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# COST

## Management



### **Thoughts from CAM-I**

Cost, Process, and Performance Management

Strategic Management Process Model

A Template for Implementing Target Costing



# THE VALUE OF THE STRATEGIC

This article demonstrates the ways that CAM-I works to synthesize the outputs of its special interest groups into a unified system of cost, process, and performance management.

# MANAGEMENT PROCESS MODEL

JOHN A. MILLER

In a June 6, 1988 Special Report issue titled "The Productivity Paradox," *Business Week* identified existing cost measurement and management systems as a barrier to improving productivity in the United States. In that report, *Business Week* identified CAM-I as a leader in the new frontier of cost management and shortly thereafter, CAM-I published a ground-breaking book titled *Cost Management in Today's Advanced Manufacturing Environment: The CAM-I Conceptual Design*. Written by leading thinkers and subject matter experts, the theme of the book was that traditional cost management tools, methods, procedures, and practices were inadequate and that new ways to think about cost management were required in the advanced world of the 1990s.

From this nucleus, activity-based costing (ABC) and activity-based management (ABM) took root, and CAM-I went on to develop the CAM-I Cross (now included in every cost accounting textbook) and a glossary of terms to articulate the integration and differences between ABC (a cost tracing methodology) and ABM (activity management). The glossary gave clear meaning and consistency to terms like resources, activities, cost objects, activity drivers, resource drivers, performance measures, and cost drivers.

## Strategic management process model

Fast-forward to the year 2000 when CAM-I and its Cost Management Integration Team published *Value Quest*, a reference book undertaken to capture, articulate, and integrate knowledge and expertise from decades of research. With this book CAM-I introduced the strategic management process model (SMP), with its decision domains for customer/market, product/service, process/activity, and resource/cost (Exhibit 1).

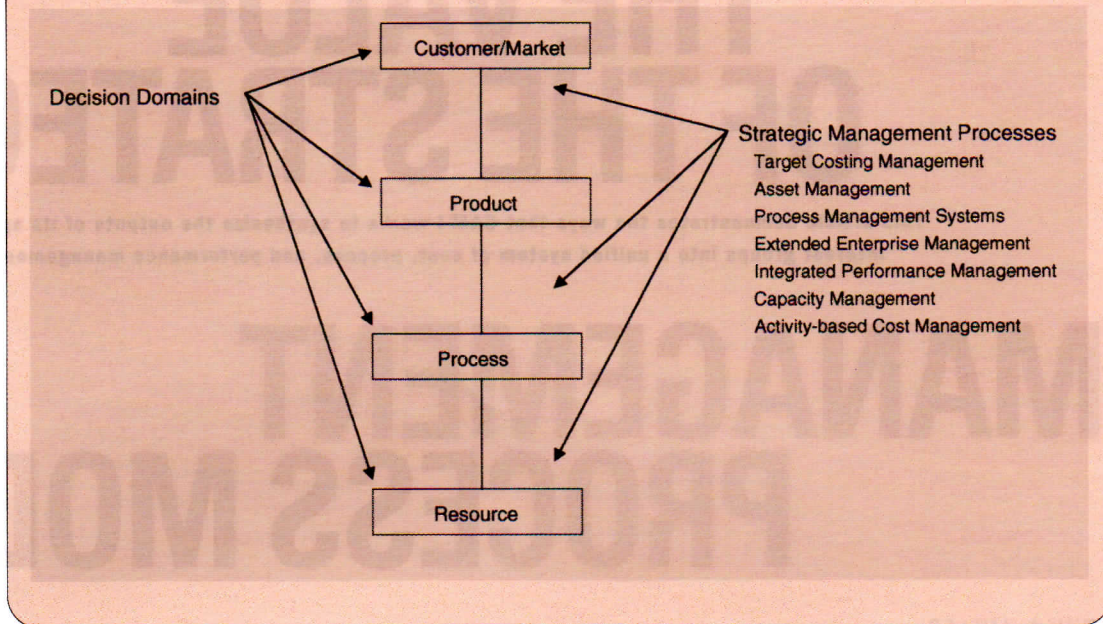
The strategic management process model provides a blueprint of the decision and data flows that define the value equation for the twenty-first century enterprise. Changes in business structures and strategies over the last decade have reshaped the information demands on companies and managers:

- Changing focus from a functional view to a process view, and

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**EXHIBIT 1 Strategic Management Process Model**



- Placing an emphasis on understanding and evaluating performance from the customer perspective.

The SMP model provides a logical framework to understand what critical high-level decisions a company must make and how to obtain the required information. Managing interdependencies and linkages throughout the value chain has the greatest impact on company performance. Actions and decisions taken based on the use of fragmented information systems or disjointed tools and techniques are less than optimal. The two primary dimensions of information integration, decision making, and information flows are encompassed in the SMP.

### Decision domains

Decision making within each decision domain requires a different type of information and a unique emphasis on how the available information is compiled. The domains in the SPM model represent the four primary decision domains:

- At the top domain, management makes decisions about what markets and customers to serve. These decisions influence and affect all other decision domains. Costs and value propositions are often market and customer specific.

- The next domain represents management decisions about what products or services are to be provided. For a particular customer and market, management has many choices for a product/service offering. Good decisions and choices in this domain are critical.
- The next decision domain is about the processes and activities necessary to develop, produce, deliver, administer, sell, and market the products/services customers buy. While decisions about customers, markets, products, and services are more strategic in nature, decisions about processes and activities tend to be more operational.
- The last decision domain represents resource decisions. Resource decisions cannot be made without good understanding of processes/activities, products/service, and customer requirements. Procurement of resources is mostly about the operational requirements of processes/activities. How many people are needed, what skills are required, what components have to be purchased, machinery and equipment specifications, how many marketing campaigns, how many new products, and

administrative complexity are just a few of these decisions.

### Information flow

Information flow between each SMP process connects the decision domains where information and data flow throughout the company's entire value chain. These represent information and data flowing throughout the company's entire value chain. Information flows to each decision domain and is the basis for decision making in each domain. The amount and quality of information flow is regulated by the systems, methods, tools, and practices individual companies use to provide information and data for decision making.

On the right side of the SMP model is a list of individual strategic management processes/tools. These tools are integrated and are the source of information and data required for decision making. Individual SMPs provide a unique set of data which may be useful, or not, depending on the type of decision that needs to be made. Understanding which SMP provides the best match between the primary decisions and the competitive challenges faced by the organization in each decision domain is the key to designing an information system that optimizes the ability to create value for itself and its customers. The SMPs listed are rep-

resentative of work done thus far by CAM-I and are not all-inclusive.

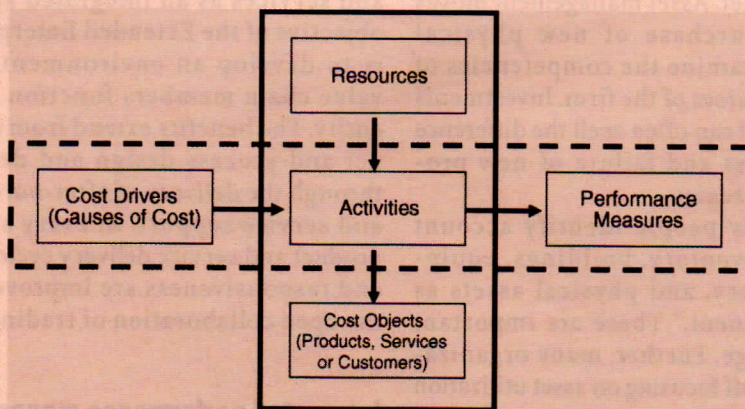
CAM-I uses a collaborative approach to acquiring knowledge and expertise. Central to this collaborative approach are Interest Groups (IGs) wherein representatives from industry, subject matter experts, and members from the academic community collaborate around a specific topic to create new tools and methods to improve organizational performance. Based on the work of IGs, SMPs are developed when enough knowledge has been accumulated to publish a significant and comprehensive process model and related tools. For example, the IG for activity-based costing continues to break new ground and is currently developing standards for cost measurement and tools to assess and benchmark the effectiveness of an organization's cost management and measurement capabilities.

### Strategic management process tools

Individual articles on several SMPs and current topical work of selected IGs is included with this issue of *Cost Management*:

- Target cost management
- Change, adaptation, & learning
- Risk management
- Armed services best practices for cost management
- Process management

**EXHIBIT 2** The CAM-I Cross





**CAPACITY SETS  
THE BASELINE  
MEASURE FOR  
EVERY COST  
ESTIMATE USED  
IN A FIRM.**

The remaining SMPs and current IGs of topical interest are summarized as follows:

### **ABC and ABM**

ABC and ABM, the strategic management process CAM-I is most noted for, is a methodology that measures the cost and performance of activities, resources, and cost objects. It is a discipline that focuses on the management of activities as the route to improving performance. It is based on the belief that accurate and relevant information is critical to any organization that hopes to maintain or improve its competitive position.

The relationship between ABC and ABM and the activity common denominator is set forth in the CAM-I Cross (Exhibit 2). Elegance and simplicity are inherent in this powerful tool. The vertical column of the Cross represents the assignment view of cost (ABC), where resources (costs) are traced to activities and activity cost traced to cost objects like products, services, and customers based on consumption of activities. The horizontal column represents the process view of cost where the focus is the management and improvement of activities (ABM). The common denominator, *activities*, sit in the middle of the Cross at the intersection of ABC and ABM.

### **Asset management**

Asset management plays a pivotal role in the CAM-I SMP Model. Asset management details the requirements for, and tracks the progress of, new resource acquisitions that are often critical if strategic and tactical objectives are to be met. Asset management moves beyond the purchase of new physical resources to examine the competencies of the human resources of the firm. Investments in human capital can often spell the difference between success and failure of new programs and strategies.

Traditionally people identify account receivables, inventory, buildings, equipment, machinery, and physical assets as "asset management." These are important assets to manage. Further, many organizations are better off focusing on asset utilization than cost reduction or even revenue enhancement to improve the performance of the company. *Value Quest* covers all of the above.

In addition, *Value Quest* goes beyond traditional thinking about asset management to include human capital. After all, hiring human capital is typically a long-term relationship and, at hiring, the employee and the employer are making a long-term investment. Investing in human capital, in reality, is not too dissimilar from the purchase of a new piece of machinery or equipment.

### **Capacity management**

Capacity management provides information on how assets are currently being used, what resources are being wasted, and where potential improvements may be made. Capacity sets the baseline measure for every cost estimate used in a firm. It is the denominator in the cost equation used to measure use and determine profitability. Capacity management is constantly interacting with the other SMPs to identify optimal production strategies under changing market conditions. Six key issues combine to create the language of capacity:

- Resource capacity
- Baseline capacity measures
- Capacity deployment
- Capacity utilization measures
- Time frame of analysis
- Organizational focus

### **Extended enterprise**

The extended enterprise, or supply chain management as it is more commonly known, is a network of firms that creates value for its customers by developing, producing, selling, servicing, and recycling products and services as an integrated system. The objective of the Extended Enterprise model is to develop an environment where all value chain members function as a single entity. The benefits extend from early product and process design and development through the delivery of after-purchase parts and service support. At every stage of the product and service delivery cycle, cycle time and responsiveness are improved through the open collaboration of trading partners.

### **Integrated performance management**

Integrated performance management (IPM) is a comprehensive management process

that provides a systematic link between organizational strategy, resources, processes, and the attainment of customer and stakeholder-defined objectives. Driven by customer requirements and stakeholder expectations, IPM serves as the primary means to:

- Link functional areas to synchronize their efforts
- Communicate strategies
- Achieve goals
- Motivate individuals to meet or exceed performance expectations

### Risk management

The goal of the risk management interest group is to research and develop a conceptual model for, and promote general understanding of a systematic, integrated, transparent, performance-based, and objectives-focused approach to risk management. Most public discussions of risk management, including most texts and articles, discuss risk management in terms of risk assessment with little or no discussion of strategy, actual risk mitigation efforts, or performance management consideration.

The goal of the interest group is to publish material on risk management, including a text, articles, and perhaps other curriculum or course material. The group's challenge is to fully address all steps in a risk management framework—from assessment to mitigation and adaptation—and to communicate the elements of such a framework, and their value, to executives and professional managers throughout the international CAM-I community.

### Resource consumption

The resource consumption accounting IG was formed to explore the potential benefits that resource consumption accounting holds, particularly in light of a number of unresolved business issues in regard to effective enterprise management and decision support not addressed by existing management accounting approaches.

### Lessons from the quest

Today, managers are beginning to understand that managing the interdependencies and linkages within the company and throughout the value chain has the greatest impact on entity performance. Effectively managing interdependencies requires an integrated information system that spans the multiple levels and management processes of the business. Integration is the key to harnessing the power of information to leverage and focus a company's resources and to maximize value creation—to transform problems into opportunities, challenges into successes.

One of the key teachings from *Value Quest* is that all of the tools and techniques being used are each designed to impact and improve the decision making process. After all, what all of the tools have in common is data and information, the prerequisites of good decision making. The next dimension of power of data and information is its integration with other tools and with the various decision domains.

### Tool integration

No one tool is an island unto itself. Despite a century of search no one has found the one tool that meets all management information and data requirements. In fact, tools are designed to be interactive and interdependent. For example, take the perennial tool champion, strategic planning. The development of a strategy and strategic plan is information and data intensive. Understanding the cost to serve customer segments, product/service profitability, available capacity, process cost and capability, investment, and asset requirements are just a few of the prerequisites for developing a strategy. Information and data are provided from tools like capacity management, extended enterprise, target costing, process management, and asset management.

Going forward, the strategic plan must have goals, objectives, and measures of performance. Tools like activity-based management (specifically ABM planning and budgeting) and integrated performance management play an ongoing role in the execution of strategy. Another example is benchmarking. How can a company benchmark processes without the aid of tools like

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**EXHIBIT 3 Target Cost Management — Integration Requirements**

<b>Interacting SMP</b>	<b>Information Category</b>	<b>Information Required</b>	<b>Process Step Impacted</b>
Activity-Based Cost Management	Activity/Product & Process Costs	<ul style="list-style-type: none"> <li>• Product cost history</li> <li>• Process cost history</li> <li>• Component/Assemble level costing</li> <li>• Cost table formulation</li> <li>• Overhead rate structure</li> <li>• Benchmarking data</li> <li>• Trend analysis</li> </ul>	<p>1.4 Understand Customer Requirements</p> <p>1.9 Compute Cost Gap</p>
Capacity Management	Capacity Capability	<ul style="list-style-type: none"> <li>• Industry capacity constraints</li> <li>• In-house capacity limits</li> <li>• Current capacity trends on cost</li> </ul>	1.9 Compute Cost Gap
Asset Management	Investment Requirements	<ul style="list-style-type: none"> <li>• Potential capital investment requirements</li> <li>• Capital investment options evaluation</li> <li>• Technology, commercial, economic risk analysis</li> <li>• Potential impact to performance metrics</li> <li>• Investment implementation risk &amp; timing</li> </ul>	1.9 Compute Cost Gap
Extended Enterprise Management	Make/Buy Assessment	<ul style="list-style-type: none"> <li>• Supplier capability</li> <li>• Benchmarking assessment by work package</li> <li>• Economic indicators by supplier segment</li> <li>• Supplier cost assessment &amp; risk analysis</li> <li>• Supplier quality/customer requirement evaluation matrix</li> <li>• Supplier ranking (by performance category)</li> <li>• Supplier performance conversion to in-house equivalent</li> </ul>	1.9 Compute Cost Gap
Process Management	Current & Potential Process Assessment	<ul style="list-style-type: none"> <li>• Process benchmarking (internal and external)</li> <li>• Process cost capability</li> <li>• Potential current process cost improvement</li> <li>• Process cost leverage areas</li> <li>• Process re-engineering evaluations</li> <li>• Process re-engineering target leverage mapping matrix</li> <li>• Long range process cost reductions</li> </ul>	<p>1.9 Compute Cost Gap</p> <p>1.12 Evaluate Process Re-engineering</p> <p>1.14 Continuous Improvement</p>
Integrated Performance Management	Corporate Profit Plan	<ul style="list-style-type: none"> <li>• Corporate profitability targets (by product/operating group)</li> <li>• Corporate/Shareholder profitability metrics</li> </ul>	1.7 Develop Required Profit

### EXHIBIT 3 *cont'd*

Interacting SMP	Information Category	Information Required	Process Step Impacted
Integrated Performance Management	Performance Assessment	<ul style="list-style-type: none"><li>• Evaluation of Key Performance Indicators (KPI)</li><li>• Performance gap evaluations</li><li>• Performance evaluation link to strategy</li><li>• Critical Success Factor (CSF) evaluation</li><li>• Current performance evaluations</li></ul>	1.9 Compute Cost Gap 1.12 Evaluate Process Re-engineering 1.13 Continuous Improvement

ABM, process management, and integrated performance measurement or attempt to outsource without benefit of understanding the cost, performance, and capability of the activities and processes being outsourced?

#### Operational data

Another teaching from *Value Quest* is that 80 percent of the data necessary for good cost measurement is operational data. Take a simple cost calculation like the direct material and direct labor components of a manufactured product. Just to calculate the direct material component requires operational data about the material used in the product, the material scrapped in the manufacturing process, material damaged in the handling process, and the disposal of scrapped material. That's all operational information and data. Add resource (cost) data like the cost per pound of material to calculate the direct material cost of a manufactured product. The direct labor component of a product cost calculation would even require more operational data. Number of process steps, time for each process step, skill set of employee at each process step, percent of product rejects, process yield for each step, and line speed are examples of the operational data that would be required to make the cost calculation for the direct labor component of a manufactured product.

By the time one gets to the indirect component of product cost, the importance of operational data in the cost measurement gets even bigger. Machine repair and maintenance uptime, capacity utilization, quality control, machine set-up times, production planning, inspection, and plant logistics/

product movement are just a few of the examples of operational data that is required to make cost measurement calculations.

The major takeaway is that "good" (i.e., accurate for the intended decision purpose) cost measurement requires accurate, timely, and relevant data about the operations of the organization.

#### New tools

One of the most useful contributions to cost management is the emphasis on tools and aids that enable things to get done faster, better, and at minimal cost. SMP Tables introduced in the book document interactions between tools, identify shared information, and document each process step impacted. The SMP table for target costing is set forth in Exhibit 3.

Each SMP has its own table. In the example, target costing is interacting with all SMPs. The first interacting SMP, activity-based costing management, intersects with target costing for activity/product and process costs, including product/process cost history, component level costing, overhead rates, and trend analysis. The target cost process step impacted by this information is identified in the right hand column.

#### Future trends

What kinds of tools will we need in the future? How will we set our research agenda? What is management looking for? How can we help? A good start for answering these questions is to look at survey data gathered from top management. Since 1993, Bain & Company has conducted an annual global survey of the top twenty-five management



**EXHIBIT 4** Top Five Management Tools for 2005

Tool Description	Usage Rank	Usage % Rank	Satisfaction Rank	Satisfaction Score
Strategic Planning	1	79	1	4.14
CRM	2	75	9	3.91
Benchmarking	3	73	3	3.98
Outsourcing	4	73	14	3.89
Customer Segmentation	5	72	5	3.97
Supply Chain Management	14	56	2	3.99
Core Competencies	7	65	4	3.97

tools, scored (scale one to five, where one is dissatisfied and five is extremely satisfied) for usage and satisfaction rates. The top five tools for 2005, on the basis of usage and satisfaction rates, are set forth in Exhibit 4.

Strategic planning has long been the number one management tool in both usage and satisfaction, and it's fair to say strategic planning will hold that slot well into the future. Because of the intensive data and information necessary to do strategic planning and to develop a strategic plan, the SMPs will remain relevant to management needs and requirements in this area. Several of the SMPs and tools covered in *Value Quest* and the current work of the interest groups are the same/similar to tools identified in the top twenty-five Bain & Company list, relevant to management at this time, including extended enterprise, change management, process management, integrated performance management, process management, and activity-based management.

In many ways, the current use of management tools is a lagging indicator when it comes to setting a research agenda where the intent is to develop new tools, methods, and practices. More important are the future needs and requirements of managers. In addition to compiling their survey results, Bain identified several central themes in their report, providing some clues as to their future requirements.

### Customer focus

Nearly two thirds of the survey respondents agreed with the statement "insufficient cus-

tomers insight is hurting our performance." More than half agree that their companies "focus on new customers when we should retain and grow our existing ones." The implication is that these same managers will want to improve their customer insight in the future. Decisions about what markets and customers to serve sits at the top of the SMP decision domain. Information and data about customers, customer segments, cost-to-serve, customer product/service offering, and customer valuation and profitability will be required to improve customer insights and performance.

### Cost management

Seventy-six percent of survey respondents believe that a growing percentage of the products and services they provide behave like commodities. Global competition is fierce, with downward pressure on prices, a squeezing of the profit margin, and no let up in sight. Welcome to the flat world. When products and services behave like commodities, the low cost provider generally prevails. The role of cost management, process improvement, and performance measurement will be recurring themes and requirements in a flat world. CAM-I will continue to develop its strengths in these areas.

In 2005, the number one rated cost-related tool was outsourcing, with three quarters of the survey respondents using it. ABM information is commonly used in the outsourcing decision. Identifying the business activities to be outsourced and understanding those business activities

that are left behind or that must be added are critical parts of the outsourcing decision. ABM can also provide measures of activity performance for quality, cycle-time, productivity, and unit activity cost, all of which should be included in the outsourcing agreement with the third party.

### **Innovation gap**

Eighty-six percent of the survey respondents believe that innovation is more important than cost reduction for long-term success. Innovation is not just new products and services where target cost management plays an important role. Innovation

in process improvement, service delivery, and product life cycles are also important. SMPs like the extended enterprise, process management, capacity management (human and capital) are all tools for innovation.

Clearly, the CAM-I research agenda and interest groups are on track with the needs, desires, and expectations of managers representing diverse organizations located all over the world. If the next twenty-five years are like the last twenty-five years, you can expect CAM-I to continue to deliver on its promise of global leadership in cost, process improvement and performance management as our quest for value continues. ■