

TYPE  
CASE  
STUDY

INDUSTRY  
SUPPLY CHAIN  
MANAGEMENT

LOCATION  
CLEVELAND,  
OHIO

## **PARKOHIO DRIVES PROFITABILITY WITH REAL-TIME DATA**

**INNOVATIVE USE OF MES AND ABILITY TO ACCESS REAL-TIME INFORMATION IMPROVES PROFITABILITY AND QUALITY FOR PARKOHIO'S ASSEMBLY COMPONENTS GROUP.**

ParkOhio is a diversified international company providing world-class customers with a supply chain management outsourcing service, capital equipment used on their production lines, and manufactured components used to assemble their products.



### **CHALLENGE**

- Outdated legacy ERP system
- Lack of accurate information
- Manual batch processes
- Need to integrate newly acquired plants quickly



### **SOLUTION**

- Plex Enterprise Resource Planning (ERP)
- Plex Manufacturing Execution System (MES)
- Plex MES Automation and Orchestration (MES A&O)



## RESULTS

- Access to real-time information
- Automated processes
- Improved quality control
- Reduced unnecessary costs
- Improved profitability
- Remote data access



Mike Gerber is the IT Director for ParkOhio's Assembly Components Group (ACG). ParkOhio is a diversified global provider of supply chain management outsourcing services, production equipment and manufactured components.

The ACG division is a leading manufacturer of highly engineered components used in cars, agricultural equipment, commercial trucks, forklifts, engines, and industrial equipment. The business

segment has 19 manufacturing, assembly, and warehouse facilities in the US, Mexico, and China that use Plex ERP, Plex MES and MES Automation & Orchestration (A&O). Their first Plex installation was in 2009.



## OUTDATED ERP SYSTEMS AND LACK OF INFORMATION

Following the financial crisis of 2008, ParkOhio found themselves in a challenging situation. They needed to launch four plants, and their contract with their ERP provider was ending.

**"We were in dire straits for a new ERP system," Gerber said. "One of the biggest challenges we faced was a shift from a batch environment to a more real-time environment. Before, the information was collected in batches, and it wasn't precise enough to truly understand our costs. Bills of Materials were not updated in the system. But, when you start working in a real-time**

**environment, where the shop floor will shut down if the information is not accurate, you need more precision to enable good business decisions."**

### MIKE GERBER

IT Director

ParkOhio, Assembly Components Group

ParkOhio needed a new system that could be deployed across the four globally disparate locations, and one that had the ability to track information to the level of detail required to enable real-time operation.





## **ERROR-PRONE MANUAL PROCESSES GET AUTOMATED**

With Plex, the ACG was able to automate tedious paper-based and error-prone processes. The division selected Plex because it was a cloud-based solution that allowed them to bring plants online in a short time frame.

**“We successfully launched our first four plants in six months,” Gerber explained. “Because Plex is a cloud-based environment, we didn’t have the overhead of infrastructure, so we were able to move very quickly.”**

## **INTEGRATED NEW ACQUISITIONS SEAMLESSLY**

Plex has been foundational to the division’s digital transformation and smart manufacturing strategy. It’s also been key to supporting the ACG’s rapid acquisition growth.

**“Every time we acquire a new plant, our goal is to implement Plex within six months. It provides us with a common information platform,” Gerber said. “The existing management team knows how to interact with Plex and once that’s in a new acquisition, they don’t have to keep asking the acquired company for information. They know how to get their own answers and with consistent information, they can make better decisions quicker.”**

## **PRIORITIZED CHANGE MANAGEMENT**

The ACG prioritizes change management for each facility’s Plex implementation. They form a core team with members that represent each of the functions at that plant’s location.

**“Our goal is to bring as many people along as possible. We train them and have them go through many pilots of the system,” Gerber explained. “We try to break their old habits and instill in them that this is real time. They’re running production. They can’t wait until tomorrow to fix issues.”**



## REDUCED UNNECESSARY COSTS

Better understanding costs has been a business imperative for the ACG and one of the most significant outcomes of using Plex.

**“We recently completed our last three Plex implementations,” Gerber said. “Now that these plants truly understand their costs, we’re seeing profitable return as they understand where they must go after improvements – whether it’s materials, pricing, labor efficiency gains, etcetera.”**

## INCREASED PRODUCT QUALITY

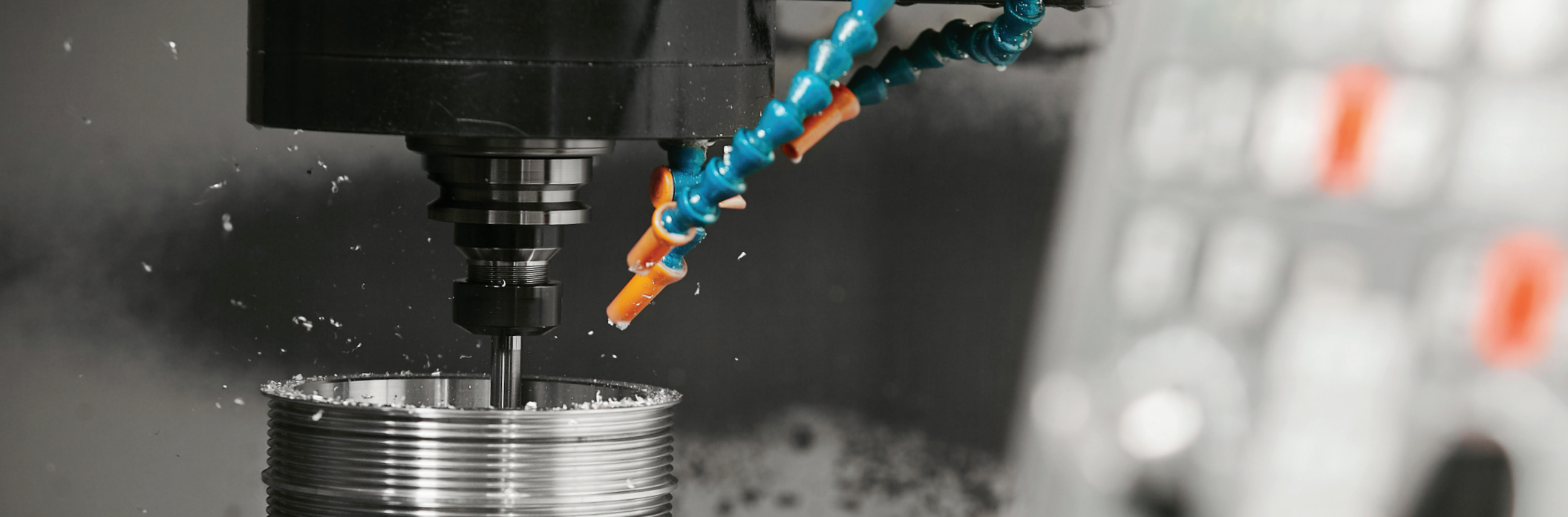
Quality improvements have been another Plex benefit for the ACG. With the ability to integrate machine data into Plex, the division created a data-driven poka-yoke in its rubber hose vulcanizing

process. Vulcanizing is critical to producing high-quality, safe and durable rubber hose. Poka-yoke is a continuous improvement process that helps prevent errors. For this application, the ACG designed the poka-yoke, using an Allen Bradley® PLC, to prevent under-cured rubber from being shipped.

**“Typically, a poka-yoke is in one operation. You put the widget in and it’s go or no go,” Gerber explained. “But with integration, we can follow a part from one end of the plant to the other and if there’s a failed process, it stops the next process from running.”**

Vulcanizing process errors are communicated immediately with a quality alert text message and the hose is isolated by the system. Use of the hose in subsequent operations is blocked and shipping is prevented.





### **ABILITY TO MONITOR PROCESS METRICS**

The ACG division has also used Plex to access real-time process and usage data in its rubber mixing operation, which requires careful attention to ingredients.

**"It's important to monitor oil tank levels, so we created a system that allows buyers to monitor levels remotely and sends alert messages when levels get to a critical reorder point," Gerber**

**said. "Instead of having to go over to a plant to get a manual reading to make sure they don't run out of oil, which would shut down their plants, they can just sit at their desk and check the tank level."**

These are just a few of the innovative ways ParkOhio's ACG uses Plex and why it was named Plex's 2023 Industry Leader Impact Award.

### **ABOUT PLEX**

Plex, by Rockwell Automation, is a leader in cloud-delivered smart manufacturing solutions, empowering the world's manufacturers to make awesome products. Our platform gives manufacturers the ability to connect, automate, track, and analyze every aspect of their business to drive transformation. The Plex Smart Manufacturing Platform™ includes solutions for manufacturing execution (MES), ERP, quality, supply

chain planning and management, asset performance management, production monitoring, process automation and analytics to connect people, systems, machines and supply chains, enabling them to lead with precision, efficiency and agility. To learn more, visit [www.plex.com](https://www.plex.com)