feature

VAPOR

How Shenzhen came

While e-cigarettes have made the greatest inroads into Europe and the United States, their components continue to be manufactured mostly in China. According to some estimates, close to 99 percent of the world's e-cigarette hardware originates in just one city—Shenzhen. *Tobacco Reporter* traveled to Shenzhen to learn how it became the vapor industry's workshop, and whether the city can maintain its competitive advantage as labor costs rise.

While most people are aware of China's spectacular growth, it takes a visit to truly appreciate the scope of the changes taking place—even if the pace has slowed somewhat in recent years. In Shenzhen, skyscrapers, motorways and container ports continue to be built so rapidly that even the world's most prominent mapping service has trouble keeping up.

For example, First Union, one of the world's largest suppliers of e-cigarettes, is headquartered in Shenzhen's Bao'an District. The journey there passes over a gleaming, just-finished highway built in the Pearl River Estuary that offers a spectacular view of the city's new airport. Yet at the time of writing, Google Earth still showed both the highway and the terminals as mere construction sites. The same was true for several futuristic structures visible from the 24th floor of First Union's downtown international sales and marketing center.

Like the vapor business, Shenzhen seems to have appeared out of nowhere. Thirty years ago, it was a sleepy fishing village with perhaps 30,000 people. Today, it has a population

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VALLEY

to dominate the global supply of e-cigarette hardware

By Taco Tuinstra

of almost 11 million. By comparison, it took New York City more than 300 years to reach its current size of 8.5 million.

But whereas the vapor industry was triggered by a combination of growing health awareness and entrepreneurial flair, Shenzhen's takeoff was engineered by the state—or, more precisely, by its strategic withdrawal. In 1979, China's supreme leader Deng Xiaoping proclaimed, "To get rich is glorious," and began a process of reform that kick-started China's remarkable economic growth. Shenzhen became a special economic zone (SEZ), a testing ground for capitalism open to foreign investment.

Taking advantage of its location (on the coast and close to Hong Kong), a seemingly endless supply of inexpensive labor and the considerable government support that came with SEZ status, Shenzhen evolved into a major industrial hub. Today, Shenzhen produces everything from textiles to pharmaceuticals, but its specialty is information and communications technology. Around a quarter of the 1.1 billion smartphones shipped worldwide in 2013 were assembled in Shenzhen, according to Counterpoint Research. ▶

Photo: Taco Tuinstra

Some parts of the e-cigarette production process are difficult to automate, and will likely continue to be done in China.

While Shenzhen is home to a few high-profile businesses, such as Huawei, most companies operating there are virtually unknown to the consumers who use their products. That's because they work as subcontractors for Western manufacturers who sell the products under their own brand names. The popular Apple gadgets, for example, may be "Designed in California," but are almost all assembled in Shenzhen by Foxconn, a giant Taiwanese contract manufacturer that also supplies other electronics companies.

A similar business model seems to have evolved in the e-cigarette industry, with Shenzhen-based contractors assembling (and sometimes designing) products that are sold under Western brand names. While sensitive components, such as e-liquids, are often manufactured in end markets to please regulators and reassure consumers, Shenzhen supplies virtually all of the vapor industry's hardware.

To some extent, First Union is to the e-cigarette industry what Foxconn is to consumer electronics. Many famous Western brands—the company won't disclose which—are wholly or partially made at one of First Union's three Shenzhen factories. The company offers its expertise, its workforce and a promise of confidentiality to e-cigarette companies. Customers are assigned dedicated working areas, each with its own security measures to prevent competitors from taking an unauthorized look in the kitchen.

Senior Marketing Manager Kylie Lee says First Union provided the spark for Shenzhen's e-cigarette manufacturing revolution. The company's success, she contends, has spawned many copycats, including firms set up by former First Union managers. After establishing relationships with their employer's customers, these managers set up their own factories to supply their clients—a common practice in Shenzhen that challenges individual companies but also contributes to the city's economic dynamism. While exact figures are hard to come by, some estimate there are currently more than 100 Shenzhen companies manufacturing and assembling e-cigarettes for Western customers.

> "We selected Shenzhen as it is the world's hub of expertise for small electronics manufacturing."

Even vapor companies that prefer to keep production in-house have flocked to Shenzhen to take advantage of the readily available components and expertise. "We selected Shenzhen as it is the world's hub of expertise for small electronics manufacturing," says Jacqueline

First Union, first mover

First Union sat at the cradle of Shenzhen's booming e-cigarette industry. The company was established in 2004 by Sunny Xu, one of the first entrepreneurs to appreciate the promise of e-cigarettes. Xu realized that, in order for e-cigarettes to be able to deliver their assumed health benefits, they would have to be acceptable to tobacco smokers. "The products on the market in those days had many technical problems, but I could see the potential," he says. So Xu set out to improve quality and reduce cost.

Today, First Union is one of the vapor industry's largest suppliers. The firm operates three factories with a combined area of 120,000 square meters and a production capacity of 800 million disposable e-cigarettes, cartomizers and batteries. It employs 10,000 people, including 200 engineers at a dedicated R&D center. In addition to countless industrial certifications, such as ISO 9001–2008, GMP and OHSAS 18001, the company has more than 245 patents to its name.

The firm also claims many industry breakthroughs, such as the idea to combine the e-cigarette cartridge and atomizer. "We invented the cartomizer," says Xu. Over the past decade, First Union has supplied more than 300 customers in 50-plus countries, including some of the business' most prominent players. To further demonstrate its commitment to the global market, it recently opened an international sales and marketing center in downtown Shenzhen.

In addition to manufacturing disposable e-cigarettes for other companies, First Union produces its own line of rechargeable vapor products under the name ISMK.

First Union's executives attribute the company's success to its long-term strategy. "Unlike some of our competitors, we are not in business to make quick money," says Vice President of Marketing Richard Yu. Being a serious player requires serious investment, he points out, and First Union consistently reinvests 15 percent of its annual gross earnings into R&D. The result is a constant stream of innovations. "We launch a new product almost every month," says Yu.

While catering to its overseas customers, First Union is also keeping an eye on prospects closer to home. China may be the world's largest tobacco market, but e-cigarettes have not caught on there as they have in Europe and the U.S. Xu and his colleagues are confident this will change. "Asia tends to copy the good things from the West," says Senior Marketing Manager Kylie Lee.

Chinese traditional cigarette manufacturers are keen to enter the segment but lack the know-how. Spying an opportunity, First Union has reached out to them. "The tobacco companies have the brands and we have the technology," says Lee. Already, First Union has basic cooperation agreements with several prominent Chinese cigarette producers. And earlier this year, the firm created a joint venture with the Jun Jia Yuan Group Co., a leading supplier of cigarette packaging with extensive contacts in the traditional tobacco sector. Bullish about the future, First Union is now contemplating a public listing, either at home or abroad. Based on First Union's track record, a stock market debut could potentially create a class of spectacularly wealthy investors. "Mr. Xu may well become the richest man in China," says Lee. —*T.T.*

Photo: FirstUnion

First Union chairman Sunny Xu (right) has high hopes of the company's recently signed cooperation agreement with Jinjian packaging, which has strong relationships with China's traditional tobacco companies.

Burrows of U.K.-based Gamucci, which wholly owns its factory. "Our core suppliers are all based nearby." The company, she adds, has solid quality-control measures in place, ensuring its Shenzhen-made products meet Gamucci's exacting standards.

White Cloud Electronic Cigarettes of the U.S., too, recently set up its own production facility near Shenzhen. The company previously outsourced its production (also in Shenzhen) but decided it wanted greater control over the process. Even though White Cloud manufactures and fills its e-liquids in the U.S., the firm continues to produce its hardware in China. "Assembling e-cigarette components such as the insulator, the collar and the spindle requires lots of work," says factory administrator Daniel Wen. "These processes are difficult to automate and cannot yet be done cost effectively in the U.S."

But while producing in Shenzhen remains cheaper than in Western countries, costs have been rising quickly. Wen estimates the price of labor has increased by 15 percent annually in recent years. "It's difficult to keep workers happy," he says. Echoing his concern, First Union says it may move some production to neighboring Jiangxi Province, where labor is less expensive. The company, which employs more than 10,000 people, is also looking into greater automation.

The rising costs, of course, simply reflect Shenzhen's success; with more companies competing for labor, workers can demand higher wages. But even as its cost advantage erodes, Shenzhen will likely retain its prime position as a supplier of vapor hardware. As Wen points out, quality, not cost, is the main issue. "It is important that customers like the product," he says. With its well-established ecosystem of component suppliers, institutional know-how and trained workers, Shenzhen will be hard to beat as the global hub of e-cigarette manufacturing. TR