
SPEED TO MARKET

A Newsletter for
Job Shops–Niche Manufacturers–Focused Distribution Systems
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Mining Your Quote Database



Data Mining is a term used to describe the process of extracting valuable information from raw data. It's a high technology field with specialized software that can sift through large amounts of data and convert this into usable information. Data mining uses mathematical algorithms to search data and identify trends and hidden patterns which can be used to predict customer behavior. This helps companies get ahead of the curve by designing and offering products and services that meet the predicted needs and desires of specific customers.

You don't need fancy software to mine the quote database in a typical job shop. What you do need is an organized format for collecting data, and the discipline to keep it up to date.

Valuable Information: The quote database in a job shop contains a wealth of information about customers, your competitive position in the marketplace, and your company's performance, but it's rarely mined to its full potential. One reason may be that data is not collected and organized in a way that allows information to be extracted easily. Another may be that management is not aware of the potential value of this information, and so it's neglected. Another might be that management thinks it takes too much time to maintain, and this cost is not offset by the perceived value of the information. Whatever the reasons, we would argue that the failure to construct and mine a quote database is a huge mistake because you are ignoring information that has potentially large gains for your business, both competitively and financially.

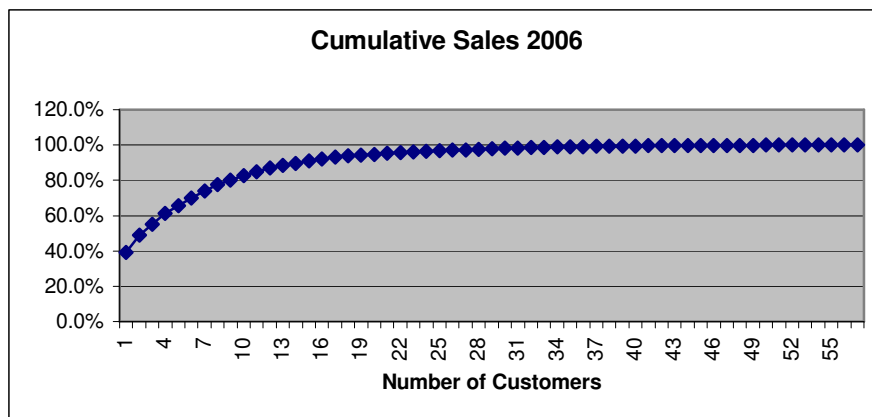
Constructing a Quote Database: Typically, the information in a quote database would include: your quote number, customer, part number, part description, date quote was received, dollar amount quoted, the date the quote was completed and submitted to the customer, and whether the quote was won, lost or not quoted. For winning bids, include the date won, the scheduled ship date, the cost of producing the order (so you can compare it to the estimate), and the actual ship date (so you can calculate lead time, and calculate on time ship performance). This equates to 8 data entries for all quotes with 4 additional entries for orders won.

Here are some examples of what we learned recently by mining the quote database we set up in a metal working shop:

- We learned that 80% of the business came from 10 customers with the remaining 20% coming from 48 customers (the 80/20 rule was working).
- We learned this shop lost money on 4 of the top 13 customers.

- We learned that three customers, who accounted for 12% of the quotes, never bought anything.
- We learned this shop only won 9% of the bids from one of its most profitable customers, and left over *two-and-one-half million dollars* on the table.
- We learned this shop won twice as many quotes (28%) from a customer who continually hammered them about their prices being too high vs. the average win rate as a whole (14%). (Their pencil was a little too sharp for their own good with this customer.)

The following graph shows the cumulative sales by customer for 2006. You can see how rapidly the 80% sales figure is achieved with 10 customers, and how little is added incrementally by the other 48 customers.

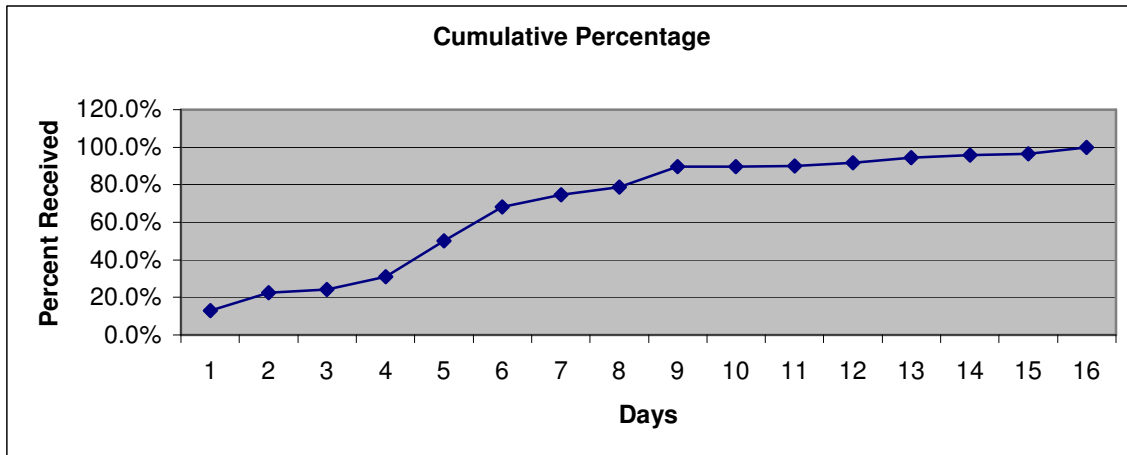


Cost to Maintain a Quote Database:

Suppose you have a metal working shop and quote about 150 RFQs per week. For every one of these 150 quotes, you will enter 8 or 12 pieces of data. And let's say it takes two minutes per quote on average to enter these data. This translates into 300 minutes or 5 hours per week. Is it worth spending 5 hours per week to know?

- The Total number of RFQ's received.
- The total dollars quoted.
- The total number of quotes submitted to customers
- "No quotes" with reason codes indicating why you chose not to quote that RFQ
- Overall hit rate in both dollars and number of quotes
- Quotes lost with reason codes (requires follow up with customer)
- Most profitable and least profitable customers
- Hit rates by customers (who is using you for pricing but not ordering anything)
- Dollar value of quotes lost by customer. This represents your lost market share.
- Time from quote to order (see graph below)
- Number of quotes that took longer to submit than your goal
- Customer rankings in terms of sales, profitability, and dollars quoted
- Your on time ship performance
- Your average lead time

Here is Another Example. We wanted to know how long a quote remained "live" after being submitted to a customer. We mined the quote database to determine the time between the submission of a quote and receipt of an order. We plotted the cumulative percentage of quotes won by the number of days it took to receive the order (we used calendar days, not working days). This is displayed in the following graph.



You can see the response was very rapid. Fifty percent of the orders were received within 5 days, and 90% within 10 days of submitting a quote. This told us two things:

1) It reinforced the importance of turning RFQ's around quickly. There is no time to waste between receiving an RFQ, completing the quote, and getting it back to the customer. In fact, measuring *Quotes Sent Late* on the *Weekly Performance Report* is an important measure of performance. This information is available in the quote database.

2) It also told us that quotes older than 10 days were not likely to become orders. This information has implications for the projected shop workload, and lead time calculations. It also establishes the window for follow up. If you wait more than 5 days to call the customer, the chances are that work is in someone else's shop already.

Summary: Constructing and maintaining a quote database in a job shop can provide management with valuable information for evaluating performance, as well as guiding strategic decision-making. The cost is miniscule compared to the value of this information. How much is it worth to know that the customer who is constantly complaining about price has caused you to use a too-sharp pencil, and under price your work? How much is it worth to know that you are losing money on 4 of your top customers? How much is it worth to know your hit rate by customer, and which ones may be using you as a stalking-horse? Managing with data is essential for shops that want to survive and prosper in today's competitive environment. A quote database is a valuable source of information to be mined.

Coming Events



Vincent Bozzone will conduct *Speed to Market Seminars* for the
[Metal Treating Institute](#) at their Spring Meeting
[Atlantis Resort](#), Paradise Island, Bahamas. April 25 – 29,
 and for the
[Architectural Woodworking Institute's](#) Annual Convention,
 Louisville, KY October 4-6.

Client Feedback



We received this very nice comment from Bob Savitzky, President of [R.S. Precision Industries, Inc.](#) Farmington, Long Island, New York R.S. Precision specializes in sophisticated, miniature, ultra precision components for aerospace, medical, and similar high-tech industries.

I truly believe that if more job shops followed Vince's advice, we could see a renaissance of manufacturing in this country. Bob then went on to say, I believe job shops must do a lot more ... They must plan strategically, market, service and price properly, hire, train, and retain the best talent, keep up with technology, commit to continuous improvement, and aggressively partner with both customers and suppliers. Yours is an important, almost critical, piece of the puzzle, but there are other pieces in the puzzle.

We thought this was very well said, and totally agree with Bob's assessment of what is needed in job shops (and all business for that matter).

It must be our lucky month.... here's another one from long-time client, **Laurie Moncrieff, President of Schmald Tool & Die in Burton, Michigan.**

For a number of years [Schmald Tool & Die, Inc.](#) has had a continuous working relationship with Vince Bozzone and Delta Dynamics. During this time, he has become very knowledgeable about our shop, the way we do business, and has developed great working relationships with our staff. He communicates well with us and also has a vast understanding of Tool & Die/job shop organizations.

We have tried other consulting agencies in the past, but have felt that our best value has come from working with Vince. Vince's rates are not only competitive, but even more importantly, he is excellent on follow through as well as continuing to make himself available for questions and issues after the projects completion. For these reasons, Vince and Delta Dynamics are the best choice for our needs.

American Tooling Industry Survey

Don't forget, William Loendorf, a Ph.D. candidate at Walden University, needs your help. William is researching how the American Tooling Industry is responding to increased global competition. Specifically, he's interested in learning what individual shops are doing to address the need to modernize, restructure, and reorganize in order to meet both current and future global challenges.

William has developed a survey, and is looking for shops that would be willing to spend 20 minutes or so filling it out. Please support this research by sending an e-mail to William at wloendorf@msn.com or call him at (509) 342-0564 and tell him to include you on his survey distribution list. Everyone who participates will get an executive summary of the results and conclusions.

New Product Announcement

We've converted the Speed to Market Videotape into a DVD
And Cut The Price by One-Third!

Speed to Market Video Training Package



A *Speed to Market* Training Seminar presented by Vincent Bozzone and taped before a live audience. Part I presents STM concepts, tools, and methods for cutting lead-time. Part II shows how these concepts and methods are applied. Share this convenient DVD with everyone in your shop who can watch it on his or her own computer, or make it a group event. It's a great way to educate everyone in *Speed to Market* concepts and techniques for cutting lead time, and improving organization performance and profitability (60 minutes).

This Video Training Package also includes:

- The book, *Speed to Market: Lean Manufacturing for Job Shops*. 2nd Edition;
- A PowerPoint® presentation with all the slides used in the DVD presentation on a companion disk—excellent for small group training and discussions;
- An Implementation Guide that will enable you to organize and implement a lead-time reduction program in your company.

The new price for the entire package is only \$195 plus S/H!

Don't delay! [Order today](#) and get on the road to profitable growth with this one-of-a-kind program specifically designed for job shops and custom manufacturing companies.

And While We're Pitching Products, Don't Forget... Delta Dynamics' [Primer of Job Shop Scheduling](#), a collection of published articles and Speed to Market management briefings on job shop scheduling, capacity management, reducing lead-time, and related topics (eleven articles, 40 pages). It is intended as an educational resource to provide the perspective and information required to understand job shop scheduling more fully.