

Higher Profits, Increased Efficiency With Time-Driven Activity-Based Costing

Activity-Based Costing (ABC) is a technique which allows companies in all industries to determine the actual cost associated with each SKU in inventory, each service provided, and each customer you serve.

Businesses must fully understand the cost, time, and quality of organizational activities to achieve the major goals of process improvement and simplification. In order to increase business process efficiencies, documentation and activity understanding are key building blocks. This ability to place costs on activities and their outputs provides a clear metrics for improvement, whether for determining long-term improvement projects or for short-term success.

Steve Anderson, founder of [Acorn Systems](#) (a Houston-based software and consulting firm focused on applying the concepts of ABC to dramatically improve the profits of their clients), has co-authored a book, [Time-Driven Activity-Based Costing: A Simpler and More Powerful Path to Higher Profits](#), which was published by the Harvard Business School Press. Anderson paired up with Robert S. Kaplan, a noted guru in the field of activity-based costing.

Having struggled with ABC in a real-world environment, Anderson and his team developed a new approach to greatly simplify and increase the power of ABC. Their key innovation was the creation of time equations, which enabled business processes to be quickly, accurately, and efficiently modeled.

Retail Solutions Online's managing editor, Tony Paris, had a chance to catch up with Mr. Anderson to discuss: his view of ABC in today's global market; the key components organizations must focus on while using ABC; the steps for properly performing ABC; common mistakes Anderson sees when businesses try and tackle ABC; and much more. Enjoy the discussion.



Steven R. Anderson
Acorn Systems

Question. What is Time-Driven Activity-Based Costing (TDABC) and what is the difference between TDABC and traditional ABC?

Answer. TDABC is a derivative of traditional ABC that recognizes that most business processes rarely change (e.g. cashiering, inventory control, merchandising) and thus can be modeled by a "static" time equation. It also recognizes that the transaction data sitting in a retailer's ERP system (e.g. Oracle, SAP) does a good job of tracking what their staff worked on. When you marry these two things – static, detailed process time equations **and** dynamic, enterprise transaction data – you have dynamic process model for your entire company. The benefits over traditional ABC are many:

- **No longer have to do regular surveys.** Can you imagine how long it would take for a retailer like Target to collect survey data each month from personnel at all 1,500 stores?
- **The results reconcile with financials.** This helps gain buy-in to make changes.
- **Increasing accuracy is easy and does not increase model size.** This may seem like an esoteric point, but for one of our retail clients, the conventional model for their entire enterprise would have taken 500 Terabytes. The TDABC model was a fraction of that size and ran in hours.
- **Data is easier to access** because it the existing transaction files;
- **Processes are the focus, not activities.** This shrinks the model, making it more manageable and understandable
- **Capacity can be estimated.** This allows management to review the capacity utilization of each department (given actual transaction volume and mix) and adjust accordingly

Q. Why should I implement TDABC?

A. Before I answer that, we should start with why companies implement activity-based costing. The primary reason is to increase profits, through 1) lowering costs by identifying high cost activities; and 2) raising revenue by either raising prices on unprofitable products or charging more for services. But as we learned from the previous question, implementing ABC can be extremely difficult, drain scarce resources, and distract the organization. The time-driven version addresses many of these problems.

In very little time, and with very little effort, companies can now track which SKUs are losing money, and how to correct pricing and policies. If we stop there, TDABC has more than paid for itself. However, the new approach brings a lot more.

First, the model can track both capacity utilization and process efficiency – two high profile areas that were not touched by conventional ABC. Several of our retail clients have identified and captured millions of dollars operationally because they now know what parts of the organization could be right-sized without a detrimental impact on sales.

Second, companies can do predictive analysis with their TDABC models. Forecast data can be loaded in to determine the impact on cost, profit, and capacity.

Q. Does it take longer or shorter to implement TDABC?

A. The answer is both and that it depends. Building the initial model takes a little bit longer, because you are working with department personnel to create a credible time equation that needs to reconcile operationally. More time is spent on validation, by design, both operationally and financially so that the numbers are accurate and universally accepted by the company. However, the time to maintain the model is much shorter than traditional ABC. Once built, routine surveys are no longer needed, saving a great deal of time. And because the time-driven model incorporates an actual transaction model, the results are inherently more accurate, more useful (because of drill down), and more understandable.

Differences in implementation time also depend how big the model is. As you will read in Chapter 4 of the new book, for departmental models, the differences are negligible. However, as you model an enterprise, the timesavings from moving from activities to processes, and substituting time equations for interviews can be enormous.

Q. What are the critical success factors and pitfalls of implementing TDABC?

A. There are several key success factors that will maximize your TDABC efforts.

First, **TDABC models need good data.** Given their scalability and transaction-basis, TDABC models depend on accessing credible data files from the ERP to feed the time equations. From what we have seen in retailing, getting good data is not a problem.

Second, **TDABC benefits from executive leadership support.** Given their wider scope (enterprise-wide) and broader findings (capacity analysis), the available opportunities become more powerful. For retailers, this does not appear to be a problem. Understanding what is driving profitability is a top priority for many retailers.

Third, **departmental personnel need to get involved.** Modeling specific operational processes is difficult to do with outsiders. To get the time equation right, input from front-line personnel increases accuracy and buy-in.

Fourth, **processes need to be repeatable.** This enables them to be modeled by a time equation. For example, in some departments such as advertising, design and basic research, it is difficult to develop equations that model time because of the creative process required in these functions. These departments may require an alternative to a time equation.

The pitfalls relate to the above. If the company lacks good data, management support, departmental involvement, and repeatable processes, then the company may not be ready for TDABC.

Q. How will your new book better prepare businesses to effectively manage time-driven activity-based costing?

A. The book is divided into two parts. Part I goes into great detail about how TDABC works and how to implement the solution. We have also included some material that should interest retailers. It focuses on how to apply this new technique to do predictive analysis, budgeting, lean management, benchmarking, supply chain optimization, and mergers & acquisitions. For example, we explore how a private equity firm built a TDABC model of a retailer to identify profit opportunities up-front. It took only 3 weeks to build the model, and it resulted in identifying how to improve the profit from \$13 million to \$70 million. This success resulted in the firm raising its bid on the company from \$80 to \$180 million.

Part II provides 8 case studies of clients implementing the solution. We examine what worked and the problems they encountered. The case studies include companies from many industries.

Q. What are the major developments / improvements within the Performance Management field that you foresee in the near future and how does TDABC fit in?

A. One major development in Performance Management is to “democratize” the results – make them relevant to all parts of an organization. One of the pitfalls of Performance Management is that the audience is often at too high of a level to affect real change. By being built from the bottom up, TDABC can measure performance at both a high and low level. While executives are reviewing profitability trends and capacity utilization of different segments of their business, departmental personnel can evaluate the profitability of specific orders of a customer contract, or identify why a particular machine was operating at 30% capacity utilization.

A second major development is the ability to do predictive analytics. TDABC enhances this capability through the time equations, which enable a more accurate estimate the impact that change can have on an organization in terms of both cost and time.

Conventional performance management systems allow a company to guess the cost impact. For example, if the team estimates that it costs \$100 to set up a new customer, then the organization can predict that the cost of adding 1,000 new customers to be \$100,000. However, these systems failed to take into consideration whether there were enough resources to set up 1,000 customers. This is where TDABC comes to the rescue. By modeling process capacity, the team can now understand their resource limitations, and strategize a more robust solution.

Q. Once a company that is looking to rapidly improve its business processes and efficiencies contacts you, where is the best place for you to get started? Why?

A. We believe that most companies can benefit from the rigor of time-driven activity-based costing. After all, who wouldn't want to better understand their processes and capacity utilization of their personnel? Retail, in general, is a great fit given the sheer volume of products and transactions. Having said that, some retailers will be better fits than others, and we recommend that their first step is to assess that fit. Once you clear that hurdle, I would still recommend the pragmatic approach of starting with one division, or one store. This way, you can validate the value and gain organizational buy-in for a rollout across the organization.