

Ningbo Makerspace Development Status and Countermeasure Analysis

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Abstract. Under the background of global economic development, China government puts forward the innovation-driven development strategy. Ningbo, as a new developing area of Makerspace, speeding up the creative talents is an objective requirement for Ningbo. This paper uses the methods of field investigation and case analysis to analyze the development of Makerspace in Ningbo, combs the problems faced by the development of Makerspace in Ningbo, explores the opportunities and obstacles for the development of Makerspace in Ningbo, and puts forward countermeasures and suggestions for the development and construction of Makerspace in Ningbo, with a view to promoting the healthy development of Makerspace in Ningbo.

Keywords: Makerspace; construction of Makerspace; suggestions.

1. Introduction

On January 4, 2015, Premier Li Keqiang of the State Council visited Shenzhen Firewood Makerspace, which made the 'maker' and 'Makerspace' more inspired and inspired, and set off a wave of mass entrepreneurship and innovation. At the beginning of 2016, 'Maker' was first written into the government work report, 13 times mentioned 'entrepreneurship' in the government work report of the two sessions. The state clearly indicated that promoting 'mass entrepreneurship and innovation' will become a new normal of economic development. Speeding up the development of creative talents is the objective requirement for Ningbo to implement the innovation-driven development strategy in depth, and is an important measure to speed up the building of 'azure wisdom valley' and the construction of the best talent ecological city. Since 2016, the relevant departments of Ningbo have issued a series of policies and measures to support the development of creative talents and space. However, overall, the development of creative talents and space in Ningbo is still in its infancy, and more support is needed. In view of the close relationship and interdependence between 'Maker' and 'Makerspace', Ningbo Maker and Makerspace are taken as the research object by the research group and a comprehensive and in-depth investigation is conducted.

2. The Current Situation of Development of Ningbo Makerspace

2.1 Policy Guarantees are Basically Sound

In March 2015, the General Office of the State Council issued a programmatic document entitled Guiding Opinions on Developing Public Creative Space and Promoting Public Innovation and Entrepreneurship, which is the first time to deploy the platform of 'Public Makerspace' at the national level. Subsequently, governments at all levels have issued relevant policies to promote the development of public space and promote double-creation. Ningbo promulgated the 'Ningbo Municipal People's Government Office's Opinions on Cultivating and Developing Public Makerspace to Promote Innovation and Entrepreneurship among the Public. It proposed that by 2020, 100 public Makerspace and customer service centers with clear industry orientation and strong professional service capabilities should be built to meet the needs of the public for innovation and entrepreneurship, and a comprehensive, wide coverage and seamless convergence should be formed. City, County (city) and district level linkage innovation and entrepreneurship service platform. At the same time, the supporting policies of Ningbo Science and Technology Innovation Voucher Promotion and Application and Ningbo Innovation Start-up Enterprise Cultivation Special Fund Transfer Payment

Management Interim Measures were introduced to create a good environment for double-creation and promote the development of public space.

2.2 Rapid Development and Orderly Distribution

By the end of 2016, Zhejiang Province has more than 3500 incubators and innovative carriers, 288 of which have been identified by municipalities, including 129 at provincial level and 80 at national level, ranking seventh in all provinces. Ningbo has 53 city-level archival public space, second only to Hangzhou (75), ranking second in the province. At present, Ningbo has emerged a large number of public spaces. By the end of 2018, nearly 100 (about 97) public spaces have been registered by the Science and Technology Bureau.

2.3 Regional Distribution is Wider

Ningbo Makerspace was originally concentrated in high-tech zones, two north-south higher education parks. Since this year, the development of Makerspace in Ningbo has shown a sparkling trend and blossomed all over the city. From the point of view of adjusting the situation, all regions have combined with the actual situation of the district alkali to develop the space of creating customers and creating people. Each County (city) has established at least one space of creating people, and each university has built or is preparing to build space of creating people of different scales.

2.4 A more Sound Service System

From the point of view of government services, governments at all levels have issued a number of special policies to support entrepreneurs. For example, in Ningbo's new talent policy, special policy opinions on accelerating the development of public space and promoting public innovation and entrepreneurship have been put forward in areas such as Jiangbei District, Beilun District and National High-tech Zone. Looking from the services provided by Makerspace for creating customers, many Makerspace have built up a chain-like support system for creating innovations and Entrepreneurship with the integration of exchange and sharing, product transformation, venture capital, independent entrepreneurship and project incubation. For example, Zhenhai Huigu Pearl Huizhong Makerspace provides more than 100 entrepreneurship jobs for entrepreneurs, and builds an entrepreneurship ecosystem.

3. Major Problems in the Development of Makerspace in Ningbo

3.1 The Overall Atmosphere of Entrepreneurship and Innovation is not Strong Enough

Entrepreneurial climate is the main factor that constitutes the development ecology of crowdsourcing space, but Ningbo's manufacturing industry is developed and private capital is relatively rich. However, due to the lack of creative and design talents, the development foundation of 'crowdsourcing' and crowdsourcing space is weak, the new technology incubation platform is still in its infancy stage, and the atmosphere of youth entrepreneurship and innovation has not really formed. The survey found that the popularity of creating space has not reached the expected level, the social awareness of creating customers is less than 1/4, and many of them have activities to show a scattered state, the agglomeration effect is limited. Compared with other alkali cities such as Hangzhou, Ningbo has a relatively small number of colleges and universities, and its attraction for foreign personnel and returnees to start businesses is relatively weak. Compared with the first-tier cities such as Guangzhou and Shenzhen in the north, Ningbo's entrepreneurship and innovation started late, and some entrepreneurs' entrepreneurship concepts were backward, which also had a negative impact on the creation of a dual-venture environment. Research and development found that the number of visitors created in many spaces is obviously insufficient, especially in some remote locations, less well-known space, a large number of idle workplaces, resulting in serious waste of resources. The poor ecological environment of entrepreneurship also leads to the lack of good

entrepreneurship projects and excellent entrepreneurship team, which has become the main problem affecting the sustainable development of space.

3.2 Homogeneous Competition in Space Operation

More than 60% of the surveyed public space think that the main problems are ‘service platform homogenization competition is fierce, service capacity is not strong’, ranking first among all kinds of problems. It is understood that at present, many operating agencies do not have the corresponding entrepreneurial service capabilities, but in order to obtain government subsidies, they crowded into the ranks of creating space by changing their names, which has a negative impact on the entrepreneurial ecological environment.

3.3 Lack of Sustained and Stable Profitability

Because of the long conversion cycle of project results, the slow acquisition of follow-up earnings, and the free workplaces and services provided, there are generally weak profitability and large losses in space. Insufficient profitability leads to greater pressure on space funds, which to a certain extent restricts the improvement of space energy level, and has a greater impact on the development of space quality and refinement. And each space is highly dependent on financial subsidies.

4. Suggestions for the Development of Makerspace in Ningbo

With the vigorous promotion of Municipal Committee and Municipal Government, Ningbo has achieved leapfrog development in creating customers and creating space for all. However, compared with Shenzhen and Shanghai, there are still some problems, such as insufficient high-end customers and low enthusiasm for creating customers, which need to be further, promoted?

4.1 Vigorously Cultivate the Atmosphere and Culture of Public Creation and Establish the Atmosphere of Innovation

Through various media and platforms to strengthen the popularity of public space knowledge and national public space policy, as far as possible in a short period of time to eradicate the development of public space cognitive errors and blind areas. In terms of gathering popularity, innovative entrepreneurship groups should be attracted and gathered through diversified activities, professional services and social mechanisms. According to the characteristics of different types of entrepreneurs, services to meet individual needs should be provided to enhance the ability of entrepreneurs. We will continue to run China Innovation and Entrepreneurship Competition, China (Ningbo) Maker Entrepreneurship Competition and other existing innovative and entrepreneurial activities. We should commend and encourage all kinds of innovators with remarkable achievements, outstanding contributions and great influence, timely report a number of innovative and entrepreneurial advanced deeds, and set up a group of innovative and entrepreneurial typical characters, innovative and tolerant of failure of ‘innovators’ innovation atmosphere.

4.2 Gathering High-End Customers and Enhancing Their Talent Reserve

With the opportunity of hosting various kinds of innovative entrepreneurship competitions, Ningbo will reserve more innovative talents, especially high-end innovative talents with strong science and engineering background. We will further improve the support mechanism for tracking the entrepreneurship project, enhance the success rate of the entrepreneurship project landing in Ningbo, and enhance the success rate of the transition from the entrepreneur to the successful entrepreneur. We should improve the statistical development system of creative talents, strengthen the research on the mechanism of the role of creative talents, and keep abreast of the dynamic development of creative talents in a timely manner.

4.3 Create a Well-Known Public Space, and Effectively Enhance the Profitability of Public Space

Taking Ningbo's 'Internet + smart city' construction as an opportunity, we should actively create a number of well-known and innovative spaces, and promote more public space into the national technology incubator support system. Encourage the development of space alliance, share the resources of entrepreneurship and innovation projects, and enhance the development efficiency and profitability. We should enrich the types of public space construction, build a number of investment promotion, media extension and professional service-oriented public space with strength and characteristics, and effectively enhance the profitability of public space.

4.4 Focus on the Development of Characteristic Differentiation

The public makerspaces of University-led construction should be guided by stimulating students' enthusiasm for entrepreneurship and innovation and improving their skills of entrepreneurship and employment. We should make good use of the existing facilities, fully integrate and utilize all kinds of science and technology parks, training bases, laboratories, incubation bases, and student activity centers and so on, and give full play to the agglomeration effect of innovation and entrepreneurship resources and the scale advantage of innovation and entrepreneurship activities. In order to create space for government-led construction, we should give full play to the advantages of government resources integration, give full play to the role of limited government investment, focus on expanding the scale and optimizing services, and strive to cultivate a number of innovative and potential technology-based enterprises. Private enterprises should give full play to the flexible advantages of the system and mechanism, give full play to the advantages of close integration with local industries, actively explore development model innovation, focus on professional development, constantly highlight professional characteristics, enhance professional skills, and avoid greed and perfection.

4.5 Strengthen the Special Encouragement and Support Policy

In view of the problems of insufficient high-end and inconvenient transformation in promoting the development of Makerspace in Ningbo, we should make key breakthroughs, continue to implement the new policy of talent development in Ningbo and the supporting policy of innovative development, timely fulfill the promise of supporting subsidy policy, urge the policy to be implemented effectively, and effectively play the role of government in policy guidance and financial support.

Government departments should insist on intimate service, and provide door-to-door service for entrepreneurs and innovators in policy consultation, information delivery and facilities construction. Encourage scientific and technological innovation units such as universities, research institutes and enterprises to provide services to customers through reasonable fees, provide free services, expenditure on consumables, project management, and provide certain financial support for enterprises stationed. Civilian capital should be strongly encouraged to invest in customer space, and investment projects should be docked with enterprises. In view of the relevant policies already issued, we should strengthen the role of supervision and ensure its better implementation.

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