

# Ariens: Education and workforce skills

## Manufacturing world is evolving quickly

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The Brillion News

*Note: This story was written from The TechEd Podcast of March 2, 2021, used as a source with permission of Producer Melissa Martin.*

The future of industry, according to Dan Ariens, Chairman and CEO of Brillion-based AriensCo, is in automation - but without leaving people behind.

That's the message Ariens delivered to business leaders and educators in an interview with Matt Kirchner of TechEd Podcast, a resource that described itself in somewhat rebellious terms: "Featuring Leaders Who Are Disrupting TechEd for the better."



Ariens said his great-grandfather, Henry Ariens, moved to Brillion from a Sheboygan County farm, and started the Brillion Iron Works until the Great Depression ended his ownership of the company in the early 1930s.

To rebound from that, Henry Ariens made a large tiller.

"He found a niche and started

making these tillers," Dan Ariens said. Henry and his son, Steve, built the Ariens Company in 1933.

The two were hands-on engineering pioneers. When Steve's son, Michael Ariens, joined the company in 1959, he brought the business acumen that the company needed. Michael Ariens was Dan's father.

Under Dan's leadership, the company has become a manufacturing leader in Wisconsin, with hallmark competencies in lean technology and continuous improvement.

Ariens said many of the elements of his firm's manufacturing successes came from Japanese industry as it rebuilt itself after World War II.

In the mid 1990s, Ariens saw Chinese industry beginning to emerge as a global force.

"China was waking up and becoming a manufacturing powerhouse," he said. "We could see that they were going to undercut all of our costs because they had such a labor advantage."

The realization that it was competing on an international scale forced AriensCo to change.

"We had to get a whole lot smarter

about how we touch parts, and how we move parts, and what's our indirect labor versus direct labor," Dan Ariens said.

He said it was a transformative change in how the company worked internally.

"What we really were after was trying to reduce us from becoming a large batch manufacturing company that held inventory and held up cash for too long, to become a 'flow' company that was turning inventories, pulling parts through, and not touching them as often, putting machines close together, letting an operator run two-three-four machines ... in a way that's efficient."

Ariens said the revelation was figuring out who the experts were.

"We found out that the smartest people were in the plant, doing the work," he said. "Lean manufacturing was about engaging the workforce in continuously improving the way that they worked."

He said the company had to convince employees that "lean" efficiency wasn't a threat to their jobs.

"It's going to make us all more successful, because we aren't going to get undercut," Ariens said.

He said the company looks at threats to its success and takes care of things it can do to improve its own position.

"We have to make sure we take

care of our world as best we can - and just be the best in class that we can be as a company," he said.

That resulted in a complete reshuffling on all of AriensCo's Plant 1 operations. That's the plant attached to the corporate offices, and where the company makes its zero-turn and commercial lawnmowers.

"Literally, not one square inch of that plant was not more polished, ceiling and walls painted, machines moved," he said.

The company married lean manufacturing principles with single-piece flow, automation and autonomous moving vehicles.

Those things all drive down the cost of making lawnmowers.

"It's a very modern, very efficient, very autonomous and innovative manufacturing system today," Ariens said. "We are competing with the world, making lawnmowers, in Brillion, Wisconsin. I think we are one of the best around. We may be the best manufacturer today of zero-turn mowers at least in the United States."

He said the company uses data-driven manufacturing, which means getting smarter.

"We have a lot of opportunities about machine intelligence, and labor intelligence, and parts the quality of those parts - and a whole lot of data gathering that we're just getting started at," Ariens said.

The changes taking place in cutting-edge manufacturing environments, Ariens said, are affecting education - at high school, technical college and university engineering

schools.

"In the early days of lean we were looking for young kids to learn about solving problems," Ariens said. "When you're ready to come into a workforce ... and help us continuously improve our business."

He said that's still the foundation, but the difference is technology itself.

"It's not so much how are we going to look at some of the mechanical solutions. It's now how are we going to look at the digital, data, computerized solutions," he said.

Ariens said steel comes in the front end of the plant and it is seldom touched by any human hand.

"We've eliminated really all the touches [with] autonomous vehicles, carts of parts that are pulled and timed from cutting it at a laser, to bending it at a press, to welding it at a booth that's all in line - and it doesn't move more than 200 feet," he said. "How do young people come into the workforce and see that flow and not be intimidated by that but look at it and go 'Oh, I've got a better way.' We want young people to come in, bring their young fresh minds, and say 'What you did is really great, but hey I have another idea.'"

He sees that approach as being the key to continued improvement. Skilled talent continues to be a problem throughout American manufacturing, but the AriensCo hooked up with the Brillion Public Schools to get high-tech skilled trades into the schools. It began by helping to fund the STEM (science-technology-engineering-mathematics) center at the

high school. That was followed by STEM facilities in the district's elementary-middle school building.

For over 20 years, AriensCo has brought in high school and college age apprentices in all of its core departments - engineering, finance, marketing, manufacturing and human resources - every summer.

"Even when we were having a difficult year financially, I didn't want to stop the apprentice program," Ariens said.

Today, at least 30 current employees first touched the AriensCo culture as apprentices in high school or college.

"They come to us for a couple of hours a day and they do important tasks that help them learn and help us do some things that are routine," he said. "That experience helps every young person to grow."

The STEM program linking Brillion schools to AriensCo was the work of Steve Meyer, a Brillion High tech ed teacher who is now manager of STEM Education & Development at Fox Valley Technical College.

"We have a great system, I think one of the best school systems in the state," Ariens said. "You can join the public school system from kindergarten on and get some form of problem-solving through STEM education all the way until you graduate."

Now, AriensCo collaborates with Meyer at FVTC, with the high school offering courses for FVTC credit.

Ariens advice for corporate leaders who complain about the lack of a good workforce talent pool: "Go do

something ... You've got to do it in your community. You can't expect the State of Wisconsin to fix this for you."

In the near future, Ariens sees today's trends intensifying.

"It's kind of more of what's going on right now," he said. "It's a lot of automation, but it's going to come faster and faster and faster."

The pandemic, with executive meetings taking place virtually, may have made some fundamental changes in doing business.

"It's going to drop a whole lot of lessons back into manufacturers - how we have to do things in a digital world, in a technology-driven society, how we manufacture in ways that technology is going to provide for us," Ariens said. "I think we're going to have to be faster on our feet in terms of inventing and putting capital in places where automation and the digital world is going to give us real opportunity - but we have to do that in a responsible way, because going too fast could leave a lot of people behind."

He sees the human brain being pushed to the limit and the computer taking over a lot of the decision-making that was typically human work.

"How do we do that and not leave a lot of people behind? That's really going to be a challenge and I think that's where it comes back to training and education."

The interview was conducted by Matt Kirchner. To learn more, visit [www.techedpodcast.com](http://www.techedpodcast.com).