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## Study on Industrial Heritage Regeneration Design for Creative Industry Park in Nanchang City

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# Study on Industrial Heritage Regeneration Design for Creative Industry Park in Nanchang City

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**Abstract:** Along with the development of the urban economy and the society, some of the industries in the city cannot meet the economic demand in the late 21st century due to the technological progress, the economic transformation, the employment change and the social and political transformation. Therefore, some of the city's space has lost its original function and meaning. Many factories and office buildings that are no longer suitable for the development of urban center need to be moved out of the center of the city. These urban spaces have the industrial memory of the city and are the historical heritage of industrialized cities. From the point of view of the layout of creative industry, this paper conducts planning study on the space of cultural and creative parks oriented to the reconstruction of industrial heritage, and explores the development mode of the cultural and creative industrial park, which is suitable for the cultural characteristics of Nanchang city and has a forward-looking vision to provide reference for the construction of cultural and creative park, the protection of industrial heritage, the adjustment of industrial structure and the improvement of urban competitiveness of Nanchang.

## 1. Introduction

In recent years, since Nanchang government attaches great importance to the development of cultural industry, cultural industry has gradually become an important force to promote the adjustment of economic structure and change the way of development. To lay out and build a cultural industry cluster, to strengthen and do excellent cultural brand, to promote the integration of cultural industry and other industries, creative cultural industry has become a new supporting point and new highlight of supply-side reform and upgrading in Nanchang.

The adjustment of industrial structure and the upgrading of supply-side reform in Nanchang make more and more industrial land in cities lose their original use value. The combination of creative industries with these industrial buildings and sites provides a direction for preserving the industrial culture of the city and transforming it into an industrial heritage to regenerate new cultural values and use values. The preservation of industrial heritage and the development of cultural and creative industries are a new opportunity and a intense collision between history and new ideas with strong impact force.

## 2. Challenges to the Design of Industrial Heritage Creative Industry Park

Nanchang, as the provincial capital of Jiangxi Province, has a complete industrial system. With the development of the times, some industrial zones in the city center have gradually withdrawn from the stage of history and are faced with the problems of developing industrial waste land regeneration and



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utilization. According to the investigation, there are five industrial heritage parks in Nanchang, which are responsible for recording the memory of industrial civilization, improving the quality of the city and optimizing the living environment. Their basic status is as follows (Table 1).

Table 1. Industrial Heritage Regeneration Design Projects in Nanchang City.

Project name	Region	Industrial history	Current Status
699 Cultural Creativity Park	Shanghai Road, Qingshan Lake District	The original site is Jiangxi Hua'an Knitting General Factory. In 2009, because of the difficult operation of the enterprise, conducting the enterprise reform and creative transformation.	Creative Park, a complex sets all kinds of creative design, cultural and educational training, film and television and music production, artists studio, exhibition and performing arts, commercial office and other supporting facilities in one.
Camphor forest	66 Sheshan road, Donghu district	The original site is Jiangxi Chemical Fiber Factory. Conducting creative transformation in 2011.	A commercial complex that sets green ecotourism, creative and cultural tourism, industrial heritage tourism as one. At the same time, it is also a AAA-class tourist attraction.
Nanchang Diesel Engine Plant Community	Dinggong Road West Lake District	The original site is Nanchang Diesel Engine Factory, which was reformed and moved away from the current site in 2002.	Make use of the site space, shape the public activity square, implant the facilities that correspond to the history of Nanchang Diesel Engine Factory, build the industrial cultural district.
AVIC Hammer Park	Donger Road, Xinxiaoqiao, Qingyunpu District	The original site is Nanchang Hongdu Machinery Factory, the birthplace of the first aircraft made by the people's Republic of China.	Relying on Hongdu industrial civilization, AVIC Hammer Park opened landmarks of fashion culture zone, creative culture zone, science and technology culture zone and aviation culture zone.
791 Art District	113 Sanjing road, Donghu district	The original site is Jiangxi Pharmaceutical Factory, which was later creatively transformed into 791.	Creative block, mainly with the art museum and private studio as the main body.

The modern industrial sites in Nanchang City have obvious characteristics of machine production, and have pioneering significance in the long river of history. Among them, there are many outstanding sites in history with profound cultural background and mass foundation. However, the current reconstruction design still faces great challenges. The lack of regional culture, the rigidity of space integration and the insufficient capacity of ecological restoration of the design still hinder the regeneration and utilization of industrial heritage.

### 2.1 The lack of use of regional culture

The so-called industrial heritage must bear the history of struggle of a city. In the process of activating the history and memory of these cities, the accurate expression and regeneration design of regional culture should be the priority among priorities. Reasonable cultural expression shall be based on the correct interpretation of the culture, designers shall start from the cultural sites that the projects rely on. No matter what new technology and new structure is used to break the past human-living wisdom, even if the visual impact is put first, the aesthetic fatigue will still appear under the textual research of time. The existence of industrial heritage as a culture is a respect for the city and a record of history. Once separated from the blood of the city and run in a opposite direction, it may make people happy at the very beginning, but it splits the undertaking vein of history and lacks a far-reaching intention.

At present, the reconstruction of the Industrial Heritage Creative Industry Park in Nanchang City has generally adjusted the site of the original site in order to better serve the business of the park. Although the symbol characteristics of the park are relatively uniform and obvious, they are general relatively scattered, which cannot preserve the industrial civilization memory very well.

### 2.2 Reasonable Use of Space

The site reconstructed with industrial heritage often increases the design difficulty for designers. Since the original industrial site is not custom-made for public services, the space functions need to be

converted. In this process, ratio scale problem, spatial function problem, and efficiency problem arise accordingly. At present, the function of creative industry park with the theme of industrial heritage in Nanchang is generally biased towards commercialization so that the atmosphere of R & D and creation is not strong enough, the exhibition area is missing or the utilization rate is not high and so on.

This article takes the park exterior space matching, the interior space design and the architectural intention of the transformation as the investigation object. In view of the effect of the satisfaction degree of the building space transformation, the supporting facilities and the overall functions of the park, this article made corresponding questionnaires to the visitors to the 5 creative parks in Nanchang City. 204 valid questionnaires were collected, including: 48 from 699 park, 42 from Camphor Woods, 33 from 791 block, 49 from China Aviation City, and 32 from Nanchang Diesel Engine Plant Community.

According to the investigation and evaluation, the comprehensive evaluation grade of the Camphor Forest, 699 Park and AVIC Hammer Park is relatively good. The whole function of the park is relatively perfect, the industrial building reconstruction effect is good, and the surrounding supporting facilities are complete. However, the public leisure plazas in 699 Park and Camphor Woods are often used for commercial activities, resulting in the lack of public space in the park. The satisfaction degree comprehensive evaluation of 798 Block and Nanchang Diesel Engine Plant Community is relatively low, and the interviewees generally think that there is no perfect functional space and the function is too single. Although the location is in downtown, and the surrounding supporting is better, the space in the block is narrow, and the activity place is insufficient.

### *2.3 Landscape Renewal and Reuse of Brown Field*

In the process of development and utilization of waste industrial land, there is often an objective or intentional environment pollution. This kind of contaminated land is referred to as the "brown field". Because of the contaminated characteristics of "brown field", the development of this kind of land is more complicated than that of other sites. The restoration and development of the "brown field" can bring more economic and social opportunities through the improvement of the original land ecology, and can also promote the land use value around the "brown field". "Brown field" has provided new service facilities and activities for the city through the regeneration design, uses renewed ecological restoration methods to change the pollution of the former abandoned industrial land itself and its adverse impact on the surrounding environment, which can bring the potential of the site itself and its convenient transportation and space advantages into full play, thus attracting more commercial and economic investment, leading to the prosperity of the surrounding economy. Earlier industrial land in Nanchang lacked ecological concept, destroyed the natural environment, lacked green space system, and the rigid public infrastructure destroyed the water cycle of the area, which was not conducive to ecological balance and self-restoration.

## **3. Strategies of Industrial Heritage Regeneration Design in Creative Industry Park**

### *3.1 Continuation of industrial historical and cultural values and creation of cultural atmosphere in creative industries*

The industrial heritage can be used as a carrier to record the development of human industrial history as well as to show the cultural landscape of human historical heritage, which is a witness of modern urban development and human industrial civilization. The architectural materials used in these industrial facilities with distinctive characteristics of the times, the enclosed space and the production atmosphere are as memorable as the epic psalms. Therefore, in the process of park planning and reuse, it is necessary to adhere to the principle of protecting history and culture, pay attention to the organic continuation of site history and culture, fully respect and retain as much as possible the original environment, planning layout, the historical and cultural status of architectural space of the site, as well as its industrial historical scenes and segments. For the whole city, this is also the protection of the continuity of urban economic, social and historical cultural development. In addition, while paying

attention to the historical and cultural value of the original industrial heritage, it is also necessary to cultivate a good creative cultural atmosphere for the creative industry which infuses new life into the industrial heritage in the planning. The impact of historical culture and creative culture is the best means of sustaining and strengthening the cultural atmosphere.

Therefore, in the process of planning and reuse of the park, the two cultures should be brought together in a symbiotic relationship. While the industrial historical culture are protected and continued, a favorable cultural atmosphere should be created and collided for the creative industry at the same time.

### *3.2 Flexible Treatment of Space Utilization*

The planning of creative industry has its particularity. First of all, the distribution of different types of construction space, public space (including exhibition and performance, leisure and entertainment public space) in the park and the distance between the different areas and the intimate distance, the preferences and needs of creative work and so on, affect the creative workers' choice of office location, thereby affecting the distribution of functions in the campus. At the same time, the uncertainty of the choice will make different types of creative enterprises mixed in a region, so that the division of land can not be distinguished clearly. In addition, most creative workers prefer the mode of integrating living space with office space, and better closely connected with the public space of leisure and entertainment, and the whole park is like an organic whole, connected with each other. Rigid functional design will shackle creative flash, so the use of space needs to be rich and flexible.

### *3.3 Decentralization of Design Rights and Macro-control of Planning*

In order to increase the richness of space and the diversity of forms in the park, attract more creative workers to enter, and create a more fashionable and fashion-forward creative space and atmosphere with its unique tide sense, in the spatial planning of the park, creative workers should be given the greatest degree of freedom and shall decentralize part of the design rights. For example, the reconstruction and design of the interior space of the building can be decided by the creative workers themselves. For the facade of the building, a certain review mechanism shall be required to ensure the unity of the diversity and coordination of the whole park.

### *3.4 Ecological Restoration and Regeneration*

Compared with the other heavy industry cities, the industrialization of Nanchang city is relatively weak, the physical and chemical "brown" are not very prominent, but the damage of the industrial facilities to the land is not allowed to be small. In the opportunity of reconstruction, culture and ecology should be combined, and sponge city construction should be combined to transform it from the decaying organization of the city to the "city lung" of renewing the natural ecology of the city. In recycled design, designers try to make use of the existing buildings and facilities on the site and give them new use functions. By doing this, it can save materials while reducing the energy consumed during the production, processing and transportation of materials and reduce the damage to the original ecological environment and embody the ecological design method.

## **4. Conclusion**

In the background of the supply-side reform and the development of the cultural industry, the migration of industrial land is the irresistible trend. A great deal of industrial waste land appears in people's view. For the sentimentally attachment to the city memory, the protection of the city development history and the restoration of the city ecology, these industrial land can become the industrial heritage, and create new vitality. The reconstruction of the city is the development, the memory preservation of the city can also have the development. This development is the process of realizing the land value and the cultural value, incorporating the missing function in the urban change in its original regional characteristics, and producing the value-added effect. More and more industrial

waste land can be transformed into creative cultural industrial park through careful planning to continue the historical and cultural values, and restore the urban ecology.

### References

- [1] WAIBEL, W. (2012) The Beijing 798 Art Zone: A maturing creative cluster?. M, ZIELKE, P. Pacific News .
- [2] Justin O'Connor, Xin Gu. (2010) Developing a Creative Cluster in a Postindustrial City: CIDS and Manchester. The Information Society
- [3] Hans Mommaas. (2004) Cultural Clusters and the Post-industrial City: Towards the Remapping of Urban Cultural Policy. Urban Studies .
- [4] Frederick Steiner. (2011) Landscape ecological urbanism: Origins and trajectories . Landscape and Urban Planning .
- [5] Ren X. (2011) Building globalization: transnational architecture production in urban China.