

# CHINA SCIENCE AND TECHNOLOGY NEWSLETTER

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## **MakerSpaces in China**

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### **Review of Development**

In the annual Report on the Work of the Government delivered in March 2015, Premier Li Keqiang for the first time mentioned the term “mass entrepreneurship and innovation”, opening a new chapter for the development of “makerspaces” in China. In the 2016 Report on the Work of the Government released on March 5<sup>th</sup>, Li highlighted that we must take full advantage of the multiplying effect of “mass entrepreneurship and

innovation” and the “Internet Plus”. The aim is to enable platforms of crowd innovation, crowdsourcing, crowd support and crowdfunding and new mechanisms engaging businesses of all sizes, universities, research institutes and makers. With high attention from the government, full support from the industrial leaders and enthusiastic participation of creative makers, makerspaces are injecting strong impetus to socio- economic development

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and industrial upgrade.

“Makerspace” has become a household term over the past year. Since Premier Li Keqiang visited the Shenzhen-based Chaihuo Maker Space in January 2015 and later affirmed government support to the innovative business model at an executive meeting of the State Council, makerspaces have mushroomed at the second and third-tier cities across the country.

By the end of 2015 there had been 2,345 makerspaces in China. “Makerspace” was simply regarded as a form of innovative business attempts in a few areas before 2015, but the call for “mass entrepreneurship and innovation” has brought about a nationwide wave.

According to data provided by the Torch High Technology Industry Development Center, Ministry of Science and Technology, by the end of 2015, China had a combined area of 80 million square meters for incubation, hiring more than 30,000 people. More than 100,000 ventures were still being incubated and 60,000 had already graduated. These businesses created over 1.8 million jobs. There were a total of 2,300 makerspaces in the country that house more than 120,000 permanent entrepreneurial teams and start-ups, presenting 510,000 job opportunities, employing 180,000 college graduates.

#### **Makerspaces everywhere**

Thanks to firm government support and strong interest of citizens, makerspaces have been on a fast track in recent years. Business giants like Alibaba, Haier and JD are keen to establish a foothold in this emerging sector, makerspace clusters like the Zhongguancun Inno Way, the Hangzhou-based Dream Village and the Jinji Lake Inno Corridor in Suzhou are blazing new trails; different forms of makerspaces such as Garage Cafe, Innovation Works and 36Kr are found all over the country.

In addition, different types of organizations dedicated to investing in or serving start-ups came into play. Among them are investors like Innovation Works, business tutors like Legend Star, media like the Founder magazine, service providers like cloud computing incubations, as well as makerspace incubators like the Chaihuo Maker Space.

Some landmark places like Beijing’s Zhongguancun Electronics Avenue, the Beijing-based National Stadium

(Bird’s Nest), and Shenzhen’s Huaqiangbei electronics market, are in a transition towards developing their own makerspaces. Some business incubators are also beginning to tap their advantages and set up characteristic makerspaces. Internet giants like Tencent and Baidu are foraying into the market to further improve the start-up ecosystem. As they are making rapid headway, makerspaces are also developing distinctive ecosystems, bringing revolutionary changes to this thriving sector.

#### **Favorable policies in a row**

The central and local governments have announced a series of favorable policies in recent years to support entrepreneurship and innovation. Incomplete statistics showed that the central government issued at least 22 documents in this regard between May 2013 and mid-2015.

In March 2015 the General Office of the State Council promulgated the Guidance on Developing Makerspaces for Mass Entrepreneurship and Innovation, with an aim to create a good climate for innovation. The main path is to motivate the whole society through the establishment of makerspaces and service platforms. Efforts should be made to effectively integrate resources and implement policies, improve service patterns, cultivate a pro-innovation culture, and generate substantial momentum for widespread entrepreneurship and innovation. In June 2015, Guidance of the State Council on Policies and Measures for Vigorously Advancing Mass Entrepreneurship and Innovation was promulgated. The document noted that China must stick to the strategic deployment, accelerate the implementation of the strategy on innovation-driven development, and let the market play a decisive role in resource allocation. The government should play its part by streamlining administration, delegating power, deregulation, opening up the market and invigorating businesses. By doing so, the aim is to stimulate millions of entrepreneurs and provide enormous momentum for economic and social development. The government should continue to improve relevant mechanisms and systems, roll out more favorable policies and strengthen coordination and collaboration to create a sound policy environment and provide public services for entrepreneurship and innovation, thus create more job

opportunities and momentum for growth.

With the guidance from the central government, local authorities also drew up concrete favorable policies and measures, further reform and create a sound environment for entrepreneurs and innovators.

### **Makers have talent**

Growing enthusiasm for entrepreneurship has helped improve quality of services and human resources. Nationwide, the payroll in the incubation industry registered an average growth of 16% annually over the 12<sup>th</sup> Five Years. It's more noteworthy that on average, the number of returned overseas students increased by 58% every year, and the number of college degree holders grew by 21% annually. This suggested a growing army of highly skilled and well-educated professionals are joining the trade of incubation service.

If we take a closer look, we will find that there are more and more contests of entrepreneurship and innovation. The objective of them is to select and develop business projects with great potential. Such contests not only mobilize public resources, but also help improve the social climate for new businesses. For instance, the China Innovation & Entrepreneurship Competition, jointly sponsored by the Ministry of Science and Technology and the Ministry of Education, has been held for a total of 4 sessions since 2012, receiving applications from 41,544 enterprises and 17,527 entrepreneurial teams. A large amount of innovations have been produced from the Competition. In the 2015 session, business contestants held a total of 11,000 invention patents and 22,000 utility models, while entrepreneurial teams owned 1,900 invention patents and 1,400 utility models.

Such aggregation of talent adds to the appeal of makerspaces, laying a more solid foundation for

highly efficient resource allocation in the interest of entrepreneurship and innovation.

### **Ecosystem improved**

With the coordination and instructions of the government, the innovation service sector has drawn a great number of excellent personnel as well as powerful social capital. They not only helped optimize the environment for people to start business and pursue innovation, expedite the development of makerspaces, but also played an exemplary role in business ventures. The past year witnessed a growth of start-up communities which integrate business ventures, jobs and even social mingling, such as the Shenzhen Bay Start-up Plaza and the YOU + Youth Entrepreneurship Community. These communities attract extensive attention at home and abroad.

A landmark event of makerspaces took place in 2015 in China. On November 20<sup>th</sup>, the Shanghai Jichuang Investment Management Co., Ltd., (an investor of Su He Hui, a well-known makerspace in Shanghai) was listed on the New Third Board (the National Equities Exchange and Quotations), becoming the first makerspace listed on the capital market. Its listing suggests the model of incubation + venture capital has been accepted by investors, opening up a new path for makerspaces to access capital.

The emergence of innovative incubators also prompts some traditional ones to reform and innovate based on their advantages and characteristics. Open, low-cost and convenient incubators are developed while conventional and innovative models become integrated to make headway. Some incubators set up last year by Haier and JD have further complemented the start-up ecosystem.

(Source: Science and Technology Daily,  
March 6, 2016)

## **2015 Annual Report of Makerspaces**

In the wake of growing enthusiasm for entrepreneurship and innovation, a total of 4.439 million new enterprises were registered in China in 2015, with a combined registered capital of RMB 29 trillion, up by 52.2% year on year. 240,000 new businesses were registered to engage

in information transmission, software and information technology services, up by 63.9% year on year.

There were a total of 2,300 makerspaces in China that house more than 120,000 entrepreneurial teams and start-ups and bring 510,000 job opportunities, including 180,000

to college graduates.

The number of technology business incubators exceeded 25,000, and small business innovation bases numbered more than 4,000. China now has a combined 80 million square meters of business incubation space, hiring more than 30,000 people to serve the incubated businesses. More than 60,000 had already graduated from the incubators, creating more than 1.8 million jobs.

Premier Li Keqiang has repeatedly stressed the government should offer tax breaks to provide impetus to the push for entrepreneurship and innovation. Tax authorities granted at least RMB 300 billion of tax

exemptions and deductions last year to support the push. In March 2015, the General Office of the State Council issued The Guidelines on Expanding Makerspaces and Advancing Mass Entrepreneurship and Innovation. In May 2015, the State Council released The Guidelines on Facilitating Employment and Entrepreneurship under New Conditions. In September 2015, the State Council issued The Guidelines on Building a Support Platform for Mass Entrepreneurship and Innovation.

(Source: Science and Technology Daily,  
March 6, 2016)

## **New Measures in 2016**

In May 2016, the General Office of the State Council released the Guidelines about Building Pilot Bases for Mass Entrepreneurship and Innovation (Hereinafter referred to as the “Guidelines”) to make a systematic plan for the building of the demonstration bases.

The Guidelines pointed out that in order to advance mass entrepreneurship and innovation, accelerate the new economy and foster new growth drivers, China will abide by principles that the government plays a guiding role, the market plays a leading role, and the process is problem-oriented and innovation-targeted, when it builds a batch of demonstration bases and support platforms, eliminates policy restrictions and develops a number of practical models and typical experiences that can be replicated and promoted to other bases.

The Guidelines stressed the demonstration bases should be supported to play a leading and exploratory role in entrepreneurship and innovation, and reforms should be strengthened in such fields as expanding the development space of market participants, intensifying intellectual property protection, accelerating transformation of scientific and technological achievements, increasing fiscal and tax support, expediting mobility of innovation talents and strengthening coordinated innovation, openness and sharing, in a bid to invigorate the market and create a sound ecosystem and policy environment in favor of entrepreneurship and innovation.

The Guidelines determined the first batch of 28 demonstration bases, including 17 regional bases such as the Haidian District of Beijing, four university & institute bases such as Tsinghua University, as well as seven corporate bases such as Haier Group.

The Guidelines stated that related parties must support the demonstration bases by growing innovative startups and building platforms. The Guidelines also laid out the objectives and priorities for building different categories of demonstration bases. For the regional demonstration bases, the priorities and objectives are to aggregate resources, build a service-oriented government, enhance policy support and expand the source of venture capital investments so as to create a new ecosystem and favorable cultural atmosphere to facilitate entrepreneurship and innovation. For university and institute demonstration bases, the priorities and objectives are to fully explore talent and technological advantages and convert them into industrial and economic advantages, improve the innovation talent training and mobility mechanism, expedite transformation of scientific and technological achievements, construct a sound system to support college students to start their businesses, and establish the support and service system to facilitate entrepreneurship and innovation. For the corporate demonstration bases, the priorities and objectives are to let the leading enterprises play a critical role, backed by their outstanding innovation capabilities, strong entrepreneurial

atmosphere and robust abilities to integrate resources, to develop entrepreneurship and innovation-friendly corporate management system, stimulate their staff's creativity, expand the channels of venture capital investment and open their entrepreneurial and innovation resources.

The Guidelines required that local governments and relevant departments where the demonstration bases are located must attach great importance to entrepreneurship and innovation, optimize organizational restructure, roll out targeted policy measures that will be fully implemented, to

unleash the whole society's innovation vitality. The local governments and departments should also set up a policy coordination and interaction mechanism, provide policy support, talent & technology assistance as well as public services to universities, research institutes and enterprises so that all stakeholders could make concerted efforts to push entrepreneurship and innovation.

(Source: Science and Technology Daily,  
May 13, 2016)

### **3W Coffee House in Beijing**

Many people who come to visit the Inno Way would stop by the 3W Coffee House and have a taste of the coffee which was also served to Premier Li Keqiang, when he visited the Inno Way. Known as China's most successful coffee chain bankrolled by crowd-funding, 3W Coffee opened its first store in August 2011. The coffee chain was born with strong Internet property. It has built a service platform to help Internet professionals to open new business and pursue innovation, and it also set up an online recruitment platform lagou.com dedicated to providing job opportunities to Internet workers.

The incubator base in the third floor of the building houses a dozen startup businesses. Among them is music production app "Behinders" founded by Li Yongbing. 3W made a RMB 500,000 seed investment when the venture business was launched. Li Yongbing rented six cubicles at RMB 999 per cubicle per month. "The place is very close to Zhongguancun, and it's very convenient for us to recruit Internet talents", said Li Yongbing, "the rent cost of work space is much cheaper than at office buildings nearby, and 3W sometimes arranges meetings between the entrepreneurial teams and potential investors and provides legal and financial training sessions, and these services are very useful to small firms."

3W has witnessed a series of new attempts in the initial stage. In the second half of 2010, Xu Dandan, Founder and President of the 3W Group, launched a crowd-funding

project to provide a low-cost and barrier-free coffee space for Internet entrepreneurs and prospective investors to exchange business and investment ideas. The initiative drew investments from 180 well-known businesspeople and investors. In 2011, the first 3W Coffee House opened in Beijing. In the next three years, 3W separately launched headhunting, incubation and seed fund businesses. In April 2015, 3W Coffee secured tens of million yuan of investment from a consortium of investors led by JD. In 2016, 3W Coffee began to expand footprints across China.

Thanks to government support and concerted efforts by business partners, 3W has kept improving its startup business service ecosystem. But what makes a good incubator? That question has been haunting 3W as well as many startup business service providers. Tilo Bonow, CEO of PIABO from Germany, has been paying attention to startup business service for a long time, told the journalist that the market is the best "touchstone", "the success or failure of a makerspace should be decided by the market. Perhaps a good many of makerspaces will disappear five years later. But the industry is still premature, and a lot of issues remain to be explored. Any measures that bolster entrepreneurship may advance development of the entire industry."

(Source: Science and Technology Daily,  
March 6, 2016)

## Maker Incubator in Yunnan

China Mobile Group Yunnan Company (China Mobile Yunnan) partnered with Kunming University of Science and Technology (KUST) to launch the “Mobile Market Innovation Incubation Base” and “KUST Maker Incubator”. Many local university students considered the program critical to practice their innovative ideas and bring their dream into reality.

According to Tao Hongyi, who led the innovation incubation business at China Mobile Yunnan, the incubator program has been joined by 15 incorporated enterprises and 13 creative teams, and three teams have secured a combined investment of RMB 21 million. One team has successfully set up business in Zhongguancun.

For instance, an entrepreneurial team of five KUST students fixed their attention on how to facilitate the communication and life of disabled people and customized wearable devices like wristband, wristwatch and app for these people. Smart watch “Watchme” is a popular product developed by the team. The team has sought software copyright protection for the product and won the gold prize at the first China Internet+ Innovation & Entrepreneurship Competition for College Students. The team has obtained a RMB 12 million investment and established a new business at Zhongguancun. According to the team leader Zhao Jiangbo, college-student entrepreneurs like them lacked business experience, personal connections and resources, and they didn’t know how to deal with unexpected problems during team management and business operation. After entering the Mobile Market Innovation Incubation Base, they received instructions from professional mentors and advisers and obtained practical experience from successful entrepreneurs, and reaped a lot of benefits from the perspective of business model, team management, technology development and resource matching.

Ma Chen, a postgraduate of control engineering at KUST, established a team named Dark Elves with his classmates to bring VR technology into drones. The drone, controlled by pupils, can take pictures of an object and recognize and identify it.

According to Huang Zhenwang, deputy general manager of China Mobile Yunnan, the Central Committee of the Communist Youth League and China Mobile launched the

“Million Young Entrepreneurs Program” in 2011, and since then China Mobile Yunnan has built the Mobile Market Innovation Incubation Base at college camps, providing entrepreneurship and part-time job opportunities as well as experience and Communist Youth League services for college students.

According to Li Hui, general manager of Internet business at China Mobile Yunnan, they provided a series of supports and services to makers. They provided office facilities for all individuals and teams joining the base; they hired companies to provide property management service and assess whether an applicant meets the requirements to join the base; they helped project developers to get more attention from prospective investors, and integrated makers’ internet business with their own mobile Internet marketing system to help these makers quickly match users.

A member of an entrepreneurial team from KUST told the interviewer, “We could not even afford to rent an office room in the initial stage, and the MM incubation base provided us with work space and a full set of hardware facilities. Without the help of China Mobile, we couldn’t have got the project up and running.”

In the recent five years China Mobile Yunnan has built Mobile Market Entrepreneurship and Employment Base in 38 universities and colleges across the province, organized 200 incubation training sessions and 150 job training salons, set up 80 entrepreneurial teams and enlisted 3,000 mobile app developers. The scale of its assistance to entrepreneurship and innovation has far exceeded expectations.

In response to the demand from local universities and colleges to expand the entrepreneurship and innovation program, China Mobile Yunnan consolidated and upgraded the base to the “Mobile Market Innovation Incubation Base”. The base has provided training and assistance to the incubated startups with an aim to developing itself into a classroom that strengthens college students’ problem-solving abilities, a laboratory that improves their practical skills, and a space that improves their innovation capabilities.

(Source: Science and Technology Daily,  
June 1, 2016)

## IC Cafe in Shanghai

Four years ago 100 professionals in the upstream and downstream business of the IC and IT sectors made a contribution of RMB 20,000 each to open the IC Cafe at Shanghai's Zhangjiang Hi-tech Park. Hu Yunwang was one of the initiators and founders of the project. He has several dozen years of experience in headhunting IC professionals. In the early years he had realized that China's IT industry has to build a platform of communication, because everybody was so obsessed with technology, and there was little communication or exchange among the upstream, midstream and downstream segments of the industry, and they were unable to match with each other's demands and information.

"I hope IC Cafe could bring together the black particles, hardware and intelligent technologies," said Hu Yunwang, "our original intention was to build a technology community to expedite the communication and development between the upstream and downstream businesses, and create an opportunity for entrepreneurs to meet with prospective investors who can help them realize their entrepreneurial dreams." "IC Cafe was made out of two thirds of technology and one third of entrepreneurship, and superficial service is worth as little as the value of a cup of coffee," he said, adding that without providing professional and meticulous services and making a big splash in the industry, we will not be able to explore the embedded value and make the business profitable.

Focus on chip and integrated circuit has been a "natural DNA" for IC Cafe. Hu Yunwang told the reporter there are two challenges for IC professionals to start up new businesses. First, the IC industry chain was very complicated and it was very hard to channel money

into the industry. Second, the IC industry featured lofty technology barriers and required a longstanding career to gather experience. As a result, most entrepreneurs in the industry were relatively old. Moreover, technology professionals were generally restrained and less talkative, most business startups were facing difficulties in securing venture investment and making a pitch in publicity and product marketing efforts. Backed by its IC community, IC Cafe has gathered a large pool of professionals, and figured out targeted solutions to help entrepreneurs deal with such issues as long-term strategic planning, technological problems and capital needs.

In the past four years IC Cafe has hosted over 1,000 activities of different themes around the world, making it a household name for IC professionals in China and other places of the planet. "IC Cafe plays a great role in consolidating information and resources, and it's helpful for the government to identify the pain points of the IC industry and integrate the whole industry chain to build Pudong into a leading IC base in China and even the world." said Tang Shiqing, Director of Pudong Science and Technology Commission.

Now IC Cafe has expanded its presence from Shanghai to Beijing, Shenzhen, Wuhan, Singapore and even the Silicon Valley, while Pudong is still regarded by most IC professionals as their home base and "physiological lighthouse", shedding light to navigate their IC startup projects toward success. Now IC Cafe is exploring more possibilities that might take place someday in the future.

(Source: Science and Technology Daily,  
June 28, 2016)