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New Ideas of Science and Technology Park Management under the Background of Intelligent Management

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Abstract: China is a country with many science and technology parks. In the new era, under the promotion of internet technology, big data technology, and cloud computing and other technologies, intelligent management has further developed. China's science and technology park management is developing toward intelligent management. Intelligent management of science and technology parks and making full use of high-tech achievements to improve the park's intelligent management path can develop regional high-tech industries and promote regional economic development. This paper starts with the intelligent management of science and technology parks, analyzes the management ideas of science and technology parks under the background of intelligent management, and studies the feasible ways of intelligent management of science and technology parks in the new era.

Keywords: Science and technology parks; Intelligence; Technology; Idea

1. Introduction

After the Second World War, many countries began to build industrial parks, and science and technology parks began to emerge in various countries. China built its first high-tech science and technology park in 1988, and then began to vigorously develop the construction of science and technology parks. So far, China has built countless science and technology parks all over the country. As a high-tech industry-university-research base, science and technology parks can promote regional economic development by developing high-end technology industries. The service targets of science and technology parks are mainly local governments and some large enterprises. The contemporary social science and technology parks are also a complex of urban development and also the original driving force. In recent years, high-end technology has promoted the rise of intelligent management of science and technology parks, and the development of intelligent management of science and technology parks has become a new trend under the background of intelligent management. Conducting intelligent management of science and technology parks and making full use of internet, big data, cloud computing and other technologies to build the basic layer, network layer and application layer of science and technology parks will be the future development direction of science and technology park management. This paper focuses on analyzing the new ideas of science and technology park management under the background of intelligent management and studying how to strengthen the intelligent management of science and technology parks in the new era. It is of great significance to the healthy development of science and technology parks [1].

2. Characteristics and Basic Structure of Intelligent Management in Science and Technology Parks under the Background of Intelligent Management

The intelligent management of science and technology parks in the new era requires a clear understanding of the characteristics and basic components of intelligent science and technology parks. On the basis of understanding the characteristics of smart parks and building and improving the five basic components, it is necessary to find feasible ideas and ways for intelligent management of science and technology parks.

The intelligent management of science and technology parks has the following characteristics: First, the intelligent management of science and technology parks has very high technical requirements. The construction and management of the park must fully apply high-end technologies such as the internet, big data, cloud computing and the internet of things, strengthen the connections between all levels and facilities of the intelligent technology park, and improve the park's infrastructure and high-end technology construction. Secondly, the construction cycle and management of the park are challenging. The science and technology parks that can drive the local economic development involve many projects and need to meet certain planning and management standards. The

establishment of the park requires the integration of resources from all sectors of society, as well as the support and assistance, which poses new challenges to the construction cycle and the planning and management of the park. Finally, the construction of science and technology parks requires a lot of capital investment. The application of high-end technology and the construction of the basic level are inseparable from capital support. The intelligent management of science and technology parks requires a large amount of capital investment to improve the overall management level and efficiency of the park [2].

The benign development and intelligent management of the science and technology park need to grasp the five key levels of infrastructure layer, perception layer, network layer, data layer and application layer. Only by satisfying these five key components of the science and technology park can it be convenient for the intelligent management of the science and technology park. The infrastructure layer of the science and technology park needs to apply advanced IT technology, as well as a management system for security alarms and construction equipment. The construction of some functional building foundations and ancillary equipment in the park is to develop and construct the infrastructure layer of the park. The perception layer of the science and technology park needs to have terminal devices that can perceive people and things, and record and store the state of pedestrians and objects through the perception devices. The intelligent management of science and technology parks in the new era requires network technology as a medium and carrier. The network layer can make full use of high-end technology to provide corresponding communication network services for the park. Various applications in the science and technology park are inseparable from information services, and the data layer needs to act as an information resource platform to realize data exchange and sharing in the park. The application layer can carry out information management of the park and is the "online portal" of the entire science and technology park. The five key levels are the basic components of the intelligent management of science and technology parks, which can not only promote the better development of science and technology parks, but also play an important role in the intelligent management of science and technology parks [3].

3. The Necessity of Intelligent Management of Science and Technology Parks under the Background of Intelligent Management

Science and technology parks gather high-end technology industries and are a booster of regional economic development. So far, China has nearly 25,000 technology industrial parks, which have made a great contribution to the economy. After entering the new era of the internet, many aspects are developing in the direction of intelligence, and China has slowly entered the era of intelligence. In the era of intelligence, intelligent management is needed, and science and technology industrial parks need to explore intelligent ways of park management in the context of intelligent management. The development of intelligent management in science and technology parks is of great significance.

3.1. Intelligent management of high-end technology

The advent of the "Internet+" era has led to the application of modern high-tech in many fields. Intelligent management in science and technology parks can improve the overall management level and work efficiency. If the science and technology park fully utilizes internet technology, big data technology, etc. to improve the management of the park, and achieve reasonable planning of the entire park and efficient allocation of information resources, the park can achieve intelligent management. In the field of management, making full use of the "internet+" concept and upgrading technical means with the times can effectively reduce management costs and improve management efficiency. The use of high-end technologies can optimize the allocation of park resources to the greatest extent and enhance the level of intelligence in the park, and also can realize the sharing of park resources between the park management and various related parts, thereby establishing an efficient management working mechanism and effectively improving the overall decision-making and management efficiency [4].

3.2. Intelligent maintenance of infrastructure

Infrastructure is an important guarantee for the normal operation of a park. Intelligent management of science and technology parks can use big data management technology to achieve intelligent maintenance of infrastructure. The science and technology park is a whole, and any facility in the park needs reasonable planning and effective maintenance. As for the intelligent management of science and technology parks, if the park facilities can be detected in real time by using data-driven and other advanced management technologies, the facility faults can be found in a timely manner, and the basic diagnosis and intelligent assistance can be realized according to the specific conditions obtained. The operation and maintenance of some large, high-end, and complex basic equipment in the park are inseparable from intelligent technical support. If it relies on human power for control, not only high operation costs, but also very low efficiency. The use of high-end foundations for intelligent maintenance of these infrastructures can effectively reduce labor costs, improve the overall maintenance level and efficiency of the park, and facilitate the normal operation and management of the science and technology park.

3.3. Promoting regional economic development

The construction of the science and technology park has integrated the resources of all parties in the local society, and most of them are built in the most developed area of a region. The high-end technology industry gather in the science and technology park, and it is a booster for the economic development of a region. Science and technology parks are industry-university-research base of high-end technology. Most of the regional scientific and technological achievements and information resources are gathered in the science and technology park. Science and technology parks may include high-end industries, high-end apartments, schools, office buildings, etc. Both industrial enterprises and consumer groups are very large. The construction of science and technology parks can fully demonstrate industrial scientific and technological achievements, and also can effectively adjust the industrial structure to adapt to the development of the national market consumption structure. Under the state's policy of actively encouraging innovation and entrepreneurship, science and technology parks where many high-tech enterprises are gathered are also the best areas for entrepreneurship and innovation in a region. Under the background of intelligent management, intelligent management of science and technology parks can promote regional economic development, promote regional industrial transformation and upgrading, and accelerate regional technological innovation, thereby enhancing the overall economic strength and competitiveness of regions and cities [5].

4. The Feasibility Ways of Intelligent Management in Science and Technology Parks

4.1. Support and encourage intelligent management of science and technology parks

Under the background of intelligent management, it is necessary to realize the importance of intelligent management of the park, and invest capital and manpower to encourage and support the smart management of science and technology parks. The internal industry of the science and technology park needs external investment support, and the construction and management of the park also needs a lot of capital support. Science and technology parks should set up special funds for the park's intelligent management, increase capital investment in the use of high-end technology, intelligent equipment maintenance and management, and park management planning, improve the basic infrastructure of the park's management, and establish an efficient management mechanism. The intelligent management of science and technology parks also needs to invest funds to encourage and guide the industrial development of the park, support industrial innovation and transformation, and meet the future development needs of the science and technology park. At the time of management, it is also necessary to give full play to the unique advantages of the park and cultivate the local characteristics of the intelligent management of the science and technology park. The intelligent management of science and technology parks requires professional talents, and the state and relevant departments need to realize the importance of talents for the intelligent management of the parks, introduce and cultivate professional talents required for the intelligent management of the parks. We can attract technical talents to join the management of science and technology parks by building talent bases and building talent platforms. The intelligent management of the park is a long-term work. It is necessary to establish a special fund project to encourage the long-term management of the park. At the same time, professional and technical talents should be cultivated for the intelligent management of the park. We should encourage and support the intelligent management of science and technology parks through appropriate policies and measures [6].

4.2. The gathering and upgrading of industrial intellectualization in science and technology parks

Intelligent management of science and technology parks needs to realize the gathering and upgrading of industrial intellectualization in science and technology parks. The industries of science and technology parks should be planned and laid out in a scientific and rational manner. In the construction of industrial clusters, it is necessary to establish industrial clusters conducive to the long-term development of each industry according to the regional development status and the inherent industrial conditions. At the same time, high-end information technology should be relied on to establish links between industries in the park and improve infrastructure technology to support the development of industrial clusters in the park. The industrial structure of science and technology needs to be rationally optimized. Based on the intelligent management concept of the science and technology park, the high-end technology system of the park is built. Making full use of various technical resources and encouraging the industry in the park to continuously carry out technological innovation, so as to promote technical development of the park. The industrial clustering and upgrading of science and technology parks must also consider the cooperation and complementary relationship between the regions. Different industrial parks, as well as the development of industrial parks and local areas, all need scientific and overall management, and the overall development layout of industrial parks should be coordinated on the basis of giving play to the advantages of different industries. Science and technology and infrastructure are the key to the management of the park. The intelligent management of the science and technology park must focus on innovating science and technology and operating models, pay attention to the use of high-end technol-

ogy, infrastructure construction and network information security in the park. With the guidance and help of science and technology, the science and technology park will enhance its scientific and technological innovation capability, realize intelligent industrial agglomeration and upgrading, and effectively develop more industrial markets.

4.3. Build a smart industrial chain of science and technology parks

Intelligent management of science and technology parks needs to make full use of high-end technologies such as cloud computing to build a complete industrial chain. The use of high-end technology is an important prerequisite for the intelligent management of science and technology parks. In recent years, the rise of e-commerce models and the construction of industrial chains in science and technology parks need to improve the park's e-commerce development through technology applications, and build a comprehensive service platform within the park. The research and development and application of key technologies are also the key to intelligent management of the park. It should encourage the industry to develop information service outsourcing models, master and use key technologies, and continuously upgrade the technology. The platform built by cloud computing technology is very important for information sharing and intelligent management in the science and technology park. The overall management and services of the science and technology park need to use the core technical equipment to build a meta-computing industrial chain. The industrial chain can realize the efficient planning and management of the park, strengthen the contact and cooperation between different industries, and improve the comprehensive management level of the park. Improving the management level of science and technology parks also requires continuous research and development of high and new technologies, encouraging the development of smart technological achievements, and establishing a standardized mechanism. The establishment of the technology industry chain can also promote the development of enterprise product, strengthen enterprise exchanges and cooperation, and meet the park's higher level of development requirements. Building the intelligent industrial chain in the science and technology park connect various industries together to achieve efficient management and improve the overall management level of the park effectively.

5. Conclusions

Under the background of intelligent management, we must grasp the development trend of the times, and also realize the importance of intelligent management when building a science and technology park. Intelligent management of science and technology parks can develop high-end technologies and realize intelligent maintenance of infrastructure, and effectively promote industrial and regional economic development of the parks. The management of science and technology park in the new era can be carried out by supporting and encouraging the intelligent management, making full use of high-end technical means such as the internet and big data to realize the intelligent gathering and upgrading of the industry in the science and technology park, and conducting overall planning and management through the ways of building the intelligent industrial chain of the science and technology park. Improving the construction level as well as perfecting the intelligent management of science and technology parks will be new ways for the development of science and technology parks under the background of intelligent management.

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