straight talk

by Jerry Koskovich, P.E.

How to Avoid Slumping in a Slump

Consider these concepts if you're wondering how to maximize your flexibility with automation.

While I've spent a good part of my professional life in component manufacturing plants over the last three or four decades, I've never run one. So I'm not about to try and advise you how to run yours. But I am going to offer what I've observed when it comes to downturns in our business and, in particular, how automated equipment impacts those events.

I'm not going to comment on the downturn the industry is talking about currently. I don't know any more than you do, probably less since I'm not on the front lines like you are. All I'll offer on this score is that there are downturns taking place at all times in different regions and locales and segments of this industry, even from winter to summer for most plants. I know of more than one plant that's gone through a "downturn" in the midst of a housing boom...when a big conglomerate, for example, with all the advantages of high-volume purchasing and a willingness to cut prices, moved in next door.

Downturns Are a Certainty

The successful plants plan for them—indeed, count on them—and are prepared. The most successful use down cycles, and "cycles" is a more accurate description, to their advantage. Truth is, when business is booming, most anyone can make a profit. It takes astute management with a suitably equipped and staffed operation to stay profitable in a downturn.

The key is flexibility, from my observations, which is also a fundamental benefit of automation...and a subject I've harped on relentlessly over the years.

Here's what I've observed the most successful plants doing in a down cycle... translated into steps you might consider taking. Several of these may cause equipment manufacturers like us to cringe a bit, like I do when I hear a news reporter pointing out our security vulnerabilities for all the world to hear.

- **Ask your equipment manufacturers and other suppliers for help.** I don't necessarily mean for price concessions—suppliers are often part of the same down cycle. But do ask your suppliers to study your operation in relation to their product and see what they can recommend to reduce costs and/or improve efficiencies. You may be surprised at what they have to say—they've seen their product used in a lot of different ways.

  I've been appalled at the poor performance of our equipment on several occasions when I've been invited into a customer's plant, for example. The production rates were far below what they should have been. Plant personnel had simply come to accept the equipment's poor performance—and management hadn't picked up on it. Whether it's the equipment's fault or the operator's fault or the fault of procedures, the problem can't be fixed until it's identified. Sometimes it's simply that the equipment hasn't been maintained properly or isn't properly calibrated. Sometimes it's improper staffing; on more than one occasion, I've watched a single operator feed an automated component saw lumber, then run around back and stack the cut parts...while the saw sat idle. Sometimes it's the material flow systems that are the problem—either to or from the equipment (or both).

- **Use down time to reconfigure your plant to make the production process more efficient.** I'm talking about everything from material handling to the proximity of cutting and pressing equipment to how trucks are loaded. If you think about it, you probably know what the problems are from your high-production periods—now's the time to cure them and save the dollars those inefficiencies have been costing you.

  Some plants define good material handling as bringing a full forklift of lumber to the saw. Of course, it's much more than that—and all critical to efficiency.

  Location and proximity of equipment is also critical. I've been in truss plants that have installed one of our automated saws—in the midst of a high-production cycle, without proper forethought—literally a building away from the tables. A lot of cart wheels were worn making their way back and forth before the saw was relocated.

- **Consider increasing sales with another product line.** If you don't currently make wall panels (or it's just a small part of your business), now may be the time to start. If that new automated linear-feed saw you bought for making truss parts can also cut wall frame parts, get its manufacturer on the phone and, again, ask for help. If you have (or are willing to hire) your own installers, wall panels could be a good option. It may not be a good option if you're relying on builder/framers for all your wall panel

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at a glance

- ❑ Use down time to reconfigure your plant to make the production process more efficient.
- ❑ Look hard at how you can have most of the benefits of full automation without spending the money to get it.
- ❑ A down cycle is a good time—really the best time—to install new equipment.
- ❑ It's possible for plants to come out of a down cycle literally twice the company that they were before.

orders—they may choose to stick build to keep their workers busy in a down cycle.

Look outside the truss and wall panel market altogether for new product lines. There are often niche products that can be quite profitable. Take that automated linear-feed saw and have it make ready-to-assemble garden sheds or backyard playhouses or carriage houses or garages. Talk to local retailers and see what they need. We once figured that an automated linear-feed could crank out components for some exceptional backyard sheds—unique roofs, really interesting-looking designs—in less than ten minutes each.

- **Start marketing your higher-quality product.** We have automated component saw customers that sell the benefits of their close-tolerance roof trusses to their builder/framer customers and have grown their customer base because of it. Roof trusses that fit together well may seem like a small matter, but it's really not—especially if your primary competitor isn't capable of producing the same quality product. Remember, your builder customer has a homeowner customer to sell, and higher-quality construction is not insignificant to most homeowners.

The biggest single thing you can do in a down cycle is automate. That sounds like a pretty self-serving statement coming from a manufacturer of automated cutting and jigging equipment. But it's the truth no matter who it's coming from.

It was made abundantly clear in the machine tool industry back in the late 80s/early 90s recession. The machine tool industry was only partially automated then (about where our industry is now). I remember reading magazine articles pointing out that the portion of machine tool businesses that were automated were not just surviving, but prospering. The non-automated portion of their industry was struggling and, effectively, contributing to the prosperity of their automated counterparts—they were losing business to them.

Incidentally, the machine tool industry's ratio of annual sales to capital investment (plant equipment) at that time was estimated to be roughly 1:1. That is, if they had $5 million in sales, they had $5 million invested in capital equipment. Component manufacturers had a far lower ratio at the time: 17:1. That is, component manufacturers with $5 million in sales only had about $300,000 invested in equipment. I understand that our industry's ratio is now more like 12:1—but still a far cry from what the machine tool industry and others have invested.

Automation gives you flexibility, the key to holding margins and profits in a downturn. One automated component saw of most any variety can easily out-produce two or three manual component saws. That means you'll need about a third (or less) staff to do the cutting ... and you won't be at the mercy of the typically more expensive sawyers. You just need good, competent, (ideally eager) operators. You can then pretty much accomplish whatever comes along—sales up, sales down—with just your core staff. And still produce a high-quality product on a timely, predictable basis. You likely won't be caught in the dilemma of hiring staff when there's a spike in orders, laying them off when the spike goes the other way. You won't have all the costs associated with on and off unemployment, including unemployment compensation costs. And you won't risk losing good people who tire of it all.

Automated jigging equipment on your tables can do similar magic for truss building efficiencies. The labor cost savings can be substantial. A good team of two or three competent truss builders can jig, lay-up and press trusses—even very intricate trusses, each one different—at a rate of about one every four to six minutes. That's a long way from 30 minutes, sometimes an hour or more, to do similarly complex trusses manually.

Non-automated competition won't be able to perform in the same way. When they hunker down, their production capabilities will suffer. They won't be as timely in fulfilling their orders and their labor costs will be much higher. And, like what occurred in the machine tool industry, they'll give up some of their business to their automated competitors.

Your automated bottom line isn't just impacted by labor cost savings from the reduced setup times. That's easy to see. But the extra time—the time saved with automation—can be used to make more product which adds more profit dollars to the bottom line. Figure how many more trusses you could make with two or three more hours per shift worth of parts cutting and/or truss building.

For all this, I'm not suggesting that you simply start replacing your manual equipment with the automated variety... especially in a down cycle when dollars are tight. It doesn't make much difference how much more money you can save or earn if you go broke trying to do it. Here again, I would sit down with equipment manufacturers and put whatever your circumstance is on the table.

Also, I recommend looking hard at how you can have most of the benefits of full automation without spending the money to get it. A few examples:

- **Double or triple production from your old manual saw with an automated helping hand.** Let's say that you have a good, serviceable manual component saw now. But the number of setups required for all the different cuts is so high that its production rates are miserable. That's typical these days. An expensive new automated component saw would solve the problem—it sets up in a flash—but it really doesn't cut parts any faster than your manual saw. Once set up, a good manual component saw and an automated component saw will cut parts at about the same rate. So... consider bringing in an automated linear-feed saw to handle all of the one-offs, two-offs, and three-offs. Give all of the longer runs to your manual saw—far fewer setups, far more parts cut per setup. You'll probably get the production equivalent of one-and-a-half automated saws for the price of one.
- **Substantially decrease truss build time without adding automated jigging (or laser-projected imaging) to all of your tables.** Automate just one table—or even just part of one long gantry system. Use that to handle all the tricky build jobs and to build pattern trusses for jobs that have multiples of the same truss. Truss-builders on your manual tables can use those pattern trusses to quickly jig up for the multiples...and build them almost as fast as your automated-table team builds theirs. Thus, one automated jigging system can give you the ability to dramatically increase truss production on your non-automated tables.

A down cycle is a good time—really the best time—to install new equipment. Your plant will realize the benefits immediately and, typically, there's ample time to do the necessary research to find what equipment is best for your plant. Further, unlike installing during high-production periods, you have time to locate and install properly. Very importantly, you have the time to think through all the other parts of your operation and procedures that high speed automated equipment will impact, such as:

- Material flow to and from the equipment.
- Finished part staging and organization.
- Optimizing your equipment's proficiency, both manual and automated, by playing to the unique strong suits of each piece of equipment. (For example, sending the component saw the longer parts and longer part runs, setting up cutting lists with parts from longest to shortest, or vice versa, to minimize setup time.)

The Silver Lining in Every Down Cycle

If you take these kinds of steps in a down cycle, you will find your company considerably more profitable when the cycle turns up. Even if the industry simply rebounds to about the same level it was at, you will probably enjoy a significantly fatter bottom line.

Adding to the increased profits realized through greater efficiencies, the marketing folks will tell you—and I've certainly witnessed—market share often shifts during down cycles. Many unprepared plants do not perform well in a down cycle, as noted earlier. If you react to a down cycle along the lines we've been discussing, the likelihood is that you will pick up some of your competitors' customers. So when the cycle starts shifting up, your volume goes up disproportionately.

I've seen plants come out of a down cycle literally twice the company that they were before. The down cycle was the best thing that ever happened to them. SBC

Jerry Koskovich is President of The Koskovich Company in Rochester, MN.

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Truss Publications, Inc.

6300 Enterprise Lane • Suite 200 • Madison, WI 53719
608/310-6706 phone • 608/271-7006 fax
www.sbcmag.info • admgr@sbcmag.info