

[Print Page](#)

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## The Green Supplier Network

GRANDVILLE - No segment of the U.S. economy has embraced sustainable business practices like the office furniture industry. The only industry to have its members issue a set of guidelines on the subject and declare it a common goal, its green manufacturing reputation goes beyond the sustainable products and facility designs of the Big Three OEMs.

Non-billion dollar OEMs like Trendway Corp. have followed suit. Supplier Interface Inc. was the nation's first sustainable company.

But with all but a few exceptions, green manufacturing has not taken hold in the industry's supply base. The multibillion-dollar Interface is an OEM in other categories.

For manufacturing as a whole, companies like Trendway are an anomaly.

Companies with 500 employees or less account for roughly 86 percent of the nation's manufacturing. With many of those companies still in the midst of a lean manufacturing transition, the vast majority has not even considered green manufacturing as an option outside of regulatory requirements.

Hoping to instill greener, cleaner practices in the nation's small and medium-sized manufacturers, the U.S. Environmental Protection Agency has launched the Green Suppliers Network Program.

Through this, OEMs are asked to solicit suppliers for low cost technical reviews focused on eliminating waste. The pilot program was implemented in the nation's core clusters of the automotive, aerospace, appliance, pharmaceutical and office furniture industries.

"We see this as a way to give U.S. manufacturers a competitive edge and keep jobs in the country," said Kathleen Vokes, program coordinator for the EPA. "Office furniture has been a leader in LEED and environmental areas. We wanted to help make their supply chain more sustainable and drive out some inefficiencies.

"This is a win-win situation for small and medium-sized suppliers."

"Basically they were offering us outside resources at no cost to help make our supply base leaner," said Mary Ellen Mika, manager of strategic sourcing services supply chain management for Steelcase Inc. "We knew that by helping our suppliers get leaner, it would ultimately save us money."

While the EPA's incentive in the program was environmental, the initiative has proven just as lean as green.

"The focus is on the synergy between lean and clean," Vokes said.

"By integrating sustainable concepts into the lean approach, you get the benefits of lean but also benefits that are good for the environment," said Bill Stough, CEO of Sustainable Research Group.

"If a company goes through a lean process and finds a way to eliminate inventory, that frees up warehouse space and hidden environmental attributes that are never sought."

With smaller floor space, there is less space to be heated and lighted; less propane will be used by trailers shuttling back and forth. If the company expands, it won't need to break ground on new construction.

As Steelcase chose suppliers for the program, the EPA coordinated with state pollution prevention providers and 360vu MEP centers. In West Michigan, that is the Michigan Department of Environmental Quality and The Right Place Inc., respectively.

The Right Place then set up a group to inspect the facility, analyze processes and find opportunities for improvement. Stough was contracted to lead four evaluations - Light Corp. in Grand Haven, Autocast Inc. in Grandville, H&L Advantage in Grandville and Metalworks Inc. in Ludington.

Following the evaluation, the supplier receives a report documenting its current condition and how it can improve. While some suppliers have shared this data with OEMs, it is not required.

"We were pretty arrogant about the fact we run a clean facility here," said Steve Beurkens, manager of sales and marketing for H&L Advantage. "They saw things we never would have seen. There were a dozen very achievable opportunities that we ourselves wouldn't have looked at."

The plastic injection company took an extra step beyond the program.

After receiving the analysis, the company brought in a trainer from Steelcase University to help implement the changes.

We now have the methods and processes to analyze, detail and implement changes to things as small as one molding press or as large as an entire production line," Beurkens said. "With all these tools in place, we're starting to implement the opportunities that the review gave us."

In the initial phases of implementation, the company has substantially lowered inventory supplies of raw materials and product. By improving just one line, the company reduced its mold and product inventory by 30 percent across the plant.

"Anytime you manufacture anything, you create excess waste," Beurkens said. "Scrap pieces of material, dirt, excess energy usage or excess cooling water all of those types of things.

"As we have become more efficient, the waste that is generated through the production process has dropped as well."

Purely green changes have included an increased commitment to recycling, selection of cleaning materials, and limiting material stored outside. When equipment, pallets and other material are stored outside, they bleed tannins, rust and other chemicals into the ground each time it rains.

Beurkens estimates that when 80 percent to 90 percent of the suggestions have been implemented, the

company will see operational savings of 10 percent to 15 percent.

Metalworks saw similar results.

"We were struggling with a lot of things throughout the plant," said Scott Akari, vice president of operations.

"We saw this as a chance for us to do some benchmarking we wouldn't have been able to do."

The review quickly identified that Metalworks' scrap usage was in the industry's 35th percentile; its inventory was in the 20th percentile.

"We've been involved with lean initiatives for quite a few years," he said. "We've always wanted to do value stream mapping but weren't sure how to go about it. We'd been talking about doing some plant rearrangement, and we used that to confirm some ideas we had and set some specific goals."

The review's value stream map showed Akari where in the process his company was losing money, and where there were opportunities to get it back.

Of the program's \$7,000 cost, the EPA covers \$2,500 and rebates an additional \$1,000 toward implementation.

The MDEQ provides some additional incentives, including the RETAP Internship Program, which places an intern onsite to assist with implementation and further evaluation, and the Clean Corporate Citizen (C3) Program, a competitive designation that allows for expedited permits.

Based on its improvements, Metalworks has filed for the C3 designation.

"When we first heard about it, we knew we wanted to do some benchmarking, but I personally thought the clean part would be a small part of it and lean a large part," Akari said.

"Lean initiatives are something that are easier to get a hold of; you can tie a direct cost to lean. But it seems to be the greener you get, the more stable the costs, so you really start to pay attention to water and energy."

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