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 Business

Company shifts gears

Loss of air bag business created opportunity for high-tech firm



Michael Sears

Wayne Goth of TLX Technologies in Waukesha assembles small parts used by Harley-Davidson in motorcycle engines. TLX makes electromagnetic devices called solenoids.

By [Kathleen Gallagher](#) of the Journal Sentinel

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Waukesha - A bad business break eight years ago is now paying off for a maker of high-end industrial parts.

All three major air bag manufacturers were buying prototypes from TLX Technologies LLC in 2001, anticipating a change in federal law that would require bags to adjust their push when they deploy based upon a passenger's weight.

Instead, the new law de-powered air bags by 30%, and the air bag makers said goodbye to TLX.

"The phones died that night," said Derek Dahlgren, a TLX co-founder and vice president of engineering. "Luckily, we were playing with other things."

Those other things paved the way for the TLX of today.

TLX makes solenoids - electromagnetic devices that open or close something or hold it in place. They can be as small as a jellybean or as big as a coffee can, and they do everything from sending current to the starter when the ignition key is turned to moving a camera shutter, from locking airplane landing gear to opening an apartment building door when you push the buzzer.

You can buy solenoids from China for a little more than a dollar, but those won't function next to a spark plug in 600-degree heat or open and close a valve 200 times a second, Dahlgren said.

TLX's solenoids, which might have price tags of \$200 or higher, can do that and more, he said.

"They're very good engineers," said Rick Goodson, senior manufacturing specialist in the Oconomowoc office of Wisconsin Manufacturing Extension Partnership, a private, nonprofit group that works with Wisconsin manufacturers.

Most companies that advertise custom solenoids take an existing model and change it a little bit, Goodson said. TLX engineers listen to what customers say they need, then build the solenoids from that, he said.

When the air bag plan deflated, TLX focused on research and development, said Neil Karolek, co-founder and chief executive.

Now TLX has five patents, and more in the works, on solenoids that use little energy, operate at high speeds and function at extreme temperatures, Karolek said.

All but one of its customers are Fortune 500 companies, who use solenoids for industrial fire protection systems, high-speed glue applicators used in manufacturing, and other applications.

TLX has raised \$1.5 million of outside funding in three financing rounds. It has 20 employees and expects to generate revenue this year of about \$3.5 million, said Karolek, who started TLX with Dahlgren in 1997 when their jobs at Applied Power Inc. were eliminated. Karolek was also an engineer at Johnson Controls Inc.

Kent Velde said his Stonehenge Capital Fund put money into TLX because of management's engineering, big company backgrounds and their ability to create unique products for industrial uses.

"Best I could determine, I didn't see anyone else out there who was creating these types of products," Velde said. "They're not just manufacturing products, they're sitting down with companies and determining their needs and developing and designing solutions."

It's a business strategy that should be more widely embraced in Wisconsin: engineer a product for a specific application, then get the customer's manufacturing business, said Larry Burnett, a lawyer at Reinhart Boerner Van Deuren who works with TLX.

"You have to have something proprietary, stay cutting edge and continually give them a good solution. But if you can do that, you can have a business where the revenue ratchets up year in and year out," he said.

As for the original air bag plan, Karolek and Dahlgren are very aware of the large number of small auto-parts companies in Michigan that are barely hanging on.

"If our original plan of going all into automotive had worked, we might have quickly grown a \$20 million company and turned the keys over to a banker in the last year and a half," Dahlgren said.



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