

California Leanin'
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AWC has done projects for a host of entertainment companies, including this unique seating apparatus at HBO.

"A lot of woodworking shows we'd attend, you'd hear 'lean' - it was a buzz word," says Vincent Barraza, executive vice president of Architectural Woodworking Co. (AWC). "We started taking some of the classes up in Glendale, CA, to look at lean implementation. We kind of went through and thought how we could fit lean into what we do."

Thus began the journey into the world of lean manufacturing for AWC, a Monterey Park, CA-based premium millwork contractor that specializes in commercial production, such as law firms and corporate offices. The company has done work for clients that include HBO, Sony, Jones Day, Univision and Paramount Pictures. It also recently finished a \$6 million project for Creative Artists Agency and is currently working on Station Casinos' corporate offices in Las Vegas.

Barraza says the company has been working on incorporating lean concepts into its manufacturing processes for the past four years, slowly adapting and looking at items it can implement without forcing too much change. "We started with small, manageable projects," he says. "Just kind of picking something and staying with it and letting people see what's going on and what kind of improvements we have."

Beginning the Transcendence

The company began going lean by first working with Professional Development Center (PDC), a state-funded workforce training center at Glendale Community College in Glendale, CA, sending employees to classes on lean principles offered by PDC. Barraza says it's important to get upper management involved in the beginning, to see the big picture and to aid in moving the process along more quickly.

"I think you need to send a pioneer or a pioneering team out there to understand what's going on and try to feed the fire, and give that to the next round of employees," he says. "When you get upper management driving the vision, I think you get things to move forward."

According to Barraza, the transition and implementation have worked out well for AWC. "I think everything that we've done so far has been pretty positive," he says. "Just changing the way we batch products made a significant increase to our bottom line. We used to batch everything as one large batch, running 100 workstations through the middle. Assembly couldn't build any of them until 100 parts were out there, because we were doing everything at once.



AWC completed this project for Univision, which included a 30-panel plasma jumbotron surrounded by wenge veneer.

"Now we're doing batches of 25," he continues. "If there's anything that needs to be corrected, we can take care of that on the next 25. By the time the fourth batch goes through, they just start streaming. Some of our old production techniques, if we've got all 100 pieces that are wrong or we have trouble assembling them, we were fighting the entire batch as opposed to rectifying it in smaller batches. So that was a significant improvement for us."

The switch to lean also involved a change in the layout of the company's 55,000-square-foot shop, with the former assembly area that was in the middle of the shop now becoming the staging area. "It's like the hub of the shop basically," Barraza says of the staging area. "Assembly can pull from there, finishing can pull from there and shipping actually pulls from that whole staging area. So it's in the center. Everybody sees what's going on. It's made a heck of a big change. And that was really only revealed to us by looking at lean and looking at flow."

The shop realignment even included changes in all of the facility's workbenches, making them interchangeable and uniform. "A guy can go from bench one to bench eight, and it's like he's still at home," Barraza says. "The screws are in the same location, his clamps are still in the same location, everything's still there."

Employees on the shop floor, though cautious, have also embraced the changes. Barraza says that some employees wondered what was going on at first. "I think employees are always receptive, it's just some people don't like change," he says. "But when they can go to any bench and work on another project and feel like they're at home, it makes a lot of sense to them."



In order to implement lean principles, AWC rearranged the layout of its 55,000-square-foot shop. The new information system AWC has integrated exports instructions from engineering, through Ardis software, directly to the saw on the shop floor.

The Right Equipment and Integration

The company recently completed an integration of Trakware job cost reporting software, and Ardis cutting optimization software, which is distributed by Eurosoft. The integration allows the company to execute the materials management component of lean more efficiently. Barraza says AWC is currently working on integrating Microvellum Toolbox software into the mix as well.

"We're taking the output from Ardis, and we've worked with Trakware to build an import function so we can take manual stockbills, as well as Microvellum's output, through Ardis' optimized output and import that back into Trakware" says Barraza. "We're actually taking the true cost of what needs to be cut on a project and assigning that to a particular sheet, not just each job but to a particular sheet. So, I can look back at casework by a specific room or item and see if it is either making money or losing money. We have jobs in Trakware now mining the data so we can adjust our pricing and so forth."

Though the company is excited about the software integration and its possibilities, there are still challenges to its implementation. "I think anytime you try to tie three different softwares together it is a challenge," Barraza says. "The software companies need to be open and receptive to working with another individual and sharing their information. But if you can make the marriage work, I think it gives them a better sales package."

AWC also has a large arsenal of equipment in the shop, including a Busellato Jet 6000 point-to-point CNC machining center, edgebanders by IMA and SCM/Olympic, Schelling and Streibig panel saws, sanders by Timesavers and Hessemann and more. Recently, the company also ordered an Accu-Systems horizontal

boring machine. "It's going to be custom built for us," Barraza says. "We hope to have that landing here sometime in September."



The reception desk in the main lobby at HBO was completed by AWC using black american walnut veneer.



The company provided veneer, millwork, fabrication and installation for the HBO project, including these workstations.

The company has used CNC machinery for quite awhile, but not in the same way it uses it presently. "Now, information is coming directly from upstairs in engineering, through Ardis, and exporting directly to the saw," says Barraza. "The saw operator isn't keying in numbers. It's very efficient in just getting that whole cell working."

AWC also lays up its own veneer in-house. "Most millworkers don't do that any longer," says Barraza. "They usually outsource to a panel manufacturer or somebody along those lines. We can minimize the timeframe for turnaround." AWC's veneer production equipment includes a Sennerskov veneer press, a Diehl veneer splicer, a Black Bros. glue spreader, a Hymmen guillotine and a Capital veneer clipper.

Reaping the Benefits

The lean concept seems to be paying off for AWC, according to Barraza. "I would say we are probably tracking close to a 10-percent increase this year over last year," he says. "We've embraced some of the lean principles. We've instituted and integrated an information system. And actually, we're looking at increasing our overall capacity, because we're turning away jobs that we just can't take in this market."

There is also talk of relocating the facility in the future. "We've grown into this facility," says Barraza. "But are we truly in the right spot to gain the efficiencies that we want to look at? What do we want to grow to and would we be able to do that in this facility? Where we're at with the columns and with the wall layout, I don't feel it really fits with where we want to be. So, what we're looking at long-term is where can we move, how can we improve and what kind of return can we expect on that."