

SPEED TO MARKET

The Newsletter for Job Shops and Order-Driven Companies

Published by Delta Dynamics Incorporated

January 2003

Feature Article

How Do You Measure Improvement?



In the last issue of the [Speed to Market Newsletter](#), we showed methods for measuring lead time. In this issue, we offer a method for measuring the financial value of improvement that results when *Speed to Market* is implemented in an organization.

Sales dollars per payroll hour is a meaningful measure. It is calculated by dividing weekly shipments (sales) by payroll hours (straight time plus overtime hours if any). This metric captures increases in sales, increases in throughput, and productivity improvements that result from the application of the *Speed to Market* technology.

Example 1: A small shop with \$1,200,000 a year in annual sales ships approximately \$24,000 per week on average. Its 12 hourly employees work about 420 hours per week, so each hour worked represents \$57.14 per hour in sales. By using *Speed to Market* to cut lead time and increase throughput, the company increases this amount by 10% to \$62.86 per hour. What is this \$5.72 per hour difference worth?

At 420 hours, this level of improvement translates to about \$2,400 more shipped per week or \$125,000 per year. However, the margin on these additional dollars shipped is extraordinarily high because only materials costs increase. Overhead costs are already covered, and the increase in productivity covers labor costs. If the cost of materials averages, say, 28% of revenues, then 72% of these sales dollars (about \$90,000) flow directly to profit improvement.

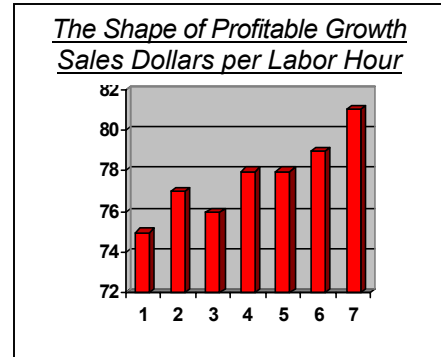
Example 2: A company with \$10,000,000 a year in annual sales ships approximately \$200,000 per week on average with 75 hourly employees. Each hour worked generates \$67.00 in sales (\$200,000/3000 hours). Increasing this amount by 10% to \$73.70 per hour is equivalent to shipping \$20,100 more per week, or approximately \$1,045,200.00 more per year with the same labor and overhead costs. At a margin of 72%, the bottom line impact would be about \$750,000. Not too shabby!

Refining the Metric: This metric can be further refined by subtracting the cost of materials, and any outside work that may be required to produce an order (e.g., heat treating, powder coating, outsourced operations) from dollars shipped. This may be necessary when not all the work is done in house, or when pre-finished raw materials are purchased. Taking this step will tie work to time more closely, as well as eliminate false increases in performance that result from outsourcing work or buying pre-finished materials. However, if all the work is routinely done in house, and there are no changes in the pattern or type of raw materials purchased, this additional administrative work may not be necessary.

Note: Some companies use revenue per employee as a measure, but we find this bit too coarse for measuring improvement...like measuring in miles when you should be measuring in feet and yards.

Keep in mind the hours worked and dollars shipped do not take place in the same week. However, you can track improvement cumulatively, and graph this trend using [Delta Dynamics' Weekly Performance Report](#). As long as the graph is moving in the right direction, you are on the right track and showing improvement.

Measuring Overhead Productivity: In addition to measuring the productivity of the hourly workforce (sales dollars per labor hour) as described previously, you may also choose to measure the productivity of salaried employees using sales dollars per payroll dollar. This will give you an indication of the performance of your salaried (support) staff. You can also measure improvement for your entire organization by using total payroll dollars (salaried and hourly).



Example: Let's say the small shop mentioned previously has 3 salaried employees in addition to its 12 hourly employees. Total salaries for these employees (including the owner) is \$3000 per week. This translates into sales of \$8.00 per payroll dollar (\$24000/3000). This can be used as a baseline against which to measure and compare organizational performance improvement, and establishes a measure of accountability in this traditionally ambiguous area.

In this issue...

- [Measuring Improvement](#)
- [Guru Speak](#)
- [Implementation Support](#)
- [News & Coming Events](#)

This measure also provides a means for determining the increased value that results (or does not result) from adding new positions or increasing salaries. For example, let's say the owner decides to add a new position, general foreman, at a cost of \$1,000 per week. That would decrease sales per payroll dollar from \$8.00 to \$6.00. The new general foreman would then be expected to provide the leadership, and take the

necessary actions to bring this figure back to its former level of \$8.00 and higher.

Key performance measures like these are easily captured, organized, compared, displayed, and trended using [Delta Dynamics' Weekly Performance Report](#).

Guru Speak



Larry Bossidy, former Chairman and CEO of Allied Signal and Honeywell, is an emerging management guru who reportedly gets a \$70,000.00 speaking fee to convey his big idea: **“Execution is a systematic process of rigorously questioning, and tenaciously following through.”**¹ Nice theory from on high...but how does it play on the ground?

Execution is a systematic process... Maybe so, but the typical manager is not process oriented. Although the process revolution has been making headway for a number of years in the business world, the command and control paradigm continues to reign supreme. Most managers think vertically, up and down the hierarchy, not horizontally across functions. This is why we emphasize managing the “quotes to cash” conversion process across departmental boundaries in our *Speed to Market* training and implementation programs.

Rigorously questioning can be clarifying and prevent missteps, but it's dangerous in most organizations. The Japanese system of "Five Whys" is an excellent method for getting at the root cause of a problem. Few use it. Why? Because questioning creates defensiveness, and is not supported by most organization cultures. Why? How true is this in your company?

Tenaciously following through is important, but difficult or impossible to achieve because organizational priorities are constantly in flux, and managers live in a world of distractions. Tenaciously following through on yesterday's priorities can make you a candidate for quick retirement, especially in large organizations.

For \$70,000.00, Bossidy should have added another thing to his big idea— *Details are important*. Most people think details are trivial, so can be ignored or delegated. This is not so, and failing to pay attention to details is a major cause of shoddy or incomplete execution and implementation.

¹ [Business 2.0](#) October 2002 Page 116

Sound Familiar?

This note was sent to us by a colleague. It was originally posted on a lean manufacturing internet discussion group.

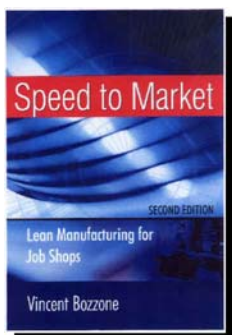
I am the VP of Manufacturing for a privately owned machining job shop. After 23 years with Motorola, I thought I could help improve any kind of manufacturing process, but I was wrong. I have had much training in JIT, Six Sigma, TPS, Kanban, Lean, Continuous Improvement, and some Black Belt courses.

I am struggling with making quantifiable improvements that show up on the bottom line. Currently we are a small team of individual players! The organization has been together for 20+ years and the "old" mind set is "Things will never change". I've introduced ideas with the support of the owner only to have them fade after a few days with little impact. I most often get sucked into the daily tasks of the business, thus causing even myself to let ideas drop by the wayside.

I was hired with only one real expectation....improve the bottom line. I have not really accomplished anything in the past 12 months, and fear my position is short lived if I don't find the "Correct Path" to lead the team down.

Has anyone out there had these problems and pulled through? Please advise, I am open to any suggestions. Best Regards, Tom

If Tom's lament sounds familiar, recognize the wisdom of the old adage that organizational improvement is 20% technical and 80% tactical. Consider using Delta Dynamics' Implementation Support Services. We offer an organized approach, proven project management techniques with skilled implementation specialists to achieve results. Look at it this way, if your company has improvement potential worth \$600,000 annually, then each week you make no progress is costing you over \$11,000. Can you afford to fool around with do-it-yourself methods that take forever and produce no results? Don't be penny-wise and pound-foolish. Call us today for a free assessment of your situation.



Speed to Market: Lean Manufacturing for Job Shops 2nd Edition
Read this book and embarrass the consultants who call you when they can't answer your questions about how lean manufacturing is different in job shops!

News and Coming Events

Update on Job Shop Management 101...In the last issue of the *Speed to Market Newsletter*, we reported working with [Lawrence Technological University](#) to develop a Job Shop Management course. As part of the development process, we asked job shop owners and managers to participate with us in a focus group to design the course. This group met on December 17th at LTU. It was a very productive, high-energy event with solid contributions from everyone. Although it will take some time to sort through all of the input we received, we will likely change the name of the course from *Job Shop Management 101* to *Understanding and Managing Order-Driven Businesses* (or something close to that). The term “job shop” is too closely related to machine shop, and *Speed to Market* has always been defined in broader terms to include all types of order-driven businesses. Changing the name merely eliminates this point of confusion.

Upcoming Workshops...The *Speed to Market Workshop* sponsored jointly by Delta Dynamics and the Wisconsin Manufacturing Extension Partnership (WMEP) is on track for January 14th. As of this writing, there are 47 people registered. Space is limited, so if you are planning to attend, act now. Call 877-247-1740 toll free to register, or [Click Here](#) for details.

A new *Speed to Market Workshop* sponsored jointly by Delta Dynamics and KITAC (Kent Industrial Training Advisory Committee) is scheduled for February 13th in Chatham, Ontario, Canada. Call 888-346-6634 toll free to register, or go to www.kitac.org for more information.

New Articles Scheduled for Publication... “Quote Faster to Increase Sales” will be published in the February issue of [The Fabricator](#). “Do You Know How to Play the Accordion? Managing Capacity in a Job Shop Environment” is scheduled for publication in the February issue of [Forming and Fabricating Magazine](#) (SME). Keep an eye out for these articles which are written specifically to help owners and managers of job shops and similar order-driven companies increase sales and manage capacity.

Tool and Die Industry Study...The *Center for Automotive Research* released their study of the forces that are reshaping the tool and die industry. For example, “Benchmark data shows that foreign competition can make dies at one-third the cost in approximately one-half the time.” Although focused in Michigan, this study has broader implications for all types of make-to-order shops. Click here for your copy: [A Collaborative Business Model for the Tool and Die Industry](#).

Featuring Delta Dynamics' Best Kept Secret...Our Videotape Training Program



Cutting lead time is the single most powerful strategy you can follow to strengthen your competitive position, improve profits, and secure the future of your business. It will increase sales, reduce costs, accelerate cash flow, increase effective capacity, and bring about profitable growth—all at the same time! Get started by bringing everyone in your organization up to speed quickly and economically. Presented by Vincent Bozzone, Tape I illustrates basic concepts and methods. Tape II shows how these are applied, as well as how to implement a continuous improvement infrastructure to ensure progress is being sustained. A PowerPoint slide presentation lets you discuss key concepts in detail with your people. You can't beat this deal! [Click Here](#) for more information.