

High-tech park growing local innovation

Chengdu's primary goal is to catch up with Shenzhen and Tianjin in boosting exports

By ZHONG NAN and LI YU
in Chengdu and LU HAOTING
in Beijing

Chengdu plans to launch more high-tech enterprises over the next three years to drive the city's economy and innovative strengths amid China's industrial upgrading.

Home to 252 multinational Fortune 500 companies, including Intel Corp, Suez Group, Siemens AG and Toyota Motor Corp, Chengdu is taking steps to enhance innovation in local companies by learning from the foreign businesses. The goal is to catch up with such longer-established rivals as Shenzhen, Dalian and Tianjin in China's eastern region.

Tang Hua, director of Chengdu's science and technology bureau, said the city will invest 1 billion yuan (\$162 million) this year to support industries such as e-commerce, pharmaceuticals, 3-D printing, vehicles and new materials to boost exports and build more national brands.

"Carrying out labor-intensive manufacturing will not benefit the local economy in the long term because many export-oriented factories already are uncompetitive due to rising wages and weak demand for low-end products in international markets," Tang said.

The Chengdu government is focusing on developing company leaders in high-tech fields, particularly small and medium-sized enterprises.

It also is offering subsidies of between 200,000 yuan and 1 million yuan for new product development to local companies. Because carrying out research and development for pharmaceutical products is a lengthy and expensive process, the maximum subsidy for this sector was raised to 4.2 million yuan for a single product.

Supported by favorable government policies and surging export orders, particularly from Europe and the United States, the output value of Chengdu's high-tech industry hit 512 billion yuan in 2013, an increase of 25 percent from the previous year, data from Chengdu's municipal develop-



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ment and reform commission showed.

Electronic information, biological medicine, new energy, new materials, optical and electrical integration, aerospace and other strategic emerging industries accounted for 70 percent of the industry's total output.

As many Chinese cities set new, higher targets for high-tech projects and supporting facilities in order to enhance their resident companies' global competitiveness, Chengdu's High-Tech Industrial Development Zone also altered its goals for future development. It aims to build itself into a world-class technology park with gross industrial output reaching 1 trillion yuan by 2020.

Since its establishment in 1991, the industrial development zone has gone through several phases, and it now specializes in developing IT, biomedicine and precision instrument manufacturing.

Its output value totaled 104 billion yuan in 2013, up 19 percent from a year earlier. Its foreign trade volume reached 24 billion yuan last year, ranking third in the country.

"The high-tech zone's next move will focus on developing strategic emerging industries, including



A production line of Molex Interconnect (Chengdu) Co Ltd, which is in the Chengdu High-Tech Industrial Development Zone. The zone aims to be a world-class technology park with gross industrial output of 1 trillion yuan by 2020.

mobile Internet, core electronic devices manufacturing, software, biomedical engineering, aeronautic equipment, new materials and advanced environmental protection," Tang said.

Chengdu Guibao Science and Technology Co is one of many high-tech companies that reflect this trend. It received 7 million yuan from the government in 2013 to support R&D in vulcanized silicone sealants, which are widely used in construction curtain walls, energy-saving windows and doors, automobile manufacturing, the new energy industry and airports.

Cao Zhenhai, chief financial officer of Chengdu Guibao, said the government offered land for expanding its manufacturing facilities in the high-tech zone in 2006.

With more research labs, workshops and researchers, its production capacity rose from 3,000 metric tons in 2006 to 23,000 metric tons last year.

The zone's service department holds regular briefings to keep enterprises abreast of national and local policies on subsidies and tax rebates, he said.

"These briefings are quite useful," said Cao. "They help us learn about municipal, provincial and national policies, innovative achievements by successful foreign companies, as well as the supply and demand data of international markets provided by consulting companies."

Chengdu Guibao's sales revenue reached 543 million yuan in 2013, up 25 percent year-on-year. It

exported 2.8 million yuan worth of products to overseas markets last year.

Zhang Qizuo, a professor at Chengdu University, said China's national strategy to build the Silk Road economic belt, grow consumption and apply new technologies in western China will help to optimize the city's industrial and human resources structure over the next decade.

"Chengdu is one of a few Chinese cities that combines a large pool of young professionals with a better but less expensive lifestyle that is due to the opportunities presented by the city's fast-growing high-tech industry," Zhang said.

Supported by 57 universities and more than 40 vocational colleges mostly specializing in heavy indus-

try, electronics and automation, chemical and computer science, Chengdu added 250,000 university graduates and 80,000 professionals from vocational colleges to China's labor pool in 2013.

"To tackle the problems of talent shortage and the rising cost of labor, Chengdu's government signed agreements with 20 local universities last year to provide both local and foreign high-tech companies with quality professionals who can work in the city after their graduation," said Tang, from Chengdu's science and technology bureau.

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Technology becoming new economic engine of Chengdu

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Transformed over two decades from China's biggest base for heavy industry in the western region, Chengdu is now thriving with a modern economy built on high-technology industries that are driving its growth and providing a window on its innovative strength.

Many of these opportunities come from China's national strategy of building the Silk Road economic belt, as well as soaring consumption power and the application of various advanced technologies.

Eager to gain higher profits from exports, Chengdu has moved toward a low-carbon, high-tech economy by curbing overcapacity and reducing the scale of heavy and energy-intensive industries on the one hand, while on the other encouraging high-tech industries to accelerate the speed of innovation and talent recruitment.

He Li, director of Chengdu's development and reform commission, said that an increasing number of domestic and international companies are building new manufacturing facilities for high-tech products, research centers and logistics hubs in Chengdu. Thus, the city is preparing to scale up efforts to improve services for strategic emerging industries and productive service sectors over the next five years.

"High-end industries, including next-generation information technology, biotechnology, precision machinery manufacturing, energy conservation and environmental protection, plus financial and business services, will further upgrade the competitiveness and innovative



We are also providing high-tech companies in incubators with access to public research facilities, helping them explore the market and offering them help in human resources as well as financing. Office space, dormitories and apartments for their employees can also be arranged."

HE LI
DIRECTOR OF CHENGDU'S DEVELOPMENT AND REFORM COMMISSION

capacity of Chengdu and Sichuan province as a whole," He said.

The Chengdu government in February announced an overall strategy of reform, innovation, transformation and upgrading, and optimized its five strategies to push forward the city's industrial transformation and optimize the structure of high-tech industries, environmental investment, and urban and rural planning.

"We are also providing high-tech companies in incubators with access to public research facilities, helping them explore the market and offering them help in human resources as well as financing. Office space, dormitories and apartments for their employees can also be arranged," said He.

To build an efficient public service platform for more than 20,000 high-tech companies in the city, different government divisions such as the finance bureau and science and technology bureau have formulated subsidies and stimulus policies to encourage innovative activities.

Sun Ming, chairwoman of the Chengdu Federation of Industry and Commerce, said another component driving development is the central government's intention to promote urbanization and narrow the gap between the more industrial coastal cities and the underdevel-

oped interior and western frontier regions.

"Because the future of Chengdu's economy will be decided by innovative breakthroughs in high-tech industries, local universities and vocational colleges have been quick to adjust their curricula to follow trends in the city's changing job market and produce talented people with practical skills to fit into the teams in various small and medium-sized companies," said Sun.

"This new economic shift has already made an impressive change, helping Chengdu's high-tech companies reach more new marketplaces. They have managed well to ship their products to international and domestic destinations through well-developed international rail freight systems and air routes, as well as highways, in recent years," Sun said.

China Bluestar Chengrand Chemical Co Ltd, which makes chemical materials for civilian and military use, is one of many Chengdu companies that reflect this trend. It expects to raise production capacity of para-aramid fiber by 10,000 metric tons next year.

The company now produces 1,000 tons of the strong, heat-resistant fiber annually. It is widely used in the aerospace industry — particularly to produce ballistic-rated body



Wang Fengde (second from right), vice-director of China Bluestar Chengrand Chemical Co Ltd, tests products together with researchers.

armor — bicycle tires, asbestos substitutes and disaster rescue equipment.

Supported by favorable policies such as tax cuts and new land use rights offered by the Chengdu government, as well as qualified local university graduates, Bluestar Chengrand has begun research on the project's second phase. It plans to invest about 3 billion yuan (\$486 million) in Chengdu to establish a production line for para-aramid and equipment to manufacture composite materials.

The expansion, with operations expected to start in 2015, will make the company the third-largest producer of para-aramid in the world after Wilmington, Delaware-based E. I. du Pont de Nemours & Co and

Japan's Teijin Ltd, Wang Fengde, vice-director of Bluestar Chengrand, said.

"Para-aramid fiber is used in the production of components for automobiles, airplanes and high-speed trains, of which western China produces a lot," Wang said. "We will keep investing 10-15 percent of our annual sales into research and development every year, and we'll also consider adding several new research labs and a department in Chengdu."

The Chengdu-based company has received a high volume of orders and inquiries for the use of various new materials from traditional domestic factories in recent years, Wang said. They are interested in upgrading the technical content of

their products. Interest has come from shipyards, garment factories, shoe manufacturers and tire producers in the Pearl River Delta, Yangtze River Delta and the Bohai Bay region.

Bluestar Chengrand's revenue rose to 530 million yuan in 2013, up 20 percent from the previous year. It has over 500 employees, including 200 scientists and researchers in different departments. It has sold para-aramid to countries including Germany, France, Turkey, Spain and Italy last year, at relatively competitive prices.

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