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# Implementing Target Costing

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I. RATIONALE

Businesses have a number of objectives, including satisfying customers with high-quality goods and services, quickly and on time; achieving high levels of market penetration; providing a good working environment for employees; and being financially successful. The long-term financial success of any business depends on whether its prices exceed its costs by enough to finance growth, provide for reinvestment, and yield a satisfactory return to its stakeholders. If there are few competitors, and if demand exceeds supply, it may be possible to simply mark up costs to establish a price that yields a sufficient profit. However, as competition increases, and supply exceeds demand, market forces influence prices significantly more. To achieve a sufficient margin over its costs, a company must manage those costs relative to the prices the market allows or the price the firm sets to achieve certain market penetration objectives. In the context of these characteristics, the practice of target costing has evolved.

Following World War II, many North American companies grew quickly because of the pent-up demand of the war years, the reconstruction of Europe and the Pacific Rim, and rapid population growth. Strong demand—and often few competitors— permitted these companies to remain profitable and grow by offsetting cost increases with price increases. Unfortunately, cost-based pricing does not foster strong cost management. It may create an umbrella of opportunity for competitors wanting to enter a market, unless there are strong barriers to entry, such as technological leadership and investment levels. It may also run the risk of pricing one’s product out of the marketplace. Today, many North American companies, accustomed to strong demand, little competition, and the ability to mark up costs to yield good profits, are experiencing a very different and more hostile marketplace.

Upstart companies struggling to make their way, such as many Japanese manufacturers after World War II, realized that they would have to offer better products at or below market prices to succeed in their home market and worldwide. If they were to realize a sufficient margin to grow, reinvest, and generate a return, their whole approach to relating prices and costs, and managing costs, would have to reflect the highly competitive climate. As a result, such leading Japanese companies as Toyota, Nissan, and NEC used what has come to be known as “target costing.” Some North American companies, including Ford and Chrysler, have begun to use the approach in their efforts to compete with the Japanese car companies. Start-up computer companies, including Compaq and Dell, have used it to compete with more established companies, such as IBM.

Target costing is a fundamentally different way to look at the relationship of prices and costs. The basic target costing equation of “Price - Profit Margin = Cost” means that prices are driven and set either by competitive market forces or by the firm as it aggressively lowers its prices to increase market penetration; that profit margins are established such that the firm can make money; and that allowable costs are derived from price and margin. For leaders in the use of target costing, this idea is much more than a shift in mechanics: It is a mindset change that permeates the whole organization, is highly disciplined, and integrates the market place with design and production. The idea that prices drive allowable costs has a marked behavioral and business impact. It is a key to long-term business survival, growth, and prosperity in a competitive and rapidly changing environment.
II. SCOPE
This statement is intended to accomplish two goals. First, it introduces the concept of target costing, which has been used by a number of leading Japanese automotive, electronic, and other companies, and is beginning to be used by some North American companies as they penetrate very competitive markets. Second, it describes the steps that a firm would take to implement target costing. It is generally addressed to senior managers, and more specifically to management accountants. It is developed to help make the management accountant a key contributor to both the introduction and application of target costing to the firm’s managerial process.

This statement assumes an organization with some awareness of target costing and an interest in introducing target costing practices into the firm’s managerial process. It is, of necessity, both descriptive and prescriptive. It defines target costing terms, concepts, and processes, and presents a plan for building a strong commitment to implementing target costing. The statement prescribes a sequence of steps that a firm would take to implement target costing, and management and the management accountant’s role in that effort.

The concepts, techniques, and case study included in this statement are structured to apply to:
- businesses that produce a product or service;
- large and small organizations;
- enterprises in all business sectors;
- all stages in an enterprise’s value chain; and
- all costs and investments, whether related directly or indirectly to a specific product or services.

Today, many management accountants are asked to do much more than just traditional transactional accounting. One of the most significant of these new responsibilities is target costing, which for many companies is a dramatically different approach to cost planning, management, and reduction. This statement will help management accountants:
- understand the relationship of target costing to the organization’s strategic and financial goals;
- understand the phases of the target costing process;
- recognize the benefits of target costing;
- comprehend their roles and responsibilities in the target costing process; and
- appreciate the organizational and management accounting challenges in implementing target costing.

III. DEFINING TARGET COSTING
Target costing is not a new idea, even though only a small number of North American companies fully embrace its elements. Henry Ford developed the first mass-produced automobile, the Model T, in 1908 with the objective of increasing volume by continually lowering its price, and by 1913 was able to sell it for under $500. Obviously, to do that and make money, costs would have to be tightly managed. Ford managed material costs via backward integration, labor costs by the use of the assembly line and efficiency improvements, and other costs by frugal behavior. The “roaring twenties,” and, later, the pent-up demand after World War II made it easier for Ford and other companies to raise prices.

Even during the late 1950s and early 1960s, American Motors conceived, developed, and introduced the Nash Rambler as a small, inexpensive alternative to the gas-guzzling monsters then on the market. The car was successful, and American Motors was very profitable—as a result, at the
end of 1962 the company had a debt-free balance sheet! Although some North American companies (such as Boeing, Caterpillar, John Deere, and Northern Telecom) have used the general ideas of target costing over the years, or applied it to a specific product (such as Ford’s Taurus or Motorola’s pocket pager), few apply it as comprehensively and intensely as leading Japanese companies (such as Toyota, Nissan, Nippondenso, and NEC).

It has only been recently that Japanese authors (such as Monden, Sakurai, and Tanaka) have begun to describe how Japanese companies are applying target costing, as these companies strive to be successful in their domestic market, and subsequently in the world markets. Some North American companies (such as Ford, Chrysler, and Cummins Engine) are beginning to study the Japanese and establish target costing initiatives. Many more companies will when they realize that price increases are no longer automatic and target costing is a powerful technique.

Because the idea of target costing has resulted from the highly competitive environment to which most Japanese companies have been subjected for a number of years, each company has its own unique approach. As a result, there is no single, simple definition of target costing. Definitions range from relatively narrow to broad.

Robin Cooper (1992), for example, says, “The object of target costing is to identify the production cost of a proposed product so that, when sold, it generates the desired profit margin.”

Michiharu Sakurai (1989) says, “Target costing can be defined as a cost management tool for deducing the overall cost of a product over its entire life cycle with the help of the production, engineering, research and design, marketing, and accounting departments.”

Peter Horváth (1993) defines it as “a comprehensive cost planning, cost management, and cost control concept...used primarily at the early stages of product design in order to influence product cost structures depending on the market derived requirements. The target costing process requires the cost-oriented coordination of all product-related organizational functions.”

Common to most definitions is a process founded on a competitive market environment; market prices driving cost (and investment) decisions; cost planning, management, and reduction occurring early in the design and development process; and cross-functional team involvement, including the management accountant.

*Competitive Market Environment:* In markets where there are a limited number of sellers, and demand exceeds supply, sellers can mark up their costs to achieve prices that result in profits. That is, they may use a “cost plus” approach to pricing. The global markets and increased competition many companies face today preclude such historical cost-based pricing practices. In competitive markets, and especially in markets where supply exceeds demand, prices are driven by market forces. This does not mean that all products become commodities, however. Sellers must take greater account of the presence of strong competitors, alternative products and services, and their prices. If a company wants to achieve higher market penetration, it may choose to lower prices while increasing quality or offering additional services. One of the benefits of target costing is that it forces an increased understanding of markets, competition, and customer needs in terms of products, quality, timeliness, and price.
Price-Driven Costs: Companies are in business to make money. When prices are set by market forces or by a management decision to be a price leader, costs must be lower than prices to make money. Therein lies the underlying concept of target costing:

\[ \text{Price} - \text{Profit Margin} = \text{Cost} \]

Of course, this contrasts dramatically with the historical practice of many firms and industries, where:

\[ \text{Cost} + \text{Profit Margin} = \text{Price} \]

This transformation of terms looks very simple. In reality, viewing costs as a derivative of prices and profit margin, rather than the other way around, requires a major shift in mindset. It should be pointed out, too, that margins cannot be arbitrarily set, but are influenced by one’s potential cost position. Not all companies can be the lowest-cost producer. Setting an unattainable margin could lead to an unattainable cost objective.

Exhibit 1 presents the underlying price and cost relationships in a market- or management-driven price and cost environment. The Japanese commonly refer to this relationship as “price down - cost down,” or simply “cost down.”

Since target costing is usually applied to new product planning, which frequently requires investments in tooling, equipment, and other assets influencing costs, it can legitimately be said that price drives both costs and investments.

Early Cost Planning: Another important element of target costing is the realization that most costs are determined by early product and process-design decisions. Trying to reduce costs once a product reaches production is very difficult. Therefore, focusing on costs during the early design stages to ensure that the target profit and cost can be realized is critical. That means product designs, material choices, specifications and tolerances, buy versus make decl-
sions, process designs, and investment decisions need to be thought through before product design and development decisions are finalized.

**Cross-Functional Team Involvement:** Finally, achieving the necessary degree of agreement and compromise between any of the functions (marketing, design and development, procurement, process engineering, manufacturing, and accounting) involved with the product delivery cycle requires the establishment of cross-functional teams specifically charged with addressing the inevitable trade-offs that will arise. This basic unit, which cuts across the organization and works together from the concept stage to production release or beyond, is charged with effecting the product development and target costing assignment. Done well, the result can be new and modified products that are developed and produced quickly, satisfy the marketplace, and yield the desired profits.

In all likelihood, target costing will not happen instantly. The idea may initially meet with resistance. The concept of prices driving costs is a major mindset change for managers once able to raise prices when costs rose. Organizing in cross-functional teams, although more popular of late, is still foreign to many managers. For them to believe that a set of different views brought together early in the design process can be more efficient and effective than a sequential process will require some demonstration. The market success of companies such as Toyota, Sony, and NEC should give managers and management accountants the incentive to implement target costing methodologies.

**IV. OBJECTIVES OF TARGET COSTING**

The fundamental objective of target costing is very straightforward. It is to enable management to manage the business to be profitable in a very competitive marketplace. In effect, target costing is a proactive cost planning, cost management, and cost reduction practice whereby costs are planned and managed out of a product and business early in the design and development cycle, rather than during the latter stages of product development and production.

Target costing obviously applies to new products. It also applies to product modifications or succeeding generations of products. NEC, for example, uses the point of time at which no further cost reductions can be realized as a cue to begin developing its next generation of products. The foundations of target costing—market-based prices, price-based costs, and cross-functional participation—may also be used for existing products, although costs are more difficult to reduce once a product is in production.

The costs most typically emphasized in the target costing process are those most directly affected by it: material and purchased parts, conversion costs (such as labor and identifiable overhead expenses), tooling costs, development expenses, and depreciation. However, because target costing is a comprehensive cost planning, management, and reduction process, as well as a specific technique, all costs and assets that may be affected by early product planning decisions should be considered. This would include more indirect overhead expenses through the production stage, and beyond, such as service costs, and assets, such as inventory. Target costing is intended to get managers thinking ahead and comprehensively about the cost and other implications of the decisions they made.

Although the initial emphasis of target costing may be cost planning, management, and reduction, a number of other benefits result from its
application. First, it requires a strong market and customer orientation. Product requirements are defined by market and customer needs, and competition. Target costing starts with an understanding of the market and an intent to meet customer needs in terms of product features, quality, timeliness, and price.

Second, the cross-functional participation central to the process yields a sense of understanding and teamwork frequently absent in a more typical, sequential design and development process. Market-oriented design and development, and concurrent engineering and manufacturing, are aspects of the target costing process that facilitate cross-functional understanding.

Finally, the market understanding, cross-functional team participation, and use of some of the underlying tools (such as value engineering) can actually accelerate the product design, development, production, and introduction cycle by avoiding delays resulting from recycling, as one area’s functional objectives conflict with others.

Target costing is as much a significant business philosophy as it is a process to plan, manage, and reduce costs. It emphasizes understanding the markets and competition; it focuses on customer requirements in terms of quality, functions, and delivery, as well as price; it recognizes the necessity to balance the trade-offs across the organization, and establishes teams to address them early in the development cycle; and it has, at its core, the fundamental objective to make money, to be able to reinvest, grow, and increase value.

V. THE ROLE OF THE MANAGEMENT ACCOUNTANT
The role of the management accountant in some companies (such as Boeing, Caterpillar, General Electric, Ford, Merck, Motorola, and Northern Telecom) is changing from historian, controller, and, often, nay-sayer to a more proactive, strategic, business partner and decision maker. Active involvement in target costing reinforces this shift in perspective and responsibility for the management accountant.

Target costing cannot be undertaken without the full support of senior management and the support and involvement of the other areas of the business, including marketing, product development, procurement, process development, and manufacturing. Once that support has been obtained, management accountants should be committed to the firm’s target costing process.

Since management accountants are trained in gathering, analyzing, measuring, and reporting information, their expertise is a fundamental element to a successful target costing effort. Having management accountants involved in the target costing process also gives credibility to the financial implications of the various trade-offs and decisions made during the target costing process. Thus, the management accountant can be responsible for holding the whole process together. Management accountants should be involved in all stages of the target costing process.

The first step in the target costing process is to establish the target price. This involves assessing the market and individual customers’ wants and/or needs, and what they might pay for the tentative new product; evaluating competing products, their prices, and estimated costs; and agreeing among the team members as to an appropriate target price. Evaluating customers’ benefit/cost trade-offs and performing competitive price and cost comparisons are central financial analyses management accountants are
qualified to perform. Companies such as Caterpillar have performed detailed cost analyses of their competitors’ products. If management’s pricing strategy is “preemptive”—that is, to lower prices to gain additional market penetration—the management accountant is also able to analyze the price, volume, cost, and profit relationships of such actions.

The second step in the target costing process is to establish the target profit margin. The starting point is the firm’s overall strategic and financial goals, including return on sales (ROS), capital, and equity. These need to be disaggregated to product lines, and eventually to individual products. Not all product lines or products will have the same target margins. Some will have to be higher to support a higher level of investment directed toward those product lines or products; some may be lower because they require lower investment, or competitive prices and costs will not support a higher margin. As with the target price, setting the target margin requires business understanding and financial analysis skills that the management accountant brings to the process.

A very important role of the management accountant is to help determine what the proposed product’s current costs would be, assuming similar product specifications and manufacturing processes to those presently used by the firm. Unfortunately, many companies’ existing product cost determination (cost accounting) systems do not provide accurate up-to-date information. Direct material costs may be reasonably identified with specific products. Conversion costs, overhead, and even nonmanufacturing costs (such as outbound freight and product-specific sales costs) may be more difficult to identify with specific products. More companies are using activity-based costing (ABC) to improve their understanding of their existing costs. The management accountant has an important responsibility to introduce ABC to the firm and apply it to the firm’s existing products and detailed processes, so a foundation for target costing can be established.

Once the allowable cost has been established and the current cost determined, the amount of cost reductions can be calculated. The target costing team’s work really begins at this point, as it considers the possible trade-offs and makes the numerous decisions necessary to deliver a product that meets the markets’ requirements at a price and a cost that achieves the firm’s profit objectives. The myriad of design alternatives, buy versus make decisions, proposed manufacturing processes, and capital investment requirements all have cost implications that must be calculated, then tracked, separately and collectively. Management accountants assume a central role in this analysis and tracking process.

An important role for the management accountant is to create a systematic framework of financial and nonfinancial measures to assure that, as the target costing process unfolds, progress against the targets may be easily tracked, to make sure the targeted objectives are being reached. Such tracking systems are especially critical if many new products are being introduced and their significance on the firm’s financial performance is great. Individual project costs, the cost impact of asset requirements, the ability to achieve the target cost and profit, and cash flows must all be tracked. In the case of multiple projects, their aggregate impact on the firm’s overall profit, return, and cash should also be monitored.
Once a product reaches the production stage and it is being sold, there are still opportunities for the management accountant to contribute to the target costing process. First, actual costs should be tracked and related to allowable costs to determine whether allowable costs are being met. This information can be used in future target costing projects. Second, there may be more cost reduction opportunities to be achieved in the production phase. The Japanese call such initiatives to continue to pursue cost reductions during production “kaizen costing” or “continuous improvement costing.”

Management accountants can and should play a number of important roles in the target costing process. They can become familiar with the process, talk with other management accountants who are already involved, visit companies already using target costing, and then take the lead in introducing target costing into their firms, such as the financial leadership of Moonglow Electronics (see the Appendix, Case Study) did. This can include sharing their knowledge of target costing with senior management and other functional areas of the firm. Management accountants can champion the initiation of a target costing project. Then they can be an active part of a cross-functional target costing team, contributing their financial analysis skills to the effort. As target costing takes effect, the management accountant will have made another significant contribution to the long-term success of the firm.

VI. THE TARGET COSTING PROCESS

Just as there is no single definition of target costing, there is no single target costing process. Each company has evolved its own organizations and practices. Nevertheless, all companies share a series of general steps:

- establishing the target price in the context of market needs and competition;
- establishing the target profit margin;
- determining the cost that must be achieved;
- calculating the probable cost of current products and processes; and finally
- establishing the target cost—the amount by which costs must be reduced.

Once the target cost has been calculated, companies take the following steps to achieve it:

- establishing a cross-functional team, which is involved in the implementation process from the earliest design stages;
- using tools such as value engineering in the design process; and
- pursuing cost reductions using “kaizen costing” once production has started.

This sequence of steps, and the intensity with which it is applied, is quite different from a “cost plus” approach, which although becoming more difficult to achieve, is still used by a number of companies. In this more historic approach the sequence of steps is:

- assessing market needs;
- evaluating competing products;
- developing new products;
- deciding whether to buy or make products or components of products;
- calculating how much to invest in new processes;
- setting up the new process;
- manufacturing the new product;
- costing the product; and
- setting the price.

Using this approach, one decision leads to another. Prices are based on the preceding steps in the process. When costs increase, prices are often also increased to maintain or improve profit margins.
In today’s more global competitive marketplace, prices need to be set early in the new product planning process and based on market and competitive conditions, or management’s own pricing and market penetration objectives. Costs must permit an acceptable profit and return on capital. New product development, procurement, manufacturing processes, investments, and other cost drivers must be managed together, in the context of market- or management-driven prices.

In the following paragraphs, the sequence of steps involved in a successful target costing process will be discussed. This should serve as a useful model for companies considering or just getting started with target costing.

**Developing the Target Cost**

**Establishing the Target Price**

The first step in the target costing process is to establish the proposed new product’s target price. This involves a number of considerations: what the market wants and needs now and in the future; what the customers want and how much they really are willing to pay for alternative features; and what the competitive offerings are and may be in the future. Obviously, the best way to determine current and future wants and needs is to ask current, or prospective, customers. Companies such as Toyota, Sony, and (more recently) Ford spend a great deal of time employing sophisticated market research techniques, including surveys and focus groups, to ascertain what functions and features customers want and how much they might be willing to pay for them.

Conjoint, or trade-off, analysis can be used in conjunction with focus groups to explore customers’ evaluations of various product features. Instead of asking customers to react directly to the product’s proposed price, ask them to indicate what price they would pay for certain features. This simulates a real buying situation. This approach can provide the relative contribution of each product feature to total product utility. This becomes especially useful as the target costing process unfolds and the costs of providing those features can be determined.

A major aspect of establishing the target price is assessing what direct, or indirect, substitutes are available from competitors. How do competitive products compare in terms of quality, responsiveness, and service levels? What functions and features do competitors’ products offer and at what prices? North American auto companies, computer companies, copier manufacturers and even major industrial product manufacturers conduct what is known as “reverse engineering” or “teardown analysis.” They obtain competitors’ products and disassemble them to ascertain what they are made of and to simulate their manufacturing processes. Some companies have developed their understanding of their competitors so much that they understand their cost structure. They do this by estimating the cost of the competitors’ materials, simulating their conversion costs based on the teardown analysis, and studying such elements as local labor rates, employment levels, and the age and sophistication of manufacturing facilities.

The target price is based on the market needs assessment, the competitive analysis, and the company’s preliminary plans to deliver a new or modified product with certain functions, features, aesthetics, and other characteristics. The principal point is that companies employing target costing base their target price on market and competitive conditions, and on their long-term pricing and market penetration objectives.
Establishing the Target Profit Margin and Allowable Cost

Once the target price has been established, a target profit margin should be calculated. In the leading Japanese companies, this is typically an absolute, or relative, return on sales (ROS). In essence, what the management is saying is that products must be profitable enough to yield a satisfactory return and cash. This target margin emanates from the company's overall long-term strategic and financial objectives resulting from the company's profit planning efforts. That is, return on sales objectives, earnings, return on invested capital and equity, and cash flows all may enter into the calculation of an appropriate target margin. To be successful in the long run, companies have to yield a return in excess of the firm's cost of capital.

Different product lines or products will have different target profit margins established for them, depending upon a number of factors. Typical factors considered include: the strength of the target market price or the aggressiveness of management's pricing strategies to penetrate markets; the firm's own cost position, whether or not it is a low-cost producer; and the level of investment required to support the product (higher investment requiring a higher margin and vice versa).

The difference between the target price and the target profit margin is the allowable cost that the company can commit to the product in question.

Different companies define the costs to be included within the definition of the allowable costs and target profit margin differently. Virtually all companies include materials and purchased parts. Most would include variable production conversion costs, including labor and associated costs, and directly identifiable and variable manufacturing overhead. Usually, new products require R&D expenditures, tooling costs, and, especially in an era of increasing automation, significant capital investment. The impact of these items, such as depreciation, should also be included. To the extent that there are other nonmanufacturing costs of distribution, advertising and promotion, sales and service, and even investments in inventory, these may also be included. The diagram below shows the range of possibilities, from the most narrowly...

<table>
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<tr>
<th>Target Costing Equation</th>
<th>Possible Costs (Investments) Included in Target Margin and Allowable Cost Calculation</th>
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<tr>
<td>Price - Margin = Cost</td>
<td><strong>Variable Product Costs</strong></td>
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<td>Direct Material and Purchased Parts Conversion Costs (Labor, Overhead)</td>
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<td><strong>Unitized Product Costs</strong></td>
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<td>General Manufacturing</td>
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<td>Non Manufacturing</td>
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<td><strong>Investments</strong></td>
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<td>Equipment</td>
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defined prime costs of material and labor to the inclusion of virtually all costs.

**Determining the Current Cost and Target Cost**

If the proposed product is a modification of an existing product, a firm has a cost basis from which it can determine what the potential costs of the proposed new product might be if the new product’s specifications and method of manufacture are similar. The next step in the target costing process, then, is to determine what the new product’s costs would be, using existing product specifications and manufacturing processes. This is frequently called the “engineered costs.” Sakurai uses the terms “drifting costs” and “current costs.”
Exhibit 2 shows three views of the relationship between the target price, target profit margin, allowable costs, current costs, and cost reduction objectives. In the first example, the difference between the target price and the target profit margin is called the target cost. The current cost is reduced to achieve the target cost using value engineering and kaizen costing techniques, to be discussed later. In the second example, the difference between target price and the target profit is called the allowable cost. The difference between the current cost and the allowable cost is actually called the target cost.

The third example is very similar to the second, but suggests that value engineering is the primary technique utilized during the design stage of the process; kaizen costing is used during the production stage. Although the difference between methods I, II, and III of Exhibit 2 may seem minor, and perhaps confusing, some leading Japanese companies use them to clearly establish what is allowable (e.g., highest amount permitted) and the target improvement required to reach the allowable cost. As cost improvements are realized, the current cost “drifts” (as Sakurai would say) toward the allowable cost. The target cost needed to be realized becomes smaller. This guideline uses the latter definition of target cost.

The process of establishing these targets is not to be taken lightly. It is, in fact, the cornerstone of the target costing and needs to be carefully performed to arrive at meaningful targets.

**Disaggregating the Target Cost to Components and Functions**

Total allowable cost and target cost can be broken down in several ways. One method is to allocate the allowable and target cost to major component blocks (for automobiles, this would mean the platform, engine, power train, and accessory package, for example), then to their respective subassemblies, and ultimately to individual components. This method will tend to result in new products that are quite similar in character to earlier models, and to production processes that, too, replicate prior production processes. It is recommended if the proposed new product is intended to be similar to its predecessor. The primary cost reduction opportunities tend to be material and processing costs.

A second method is to allocate the allowable and target costs according to the product’s functional areas. This is especially appropriate when customers’ wants and needs have been assessed, including the relative value they put on different functions, and when costs have to be reduced significantly. The steps involved include defining and classifying the product’s functions; evaluating the importance of the functions; and assigning allowable and target costs to each function.

The first step is to define the user functions of the proposed new product and classify them by use and value. These functions can be further classified into physical, or “hard,” functions and convenience and value, or “soft,” functions. Hard functions include, for an automobile, such characteristics as size, shape, weight, fuel economy, and speed. Soft functions include aesthetics, harshness of ride, vibration, and noise. The next step is to evaluate the various functions, both hard and soft, in terms of relative importance. Finally, allowable and target costs are assigned to the functions. Initially this means assigning the allowable and target costs on the basis of the relative importance.

Products can be designed in the context of the costs assigned to the hard and soft functions. As the design begins to take form, the target
cost assigned to the functions can be disaggregated to the components that support it. There is continuing effort to reconcile the value assessed to the functions to be provided with the component costs that support them. Components whose costs are higher than the value of the functions they support represent continuing cost reduction opportunities. The basic objective of this function-oriented cost assignment and design is to provide the desired functions at costs proportionate to their assessed values. Price value and cost value may be quite different. Certain functions or features may add price value at relatively low cost. Setting high cost values for these items may result in them costing more than they should. A Pareto analysis that rank orders the estimated component costs will also help identify areas with high potential for cost reduction.

**Realizing the Target Cost**

The process of achieving the cost objectives is founded on three fundamental precepts. First, it is essential to use a cross-functional team of participants who are affected by, and can affect, the product and process specification process. Second, the team’s participation early in concept design and development will greatly affect product life cycle costs. Finally, using value engineering techniques and other tools to arrive at a product and process design is central to achieving the target cost.

**Utilizing the Cross-Functional Team**

In the Japanese company model, which is beginning to be emulated by some North American companies (such as Ford, Chrysler, and Cummins Engine), a senior product manager usually has overall responsibility for the product planning/target costing effort. The manager is supported by team participants representing marketing, product planning, design, development, procurement and even key suppliers, process technology, manufacturing, and accounting. Some companies. John Deere for example, even include key customers on the team. Obviously, the decision regarding team participants is a function of the nature of the product involved and the impact various team members can have on the decision-making process. Some preliminary research suggests that design, purchasing, and process technology (which, of course, implies process design and capital expenditure decisions) are most frequently involved.

The emphasis on the team recognizes the high degree of interdependence between marketing and product planning, design and development, and process technology and manufacturing. A decision at one stage virtually always affects others. The management accountant needs to be involved to provide rapid feedback on the cost implications of the various alternatives and decisions. Making decisions together and taking into consideration the various interrelationships results in both faster and more balanced decisions.

The creation of the team is the whole essence of concurrent engineering, which has become popular in many product companies in the last few years. Concurrent engineering is the idea of having product development and manufacturing simultaneously involved in the product development. Traditional processes are more sequential. The target costing team extends the idea of concurrency further—out toward the marketplace, to key suppliers, and to include cost management.

**Early Cost Planning and Management**

Consistent with the creation of a cross-functional team and the concept of concurrency is the realization that decisions made early in the design process drive product and process costs and, utili-
mately, the life cycle cost of the product itself. Early product design will influence material choices, number of components, buy versus make decisions, tooling and capital investment requirements, and, ultimately, manufacturing process costs. If design engineers make such decisions in the absence of procurement, process engineers, manufacturing managers, or management accountants, then they risk making decisions without fully appreciating their impact.

It has been estimated that, in many situations, the concept and design phases of the cycle effectively commit a very high percentage of the product’s total costs, even though few costs may have actually been incurred. Exhibit 3 shows the relationship of committed and incurred costs to the product development cycle. Costs are actually planned into a product—or, more significantly, managed out—early in the development cycle. It is much more difficult to take significant costs out of a product once it has reached production without major redesign and time delay.

**Value Engineering and Other Tools**

The principal technique for achieving the target cost, by closing the gap between the current cost and the allowable cost, is value analysis, or value engineering. Some companies use the term “value analysis” for the product design and development stage and “value engineering” for the post-development stage. However, the terms are frequently used interchangeably.

In the value engineering process, several major decision areas can have the most significant impact on costs. First, the product design will drive a number of costs. A few years ago, for example, IBM introduced a printer specifically designed to minimize the number of parts, connecting devices, and assembly requirements. This design decision resulted in greater commonality of parts used for similar applications,
the replacement of the usual fasteners with parts that snapped in and out, markedly simpler assembly for both IBM and the end user, and much lower field service and support costs.

A second major value engineering cost opportunity is the choice between buying components from outside suppliers and making them oneself. This decision, obviously, depends upon the suppliers’ and one’s own capabilities, core competencies, and costs. If suppliers have the skill to manufacture parts, sub-assemblies, and assemblies for a company at higher quality and lower cost, those items probably should be purchased from the outside. Items should be produced inside if there is a quality, speed, and cost advantage or if they represent a fundamental underlying competency that the company does not want to share.

For items that are scheduled to be purchased from outside suppliers, work with the suppliers to assure that they have done all that they can do to increase their quality and reduce their costs. Some Japanese companies even have suppliers represented on the product planning/target costing teams if their component parts are critical to the overall design, development, production, and cost of the company’s products.

For those parts deemed appropriate to manufacture inside, a subsequent decision of how to manufacture includes the acquisition of capital equipment to facilitate the manufacturing process. Both process engineering and manufacturing have to be involved as product design and specification decisions are being made and, particularly, as buy or make decisions are reached.

Market and product planning, design and development, purchasing, process engineering, and manufacturing decisions and their financial implications are inextricably intertwined. A decision at an early stage that fails to take into account its impact on later stages in all likelihood will need to be recycled. That recycling can result in a longer product development and production cycle than the concurrent approach embodied in the target costing process.

**Monitoring the Target Costing Process**

As the target costing process unfolds, it is important to track how well the objectives—both non-financial and financial—are being achieved. Are the customers’ wants and needs being satisfied? This may necessitate continued input from existing and potential customers via surveys, focus groups, and other means. Are competitors behaving as expected? If not, what are the implications of their actions? Is the target price still valid? If not, what is the impact on allowable and target cost objectives?

The allowable and target cost figures are aggregated numbers, and may be disaggregated along traditional lines—primary building blocks, sub-assemblies—or along functional dimensions, ultimately to underlying components. As the project team works together, it is important to track the gains and shortfalls against the target reductions and allowable costs. Some companies maintain detailed status boards aggregating where they stand against major building block or function targets, broken down to individual components. In this way, the team knows at all times where it stands against the objectives and where additional opportunities must be found.

Maintaining an accurate assessment of current costs is also important, as they serve both as the foundation for the target cost determination, and as a report on how well the allowable costs are being achieved. For those companies whose
cost accounting systems use methodologies that spread large pools of costs across a number of products relatively evenly, or in other ways fail to relate costs to the products that cause them, activity-based costing (ABC) can be particularly effective for both assigning costs to products more accurately, and then tracking actual costs. As the definition of the costs to be included in target costing becomes more comprehensive, including shared manufacturing and non-manufacturing costs, the application and benefits to be derived from ABC become greater.

**Enhancing Target Costing with Kaizen Costing**
Advocates of target costing appropriately argue that major cost reduction opportunities are best achieved during the early stages of the concept, design, development, and production cycle. Nevertheless, in those companies truly committed to cost management, the quest for cost improvements continues, even during the production stage. The Japanese make a distinction between value engineering (cost reduction during the design and development stage) and “kaizen costing” (the continuous and zealous pursuit of cost improvements during the production stage).

Leading companies are always looking for ways to eliminate waste and reduce costs, even after a product has gone into production. Modifications to the product and its design, supplier management efforts, and continual process improvement initiatives are all part of the kaizen costing effort.

Some of the principal opportunities that Japanese companies pursue in their kaizen costing efforts include the total elimination of any kind of waste (such as material scrap, material handling, excess inventory, and burdensome administrative activities); job content balancing (to assure that the minimum number of workers is required); and working closely with one’s suppliers (to assure that they, too, are as effective and efficient as possible).

**Repeating the Target Costing Process**
Some authors have suggested that target costing is a static process; once the target cost has been established, it does not change. Leading Japanese companies consider target costing to be much more dynamic. Their view is that a product whose price is declining will reach a point where costs can no longer be reduced through kaizen costing. That is the trigger for a new generation product with significantly different characteristics, which can result in a significantly lower allowable cost and, as a result, new profit opportunities. As that new-generation product enters production, kaizen costing techniques are subsequently applied.

Exhibit 4, which is derived from similar charts from NEC, demonstrates the relationship of product prices over time; the significant cost reductions that can be achieved from one generation of product to the next by using target costing practices; and the continuing (but less significant) cost reductions that can be realized via kaizen costing. As the effect of kaizen costing begins to flatten, a next generation product is developed, target costed, and introduced. In this diagram, Design Cost “A” represents the cost that has been achieved from the target costing process. As time passes, kaizen costing results in further cost reductions. As the potential for additional cost savings dissipates, a new generation of product, “B,” is developed using target costing to achieve a significant drop in cost. Then, kaizen costing takes effect again, taking further costs out of the second-generation product.

In summary, the target costing process consists of four principal stages: first, the establishment
of the target cost; second, the team-oriented value-engineering-based cost-reduction efforts during the concept and design stages; third, the application of kaizen costing during the production stage; and finally, the introduction of the next generation product when few additional cost improvement opportunities can be achieved.

VII. TARGET COSTING PROCESS TOOLS
Target costing is as much a significant mindset change regarding the relationship of prices and costs, a discipline, and an integrative approach to decision making, as it is the application of a set of techniques and tools. However, a number of techniques and tools facilitate an effective and efficient target costing process.

**Market Assessment Tools**
Three externally-oriented analyses—market assessment tools, industry and competitive analysis, and reverse engineering—provide a firm with a foundation for defining the proposed new product and establishing its target price.

The first step in determining the target cost is to assess the market and customers’ wants and needs in regard to the proposed product. A first step to satisfying customers is to find out what they want. This can be accomplished either indirectly (via current or prospective customer surveys) or directly (by using focus groups that bring together groups of current or potential customers to ask them what they like and dislike about existing products, what they want from new products, and what they might be willing to pay for the various product features). Although getting to know what the customer wants and needs, or may want and need in the future, seems so obvious, many companies do not do it well. Rather, they continue to develop products from an internal perspective. One of the best
ways to determine market wants and needs is to ask former customers or noncustomers. These sources can provide insights regarding the shortcomings of existing or proposed products that are very different from the views of existing customers. If satisfied, the company can open up new markets.

Japanese companies have for years made a very strong effort to ascertain customers’ needs and their reactions to current products. For example, the Japanese automobile companies have emphasized reliability, fit and finish, quietness of the ride, and little pleasantries such as electric mirrors and drink cup holders to gain market share. North American companies are beginning to do more of that. Prior to the development and introduction of its highly successful Taurus, Ford extensively surveyed existing and prospective customers about what they wanted and did not like in a new car. The Taurus has been one of the most successful cars in the company’s history. Boeing builds mock-ups of its cabins and asks its airline customers, and their customers, to evaluate them; Caterpillar puts stereo radios into the cabs of its heavy equipment because that’s what operators wanted; Gillette introduced a totally new design for its women’s razor; Thermos introduced a highly successful electric grill after extensive market review and evaluation.

**Industry and Competitive Analysis**

A whole body of knowledge has grown, primarily from the work of Michael E. Porter, on the subject of industry and competitive analysis. When companies operate in a near monopoly or oligopoly, understanding one’s competitors in detail is less important. However, as the number and strength of competitors increase, understanding those competitors in great depth provides the opportunity to position one’s firm and its products to advantage.

A number of leading companies have markedly increased the resources applied toward understanding the industry in which they operate and the competitors with whom they compete. In the late 1970s and early 1980s, Xerox began to realize that they were losing significant market share to a number of Japanese competitors whose product quality was higher and whose prices and costs were significantly lower. Xerox began to learn all they could about these competitors and their products in order to reestablish their market leadership. Similarly, Caterpillar during the early 1980s began to feel the competitive pressures of Komatsu. They assigned a team of executives to specifically study Komatsu. One conclusion they reached was that Caterpillar’s costs were significantly higher because of outdated manufacturing and other practices. That led Caterpillar to refurbish its facilities to markedly reduce their own product costs. General Electric, emanating from its commitment to be “Number One or Number Two” in any industry in which it operates, spends a great deal of its strategic planning efforts understanding its markets and competitors. One of the capstone requirements of GE’s Financial Management Training Program (FMP) is for the participants to complete a competitive analysis of one of GE’s major competitors. A visit to Honda’s motorcycle plant in the early 1980s prompted Harley-Davidson to rethink its whole business approach. Harley-Davidson’s turnaround is one of the true success stories of North American manufacturing in the last decade.

**Reverse Engineering**

One of the tools that companies such as Xerox, Caterpillar, and the U.S. automobile companies are now using extensively is called reverse engineering or teardown analysis. These companies acquire competitors’ products and disassemble
them to investigate their design, material, likely manufacturing processes, product quality and attributes, and product costs. In this way, these companies really understand their competitors’ products, how they differ from their own, and what they cost to produce. Some might argue that a number of companies have been doing reverse engineering for some time. The difference is the organization and degree to which it is being done by some companies, the resources that are committed to the process, and the pervasive use to which the analysis is put. Leading-edge companies such as Chrysler have built significant teardown facilities, committed sizable resources, and use the results of the analysis across the full spectrum of concept, design, procurement, process engineering, manufacturing, and post-sales activity. Rather than be a tangential exercise, which may or may not be used, in leading-edge companies reverse engineering has become central to a full understanding of the competitors’ product and service offerings.

Financial Planning and Analysis
The determination of the target profit margin relies heavily on the comprehensive and detailed financial planning and statement analysis. Every firm has relationships between prices, volumes, and revenue; costs, and investments, in the aggregate and for specific product lines and individual products. The management accountant must understand these relationships to be able to relate them to a proposed product. Based on the results of the externally oriented analysis—which is used to help establish the target price, a thorough understanding of the product line involved and related existing products, and how the proposed new product may be similar and different in terms of product design and processing, both the firm’s cost structure, and what is realistic in terms of competitive cost structures—a target margin can be set.

Product Cost Analysis
Organizations must also be able to determine the product costs and related investments for their firm’s product lines and products in order to estimate the cost of the proposed new product under existing and proposed product and process characteristics. One technique that has been promulgated in the last few years is activity-based costing (ABC), which is intended to result in a more accurate determination of product costs. Rather than rely on very general rules for assigning costs to products, such as average material scrap rates and direct labor-based overhead rates, ABC takes into consideration product, process, and other differences to more accurately relate the costs that a business incurs to the specific products that drive them. (The Institute of Management Accountant’s Statement on Management Accounting, Implementing Activity-Based Costing, deals specifically with ABC.)

Identifying costs with specific cost-incurring activities—such as procurement, receiving, material handling, setups, and inspection, which is a fundamental early step in the ABC process—provides high visibility to potentially wasteful activities. This step in the ABC process is frequently called activity-based management (ABM) and serves as a useful aid to kaizen costing.

Key suppliers also can play an important role in product design, development, and costing. Working closely with their customer, the key suppliers can demonstrate additional ways by which alternative product design or processing decisions can favorably, or adversely, affect the supplier’s costs. Therefore, working with the suppliers early in the process and even including them on the target costing team can add to a better understanding and optimization of product costs.
Japanese companies most closely identified with target costing (such as Toyota, Nissan, Nippondenso, and NEC) do not seem to use ABC techniques. Initially, that might seem to contradict the previous paragraphs. In fact, understanding the evolution of Japanese manufacturing and costing practices makes it more understandable. These leading Japanese companies have emphasized total quality management (TQM) and just-in-time (JIT) manufacturing for a number of years. Both lead to very organized “lean production” environments. In a flow line or cellular manufacturing environment, a high proportion of product costs may be directly identified to them. ABM is a useful approach to understand a sequence of activities, differentiate between value and nonvalue, and eliminate the wasteful activities. Leading Japanese companies are past the point of ABM. Similarly with ABC, it is an analytical approach to better identify costs to products in situations where that is difficult. Toyota, and others, by rearranging their factories contend that they can identify a high proportion of their costs directly to relatively homogeneous product families, and, thus, do not require ABC.

The story of Harley-Davidson closely follows the Japanese model. By making their factories flow better, and by utilizing other JIT practices such as “pull” manufacturing, they focused on simplification and waste elimination first. Japanese companies do know their costs well, and use “cost tables” extensively in their target costing efforts.

Cost Tables

Japanese companies employing target costing have established, maintain, and utilize extensive “cost tables,” which are detailed databases of cost information based on various manufacturing variables. They are used to project new product costs assuming the use of different designs, materials, manufacturing processes, and end-user functions. These cost tables supplement conventional product costing systems, which focus on historical costs, and are specifically developed to help managers determine in advance the effect of alternative choices. Although originally prepared manually, these databases are now computerized in such companies as Nippondenso. They have also been developed over a number of years, based on the experiences of the company, and, as a result, represent a significant resource for the firm that has them, and a competitive disadvantage to those who lag in their development. The cost tables were originally developed for material costs, but have been expanded to include process design and production methods.

A primary role of the management accountant in Japanese companies employing cost tables is to maintain such tables. To do that requires that the management accountant understand design alternatives, procurement practices, process engineering, and production. During the product development process, the management accountant brings the content of the cost tables to the inevitable trade-off discussions. If existing tables are not adequate, the management accountant may have to extend the existing tables to satisfy new issues.

It should be reiterated that these cost tables have been developed over several decades. North American companies wanting to emulate them will require a significant commitment of resources and time.

Once the market and competitive environments have been adequately assessed, financial planning and analysis have led to a target profit margin, and internal analysis of one’s own costs has been completed, the allowable cost and current cost can be compared to determine the target cost. Once the target cost has been determined,
the challenge of achieving it follows. Companies use a variety of approaches.

Some companies have initiated what have become known as “concurrent engineering initiatives” to bring the design and development product engineers together with the process engineers and manufacturing managers. They identify the interrelationships between product design and manufacturing and deal with them concurrently, rather than sequentially. This is certainly a start toward parallel activity and integration across the organization, although it may not fully consider the customer, vendor roles, or cost implications. For companies whose product development cycle is long, such behavior can shorten the time-to-customer cycle.

**Value Engineering**

Value engineering is intended to start with the customers’ wants and needs, relate them to product design, buy or make decisions, and process engineering and manufacturing—all in the context of services, quality, speed, and cost. The idea is that the marketplace, product development, manufacturing, and even post-manufacturing activities (such as field service) are inextricably bound together with costs and have to be dealt with simultaneously.

Supporting value engineering are such tools as cost structure analysis and functional analysis. The former divides the overall product into sub-assemblies or even individual components and attaches current costs and target costs to that framework in order that costs may be reduced substructure-by-substructure and component-by-component.

Functional analysis looks at a product in terms of its various functions and relates the value of those functions to the costs associated with them. Important functions usually support the most costs, and less important functions ought to cost less. The idea is to relate what the customers need, in terms of product features and capabilities, to the prices that they are willing to pay for them and to the costs that go into them.

**Quality Function Deployment**

The Japanese, and more recently some North American companies, have taken this concept of customer wants and needs, functional characteristics, technical specifications, and costs to a very sophisticated level of analysis called “quality function deployment.”

Quality function deployment (QFD) is defined as “converting the customers’ demands into ‘quality characteristics’ and developing a design quality for the finished product by systematically deploying the relationships between the demands and the characteristics, starting with the quality of each functional component and extending the deployment to each part and process.” The technique uses a formal process of relating customer demands and product design to achieve the best fit of quality demands, technology offerings, cost, and reliability.

**VIII. MANAGEMENT ACCOUNTING CHALLENGES**

Management accountants have a significant role in ensuring that the long-range financial and other objectives of the firm are realized. They must use the most powerful tools at their disposal. In a competitive business environment, where prices are set by market and competitive pressures, or when management decides to price aggressively to achieve market penetration, target costing is one such tool. Inasmuch as target costing represents a fundamentally different approach to cost management, a number of significant challenges face the management
accountant who is thinking about encouraging the implementation of target costing.

Awareness and Education: For many companies, the shift from a “cost up, price up” to a “price down, cost down” mindset is a major change. Management accountants accustomed to analyzing and reporting financial results can be among the first to sense the impact of shifts in market and competitive pressures on prices, or the benefits of lower prices on market penetration, and, thus, costs. This understanding must be conveyed to the other managers throughout the firm.

Target costing is a primary management tool for coping with a price-down environment. Management accountants have a major responsibility to review the available literature and to seek out examples of target costing. Major Japanese companies lead the way. More and more non-Japanese companies are beginning to use the process as they come under extreme price and cost pressures.

Because target costing is such a fundamental process, awareness and education of it must reach far beyond management accountants to virtually all other areas of the business and upward to senior management. Besides management accountants, both senior management and other managers throughout the organization must become familiar with target costing and embrace its introduction.

Senior Management Support: Target costing is the manifestation of a significant cultural change for many businesses. Underlying it is the notion that markets put a lid on prices; management cannot continue to raise prices indefinitely. Management can lower prices, especially in an effort to increase market share. In turn, management sets costs, providers of resources do not. In reality, only senior management can set that tone for a firm, especially if it contradicts history.

There are several ways management can demonstrate its acceptance of market-based pricing, and its implication for cost management, generally, and target costing, specifically. One would be to espouse a plan of no price increases, especially as a solution for a cost/price squeeze. The second would be to support explicitly a target costing initiative throughout the firm.

Cross-Functional Involvement: Another major challenge for the management accountant is to get real “buy-in” from the other functions of the business involved in product planning, design, development, procurement, process engineering, production, distribution, and customer support. They, too, must be made aware of the market and competitive forces affecting prices, and their impact on cost management. They must actually experience a target costing process, in order that they understand and appreciate how it works and can benefit a firm.

Probably no challenge is as great. Product planners tend to respond to customer needs, or their own, without a strong concern for costs. Designers frequently tend to overdesign. For example, the selection of common rather than unique parts, or the selection of general-purpose rather than special-purpose equipment, is often not considered and therefore the higher costs associated with complexity are built into product cost. By the time a product reaches the procurement, investment, and production stages, costs have already been committed. To get the various other managers involved in target costing, and work through a project, is a major challenge for an organization. To get them to understand the concept of the cost of complexity and to ensure
that these costs are kept to a minimum is a major challenge for the management accountant.

The Pilot Project: Obviously, if a firm is to effect the shift to a target costing mindset for the planning and introduction of its products, it has to start with a specific product. A successful project will go a long way toward achieving the shift. The management accountant has to assure that the appropriate groundwork has been laid—adequate awareness and in-depth training has taken place; examples have been witnessed, or at least studied; top management has embraced the idea; cross-functional involvement has been committed. The management accountant has the opportunity and responsibility to develop a pilot project plan, then use it to manage the process. As everyone works through the pilot, gains the experience and learns from it, and the end result is deemed successful, the process of target costing will begin to be woven into the fabric of the firm on an ongoing basis.

Implementing target costing is a major shift in organizational behavior. The challenges for the management accountant are many; the potential benefits for the firm significant.

IX. CONCLUSION

The objective of target costing is to assure that a firm achieves its product-specific and firm-wide profit objectives in a very competitive market environment. It is becoming increasingly essential as more firms are realizing that they cannot increase prices to solve cost and profit squeeze problems.

Target costing requires a major change in mindset for many companies, executives, and management accountants accustomed to operating for so many years in a business environment more accepting of regular price increases. Those industries most clearly affected by increasing global, competitive pressures could be expected to respond most quickly to the approach and benefits of target costing. Those seemingly less immediately affected may fail to react as quickly, and, as a result, may fail to achieve the benefits of earlier cost planning and stricter cost management, and their impact on profitability and market position.

Implementing target costing will take time. It requires widespread education, the support of senior management, the involvement of all parts of the organization, and a strong, proactive role on the part of the management accountant. This guide is intended to provide a concise introduction to target costing, its implementation, and its benefits.

APPENDIX: CASE STUDY

MOONGLOW ELECTRONICS COMPANY

The Moonglow Electronics Company (a fictitious name for an actual North American company) is a rapidly growing manufacturer of sophisticated electronic equipment for industrial application. Despite the intense competition of the industry, Moonglow has grown to over $500 million per year in sales.

Several years ago, its management had become impressed with what it read about Japanese management practices including TQM, JIT, and, more recently, cost management. As a result, they made several trips to Japan to try to understand Japanese management practices better. On a recent trip they focused on Japanese finance and accounting practices. This included:

- frequent (six month) budgets with heavy involvement and commitment by line management;
- strategic cost management using target costing and cross-functional teams; and
the role of finance in decision support and facilitation as contrasted with a more typical command and control orientation.

Management concluded that Moonglow Electronics could apply many of the finance and accounting practices that they encountered by visiting Japanese companies.

Moonglow has analyzed the price, cost, and volume history of some of their key products. The company concluded that for a select group of 15 products, representing nearly 40% of sales for one product line, most of the products’ costs increased in the past year. Looking more specifically at four products introduced over the last three years, the company found that prices were usually above what they projected by 13%, while costs were up by 65%. Figure 1 summarizes the results of this analysis.

Figure 2 shows one of the products representing a major portion of Moonglow’s business. As both prices and costs rose, unit volume collapsed. It was only after price reduction, partnered with an effort to reduce costs, that unit volume increased during 1993.

Senior Moonglow financial management, with the full support of the CEO, has concluded that a target costing initiative focused on both new and existing products should be introduced throughout the company. The intent would be to ingrain the philosophy of target costing throughout the organization so that as prices come down, whether due to market forces or management’s...
own initiative, costs will also be managed down and out of the business in order that market leadership and margins may be maintained.

Moonglow financial management concluded that, when compared with leading Japanese companies visited, there was an inadequate concern for cost management and reduction throughout the company. Growth, price increases, and a history of strong profits masked the need for more rigorous cost management. It was concluded that a significant change in mindset would have to be affected whereby cost reduction would become a way of life throughout the company—virtually an obsession for the Moonglow people.
The second major conclusion that was reached was that cost management during design was not a priority; rather, most attention to cost issues occurred after products reached production. More attention to costs during design would be required and appropriate training and tools would need to be provided.

Finally, it was concluded that Moonglow’s product introduction process, including the consideration of costs, was very sequential. Marketing passed off to Product Development, Product Development passed off to Engineering and Production, Finance got involved late in the development process. More concurrency would have to be achieved.

It was agreed by Moonglow management that cost management would have to receive much greater attention “every step of the way” in the development process. During product planning (marketing), as a part of product definition, the product’s selling price, projected volume, and initial “target” cost would be determined. In concept design, rough cost estimates would be assessed and assigned to component or functional blocks. By general design and prototype development, more rough cost estimates would be made to assess whether the target cost could still be achieved. Similarly, in detail design (drawings and specifications) and manufacturing system design (processes, tooling, etc.) detailed cost estimates would continue to be made to assure that the target cost could be met. During each and every step of the development cycle, cost estimates would be made to assure that the target cost was attainable.

The final step in Moonglow’s plans to increase cost management practices and results was to outline a specific list of action steps. They included:

- Plan price and cost reductions;
- Develop a formal “estimated cost system”;
- Demand “estimated cost reviews” at each step;
- Continue to develop “team” approach to new product development;
- Measure and learn from experience;
- Develop “value engineering” skills and process throughout the organization;
- Use nontraditional targets and measures to manage cost management process improvements.

To demonstrate the importance that the company was beginning to place on target costing, and his support, the CEO wrote in the company’s 1993 Annual Report. “Our financial executives studied the disciplines in use at a number of leading Japanese companies during the past year. As a result we have instituted a Target Costing program to formalize our cost reduction efforts.”

GLOSSARY

ALLOWABLE COST. The difference between the target price, based and set on market conditions and competitive forces, or management decision to achieve market penetration, and the target profit, derived from the firm’s overall strategies and objectives, and business planning process. The allowable cost is, in effect, the maximum cost that may be committed to a product in the product planning process to achieve the firm’s profit objective.

CONCURRENT ENGINEERING. The practice of bringing together a task force representing marketing and product planning, design and development, process engineering and manufacturing to achieve concurrent, rather than sequential, decision making. The objective is to achieve the desired product quality, faster
delivery, and lower costs. The objectives of concurrent engineering and target costing are quite similar. Target costing, however, puts a much stronger emphasis on market-based pricing, price-driven allowable costs, and the explicit requirement that the target cost be achieved.

CURRENT COST. Also referred to as the drifting cost or estimated cost. Represents the costs that would occur if existing product designs and specifications and process technologies were applied to a new product.

FUNCTIONS. Functions are the effects of a product’s characteristics that satisfy the customer. Hard Functions are product attributes that are related to the use of a product and include all functions of a product that are required for its technical and economic use. They may be objectively evaluated. Soft Functions can be characterized as “image” functions. They go beyond the technical and economic uses of the product, and include such characteristics as aesthetics, prestige, and affect. They tend to be subjectively evaluated.

KAIZEN COSTING. The comprehensive and continuous approach to reducing costs after a product has reached the production stage. Both the product, including its design, materials, and specifications, and the production process are considered. The source of many of the cost improvement ideas is the workforce closest to the product and production process.

TARGET COST. A term that means different things to different companies. Some refer to target cost as the difference between the target price, set by market forces, and the target profit, set by management. Others refer to target cost as the difference between the allowable cost and the current cost, or, in essence, the amount of costs that must be reduced to achieve the allowable costs. This guide uses the second definition.

TARGET COSTING. A comprehensive management process that starts with the premise that prices are established in the marketplace based on customer requirements and competitive alternatives or management decision; to prompt markets that firms are in business to be profitable, grow, and provide a return to their shareholders, and, as a result, that allowable costs and investments are driven by prices; that costs may be best managed out early in the product-development process; that cross-functional teams are best able to deal with the inevitable functional tradeoffs; and that analytical techniques and tools such as value engineering and cost tables contributed to the process.

TARGET PRICE. The price of a product that the marketplace effectively “gives” to a firm (based on customers’ wants and needs and competitive alternatives) or that management sets to achieve certain market penetration objectives. In increasingly competitive marketplaces, it can be assumed that prices will fall—hence the term “price down.”

TARGET PROFIT (MARGIN). After the target price has been established, the amount of profit, both absolute and relative, that is established for the proposed product. The target profit is derived from the firm’s overall business strategies and objectives, usually emanating from the business planning process. The actual definition of what is included/excluded in the target profit varies from company to company.

VALUE ENGINEERING. The systematic analysis of a product’s design, materials, specifications, and production process, in the context of customers’ wants and needs, to balance overall costs and benefits, and increase the ultimate value of the product. Because
trade-offs between design and development, production, and cost are involved, value engineering is best achieved utilizing cross-functional teams.

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