



Top Truck-Parts Supplier Deploys Electronic Kanban for Faster Turns, Reduced Inventory

Overview

Country or Region: United States

Industry: Manufacturing

Customer Profile

Headquartered near Columbus, Ohio, Commercial Vehicle Group (CVG) has more than 5,500 employees working at more than 35 locations worldwide and serving customers in over two dozen countries.

Business Situation

For two years, CVG implemented the kanban method of inventory replenishment using a manual, card-based approach that was complex, time-consuming, and prone to error.

Solution

CVG implemented Ultriva Electronic Kanban, a turnkey, browser-based solution from Microsoft® Partner Ultriva, based in Cupertino, California. The solution is based fully on Microsoft server and development technologies.

Benefits

- Inventory turns up by 28 percent
- Inventory down by 43 percent
- Saves 6,500 sq. ft. of floor space
- Helps users work smarter
- Promotes teamwork
- Improves customer service
- Streamlines just-in-time delivery

“To get the most benefit from kanban, we needed a closed-loop solution that any of our suppliers could access easily. Browser-based Ultriva Electronic Kanban answered that need perfectly.”

Rick Clevenger, Director of IT Systems, Commercial Vehicle Group Interior Systems Division

Commercial Vehicle Group (CVG), one of the world’s top suppliers of cabs and cab-related parts for the commercial trucking industry, needed to automate its implementation of kanban, a demand-driven method of inventory replenishment, because the company’s manual approach to the method was complex, time-consuming, and error-prone. CVG implemented Ultriva Electronic Kanban, a fully automated solution based on Microsoft® server and development technologies. Within just a few months of deployment at two of its plants, CVG saw turns increased by 28 percent, inventory reduced by 43 percent, and associates at all levels—within CVG and suppliers—better collaborating and communicating toward company objectives of total quality production, lean manufacturing, and elimination of waste.

“Ultriva Electronic Kanban helps CVG to work closely as a team with its suppliers and customers.”

Linda Lee, Inventory Control, Commercial Vehicle Group

Situation

Founded in 1997, Commercial Vehicle Group (CVG) is a leading supplier of cabs and cab-related products for heavy-duty commercial trucks and specialized vehicles used in construction, mining, agricultural, and marine environments. CVG introduced the first air-suspension seat for the trucking industry and today is the only supplier that can offer a complete cab interior—from state-of-the-art technology structures and assemblies to vision-safety solutions, wiper systems, switches and controls, wire harnesses, mirrors, and a full array of trim systems.

Through such advances, CVG is now ranked No. 1 or 2 in every aspect of the commercial-vehicle body market—a marker of success that stems at least partly from the company’s innovative efforts to dramatically streamline the supply chain.

For example, early on, CVG pursued a “co-location” strategy unique in the heavy-truck industry: establishing production and light-assembly plants near to major-customer sites so as to expedite just-in-time parts shipment. CVG also has deployed extensive enterprise resource planning (ERP) systems for its purchasers, manufacturers, and suppliers, and has implemented Six Sigma programs for process improvement on a similar scale.

Most recently, CVG has implemented *kanban*, a demand-driven method of inventory replenishment that evolved from a total quality production system pioneered at Toyota Motor Corporation. Some CVG executives were among the first graduates of training programs in the method, and today every CVG employee must complete 40 hours of instruction in a similar program, instruction that is provided by a member of the shop-floor staff.

Immersing new employees in learning the kanban method—and empowering them to

take the lead in eliminating waste, a key element of kanban—is emblematic of the way CVG approaches its entire business, according to Bryan Stiles, Vice President, CVG Strategic Business Development.

“We focus heavily on employee involvement, bringing everyone’s skills to bear on eliminating waste in the manufacturing and supply chain, and using those skills to make the business better,” Stiles says.

As Stiles explains, to make the most of its employees’ kanban skills requires not just training but also tools. When CVG first implemented kanban in 2004, it was a manual tool, based on plastic or cardboard cards that resided with every part in the company’s inventory. A card would travel with its corresponding part from its arrival at a CVG warehouse to its delivery at a customer site.

Stiles says the card-based approach provided employees an excellent introduction to kanban, but also had drawbacks. “Inventory counts, signals to suppliers for inventory replenishment, and entry of new-inventory information were initiated or implemented by hand, making it very time-consuming and complex to adjust inventory,” he points out.

Further, card-based kanban was subject to error. “A card is easy to misfile, drop, or accidentally get put into someone’s pocket, and when that happens, its associated part doesn’t get replenished,” Stiles says. “For all these reasons, we decided to take kanban to the next level by implementing an electronic approach to the method.”

Solution

After evaluating a handful of kanban software products, CVG executives selected Ultriva Electronic Kanban based on a number of criteria.

“Within just a few months of implementing the solution, we saw turns speed up by 28 percent and inventory down by 43 percent.”

Rick Clevenger, Director of IT Systems,
Commercial Vehicle Group Interior Systems
Division

Perhaps most significantly, the solution was browser-based. “To get the most benefit from kanban, we needed a closed-loop solution that would support a continuous-flow process, a solution that any of our suppliers could access easily,” says Rick Clevenger, Director of IT Systems, CVG Interior Systems Division. “Browser-based Ultriva Electronic Kanban answered that need perfectly.”

Another advantage of the solution’s browser-based foundation was its accessibility to the shop-floor employees of CVG who would be using it daily, according to Butch Elliott, CVG Lean Manufacturing Manager.

“Whether for kanban or another initiative, we are committed to involving employees in continuous improvement, to elevating their skill levels, and to giving them the tools they need to help CVG maintain its competitive advantage,” Elliott says. “An easily accessible, easily usable automated kanban solution is just that kind of tool.”

CVG executives also liked that the Ultriva solution was based on Microsoft® server and development technologies, largely Microsoft Windows Server®, Internet Information Services, Microsoft SQL Server™ 2005, and Visual Studio® 2005. “This would enable us to integrate the solution seamlessly with existing back-end applications also based on the Microsoft platform,” Clevenger explains. “It also would enable us to maintain and update the solution cost-effectively, thanks to the wide availability of expertise in Visual Studio 2005, Visual Studio .NET, and other Microsoft technologies.”

In early 2006, CVG launched its deployment of Ultriva Electronic Kanban at two of its plants. Within a few months, hundreds of shop-floor employees internally and at some CVG suppliers were using the solution on a daily basis.

Benefits

According to Clevenger, as a turnkey solution, hosted by Ultriva, and with its browser-based user interface, Ultriva Electronic Kanban proved relatively easy to implement and adopt—with CVG buyers and some suppliers using the product smoothly after just two days of training.

Since initial deployment, for those users and others, the benefits of the solution have become clear: faster turns and reduced inventory thanks to a vastly more automated process and better visibility of inventory; a system that empowers employees at all levels; comprehensive tracking and analysis of supplier performance; and closer involvement of suppliers in the process.

Faster Turns, Reduced Inventory

As Kim Stipes, CVG Materials Manager, explains, the first job for Ultriva Electronic Kanban was to automate the scanning of parts coming in and to provide comprehensive real-time visibility of inventory to everyone involved. “We’re scanning products on the dock that used to be keyed in manually, so we’re getting parts accepted faster and stocking them faster, too.”

Stipes also speaks to the benefits of automation in reducing errors: “Using Ultriva Electronic Kanban means the process is far less prone to errors than the manual approach we used before.”

Another aspect of automation is the solution’s seamless integration with the company’s existing ERP system, enabling the company to provide any authorized user with an accurate and comprehensive real-time view of parts and inventory. “Shop-floor employees can access a total view of inventory at all points in the supply chain, so we can run a very efficient and lean material flow and on-time delivery to customers,” Clevenger reports. “At one warehouse, within

“Because the solution has eliminated many of the manual steps of securing new parts, buyers say that for the first time they feel like buyers instead of order takers.”

Butch Elliott, Lean Manufacturing Manager,
Commercial Vehicle Group

just a few months of implementing the solution, we saw turns speed up by 28 percent, inventory down by 43 percent, and a savings of more than 6,500 square feet in floor space.”

Total User Involvement

According to Elliott, Ultriva Electronic Kanban is empowering employees to take the lead in making electronic kanban a success at CVG. “Because the solution has eliminated many of the manual steps of securing new parts, buyers say that for the first time they feel like buyers instead of order takers,” he says.

For her part, Buyer Sharon Morrow calls Ultriva Electronic Kanban “essential” for her work in reconciliation. “I can see inventory velocities, what’s in process, what’s in transit, and what’s shipped,” she explains. “I also can easily download data into a [Microsoft] Excel® spreadsheet to see inventory cycles, compare lead and transit times, or analyze supplier performance.”

Morrow’s colleague Linda Lee, of Inventory Control, says the solution also helps her to better serve CVG customers. “We can easily track a part from the time it leaves the supplier to its delivery here, which helps us to know how a given supplier is performing and enables us to give the customer a heads-up if a part is going to be delayed,” she points out. “In this way Ultriva Electronic Kanban helps CVG to work closely as a team with its suppliers and customers.”

According to Elliott, it’s not just power users like Morrow and Lee, but also occasional users at the executive level who are working smarter with the help of Ultriva Electronic Kanban. “Managers, whether they’re onsite or on the road, can see comprehensive status of all parts shipments, because the solution will send alerts based on certain conditions to a home PC, mobile device, or what have you,” he notes. “They’re seeing real-time data for

the first time, so they know right away if there’s a problem with a part or supplier.”

“Now, It’s All Automatic”

Moreover, it’s not only users inside CVG that are realizing the benefits of Ultriva Electronic Kanban. As Stipes notes, the browser-based user interface and closed-loop architecture means authorized users from any supplier with an Internet connection can tap into the solution and make it work for them.

“In the past, we used our ERP system to access our sales information, then we batch-processed that information and sent forecasts to suppliers,” Stipes says. “Now, it’s all automatic. As soon as we receive a part, sell it, or need it replenished, the supplier knows it. So Ultriva Electronic Kanban not only helps us to manage inventory and streamline just-in-time delivery, it can help our suppliers to do so as well.”

One supplier, Doris Schnabel, of Customer Service at LMR Plastics, echoes that sentiment. “Before, we relied on twice-weekly fax requests for parts to ship to CVG,” she says. “Now those requests come in automatically through Ultriva Electronic Kanban, and we can make daily shipments that are smaller and more manageable.”

Schnabel also emphasizes the ease of use and all-encompassing nature of the solution. “I can see everything we need to ship that day on a single screen, and I can put all the parts on a single pack list as well. This helps us to save paperwork and to better manage our own inventory,” she says. “I wish all our customers would adopt a system like Ultriva Electronic Kanban.”

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: www.microsoft.com

For more information about Commercial Vehicle Group products and services, visit the Web site at: www.cvgrp.com

For more information about Ultriva products and services, visit the Web site at: www.ultriva.com

Microsoft Server Product Portfolio

For more information about the Microsoft server product portfolio, go to: www.microsoft.com/servers/default.aspx

Software and Services

- Products
 - Microsoft Visual Studio 2005
 - Microsoft SQL Server 2005
 - Microsoft Windows Server 2003 Enterprise Edition
 - Microsoft Internet Information Services

Partner

- Ultriva Electronic Kanban