TARGET COSTING at a *Consumer Products Company*

THIS GLOBAL MANUFACTURER USES IT TO INTRODUCE NEW PRODUCTS.

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Does the following sound familiar? Your company has developed a new product. You determined the product cost, added a markup, and came up with a price of $5.82 per unit. Your competitors, however, sell comparable products for less than $5.00 per unit. Now managers are scrambling to cut costs while trying to determine if they should proceed with the new product or scrap it.

Many companies follow the process where they develop new products, calculate prices based on cost plus a markup, and don't really scrutinize costs until it's almost too late. At this point, management has a much more difficult time delivering a profitable product.

Conversely, some companies use a target-costing approach when developing new products. Target costing assumes that prices are market driven. Many describe a target cost as an allowable cost and calculate it by subtracting the desired profit margin from the product's selling price. The target cost is considered throughout the product-development cycle. Companies manufacture and sell products that they can produce at or below a target cost and redesign and abandon products with costs that exceed the target cost.

While many people focus on the calculation of a target cost or "cost target," target costing is a process. It differs from cost-plus pricing in that it's a way of managing the product-development process. The target-costing process focuses on six key principles: price-led costing, customer focus, focus on design of products and processes, cross-functional teams, life-cycle cost reduction, and value-chain involvement.

To date, most target-costing applications in the United States have been at large companies in the transportation, heavy equipment, large appliance, automotive, and electronics industries. Competitive pressure was often the driving force behind these implementations. Target costing has been advocated as especially effective for companies with extensive supply chains that face globalization in price-aggressive marketplaces.

Even though the consumer products industry doesn't have all of these characteristics, it does face extensive competitive pressures, and the principles of target costing still apply. Nevertheless, very few consumer products companies have actually implemented target costing. A large global manufacturer and supplier of personal homecare products is a notable exception. Headquartered in the southwestern U.S., this company has aggressively applied target-costing principles to introduce new products. Given the competitive nature of the consumer products industry, this company uses target costing as a cost-control tool during product and process design for its new product introductions.

Target costing can be broken down into five steps, as Figure 1 shows. We will discuss how the consumer products company used each step during its product-development process. Then we'll explain how it linked target costing to Stage Gate, another corporate initiative already in place, to bolster target costing's credibility and avoid the perception that it's just another flavor-of-the-month improvement initiative.

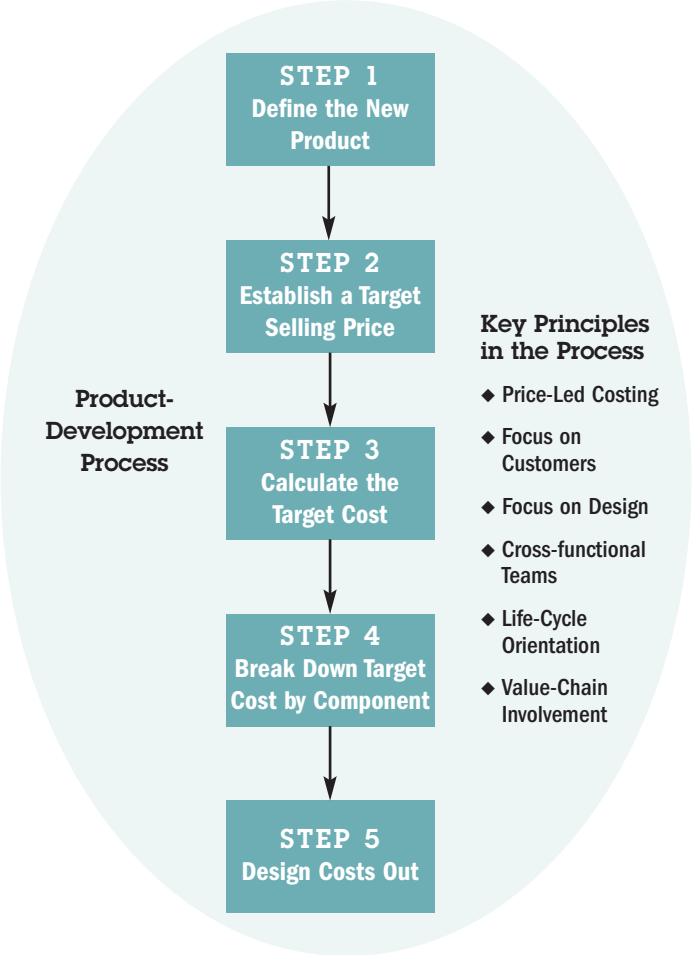
STEP 1: DEFINE THE NEW PRODUCT

To define the new product, you need to understand customer requirements and determine what features the new product will have. The product-introduction process at the consumer products company began with a new product concept. In 2002, the company was concerned about inroads that private-label products were making on the market share of liquid hand soaps. As a branded producer of liquid hand soaps, this company competes with other branded producers as well as private labels. Creating new products, including extensions of existing products, helps the company increase market share. Therefore, the company decided to launch a liquid hand soap containing Vitamin E, a new feature added to the company's existing line of hand soaps. Even though the company expects the Vitamin E product to generate relatively modest sales, it must make a profit.

STEP 2: ESTABLISH A TARGET SELLING PRICE

Once you define the product characteristics, pricing research begins and includes customer surveys, focus groups, and reviews of competitor pricing. For new product concepts, the consumer products company's marketing department frequently uses an Internet survey to establish price points that are acceptable to consumers. For a variation of an existing product, marketing generally surveys competitor prices to support its pricing deci-

Figure 1: Steps for Target Costing



Source: Developed from material in "Purchasing and supply management's participation in the target costing process" by Lisa M. Ellram (in *Journal of Supply Chain Management*, Spring 2000, pp. 39-51) and *Target Costing: The Next Frontier in Strategic Cost Management* by Shahid L. Ansari and Jan E. Bell (Irwin Professional Publishing, Chicago, Ill., 1997)

Table 1: New Product Target Cost

Target Selling Price	$1.52
Desired Contribution Margin (46%)	0.70
Cost Target (Variable Costs)	$0.82

Table 2: Target Cost by Component for Vitamin E Product

	PRELIMINARY COST ESTIMATES	TARGET COST	COST GAP
Formula	$0.308	$0.301	$0.007
Bottle	0.155	0.155	0.000
Pump	0.140	0.140	0.000
Label	0.060	0.060	0.000
Corrugate	0.026	0.026	0.000
Other (Pallet and Stretch-wrap)	0.002	0.002	0.000
Processing (primarily labor and overhead)	0.329	0.136	0.193
Total	$1.020	$0.820	$0.200

sion. For the new Vitamin E soap, the company used these techniques to establish a target selling price of $1.52. (We have altered all pricing and cost information because of its proprietary nature.)

In the highly competitive liquid hand soap industry, pricing is a focal point for consumer buying decisions. Within the liquid hand soap segment, retail prices are relatively consistent across products of the company and its major competitors. Consistent pricing ensures shelf space at the retailer, and the additional shelf space a new product garners improves brand awareness, which is very important for consumer-products companies.

STEP 3: CALCULATE THE TARGET COST

Once you establish the target selling price, you subtract its required profit margin to determine the product's target cost. For this particular company, the required profit margin is expressed as a contribution margin, and the cost target is for variable costs only. Therefore, the company's contribution margin must be high enough to cover all of its fixed costs and still produce a profit. The fixed costs include not only fixed manufacturing costs, but also selling, general, and administrative costs. For liquid soaps, the company requires a 46% contribution margin. After subtracting the Vitamin E product's contribution margin from its selling price, its cost target for variable manufacturing is $0.82 (see Table 1).

By including only variable manufacturing in its cost targets, the company's target costing process is somewhat unusual. Unlike at Boeing, Caterpillar, and other large manufacturers, new-product-development costs are relatively low for the company's liquid soaps. Therefore, these nonrecurring fixed costs, as well as all other fixed manufacturing costs, are excluded from the cost targets for liquid soaps.

STEP 4: BREAK DOWN TARGET COST BY COMPONENT

Next, you assign cost targets to each of the product's components. After reviewing the component costs of similar products, the company established cost targets for the variable components of the Vitamin E soap. For example, the company had recently launched Product B hand soap, which was similar to the Vitamin E soap, so its component costs served as a benchmark for the Vitamin E product. But the production requirements for the Vitamin E product were somewhat different from those for Product B, which led to a gap between Vitamin E's preliminary cost estimates and its cost target (see Table 2).

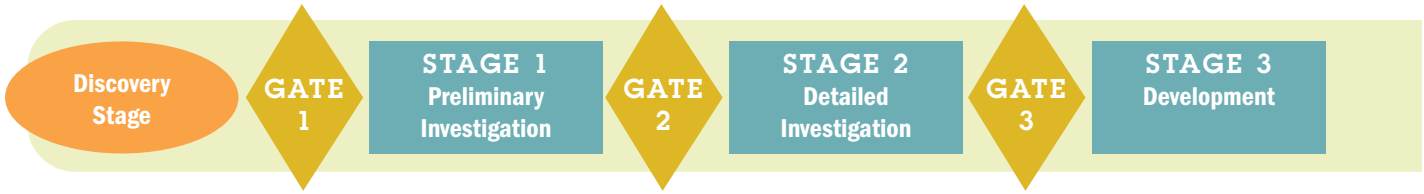
Even though the Vitamin E hand soap was above its cost target, management could have launched the new product based on its desire to keep up with the competition and maintain or build upon its current allotment of shelf space at retail outlets. Using this strategy, the company would attempt to reduce costs after introducing the product. Once they finalize the formulation, processing, and packaging decisions, however, there's little opportunity for cost reduction (see Table 3 for a description of each of these areas). Therefore, the company decided to delay introducing the Vitamin E product until it closed the gap between the preliminary cost estimate and the cost target.

STEP 5: DESIGN COSTS OUT

As we discussed, opportunities for cost reduction occur during the formulation, processing, and packaging of liquid hand soaps. For example, the company could change the formula to allow for less expensive ingredients, outsource processing to a third party, or negotiate with suppliers to reduce the cost of the container and pump.

By reviewing the costs in Table 2, you can see that manufacturing labor and overhead account for most of the gap between the preliminary cost estimate for the Vit-

Figure 2: New-Product-Development Process Using Stage Gate



amin E product and its target cost. Since labor and overhead costs occur during the processing phase of the production process, this was the area the company focused on during cost-reduction efforts. The selection of a manufacturing site significantly affects labor and overhead costs, so the Vitamin E product team considered three possibilities: union plants, nonunion plants, or independent vendors or co-packers:

- **Union plants:** These are located in relatively low-cost areas in the central part of the U.S. Wage rates at these locations are low, and, because of the centralized locations, transportation costs are relatively low as well. While steady-state, long production runs are very cost effective, these plants are less flexible, so changing over to new products is quite expensive.
- **Nonunion plants:** These plants are located in parts of the country that have relatively high labor costs. They aren't centrally located, and thus have higher transportation costs, but nonunion plants offer flexibility. Work rules are less restrictive, so the plants can adapt to new products and production processes more easily. These plants can also work overtime and add or reduce production workers more easily than the unionized plants, thus allowing greater flexibility in their production schedule. Furthermore, changing over to new products at these plants is less expensive than at the union plants.
- **Co-packers:** These are independent vendors to whom production is outsourced.

Early in the product-development process, the company had ruled out production at a union plant because they are better suited for large batch sizes and long production runs. Since the company is going after a niche market and never expects the Vitamin E product to be mainstream, it would be produced in relatively low volumes with variable demand. Therefore, initial plans were to produce it at a nonunion plant.

Unfortunately, as Table 2 illustrates, the preliminary cost estimate for processing at a nonunion plant was $0.193 above the cost target. Upon further investigation, the high labor and overhead costs were due to the low volume and slow run rate of the new formula. Since producing the new product internally didn't meet the cost target, the product team requested a bid from co-packers. One co-packer submitted a bid of $0.136, which met the cost target for processing and put the total cost within $0.007 of the target. At this point, the company finalized and approved the new product.

Table 3: Key Management Decisions During the Development of Liquid Hand Soaps

Formulation—Research and Development works with the marketing department to select new ingredients for the liquid soap. Decisions must be made with regard to selection of cleaning ingredients, antibacterial agents, dyes, and fragrances. Niche products might also contain some specialty ingredients, such as Vitamin E.

Processing—For the most part, the mixing and blending process is similar for all liquid soaps. Depending on the product's characteristics, however, steps might be taken to make the processing more efficient. For example, antifoam ingredients could be added to speed up the production process. Processing costs are also affected by production volume, batch size, flow rate, processing location, and other factors.

Packaging—For liquid hand soaps, packaging includes development of the bottle and pump container that hold the liquid soap. This step requires a cross-functional product team that includes marketing, packaging design engineers, procurement, and suppliers. The role of marketing, engineering, and suppliers is to select a design that is aesthetically pleasing yet provides the necessary functionality. Procurement's responsibilities include scheduling, and its representative must ensure that any product choices can be delivered in the right quantity and at the right time to meet production requirements.

Source: Developed from material at www.stage-gate.com

INTEGRATING TARGET COSTING INTO THE PROCESS

Target costing is more likely to be adopted successfully if it's fully integrated into a company's pre-existing product-development process. The consumer products company uses Stage Gate, a process for product development from a third party (see www.stage-gate.com for more information). Stage Gate represents a series of processes and software tools to support the new-product-development process. Essentially, Stage Gate provides an operational roadmap for driving new-product-development projects from idea to launch by dividing this process into a series of activities (stages) and decision points (gates). After idea generation, the five stages include preliminary investigation, detailed investigation, development, testing and validation, and product launch. A gate precedes each stage where a decision is made as to whether or not to proceed with product development. At each gate, or decision point, a senior leader decides to go, kill, hold, or recycle the project. Figure 2 illustrates the Stage Gate process. Stage Gate instills discipline into what can be a chaotic process by speeding up the new-product-development process and helping ensure that critical steps aren't omitted.

Using Stage Gate in the product-development process supports target costing. First, Stage Gate requires financial analysis at each gate in the process to determine whether a business case can be made to support the new product introduction. Target costing offers a methodology to support the analysis. A company establishes a hard cost target for a new product and must achieve it before target costing supports the decision to move forward with the project. Otherwise, the company should kill the product or place it on hold until they meet the cost target (as was the case with the Vitamin E product). This aspect of Stage Gate supports a key principle of target costing, namely price-led costing.

Cross-functional teaming is another important component of Stage Gate. The diagram of the Stage Gate process illustrates that there's no single R&D, production, or marketing stage; instead, each stage consists of a set of parallel activities undertaken by individuals from different functional areas working together as a team. Using cross-functional teams is also a very important component of target costing. Achieving an aggressive cost target requires cooperation among different functional areas. For example, in the case of the Vitamin E product the manufacturing department worked with procurement and outside suppliers before deciding to outsource production of the new product to co-packers.

CLOSE THE GAP

Target costing is a proactive, comprehensive, strategic cost management system for profit planning. It instills discipline by requiring that new products hit their cost targets before they are produced. This consumer products company doesn't often drop new products when they initially fail to meet a cost target. Instead, the company attempts cost reductions while holding the functionality and quality of the products at a constant level. They simply delay a new product's introduction until cost targets are achieved. For the Vitamin E soap, the product team delayed its launch until they closed the $0.193 gap between the preliminary cost estimate and the target cost for labor and overhead, which allowed them to introduce a profitable product. ■

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