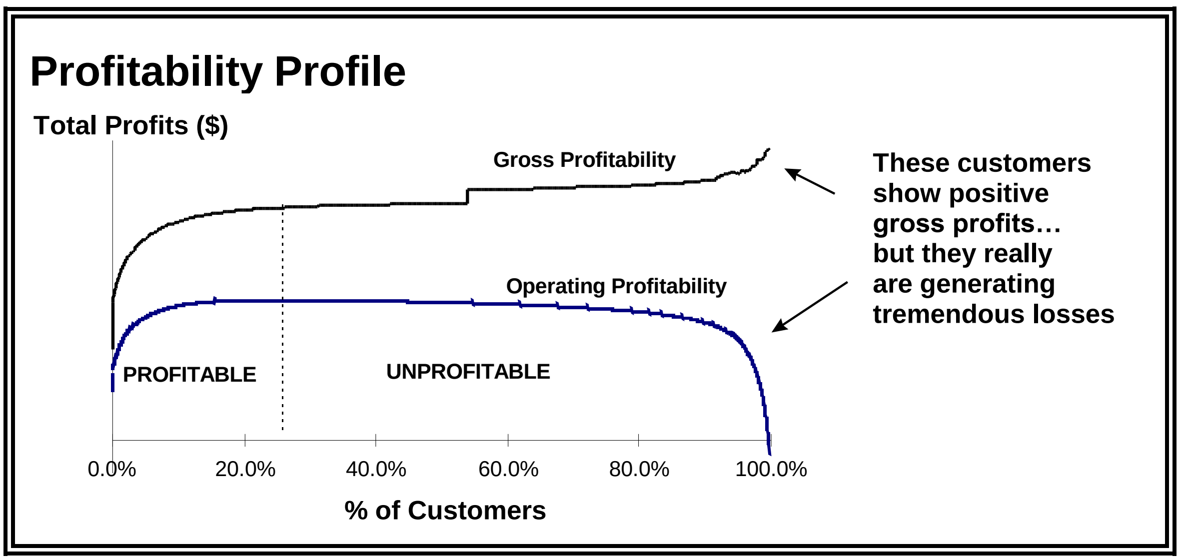
Should more distributors and wholesalers practice their ABCs?

Activity-based costing (ABC) is sweeping most industries and helping companies get a better handle on costs and profits. It will revolutionize the distribution industry as well.

By Steve Anderson, September 1997

When a Texas awning and industrial products supplier decided to analyze the profitability of their customers and product lines last spring using activity-based costing software, they were disillusioned with the findings. According to the study, over 70% of their customers and 80% of their products were unprofitable. This directly contradicted their gross margin reports indicating that over 95% of their products and customers were profitable. Should they close shop or throw out the ABC results? Neither. In fact, these findings are typical at companies who perform activity-based costing. An electrical parts supplier discovered that over 50% of their customers and products were unprofitable. Companies nationwide are discovering that their current accounting systems do not always give the whole picture. Activity-based costing can help.

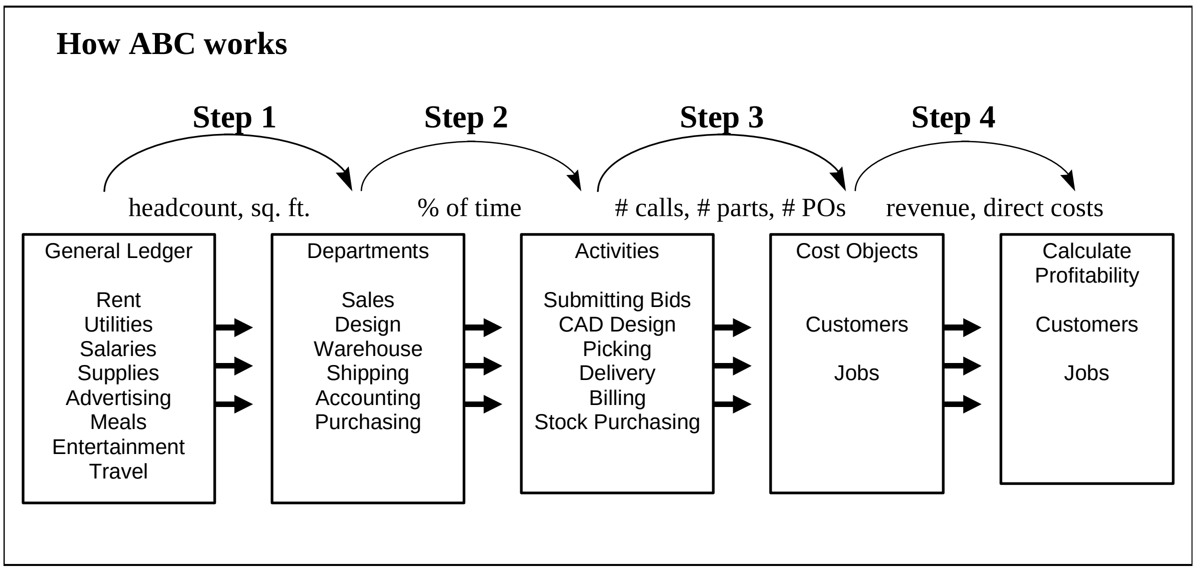


What is ABC?

Activity-based costing is a method of driving company resources to specific customers and products in order to calculate the full costs and profitability.

Step 1 is to assign the company's general ledger expenses (e.g., rent, utilities, salaries) to specific **departments** (e.g., sales department, purchasing, accounting) according to how the resources are used (e.g., square footage, headcount). These departments are represent collections of personnel performing similar tasks and where costs can be easily isolated (e.g., separate offices). For example, if the accounting department occupies 10% of the office space, then hypothetically 10% of facility rent, utilities, property taxes, janitorial services, etc. will be assigned to accounting.

Step 2 is to drive department expenses to **activities**. For example, if a sales force spends 50% of their time quoting customers, then 50% of their department's expenses will be assigned to the activity of quoting.



In **Step 3**, activity costs are driven to cost objects (e.g., customers, products, projects, orders) in proportion to their use. Cost objects are your business. They generate your revenue, profits, and losses. You first have to decide which costs objects you will track costs and profitability. For example, knowing the costs associated with specific orders is critical in the building industry because every job is custom. Once the costs objects are defined, driver equations will be developed that will estimate the amount of time spent on a particular activity for a cost object. For example, the time it takes to process an order is influenced by the number of SKUs, whether the customer is new, and whether the material is in stock. Therefore, a sample equation could be:

order time =5 min + [1.5 min x (#SKUS)] + [20 min x NewCustomerFactor] + [5 min x (#Stock-Outs)]

This equation would be used to drive the order processing activity costs to orders based on the proportion of time particular order takes versus the total order processing time for all orders.

Finally, **Step 4** calculates the profitability based on revenue and direct costs associated with each costs object. For example, if customer x incurred $100,000 in indirect expenses during the 3rd quarter, and we know that revenue was $150,000 and the cost of goods sold was $60,000. Then activity-based costing would estimate an operating loss of ($10,000).

Activity-based costing gives management a clearer picture of what is generating their profitability and/or their losses. With this information, management can pinpoint not only which customers, but also which products or orders are responsible for losing their company money. With this information management can make optimal changes. Many examples exist of companies that have doubled or even tripled profits as a result.

Example

Johnson Steel has completed an order for cut bar and polished plate for general contractor building a new school. Here is a comparison of the estimated cost and profitability of the order using their current accounting system versus activity-based costing. In the activity-based costing case, we have included the drivers for those costs.

Current Accounting

Revenue	$15,500	
Direct Materials	10,000	
Direct Labor (200 hours)	500	
Gross Profit	**5,000**	**(32%)**
Overhead (40% of DM)	4,000	
Operating Profit	**1,000**	**(6%)**

Activity-Based Costing Method

Revenue		$15,500	
Direct Materials		10,000	
Direct Labor (200 hours)		500	
	Gross Profit	**5,000**	**(32%)**
	COST DRIVER		
Selling	time with customer	2,500	
Order Proc.	complexity of order	500	
Purchasing	# PO , # parts	100	
Picking	# parts	100	
Quality Control	# defects, # parts	500	
Delivery	distance, weight	2,500	
	Operating Loss	**(1,200)**	**(-8%)**

This example illustrates the value that activity-based costing can provide managers. It can clarify whether an order or job is generating real profit, and indicate what costs are burdening the project. In this case, selling and delivery consume all of the gross profit.

The heart of activity-based costing is to drive overhead and operating expense to specific customers, products, and orders. A seemingly profitable customer can become extremely unprofitable when you consider expenses associated with selling, order processing, purchasing, inventory, and delivery. Knowing which expense(s) are resulting in the loss points you in the right direction. Changing the way you serve that same client gets you there.

Despite what many accountants may claim, activity-based costing has been around for over a century. 'Activity-based costing' is just the latest name. Andrew Carnegie forged a profitable steel company amidst cutthroat competition as a result of understanding the full costs of his operations. His company measured the time and expense associated with single drops of welding solders. Not a drop was unaccounted for. By the early part of this century, "Taylorism" was sweeping industry to help establish work standards. The time to perform specific activities was measured, and expenses associated with these times were tracked.

The major difference today, however, is the intense focus on overhead. In the past, direct labor and materials represented over 90% of the cost of a product. This is no longer the case. Machines have replaced humans. Markets and competition are now global. SG&A can represent as much as 20% of revenues. Overhead can easily represent over 50% of the cost of a job.

How can ABC help distributors and wholesalers?

Winning bids and contracts has always been and will continue to be a crucial part of the distribution industry. As suppliers face more competition in their bid process, more attention will be placed on costs in order to stay competitive. With the myriad of choices that companies have today in selecting vendors to manufacture their products, why shouldn't they expect the lowest price. The problem is that companies cannot accurately predict the true cost of the job. They do a good job of estimating direct material and labor costs, but overhead is a mystery. Most distributors use overhead formulas based on the direct costs (e.g., 25% mark-up over materials; 50% of direct labor hours). Overhead can represent a significant portion of the total cost of the job. Guessing is dangerous. An arbitrary mark-up may win the troublesome jobs that require fire fighting by everybody in the company, and lose the easy jobs that can be completed ahead of schedule. One obvious approach is to continually strive to be the low-cost vendor. Multi-sourcing with different suppliers, maintaining an on-line library of existing designs, charging clients for changes to jobs, performing routine preventive maintenance, and rewarding employees for cost-saving ideas will all save money. Activity-based costing points out these opportunities and shows how activities can be streamlined and overhead reduced without hurting customer service. Activity-based costing can show you how to become a low-cost supplier.

In the distribution industry, waste comes in many forms - excessive selling time to win a small job, re-entering bid information into the order system, creating quotes that are identical to previous jobs, rush ordering supplies to meet the deadlines of a customer, carrying too much slow-moving stock, and performing unnecessary redundant quality checks. These activities all add costs, but are sometimes difficult to identify using traditional accounting or job-costing methods that track only direct labor and materials. Activity-based costing provides you with a method of capturing these expenses using your existing accounting system and assigning them to specific jobs. Your bids will be more accurate, taking into account these indirect expenses.

How can distributors get their ABCs?

Today, thousands of companies are implementing activity-based costing. Most of the Fortune 1000 use it today - companies like IBM, Kraft, Procter & Gamble, Xerox, Shell, Coors Brewing, GTE, Louisiana Pacific, General Electric, and Dow Corning. At an equal rate are the number of accounting firms and consultancies eager to assist the process.

Implementing activity-based costing can take as little as one month and cost $10,000. On the other extreme, some companies have ABC projects taking over two years at a cost of millions of dollars. Careful planning and advanced preparation is critical. For most companies, seeking the advice of an expert can facilitate the effort. Listed below are some questions that can help you decide if activity-based costing can help your organization.

Implementation Checklist:

1. Does your company track the operating (pre-tax) profitability of specific customers, products, and/or jobs?
2. Do you allocate selling, order processing, purchasing, and other indirect expenses to specific jobs based on actual wage?
3. Are sales force commissions based on operating profits? How about gross profits?
4. Do your overhead mark-ups vary by job?
5. Has your organization "fired" a customer for being unprofitable in the last year?
6. Has your organization eliminated product lines or services in the last year?
7. Do you regularly rate your vendors?
8. Do indirect expenses/overhead exceed 20% of sales?

Companies that employ activity-based costing can answer "Yes" to most if not all of these questions. If you believe your organization is a good candidate to implement activity-based costing, listed below are some preliminary guiding steps that will enhance the effectiveness and ultimate success of your effort.

STEP 1: DEVELOP YOUR TEAM. By the very nature of being a comprehensive analysis of your company, activity-based costing projects require broad participation of your company. You will need representation from accounting, MIS, sales, and key personnel from the operating departments. It also helps to have an outsider (e.g., local consultant) who can act as a facilitator.

STEP 2: DO YOUR RESEARCH. Activity-based costing is academic, and some of the leading spokesmen are college professors. It may be worthwhile researching the subject at local colleges or libraries, and disseminating the information to the core team. A solid understanding will be needed on 1) determining the resources (for starters try the departments); 2) identifying the core activities and driving the resource costs to these activities; and 3) driving the activity costs to specific cost objects (e.g., orders).

STEP 3: KEEP IT SIMPLE. Problems usually occur not because the data was unavailable, but rather because the team tried to use all the data. Distributors will be surprised how much information is tracked by their existing systems. The team needs to sift through the data and extract the true drivers of costs. For example, an architect's design time on a given job is influenced by quality problems that occurred on previous jobs at a given customer. But his time is even more influenced by the complexity of the current job, which can be measured more easily by the number of parts or the number of custom drawings.

If history is a lesson, activity-based costing will spread quickly through the distribution industry in very much the same way as JIT inventory and EDI are being implemented. The question most industry participants will have to ask themselves is whether it is worth the investment to lead the change, or are they content to feel their way with one eye shut.

About the author:
Steven Anderson is the Founder of both Acorn Systems and Oak Forest Ventures. The first was a software company founded in 1996 with offices in Houston and Philadelphia that specializes in activity based costing and other decision automation software tools that help boost the operating profits of their clients. The second is a solutions company founded in 2001 that specializes in capturing value through its proprietary methodology and solution. Mr. Anderson is an alumnus of Harvard Business School and McKinsey & Company. He also holds an engineering degree from Princeton University, and an accounting post-baccalaureate from University of Houston. He can be reached for advice at (484) 437-0953, or by e-mail at sanderson@acornsys.com. For additional information on this subject, visit Oak Forest at www.oakforestventures.com.