



# Public Art Plan of Smart Industrial Area in China

Shimei Yin, Beibei Deng, Dan Zhao

Shanghai Art & Design Academy, Shanghai 201808, China

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**Abstract:** Humanity is an important concept in the construction of contemporary smart industrial area. It takes public art as the media and reflects the unique spiritual outlook of smart industrial area. Based on the humanistic shaping on smart industrial area, this paper selects Nanjing Jiangbei New Area Industrial Technology Research and Innovation Park as study object and explores its effective ways of public art plan from the perspective of connotation of public art, planning role and planning methods.

**Keywords:** public art plan, urban planning management system of China, planning technologies, smart industrial area, Nanjing Jiangbei New Area Industrial Technology Research and Innovation Park

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Art is the spirit of city and an important part of city's soft competitive power. As the most intuitionistic and visible forms of urban culture, public art plays an increasingly important role in creating urban cultural atmosphere, highlighting urban cultural character, improving urban reputation, and cultivating public artistic aesthetics and innovative spirit.

## 1. Public art plan

In the early 1990s, the concept of public art was introduced in china. Sculpture and mural consist of the main forms of public art (Wang Zhong, 2014). On September 14, 1993, Regulation The Administrative Regulation of City's Sculpture Construction was issued by Ministry of Culture of the People's Republic of China and Ministry of Housing and urban Development of the People's Republic of China. Subsequently, relevant local managementive regulations were issued. Local governments began to organize sculpture plan so as to propagate city's culture and beautify city's environment.

Sculpture is not the whole of public art as the most important part for its "artistry" and "publicity" properties. The artistry of public art undertakes the responsibility not only presenting beauty, but also social responsibility. That decides public art needs to realize popularization, affinity, safety, national participation and pay more attention to environmental awareness, humanistic quality, aesthetic taste and life attitude. Its value lies in paying close attention to education and integration in the process of public art practice. Public art is not only a work of art in public space, but also the embodiment of citizens' life experience and life course. More importantly, it is verification of cultural context and value of the times (He Xiaoqing, 2013).

From sculpture to public art, sculpture plan is also upgraded to "public art plan". Public art plan systematically organizes public art projects into urban public space in combination with local urban development, natural resources and human resources, so as to effectively guide the orderly construction of public art projects. Dr. Sun believes that the value of public art plan lies in: public art plan is a deeper, more rational and more mature expression of people's understanding of urban space. It is based on a deeper understanding of the value of public art in modern society, combined with the goal of urban development, and carried out in a step-by-step and orderly manner, which avoids blindness of public art construction (Sun Zhenhua, 2003).

## 2. Practical experiences of public art plan in China

### 2.1 Diversification of planning objects

Public art plan is a technical tool of taking environmental art as its core and an emerging art discipline formed by the intersection of sculpture, architecture, urban planning, behavioral science, culture, anthropology and other disciplines. Public art plan expands its planning objects from sculpture to sculpture, landscape, installation, mural, architectural sketch, water Diversified art carriers such as gardens.

### 2.2 Hierarchical planning content

As an illegal planning, public art plan is consistent with urban legal planning at the planning level. That is:

At the overall planning level, public art plan puts forward ideas on the development objectives and construction direction from city's view, and determines the planning structure and zoning of public art according to regional characteristics, urban

historical, cultural and social characteristics, spatial layout structure and style characteristics, and formulates corresponding short-, medium- and long-term development strategies and implementation suggestions.

At the zoning level, public art plan is a deepening process based on overall public art plan. Guided by the strategic objectives and planning principles proposed in the master plan, public art plan will deeply study the historical and cultural background, functional positioning, architecture, landscape, roads and user preferences of the region, and further refine the spatial zoning, axis, primary and secondary priorities, rhythm, theme, art form and main location of public art planning, as well as public art works and architecture Control requirements and principles of spatial elements such as roads.

At the plot level, public art plan has a specific scene context. Its planning and design meet the requirements of controlled detailed planning and design of the plot under the guidance of urban detailed planning, and further clarify the theme, public participation, artistic expression forms, visual modeling, spatial scale, materials, colors, etc. of public space art.

### 2.3 Result form

It has not yet established a corresponding public art plan framework system, and result forms of planning are different. Some scholars suggest that it should include design guidelines, instructions and planning papers, which includes design guidelines include preparation basis, design principles and objectives, current situation analysis, theme positioning, planning layout description, space and theme classification description, control requirements of each partition, art theme and form guidance, planning indicators, long, medium and short-term implementation strategies, etc. The planning papers include the distribution map of the current situation of public art, the distribution map of the overall plan, the schematic diagram of spatial form, zoning plan, the planning plan of important nodes, the elevation, the effect drawing, etc. in the regulatory planning of key areas and the detailed planning of nodes, there should be the achievement requirements of spatial model and art creation manuscript (Zhang Jian, 2018).

## 3. Case research

This paper discusses technical path of public art plan in regional development level taking Nanjing Jiangbei New Area Industrial Technology Research and Innovation Park as an example.

### 3.1 Background

Jiangbei New Area Industrial Technology Research and Innovation Park was located in the core area of Nanjing Jiangbei New Area. Backed by the old mountains, it faced the Yangtze River, covering China (Jiangsu) Pilot Free Trade Zone Nanjing Area (Figure 1). It was an important innovation source for Nanjing to build a famous innovation city with global influence (Figure 2).



Figure 1. Location of Jiangbei New Area Industrial Technology Research and Innovation Park



Figure 2. Map of Innovative Space Planning Structure of Nanjing

In March 2012, the industrial area had completed Strategic Planning and Urban Design, defined the core vision and structure of space. That was vital organization, vital function and vital space. "Community group", combined with spatial structure characteristics of "one belt and water ring", "one mind leading two cores" and "multiple veins connecting two wings", which constituted its core content. It would create a suitable city for industry, capital and residence, building an international high-tech industry incubation and scientific and technological innovation industry based on integrated development of innovative industries, talents and cities.

The industrial area covered an area of 23Km<sup>2</sup>. It consisted of two blocks north and south. North block was a planned area of 2.73km<sup>2</sup> from Chengnan River in the north, Hengjiang Avenue in the East, Wuqiao connecting line in the South and pubin road in the west; south block was bounded by commercial land to form a complete area surrounded by Xiaoyu Street - Huagu North Street - Aipu Street - Huigu road - lvshuiwan road - Hengjiang Avenue - Huqiao - Xiangxian road - Huixin Street - sesame River Road, with a planned area of 3.6km<sup>2</sup> (Figure 3). North block was mainly used for scientific research and office, commercial and residential, commercial office and education. South block was mainly used for administrative office, commerce, scientific research and office, cultural facilities, education and ecology (Figure 4).



Figure 3. Map of public art scope



Figure 4. Map of land utilization

### 3.2 Planning goals

The goal of public art plan was to confirm the overall cultural characteristics and value pursuit of spatial form, and to ensure program and soul for guiding the artistic construction of urban spatial form elements. It was expressed as a spatial image vision, which was expressed on the technical language of spatial form elements, reflecting the unique cultural charm and spiritual style of space.

The public art planned to build a global innovation resource, intelligent design center and emerging industry highland, which based on the city's own artistry, publicity and territoriality. Planning and constructing process of public art was a materialized process from the perspective of improving the environmental quality of urban public space and reflecting the characteristics of urban culture. In this case, from the harmonious relationship between "people" and "city", we excavated the historical and cultural characteristics and contemporary cultural characteristics of Nanjing combining with building objectives of the park, showed the intension of this smart park with Chinese cultural heritage, and defined the public art vision of "cutting jade and penetrating water and green into clouds" (Figure 5).

### 3.3 Building public art plan guidance system

The process of city development was the process of transformation from urban culture to spatial text. This process was spatialization of culture. Public art plan turned abstract ideology to specific space form through spatial form building, which was perceived by people. In this industrial area, focusing on the public art vision, we build a planning and control system of "all of elements", "hierarchy" and "planning chart" to optimize the layout and guidance of public art.

#### 3.3.1 All of elements

"All of elements" control was a pattern of guiding the construction of artistic materialized elements from the perspective of integrated environmental composition, which needed to research the structural requirements of upper level planning and related planning on the architecture, road traffic, municipal facilities, greening and water systems, whose constituted urban spatial interface form from the perspective of the integrity of environmental composition. "All of elements" control pattern translated all of elements into public art system, artistic facility system, artistic spatial interface system and festival and activity system that composed the four major public art planning and building systems. Among them, public art system consisted of static public art and dynamic art; artistic facility system was an artistic connotation of environmental facilities, including environmental facilities, urban furniture, municipal utilities and transportation facilities; artistic spatial interface system was based on the perspective of public space interface, and comprehensively considers the artistry of building facade, park green space, urban square and road system; and festival and activity system determined the main activity routes and cultural activity themes in the main activity areas according to the user groups from the perspective of the sociality of public art (Figure 5).

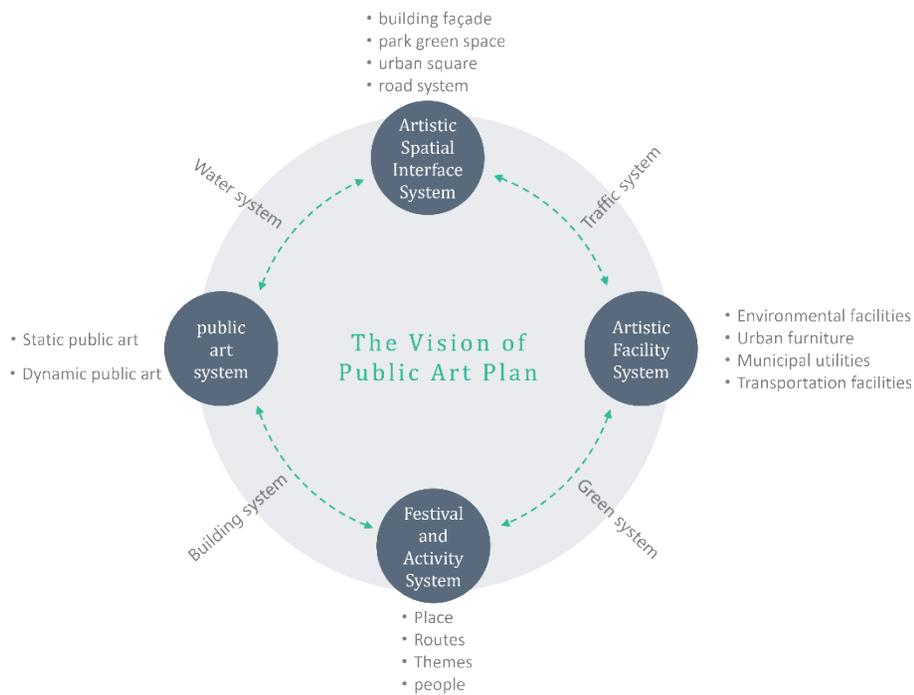


Figure 5. Planning control system of "All of elements" pattern

### 3.3.2 Hierarchy

In practice, we adopted the hierarchical control planning method from macro to micro in view of the phenomenon of "randomness" during the layout of public art. The method combined with the regulatory detailed planning structure, urban design requirements and the constructive detailed planning scheme of each plot, and turned the macro cultural policy to the specific elements of the interface form of public space. Through the planning, we established project list of public art and integrated overall cultural policy objectives into planning management of each transferred plot (Figure 6).



Figure 6. Project list



Future public art plan will also gradually form its complete planning system to meet the needs of urban constructive development at different levels, and effectively play its role on planning guidance, construction implementation and later maintenance.

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