

# Analysis of Industrial Layout Planning Based on Economic Transformation

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**Abstract:** Under the background of economic transformation, urban industrial layout has produced subversive changes, innovative enterprises, innovative talents and industry integration development of industrial layout planning put forward new demands. Based on the trend of modern economic transformation, this paper discusses the demand and current situation of industrial layout and planning, and puts forward the corresponding optimization strategy of industrial layout planning.

**Keywords:** Industrial Layout; Economic Transformation; Planning

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## Introduction

The essence of industrial layout planning is a dynamic response to the development process of urban economy and industry. In industrial layout planning, economic and industrial transformation plays a decisive role, and industrial layout planning is an adaptation process to economic and industrial transformation. With the multiple transformation of urban economic development, it is urgent to solve the defects of the traditional industrial layout planning, so that the industrial layout planning can adapt to the economic transformation and development.

## 1. Industrial layout planning

Industrial layout planning is the integration and docking of urban industry and space, aiming at forming a reasonable and long-term industrial development layout, which can reflect and present the spatial requirements of industrial site selection in supporting facilities and land elements. To carry out industrial layout planning, we must consider all influencing factors comprehensively based on the objective law of industrial spatial distribution, and carry out comprehensive and long-term strategic spatial allocation of economic production activities related to various industries, departments and levels, so as to ensure the long-term and stable development of social and economic activities.

## 2. Trends of economic transformation

Economic transition refers to the fundamental change in the integration of the operating mechanism, system type and function of social and economic development, which is specifically manifested in the transformation and adjustment of economic development model, power, structure, system and path<sup>[1]</sup>. The contents of economic transformation closely related to the industrial distribution planning mainly include the transformation of the development power, the transformation of the industrial form and the transformation of the development mode. First of all, the current social economy is gradually shifting from traditional factors to innovation-driven development, and innovation factors have become the core factors of economic growth and development. Second, the new economy and new forms of business continue to emerge, showing the typical characteristics of platform, intelligence and digitalization. Finally, industrial integration has deepened, with the integration between manufacturing and service industries, and between the real economy and the virtual economy growing faster and deeper.

### **3. Demand and current situation of industrial layout planning based on economic transformation**

#### **3.1 The spatial pattern of industry does not meet the needs of economic transformation**

Under the background of deepening economic transformation and technological innovation, various types of new industries, new models and new business forms continue to emerge, and the spatial pattern of the driving industry must be adjusted accordingly. With the increasing number of innovative enterprises, the cognition and geographical boundary of the spatial pattern of the traditional industry will inevitably be broken and refreshed. The functional zoning mode of the spatial pattern of the traditional industry can hardly adapt to the economic development in the new era. In particular, the development of digitization and information technology has promoted the huge changes in the social production and consumption mode. Under the background of economic transformation, space utilization mode is required to be more flexible, and the spatial pattern of network industry has become an inevitable trend of industrial distribution<sup>[2]</sup>.

The existing layout mode of industrial functional zones in many regions is generally lack of operability and precision, which is not conducive to the introduction of a large number of innovative enterprises, and it is difficult to meet the development needs of new industries, new models and new business forms of economy. First, different industrial functional zones have clear geographical boundaries and dispersed management bodies, so it is difficult to promote industrial development according to functional positioning in actual implementation, and the positioning of industrial functional zones is prone to conflict with the actual development intention of the region. Second, industrial functional zones such as cultural and creative design and technological innovation mainly take the form of space utilization with industrial parks as the core, and many parks have problems such as blind leasing and lack of development vitality, which has caused a certain inhibition of innovative enterprises' entry into industrial parks<sup>[3]</sup>. In order to improve the rental rate of industrial parks in some regions, enterprises are not strictly examined in the investment promotion, resulting in many enterprises that are not consistent with the direction of economic development. The overall layout of enterprises is scattered, which is not consistent with the regional new economy positioning.

#### **3.2 Supporting facilities do not meet the needs of economic transformation**

In the current era of innovation-driven economic transformation and development, the concentration of talents will attract investment, technology and other economic growth factors. Therefore, urban development must increase the concentration of creative and innovative talents, create a good working and living environment for them, enhance the sustainability and sophistication of talent attraction, and promote innovative behaviors and activities. The self-expression and personalized characteristics of the innovative and creative class are mostly strong, and they are more inclined to open, diverse and inclusive environment, and favor the infrastructure that is compatible with the specific lifestyle, especially the flexible and small-scale facilities<sup>[4]</sup>. On the other hand, in the mode of innovation-driven economic transformation and development, high-quality supporting facilities that can support all kinds of smart production activities, such as advanced intelligent and information facilities that can provide 5G network services, are required.

At the present stage, the supporting facilities of industrial layout in some areas are mainly based on the allocation of professional facilities on the basis of traditional industrial functional areas, and insufficient attention is paid to the facility support for innovative and creative talents and activities. First, the construction of basic information infrastructure based on 5G networks and other information technologies still needs to be further strengthened. The construction and deployment of 5G base stations around the country is continuing to advance, and relevant supporting policies are being introduced one after another, but it will still take a long time for 5G networks to be widely used. Secondly, with the increasing number of innovative and creative talents, their requirements for the quality of life and atmosphere are also constantly improving. The existing living facilities in the city still need to be further

upgraded and perfected, and the comfort of living space is lacking. Some urban public facilities are old, lack of repair and aging service functions, and cannot meet the personalized needs of innovative and creative talents with high quality. At the same time, due to the ownership relationship of some urban facilities under the jurisdiction of different levels of government departments, there are certain limitations in the actual use process, and the sense of experience and comfort are greatly reduced.

### **3.3 Institutional supply does not meet the needs of economic transformation**

New technologies will bring about new changes in industrial spatial form, and require systematic reconstruction of management system, such as to create greater space for industrial layout planning reform. Based on the background of economic transformation, spatial organizations have stronger diversity, freedom and flexibility, pay more attention to the innovation of economic market and environmental freedom, and demand more independent management organizations such as industry associations [5]. Under the influence of the development trend of innovation-driven and industrial integration, the form of space utilization has undergone a great change, which has a great deviation from the traditional cognition. Therefore, it is necessary to reconstruct the flexible management and control logic to adapt to the variability and demand uncertainty of the industrial space. In addition, innovation-driven, all kinds of innovative and creative activities continue to emerge in grassroots units, and innovative elements continue to gather. However, due to unclear rights and responsibilities, lack of corresponding authority and other problems, it is difficult to realize the transformation of innovative elements.

In the face of the current development trend and demand of innovation-driven and industrial integration, the existing system supply in many regions lacks adaptability and cannot effectively meet the actual demand, so it is urgent to change and improve the ideas of system construction. First, in order to encourage the development of the new economy, relevant taxation, land use, talent, capital and other systems are constantly introduced in various places. However, in some areas, the development idea of manufacturing economy is still followed. Taking land construction as an example, the construction of industrial parks is still given priority. Second, most regions are still under the mode of strong government management system, and the phenomenon of government departments replacing the market is generally serious. On the one hand, despite the continuous introduction of various policies and measures to delegate power to the grassroots, the problem of unclear authority of economic entities and managers still exists, and the transformation of government functions is slow. The regulatory departments of mixed and cross-border industries such as cultural innovation, culture, commerce and trade, science and technology, and tourism are not unified, and the phenomenon of multiple supervision and segmentation is very common. On the other hand, due to the influence of property rights diversification and other factors, some industrial parks, old factories and other facilities are inconvenient in the use and management, and the utilization rate is limited, which causes corresponding obstacles to the grassroots innovation and entrepreneurship activities.

## **4. Optimization of industrial layout planning based on economic transformation**

### **4.1 Improving the spatial pattern of existing industries**

Under the background of economic transformation, innovation-driven and industrial integration promote the emergence of innovative enterprises, and the use of industrial space has a fundamental change. The traditional functional zoning model can no longer adapt to the development of the new economy, and it is necessary to rebuild the spatial pattern of the network industry and industrial ecosystem. First, we should take key industries as the core, build corresponding core, service and supporting industrial chains, and optimize the spatial layout of industries. Secondly, targeted construction should be carried out for specific consumer groups and practitioners in various industries, focusing on their diversified needs and supporting needs for industrial development. Third, we will make in-depth analysis of the needs of key development industries, make targeted distribution of relevant service facilities, and enhance the diversity of market-oriented services. At the same time, it is necessary to strengthen the analysis of the living demands of practitioners in key industries, the public and consumers, and rationally arrange living service facilities to meet the social and consumption needs of all groups. Medical, recreational and other basic needs. Fourth, we should pay attention to the construction of basic support facilities for key industries and ensure the construction of infrastructure systems in communication, logistics and

transportation for industrial development. Fifth, in view of the actual development of various industrial ecosystems, supporting systems, regulations and policies should be formulated to provide high-quality public services to ensure the development of various industries.

Taking the construction of cultural tourism industry ecosphere as an example. First, based on the core local cultural tourism industries such as sightseeing and cultural experience, supporting service industries such as boutique retail, characteristic catering and homestay can be laid out. Second, it is necessary to fully consider the needs of different groups of tourists for experience, participation, special activities, leisure and entertainment. Thirdly, based on the analysis of the tourism needs of different groups of tourists, it is necessary to rationally arrange tourist centers, characteristic shops, tourism platforms and star hotels and other living service places within the industrial ecosystem. Fourth, we should strengthen infrastructure construction, such as wireless network coverage, more parking Spaces, and sanitation facilities. Fifth, through the construction of the management mode of large scenic spots, the implementation of IP research and development incentive and large platform support strategy, to ensure the construction of cultural tourism industry ecosystem and high-quality development.

## **4.2 Improving existing supporting facilities**

First of all, according to the development needs of different industries, we should strengthen the allocation of specialized facilities. The industrial ecosystem covers a large number of innovation support institutions such as investment institutions, innovative and entrepreneurial enterprises, incubators and research and development institutions. Therefore, it is necessary to strengthen the supporting facilities of relevant professional facilities, improve the activity of innovation, and promote knowledge sharing and technical cooperation further closer <sup>[7]</sup>. At the same time, attention should be paid to strengthening the construction of industrial platforms, integrating the specific development conditions of industries and enterprises, guiding qualified enterprises and relevant research and development institutions to jointly build technology platforms or research centers, building industry-university-research innovation cooperation entities, and improving the level of technological innovation and transformation of scientific and technological achievements.

Secondly, we should improve living service facilities. First, we should strengthen the improvement of housing facilities and make housing supply more inclusive for creative and other workers. Second, we should strengthen and improve commercial supporting facilities, rely on supermarkets, shopping malls, hotels and shopping centers, and strengthen the construction of commercial supporting services to meet the commercial consumption needs of all groups. Third, we should improve recreation facilities, open sports centers, plazas and other fitness venues, and set up appropriate art centers, cinemas and other leisure facilities to meet the needs of diverse entertainment and leisure. Fourth, we need to improve supporting educational and medical facilities, lower the entrance threshold for primary and secondary schools, create a good learning environment for children of migrant workers, and promote full medical insurance coverage so that all groups can enjoy quality medical services. Fifth, we should strengthen the improvement of transport supporting facilities, optimize the layout of urban bus routes, gradually expand the coverage of rail transit, and configure green transportation tools such as shared bikes to meet different travel needs.

Finally, we should strengthen and improve the intelligent information facilities. First, we need to improve the existing broadband network, promote the joint construction and sharing of urban network communication facilities, implement the standards for the construction of broadband to all households, and improve the popularization and coverage of broadband networks. Second, it is necessary to promote the comprehensive deployment of 5G wireless network, deepen the comprehensive coverage of "5G+WLAN" in public places, and promote the formation of three-dimensional and multidimensional 5G wireless network information pattern <sup>[8]</sup>. Third, we should strengthen and improve the perception system of urban intelligent infrastructure. Strengthen the use of IOT perception technologies, strengthen the deployment of IOT in public facilities, deepen the construction of smart cities, and expand the scope of integrated application of new network technologies, such as the application of lampposts, parking lots and other fields. We will accelerate the construction of smart living service facilities and expand the application range of smart devices in daily life.

### 4.3 Improving the supply of existing institutions

First, we need to strengthen the flexible control of industrial space. We should establish a regulatory management system suitable for innovation and entrepreneurship activities, strengthen the hierarchical reform of controlling detailed planning, and make the first-line units at the grass-roots level responsible for the flexibility planning of land plots to enhance the ability to cope with the diversity and uncertainty of innovation. To build a more attractive land supply model, establish a selection mechanism for key projects, adopt the lease before letting or listing transfer and other directional supply methods; We will establish a way of invigorating the land stock through continuous innovation, optimize the guidance and control process, clarify the authority of the government and the market, increase the assessment of inefficient land use units, and encourage enterprises to upgrade and innovate.

Second, we will strengthen the decisive role of the market in industrial distribution planning. First of all, we should actively introduce various types of industrial ecosystem operators, and let the market take charge of operation and maximize the stimulation of market power. The government should gradually withdraw from some industries, guide the inflow of social capital, change its management responsibility to service responsibility, and minimize its interference in the industrial ecosystem. Secondly, we should strengthen and improve the service system of market operators, expand market service functions, provide marketing, legal, financing and other professional services for the majority of small and medium-sized enterprises, and build a market service network.

Third, government departments should gradually delegate power to lower levels and stimulate innovation at the grassroots level. First of all, local governments should clarify the functional boundaries of departments at all levels, gradually delegate power to grassroots units such as streets and communities, and build a decentralized and diversified management pattern. Secondly, it is necessary to optimize the assessment incentive mechanism, formulate an economic assessment index with industrial structure assessment as the core and quality development as the focus, build a high-quality regional development assessment mechanism guided by the development of the industrial ecosystem, and focus on the assessment of the contribution of characteristic industries, key enterprises and other indicators.

### Closing Remarks

Under the new normal, social industrial development and production mode are in a period of major adjustment, and urban space is in a critical stage of stock renewal. We must actively adjust and optimize the industrial layout from the aspects of spatial model, supporting facilities, institutions and mechanisms, enhance the adaptability of industrial layout and economic transformation, and promote the sound and sustainable development of urban economy.

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