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# Analysis On The Development Strategy Of Old Harbor Area

# Regeneration

# ---- the port authority of Harbin area as an example

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**Abstract:** As the city layout and adjustment of industrial structure, on the basis of the existing land area, in order to save land, improve land value, renovation of old harbor area regeneration is very necessary. A mature and perfect old harbor area regeneration is a multi-faceted fit, and how to update the old harbin, the strategies adopted by different cities are not the same. In this paper, the port authority of Harbin as an example, and puts forward some strategies for the renewal of the industrial development in the region from the aspects of the development orientation, industry selection, functional orientation, spatial structure and national policy.

## **INTRODUCTION**

After 20 years of the 20th century, old harbor area regeneration becomes the focus of global attention, many of the old harbor area abroad had regenerated and transformated for large-scale<sup>[1,2]</sup>. For old harbor area regeneration for our country is still exploratory stage, and the function of the harbor area and the surrounding urban and space integration, the space form inside the area and thinking of structure, as well as the use of historical elements have important guiding significance. At present, China's successful regeneration of the harbor area is mainly concentrated in the southern region, and for the north, due to seasonal, economic and other factors, the old harbor area regeneration is more difficul. Therefore, the research on the harbor regeneration of the northern area, The main purpose is to adjust the industrial structure and make use of its unique geographical elements (two season elements) to create local characteristics.

## Analysis On The Present Situation Of Harbin Port Authority

the port authority is located in the middle of Songhua River, on the coast of Nenjiang, Issued a large area of Russia far east area. Take Heilongjiang, the Songhua River and the Wusuli River three counties along the Yangtze River and the transportation function of the Russian import and export trade, Northeast China's largest inland port and an international hub port. With the increasing competition in the industry and the continuous development of land transportation, Harbin's shipping function is constantly weakening. The site of port authority, located in the outskirts of Harbin, that has lost the original function and trend of decline by city planning structure adjustment. In the new round of "Harbin City Master Plan", the Port Authority area of land property changed



from logistics warehousing land to land for housing, public facilities and public green space, the land is clearly adjusted from the production site to the land for living, that is shown in Figure 1.





**FIGURE 1.** The master plan of Harbin City (2011-2020) **FIGURE 2.** Distribution of health industry and related industries in Harbin

## Industrial Structure Status

"2016 State Council Government Work Report" stressed, "China's 13th of Five-Year" period to accelerate the upgrading of the industrial structure, the report that the modern service industry as a new industry, to increase the proportion of industry. The current situation of Harbin industrial structure from the following three aspects.

## (1) Development demand

Since 2010, the industrial structure of Harbin, which increasing the proportion of the third industry. The first, second industry accounted for decline year by year, and the total retail sales of social consumer goods continue to improve<sup>[3]</sup>. It can be judged that the third industry in Harbin is incremental growth. In order to cope with the new macro strategic objectives, Harbin based on the four key development areas for further adjustment of industrial structure, among them, bio-medicine as a new industry has been incorporated into the city's industrial development goals, the goal to build the province's largest city of health industry to the 2020.

(2) Three disadvantages

Industrial base transfer: The original logistics warehousing industry gradually is shifting outward within base, Leading to the lack of leading industries in the region.

Lack of infrastructure: The land structure is not balanced in outskirt, the lack of public service facilities.

Low economic aggregate: Due to the gradual decline of the original logistics warehousing industry, because the area of logistics warehousing industry gradually decline, the current demand for development is not enough to support economic growth, so the overall economy of the region is in a low situation.

(3) Three advantages

Obvious geographical advantages: The base is close to the central city of Harbin, the city's second ring road passes through the base, and close to the subway line.

Abundant landscape resources: Songhua River and Majiagou which the formation of the clamping force on the base.

Relevant policy support: Harbin as the capital of Heilongjiang Province, preferential policy support and infrastructure resources in the province.



### THE REGENERATION STRATEGY OF HARBIN PORT AUTHORITY

#### **Industrial Structure Selection**

Through the adjustment of industrial structure in Harbin, under the back-ground of regional industrial layout and macro policy support, that is shown in Figure 2, the choice of industrial structure can be considered from the development needs and advantages and disadvantages of the port authority. The base needs to be able to take full advantage of the base and surrounding advantages, overcome disadvantages and be able to integrate with the existing industrial base in the region and surrounding areas, Linkage development of the third industry promoted each other. Considering the industry characteristics, the health service industry based on service activities which is the base of the main industry, fitness leisure, health care and living office three health services which were the main function of development.

From the perspective of industrial integration, healthy industry is given priority in base leading industry, and combined with the existing medicine industry base in Harbin, and closed contact with the core area of the new city of Harbin East , health industry which achieve dislocation development in function, and supplement and improve the health industry chain<sup>[4]</sup>, health industry area is formed on the longitudinal. That make full use of the advantage resources of city center and new city of Harbin East , and the existing condition of the base, cultural tourism and retail busines were developed, it gradually become an important node in Binjiang belt, and integrate into the Riverside Development Zone horizontal, that is shown in Figure 3.

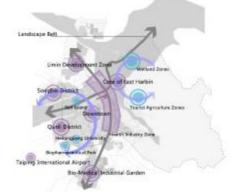


FIGURE 3. Regional industrial integration

FIGURE 4. Industrial development model

### **Development Mode Selection**

Port Authority will serve as a platform for regional business, real estate, health, tourism and talent training on the development model, and that adopts the model of embedded development, and combines with function of innovative, exogenous and endogenous, collaborate and guide spatial integration, that is shown in Figure 4. The main elements of the development of health industry, such as convenient transportation, technical basis, market environment, government support and human environment for Port Authority area. The area already has two convenient elements of convenient traffic and excellent environment, in the future development, we need to promote the construction of environment, the introduction of high technology and the training of talents, thus that can strengthen crowd gathering, and to complete the development of regional transformation.

### **Functional Orientation And Planning Elements Extraction**

The existing industries are mainly small business activities and cultural tourism around the port authority, that combined with the embedded development model, the main functions of the Port Authority area can be targeted at the following five points:



(1) SOHO active block: It combined with the surrounding urban, small scale commercial and recreational activities to attract popularity, it can bring motivation for the venue to activate;

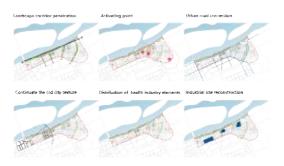
(2) Cultural and creative park: Leisure, experience and display are the main direction of development, Binjiang leisure entertainment is built by the remnant Kanto railway combined with shipping culture, so that to attract popularity;

(3) Commercial business district: Leisure, business, business affairs are main function, as the point of catalyst active site, It not only complements the regional business needs but also brings development opportunities.

(4) Health experience Park: It combined with the core content of the health industry, and built a healthy industrial park, and to undertake the functions of health management, talent training and recreation.

(5) Urban agriculture experience park: It is a supplement to the health industry park, that fully combine leading industries, and set up urban agriculture experience zone , in the vicinity of the railway is still under the constraints.

Under the guidance of functional positioning, waterfront landscape corridor inward penetration, the setting of the activation point of the inner harbor, and link roads around the city, the continuation of old street Daowai District texture, health industry elements of multi distribution and renovation of industrial sites is to promote the six elements of the planning structure, that is shown in Figure 5.



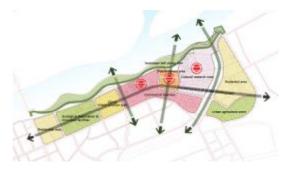


FIGURE 6. Planning structure

FIGURE 5. Plan elements Spatial Structure Update

Under the requirements of functional positioning and planning elements, the surface of the waterfront and the skyline were re-arranged from the perspective of external space structure, then the important space nodes are designed, the layout of the entire region follows the "one axis, one area, three hearts, the corridor of the three, the area of the six, the group of two" layout structure<sup>[5]</sup>, striving that to create a new vitality on the basis of preserving the sense of place, that is shown in Figure 6.

The western region of the base is closely connected with the surrounding residential areas, so it is necessary to continue the existing texture of the city, in the form of the building and the surrounding residential areas are consistent with the layout of the determinant layout; Taking into account the characteristics of the function of the SOHO and the business district, more morphological changes were used to make the space more dynamic under the premise of maintaining the same scale; As an important node of the inner harbor is more specific form of the multi - lateral large-scale building, which is more prominent in the spatial characteristics, the function to achieve the landscape node and the requirements of the block; Because of its characteristics as a health management, research and development and training area, the research area has adopted a larger scale to meet the functional requirements<sup>[6]</sup>, that is shown in Figure 7.





FIGURE 7. Planning the floor plan

In the skyline of the builders, in various functional areas set up a different height of the building, with super high business center for the commanding heights to increase the rhythm of the skyline changes, so that it is full of rhythm beauty, that is shown in Figure 8.

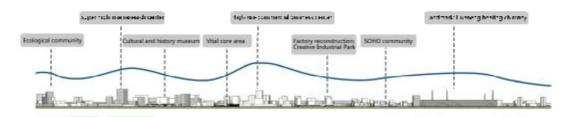


FIGURE 8. Waterfront skyline

In the control of the building red line, consciously retained the waterfront, waterfront corridor to ensure coherence and unity, and connect the entire area of the internal public green space, has formed a complete penetration of the public space system that is shown in Figure 9.



FIGURE 9. Public space system

## CONCLUSION

This paper from the perspective of the overall development, the combination of regional development positioning, that according to the harbor authority area of Harbin city proposed update strategy from the perspective of industry selection, function orientation and spatial structure. In the industry update and selection, the full consideration of the base of the existing building heritage value and historicity, combined with the overall industry background to choose, rather than blindly pursue high output and high efficiency.

we need to think about the spatial sequence, the use function and the context inheritance from the renewal of the space. The original core space, such as the entrance plaza, waterfront space, near space, etc., need to be reasonably inherited, and become an important node in the new space sequence in the space update. Different functions according to the different spatial scales, so that to enrich the space environment.



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#### REFERENCES

[1] MSJ Group. Darling Harbour transformation, Sydney, Australia. World Architecture. In Chinese. 10: 44-46, (2000)

[2] Zhixiang Chen. Repair for innovation, integration and transformation----Duisburg port Park renovation. Modern urban studies. In Chinese. 21(3): 80-88, (2006)

[3] Min Zhang. Analysis of industrial structure in Harbin and suggestions on industrial policy. Harbin Institute of Technology. In Chinese. 12, (2012)

[4] Lei Fang. Local research on China's industrial regions in 2006. Beijing: Ocean Press. (1993).

[5] Harbin Yearbook. Beijing: China Statistics Press. (1997).

[6] Lijun Fan. Research on Spatial Renewal of Urban Dock Industrial Zone Based on Integration. Harbin Institute of Technology. (2010).