

By YUAN SHENGGAO

Weifang Hi-Tech Industrial Development Zone in East China's Shandong province has become a key player in supporting regional industrial upgrading and transformation, according to official.

On Jan 8, Weichai Power, a Global Fortune 500-listed company in the zone, won the first prize at the 2018 National Science and Technology Progress Awards for its breakthroughs in commercial vehicle powertrain development and applications.

Powertrain is the core part of an automobile — the engine, transmission and axle. Its performance will affect commercial vehicles' power output, energy efficiency, emissions and reliability. China's commercial vehicle development was constrained because there was lack of a platform for engine, transmission and axle producers to coordinate for an integrated solution.

In 2005, Weichai made its first acquisition by purchasing Zhuzhou Torch Spark Plug Co in Hunan province. The deal allowed Weichai to obtain a controlling stake in Shaanxi Fast Gear, Shaanxi Heavy-duty Motor Company and Hande Axle.

It then successfully developed an industrial chain that combined the development of engines, transmissions and axles under one roof.

"The integration changed our traditional understanding on vehicle development," said Li Guoxiang, a professor from School of Energy and Power Engineering at Shandong University.

Then in 2018, Weichai reported breakthroughs in power output, emissions control, system reliability and professional development and production, according to experts.

Weichai has become an iconic company in supporting the zone's efforts to replace old economic growth engine with new ones. It independently developed the first high speed engine in China, named LandKing. It also developed the first electronic control system in China.

Tan Xuguang, chairman of Weichai, said the company's independent innovation leads to its pioneering work in industrial chain development.

GoerTek, a company focusing on in micro-loudspeaker, microphone and voice receiver production in the zone, also strives to explore emerging opportunities in a rapidly changing market. The company's management revealed that GoerTek will gear up its development in virtual reality and smart equipment in upcoming years.

Apart from Weichai and GoerTek, the zone also has many other leading businesses such as Shengrui Transmission Corporation — developer of the world's first front-engine, front-drive eight-gear auto transmission — Foton Shandong Multifunction Plant and Weifang Special Steel.

Officials from the zone government noted that those big companies continuously invest in new technology, brand development and marketing, which inject strong growth power to the zone.

If leading companies increased awareness of the zone, then small- and medium-sized enterprises are forming a development foundation for the local economy, according to the local authority.

Hoaco Automation Technology, a precision equipment manufacturer in the zone, has reported breakthroughs in die cutting machine development and production.

Ding Chunhui, deputy general manager of Hoaco, said that the company's die cutting machines are used in electronic and medical device production.

Ding said the company has applied many patented technologies that can help users save costs and reduce their workforce size, as well as improving efficiency and accuracy.



Primary school students in the Weifang Hi-Tech Industrial Development Zone show their understanding about Chinese new year through pictures at the first school day after the Spring Festival holiday. PHOTOS PROVIDED TO CHINA DAILY

## Zone shifting province to right gear for upgrades

High-tech industry in Weifang leads the way to transform area



Technicians work at the production line of Weichai Power, a company that won the first prize at the 2018 National Science and Technology Progress Awards.



Staff work at the administrative office in the zone, checking out the e-lockers that works based on internet technology.

Ding said Hoaco has a market share in China of more than 50 percent. It is also able to provide integrated services covering equipment production, technology support and after sales needs.

In recent years, the zone government has tried to improve the business innovation environment. It carried out a business cultivation plan named "Invisible Champion", which aimed to increase the number of high-growth companies to 33 in 2018, up from 15 in 2017.

In the first nine months of 2018, statistics from the zone show that Shandong Tianrui Heavy Industry reported their overall year-on-year industrial output value increased 44.9 percent; Shandong Yulun Heat Exchange System reported an increase of 23.7 percent; and Shandong Novoshine Optoelectronics reported an increase of 57.4 percent.

The zone also encourages companies to strengthen communications with leading academic institutes to enhance business innovation ability.

"We will continue to increase research and development investment and strengthen ties with leading institutes to maintain our leading position in the industry," said Chen Guangliang, deputy general manager of Shandong Super-machinery Generating Equipment.

By the end of 2018, 23 high-tech businesses in the region have been recog-

nized as "Gazelle Enterprises" by the local government. Among these, seven were also recognized as Gazelle Enterprises by the central authority. Those businesses, which feature high-growth and have strong development potential, will obtain more support from the local government and financial institutions, according to local authorities.

In addition, residents' satisfaction with their living environment in the zone is also a top priority of the local government.

The zone made huge investments on shantytown upgrades over the past few years so residents can enjoy high-quality lives.

Liang Xingyu's family who once lived in a shantytown, obtained three new properties through upgrade projects. Each new property covered more than 130 square meters. Before the relocation, four generations of Liang's family had to live in an old 100 sq m property in a shantytown.

Last year, relocation plans of all 91 communities in shantytown in the zone were completed. The relocated residents are expected to move in to new properties soon.

"The new property construction is progressing rapidly. Our concern on uncertainty is getting less," said Wang Bin, a local resident who is

waiting to move into a new home.

Last year, the zone initiated a series of urban upgrade projects so residents enjoy better city life. Meanwhile, new schools and kindergartens were built to offer better education to children. A new senior people day care center was built and people aged 80 and older were offered free flu vaccines.

In 2018, government service departments also upgraded work procedures so residents can enjoy more conveniences in daily life.

Looking ahead, the zone's government will continue to enhance service quality to better support local businesses and residents, according to the zone.

Cui Chengwang and Wang Lian contributed to this story.



## Shengrui shows off its latest inventions

By YUAN SHENGGAO

Shengrui Transmission, a pioneer auto transmission developer in the Weifang Hi-Tech Industrial Development Zone, organized a summit to discuss the latest industry trends and release its latest products on Jan 18.

Shengrui introduced the world's first front-engine, front-wheel drive hybrid eight-gear auto transmission; a third generation front-engine, front-wheel drive eight-gear auto transmission; a front-engine, front-wheel hybrid six-gear auto transmission; a front-engine, front-wheel drive, efficient and compact eight-gear auto transmission, and a rear-drive eight-gear auto transmission.

Representatives from 12 automakers, including Faw, Dongfeng Motor, Chery and Great Wall, and more than 180 suppliers attended.

Shengrui also launched a smart production line with an annual capacity of 300,000 units. About 73 percent of tasks on the production line can be done automatically.

The company's new products such as the hybrid six-gear auto transmission will be produced on this line, it said.

The line is a milestone in China's auto transmission production and represents an upgrade to domestic production, according to the company.

On the same day, Shengrui's auto transmission industrial park in the zone was put into use. The company said, the industrial park, the first of its kind in China, will support China's transmission industry development.

"China has become the largest automotive production and trade market for 10 consecutive years. That success should be attributed to breakthroughs made by domestic auto component makers," said Xin Ning, president of China Automotive News.

Xin said Shengrui has an auto transmission research and development capacity and an innovation chain which covers concept design, simulation analysis, hardware design, software

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Xin Ning, president of China Automotive News

development, calibration and industrialization. This allows Shengrui to have sustainable innovation.

"Shengrui won first prize at the National Science and Technology Progress Awards for developing the first eight-gear automatic transmission in China in 2016. The 8AT has been introduced to the market and Shengrui has an annual production capacity of 600,000 units," Xin said.

Shengrui, established in the zone in 2003, has built two national research centers. It is also a national technology innovation demonstration business, a national high-tech company, a national smart production pilot demonstration company and a national intellectual property rights demonstration company.

Shengrui has also developed a R&D team with international horizons. They have established R&D centers in Germany, the United States, Beijing and Qingdao in Shandong province. The company has registered 576 patents and more than 110 invention patents.

Liu Xiangwu, chairman of Shengrui, said the company will continue to focus on transmission development and strive to be a leading auto transmission developer in China in the next two to three years.

Cui Chengwang contributed to this story.



Shengrui launched its smart production line with an annual capacity of 300,000 units on Jan 18.

## Horsing around at parade



Subdistricts in the Weifang Hi-Tech Industrial Development Zone hosted a series of traditional celebration activities on Feb 11, to mark a stunning start to the Year of the Pig. The cultural parades included folk dances and walks on stilts. The performance not only allowed residents to recall their good memories from childhood but also expressed people's best wishes for the new year.

## Partnership, innovation bolster hydraulic drilling maker

By YUAN SHENGGAO

Li Yongsheng, chairman of Shandong Tianrui Heavy Industry, has long been committed to promoting technology innovation to maintain business growth.

Tianrui, situated in the Weifang Hi-Tech Industrial Development Zone, signed a cooperation agreement with a British rock drilling machinery maker in 2017 to strengthen communications in human capital, resource and technology.

The cooperation has enabled Tianrui to become one of the first companies to introduce hydraulic drilling technology into the Chinese market. The partnership also reduced domestic companies' reliance on imported high-end drilling machines.

"We believe the cooperation will bring fundamental change to China's drilling machinery sector and will lift overall performance of the sector in China," Li said. "The project also marked a milestone



Li Yongsheng (second from left), chairman of Shandong Tianrui Heavy Industry discusses technical proposals with workers.

in Shandong's progress to replace old economic development drivers with new ones."

Li was invited to the zone by the local government as an industrial professional in 2010. He and his team developed numerous prod-

ucts with independent intellectual property rights. The company said Tianrui, established in 2010, has become one of top three rock drill suppliers in China.

"Weifang's premium business environment for startups sup-

ported Tianrui's development and prompted Tianrui to become an industrial leader," Li said

In recent years, Li has paid closer attention to professional cultivation while continuously promoting innovation.

It has established a professional research and development team that has optimized age structure and an innovative spirit. The company also welcomed two R&D teams from South Korea and Britain.

In August, Tianrui signed an agreement with a company from South Korea to establish a meglev technology development center in Weifang. Some of its products, including the meglev high-speed motor, have entered into industrialization process.

The zone has decided to invest 300 million yuan (\$44.30 million) to build a meglev industrial park. Shandong Startup Investment Fund is also planning to invest 1 billion yuan to this project, according to the zone government.