

IFLA AAPME Awards 2024

Award Categories – Unbuilt Category – Analysis and Planning

Project Title:

Shijiazhuang Taiping River Area Urban Design, Shijiazhuang, China

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Project statement

Shijiazhuang Taiping River Area Urban Design Project covers a site area of 5.53 km² in the city of Shijiazhuang, the capital city of Hebei Province in China. The project is located on the extended central axis of Shijiazhuang, serving as a pioneering demonstration area for riverfront development, where the old city, new district, universities, innovation and technology, and waterfront activities converge and intertwine.

In a city with high levels of pollution and scarcity of natural areas, we proposed an eco-sensitive approach to city making, based on the idea of multiplying the benefits of the edge condition between city and river. Rather than a simple waterfront, the district itself builds a whole relationship towards the water, while large ecological zones are restored to their natural condition. This allows to build prominent programs as an interactive interface towards the water, serving the whole Shijiazhuang community with new public attractions.

Urbanizing less, urbanizing better. This project shows that there is a higher value in a more sensitive approach towards city-making.

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Project Narrative and Contents

Shijiazhuang Taiping River Area Urban Design Project covers a site area of 5.53 km² in the city of Shijiazhuang, the capital city of Hebei Province in China. The project is located on the extended central axis of Shijiazhuang, serving as a pioneering demonstration area for riverfront development, where the old city, new district, universities, innovation and technology, and waterfront activities converge and intertwine.

Acknowledging the region's unique challenges of drought and flooding, the proposal introduces the concept of an amphibious city. This approach aims to achieve a harmonious coexistence of naturalness and urbanity across the entire river basin. Specific measures include renaturalizing the riverbanks in accordance with inundation lines to create submersible amphibious floodplains. Instead of traditional embankments, the plan suggests retiring them in favor of wide shoals, simulating natural flow patterns to restore floodplain boundaries.

The proposed eco-sensitive approach for the new urban area in a city characterized by high pollution levels and a shortage of natural spaces seeks to address environmental challenges while fostering a sustainable and harmonious relationship between the urban and natural elements. The primary focus is on leveraging the edge effect between the city and the river, encouraging exploration and optimal utilization of the multi-dimensional connection with the water, and simultaneously restoring ecological zones.

To bring this vision to life, the masterplan introduces innovative and interactive elements along the waterfront, serving as a dynamic interface that enhances the quality of life for the entire Shijiazhuang community. The incorporation of prominent programs aims to create new public attractions, transforming the urban-river interface into a vibrant and accessible space for residents.

Furthermore, the proposal envisions the reconstruction of topography, forming gentle hills and low-lying valleys to enhance habitat creation and functionality of the area. High island hills are identified as suitable locations for buildings and structures, creating special amphibious zones that can adapt to fluctuations in water levels.

The overall objective is not merely to juxtapose the urban and natural elements but to forge a symbiotic relationship that maximizes synergies between the river and the urban district. This

comprehensive approach aligns with the broader goals of environmental sustainability, community well-being, and resilience in the face of changing environmental conditions. The proposal represents a thoughtful and integrated strategy for urban development that prioritizes ecological restoration, adaptive design, and the creation of vibrant, people-centric spaces.

4 strategies to shape a new relationship between the city and water :

1. Amphibious City

- Symbiosis with water to build an amphibious city where nature and urbanity are in harmony

In response to the regional challenges of drought and flooding, we aim to build a resilient landscape that balances nature and urban development. By renaturalizing the riverbanks and replacing the hard embankments, amphibious zones are created to release the pressure from pressing water management challenges.

2. Vibrant River

- Two characteristic identities for the 2 rivers, introducing new types of waterfront public life

The design strategy is introduced based on the existing characteristics and nature of the 2 rivers: Hutuo River is the natural habitat of migratory birds and fish, and Taiping River is more connected with the surrounding urban environment. The river habitat on Hutuo River and the Sport Corridor on Taiping River will provide destination options for various visitors.

3. Fun City

- 5 vibrant urban clusters united together by the activity ring

5 main themes are incorporated into the design for different program clusters. Each has its own special relationship towards the adjacent river and advocates for its local identity. An activity ring connects all public nodes in each cluster, forming a diverse yet closely connected urban sequence.

4. New Communities

- Future-oriented urban model for low-carbon and sustainable neighbourhoods
- Sustainability and circularity are key to the new neighbourhoods. With smart transportation system, passive architectural design, renewable energy production, zero-waste management and latest sustainable technologies, this area will become the test field for achieving ideal urban and nature habitat.

3 key zone as pilot projects to practice our methodologies

- **Lifestyle Bay: River for Everyone**

The Lifestyle Bay is an urban quarter designed for everyone, from local communities to occasional visitors. It serves as a hub for everyday life for regular users while hosting special events and public attractions, making the waterfront an iconic destination for all Shijiazhuang citizens.

The landscape is both fun and diverse, focusing on creating public spaces that facilitate interactions between users and ongoing activities. It features terraces, playgrounds, and viewing platforms, each unique and special.

The landscape system is designed to delay and capture heavy rains, providing floodable spaces for extreme water events. During the dry season, water is stored for long-term use and reused to minimize waste.

Energy and sustainability systems operate at a cluster level. Community-scale solutions empower users to actively participate in proposed strategies, supported by interactive networks and building-scale systems.

- **Design District: Arts and Innovation meet together**

The functions and scales of the buildings transition from large to small as they move from the edges towards the waterfront. On the peripheral plots, large structures like an art academy and an art center are situated. Closer to the central area, smaller courtyards and more mixed-use functions are arranged.

In this node, two types of ecological experiences coincide. A landmark urban park integrates diverse art installations and commercial functions. While along the riverbank, nature takes the lead, creating a wild and unique experience.

The design of public spaces within the site can delay runoff, filter, and store rainwater during the rainy season, and release and reuse it during the dry season, achieving highly flexible and responsive water management in all weather conditions.

The area design utilizes a village-like structure and organization, enabling hierarchical resource recycling and reuse to minimize waste. Through collaborative efforts within the region and systematic support from a sustainability center, low-carbon performance is achieved across the area.

- **Bio-seum: When Ecology becomes Spectacle**

4+1 Bio-domes with semi-artificial habitats offer an interactive ecological experience for visitors. Each dome has its own unique features, allowing visitors to trace the ecological evolution history of Shijiazhuang and experience exotic landscapes.

The technology and design of the ecological domes transform the super natural museum into a botanical garden, where visitors can explore diverse ecological environments. It goes beyond nature and diversity.

The water system uses a restoration strategy directly connected to the river. Each dome relies on natural ventilation and evaporation strategies to maintain optimal humidity levels.

By integrating photovoltaics into the glass, the super natural museum domes are interconnected, exchanging heat and energy according to their needs. Due to their

different temperature and humidity levels, they can share excess heat or cool energy, providing visitors with an energy-efficient and comfortable visiting environment.

Urbanizing less, urbanizing better. This project shows that there is a higher value in a more sensitive approach towards city-making.

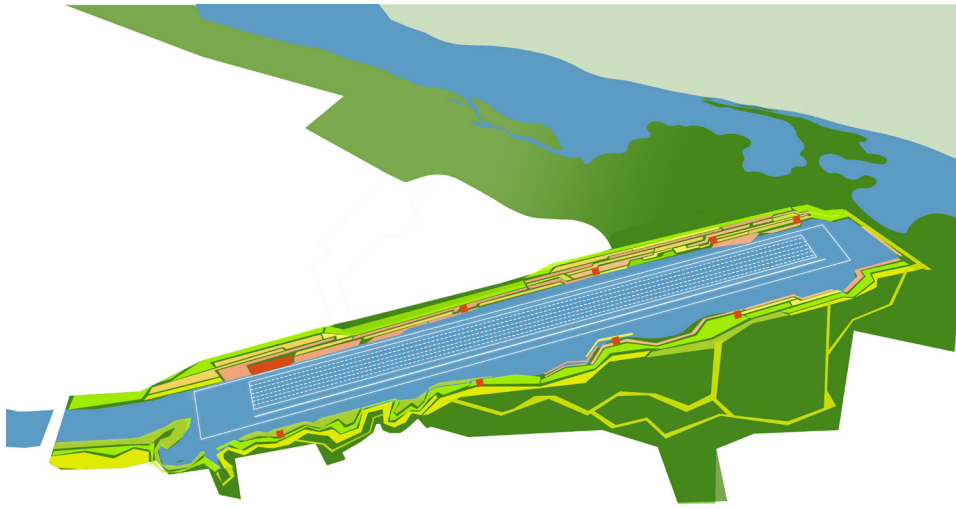


Masterplan: The overall objective is not merely to juxtapose the urban and natural elements but to forge a symbiotic relationship that maximizes synergies between the river and the urban district.



Overall Birdseye View: Shijiazhuang Taiping River Area Urban Design Project covers a site area of 5.53 km², serving as a pioneering demonstration area for riverfront development, where the old city, new district, universities, innovation and technology, and waterfront activities converge and intertwine.

DESIGN GENERATION SCHEME



A water race track brings together a variety of water sports.



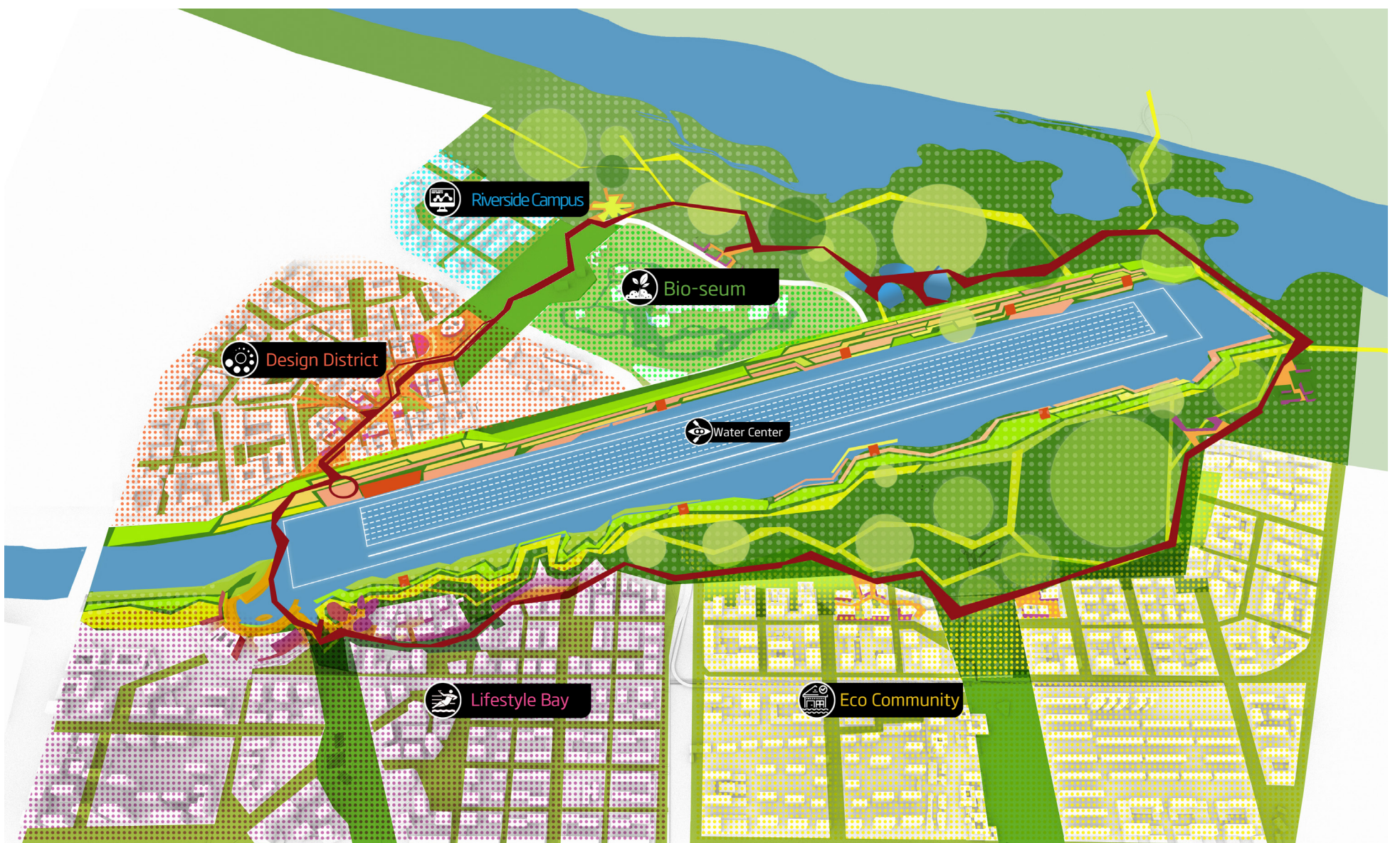
The delta scenery extend from the waterfront into the dynamic hinterland.



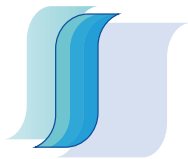
A multi-dimensional ring formulate a diversified yet connected framework for all.



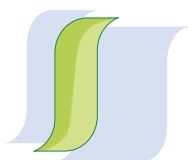
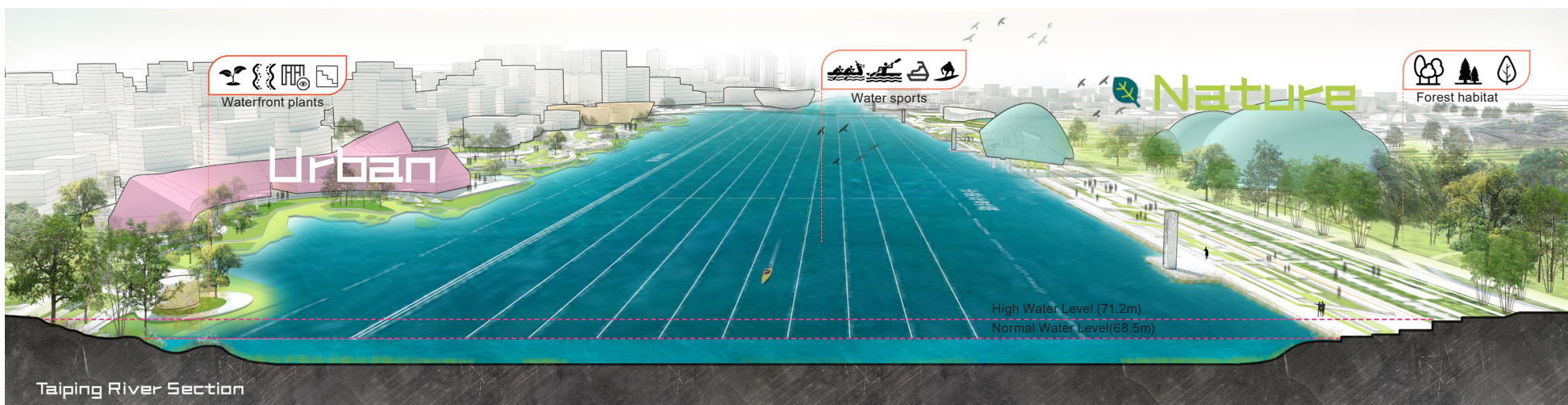
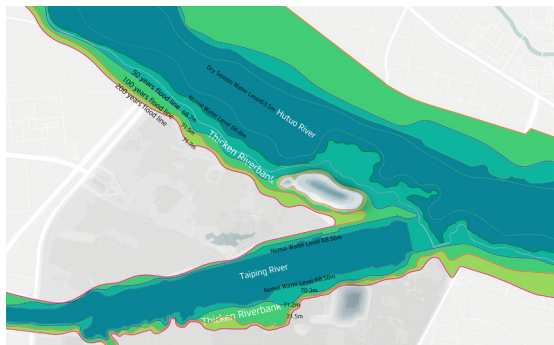
The programs and functions will be organized by the wind corridor and green network



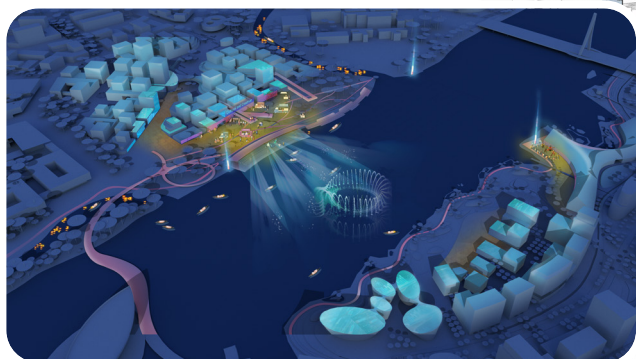
5 main themed areas, Bio-seum, Riverside Campus, Design District, Lifestyle Bay, and Eco Community will introduce green lifestyle with new technologies and create new Taiping River Area with brand new visions and expectations.



DESIGN STRATEGY 1: AMPHIBIOUS CITY

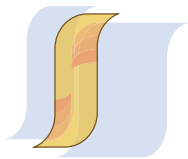
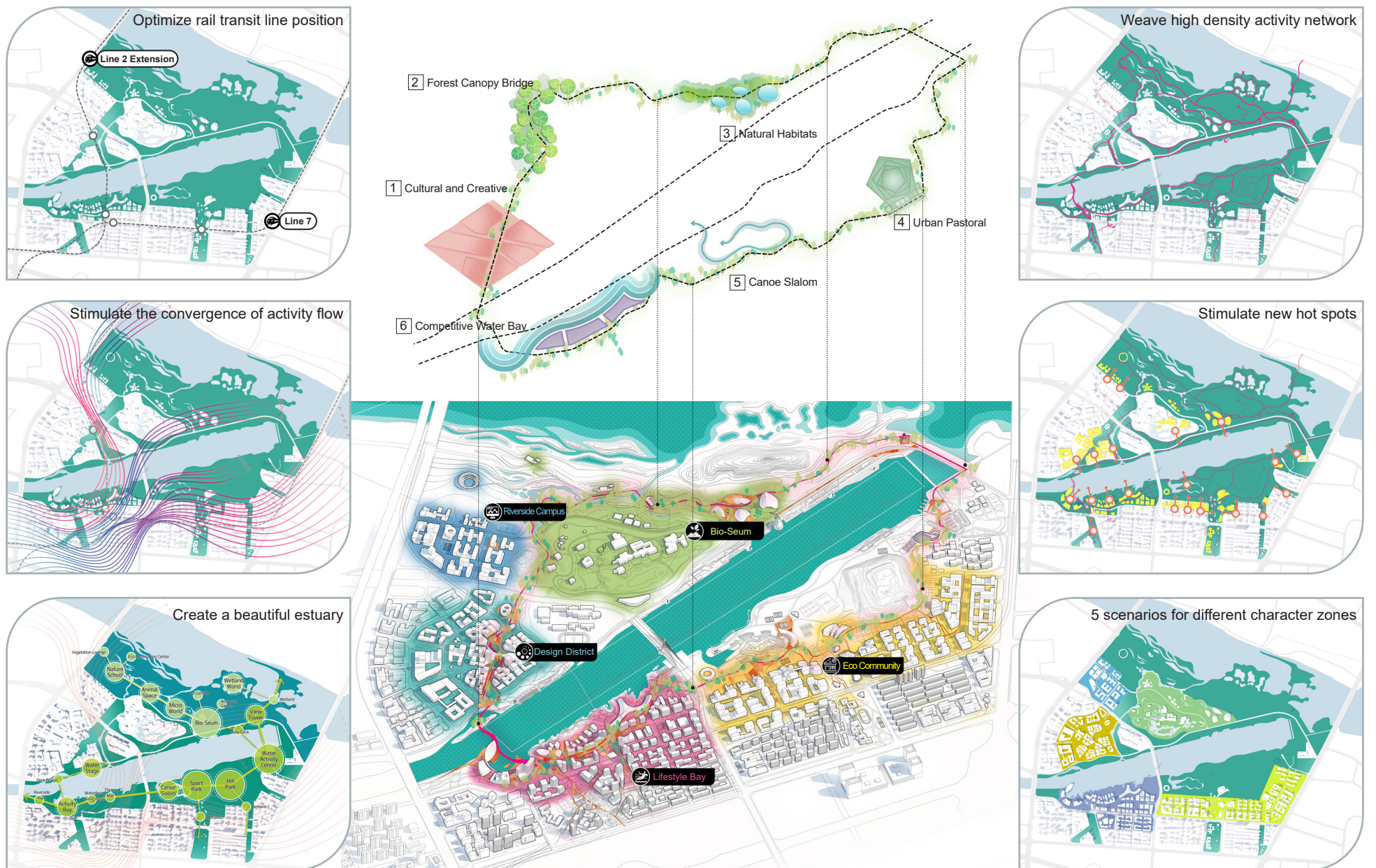


DESIGN STRATEGY 2: VIBRANT RIVER

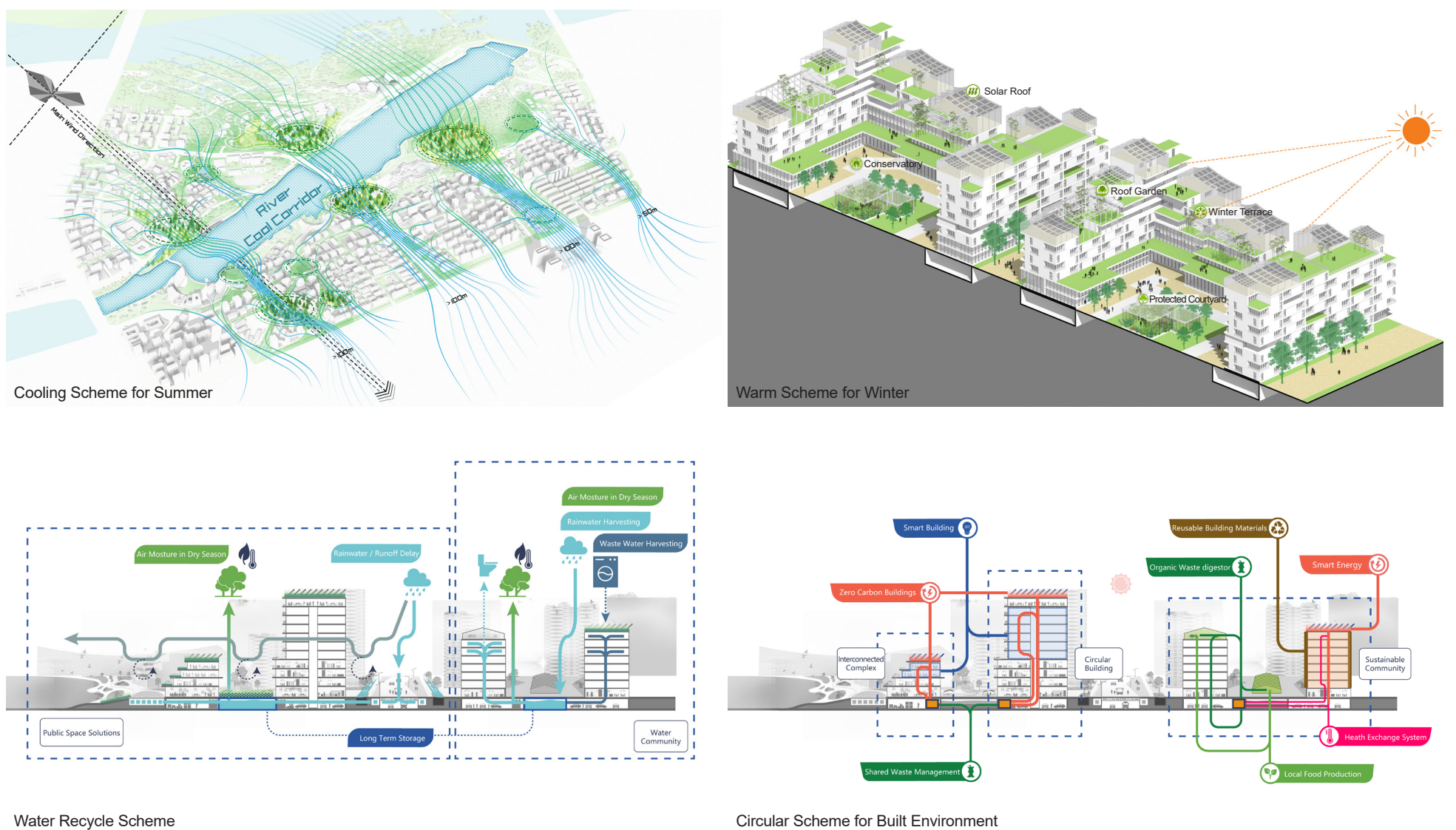




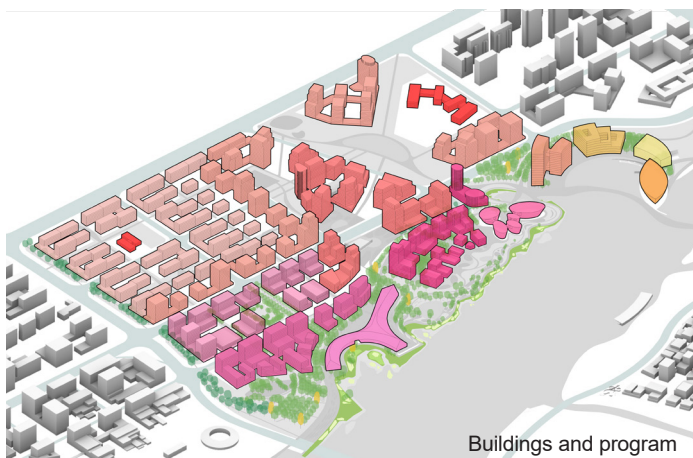
DESIGN STRATEGY 3: FUN CITY



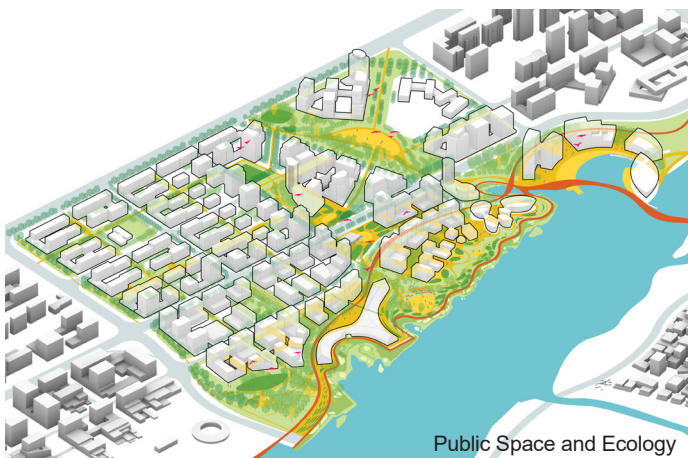
DESIGN STRATEGY 4: NEW COMMUNITIES



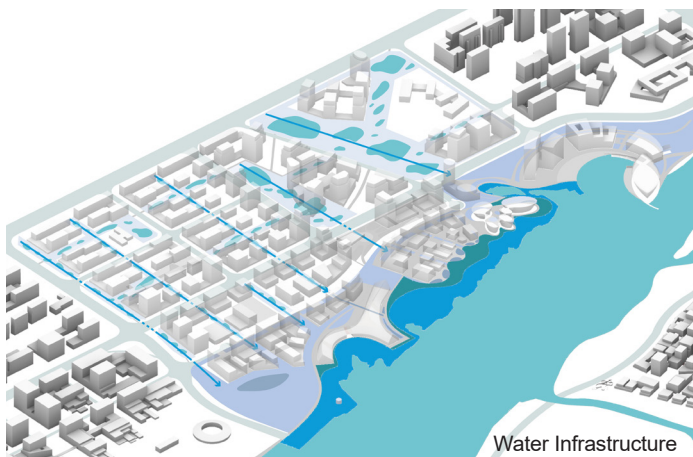
KEY NODE 1: LIFESTYLE BAY -- RIVER FOR EVERYONE



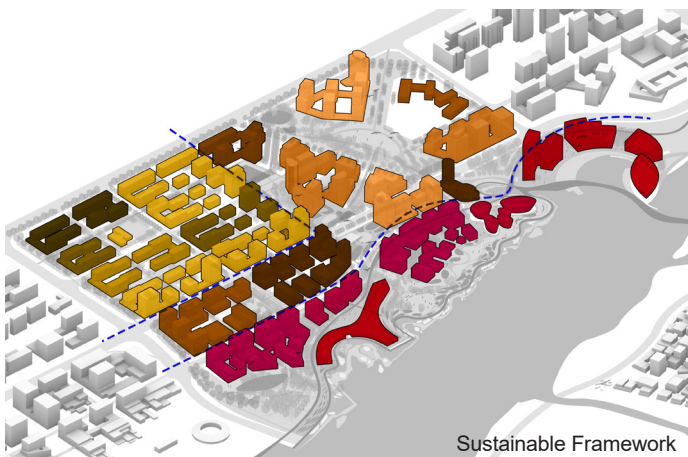
Buildings and program



Public Space and Ecology



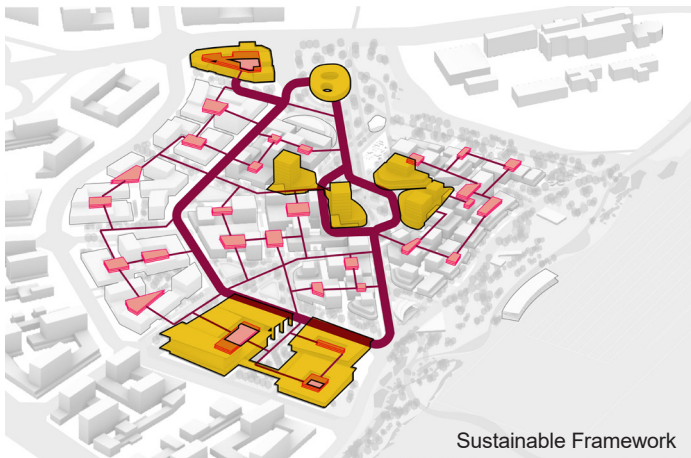
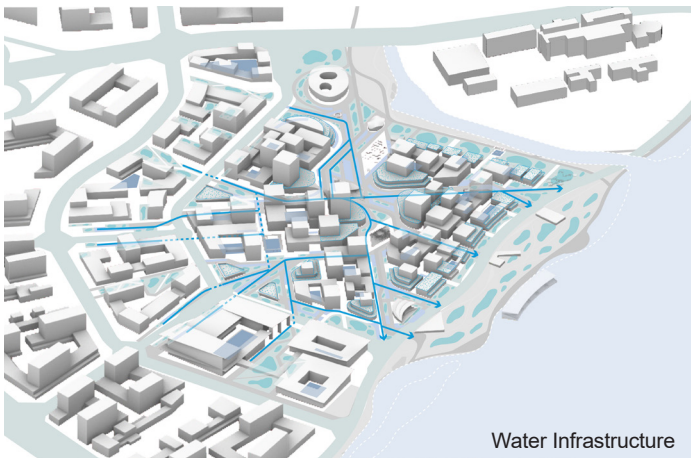
Water Infrastructure



Sustainable Framework



**KEY NODE 2:
DESIGN DISTRICT -- ARTS AND INNOVATION MEET TOGETHER**



**KEY NODE 3:
BIO-SEUM -- WHEN ECOLOGY BECOMES SPECTACLE**

