

Strategic Planning for Coastal Area of Pudong In Shanghai 2025 – Eastern Shanghai International Frontier Gateway District

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1 ABSTRACT

To be an international economic, financial, trade, shipping center and a global city is an ultimate goal and long-term task for Shanghai. In the past 30 years, Shanghai has got a great development. In the meanwhile, as the center of Yangtze River Delta, Shanghai has also contributed a lot to the development of the surrounding area, which is growing to be one important metropolitan area in the world. Nowadays, around Shanghai, there has been three other Shanghais. One Western Shanghai includes Suzhou, Kunshan, Hangzhou which are based on cultural tourism and manufacture of technology; one Southern Shanghai includes Ningbo which is based on marine equipment and chemical industry, and one Northern Shanghai includes Nantong which is also based on marine equipment and chemical industry.

In the future development, Shanghai and Yangtze River Delta will face more challenges and need to change the development path, laying more effort on improving the soft power in international service, scientific and technological innovation, cultural influence and livable ecology. In this paper, we have one vision for Shanghai 2025, that there will be one area playing the role of springboard for the transition, which need international ports and airports in the meantime, and land resources growing gradually. We believe that as the international gateway of Shanghai and Yangtze river delta, Coastal Area of Pudong including Jiuduansha wetland has a big chance to be the pivot, and the Eastern Shanghai in the near future. In this paper, we are going to depict the picture for Coastal Area of Pudong in 2025, and explain how it is going to be and why it can be.

2 BACKGROUND

2.1 Shanghai: A city where the East meets the West

Looking through Shanghai's history as a city where the East meets the West, Shanghai has always been playing a significant role in China's opening up for international cooperation. Nowadays, Shanghai is on its way towards a global city. However, compared with the leading cities such as London, New York in the world, Shanghai has shown some disadvantages. For instance, in the aspect of industrial economy, it lacks innovation, and the ability of international service is lower (the amount of international financial institutions and international organizations is low); in the aspect of spatial development, the pressure of population upon the limited land resource is high, as is the population density of downtown Shanghai (permanent population density is 29900 people/km² in 2012¹), and new town needs more time to attract population; in the aspect of ecological environment, ecological land has been eroded gradually (the percentage of urban development land is more than 40% all around Shanghai²), and urban environment quality needs to be improved. So, future development for Shanghai lies in the international service, scientific and technological innovation, cultural influence and livable ecology. Only by upgrading its soft power, can Shanghai be a rising cosmopolis. As the international gateway of Shanghai and Yangtze river delta, Coastal Area of Pudong is in a prominent strategic position and has a big chance to be the pivot for the transition.

2.2 Yangtze River Delta: A region leading economic development and opening up of China

The Yangtze River Delta, of which Shanghai is the core, is in the stage of rapid development. Among this metropolitan area, Western Shanghai District which is represented by Suzhou, Kunshan, Hangzhou, taking advantage of location, transportation, ecology, culture and so on, has got great development in the aspect of cultural tourism and manufacture of technology. In the spatial structure of Yangtze River Delta, Western Shanghai District has grown to be the sub-center, forming two development axes, namely Shanghai-Nanjing

¹ Shanghai sixth census in 2010.

² Shanghai Urban Planning and Land Resources Administration, Shanghai Urban Planning and Design Research Institute: Shanghai in Transformation Urban Planning Strategy. Shanghai, 2012.

and Shanghai-Hangzhou. In contrast, Southern Shanghai District which is represented by Ningbo and Northern Shanghai District which is represented by Nantong started growing relatively late. However, bringing the advantage of coastal cities into play, they have become a key manufacturing base and comprehensive logistics base, which is based on marine equipment and chemical industry.

To be the leading city group in the world and promote the international influence, Yangtze River Delta need more effort to optimize the functional structure. On the one hand, it need to strengthen the leading role of Shanghai in two sectors, which are international communication abroad and high-end service at home. On the other hand, it need to accelerate the development speed for coastal cities, narrowing the gap between Northern Zhejiang and Southern Jiangsu. Above all, as the core of coastal area, Pudong need to play a bigger role on regional development in the future to keep pace with international frontier.

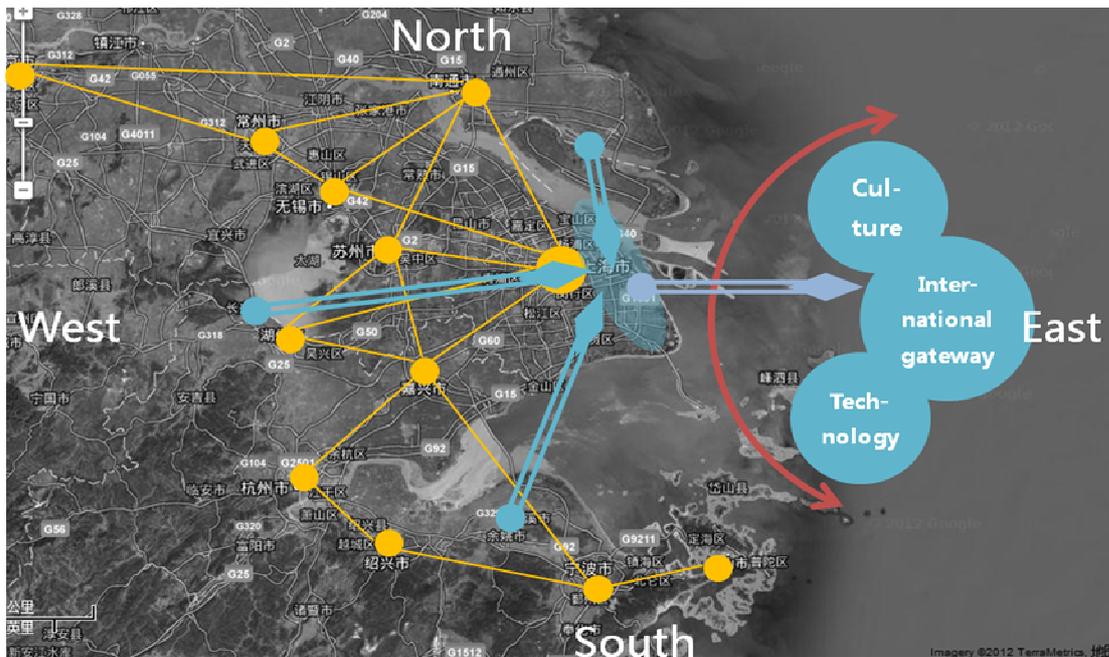


Fig. 1: The structure of Shanghai and its surrounding areas.

2.3 Coastal Area of Pudong: A place having conditions and opportunities

2.3.1 Conditions

Nowadays, downtown Shanghai is limited by space, overcrowded to accommodate newly increased needs, and need to build the city inwards in the future. By comparison, as the forefront of Shanghai, Coastal Area of Pudong has great advantages in location, transport, ecology, land space, culture, technology and so on, and is being a hub where global human resources, capitals, cultures and technologies are introduced. To summarize, it has a great chance to be a new strategic urban development space.(Figure.2)

2.3.2 Opportunities

From the point of view of Yangtze River Delta, a series of National Strategy like Development of Coastal Area in Jiangsu, Construction of Coastal Thoroughfare, Zhoushan Archipelago New Area and so forth, means that the development path for Yangtze River Delta has turned from River Economy to Ocean Economy eventually. This will definitely bring good chance for the Coastal Area of Pudong that is in the core place.

From the point of view of Shanghai District, the government has reoriented the use of investment on major construction projects. Some projects as Waigaoqiao Cultural Free Trade Zone, Disneyland, and industrial park of equipment manufacturing and aircraft manufacturing have provided good chance for development transformation. Besides, expansion of Pudong International Airport will further enhance its international aviation hub status.

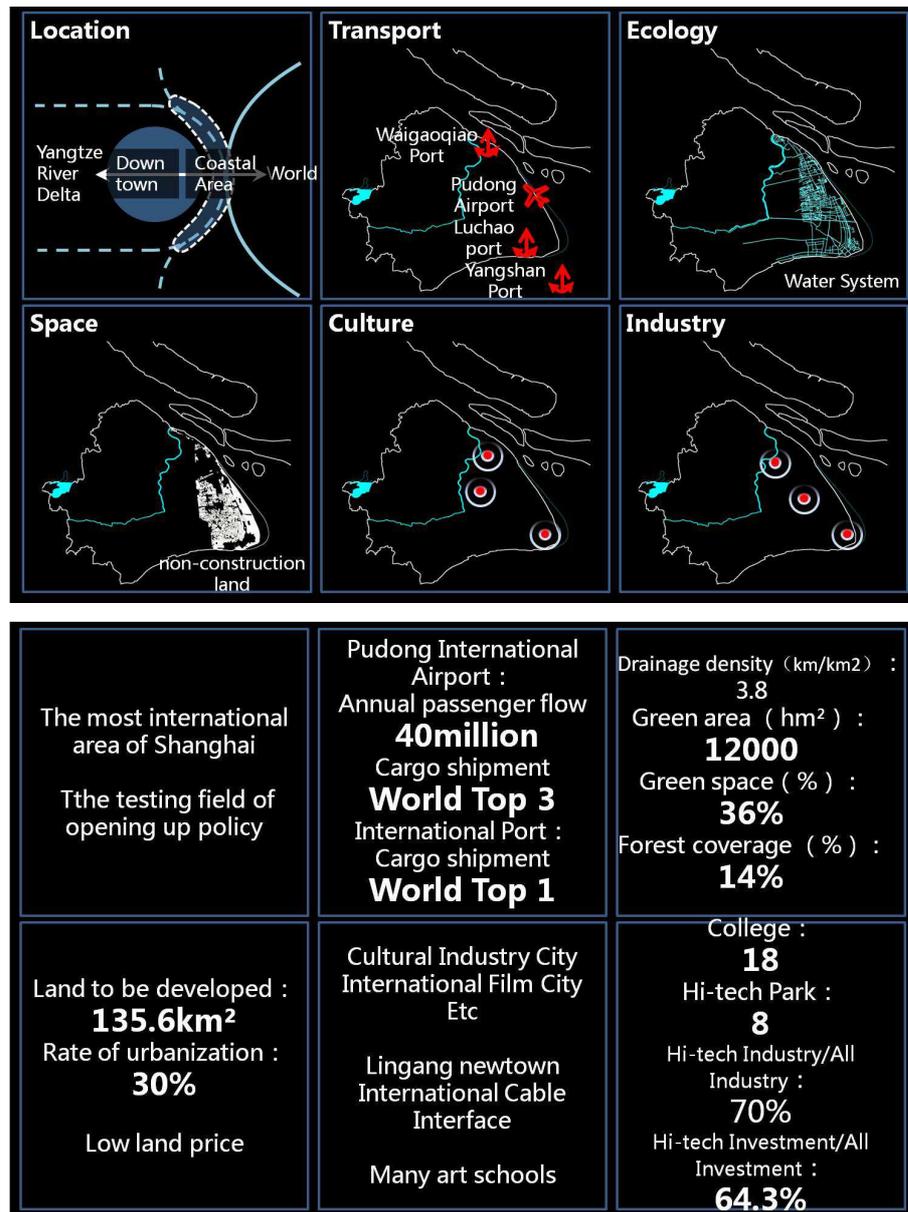


Fig. 2: The advantages of Coastal Area of Pudong.

3 STRATEGIC CONCEPTION

3.1 Object

Above all, based on regional structure and city development demand, in the meantime considering the advantages of Coastal Area of Pudong, we have one envision that Coastal Area of Pudong can be the Eastern Shanghai International Frontier Gateway District in the near future. The object contains three parts as Hub of International Communication, Base of High-tech Industry and Multi-culture City.

3.1.1 Hub of International Communication to collect talents and service communication

As passenger volume of Pudong International Airport increasing and air lines expanding, Coastal Area of Pudong is positioned as a hub collecting top talents at home and abroad.

3.1.2 Base of High-tech Industry to optimize industry and add value to research

Most of the Nine High-tech Industry in Shanghai located in Pudong, which lays a good foundation for Coastal Area.

3.1.3 Multi-culture City to output innovation and become attractive

Pudong has got a good start in film making, online games, carton and so on. Besides, the projects of Waigaoqiao Cultural Free Trade Zone and Disneyland give a hopeful picture of the Coastal Area’s future in opening up policy. So, this area can be a Multi-culture City, which is complementary to the central city.

3.2 Strategies

3.2.1 Building a center: Eastern Shanghai International Frontier Gateway District

As discussed before, the development of Pudong relies on international communication, and it should attract more talents by providing pleasant living environment and swift transit services. So the airport area should develop a top urban center to encourage more global cooperation. For the northern and southern parts of Pudong, cultural and technological industries will be their incentives.

As a result, a new town would arise from eastern Shanghai, creating a global networking center in coastal Pudong. It would act as the motivation for a more globalized Shanghai. With a connection to the downtown, the eastern new town will become a complement of shanghai’s main axis. It will help build a polycentric structure of Shanghai together with the northern and southern part of coastal area, which will eventually relate to the polycentric metropolitan of Shanghai and Yangtze River Delta.

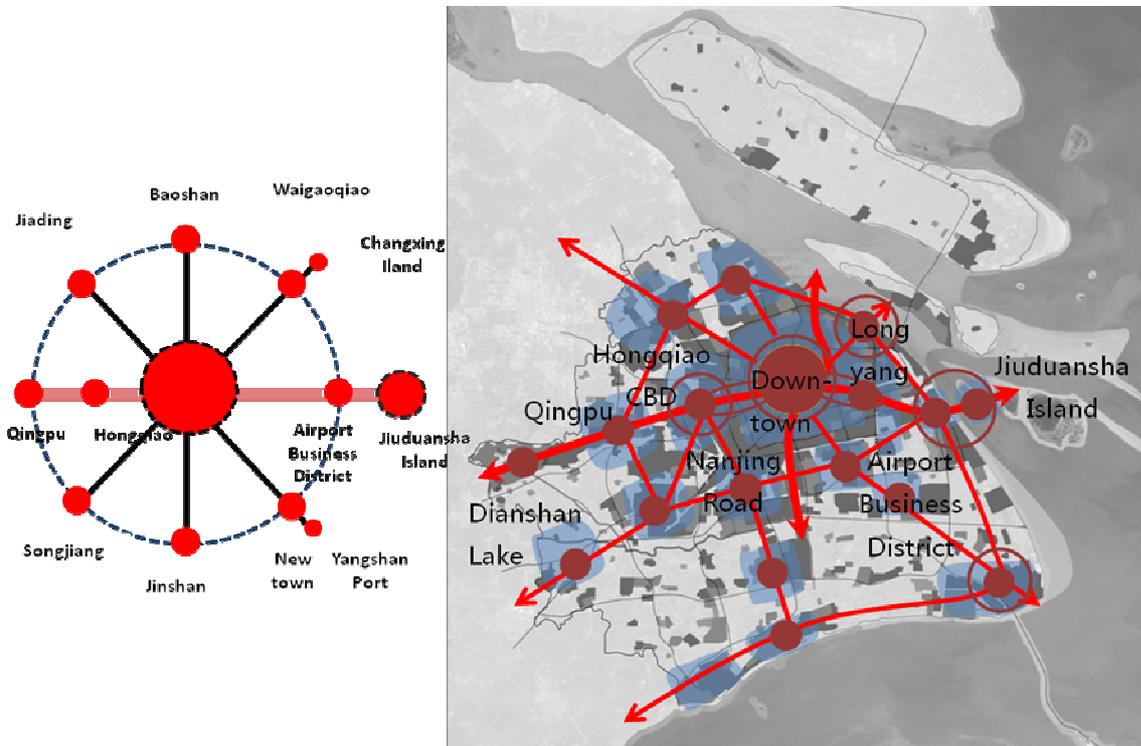


Fig. 3: The space structure of Shanghai in the future.

In the pattern of space, based on some case study about Two-Centre City, we conclude that the distance between new town and central city is usually within 40km. Considering the current situation, we place Eastern Shanghai International Frontier Gateway District mainly on Jiuduansha wetland, which is in the north of Pudong Airport. This district is near the Airport, having plenty of land resources that is growing gradually. Otherwise, being in the north of the Airport, this new district may get rid of the dependence on central city, taking advantage of the beautiful scenery in Jiuduansha wetland to satisfy the needs of high-end environmental requirements from senior people.



Fig. 4: Two plans about Two-Center City.

3.2.2 Constructing nine towns: nine economic parks in Coastal Area of Pudong

Since the globalization has brought scientific and cultural cooperation to an unprecedented level, the Eastern Shanghai should grasp this opportunity to adapt itself to the global trend, thus attracting international talents. Pudong will develop into a 9-pillars-city insisting of 9 clusters, each for a newly developed international function, that is to say, a convention center, a hi-tech park, a research laboratory, a cultural and creative zone, a media city, a recreation park, an airport business district, a global university town and an international summit conference center.



Fig. 5: Function strategy and 9-pillars-city.

4 SPATIAL PLANNING

4.1 Forecasting the scale of development

Learning from international practice, we arrive at a decision that the ratio of urban construction land is within 50%. In 2010, urban construction land of Shanghai is 2800 km², and the ratio is near 50%. Considering the great advantage of Pudong in ecology, the construction land must be controlled to balance the whole ratio of Shanghai. So, we conclude that 40% will be a good choice for Pudong.

Finally, on the basis of the site research, and through this ecological-capacity model for forecasting, we came to the conclusion that Pudong's population will reach 4.2 million, which would require a sum of 500 square kilometers' land.

4.2 Space layouting

Based on a comparative study with Incheon, Korea, we forecast the land-use percentage for these 9 clusters and the area needed, then we choose appropriate locations for each cluster. As a result, 3 economic zones will be developed in Pudong. Firstly, the international hub containing airport business, international communication, and airline industry. Secondly, the creativity zone containing cultural trade port, financial services and the Disneyland. And finally, the industrial park accommodating port vicinity manufacture. To strengthen the transportation between downtown and eastern shanghai, the Middle ring road will extend to Jiuduansha wetland.

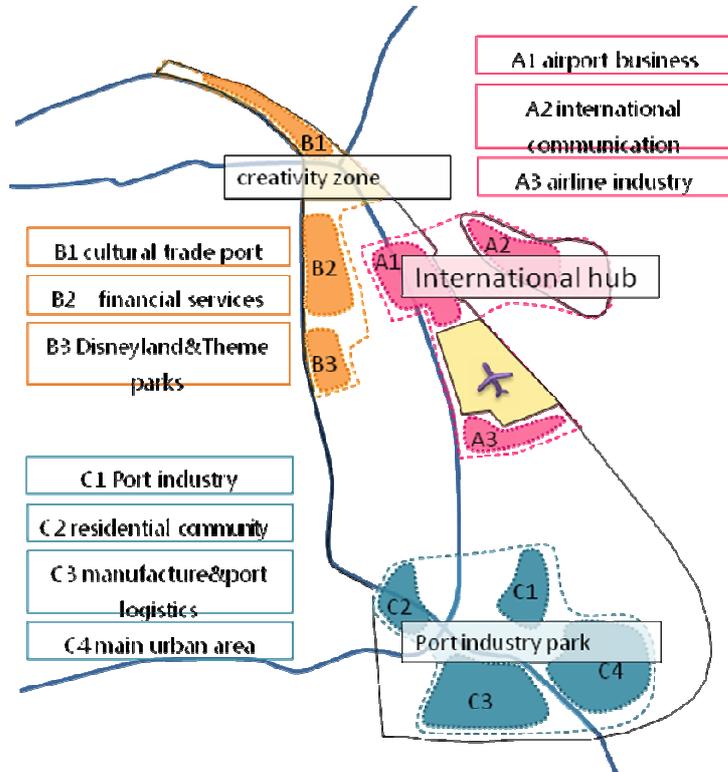


Fig. 6: 3 economic zones in Coastal Area of Pudong.



Fig. 7: Land use plan in Coastal Area of Pudong.

4.3 Detailed design for the core

From the aerial view of Eastern Shanghai, we can see there are two parts across the sea. To make these two parts correspond perfectly, we design a seaside park along the western side. And marinas are set on both sides to connect each other. On the western side, there will be an airport business district, a global university town and a convention center in the loop. On the eastern side, there will be an international summit conference center, a global climate laboratory and a CBD around the central wetlands. By preserving the pattern of the rivers and wetlands on the island, we would like to create a favorable environment on and off the island.

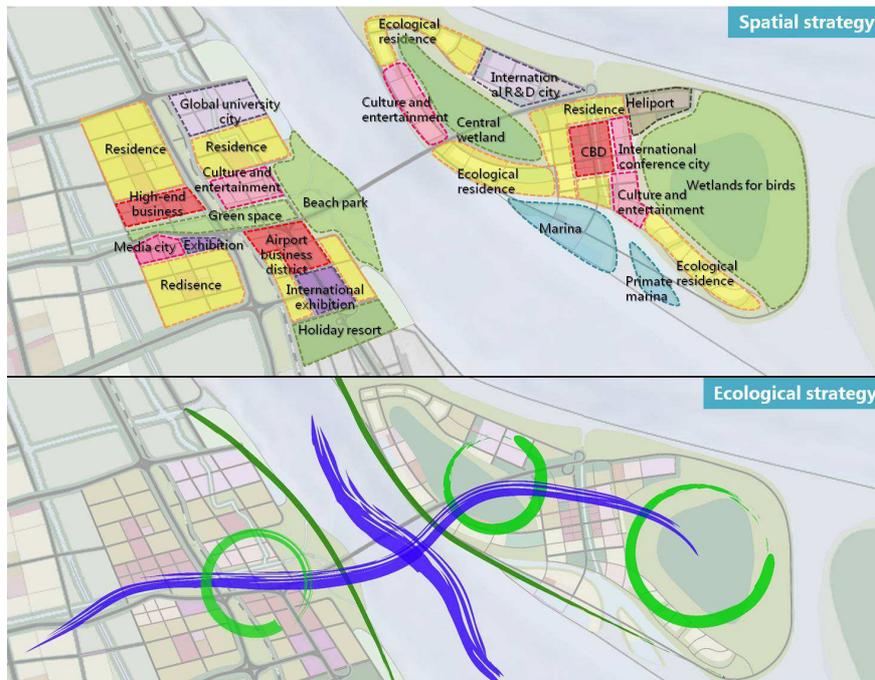


Fig. 8: Land use plan in the core of Coastal Area.



Fig. 9: Urban design renderings.

When it comes to urban design, the parkway will serve as the main axis of the western site, connecting multiple functions along the way and creating a pleasant working environment. In order for environmental conservation, the eastern side adapts low density residence, with private heliport and marina. Combining various functions like international conference, research and institutions, Eastern Shanghai will be a convergence of the world's talents.

5 CONCLUSION

To summarize, we hope Eastern Shanghai will be a new pivot to motivate coastal area of Pudong to make a leap, and accelerate Shanghai's pace towards a cosmopolitan city.

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