

Research on the Management System of Science and Technology Incubator

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Funding: The construction of business incubator service system based on science and technology in Zigong(2017DZ03).

Abstract: Science and technology incubator, as an organization dedicated to serving science and technology enterprises, has many functions, such as cultivating small and medium-sized science and technology enterprises, transforming science and technology into productivity, adjusting regional and national industrial structure, promoting the development of high and new technology industries, and promoting employment. Since the emergence of the first business incubator in the United States in the 1950s, this new form of social and economic organization has been developing rapidly all over the world, and has cultivated a large number of successful enterprises, which initially made great contributions to promoting the development of the world economy. However, with the increasing number of science and technology incubators and the rapid development of science and technology enterprises, various problems in the management system and operation mode of science and technology incubators are gradually exposed, which seriously affects the sustainable development of science and technology incubators in China. In view of this, based on the analysis of the current situation of science and technology incubator management in China, this paper puts forward the construction strategy of standardized management system of science and technology incubator in order to promote the scientific development of science and technology incubator in China.

Keywords: Technology incubator; Management system; Science and technology enterprises

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1 Introduction

In the 1950s, American economist Joe Mancu first proposed the concept of incubator. In 1959, the world's first business incubator was established in New York, the United States. After more than half a century of development, the business model of science and technology incubator has blossomed all over the world, making an immeasurable contribution to the development and prosperity of the new economy. Since the establishment of the first Incubator - Wuhan Donghu New Technology Entrepreneurship Center in 1987, with the strong support of governments at all levels, China's incubator industry has gradually entered a high-speed development stage. At the same time of providing high-tech entrepreneurship services, it has gradually derived a variety of incubator types, such as national comprehensive business incubator, new technology business incubator, University Science and Technology Park, professional technology incubator, venture capital leading incubator, overseas students entrepreneurship Park, etc., which provides a good atmosphere and environment for science and technology innovation and entrepreneurship, realizes the effective transformation of scientific and technological achievements, promotes science and education and The overall development of the economy. However, while making remarkable achievements, technology incubators have gradually exposed some problems in their development process.

The most obvious one is the continuous trend of incubator failures since 2016. Through the research and summary of the closed technology incubator, the main reason is that the management system is unreasonable. Therefore, in the face of increasingly fierce competition in the industry, technology incubators can only stand in the fierce competition environment if they constantly innovate the management system and realize self upgrading and transformation.

2 Management status of science and technology incubator

2.1 Single investor

From the perspective of investors, the current domestic technology incubators are still dominated by the investment of relevant government departments. This is closely related to the positioning of science and technology incubators in China. Since the birth of our country, science and technology incubator has been positioned as a non-profit social public service organization for the cultivation and incubation of start-ups and the transformation of high-tech achievements, in which the government plays an essential role.

2.2 Software service lag

With the vigorous development of the technology incubator industry, the internal hardware facilities of the incubator are continuously improved, and the service types are also increasingly perfect^[1]. However, currently, the services provided by the domestic incubator are still mainly focused on office space, property management, related hardware facilities, tax policies and other "landlord" services, and the corresponding incubation services they can provide are seriously lagging behind, especially Some high-level services are lack of value-added services, such as industry resource docking, enterprise financing, brand promotion and so on.

2.3 Lack of high-quality professional management talents

Science and technology incubator should not only provide mature hardware supporting, but also provide corresponding incubation services for enterprises. However, in terms of the overall structure of management talents in domestic science and technology incubators, there is a general lack of high-quality professional management talents, which makes it difficult to provide in-depth incubation services for

incubation enterprises.

3 Research on standardized management strategy of science and technology incubator

3.1 Define the role of the government and improve the supporting policies

Governments at all levels should fully recognize the positive role of science and technology incubators in promoting the development of national economy, so as to increase the support and construction of science and technology incubators, actively publicize and advocate relevant science and technology enterprises to enter the incubators, improve the overall number and service quality of incubators in China, and meet the needs of science and technology enterprises. At the same time, we should give full play to the special role of science and technology incubator in the system reform of scientific research institutes, and support some scientific research institutes that meet the conditions to directly invest in science and technology incubators. Governments at all levels should further clarify their roles, actively use science and technology incubators to promote the stable development of local economy, improve support policies, and make efforts to find ways to run science and technology incubators.

3.2 Improve service functions and improve incubation quality

In the face of the increasingly fierce competition in the incubator industry, the technology incubator should provide a good growth environment for the enterprises in the incubator by constantly improving its service functions. In terms of hardware facilities, it should provide sufficient development place, perfect information network configuration, good external environment and high-quality property services for the incubating enterprises. In the aspect of software service, we should gradually improve the relevant policies of fee preference, risk guidance and intermediary support. At the same time, it can also provide the incubating enterprises with scientific and technological cutting-edge information, market industry trends and human resources information through various types of activities such as organization and exchange, exhibition and so on. Focus on cooperation and introduction with universities, scientific research institutes, investment institutions, human resources, financial services, legal affairs, technical consulting, business planning and

other relevant institutions^[2]. Actively guide various forms of informal communication between incubated enterprises to create a good atmosphere for innovation and entrepreneurship.

In addition, according to the different types of science and technology incubators, we should constantly strengthen their own characteristic services. For example, University Science and technology park should improve enterprise diagnosis, business planning, talent management and training and other supporting services according to the innovation, entrepreneurship needs and specific characteristics of college students. The national comprehensive business incubator should pay attention to the guidance and cultivation of scientific and technological innovation consciousness and ability according to the inherent characteristics of the state-owned enterprises. Professional technology incubators should provide more professional support policies for scientific and technological innovation and perfect entrepreneurial facilities and services. The Overseas Students Pioneer Park provides international business registration services, as well as the corresponding life services such as convenient for enterprise personnel to and fro for many times and stay. In a word, a good business environment and perfect incubation service need not only the continuous improvement of the incubation capacity of the technology incubator itself, but also the strong support of the relevant government departments.

3.3 Build a high-quality management team and innovate the incubation system

Innovation is the eternal driving force for the sustainable development of science and technology incubator. The development process of incubator itself is the process of science and technology innovation, system innovation and idea innovation. In each stage of development, incubators will inevitably encounter various innovation problems. At present, China's science and technology incubator industry is in a critical period of transition to diversified, networked, intelligent and professional development. With the integration of private capital, the positioning of incubator itself is also developing from non-profit public welfare institutions to profit-making professional service institutions. The key to the innovation and development of the incubator lies in whether it has a high-quality management team and whether the management system of the incubator itself is scientific. An excellent incubator leader should not only have the meaning of innovative service, but also

understand R & D, fine business and rich management experience. A high-quality incubator management team must have a good sense of service, professional ethics and spirit of cooperation, and provide professional services for enterprises in incubation according to different types of incubators. The investors of the incubator should give the rights and interests of the management team in operation, finance, reform and other aspects, select high-quality management leaders, optimize the incentive mechanism, innovate the incubator system, improve the incubator quality and promote the healthy development of the incubator.

3.4 Introduction of venture capital institutions and intermediary service institutions

With the vigorous development of science and technology entrepreneurship, science and technology venture capital emerges as the times require^[3]. Science and technology venture capital can effectively help science and technology innovation enterprises to carry out business management and business talent, promote their development and growth, introduce science and technology venture capital into science and technology incubator, and realize "mutual benefit and win-win". The aggregation of incubators to start-ups and the capital investment in their cultivation period can effectively reduce the risk and cost of venture capital seeking investment objects. The capital follow-up of scientific and technological venture capital to scientific and technological start-ups can provide sufficient funds, experience and channels for the sound development of scientific and technological start-ups, so as to promote the overall incubation quality of incubators. Therefore, the incubator should pay attention to the introduction of venture capital, provide guarantee for the good operation of incubated enterprises, and build a "win-win" strategy.

In addition, it is difficult to give consideration to all incubation services only by the incubator's own ability. The incubator should be good at providing relevant services with the help of social intermediary service agencies. According to the service requirements of the incubating enterprises, the incubator should introduce the intermediary service institutions with good reputation and high quality to provide professional services for the incubating enterprises. Through the cooperation with the incubator, the intermediary agencies can obtain more stable customer groups, expand the space for survival and development, realize complementary advantages with the incubator, and

realize common benefits and development.

3.5 Relying on universities and scientific research institutions to improve incubation conditions

Science and technology incubator is an important way to transform scientific and technological achievements into productive forces. The scientific and technological resources of modern society mainly come from various universities and related scientific research institutions. Science and technology incubator should pay attention to establish close cooperation with the birthplace of science and technology resources, such as universities, scientific research institutes and other institutions, expand the incubation function of universities and scientific research institutes, and build science and technology incubator with them[4]. Provide convenient conditions for innovation and Entrepreneurship of scientific and technological personnel, and realize efficient transformation of scientific research achievements. At the same time, science and technology incubators should make full use of the science and technology resources owned by universities and scientific research institutes, help incubating enterprises grasp the cutting-edge science and technology information in time, obtain relevant training services, and establish industrial cooperation relationship with scientific and technological research and development institutions, so as to improve the entrepreneurial conditions.

3.6 Strengthen communication and cooperation to open a new chapter in the development of incubators

At present, China is in a critical period of development of science and technology incubators. The Ministry of science and technology of the people's Republic of China has formulated a special plan, which has greatly promoted exchanges and cooperation among domestic incubators, encouraged the establishment of regional and national incubator networks, and actively participated in exchanges and cooperation among international incubators^[5]. In addition, we should establish China Association of science and technology incubators, introduce private capital and methods, and promote business training and experience exchange of

science and technology incubators. In the process of the development of science and technology incubator, we should deeply study the problems encountered in the process, summarize the experience in time, and actively carry out regional, national and international exchanges and cooperation. Relevant government departments in each region should focus on building key incubators, give full play to their demonstration and driving role, and open a new chapter in the development of China's science and technology incubators.

4 Conclusion

As an important platform connecting the source of scientific and technological innovation and high-tech industry, science and technology incubator is the key element of the system of scientific and technological innovation in China. In order to build a complete management system of science and technology incubator, we should perfect the government's supporting policies, improve the service quality, build a high-quality management team, introduce venture capital institutions and intermediary service institutions, improve the incubation conditions, enhance the incubation capacity, and promote the healthy development of China's science and technology incubator industry.

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