

Plex Cloud ERP Improves Wolverine's Quality 20 Percent, Reduces Inventory 30 Percent



At a Glance:

- Plex Manufacturing Cloud ERP provides vibration damping and sealing materials supplier an improvement in first-pass quality of 15 to 20 percent.
- System brings company more accurate inventory, cuts lead time to five weeks, and doubles aftermarket business.
- Plex eliminates paper handling and three-way match problems in Accurate Payable.
- Raw materials and work-in-process inventory are down by more than 30 percent.
- The inventory process used to take two full shifts and up to 70 employees. Now, it takes less than one shift with fewer than 30 people.

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About Wolverine Advanced Materials

Wolverine Advanced Materials was overwhelmed when sales grew 10 to 13 percent over a two-year period. Its manual systems for raw material orders, inventories, shipping, and scheduling systems couldn't keep up with the new demand, and lead times grew to 10 weeks.

Setting its sights on lean, demand-driven manufacturing, management turned to Plex of Troy, Michigan, to launch a manufacturing-based ERP system for its manufacturing facilities in Virginia, Florida, and Germany.

Since launching the Plex Manufacturing Cloud, Wolverine has achieved extremely accurate perpetual inventory, cut its lead time to five weeks, and more than doubled its aftermarket business.

“The improved efficiency and reduced costs from fewer changeovers have been great.”

Its new lean manufacturing abilities have enabled the company to accurately determine cost and profitability by part, allowing it to become increasingly competitive, especially against offshore competitors who go after its high-margin parts.

Raw Materials and Inventory Are Controlled

Wolverine has a complex, seven- to eight-layer bill of material with multiple processes and multiple exit points. It does not have a single-piece workflow or order system. It has to carefully sequence multiple orders to optimize its coating, slitting, and stamping operations. Prior to implementing Plex Cloud ERP, employees tried to optimize production manually, but this was difficult because they didn't have the information they needed at the right time.

“We were constantly changing over lines and had much more scrap than desired. The only time we had an accurate inventory count was when we did a physical inventory twice a year. We couldn't keep track of our raw materials, work-in-process, and finished goods.

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“We had to get our inventory under control so we could order only the raw materials we needed and produce only the inventory required.”

There had been several earlier, unsuccessful attempts to install ERP systems. Mature employees, many of whom were unfamiliar with computers, resisted the changes. But Plex’s screens were so easy to use that employees embraced the system.

“I’ve been around many ERP systems, and this is the first time I haven’t seen a user revolt. Plex is more of a user-designed system.”

The Purchasing function, one of the first to be implemented, focused on raw material ordering and inventory management to ensure Wolverine had the right grade of steel at the right time. The Production Control and Scheduling functions soon followed.

“We saw a huge improvement when Receiving went online,” says a Wolverine Implementation Manager. “Everything was barcoded. We knew immediately what was received and could track it. Our information was in real time.

“As other parts of the system came online, everything integrated and we now have an accurate, real-time picture of raw materials, work-in-process, finished goods, and customer orders. We’re also able to more accurately track the cost-per-job throughout the entire process. Before, we averaged it out at the end of the month.”

Productivity Soars With Accurate Information

As each function of Plex Cloud ERP launched, efficiency continued to improve. Today, Plex is at all workcenters on the shop floor, and data is entered immediately.

“Since implementing Plex, two forklifts have been idled and eight people have been assigned to other jobs.”

“Most of our raw materials are now done with releases, so we’ve reduced our Receiving manpower by 25 percent. We reduced three people in Purchasing.

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We've eliminated paper handling and three-way match problems in Accounts Payable. Raw materials and work-in-process inventory are down by more than 30 percent.

"We know what's available and exactly where it is. Before, our raw materials were not marked by serial number, and they weren't monitored once they left the shipping dock. We depended on spreadsheets and handwritten production reports and never knew what we had until the end of the month. It was impossible to keep track of our work-in-process inventory.

"The twice-a-year inventories used to take two full shifts and 60 to 70 employees. Now that Plex barcodes everything, inventory is accomplished in less than one shift with fewer than 30 people. All pallets are barcoded, and lift trucks are equipped with scanners."

"Since implementing the Plex system, two forklift trucks have been idled and eight people have been assigned to other jobs."

Quality Improves as Costs Decline

Plex Cloud ERP allows the shop floor to see all customer orders and efficiently group them by material for scheduling purposes. This has enabled Wolverine to dramatically improve productivity and reduce costs.

"Four employees used to work in Slitting Operations, manually trying to group and schedule orders before Plex. Now, only two are needed."

"The same situation applied to the Coating Operations. By more efficiently grouping orders, we are able to make more coated footage without overtime. Before, every time we changed a coating, we had to flush out the lines. Now we can make enough coated footage at one time to fill several orders, reducing the number of times we need to flush lines. Overtime is down by 60 percent - an enormous savings.

"The improved efficiency and reduced costs from fewer changeovers have been great, but we experienced another side benefit. Our first-pass quality has improved by 15 to 20 percent, varying by grade and line. This was an unexpected bonus."

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Packaging System Saves Time and Money

Prior to the Plex implementation, the Wolverine press floor would stamp pieces and send them to Shipping. Shipping would then package and ship them. The packaging procedure consisted of calculating a piece weight and then filling up the box to the correct weight. No actual piece count was taken; it was assumed that the correct number of pieces was packaged.

“Worried about shorting a customer, we used to throw in extra just to be sure. We asked Plex to customize a system for us. Now, we enter the package requirements. Parts are stamped and boxed at the press. A new scale tied to Plex can tell us if we’re off by even one piece. We were probably shipping 5 to 10 percent overages. Now, we’ve been able to redeploy five people from Shipping.

“We had our payback on the Plex shipping weigh-scale system in only a couple of months!”

“What we got with Plex far exceeded my expectations,” says Wolverine’s President. “What we’re able to look at and see, how we’re able to tie sales forecasts into production schedules... it’s great. We figured about a four-year payback. We have clearly exceeded that.”

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About Plex

Plex is the Manufacturing Cloud, delivering industry-leading ERP and manufacturing automation to nearly 400 companies across industries including aerospace and defense, food and beverage and motor vehicles. Plex pioneered Cloud solutions for the plant floor, connecting suppliers, machines, people, systems and customers with capabilities that are easy to configure, deliver continuous innovation, and reduce IT costs. With insight that starts on the production line, Plex helps companies see and understand every aspect of their business ecosystem, enabling them to lead in an ever-changing market.