



Is Your Order Book Telling You To Consider Activity-Based Costing?

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Activity-Based Costing (ABC) is often mentioned in conversations between shop owners, but it seems to be an idea that most shops never get around to fully investigating. There are many benefits to performing even a short-term ABC project, but costs and personnel time need to be considered. These days, everyone is too busy to take on an extra project, especially another accounting study. However, your order book might be sufficient evidence that you need to get to work on an ABC project. Here's a brief explanation of how and why.

Loss of Significant Business. In the precision machining industry, this situation can arise whenever a shop has lost a significant amount of repeat business. This leaves a much larger amount of overhead costs to be carried by the few remaining jobs. If your business has changed structurally because of a significant loss of parts volume or a specific line of parts, your costing system should change to reflect these changes. In the event that it did not change, an ABC project will identify the new allocation for overhead costs, and demonstrate to management the urgency of replacing the lost sales and taking immediate action to reduce overhead.

Winning Complex Bids, Losing Simpler Jobs. While our industry has watched entire classes of easier-to-produce parts flow to the low-cost producers overseas, we still need to examine the balance of jobs that we are awarded to see if there are inequities or clues that our costs are out of line. Normal costing systems tend to over-cost the simpler, less complicated items, while under-costing the more sophisticated, more complex items. This is because normal costing systems tend to average costs more

broadly. If you receive more than your fair share of "the tough jobs," then an ABC study might indicate what your customers recognize in your quotes: high costs for simple jobs and relative bargains on more difficult-to-produce parts.

High-Volume Losses, Low-Volume Profits. If high-volume parts show losses or small profits, though more complicated, and small-volume products show significant profits, then this is a clue to reassess how overhead and indirect costs are allocated. It has been barely more than 100 years since Wilfredo Pareto made the observation that 20 percent of the population owned 80 percent of the wealth, but this Pareto Principle should not apply to recovery of one's costs. An ABC study can identify the resources used by both high-volume and low-volume process streams and help to more fairly assign costs to the appropriate products.

You Always Get The Order With All Of The "Extras." If a review of your order book shows that you "rule" when additional non-machining processing steps are required, such as heat treating, plating or other part finishing, then ABC can help determine if it is because costs are not assigned properly at the batch or customer level for the additional resources that these extra steps require. This is an area where ABC can make a difference, when indirect costs are significant (i.e. managing additional outside processes) or when there are a large number of processes or inputs. This is especially true if the cost of the "extra processing" is large in relation to the cost of the primary production process.

Some Departments Full, Others Barely Run. Again, your customer seems to have found a bargain in the



departments that you run full, while they avoid patronizing your "too expensive boutique operations." Listen to your customers' "vote by quote" and examine the differences between how costs are allocated between busy and idle departments.

ABC is not a miracle cure for an ailing business. If your problem is the lack of business activity or a small percentage of your productive capability is actually producing, then ABC will only confirm this bad news. ABC is, however, the proper tool to help you decipher the data from the marketplace about your cost assignments. Because of the expense of collecting and analyzing ABC data, it is not necessarily a replacement for your normal costing system. However, when you have activities that are more likely the result of customer requirements than your inherent processes, ABC will help you account for the share of costs at that customer level.

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Like the physician telling you to drop a few pounds, stop smoking or exercise daily, it is what we do with the message from ABC that will make the difference in our shops. Happy costing!



Activity-Based Costing Basics

ABC is an innovative approach to improving traditional costing systems. In ABC, costs are first assigned to activities performed, then these costs are applied to the goods or services produced. The costs are based on how the goods or services consume the resource. Most cost accounting systems assign costs based on one or two "cost drivers," such as machine hours or man hours. ABC has finer resolution and subdivides costs according to whether or not they are at the unit, batch, product, customer or facility level. It is this ability to assign costs by activity that gives ABC a finer resolution and avoids the over or under assignment of costs by the lump sum averaging of using only one or two cost drivers.

Unit level costs are resources acquired and the activities performed specifically for individual units of product. Materials, parts, components, as well as labor and energy are typical unit level resources.

Batch level resources are the resources used and activities required to make a batch of products. The laboratory testing to qualify a heat of steel is an example of a batch cost; the manganese, sulfur or lead added to the melt would be examples of unit costs.

Product level resources are those resources and activities used that produce a specific product. Thread gages are an example of a product cost for a company making threaded parts. Product level costs are traceable to specific products,

but are indirectly related to batches or specific units. You do not put a gage on every part, so it is not a unit level. A gage may be used on different parts, so that its cost is not attributed to a particular batch.

Customer level resources are those items and activities that are required to serve specific customers. Much of our industry's costs for quality documentation are the result of customer requirements by certain OEMs, typically PPAPs, control plans and other customer-mandated documentation.

Facility-level resources and activities are those resources and activities that provide the general capacity to produce the goods or services. Facility-level resources are particularly prone to misallocation in situations where production volumes suddenly decrease. Rent, general administration and management are examples of facility-level activities that relate directly to the scope of production, but are not directly attributed to specific products, customers, batches or individual units.

For more information, visit the following links:

www.faa.gov/ait/bpi/handbook/chap5.htm

www.pitt.edu/~roztocki/abc/abctutor/

en.wikipedia.org/wiki/Activity-based_costing

Walt Disney World...continued

Attention to details should be a way of life. I have written before about how a shops' dumpster area can indicate its state of organization, housekeeping and other methods of work. During the behind-the-scenes tour, we were asked to not photograph "off-stage" areas. I can report that the area around Disney's behind-the-scene dumpsters was as neat and orderly as any that I have seen. Disney wants to protect its guests from the realities that they might see behind the stage, but I can tell you that seeing a clean and orderly area around each of several different high-volume trash dumpsters behind the scenes was as "magical" a discovery to me as a manager, as any of the pixie dust that got scattered for the children back "on-stage" in the park. Housekeeping, everywhere at Disney, was immaculate – everywhere both "on-stage" and "off."

Committing to the message is as important as the message itself.

At Disney, millions of towels and other linens are laundered each week. Employees in the Disney laundry operations are considered cast

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Standard work methods help employees to concentrate on the task at hand, rather than spend time and energy to figure out how the project should be done.

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members, too. They are always reminded that they have an important part to play in satisfying guests. The consistency of this message is a lesson for our industry. Consistency is not only needed in the output process, but in our words and actions as well. This will help our employees stay focused on performance and provide the best customer service.

Tinkerbell's pixie dust may not be available to you to work magic in your shop, but I assure you that these lessons from Mickey and company can help you improve your processes and company culture.