APQC INTERNATIONAL BENCHMARKING CLEARINGHOUSE

# Activity-Based Management III:

## *Best Practices for Strategic Improvement*

CONSORTIUM BENCHMARKING STUDY

**BEST-PRACTICE REPORT**

AMERICAN PRODUCTIVITY & QUALITY CENTER
123 NORTH POST OAK LANE, HOUSTON, TEXAS 77024-7797 • 713-681-4020
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# Project Personnel

**Study Team**

Matthew Kolb, Arthur Andersen, LLP
Steve Player, Arthur Andersen, LLP
Robert Savage, Arthur Andersen, LLP
Dan Swenson, Professor, University of Idaho
Laura DeVries, APQC International Benchmarking Clearinghouse

**Subject Matter Expert**

John Miller, Arthur Andersen, LLP

**Contributing Authors**

John Miller, Dan Swenson, Laura DeVries

**Editor**

Susan Elliott

**Designers**

Connie Choate, Eric Heisserer

**Illustrator**

Greg Tucker

**MEMBERSHIP INFORMATION**

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# Contents of Study Report

# Sponsor Organizations

**Armstrong Laing**

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**Capital One Services**

**MetLife**

**Navistar International**

**Nestlé USA**

**PR Newswire**

**Puget Sound Naval Station**

**Trebor Bassett Limited**

**United Stationers**

# Partner Organizations

**Advanced Micro Devices**

**AlliedSignal**

**Applied Materials**

**Guardian Industries**

**H-E-B**

**Lower Colorado River Authority**

**Motorola**

**Navistar International**

**Owens & Minor**

**PHH Vehicle Management Services**

**Rocketdyne**

**United States Coast Guard**

# Executive Summary

In the past decade, organizations have increasingly recognized the value of activity-based management (ABM) and have undertaken ABM initiatives. According to a survey conducted by the Institute of Management Accountants in 1992, fewer than 100 ABM initiatives were under way at that time. By the end of 1998, more than 20,000 organizations were estimated to have initiated ABM implementations.

Beginning in 1994, the American Productivity & Quality Center (APQC) and its research partners have collaborated to search for and study best practices in the application, development, and use of emerging ABM information systems and practices. The first two studies (completed and published in July 1995 and September 1997, respectively) were both landmark works, and each made a significant contribution to the ABM knowledge base. This third study again is expected to make a continuing significant contribution to the ABM best practices knowledge base.

**Details about the three studies are as follows:**

- **Activity-Based Management I.** This was a broad-based study of best practices in the development, application, and use of ABM information systems. ABM I identified all of the known ABM implementations (approximately 3,500) and invited a subset of 550 organizations to participate in a comprehensive survey effort. One hundred sixty-seven organizations participated in the survey, and site visits were conducted at 15 best-practice partner companies. The study was led by recognized ABM experts including John Miller (project director), Richard Brown, John Campi, Dr. George Foster (Wattis Professor of Management at Stanford University), Larry Maisel, and Dr. Dan Swenson (University of Idaho). In addition, the Consortium for Advanced Manufacturing International (CAM-I), APQC's International Benchmarking Clearinghouse, Arthur Andersen, and more than 60 sponsor companies participated in this study.
- **Activity-Based Management II: Best Practices for Dramatic Improvement.** This was a more focused study of best practices in three specific areas, including ownership by operating personnel, systems development, and reporting. Jointly conducted with Arthur Andersen, Activity-Based Management II identified all of the known ABM implementations (approximately 10,000) and selected a subset of more than 500 organizations to participate in the study. One hundred sixty

organizations participated in the survey, and site visits were conducted at 13 best-practice partner organizations. ABM experts leading this study were John Miller (project director), George Foster, Randolf Holst, R. Steven Player, and Dan Swenson. In addition, APQC's International Benchmarking Clearinghouse and 26 sponsor companies participated in the study.

- **Activity-Based Management III: Best Practices for Strategic Improvement.** This study also was jointly conducted by APQC and Arthur Andersen. It focused on best practices in three areas, activity-based budgeting (ABB), using ABM information to enhance revenues, and measuring the benefits of the ABM implementation. Known ABM implementations have exceeded 20,000, and primary and secondary research were used to identify the subset of organizations invited to participate in the study, of which 12 became best-practice partners. ABM experts leading this study were John Miller (project director), Matt Kolb, R. Steven Player, Robert Savage, and Dan Swenson.

The three studies have been synergistic and designed to build upon one other. ABM I established the basic framework and general knowledge base including the widely used and frequently quoted ABM Best Practices Model and the ABM Value Cycle. Key findings focused on a knowledge base of generally accepted ABM methods, procedures, terms, techniques, and practices; use of cost-efficient, reliable, and user-friendly systems; and the necessity of management leadership, commitment, and priority. ABM II continued to build upon the basic ABM framework and general knowledge base and identified 13 key findings and best practices for ABM systems, reports, and transferring ownership to operating personnel. ABM III expanded the basic framework and general knowledge base and identified 11 key findings and best practices for activity-based budgeting, measuring the benefit of the ABM initiative, and using ABM information to enhance revenues.

(The reports from the first two ABM studies also are available from APQC at www.store.apqc.org or 800-776-9676 [713-681-4020 outside the United States].)

## KEY FINDINGS

This report contains detailed explanations of the key findings and significant contributions of this ABM best-practice study. The following key findings include best practices for each of the three areas of focus for the study.

### Revenue Enhancement

1. Customer profitability analysis is a dominant application.
2. Improvement efforts are directed at changing customer behavior.
3. Revenues are enhanced through advanced pricing models.
4. ABM is used at both ends of the supply chain to enhance revenues.

**Measuring Results and Benefits**

5. Measurement of results and benefits is application-specific.
6. Dollars is the metric of choice.
7. Cost savings and benefits are identified and classified by type.
8. Measuring the progress of the ABM initiative is becoming a priority.

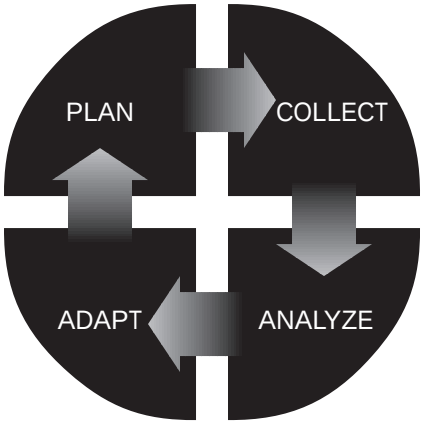
**Activity-Based Budgeting**

9. ABB is commonly used to establish standards.
10. Organizations align activities with strategic and operating plans.
11. Accountability occurs at the process level.

In addition to the specific areas of study, the project team expanded the scope of the study to identify and document the common themes and practices consistently identified and given priority by best-practice companies. So consistent were certain messages and best practices identified, they are presented and reviewed in this report as the Seven Commandments.

1. Management must display commitment and give priority to all phases of ABM initiatives.
2. Application of ABM must add value to the organizational strategy.
3. The ABM methodology must be applied consistently throughout the process.
4. Cost-efficient and reliable reporting systems must be employed.
5. ABM information must be linked to improvement initiatives, operating and strategic goals, performance measures, and the operating environment.
6. Linkage to incentives is required to demonstrate the importance of achieving set goals.
7. Training and education must be used throughout the various levels of the organization.

**APQC's Benchmarking Model: The Four-Phase Methodology**




## METHODOLOGY

Benchmarking is the process of identifying, understanding, and adapting outstanding practices to help organizations improve their performance. This study was conducted using the four-phase benchmarking model of the American Productivity & Quality Center's International Benchmarking Clearinghouse, as described below.

**Phase I: Planning**

In planning this study, the study team and project sponsors established the scope, key measures, and definitions. Next, a database of potential benchmarking partners was developed. With this framework, the screening questionnaires and the detailed questionnaire were designed and administered. The final step in planning was to identify contacts at potential partner companies.

#### Phase II: Collecting Data

The study team used a site visit discussion guide to collect data from the partner organizations throughout the benchmarking process.

#### Phase III: Analyzing and Reporting

The analyzing phase includes identifying practices that enable superior performance, identifying barriers to performance, and analyzing trends.

In addition, research reports are presented and sharing sessions on innovative practices are conducted in this phase.

#### Phase IV: Adapting and Improving

Adaptation and improvement from the best practices identified throughout a consortium study occur after the sponsor company representatives take the study learnings back to their organizations. Arthur Andersen and APQC staff members are available to help sponsors create action plans appropriate for their organizations based on the learnings.

### SUBJECT MATTER EXPERTISE

As is standard with American Productivity & Quality Center consortium benchmarking studies, subject matter expertise was employed throughout this study. John Miller of Arthur Andersen served as the study director and principal author of this report. Miller was also the director and principal author for the first two ABM studies completed and published in 1995 and 1997.

### OTHER RESOURCES

In preparing this third ABM Best-Practice Report, the research project team elected to summarize and report key findings in two ways. First is to report and summarize the key findings in the three specific and focused areas of study. In addition, this report summarizes and prioritizes the most important and significant learnings from the perspective of the three best-practice studies combined. In this larger endeavor we have used and given attribution to the following:

- Knowledge contribution from our 36 best-practice partners that have hosted site visits, the 327 organizations that have completed detailed and comprehensive surveys, more than 80 sponsors that have funded our research efforts, and the numerous subject matter experts that have contributed their time and participated in the research.
- Arthur Andersen ABM thought leadership. Arthur Andersen practitioners have released several books that provide specific case studies and best-practice examples of ABM implementations. *Activity-Based Management: Arthur Andersen's Lessons from the ABM Battlefield* (MasterMedia, 1995), edited by Steve Player and David Keys, provides a pragmatic case study-based view of ABM and the pitfalls that may arise. *Implementing Activity-Based Management in Daily Operations* (John Wiley & Sons, 1996), by John Miller, provides guidelines and best-practice exam-

ples from planning an ABM implementation to full integration. *Activity-Based Management in Wholesale Distribution: Winning the Profitability Battle* (National Association of Wholesale Distributors, 1998), by Steve Player and Jim Gibson, addresses best practices and case study examples for implementing ABM in distribution and logistics. *Cornerstones of Decision Making: Profile of Enterprise ABM* (Oak Hill Press, 1999), by Steve Player and Carol Cobble, provides best practices and case study examples for large-scale, enterprisewide ABM implementations.

- Participation and involvement of CAM-I, the world's leading cost management systems research consortium. Since the founding of CAM-I's Cost Management System (CMS) Program in 1986, Arthur Andersen's Advanced Cost Management Team members have participated in leadership roles for the CMS Program including chairing the overall program and leading the ABM Best Practice and Enterprise-Wide ABM interest groups.

## SUMMARY

When the third ABM best-practice study was initiated in August 1998, the intent was to again conduct a significant and comprehensive landmark work of value to managers and organizations that elect to implement ABM. The areas of focus—activity-based budgeting, measuring the results of the ABM initiative, and using ABM information to increase revenues—are specific and important areas to a successful ABM implementation.

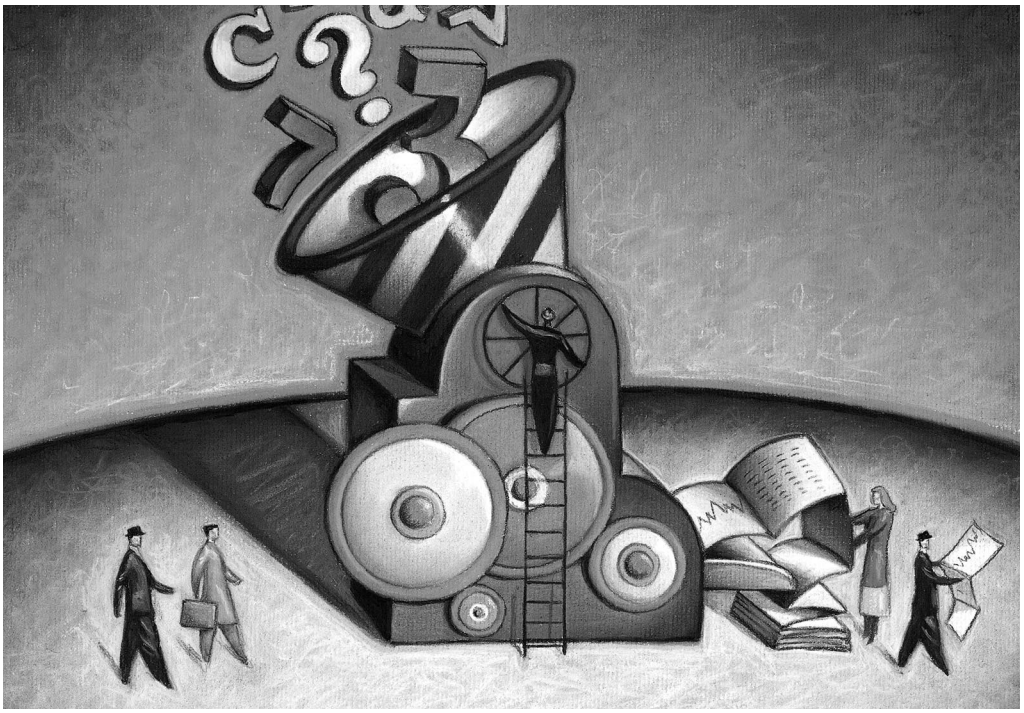
All of the best-practice partners were able and willing to share insights, experiences, methods, practices, and lessons learned that have made them successful. The contribution of knowledge went well beyond the three specific areas of study. Much of what we have learned continues to build upon the knowledge base developed in the first two studies. This contribution was so important that the project team expanded the scope of this report to include a summary of the Seven Commandments for success to include and leverage the work completed in the first two studies.

Consistent with the vision and mission of our earlier works, our objective was to continue to lay a foundation for others to build upon and improve. This final report fulfills that vision and mission.

# Key Findings

## Section One

# Revenue Enhancement



# Introduction

As the need for top-line revenue growth has become increasingly important as a management priority, activity-based management has developed into a powerful tool to help companies grow. Early indications have been very positive for companies taking this cost management approach to growing revenues. Previous activity-based management studies indicate that, for some organizations, revenue increases have exceeded 700 percent. To be successful, companies must focus on sustainable and profitable revenue growth, which requires accurate cost information. Revenue enhancement is driven by an organization's ability to identify, create, and retain profitable customers, segments, markets, or channels.

Leading organizations are using activity-based management to understand selling activities and costs associated with serving customer segments, to design menu pricing systems to bill for add-on services, and to analyze peaks and valleys in activity levels. Other companies grow revenues by identifying logical follow-up sales opportunities or by designing their services to perform activities more efficiently than their customers do. Still others are using cost management as a key tool in explaining how their products and services provide higher-value and lower-cost customers.

Products and services are provided to markets and customers through various distribution channels or contractual relationships. Because products, services, and customers consume resources at different rates and require different levels of support, the costs and profitability of different customers and market segments must be accurately determined and understood. Customer profitability calculations consider all costs to produce, design, support, distribute, and service individual customers, customer segments, customer groups, and distribution channels. This information is vital for selecting and pricing the individual and segmented markets in which an organization competes.

ABM systems and methods link the consumption of activities directly to those customers or customer groups that consume the activity.

# Finding 1:

*Customer profitability analysis is a dominant application.*

A clear learning for this study is that not all customers are created equally. Some customers are much more expensive to serve than others, and the costs associated with differing levels of service and support are quantified by using activity-based information. A better understanding of customer-specific costs enables companies to calculate customer profitability. Revenue, and especially profitability, is enhanced by focusing attention on the most profitable customers. ABM provides companies with tremendous opportunities to increase revenue and improve customer profitability.

**Guardian Industries:**

When Guardian Industries implemented activity-based management, it needed to determine which customers were profitable and which ones were not. Because Guardian had some customers, and in fact some plants, that were not profitable, it also needed to teach production and sales personnel the basics of activity-based costing so they could ask the right questions and obtain the appropriate information. Guardian's marketing organization in particular needed the ability to emphasize the most profitable product and customer segments. Customer profitability reports are now sent directly to sales personnel with requests for explanations on unprofitable accounts. While the company can now identify expensive (and unprofitable) customers, it needs better information to understand why the behavior of some customers makes them more expensive to serve and what actions it can take to change customer behavior.

**H-E-B:**

In addition to a supplier, activity, and product "view" of costs, H-E-B uses ABM information to prepare a customer view of costs. This view identifies the type of customer that is most profitable, as well as the various factors associated with this assessment, such as order size, method of payment, and delivery or "carry-out" activities. H-E-B would like to use its customer view of costs to calculate the profitability of customer groups and target its advertising and promotions to attract these customer groups to its stores.

**Owens & Minor:**

Industry cost reduction pressures prompted Owens & Minor (O&M) to enter the activity-based costing arena to determine which customers were most profitable and identify opportunities for improvement. This effort began with a study conducted on 90 percent of its customers. The study's results enabled O&M to understand the differences between profitable and unprofitable customers. This information was provided to division managers who then sought to either raise prices or change the behavior of unprofitable customers.

Profitability analysis at O&M is conducted primarily by customer. Customer costs include the labor costs associated with filling orders and delivering products. Interest costs are assigned to customers based on required inventory levels and outstanding accounts receivable. Different guidelines exist for each customer type (e.g., acute care hospitals, surgery centers, and physicians' offices), but all customers are expected to be profitable. The next generation of activity-based pricing will incorporate expenses associated with the supply chain. An analysis of the supply chain will direct customers to the most efficient suppliers determined by the activity-based studies.

**PHH Vehicle Management Services:**

At PHH Vehicle Management Services (PHH), the product profitability reports revealed acceptable profit margins with few exceptions. A large portion of PHH's cost structure, however, is unrelated to the products and services it offers. Therefore, to calculate customer profitability at PHH, the ABM model considers the size and complexity of customer orders. These factors impact "cost to serve" and dramatically affect customer profitability. Customer profitability at PHH varies considerably due to differences in customer demands on account executive time, differences in billing requirements (e.g., one consolidated bill for customers vs. many for multiple locations), and differences in use of high-cost services (e.g., expedited vehicle orders).

PHH now reviews customer profitability annually. For those customers that have unacceptable profit margins, steps are taken to either lower costs by changing customer behavior, or, as a last resort, increase selling prices.

# Finding 2:

*Improvement efforts are directed at changing customer behavior.*

ABM information is also being used to influence changes in customer behavior. Customer behavior drives many types of costs, including demands for special orders, special packaging, more frequent deliveries, faster deliveries, and other unique customer demands. Customer behavior is frequently identified as a cost driver (cause of cost) to organizations, and best-practice companies benefit by effecting positive changes in customer behavior.

**Guardian Industries:**

Some of Guardian's customers were placing special orders, which required Guardian to repackage its cartons of glass and ship partial containers. This occurred when glass was shipped in quantities inconsistent with plant packaging. Guardian used ABM to quantify the costs associated with partial orders, including the cost of repackaging and warehousing partial-case containers. Identifying the costs associated with these types of activities provided an opportunity to alter customer behavior in order patterns, which would ultimately save time and money for Guardian.

**Owens & Minor:**

At Owens & Minor, distribution fees are used to influence customer behavior. As customers become more efficient, distribution fees are reduced. Customers affect O&M's costs by the way in which they order products, including order size, order frequency, and order timing. Without involving the customer, O&M would find it very difficult to eliminate nonvalue-added activities from both parties.

A major obstacle for O&M in using ABM and activity-based pricing (ABP) is its customers' lack of understanding and willingness to change. Many customers are reluctant to change their buying behaviors, even though it would result in lower distribution fees. Nevertheless, customers that are willing to partner with O&M receive lower prices through ABP, thus increasing their competitiveness in the marketplace. The other customers may actually incur increased distribution fees.

Customers using ABP have optimized their orders and delivery schedules. By finding a balance among the cost of delivering, receiving, and storing products, the customer can reduce its distribution fees from O&M and its own materials handling costs. As a customer reduces its transactions with O&M, its internal activities are often reduced as well, thus freeing up resources and material storage space that is either redeployed or eliminated.

# Finding 3:

*Revenues are enhanced through advanced pricing models.*

ABM revenue-enhancement initiatives emphasize expanding services to existing customers through menu-based pricing and service-level pricing. Sophisticated and powerful customers recognize that buying behavior, order frequency, support requirements, frequency and method of delivery, and other specific or unique requirements are cost drivers to their suppliers. These customers expect to benefit when they save their suppliers money, and they are unwilling to subsidize their less efficient competitors (share the savings). Increasingly customers are requiring alternative pricing models and the unbundling of services and costs instead of a one-price-fits-all approach.

**Owens & Minor:**

ABM forms the basis for Owens & Minor's activity-based pricing program called CostTrack. This is a program in which customers choose from a menu of services to create a distribution program to meet their needs. The more efficient customers are able to enjoy lower distribution fees, and the less efficient customers are offered assistance to make improvements. O&M is now incorporating nonvalue-added activities into its menu of services and working with customers to eliminate activities that are not essential.

All prices for services provided by O&M are based on ABC studies, which are performed at each of its distribution centers. Services are priced at cost plus an agreed-upon profit margin. O&M uses an open-book policy to share cost information with its customers. Both O&M and its customers have incentives to reduce costs—the savings are shared. The basis for activity-based pricing is an open, honest approach where the customer participates in cost-reduction efforts and thus enjoys lower distribution fees.

**PHH Vehicle Management Services:**

PHH Vehicle Management Services uses activity-based cost information to reflect the cost of customer purchasing behavior, service levels, volume, and other require-

ments in its pricing model. Essentially PHH uses menu-based pricing to price a package of product and service offerings to its customers. Salespeople use "what if" techniques to experiment with different service/price combinations. This process enables Sales and Client Relations to negotiate with clients on level of service, not just price.

# Finding 4:

*ABM is used at both ends of the supply chain to enhance revenues.*

ABM is also used to improve the effectiveness of both ends of the supply chain. By working closely with internal and external suppliers, companies reduce time to market and design and manufacturing costs. Similarly, customers benefit through improved efficiencies. Suggestions for improvements in product design, distribution methods, and delivery quantities can save money for both parties, leading to a better business relationship and increased sales.

**AlliedSignal:**

Traditionally, AlliedSignal's Electronic and Avionics Business Unit has purchased from a large number of vendors. ABM identified the number of non-certified vendors as a cost driver, and it sought to reduce the number of suppliers in general and the number of non-certified suppliers in particular. Some "low-cost" suppliers were actually quite expensive due to quality problems, inspection requirements, and other activities associated with maintaining a large supplier base. The Electronic and Avionics Business Unit now uses a supplier scorecard to reward or penalize suppliers for certain activities and processes. Furthermore, AlliedSignal issued long-term purchase agreements for low-volume, low-cost items. It also implemented a Supplier Administered Materials Management system in which a supplier cost-effectively manages part of AlliedSignal's inventory, places purchase orders, and takes ownership of this process.

**H-E-B:**

H-E-B's Supplier View uses ABM information in high-level meetings with suppliers to evaluate profitability issues and identify partnering opportunities to reduce supply chain costs. Activity-based costing information has allowed these high-level meetings to become more fact-based. This approach associates costs with activities, thus providing an objective measure to evaluate changes in customer behavior. Based on the Supplier View, ABC has enabled H-E-B to move its conversations with suppliers away from hardball negotiations with winners and losers to partnering agreements where both parties benefit.

H-E-B is attempting to drive costs to the appropriate cost object. One example is the efficiency with which trucks are loaded. If a truck can be backed to a loading dock, a pallet of product removed, and that pallet taken to the storeroom floor, each party has minimal costs associated with this delivery. If, however, a truck makes a delivery that takes more time to unload due to packaging, and the product requires storage in the warehouse with only partial delivery to the shelves on the storeroom floor, the delivery has higher associated costs. Upon identification of these activities and associated costs, H-E-B provides incentives to suppliers to package and load more efficiently and rewards them for such actions.

**Owens & Minor:**

Owens & Minor determined that by involving the customer in the evaluation of supply chain costs, the customer better understands the true cost of products and services. Through activity-based pricing, manufacturers reward O&M with lower prices due to improved efficiencies in the procurement process. For example, an order verification program has been implemented in which vendor shipments are not counted when delivered but put directly on shelves based on quantity stated as shipped by the vendor. Some of these savings are passed on to O&M's customers.

As part of the supply chain analysis, O&M may take on activities that had been performed by a customer, such as inside delivery. If O&M's costs for this activity are lower than its customer's, it will either take over the service or work with the customer to help the customer become more efficient. Similarly, O&M's costs will be compared with its suppliers' costs for potential efficiencies. For example, manufacturers gain efficiencies by shipping in full truckloads to O&M. O&M will then break down the loads into smaller orders and incorporate them into its customers' regularly scheduled deliveries.

**Rocketdyne:**

Innovative defense contractors are maintaining, and even expanding, their Department of Defense business by responding to cost pressures. Through supply chain management, analysis, and benchmarking of internal processing costs, Rocketdyne reduced costs and substantially increased its share of government contracts for small, medium, and heavy rocket orders.

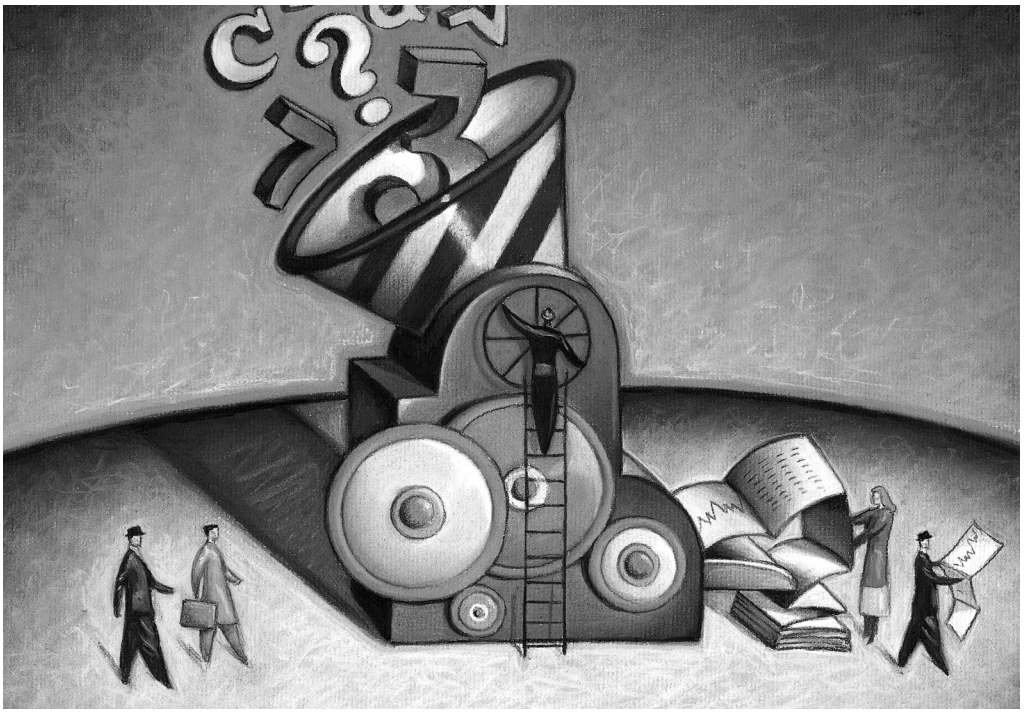
The purchasing function partnered with suppliers to form an "extended enterprise." Non-strategic components and services were evaluated using a "make-versus-buy analysis," and these components and services were outsourced if they were not competitive internally. Product designers worked closely with both internal and external suppliers early in the product development cycle and developed a "design-for-manufacturability" mentality. Suppliers were given cost-reduction goals and were asked to suggest ways in which costs could be removed from the supply chain.

# Summary

The best-practice organizations have discovered many ways to enhance revenue. By using activity cost information, they have improved their competitiveness by developing more cost-effective supply chains. The best-practice companies have also implemented advanced pricing models, such as menu-based pricing, to develop a very attractive (and profitable) customer base. These pricing models have also served to change customer behavior by rewarding customers that reduce transaction costs. And finally, customer profitability analysis ensures best-practice companies that they are targeting profitable customers as they enhance revenues.

## Section Two

# Measuring Results and Benefits



# Introduction

Management expects to see benefits in terms of value for its investments in information systems. Value is achieved when users of ABM information are able to make better decisions and improve the effectiveness and efficiency of organizational processes and activities. While organizations can accurately define the resources and costs associated with implementing activity-based management, valuation of benefits requires added discipline and effort. This area of the report examines the procedures, methods, practices, and policies organizations use to value investments in ABM information systems.

# Finding 5:

*Measurement of results and benefits is application-specific.*

The degree to which best-practice partners measure the results and benefits of their ABM initiatives is application-specific and dependent upon how ABM is positioned within the organization.

- When positioned as a replacement for existing cost management and cost accounting systems, the cost to develop, install, and maintain the ABM information system is seen as a cost of doing business. No separate measure of benefit is required.
- When used as a replacement for the organization's product or customer pricing system, the cost of developing this tool is viewed as a cost of doing business. No separate measure of benefit is required.
- When used as a replacement for, or a supplement to, a major component of the organization's performance measurement system, the cost of the ABM tool is viewed as a cost of doing business. No separate measure of benefit is required. (In this context, ABM might even be used to measure the benefits of other improvement initiatives.)
- When ABM is positioned as a methodology to control costs and achieve process improvements, the cost of implementing ABM is often measured and evaluated against the benefits of the ABM system.

**AlliedSignal:**

AlliedSignal's Electronic and Avionics Business Unit replaced its traditional management accounting system with ABM to measure product profitability for commercial products. This information is used for product mix decisions and to focus sales and marketing efforts on the most profitable products.

For AlliedSignal's Federal Manufacturing and Technologies Business Unit, individual product cost information is incidental. This unit operates a Department of Defense facility under a cost reimbursement contract based on total spending, not individual product costs. Its management accounting system was replaced by ABM, and it now tracks performance based on activity costs. ABM costs serve as a baseline from which to chart continuous improvement goals over time.

Another of AlliedSignal's sites used ABM to improve the procurement process. One activity, change PO and expedite, was identified as being too costly. The projected savings associated with improving the change PO and expedite activity far exceeded its costs, thus justifying the activity analysis. A team used activity information to attack the problem, search for the source of waste and variation, and develop action items to improve the process.

**PHH Vehicle Management Services:**

PHH Vehicle Management Services replaced its management accounting system with ABM. ABM is currently used to analyze product and customer profitability, calculate incentives for salespeople, control costs, and price customer contracts. As PHH's management accounting system, ABM is pervasive throughout the entire PHH organization, and a separate measure of benefit is not required.

# Finding 6:

*Dollars is the metric of choice.*

The metric of choice to measure the results and benefits of ABM is dollars. While additional metrics include quality, cycle time, and capacity utilization measures, in most cases these measures are converted and expressed in dollars.

**AlliedSignal:**

Across AlliedSignal's Aerospace and Defense Division, ABM supports corporatewide "lean" manufacturing, supply chain management, and six sigma quality initiatives. Activity-based information is used to measure the results of these improvement initiatives. Regardless of the application and use of ABM, the leadership at AlliedSignal favors the quantification of benefits in financial terms. For example, AlliedSignal's Maintenance Sales and Services Unit emphasizes speed and turnaround time. Downtime is extremely expensive for its customers, and ABM is used to calculate the cost of delays, constraints, and bottlenecks.

**Motorola:**

Motorola calculates return on investment (ROI) to measure the overall performance of ABM. Improvements in cycle time, equipment utilization, on-time delivery, and quality are linked to this dollar-based financial measure. Nonvalue-added activities are tracked in dollars using a simple pie chart. These costs are categorized according to activity area, such as setup, waiting time, and inspection. A spreadsheet is then prepared to break down each category into specific activities. One or more cost drivers are identified for each activity, and action items are established to reduce or eliminate each cost driver.

**Owens & Minor:**

Owens & Minor maintains a high-volume business with slim profit margins, and the results of its customer profitability initiative are measured in dollars. Due to intense competition, customer contracts are priced aggressively, and O&M expenses must trend downward to correspond with lower customer charges for activity fees. Variance reports are prepared monthly to compare actual activity costs with standards.

# Finding 7:

*Cost savings and benefits are identified and classified by type.*

Best-practice companies recognize that cost savings and improvements take many sizes and shapes. In some cases, savings are quantifiable and occur immediately (in the current period). Other benefits are difficult to quantify and build up over time. For example, some efficiency improvements do not result in an immediate financial benefit for the current period, but instead create additional capacity. This additional capacity can then be sold or deployed to increase revenue. And finally, some savings might be described as "avoided costs." Costs are avoided when equipment and plant utilization improves, allowing expansion without requiring the purchase of new capital assets.

**AlliedSignal:**

AlliedSignal categorizes cost savings as being "hard" or "soft." Cost "take-outs" that eliminate costs in the current period are considered hard savings. Soft savings do not result in immediate cost reductions. Instead, soft savings either occur in a future period or create additional capacity. For example, soft savings occur when current resources (generally people or equipment) are used more efficiently and effectively and therefore can be redeployed to expand capacity, avoid a new hire, or defer an equipment purchase.

# Finding 8:

*Measuring the progress of the ABM initiative is becoming a priority.*

Best-practice companies view metrics used to evaluate the *progress* of an ABM implementation as being different from the metrics used to measure the results of an ABM initiative. Until recently, using metrics to evaluate the progress of an ABM implementation was not considered to be a critical practice or even important to achieving a successful ABM initiative. More often, project managers used time and milestones as the basis for monitoring the progress and skill (and best practice) of ABM implementations. Progress is often measured based on deviance from plan, and typical project management metrics include percentage complete, estimate to go, resources consumed as compared to budgets/estimates, and percentage of deliverables meeting due dates.

For large-scale, enterprisewide ABM implementations undertaken by Fortune 500 companies, it would be impractical and difficult to evaluate and monitor the progress of the ABM implementation with only time- and milestone-based project plans. This is especially true where management of divisions, operating units, components, or business units within the organization is proceeding along its individual time line. To measure the overall progress of large-scale ABM implementations, best-practice companies use a consistent set of metrics to plan the ABM implementation and to evaluate progress.

**Rocketdyne:**

Rocketdyne is experimenting with a "spider chart" to benchmark its tenets of target costing. If Rocketdyne has made little progress on a given tenet of target costing, it scores its results near the center of the spider chart. Conversely, if it has achieved world-class status, its score is at the outermost point on the chart. The spider chart is very powerful as a tool to vividly illustrate the status of a target costing initiative. Similarly, the spider chart could be used to illustrate the status of an ABM initiative. The benchmarks on the spider chart could be internal (set against other sites within a large corporation) or externally applied to other companies.

## Bonus Best Practice: DEPARTMENT OF DEFENSE

In response to reduced budgets and other changes, since the late 1980s the Department of Defense (DoD) has undertaken significant efforts to implement ABC/ABM at many of its components (Army, Navy, Air Force, Marines, Defense Logistics Agency). A key part of the DoD strategy for implementing ABM across the entire department is to provide basic policy and guiding principles but allow the components to set pace and path, operate within a common framework, use a consistent set of metrics to monitor progress, and share knowledge and training. To monitor the progress of key dimensions of the ABM initiative at various levels within the components, the DoD developed a PC-based software tool and a spider diagram. Each of the dimensions of performance is presented below.

### Activities

- **Breadth**—extent to which the full scope of enterprise functions have been defined and agreed upon by stakeholders. Determined by the percentage of enterprise functions for which this holds true.
- **Depth**—level of detail, breakdown, or indenture to which the activities and transactions of an enterprise have been defined and agreed upon by stakeholders. Determined by leadership's estimate of total number of levels needed to identify all activities of the enterprise and the number of levels that have been defined and agreed upon by stakeholders. Stated as a percentage to normalize for variation in size and complexity of enterprises.
- **Standardization**—extent to which common terms have been agreed upon for common activities within the enterprise, including output metrics. Determined by the percentage of defined activities for which this holds true.
- **Discipline**—degree to which functions, processes, and activities, as defined, are kept current as executed. Determined by the percentage of defined activities in compliance with standard criteria agreed upon by leadership.

### Compilation of Data

- **Enterprise Cost**—degree to which total cost of the enterprise is known and understood in terms of the activities that create or consume cost. Determined by the percentage of total enterprise cost that has been correlated to defined activities.
- **Activity Costs**—degree to which costs of activities are known. Determined by the percentage of defined activities for which costs are known.
- **Output**—degree to which activity performance levels (output) are known. Determined by the percentage of defined activities for which this is known.
- **Drivers**—degree to which activity cost drivers are known. Determined by percent of measured activities for which cost drivers have been identified.
- **Special Decisions**—degree to which some decisions have been driven by ABC/ABM. Determined by leadership's estimate of the percentage of total cost that has been affected by some decisions (routinely or not, operational or strategic), wholly or partially based on ABC/ABM information.
- **Operational Decisions**—degree to which operational decisions are being routinely driven by ABC/ABM. Determined by leadership's estimate of the percentage of total costs that are being routinely affected by operational decisions essentially based on ABC/ABM information.
- **Strategic Decisions**—degree to which strategic decisions are being routinely driven by ABC/ABM. Determined by leadership's estimate of the percentage of total cost that is being routinely affected by strategic decisions essentially based on ABC/ABM information.

### Data Integration and Availability

- **Cost**—degree to which activity costs are routinely available. Determined by the percentage of defined activities for which costs are routinely available within normal management systems (automated or not).
- **Output**—degree to which activity performance (output) is routinely available. Determined by the percentage of defined activities for which performance data are routinely available within normal management systems (automated or not).
- **Drivers**—degree to which status of persistent activity cost drivers is routinely available. Determined by the percentage of persistent cost drivers, whether internally or externally controlled, for which status is routinely available.

# Summary

The value and benefit of ABM can only be measured based on people's decisions, actions, and improvements using the knowledge and information that is provided. Because ABM information is an enabler that drives and supports improvement initiatives and decision making, it can be difficult to measure and quantify separately. The results of some decisions can be quantified while others cannot. Activity-based management measures the result of decisions and improvements, regardless of acronym or who gets credit. While some organizations view ABM as a methodology for improvement, most do not. Most view it as a tool and enabler to improvement and decision making.

Attaching a dollar sign to the measure increases the usefulness of the information tool. Organizations and the people who manage them are bottom-line driven, and dollars are the language of business and the measurement of choice. The dollar sign seems to inspire people to action. The ABM information system tracks improvement and changes and provides process-based cost and operating information to judge the result of decisions and improvement efforts.

Best practices for performing meaningful cost-benefit analyses are still emerging. Measuring and qualifying the value of information is difficult. Because activity-based management information drives and supports all improvement initiatives, regardless of acronym, it can be difficult to quantify its role in improvement and decision-making. Furthermore, most organizations have no current procedures, practices, or methods in place for measuring and qualifying benefits from their existing financial and operating systems.

## Section Three

# Activity-Based Budgeting

# Introduction

Planning and budgeting have been viewed as key strategic areas where the finance department can add value within companies. Yet traditional budgeting processes often failed due to the focus on resource imports rather than on the activities necessary to manufacture products and provide services. To compensate for the weaknesses in traditional systems, leading companies are expanding their activity-based systems to include activity-based budgeting. Specifically, ABB uses an activity-based management model as a framework to translate output demands into the activities that are necessary to create the outputs. This activity information also forms a basis for resource demands. In addition to more accurately forecasting resource levels, in terms of indirect overhead costs, ABB anticipates the impact of process improvements on resource utilization. Due to its ability to measure change, activity-based budgeting is also useful in evaluating the impact of new investments.

Through activity-based budgeting, the ABM system is linked to operations control, giving managers the financial information they need to budget appropriate capacity levels for future periods. Budgetary planning and control is the most visible accounting information in the management control process. By setting standards of performance, and providing feedback by means of variance reports, the financial control system supplies much of the fundamental information required for overall planning and control.

Effective enterprisewide budgeting is difficult to attain. Budgeting—the process of allocating resources to selected activities or programs—is troublesome and difficult due to its comprehensive and collaborative nature. The search for better methods of allocating and controlling the expenditure of funds has always been of importance to managers.

An important feature of ABB is its ability to strengthen the interface between planning and budgeting. ABB allows planning guidelines to be broken down to the level of detail needed to provide objectives for individual activities within the business. Management must have the right tools to help it deploy increasingly scarce resources

in today's rapidly changing business environment. The tools must not only help allocate the optimum level of resources that the business needs to achieve its vision, goals, and objectives; they must also establish cause-and-effect relationships between activities and costs to garner maximum support from management.

ABB is a planning and budgeting tool that works by revealing the linkages between the activity drivers. The output from the strategic plan must be a set of coherent objectives for each business unit. These include such financial objectives as the level of operating profit as well as the other critical business aims that vary with each organization. An activity-based budget also provides the foundation for more effective control.

# Finding 9:

*ABB is commonly used to establish standards.*

A significant difference between traditional and activity-based budgeting is the historical orientation of cost information. With traditional budgeting, managers often use some variation of taking last year's actuals, plus an inflation factor, to arrive at future budgets. Adjustments due to changes in head count, promotions, capital spending, wish lists, and negotiated fudge factors also affect the budget as it moves up and down the organization. With ABB, managers start by identifying the outputs, service levels, and activities required to support the sales volume or other requirements of the business.

These differences are also apparent in the development of standards derived from the budgeted spending levels. It is not unusual for an organization to use historical cost as the basis for developing manufacturing cost standards. These historical costs often include rework, duplication, waste, redundancy, and other nonvalue-added costs and activities. Accepting historical costs as a given and reflecting these costs in standards are inconsistent with the themes and practices of ABB.

Standards derived from the activity information in ABB target nonvalue-added costs for elimination and reflect the effect of capacity and output requirements. Activity-based budgets focus on future competitive position and use historical cost only as a baseline for improvement and goal setting.

Customer costing might be performed on an annual basis to develop manufacturing product standards as well as service standards.

**Advanced Micro Devices:**

Advanced Micro Devices (AMD) uses information generated through the activity-based costing system to build standard costs. AMD begins with the actual cost of the process flow—from raw wafers to finished products. The additional information that is needed to establish standards includes:

- ABC actuals,
- future production plans,

- future capital spending plans, and
- projected process improvement.

Standards are used to project the cost of running a particular technology during a particular period of time. The standards model allows AMD to measure the profitability of particular business segments.

**Lower Colorado River Authority:**

Budget standards are developed for activities, products, and services, thus facilitating a horizontal, cross-sectional view of the business units. The standards are compared with actual costs on a monthly basis to support variance analysis.

Transactions at the Lower Colorado River Authority (LCRA) are recorded to accounts in the general ledger that can be rolled up vertically (department, site, and business unit) or horizontally (activity, product/service, and business unit). This gives the ledger enough detail for external financial reporting requirements, e.g., GAAP or FERK, or internal management reporting requirements, e.g., by department, activity, or project.

# Finding 10:

*Organizations align activities with strategic and operating plans.*

Strategic plans are the blueprints of management's longer-term vision for creating value for the organization's shareholders. Operating plans represent a more detailed set of short-term objectives, priorities, actions, and responsibilities that are necessary to fulfill the strategic plan. Activities represent the work effort required to make plans and goals a reality. Activities bridge the strategic and operation plans and link the daily work performed in offices, factory floors, service centers, and support areas to strategic goals and operating objectives.

Best-practice organizations align and link activities to strategic and operating plans by identifying and directing those activities and actions necessary to accomplish the organization's short- and long-term goals. Strategic and operations planning are improved by specifically identifying those critical activities that must be performed to meet the objectives. Those organizations that align their activities with strategic and operating plans report more understandable and actionable plans.

**Lower Colorado River Authority:**

At the Lower Colorado River Authority, ABB ties directly to the five-year strategic plan. ABB provides a horizontal, cross-sectional view of the business. The budgets are also much more narrative and help explain how the business units' goals and objectives will be obtained. Each line of business prepares a detailed monthly report for management, and ABB facilitates a product/service profitability view of the business with cost allocations that are defensible. Previously, the business units were arbitrarily assigned a portion of overhead that was described as a "big glob." Now overhead cost tracing is defensible, and customers of the LCRA are more likely to pay for their fair share of services. The LCRA is a quasi-governmental nonprofit organization, and without accurate cost tracing, cross-subsidization occurs among customers.

**Navistar International Corporation:**

At Navistar, ABM links strategy to financial and operational metrics and makes management accountable for financial and operational results. For example, activity analysis measures the extent to which processes support Navistar's strategic plans. Activities are assigned a value from one to 10 based on how well they support strategic goals, and they are plotted in a four-box matrix along activity cost and strategic fit dimensions. High-cost/low-fit activities are targets for process change or redesign to control costs. High-cost/high-fit activities are targets for process improvements. Low-cost/high-fit activities are emphasized and enhanced, and low-cost/low-fit activities are not a priority for process improvement or change.

**Rocketdyne:**

Rocketdyne defines strategic manufacturing processes as those in which it has a core competency. Rocketdyne will exploit its core competencies but consider non-strategic manufacturing and support processes as candidates for outsourcing. By emphasizing its core competencies, Rocketdyne bolsters its competitive position. By opening up its non-strategic processes for outsourcing, it will reduce manufacturing costs and further improve the competitiveness of its products.

**U.S. Coast Guard:**

The U.S. Coast Guard uses activity-based budgeting to align activities with its business goals and objectives. (Performance goals that are objective, quantifiable, and measurable are mandated by the Government Performance and Results Act.) For the Coast Guard, activities were used to link resource spending with the services it provides, defined as waterways management, commercial vessel safety, search and rescue, maritime law enforcement, marine environmental response, and port safety and security. Prior to ABB, when Congress changed resource allocations to the Coast Guard (e.g., budget cuts), the budgeting system did not demonstrate the effect of changed (reduced) allocations on the services it provides to the public. ABB illustrates causal links between resource spending and service outputs.

# Finding 11:

*Accountability occurs at the process level.*

The involvement of individuals from a process level in organizational budgeting activities often provides a realistic perspective of overall corporate costs. This active involvement from a process level creates an avenue from which to give and receive input on operations, as well as establish a mechanism for process-level accountability. Active involvement at the process level also provides for a type of performance measurement at various levels—information at the lower levels can be evaluated with respect to overall organizational performance, thus providing a pragmatic view of where costs are incurred.

**AlliedSignal:**

At AlliedSignal's Federal Manufacturing and Technologies Division, a great deal of communication occurs between the lead manufacturing team and the ABM team. The ABM information is process-based, and it results in a natural linkage by causing the system to function using a "pull" type of approach. The manufacturing teams actually control the reports they receive through their information requests.

**Lower Colorado River Authority:**

Prior to ABM and ABB, the monthly management accounting reports were prepared at the corporate level. Managers at the process level had little visibility with regard to performance reports. Process-level managers now use activity-based information to prepare detailed monthly variance reports for each line of business. The business unit reports are then reconciled with the corporate-level summaries.

**Rocketdyne:**

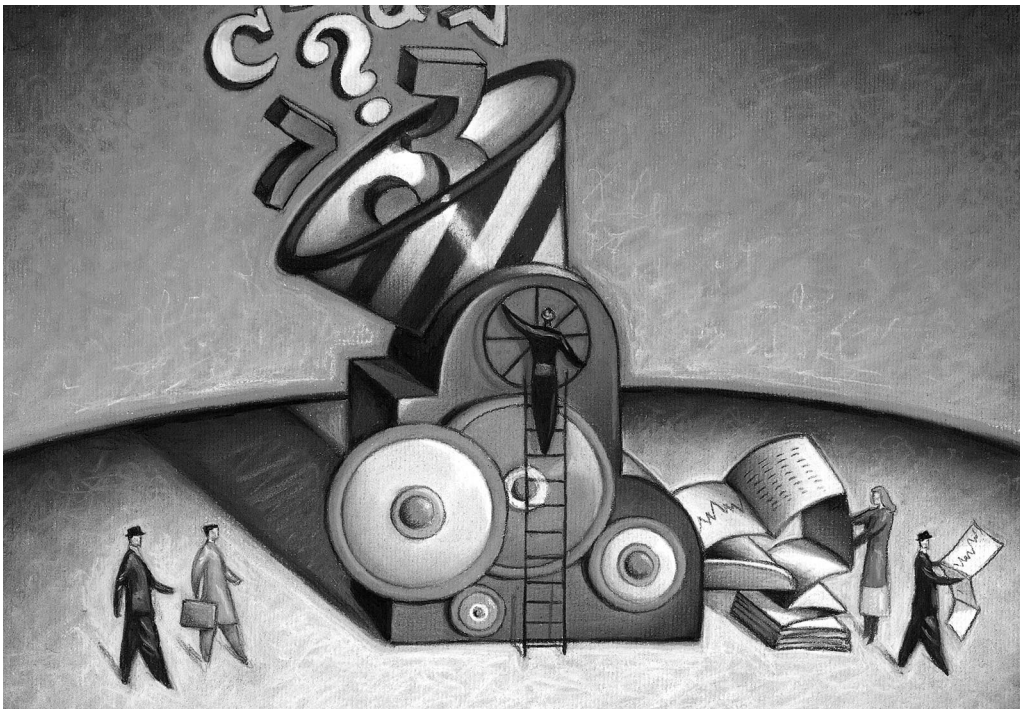
Rocketdyne applies participative budgeting throughout its organization. Prior to ABM, few management accounting reports were available for cost control purposes. As the departments have become involved in ABM, they are more self-directed and more actively involved in budgeting at a lower level of detail. Budgeting at the process level requires greater involvement from department-level individuals. At Rocketdyne, ABB has also created greater interest in monitoring department-level budget variances.

# Summary

Activity-based budgeting is still a relatively new and emerging application of activity-based management. Nevertheless, several of the best-practice organizations have successfully applied important components of a fully operational ABB system. For example, best-practice companies are using ABB to establish budget standards, which are then used to analyze variances based on actual spending. ABB also helps link budgeting to strategic and operational planning. This linkage is often missing from traditional budgeting approaches. Finally, ABB establishes accountability at the process level of the organization. Accountability at the process level encourages participative budgeting and allows operating managers to see a cause and effect between the activities and processes they control and their effect on costs.

# General Best Practices

## *The Seven Commandments*



# Introduction

Since the first ABM best-practice study site visit (Current Inc. in Denver on February 15, 1995) until the most recent (Rocketdyne in Huntington Beach on November 6, 1998), a total 45 site visits have been conducted with organizations that have achieved success with their ABM implementations. These best-practice partners have included distributors, manufacturing companies, service organizations, government agencies, utilities, retail sales organizations, telecommunications, banks/financial institutions, and government contractors. Applications of ABM have ranged from product costing, updated annually for a manufacturing plant, to full-scale enterprisewide implementations covering the cost structure of an entire organization, updated continuously. The base of knowledge is tremendous.

While the focal areas for the individual site visits varied among the three ABM best-practice studies, the process of collecting data and information for each study remained consistent. Survey questionnaires were designed to collect quantitative and qualitative ABM data from the study partners and others who completed the surveys between the studies. In addition to collecting information about each specific area of study, site visit guidelines and questionnaires were designed to review and discuss key success factors, systems and methods of reporting, and general application and use. Each of the site visits provided contributions to the ABM knowledge base that went well beyond the specific area of study and focus.

Common themes and practices have been apparent. Over and over again, best-practice partners were heard emphasizing similar requirements and experiences of success. This section of ABM III identifies those key messages heard from partners in all three of our studies. So consistent were certain messages and best practices that they have been identified as the Seven Commandments for a Successful ABM Initiative.

# Commandment 1:

*Management must display commitment and give priority to all phases of ABM initiatives.*

Leadership commitment and support were identified as critical to a successful ABM implementation at every best-practice organization visited. The ABM initiative at each of the best-practice companies had high visibility and was important to the success of the organization. Commitment and priority were not only stated in words but also demonstrated through the commitment of resources and, more importantly, the commitment of time required to be involved in the ABM initiative. Management is deemed to include senior-level executives, operating and line managers, and cost center or department function managers.

Management commitment and priority were visible and evidenced by the scope and breadth of training, level of ABM sponsorship, frequency of involvement by senior and operations managers, and the percentage of total personnel involved in the implementation. Management commitment and priorities were also evident by managers' involvement in the design of the information system, including the accuracy of information, level of detail and specificity, frequency of update, ease of access and use, flexibility, and relevance.

Initially, top managers' commitment and priority are based on an expectation that the ABM information system will be of value to them. As a condition of continued management support and ownership by operating personnel, the ABM information system must demonstrate value and results to the organization. Ultimately, proof of value must be demonstrated at the user level.

**COMPANY EXAMPLES**

- At Guardian, successful ABM implementations were followed by a one-day visit from the president. (If the president did not visit the site, it was a sure sign that ABM was less than successful.)
- At PHH, the president "kicked off" the site visit by describing how ABM was used as a pricing model and to measure client profitability.

- At Owens & Minor, a pilot was initiated that identified a large percentage of non-value-added activities, and the process was then rolled out to two additional locations. The model was revised and quickly rolled out companywide.

# Commandment 2:

*Application of ABM must add value to the organizational strategy.*

ABM initiatives are successful when they meet the information needs of the organization. Information becomes valuable when it contributes to meeting the goals, objectives, and strategy of the organization. The failure to link the ABM system to what is important to the organization is fatal. "Build it and they will come" is an untruth in the ABM world. The ABM system must be built to meet the specific needs and priorities of the organization. The purpose and expected results must be articulated, documented, and understood.

As a basic starting point, any major initiative like ABM must contribute to the overall mission and vision of the organization to have value. ABM applications must be linked to the organization's needs and requirements so that efforts expended to implement the ABM system are valuable and useful.

ABM information has wide use and applicability, and it has been used to determine product and customer profitability, benchmark, measure performance, cut costs, increase revenue, budget, evaluate outsourcing alternatives, consolidate operations, price/bid products and services, and affect strategy deployment. Priorities, needs, and requirements at individual organizations are widespread and vary considerably over time. Best-practice companies align the use and application of ABM information to meet a business need and to solve a business problem.

The key considerations in the design of the activity-based management information system are its purpose and use. Best-practice companies design systems to meet the needs and requirements of the organization. The purpose and use of activity-based management drive the amount of information, frequency of collecting information, and level of detail that must be obtained.

Best-practice companies have learned that single and limited use of ABM information fail to capture the full value and potential of the activity-based information. Therefore, these organizations consistently seek new applications and uses of activity-based management information. This migration is important because limited applications and uses may not provide sufficient value to offset the cost of implementing and maintaining the system.

Another perspective is expanding access to ABM information. Best-practice companies understand that value is created when people use ABM information to improve organizational performance. As more people use the ABM information its value increases. Therefore, focused efforts are undertaken to increase the base of people who access and use ABM information.

There are many alternatives to the design and installation of the activity-based management information system. Alternatives are driven by the purpose and use of the activity-based information and are application-specific. The resource commitments from information services that are necessary to support the activity-based management implementation are also application-specific. Regardless of the application, best-practice organizations are involving their information services and technical personnel early in the activity-based management system design and development stages.

**COMPANY EXAMPLES**

- PHH Vehicle Management Services needed a measure of client profitability. By keeping its "eye on the prize," it maintained organizational support for the ABM initiative (from the president down). PHH's initial ABM effort failed. Its second attempt was successful due to less complexity and a focus on specific organizational objectives.
- One AlliedSignal site tailored its ABM effort to purchasing without implementing a full-blown ABM project. Activity costs were used to map out and measure the cost of purchasing activities. This approach enabled management to focus on reducing high-cost purchasing activities and resulted in a 30 percent savings.

# Commandment 3:

*The ABM methodology must be applied consistently throughout the process.*

Best-practice organizations consistently apply generally accepted ABM methods, procedures, terms, techniques, and practices. Examples include consistent use of the CAM-I Cross, common activity dictionaries, and generic process classification frameworks. Best-practice companies emphasize consistency and comparability in report design. Collection and analysis of cost information from multiple units is done systematically. Investments made in common definitions, common coding, and consistent application of cost assignment methods help to ensure comparability.

Consistent application of ABM methodology also includes the consistent use of data collection techniques and methods. Eight specific data collection methods (manager interviews, worker interviews, questionnaires, existing documentation, observations, group-based interviews, work measurement, and process mapping) were identified as being used extensively by best-practice companies.

**COMPANY EXAMPLE**

- At AlliedSignal, even though its commercial plants and Department of Defense-owned facility produce different products, a common activity dictionary enables management to benchmark the cost of similar processes across its plants.

# Commandment 4:

*Cost-efficient and reliable reporting systems must be employed.*

Best-practice organizations place significant emphasis on installing the systems, procedures, and methods necessary to collect and report activity-based information on a regular basis. The frequency of ABM reporting ranges from providing continuous, real-time results to periodic reports. In general, those organizations using ABM information in the applications of process improvement, cost control, and performance measurement tend to report information more frequently and in more detail than those organizations using it for pricing and product/customer profitability analysis. Either way, the systems, procedures, and methods that are installed are responsive to the needs of the users, easy to update and maintain, reliable, and cost efficient.

There are at least two reasons why best-practice companies significantly emphasize systems and reporting. The first reason is cost. ABM systems that are not integrated and linked to the existing financial and operating systems of a company can be difficult and expensive to operate and maintain. Another reason is timeliness. Linkage to and integration with existing systems ensures that ABM reports are available at the same, or nearly the same, time as other financial and operating reports.

**COMPANY EXAMPLE**

- Guardian's initial ABM effort was successful, but it was overly dependent upon IS support. By moving to off-the-shelf software, the ABM models became more functional and required much less involvement from Information Systems.

# Commandment 5:

*ABM information must be linked to improvement initiatives, operating and strategic goals, performance measures, and the operating environment.*

The value and benefit of ABM information to the organization are created when the information is used to make better decisions and improve processes. Operating personnel are more likely to embrace tools that help them achieve their goals. Therefore, best-practice organizations recognize that linking ABM information to goals, objectives, and improvement initiatives is vital. In best-practice companies, this is often a formal linkage to the strategic and operating goals of the organization.

Linkage to operations goals, objectives, and improvement initiatives includes the practice of leveraging the existing knowledge base. Written and documented procedures, job descriptions, policies, historical reports and studies, public financial reports, and internally developed flowcharts are just part of the vast treasure chest of information that can be used to leverage the existing knowledge base.

To support benchmarking and improvement initiatives, best-practice companies design ABM systems such that users can compare relevant internal cost and performance measures with externally driven targets. Managers use comparative reports to set standards or highlight gaps for a particular activity or business process. System design specifications take into account such techniques as benchmarking, best practices, and target costing.

**COMPANY EXAMPLE**

- At AlliedSignal, ABM is a measurement tool that is seamlessly integrated with other initiatives to the extent that team members often do not know whether the project is ABM, Lean, Six Sigma, or something else.

# Commandment 6:

*Linkage to incentives is required to demonstrate the importance of achieving set goals.*

Linkage to compensation is included as a best practice primarily because of its perceived importance to achieving a successful ABM implementation. Best-practice organizations unanimously agree that compensation drives behavior in an organization and that linking behavior to compensation is a powerful tool. While most of the best-practice companies indicate this linkage as a priority for the future, few have linked ABM information to compensation in a meaningful way. Examples are rare, and best practices in this area are evolving and emerging.

Activity costs and activity outputs, taken together, are a basic and fundamental measure of productivity and efficiency. In many respects, compensation has always been linked to activities. Perhaps the most obvious link is with the employee's paycheck. Paychecks are compensation to employees for performing business activities. Activities that require significant skill levels or specialized knowledge have always been compensated at higher levels than activities requiring minimal knowledge or skill.

**COMPANY EXAMPLES**

- Each year PHH Vehicle Management Services uses ABM to analyze the profitability of each large client. To shift the focus of salespeople from the "top line" to the bottom line, a significant portion of their compensation is now based on client profitability.
- Owens & Minor has a bonus program for employees that is tied to quality measurements based on cost of activities eliminated.

# Commandment 7:

*Training and education must be used throughout the various levels of the organization.*

Every best-practice partner in each of the three ABM best-practice studies has identified training and education as key success factors. The reason for their importance is simple: ABM information is only of value when people use the information to improve processes and make better decisions. Most people are unfamiliar with and inexperienced in the use of process-based information. Similar to training on the use of traditional financial information, personnel must be trained in the application and use of ABM information.

Best-practice companies tend to be learning organizations that initiate extensive broad-based and multilevel training and cross-functional learning. Training beyond the traditional financial organization structure is evident, and even required, to enable individuals to apply activity management skills in specific work situations. The commitment to and emphasis on training and education was also demonstrated in the wide use of ABM knowledge centers or centers of excellence.

**COMPANY EXAMPLES**

- At AlliedSignal, ABM helped operations understand how to measure the cost savings associated with improvement initiatives.
- At Guardian and PHH Vehicle Management Services, ABM training helps those involved understand business operations, often leading to career advancements.
- At PHH Vehicle Management Services, new hires in the sales department must have a quantitative background so they can use ABM information to help clients manage costs.

# Summary

The Seven Commandments are interrelated and cannot exist independent of one another. Management commitment and involvement are conditioned by demonstrating value, and prioritizing the application and use of ABM information to meet a business need or solve a business problem is necessary to demonstrate value. A consistent ABM methodology is a necessary and important part of making the ABM application successful. Systems and methods are required to report ABM information and make it available for use. Once the information is available, linking ABM to improvement initiatives, operating goals, and performance measures gives individuals a reason to use it. Linkage to compensation gives them the incentive to use the information, and training and education provide the knowledge and skills to use the information effectively.

# Partner Organization Profiles

# Advanced Micro Devices

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 13,000

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Products are very similar

**Annual Costs:**
More than $2 billion

**Customer Diversity:**
Customers are very similar

**Primary ABM Applications:**
Make vs. buy analysis, cost estimation, product profitability analysis, process improvement, performance measurement, inventory evaluation

**Years of ABM Use:**
More than five years

**Results of ABM Efforts:**
Extensive reductions in manufacturing costs; significant improvements in make vs. buy decisions; moderate process improvements in operating and support departments

**ABM Reporting System:**
Developed ABM software internally; ABM is mostly integrated with product costing systems, partly integrated with operating systems (e.g., MRP); system features include good accessibility of cost and operational data, drill-down capabilities, and tracing costs to activities; the ABM system is updated quarterly, with reports available online

**ABM Linkage to Business Environment:**
ABM is linked slightly to other improvement initiatives; ABM performance measures are, for the most part, embraced and perceived as fair

**ABM Resources:**
Adequate use of activity dictionary, ABM library, and training manuals; adequate training in accounting and finance, ABM concepts, and ABM applications

**Barriers to Implementation:**
Limited resources have been a significant barrier; lack of sponsorship, systems issues, and other initiatives being more important are significant barriers

# AlliedSignal

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 15,000

**Scope of Implementation:**
Multiple facilities

**Product/Service Diversity:**
Products are very diverse

**Annual Costs:**
More than $3 billion

**Customer Diversity:**
Customers are diverse

**Primary ABM Applications:**
Make vs. buy analysis; product profitability analysis; service profitability analysis; process improvement; cost control; business process re-engineering; performance measurement; benchmarking

**Years of ABM Use:**
Three years

**Results of ABM Efforts:**
Extensive changes to operating and support processes; moderate changes to product mix, sourcing decisions, and performance measures; significant improvements in operating costs; moderate improvements in product development costs, product sourcing costs, and operating support costs

**ABM Reporting System:**
PC-based commercial ABM software is used; ABM is partly to mostly integrated with internal financial reporting and operating systems, e.g., MRP; system features include ease of use, flexibility, accessibility of cost and operational data, and tracing costs to activities; reports are available either monthly or quarterly and most are available online

**ABM Linkage to Business Environment:**
ABM is linked extensively to total quality management, business process re-engineering, just-in-time manufacturing, and supply chain management; ABM performance measures are moderately embraced and, for the most part, perceived as fair

**ABM Resources:**
An ABM competency center reporting to the CFO; extensive use of an activity dictionary, an ABM resident expert, visits to other sites, and meetings with ABM user groups; good use of training manuals, an ABM library, and training in ABM concepts and applications

**Barriers to Implementation:**
System issues are a very significant barrier; managers unwilling to change and limited resources are moderate barriers

# Applied Materials

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 12,000

**Scope of Implementation:**
Multiple facilities

**Product/Service Diversity:**
Products are very diverse

**Annual Costs:**
More than $3.5 billion

**Customer Diversity:**
Customers are moderately diverse

**Primary ABM Applications:**
Product costing; cost estimation; pricing models; product profitability analysis; customer profitability analysis; process improvement; cost control

**Years of ABM Use:**
Three years

**Results of ABM Efforts:**
Changes to pricing strategies, new product introductions, operating processes, and the annual budgeting process; improved product and customer profitability, product development costs, and reduced operating costs

**ABM Reporting System:**
PC-based commercial ABM software is used; ABM is integrated with internal financial reporting, product costing, and operating systems; ABM system features include ease of use, flexibility, accessibility of cost and operational data, and drill-down capabilities

**ABM Linkage to Business Environment:**
ABM is linked to continuous improvement, employee empowerment, and supply chain management

**ABM Resources:**
Training manuals, an activity dictionary, an ABM resident expert, visits to other sites, and meetings with ABM user groups

**Barriers to Implementation:**
Lack of sponsorship; managers unwilling to change; lack of perceived benefits

# Guardian Industries

**Industry Group:**
Process manufacturing

**Number of People:**
More than 14,000 worldwide

**Scope of Implementation:**
Multiple facilities

**Product/Service Diversity:**
Products have some diversity

**Annual Costs:**
More than $1.5 billion

**Customer Diversity:**
Customers are diverse

**Primary ABM Applications:**
Product costing; product profitability analysis; customer profitability analysis; inventory valuation

**Years of ABM Use:**
More than eight years

**Results of ABM Efforts:**
Changes to product and customer mix; changes to pricing strategies; significant changes to operating departments and performance measurement; significant improvements in product and customer profitability; moderate improvements in operating and support costs

**ABM Reporting System:**
PC-based commercial ABM software is used; the ABM system is fully integrated with internal financial reporting and product costing; system features include accessibility of cost and operational data, drill-down capabilities, quality of cost and operational data, and tracing cost to activities

**ABM Linkage to Business Environment:**
ABM is linked extensively to business process re-engineering, reorganization by process, and benchmarking and is generally linked to total quality management and employee empowerment; ABM performance measures are, for the most part, embraced and perceived as fair

**ABM Resources:**
An ABM competency center reporting to the CFO; extensive use of an activity dictionary, an ABM resident expert, and basic training in accounting and finance; good use of training manuals, an ABM library, meetings with ABM user groups, and training in ABM concepts and applications

**Barriers to Implementation:**
Managers unwilling to change and limited resources are moderate barriers

# H-E-B

**Industry Group:**
Retail groceries

**Number of People:**
More than 42,000

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Products are very diverse

**Annual Costs:**
More than $6 billion

**Customer Diversity:**
Customers are very diverse

**Primary ABM Applications:**
Cost estimation; pricing models; process improvement; cost control; business process re-engineering; supply chain analysis

**Years of ABM Use:**
Four years

**Results of ABM Efforts:**
Significant change to product mix; moderate changes to operating and support processes; moderate improvements in product profitability; some improvement in operating and support costs

**ABM Reporting System:**
PC-based commercial ABM software is used; system features include ease of use, flexibility, drill-down capabilities, quality of cost and operational data, and tracing costs to activities; the ABM system is updated semiannually, or as needed; reports are, for the most part, available in hard copy only

**ABM Linkage to Business Environment:**
ABM is generally linked to supply chain management and moderately linked to total quality management and business process re-engineering; ABM performance measures are embraced completely and perceived as fair

**ABM Resources:**
An ABM competency center reporting to the CFO; extensive use of an activity dictionary and an ABM resident expert; good use of training manuals, visits to other sites, and meetings with ABM user groups; adequate training in ABM concepts and applications

**Barriers to Implementation:**
Other initiatives being more important; limited resources and technical issues have been a significant barrier; managers unwilling to change has been a moderate barrier

# Lower Colorado River Authority

**Industry Group:**
Utility

**Number of People:**
More than 1,700

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Services provided are diverse

**Annual Costs:**
$450 million

**Customer Diversity:**
Customers served are diverse

**Primary ABM Applications:**
Product costing; make vs. buy analysis; cost estimation; process improvement; cost control; budgeting

**Years of ABM Use:**
Three years

**Results of ABM Efforts:**
Moderate to significant changes in operating and support departments; moderate to significant changes in the budgeting process; moderate changes in customer support; moderate improvements in support costs

**ABM Reporting System:**
Custom-designed ABM models integrated with ERP software; ABM is partly integrated with internal and external financial reporting, as well as product costing and operating systems; the ABM reports are updated monthly and are available online

**ABM Linkage to Business Environment:**
ABM is linked moderately to total quality management, employee empowerment, and reorganization by process

**ABM Resources:**
Used frequent visits to other ABM sites

**Barriers to Implementation:**
Limited resources, systems issues, and other initiatives being more important have been significant barriers

# Motorola

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 50,000

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Products are similar

**Annual Costs:**
More than $7 billion

**Customer Diversity:**
Customers are similar

**Primary ABM Applications:**
Product costing; cost estimation; pricing models; process improvement; cost control; benchmarking

**Years of ABM Use:**
Three years

**Results of ABM Efforts:**
Significant changes within operating departments; moderate changes to product pricing and product mix; moderate changes to customer support; moderate changes to performance measures; significant improvements in product development costs; significant improvements in operating and production costs

**ABM Reporting System:**
PC-based commercial ABM software is used; the ABM system is partly integrated with internal financial reporting, product costing, and operating systems; system features include ease of use, drill-down capabilities, and accessibility of cost and operational data; the ABM reports are updated monthly and are available online

**ABM Linkage to Business Environment:**
ABM is linked slightly to other improvement initiatives; ABM performance measures are embraced and perceived as fair

**ABM Resources:**
ABM competency center reporting to the controller; good use of an ABM resident expert, an activity dictionary, training manuals, visits to other sites, meetings with ABM user groups, and training in ABM concepts and applications

**Barriers to Implementation:**
Systems issues have been a significant barrier; lack of sponsorship and managers unwilling to change have been moderate barriers

# Navistar International Corporation

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 15,000

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Products are diverse

**Annual Costs:**
More than $5 billion

**Customer Diversity:**
Customers are diverse

**Primary ABM Applications:**
Product costing; make vs. buy analysis; cost estimation; product profitability analysis; process improvement; cost control; supply chain analysis; performance measurement

**Years of ABM Use:**
Three years

**Results of ABM Efforts:**
Changes have been made to pricing strategies, product mix, sourcing decisions, operating and support departments; product profitability has improved, operating and support costs have declined, and product sourcing costs have fallen

**ABM Reporting System:**
PC-based commercial ABM software is used; ABM is integrated with internal financial reporting, product costing systems, and operating systems; system features include ease of use, flexibility, accessibility of cost and operational data, drill-down capabilities, quality of cost and operational data; the ABM reports are prepared quarterly and are available online

**ABM Linkage to Business Environment:**
ABM is linked to total quality management, supply chain management, and benchmarking

**ABM Resources:**
An ABM competency center reporting to the controller; extensive use of training manuals, an activity dictionary, an ABM resident expert, visits to other sites, meetings with ABM user groups, and training in ABM concepts and applications

**Barriers to Implementation:**
Systems issues and limited resources have been moderate barriers

# Owens & Minor

**Industry Group:**
Distribution

**Number of People:**
More than 3,000

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Products are diverse

**Annual Sales:**
More than $3 billion

**Customer Diversity:**
Customers are very diverse

**Primary ABM Applications:**
Product costing; cost estimation; pricing models; customer profitability analysis; process improvement; cost control; supply chain management

**Years of ABM Use:**
Seven years

**Results of ABM Efforts:**
Changed pricing strategy, product mix, sourcing decisions, and operating and support processes; improved product and customer profitability and reduced operating and support costs

**ABM Reporting System:**
PC-based commercial ABM software is used; ABM is integrated with operating systems, product costing systems, and internal financial reporting; system features include ease of use, flexibility, accessibility to cost and operational data, and drill-down capabilities; ABM reports are updated monthly and available online

**ABM Linkage to Business Environment:**
ABM is linked to total quality management, employee empowerment, supply chain management, and benchmarking

**ABM Resources:**
Training manuals, an ABM dictionary, an ABM resident expert, visits to other sites, and meetings with ABM user groups

**Barriers to Implementation:**
Limited resources; managers unwilling to change

# PHH Vehicle Management Services

**Industry Group:**
Service

**Number of People:**
1,100

**Scope of Implementation:**
Enterprisewide

**Product/Service Diversity:**
Services are diverse

**Annual Costs:**
Approximately $100 million

**Customer Diversity:**
Customers are diverse

**Primary ABM Applications:**
Product costing; cost estimation; pricing models; product, service, and customer profitability analysis

**Years of ABM Use:**
Four years

**Results of ABM Efforts:**
Extensive changes to pricing strategies; significant changes to product and customer mix; moderate changes to performance measures, employee reward and recognition, and the annual budgeting process; extensive improvements in product/service profitability and customer profitability

**ABM Reporting System:**
Custom-designed ABM models using Microsoft Access and Excel; the ABM system is fully integrated with product costing and partly integrated with budgeting systems; system features include ease of use, flexibility, drill-down capabilities, quality of cost and operational data, and tracing costs to activities; the ABM reports are updated either monthly or annually and are available in hard copy only

**ABM Linkage to Business Environment:**
ABM is linked moderately to employee empowerment and slightly to benchmarking; ABM performance measures are completely embraced and, for the most part, perceived as fair

**ABM Resources:**
An ABM competency center reporting to the vice president of business planning and analysis; extensive use of an ABM resident expert, training in ABM concepts and applications, and basic training in accounting and finance

**Barriers to Implementation:**
System issues have been a significant barrier; limited resources have been a moderate barrier

# Rocketdyne

**Industry Group:**
Fabrication and assembly

**Number of People:**
More than 1,000

**Scope of Implementation:**
Single facility

**Product/Service Diversity:**
Products are diverse

**Annual Costs:**
More than $500 million

**Customer Diversity:**
Customers are similar

**Primary ABM Applications:**
Target costing; make vs. buy analysis; process improvement; cost control

**Years of ABM Use:**
Four years

**Results of ABM Efforts:**
Significant changes to operating and support departments; significant reduction in operating and support costs; some use for performance measurement

**ABM Reporting System:**
PC-based commercial ABM software is used; system features include ease of use, flexibility, accessible cost and operational data, drill-down capabilities, and accurate cost and operational data; the ABM reports are updated monthly and are available online

**ABM Linkage to Business Environment:**
ABM is linked extensively to total quality management, business process re-engineering, and employee empowerment; ABM is linked moderately to benchmarking and

reorganization by process; ABM performance measures are moderately embraced and, for the most part, perceived as fair

**ABM Resources:**
An ABM competency center reporting to the vice president of operations; good use of activity dictionary, an ABM resident expert, and visits to other sites; other resources include an ABM library

**Barriers to Implementation:**
Limited resources, lack of perceived benefits, and other initiatives being more important have been significant barriers

# U.S. Coast Guard

**Industry Group:**
Government agency

**Product/Service Diversity:**
Similar

**Scope of Implementation:**
Functional directorate

**Customer Diversity:**
Diverse

**Primary ABM Applications:**
Process improvement; strategic and operations planning

**Years of ABM Use:**
One year

**Results of ABM Efforts:**
Good to moderate for process improvement

**ABM Reporting System:**
Homegrown software

**ABM Linkage to Business Environment:**
Excellent linkage to federal mandates, programs, and requirements

**ABM Resources:**
Excellent use of training; good use of activity dictionary

**Barriers to Implementation:**
Difficult to make change in government environment; organizational culture has strong focus on operational excellence and response; finding resources and support for improved "cost" information is challenging