

PRACTICAL APPLICATIONS OF ACTIVITY-BASED COSTING

Moving Beyond Cost Control to Support Business Management Decisions

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INTRODUCTION

Activity-based costing (ABC) and activity-based management (ABM) often are perceived as simply a route to cutting costs. In fact, the methodologies are capable of much more than that. In the following pages, you will read about several positive purposes to which you can apply ABC and ABM (ABC/M).

This is the third in a series of three papers developed to help you understand ABC/M. This paper discusses several types of applications that benefit from the use of ABC/M. The other two papers in the series are An Introduction to Activity-Based Cost Management, and Activity-Based Costing Implementation Issues.

Author: Richard Barrett

Contributors: Chris Grundy, MaryLouise Meckler, David Nguyen

Audience: CFOs, financial controllers, financial managers, and cost accountants

PRODUCT, CUSTOMER, AND CHANNEL PROFITABILITY

In our first paper, *An Introduction to Activity-Based Cost Management*, we saw that ABC/M systems use activity analysis to analyze and apportion costs based on what is actually happening within an enterprise, whereas traditional costing systems analyze overhead expenditure in terms of resources supplied. Applying ABC/M can reveal surprising truths about a business—even to those who previously thought they knew the business best.

If the factors driving cost are not fully understood, and if management operates on intuition rather than a reasoned and fair allocation of costs, then chances of misunderstanding the business are relatively high—and critical mistakes are much more likely. Companies that assume the best products are the ones they sell the most of tend to use sales volume as a key performance measure. But sales volume as a performance indicator can be misleading if all your sales efforts focus on well-established, high-volume products—especially if you don't consider how these products consume your company's activities.

You must understand the true profitability of your products, and similarly your customers and channels. Using ABC is one of the best ways to understand profitability.

CONTROLLING SHARED SERVICES

The phrase “shared services” describes facilities that organizations supply—usually in the form of services that departments provide for one or more internal customers. Examples of shared services include a personnel department responsible for recruitment, payroll, and other functions that reach across the enterprise, or an IT department, responsible for maintaining the enterprise’s technology infrastructure.

The IT department serves as an interesting example for a number of reasons. First, companies widely accept the IT department as a fundamental requirement—few companies would even consider trying to manage their businesses without an IT organization in place. Second, IT expenditure increases every year, as companies demand more of technology in an attempt to understand and manage an ever more complex and demanding business environment. Third, very few companies know what activities consume IT resources—yet without that knowledge, there isn’t much chance of understanding how IT spending adds value to the business.

ABC/M provides a way of gaining this understanding, and paves the way to charging IT services internally, setting targets for cost reduction (by eliminating wasted activity), and offering competitive services.

Main Activity	Cost \$'000	Activity Driver	Driver Volume	Rate Per Unit of Driver
Storing Data	50	Direct Access Storage Device Space Used (DASD)	10 GB	\$5,000/GB
Processing Transactions	150	MIPS used by application	2 million	7.5c/MIPS
Responding to Support Calls	125	Support calls received	9,000	\$13.89 per call
Maintaining the Network	75	Number of PCs and peripherals connected to network	65	\$1,154 per call
Undertaking Development Projects	100	Time spent on projects	5,000 hours	\$20/hour

Table 1. Rate Card for IT Services

Table 1 depicts a rate card—a very useful output from the ABC model. This is the result of an ABC exercise carried out for an IT department. The department’s main activities are described in the leftmost column, and the cost of each of those activities appears in the second column.

Each of the activities has an activity driver associated with it. For instance, the activity **Responding to support calls** is driven by **Support calls received**. Dividing cost by driver volume yields the rate per unit of driver. Because the IT department spent \$125,000 (cost) on responding to support calls, and support calls numbered 9,000 (driver volume), it's easy to calculate that each support call cost \$13.89.

This simple costing method provides a very good way for the IT department to work out how to cross-charge for support calls, and allows it to set up agreements with internal customers. The IT department can be confident that its costs will be covered, and there is transparency in the calculation, so the level of internal pricing can be justified. Furthermore, the rate card gives users the opportunity to seek the same service elsewhere—possibly from an external supplier—and offers a way of making users responsible for the amount of the internal resource that they use.

Although our example focuses on an IT department, the same approach holds for any other shared services department.

BUDGETS AND FORECASTS

In many organizations, the budget cycle is a laborious process that's carried out without much enthusiasm and without much structured thinking. Frequently, budgeting is a matter of negotiation between the finance director and departmental heads, with departmental heads basing their initial budgets on the previous year's figures, uplifting them across the board, and the finance director subsequently negotiating the cost budget down—perhaps without considering what actually comprises value-adding activities. Most budgeting exercises work this way—yet if the project isn't approached in a more scientific way, is it worth even doing?

In our paper Introduction to Activity-Based Costing, we discuss how activities consume resources. If your budget process doesn't recognize the link between activities and resource consumption, how can it possibly predict the resources your business will need? A better approach is to adopt an activity-based budgeting methodology—one that uses target-driver volumes and unit rates to calculate the resources necessary to achieve the level of business.

Suppose we're aiming for a 20% increase in sales, and a corresponding increase in the volume of orders. Sensibly, we don't try for an across-the-board cut in costs, but instead, we identify and reduce the effort expended on activities that add no value. For example, credit control and customer returns processes add no value, and typically are caused by process failure of one kind or another.

In Table 2, we've identified process improvements and the appropriate actions we can take to implement these improvements:

- One of our key components is found to cause most of the customer returns, so we devote effort to improving that component. Quality improvements are expected to reduce the number of return notes from the current volume of 2,400 to the projected volume of 1,500
- The credit control manager identified process improvements that reduce the cost per return note in credit control to \$30
- The credit control manager expects the number of late paid invoices to remain unchanged

The effectiveness of telephone chasing has been questioned. A more efficient way of achieving the same end has been suggested, with an external debt collection agency employed to contact the slow payers. This is reflected by a new activity, **Issue and monitor solicitor letters**, at a unit cost of \$5.

Table 2.
ABC Budget for
Credit Control Function

Activity	Cost \$'000	Activity Driver	Driver Volume	Unit Rate \$
Current Year Actual				
Print and Mail Invoices	6.0	No. of orders	5,000	1.20
Chase Customers on Telephone	32.0	No. of late paid invoices	700 700	51.43 51.43
Issue Credit Note	87.0	No. of return notes	2,400	26.25
Allocate Receipts	11.0	No. of orders	5,000	2.20
Plan, Organize, and Monitor Staff	4.0	Unallocated		
Total	140.0			
Next Year Budget				
Print and Mail Invoices	7.2	No. of orders	6,000	1.20
Chase Customers on Telephone	10.2	No. of late paid invoices	200	51.43
Issue and Monitor Solicitor Letter	2.5	No. of return notes	500	5.00
Issue Credit Note	45.0	No. of return notes	1,500	30.00
Allocate Receipts	13.2	No. of orders	6,000	2.20
Plan, Organize, and Monitor Staff	4.0	Unallocated		
Total	82.1			

Key driver volumes should be the starting point for an activity-based budgeting methodology. Once you've established driver volumes, calculate back to determine the resources you'll need to satisfy driver volume criteria, using either (a) the current actual unit rate, or (b) an amended unit rate that results from changes in the organization's processes.

PERFORMANCE MONITORING AND BENCHMARKING

Performance monitoring is another area in which ABC/M can help, using many of the same principles discussed in previous sections.

Measures such as profit, sales growth, and return on capital employed (ROCE) are certainly important indicators of corporate health for shareholders, but they aren't much help to managers, who have direct control over other measures—such as driver volumes and unit rates.

Suppose shareholders target an increase in profitability via overhead reduction. Managers who need to make this happen might achieve it by reducing the number of customer returns—because it's the number of returns that drive wasted activity.

This principle is illustrated in Figure 1. Moving further down the chain of management, the buying manager could set a target to reduce component faults. At each level, the target is based on something managers can actually influence and control in their own role.

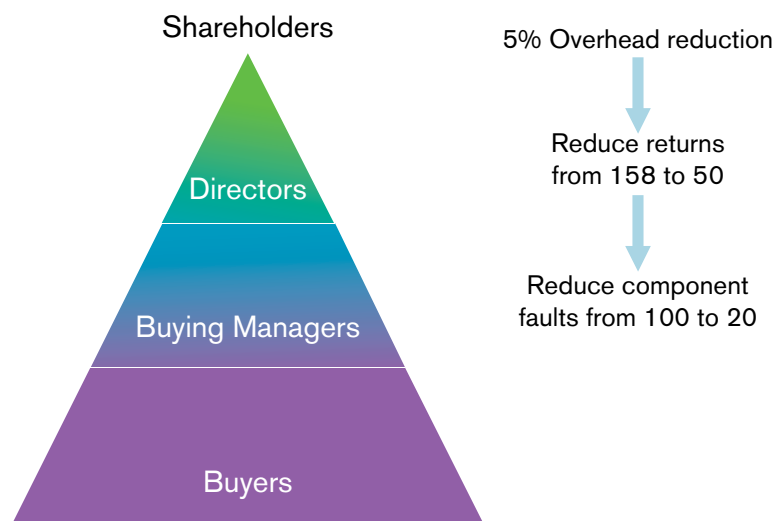


Figure 1. Using ABC/M performance measures, managers can influence and control performance

You can extend the use of the rate card and driver volumes for performance monitoring to benchmarking. As long as the activity dictionary is controlled properly—i.e., uses standard naming, has consistent and clear definitions, is the only dictionary applied across the enterprise, and is controlled at a single point—internal comparisons should be possible.

PROCESS IMPROVEMENT

It's not unusual for a business to try to improve competitiveness by offering its products and services at a lower price, while maintaining profit margins. Obviously, this is done by decreasing costs, but in too many organizations the cost-cutting is carried out by an edict from above to cut costs across the board, irrespective of the relative benefits to the company of different processes and activities. Cutbacks on activities that are vital to the health of the organization—activities such as product development, marketing, and training—are only carried out at great risk.

A better approach is to use ABC/M to analyze activities, determining which activities waste cost or which activities don't add value to the business. As part of this exercise, it's important to perform a value-added analysis. This involves looking at each activity and classifying it according to the benefit it confers on your organization. Exactly what classifications you use are up to you, but remember that the objective is cost reduction, and it's important that you identify wasted activity or process failure. You also should bear in mind that labeling activities as nonvalue-added—no matter what terms it's couched in—can create a defensive response from the people carrying out the activity, thus hampering constructive discussion.

Table 3 (below) depicts a value-added analysis with the following categorizations:

- Value-Added (VA)—an activity that directly adds value to the customer or the business, and which is the result of a getting things right first time
- Supporting (SUP)—an activity that doesn't add value directly, is required to support VA activity, or is necessary to remain in business
- Waste (WAS)—an activity that adds no value to the customer, or adds value but represents action taken because things didn't get done right the first time

Table 3.
Value-Added Analysis

Activity	Cost \$'000	VA	SUP	WAS
Print and Mail Invoices	7	7		
Chase Customers on Telephone	10		200	10
Issue Solicitor Letters	3			3
Issue Credit Note	45			45
Allocate Receipts	13	13		
Plan, Organize, and Monitor Staff	4		4	
Total	82	20	4	58

We consider any activity that's caused by not getting it right the first time as wasted—because, by definition, that activity should be avoidable. For instance, customer satisfaction may increase when the fault on a product is politely, quickly, and efficiently corrected, but the fault should have been avoidable in the first place—therefore, the activity of correcting the fault is wasted.

To further illustrate the concept of wasted activity, consider the activity **Chase customers on telephone**. Does this activity add value to the organization? After all, it results in money being collected by the company, and thus improves the company's financial position—doesn't it?

Actually, this activity should be classified as wasted. The customer failed to pay on time, and if we'd avoided this situation then, we wouldn't have had to incur the cost of the extra activity. A good test for wasted activity is to ask the question, "Would the customer be prepared to pay for this?" It's unlikely that a customer paying on time would be happy to pay for collecting debts from a bad customer.

Having identified the cost of process failure activities, it's useful to show the activities graphically, as in Figure 2. Process failure often results in a loop within a flow chart, and using the activity-costing analysis, these loops can be costed. It makes sense to direct your attention towards eliminating the more expensive loops.

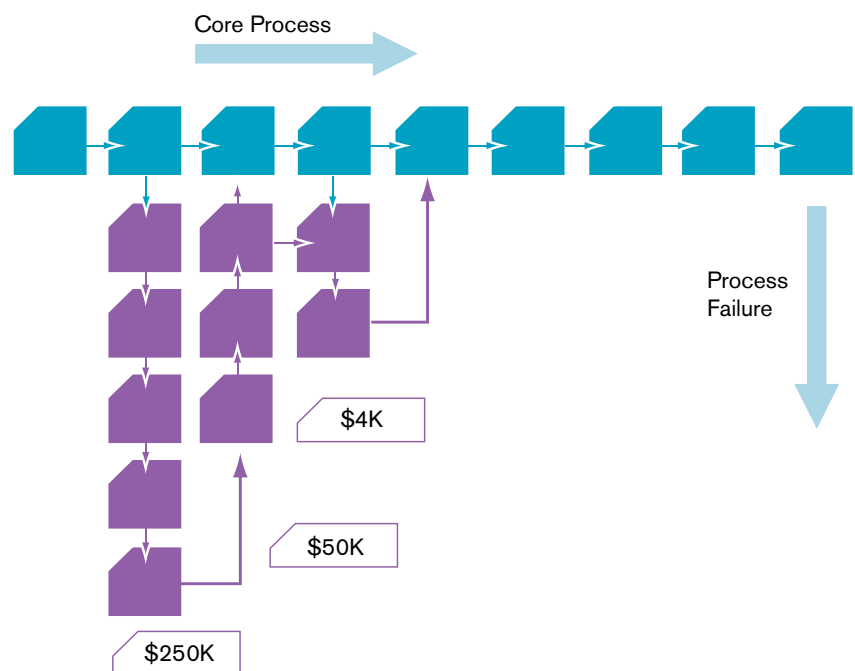



Table 3. Using activity-costing analysis, you can assess the cost of process failure and prioritize accordingly.



You should then look to the root causes of the wasted activities.

These usually will be the same as—or closely related to—the drivers used for activities in the ABC/M analysis. Once identified, reduction in the volume of root cause drivers will be very effective in reducing cost. Furthermore, performance targets can and should be set to monitor the performance of managers whose responsibility is to reduce each area of wasted effort.

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