

# SPEED TO MARKET

*Job Shops–Niche Manufacturing–Focused Distribution Systems*

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## Will your Business Survive?

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A flurry of recent articles in Detroit area newspapers paints a grim picture for the future of tool and die shops in Michigan. These are the job shops that make fixtures, dies, molds, gauges, work holders, and other tools and devices required to make a wide range of products from automobiles to toys.

According to the U.S. Bureau of Labor Statistics, the nation lost 2,778,000 manufacturing jobs between July 2000 and October 2003, roughly 175,000 per month. Michigan lost 175,600 manufacturing jobs during that period, or nearly 20 percent of its factory-related employment.<sup>1</sup> Monthly employment reports from the Labor Department show that manufacturing employment has declined for 40 straight months.

Michigan, because it's home to the major domestic automakers, leads the nation in tool and die firms, with 1,600 firms employing 50,000 workers as of May 2002. But those firms — most with 50 or fewer workers and heavily clustered in the Metro Detroit, Grand Rapids and Saginaw areas — have been failing at alarming rates in recent years, largely because of outsourcing to places like China and Taiwan.<sup>3</sup>

According to testimony at legislative hearings, the state has lost 10,000 tool and die jobs in the past 18 months, and 34,000 since 1998. Laurie Moncrieff, president of [Schmald Tool & Die](#) in Flint estimates that 30 percent of tool and die companies have gone out of business during that period, and predicts that 50 percent will go out of business in the next few years.<sup>3</sup>

Matt Coffey, president of the [National Tooling & Machining Association](#), has seen his membership fall from 2,340 companies to about 1,900. Coffey estimates there were roughly 14,000 U.S. tooling companies a few years ago — a number that has shrunk to less than 10,000 today, a 30% decline. The average company employs about 35 people, which means 140,000 tooling jobs have vanished nationally since 2000.<sup>1</sup>

There is no question that these companies are in a brutally competitive situation fueled by fast-growing foreign competition (especially work being sent to China and Taiwan), and the general economic decline of the past few years. New technologies and productivity gains have played a part as well.

**What can be done?** One approach is to seek government help, and toolmakers have become more politically active. In their article,<sup>3</sup> Lisa Zagaroli and Gary Heinlein write: "Motivated by a fear that their jobs, way of life and the country's manufacturing base are vanishing, toolmakers are making the trek to lobby Lansing or Washington, D.C., in hopes of influencing legislation."

And in the same article "State incentives may be too little, too late," says Jay Baron, manufacturing expert with the Center for Automotive Research in Ann Arbor who has studied the tool and die crisis extensively. "Anything positive is good at this point, but obviously it isn't going to have a huge effect," he said. "This took a long time to develop, and it won't be resolved quickly. A number of shops are doing well, but the future of the small shop is really pretty dismal."<sup>3</sup>

The fact of the matter is that there will be fewer tool and die shops at the end of 2004 than there are at the beginning. The question is, *Will yours be one of them?*

Rob Dumont, Managing Director of the [Michigan Tooling Association](#), makes this observation in the January 2004 Issue of MTA's newsletter, *Tool Talk*.

*It seems to me that a little introspection might be in order at this time. What government should do (or not do) at the Federal and State levels has received the bulk of attention. The one absent, or at least minimally present ingredient in the mix is: "What are we going to do ourselves?"*

*Regardless of all the arguments advanced on the relative competitive factors in play between Asia and the United States, one incontrovertible fact remains: geography favors the U.S. producer. In short, we are here and they are elsewhere. Elsewhere happens to be a long way off, transportation costs, language differences, and time give us an edge. Why not capitalize on those facts and try to leverage them to gain a greater advantage! In the coming months, MTA will make available opportunities to hear about how to cut lead time, and improve performance in terms of speed of throughput. "Quotes to Cash" and "Speed to Market" are concepts that are being worked on to enable our members to save time, and time being money, savings will follow. Shorter lead times, cost savings, and geography translate into a substantial competitive advantage.*

**There are two things you can start to do immediately.** One is cut your lead time; the other is to reduce waste to become as efficient as possible. In the end, price differences may not turn out to be as significant as buyers may currently believe, especially when they start to make "apples to apples" comparisons between domestic and foreign suppliers of machine tools. For example, the cost of transportation, the cost of mistakes, the cost of time, the cost of sending engineers half way around the world to make sure work is progressing and is being made according to specifications, import taxes, transportation costs, the cost of communication, the cost of delays, the cost of rework, all must be factored into the comparison. There is more to the cost than price. But by the time buy-

ers figure this out, more shops will shutter their doors, and more skilled machinists will be stocking shelves at Wal-Mart.

It stands to reason that if you do not have an organized approach in place to cut your lead time and improve your service capability, you will not improve – and very likely will not survive given the rigors of even more intense levels of competition. But cutting lead time is easier said than done, and many companies find they have little in the way of tangible results to show for their efforts. Delta Dynamics can help. As readers of this Newsletter are aware, we have well-developed approaches for cutting lead time in job shops and similar order-driven businesses. Those of you who recognize the importance of implementing lead time reduction should contact us immediately for more information about how we can help you survive and even prosper in this new reality.

<sup>1</sup> [END OF THE LINE: Tool-die shops fighting for life](#) Economy, China get the blame for lost jobs. *December 30, 2003* Jeffrey McCracken, Free Press Business Writer

<sup>2</sup> [FIGHTING BACK: Tool and die industry gets political](#) Manufacturers lobby to protect jobs, futures *December 30, 2003* Jeffrey McCracken, Free Press Business Writer

<sup>3</sup> [EFFORT STALLS TO PROTECT FACTORY JOBS](#) Fed initiatives to stem decline go nowhere; Michigan legislation may be too little, too late *December 29, 2003* Lisa Zagaroli and Gary Heinlein –The Detroit News

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## News and Notes

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[New Article To Be Published...](#) We have a new article scheduled for publication in the February issue of [Fabricating and Metalworking Magazine](#), ***Changing the Ground Rules: Cutting Lead Time in Job Shops & Custom Manufacturing Environments*** which outlines the changes in thinking and organizational practices required to cut lead time. Keep an eye out for it.

[You Are Invited to a Free Workshop...](#) The Michigan Tooling Association Presents a FREE WORKSHOP... *Changing the Ground Rules–Cutting Lead Time in Job Shops and Custom Manufacturing Environments*. Presented by Vincent Bozzone, President, Delta Dynamics Incorporated. Tuesday February 3rd 8:30–10:30 AM Coffee and Pastry 8:00–8:30 AM MTA Headquarters Farmington Hills Michigan  
[Details](#)

[Innovative Holiday Gift...](#) [COSS Systems, Inc.](#), a Toronto-based company that designs and installs a full range of manufacturing software for small to mid-sized companies gave their customers the gift of a *Speed to Market Workshop* along with a copy of the *Speed to Market* book and a catered lunch. It was a first-class event that will have enduring value for these companies, and was a lot of fun to do.

# Managing By The Numbers

## Assessing the Impact of a Weekly Performance Report at Kurek Tool

Item #	Unit	QTD	YTD	YTD	YTD
Part Name	QTD	YTD	YTD	YTD	YTD
<b>Order Release</b>					
Orders Released	1	155,000	1,145,000	1,145,000	1,145,000
Orders Shipped (Delta)	1	160,000	1,160,000	1,160,000	1,160,000
Order Backlog	1	100,000	1,100,000	1,100,000	1,100,000
<b>Estimating</b>					
Estimate Received	1	40	140	140	140
Estimate Released	1	100	100	100	100
Estimate Shipped	1	100	100	100	100
Estimate Backlog	1	100	100	100	100
<b>Engineering</b>					
Engineering Released	1	10	10	10	10
Engineering Shipped	1	10	10	10	10
Engineering Backlog	1	10	10	10	10
<b>Production</b>					
Production Released	1	100	100	100	100
Production Shipped	1	100	100	100	100
Production Backlog	1	100	100	100	100
<b>Inventory</b>					
Inventory Released	1	100	100	100	100
Inventory Shipped	1	100	100	100	100
Inventory Backlog	1	100	100	100	100
<b>Shipping Performance</b>					
Shipping Released	1	100	100	100	100
Shipping Shipped	1	100	100	100	100
Shipping Backlog	1	100	100	100	100
<b>Customer Service</b>					
Customer Service Released	1	100	100	100	100
Customer Service Shipped	1	100	100	100	100
Customer Service Backlog	1	100	100	100	100

The sad fact is that quantification is not being done in most businesses...and it's costing them a fortune.

Michael E. Gerber, *The E-Myth Revisited*

Readers of this Newsletter may recall the articles published in the May and June issues, [The Need for Speed](#) and [The Need for Speed Part II](#) that describe how *Speed to Market* was put into practice at Kurek Tool in Saginaw, Michigan. Jennifer Kurek-Clor, Manager of Marketing and Infrastructure Development, contributed the following piece on the impact of embedding Delta Dynamics' Weekly Performance Report at Kurek Tool.

Installing the *Weekly Performance Report* at Kurek Tool Inc. has truly elevated our management to a new level. Before implementing this report, our intent was to analyze data monthly, but in reality it was more like a 6-8 (sometimes 10-12) week cycle. Thus, we were always looking at outdated material. By the time we looked at the data, it was difficult to remember the circumstances that created it, so it really meant nothing to us.

As we started the process of implementing the *Weekly Performance Report* with Delta Dynamics, we learned our data was not only outdated, it was inaccurate as well. We thought the reports we looked at were giving us valid performance information based on known data, but in reality they were not. It was a real eye-opener to discover the quote win rate was really not what the report had been showing us all along, as well as to learn that time and materials jobs accounts for a third of our business! We thought the information meant one thing when in effect it meant another.

Based on these two significant findings, we realized the data we looked at was totally meaningless... it was what we could get our software to spit out, not really what mattered most to us.

So we sat down with Vincent Bozzone and discussed exactly what was important to know about our business, and then decided what data would be most meaningful. Once we did this, the next step was to determine where that data would come from and how to access it most efficiently.

Our *Weekly Performance Report* now represents the information we want and need to run our business, not just what we can get. Because the report is published weekly, rather than when we can fit it into the laundry list of tasks and duties we must accomplish, we now have a disciplined approach to data collection and analysis that serves us

very well. This weekly approach also gives us virtually “live” data to look at, and we have a much better sense of why things look the way they do because the events that generated the numbers are fresh in our minds. Tracking performance this way also lends itself to simplified trend analysis, and gives us a clear picture of the health of our business over time. It is extremely easy to maintain, and I will even claim that it is fun to do.

Three of the most important benefits we realized include the following:

- 1) We now have a clear picture of what’s really going on in our business. The data is virtually real time, accurate, and the indices we chose are specific to our business.
- 2) There is finally trust in the numbers – no more “excusing away” the data as inaccurate or outdated. This forces us to confront problems and undertake corrective actions. As a result, we have seen productivity improve by 15% (since March 2003 when we implemented the report), plus we have improved our on-time ship performance from 65% to 88%, and reduced overtime even with increasingly higher levels of sales. And we are really just getting started!
- 3) Communication among members of our management team has greatly improved. Now we talk about real issues, not perceived issues, and we deal with facts not opinions in our weekly meetings. We also have a clear picture of continuous improvement trends and know whether or not our programs are producing the desired results. We would highly recommend this tool to anyone who is serious about improving the performance and profitability of his or her business, It worked wonders for us and I am confident it will do the same for you.

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**Other comments from *satisfied business owners who have implemented a Weekly Performance Report...***

- *I don't know how you can manage a business without one.* Richard B. Hardy, Chairman and CEO, Hyde Tools, Southbridge Massachusetts
- *It focuses us on the things that are important, and has been very helpful in educating myself and my entire staff. We're really pleased with the results.* Jim Carter, General Partner, Digital Machining Systems, Duson, Louisiana
- *The Weekly Management Report enables us to see our entire business all at once. This perspective lets us move more quickly, make better decisions, and act with confidence. In addition, it focuses each of our key players on their part of the business which assures accountability and results.* Al Choiniere, President, Superior Inc., Xenia, Ohio

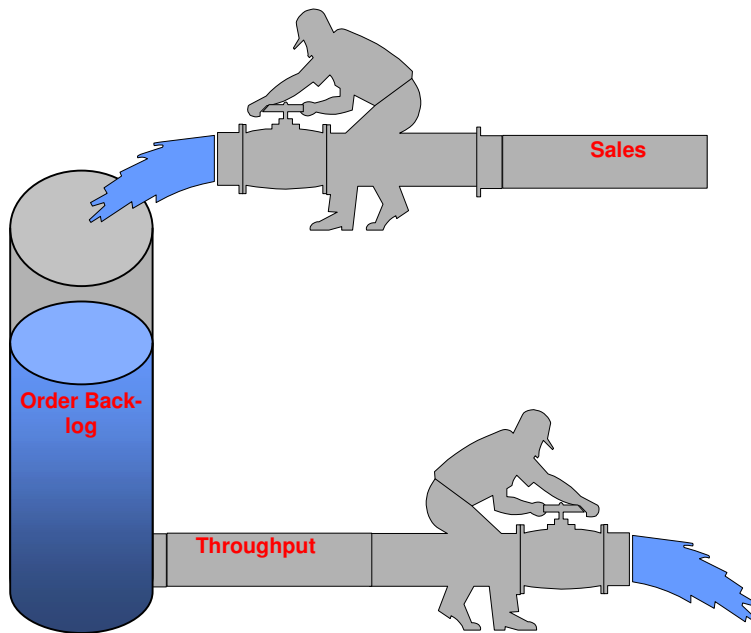
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## How Not to Manage Capacity in a Job Shop

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*Managing capacity in a job shop is no easy task given the feast or famine nature of demand, uneven workflow, and dynamic nature of the floor. This article, from our correspondent in the field ([When Customers Try to Run Your Business—Let the Games Begin](#) April 2003) describes the chaos created by uneven demand in his shop, and management's efforts to deal with it. Many shops fail to actively manage capacity, which extends lead times, and is a major cause of late shipments.*

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We started capacity planning about 2 months ago. We had no information on the shop's load. We didn't even have any information on available hours in each area. I have been keeping data (manually - ugh!) on 9 plant areas since the beginning of the year. I have been assigned to identify why the lathe (turning) area is always backed up while all the other areas pulse hot and cold.

I told them it was caused by poor planning and inaccurate data — they told me it was caused by poor supervisors and employees! When I exposed the flux in the number of hours released to turning (the first operation), they said "But that's what engineering released!"

*As part of this process we are defining constraints in production. It goes something like this: The first week we release 3000 hours to the shop. (The shop averages 3000 hours per week.)*

The second week we release 1400 hours to the shop. We clean up some backlogged jobs in turning to keep busy. Grinding and heat treating run out of work. Gear cutting gets low. We find stuff for people to do, and the numbers go the wrong way — again. (Incidentally, we run about 55% run time, 20% setup time, and 25% "lost" time—training, waiting for work, etc).

The third week we release 4500 hours to the shop (Hey, that's what came out of engineering!) Wham! Look at all the work backing up in turning!

TURNING IS OUR MAJOR CONSTRAINT!!!! Let's work overtime and Saturday!!!

As the jobs spread throughout the shop, our constraining area moves from turning to heat treating to gear cutting to gear grinding to grinding. Hmmm What is going on here?

Scheduling with our modified ERP system will show us what to work on. Eventually it will even identify our constraining process (Psssst - it's TURNING!).

Incidentally, this investigation has exposed setup and run rates that are at least 15% too low. Management set these too-low rates to encourage employees to try harder. This, of course, confuses scheduling since the work scheduled cannot be performed. This, in turn, allows management to "yell" at the employees to work harder. Which in turn makes the employees think management doesn't know what they are doing. Which in turn ruins morale. And so it goes...

At the same time, management realized that workforce flexibility is important in capacity management, and we embarked on a program to cross-train operators. Here's what happened:

- Initially, all our employees ran dedicated machines.
- When business slowed down, we laid off a bunch of people.
- We decided to cross-train the ones left so we would have more flexibility.
- The training was ad-hoc, haphazard and people didn't get trained very well.
- We wasted a lot of time. Productivity dropped and the "numbers" went in the wrong direction — again!
- Business started picking up.
- In an effort to get more work out without hiring back the people we laid off, we assigned employees to machines they knew.
- These are the machines they feel comfortable with and are most productive.
- Now all our employees run dedicated machines. In fact, the same machines they ran before the training.

The net result? "Training" added costs, lowered productivity, and produced no improvement in operator flexibility. Training got a black eye when the real reason was a poorly conceived and even more poorly executed plan.

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### *Is Your Company Up to Speed?*

**Our exclusive *Speed to Market Technology* is specifically designed to improve performance and profitability in order-driven businesses. The net result? *More money in your pocket!* More sales, less cost, accelerated cash flow, more capacity, better quality, and less rework—all at the same time! Don't delay. Call us today to find out what Speed to Market can do for you!**