China searches for high-tech leap forward

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The manicured lawns and carefully sculpted buildings of Huawei's headquarters are a far cry from the sweatshop image of southern China's factory belt.

In place of rows of migrant workers hunched over production lines or sewing machines, engineers hover in front of NASA-style giant screens pinpointing any problems in the Chinese technology giant's global network of telecoms systems.

Across the Silicon Valley-style campus, besuited executives wander through a training centre designed by British architect Norman Foster, while potential customers are wowed by new electronic gadgetry in a huge showroom.

"(The campus shows) we are trying to look like an international company," said Ross Gan, Huawei's head of corporate communications.

Huawei, which was founded just 21 years ago by a former People's Liberation Army engineer, is the kind of company China needs if it wants to shift its economy from being the world's workshop to a creator of genuine global brands.

The country has enjoyed a staggering boom in the last 30 years by churning out cheap toys, clothes and gadgets.

But for the past 10 years it has been looking to emulate Japan and South Korea, and move from cheap processing of other people's ideas to nurturing a new Sony or Samsung. But Chinese brands still do not roll off the tongue.

Huawei, whose core business of manufacturing goods like mobile phones for foreign firms and providing huge technology infrastructures remains intact, is at the forefront of this attempt to shift direction.

Last year it made 1,737 patent applications, more than any other company in the world, but Gan conceded that the key to the company's success as a brand depends on transferring those into profitable products.

It produces one of the world's leading dongles, a device that allows laptop users to get Internet access wherever they are, and has created an Islamic mobile phone that gives a daily Koran reading and points users towards Mecca whenever they need to pray.

Whether this flurry of ideas can be translated into the next Playstation remains to be seen.

The firm is part of efforts in the southern province of Guangdong's factory-belt to change growth models. Already threatened by rising wages and competition from places like Vietnam, the financial slowdown hit the region hard.

Chinese exports, many of them made in Guangdong, have collapsed by more than 20 percent, forcing the closure of factories and leaving up to 20 million migrant workers without jobs early this year.

"The financial crisis has shown that our traditional growth pattern is very fragile," Wang Yang, the province's Communist Party chief, told foreign reporters on a recent visit.

Another company trying to move up the value chain is BYD, a Shenzhenbased battery company that has turned its attention to electric and hybrid cars.

Formed in 1995, the company has enjoyed huge success providing batteries for mobile phones, exactly the kind of low-end manufacturing that helped Shenzhen transform from a fishing village to a gleaming city of 12 million in 30 years.

Now BYD -- which stands for Build Your Dreams -- is harnessing its battery expertise to outmanoeuvre established carmakers, and create vehicles with fewer emissions.

While most electric cars only have a range of around 160 kilometres (100 miles), BYD says its electric models will be able to travel 400 kilometres on a single charge.

Although the cars are not styled as elegantly as many western models, BYD has attracted international attention and 230 million dollars from US investment guru Warren Buffett.

"Technology is the key and innovation is the route," said Henry Li, general manager of the auto export division, on a visit to the company's factory.

The annual Fortune magazine list of the world's top 500 companies by revenue this year included a record 34 mainland Chinese firms. However, all of them were state-owned and operating in often restricted markets or monopolies.

Xu Yan, an associate professor at Hong Kong University of Science and Technology's business school, said the protected or monopoly-controlling state-owned behemoths have prevented China from developing new brands in some sectors.

"The state-owned companies are slow and not very responsive to the market and therefore lack innovation," Xu told AFP.

Despite this, technology firms are starting to make the leap as they seek to compete in international markets, Xu said.

"Many hi-tech companies, like Huawei, cannot survive if they do not innovate and they realise they can no longer just offer a low price," Xu said.

Another contender to break out from the domestic market is electronics firm TCL, a leading manufacturer of flatscreen TVs.

The company has excelled in driving down prices and is now using some of that cash to design its own products, including its own 3D screen.

Outside its factory in Huizhou, near to Shenzhen, a huge slogan is plastered on the wall in Chinese and English: "Persistence. Consolidation. Improvement."

Whether "innovation" can be successfully added to that list is a crucial question for China.