



Fully automated robots weld the bodies of automobiles in a workshop in the Foton Shandong Multifunction Plant in the Weifang Hi-tech Industrial Development Zone.

PHOTOS PROVIDED TO CHINA DAILY

# Manufacturers lead upgrade and transformation agenda

Zone's development plans put into action by the businesses that call it home, **Tang Zhihao** reports.

Manufacturers in the Weifang Hi-tech Industrial Development Zone are pushing forward its industrial upgrade and transformation plan in response to the central government's efforts to replace old growth drivers with new ones.

## Weichai's approach

Weichai Group, one of the largest vehicle parts and engine developers in China, has been committed to promoting innovation, supporting industrial integration and gathering global resources to build up its core competitiveness.

The company invested heavily in developing engine reliability and core technologies to serve clients' evolving demands over the past few years.

Figures provided by Weichai show that more than 5 percent of its annual sales revenue has been invested in research and development. Total investment in core technologies and reliability enhancement has reached 15 billion yuan (\$2.21 billion) over the past 10 years.

The number of engineers in the company's R&D department has increased to more than 3,000, from just 60 people.

Weichai Group, founded in 1946, has registered 2,633 patents, including 469 invention patents, over the past seven decades.

The company's engine sales volume reached 300,000 units in the first half of 2017, an increase of 50 percent year-on-year.

"Weichai has reported rapid growth over the past decade. Our annual sales revenue exceeds 100 billion yuan. We diversified our product portfolio and made breakthroughs in our internationalization progress," said Tan

Xuguang, chairman of Weichai. "Weichai's every success was supported by technological innovation."

In the era of smart manufacturing, Weichai also vowed to accelerate its infrastructure and management system upgrade to maintain long-term growth. It has joined the first group of smart manufacturing demonstration businesses in China.

## Integrating global resources

Apart from strengthening commitment in independent R&D, Weichai is keen to create partnerships with the world's top technology solution providers to keep it one step ahead of the competition.

In 2009, Weichai Power, one of the subsidiaries of Weichai Group, acquired French marine engine developer and producer Moteurs Baudouin.

Moteurs Baudouin successfully distributed its engine systems in the North American market with support from Weichai.

In 2012, Weichai Power purchased a 25 percent stake in Germany's forklift maker Kion for 467 million euros (\$534 million) and a 70 percent controlling stake in Kion's subsidiary Linde Hydraulics for 271 million euros.

The deal allows Weichai to be a leader in the hydraulics industry and strongly support China's machinery industry's upgrade and transformation.

In the same year, Weichai purchased a majority stake in Italian yacht-maker Ferretti to tap into luxury yacht businesses.

All Weichai's overseas projects reported positive net profit in 2016. The overall net profit was four times that of 2015.



**We diversified our product portfolio and made breakthroughs in our internationalization progress."**

**Tan Xuguang**, chairman of Weichai Group

This positive investment return strongly supports Weichai's confidence in global expansion and acquisition.

Weichai America, a wholly owned subsidiary of Weichai Power, decided to invest \$60 million in leading alternative-fuel power system developer Power Solutions International in March this year. Weichai became PSI's largest shareholder. The deal marked Weichai's debut in the North American power market.

## Foton's efforts

Strategies to replace manpower with machines have been enforced by the Foton Shandong Multifunction Plant in the high-tech zone to support its long-term growth.

A manufacturing execution system was introduced to support Foton's smart production in September 2016.

Yin Baoyin, who once worked in the order-sorting department of Foton's Weifang plant, said that the new system can sort orders much more accurately

and effectively than human beings.

"The system will prepare all order-related data and sort orders automatically," said Yin. "The order sorting time has been reduced from 2 hours to only 40 minutes."

Smart technologies have been used in processes such as painting, welding and gluing at Foton's plant over the past two years.

The figures provided by the company show that the first-time pass rate of products from assembly lines increased by more than 60 percent compared with previous years.

Foton said that technologies have helped the company to reduce production costs by 41.83 million yuan in 2015 and 2016. The number of employees on Foton's production lines dropped from 2,433 in 2015 to 2,281 in 2016.

The employees who left their positions were re-trained and acquired new skills to support the company's growth in other job positions, according to the company. For instance, Yin is now responsible for monitoring production statuses on the site.

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**WEIFANG HI-TECH INDUSTRIAL DEVELOPMENT ZONE**  
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## Regional history, culture remembered in local museums

By **ZHUANG TI**

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The Weifang Hi-tech Industrial Development Zone plans to build more subdistrict and village-level museums to preserve family tree documents and anecdotes that have cultural and historical value, as high-rising buildings replace shantytowns in the region's upgrade plan.

The move will help residents who once lived in shantytowns to remember their ancestors and family history. It will also enrich local people's cultural lives and allow the younger generations to learn more about the city's development history.

"We will collect stories about the culture and famous people of the zone. It will help young people to better understand traditional culture and cherish our city," said Chai Jiankun, a staff member from Xin'gang sub-district.

Four subdistricts — Xincheng, Xin'gang, Qingchi and Xinchang — each will have a museum to record stories about famous people in the area. Each museum will obtain no more than 1 million yuan (\$147,000) in supporting funds from the zone.

Xin'gang subdistrict museum, covering more than 3,000 square meters, will be open to the public soon. The total investment reached 10 million yuan, according to the zone.

There will be 37 village-level museums to collect typical items, such as agricultural tools, to reflect local people's lifestyles. Each museum will be eligible for no more than 300,000 yuan in subsidies to



**We have a much better life nowadays. We should not forget our history and excellent traditions."**

**Xu Xizhi**, a resident in the Shanhouxu community

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**village museums**

will collect typical items, such as agricultural tools, to reflect local people's lifestyles

cover construction and operation cost in the community.

"We have a much better life nowadays. We should not forget our history and excellent traditions," said Xu Xizhi, a resident in the Shanhouxu community.

The museums' construction plan gained strong support from local residents. Many residents shared stories about their ancestors and families to expand the collections of the archives.

*Liu Yinghong contributed to this story.*



Villagers of Xincheng subdistrict's Phoenix community visit their village museum.

## Briefly

### Shengrui noted for drawing talent

Shengrui Transmission — developer of the world's first front-engine, front-drive 8-gear auto transmission (SAT) — has been recognized as a model business in talent recruitment and services by the Shandong government. The Weifang Hi-tech Industrial Development Zone has attracted 30 experts listed on China's Thousand Talents Program, two professionals listed on the Ten Thousand Talents Project and six experts recognized by the Ministry of Science and Technology. Shengrui's research and development team has more than 300 engineers. Shengrui's SAT won the National Science and Technology Progress Award in January this year.

### GoerTek acquires stake in Kopin

GoerTek and Kopin will launch a new type of augmented reality product by the end of 2017. GoerTek entered into a strategic relationship with United States' Kopin by acquiring a 10.1 percent stake in the company in April, becoming the largest shareholder. NASDAQ-

listed Kopin is a leading virtual and augmented reality technology solutions provider. It provides wearable solutions to many military and industrial clients. GoerTek said that the partnership with Kopin will strengthen its research and development capability in VR and other wearable devices.

### New tax receipt machine adopted

The first automatic tax payment receipt-printing machine in Shandong province was put into use in the Weifang Hi-tech Industrial Development Zone on June 14. The machine allows taxpayers to get their receipts in the most effective and efficient manner. It also helps to reduce taxation offices' costs and offers better protection of people's privacy.

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潍坊国家高新技术产业开发区  
Weifang Hi-tech Industrial Development Zone

## Targeted investment improves quality of education

By **TANG ZHIHAO**

The Weifang Hi-tech Industrial Development Zone has introduced a range of measures to ensure high-quality education as part of its efforts to enhance local residents' quality of life.

Oversized classes have long been a problem constraining education quality enhancement in the zone. The zone has invested 898 million yuan (\$132 million) to expand or upgrade eight primary and high schools to reduce class sizes.

The zone announced that the number of students per class will be reduced in the 2017 autumn semester, as required by the Shandong government. According to standards set by the Shandong government, primary schools' class size will be reduced to less than 45 students and high schools' class size will be

reduced to less than 50 students.

The zone also plans to promote the concept of small-size classes to provide higher quality education services to students in the coming years. The size of classes will be less than 40 students. The zone plans to invest 3 billion yuan into building and expanding 12 schools to achieve this goal. The number of school seats in the zone will double by 2020.

Local authorities have also put forward measures to upgrade the pre-school education system to better serve residents' evolving demands.

Twenty-three kindergarten upgrade projects covering five areas have been launched since June this year to provide premium pre-school services. Fifteen government-funded kindergartens will be built to meet people's education demands. The zone government plans to provide subsi-



A teacher with Weifang Hi-tech Zone's New Epoch School gives an English class to students in the Weifang Hi-tech Industrial Development Zone.

dies to company and institution-funded kindergartens, as well as privately operated kindergartens that target all families in the zone.

In the future, kindergartens will not only have more space but also have more

well-trained teachers.

The upgraded Dongming Kindergarten, which opened its doors in October 2015, has 56 teachers, up from 38 in 2014. There are 15 classes in the kindergarten, up from 11 in 2014. The kindergarten has

been equipped with a library, multimedia classrooms and an art gallery to serve children's varying interests.

Dongming Kindergarten hosted a basketball tournament on June 15 on its own playground. The kindergarten had to share a playground with another school before 2015.

The zone, known for its innovation and high-tech industries, has set a goal to foster century-old schools to support its long-term development. The zone applies high standards in school planning, construction and supporting facilities' development processes.

Weifang Hansheng International School, which will be put into use in September, invited architects from China's leading architectural design institutions such as the Beijing Institute of Architectural Design to give suggestions about how to better use the space.