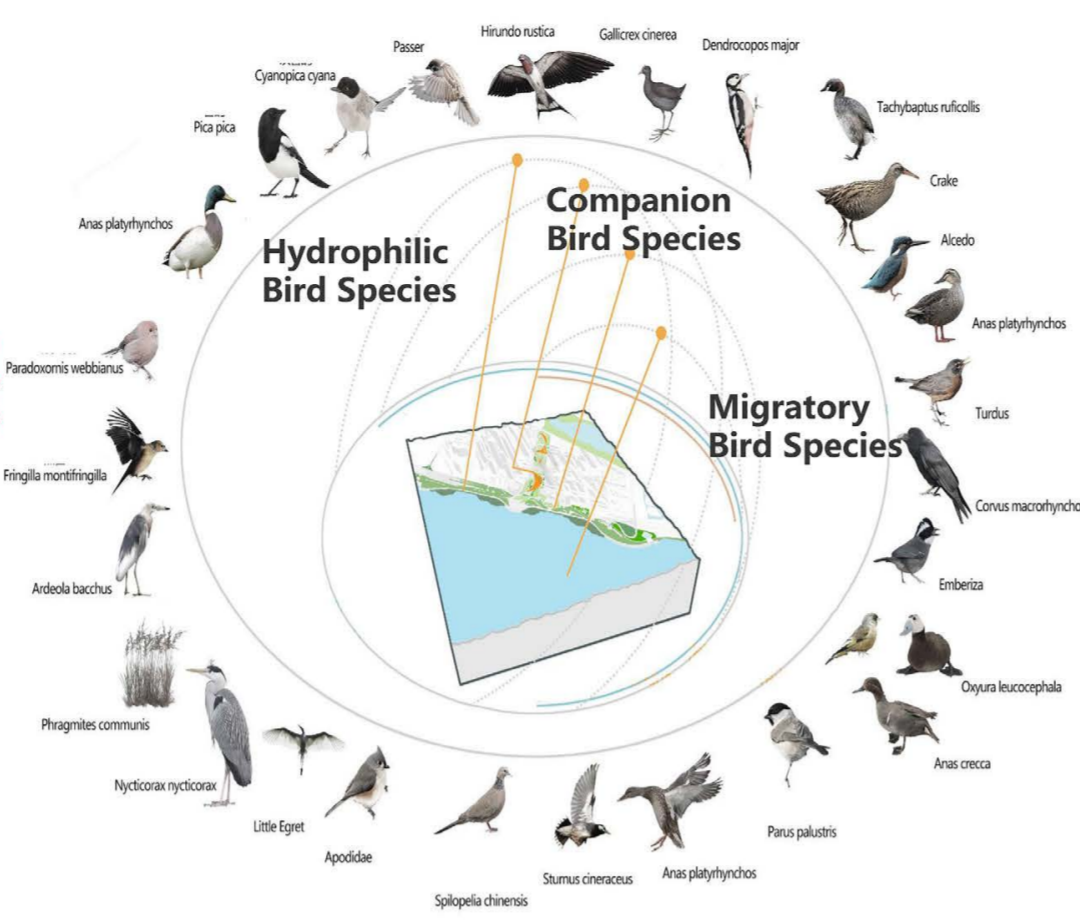
- Streetscape
- Windbreak shelter
- Public green space

## SITE-SPACE-REGION ECOLOGICAL LINKAGE

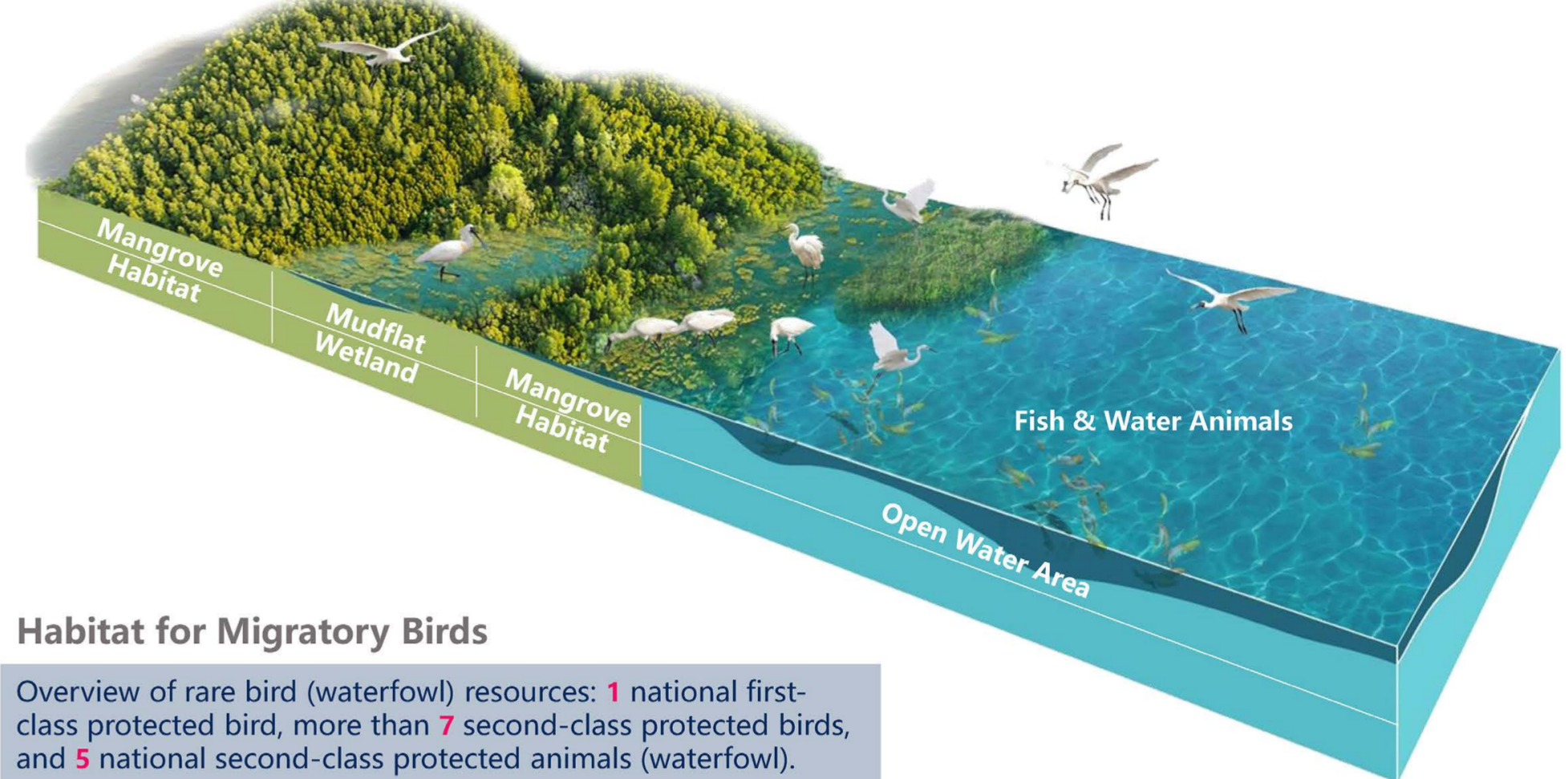


# RECONSTRUCTION OF BIRDS-FRIENDLY HABITAT

## Concentrated Habitat for Water Birds

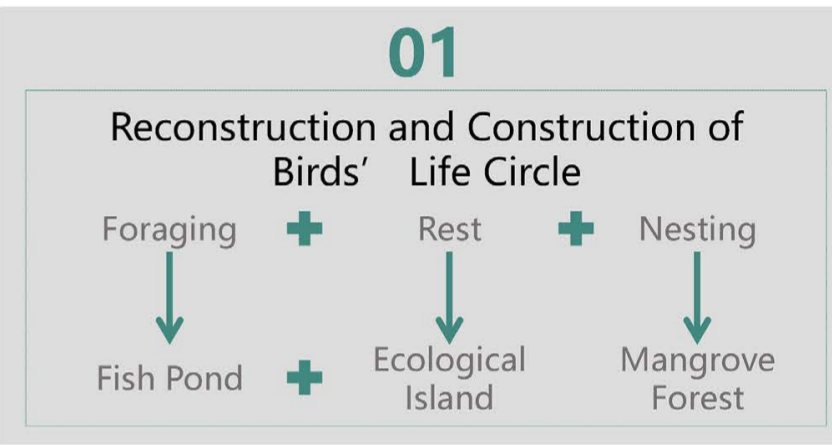


# RESTORATION OF MANGROVE HABITAT



## Habitat for Migratory Birds

Overview of rare bird (waterfowl) resources: **1** national first-class protected bird, more than **7** second-class protected birds, and **5** national second-class protected animals (waterfowl).



**02**  
"Protection Classification" - Water Environment Creating

The project forms deep water areas, shallow water areas and a central bare mud flat, to meet water level requirements of different birds, and expands the open water area in combination with the creation of wetland habitat landscapes, to create a habitat for water birds.

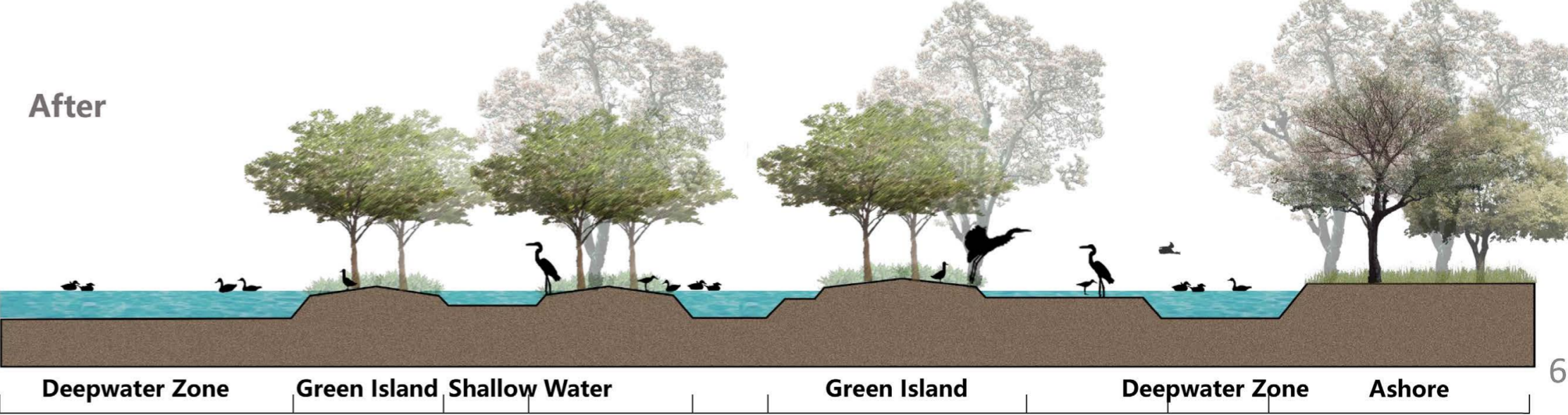
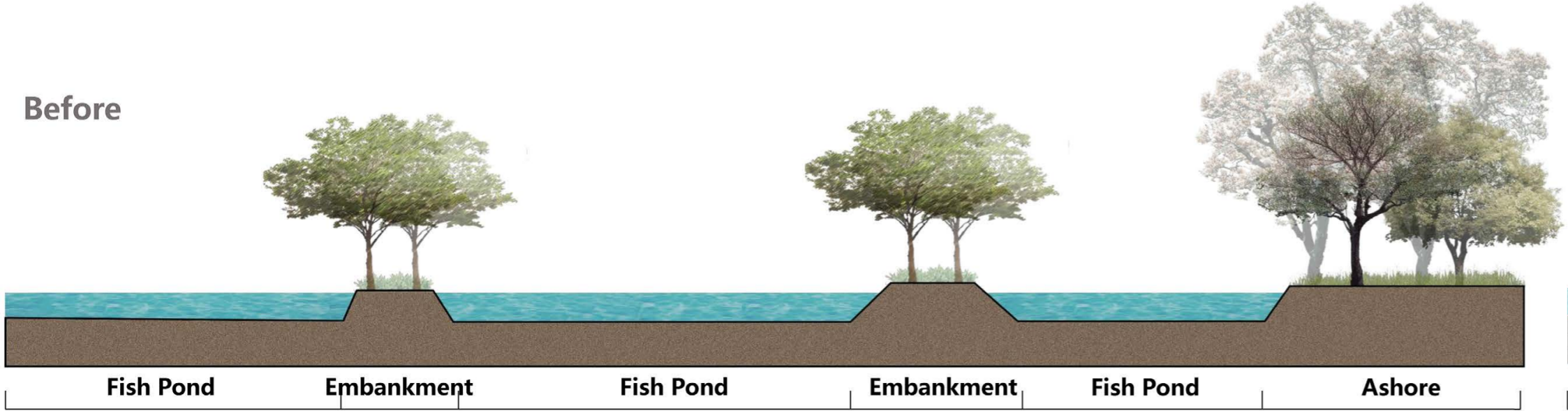
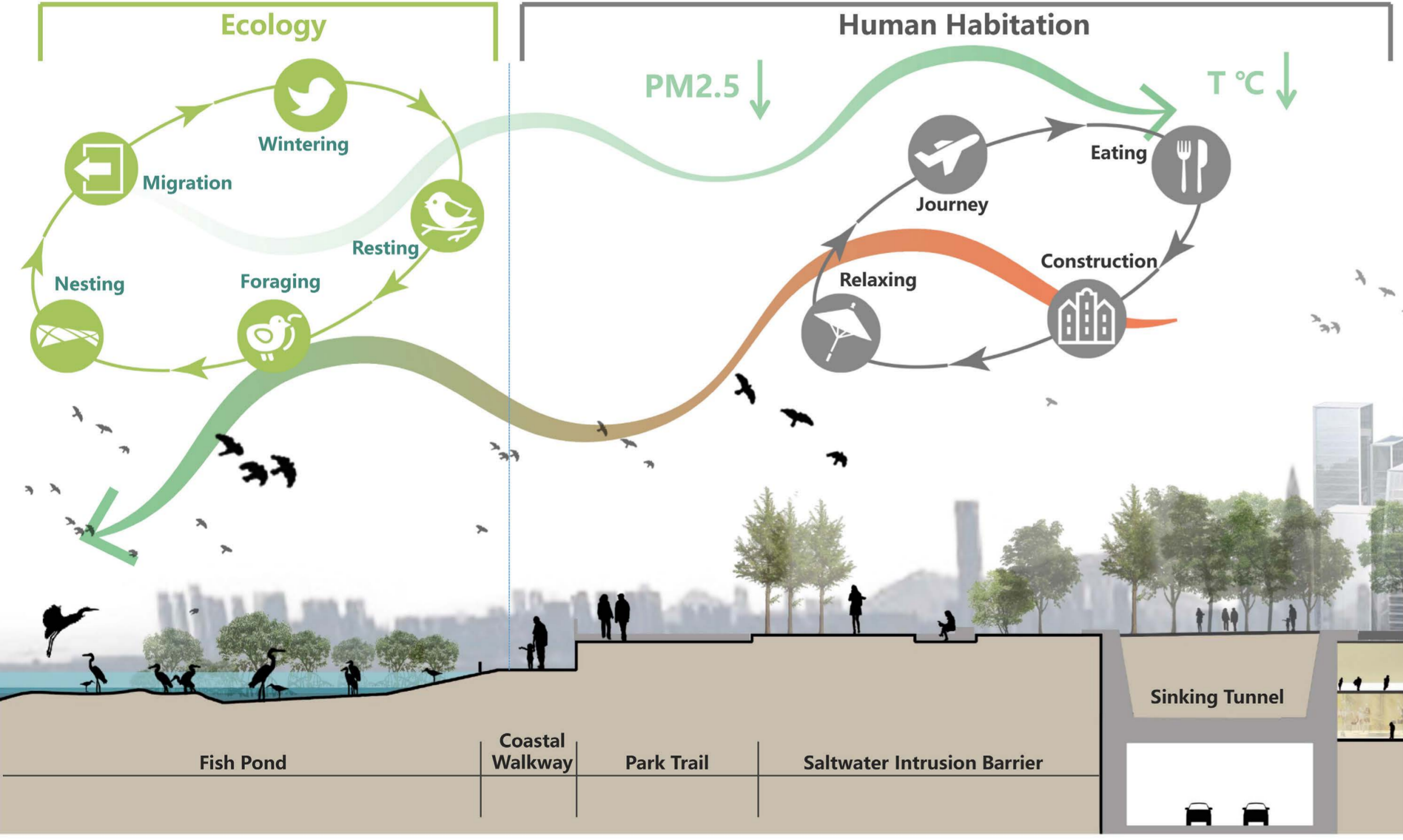
The number of birds increases by **34.4%** to **44,000** per year.

**4** Increased species of birds (Ploverformes, Anseriformes, Pelicans, Boobies, wetland-dependent birds). Among them, **13** sub-species of Ploverformes are increased.

The original water area is expanded by **23.9%**, providing more habitat area.

Deep water channels are built to provide habitats for meeting the needs of different birds.

It provides a suitable living circle for bird migration and wintering.



**MIGRATORY BIRD PARK WITH FRIENDLY COEXISTENCE OF HUMAN, NATURE AND BIRDS**



The central green axis connects with the Super Campus-themed central axis of the Shenzhen Bay Super Headquarters Base, and links with the OCT wetland in the north, forming a super ecological space and an extremely charming stage.

Research Scope

**Bayview Festival Lawn:**  
It brings together open-air concerts, theater performances, and art exhibitions.

Museum of Modern Art

Water Lily Garden

**Deduction and Art Park:**  
It is a space for art performance groups and enthusiasts to communicate, practice, perform and appreciate.

**Natural History Museum:**  
It enables people to know about natural geography, culture and history.

**Lingnan Garden:**  
While feeling the Lingnan culture, people can enjoy the scenery of blooming flowers and the sea view.

**EYE OF SHENZHEN BAY**

**SHENZHEN BAY BALCONY**

**Mangrove Wetland Park:**  
This area extends the ecological function of mangrove wetland, providing habitats for species including migratory birds to stay and forage.

→ Pedestrian Route

- Lingnan Garden – Destination for People and Culture
- Bayview Festival Lawn - A venue for festival performances
- Mangrove Wetland Park – Natural Habitat for Migratory Birds
- Performance and Art Park - Habitat where people interact with the sea

**DIVERSIFIED: CULTURE AND ACTIVITIES**



FLOWER FACING SEA

LEISURE SPORTS

PERFORMANCE

INTERACTIVE ART

Greater Bay Area Habitat

Activity space accommodating more than **300,000** people

Number of birds **+34.4%, +44,000/year**

The average concentration of Pm2.5 **-9.3%** year on year

Days with good air quality **+2.2%** year on year



Bay Area Landmark

