

Research on Construction of Smart Park

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Abstract: Smart park refers to the integration of a new generation of information and communication technologies, with rapid information collection, high-speed information transmission, highly centralized computing, intelligent transaction processing and ubiquitous service delivery capabilities to achieve timely, interactive and integrated information awareness, delivery and processing in the campus. The development concept of advanced parks with the goal of improving the industrial agglomeration capacity of the park, the economic competitiveness of the enterprise, and the sustainable development of the park.

1. Introduction

In recent years, with the accelerated development of urbanization, the world cities, especially the more developed cities, have been plagued by 'urban diseases'. The emerging term 'smart city' came into being. Under the guidance of the pioneering concept of smart city, the concept of 'smart park' has also entered the public's vision [1]. The smart park is an upgraded version based on the informationization of the park. It is an important manifestation of smart cities. Its architecture and development model are the epitome of smart cities in a small area, which reflects the main system model and development characteristics of smart cities. It also has the uniqueness of a development model different from that of a smart city.

The focus of smart park construction lies in 'smartness'. Through the integration of information technology and various resources, we will infiltrate every detail of the construction and operation of the park, strengthen the business, service and management capabilities of the park, and innovate the organizational structure [2]. In the fierce competition, the sustainable development of the park will be maintained, and a super soft power will be created for the park.



Fig. 1 Business Value of Smart Park

2. Recent Developments

At present, the number of smart parks in China is increasing, the scale of the park's economy is expanding, and the park model is constantly innovating and developing. However, there is a lack of overall planning, a large number of isolated islands, low overall service capacity, few intelligent elements, and low level of integration. Low level of innovation [3]. It can be said that many smart parks have the concept of concept and speculation. At the same time, the parks with different types, different stages and different endowments have different goals, strategies and key tasks for building smart parks.



Fig. 2 Development of Smart Park

Generally speaking, the development of domestic smart parks is still in its infancy, and the construction of information infrastructure in this stage is first, providing good support for the construction of the park. However, infrastructure construction, park management and services are still in a state of dispersion, and there is no synergistic intensification effect [4]. The integration of informationization and industrialization is still absent. At the same time, there is a regional imbalance in the development level of smart parks. There is a gradient between the central, western and northeastern parks and the eastern parks. The eastern economic regions have advantages in terms of geographical transportation, urban economic development, and policy tilt.

3. Construction Content of Smart Park

In the process of building a smart park, we must meet the needs of different groups of people. From the perspective of operators, efficient and intelligent management and green energy-saving facilities are needed. From the perspective of enterprises, their long-term development requires various types of enterprise service resources, such as industrial and commercial registration, financial taxation, financing guarantees, etc. From the perspective, a good office environment and a perfect living service are the primary needs. Focusing on the development requirements of enterprises and the spiritual needs of talents, to build a smart park, we must coordinate the resources of the government, enterprises and other parties to realize the wisdom of management, work and life, and create a smart park in the Trinity [5].

The construction content of the smart park can be divided into smart environment, smart investment, smart office and smart life according to the development orientation of the park. In addition, there are smart management, smart infrastructure and various special applications for the construction of professional parks.

In the traditional park system, the park is established and managed by independent departments with their own functions. To build a smart park, we must fundamentally change the traditional model and regard the park as a single system composed of multiple interconnected subsystems, rather than a separate system. The development of the 'Smart Campus' functional architecture will determine the height and boundaries of the plan.

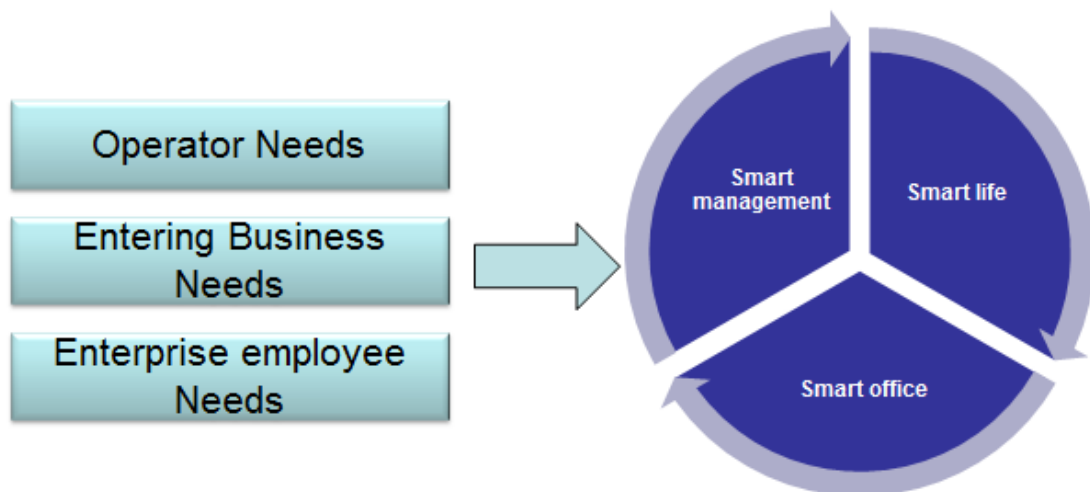


Fig. 3 Demand of Smart Park

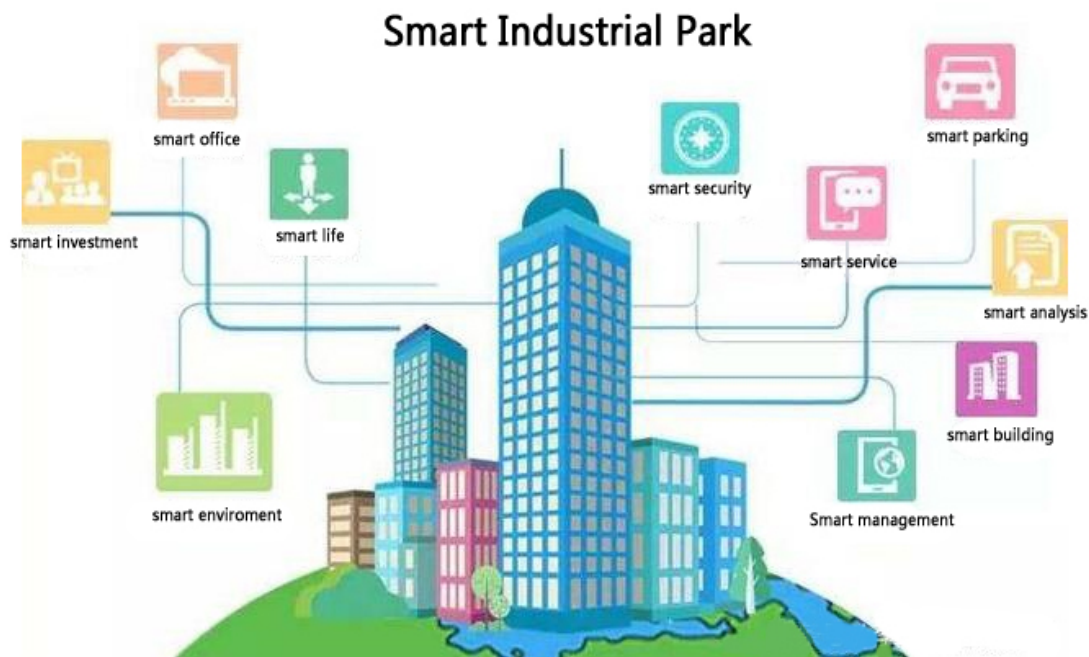


Fig. 4 Construction Content of Smart Park

4. Prospect

Smart construction has created a powerful weapon for both the park and the park enterprises to create economic and brand benefits. The construction of smart parks will become the focus of competition in the new generation of parks. Based on the current development stage of China's smart parks, future development will focus on the following three points:

(1) Information infrastructure and e-government remain the focus of new smart park construction. The initial stage of the smart park construction is still focused on information infrastructure and e-government. First of all, the intelligent park information infrastructure construction is mainly in the direction of 'broadband, convergence, ubiquity, security', and continuously consolidate the construction of broadband networks. Secondly, the construction of smart parks pays great attention to public domain management and services, closely focuses on the needs of the public, accelerates

the construction of social information service networks for individual users, and establishes an e-government platform and public service system that benefits everyone.

(2) The construction of the smart park will strengthen the interactive development with the park industry. On the one hand, the smart park will be oriented towards innovation and ecological development. In the future, the construction of smart parks will pay more attention to the development of high-tech, eco-friendly and other industries, and integrate low-carbon management concepts to integrate new technologies, management tools, management platforms and innovations in the park. On the other hand, the construction of smart parks is combined with the industrial development of the park. Introduce a group of smart industries with great development potential and good market prospects, and gradually form a one-stop industrial pattern of 'smart manufacturing' to 'smart service'.

(3) Further integration of smart park management and urbanization management. The industrial park achieves the industrial scale effect through the aggregation of core and related industries, talents and knowledge gathering, productivity improvement, and supply chain efficiency improvement. Future urban development and management can be driven by the construction of smart parks, stimulating the construction of smart cities, and integrating the management functions of smart parks into the management system of smart cities, achieving a high degree of integration between smart park management and urban management. A 'smart' urban management system with regional influence.

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