<u>A Note on Customer Satisfaction</u>

The Customer Satisfaction category examines your performance from the customer's perspective. Each of your products can earn points if it meets four criteria:

1. It must sell 50 thousand units during the year.

2. It cannot stock out. However, if the product's plant is running at maximum utilization (a complete second shift) the stock out rule is waived. (There are times when a competitor's unforeseen actions could cause capacity shortages.)

3. Its December Customer Survey score must be 30 or more.

4. The product must be available for sale by Dec. 31 of the previous year. All products that sell at least one unit during the year are considered. If the company has five products that sold at least one unit, then each product can contribute 20 points. If it has eight products making sales, each product can contribute 12.5 points.

Since some products make sales in two or more segments, the algorithm produces a weighted average. For example, if a product sold 900 units in Traditional with a score of 40, and 100 units in High End with a score of 10, the weighted average would be (900*40 + 100*10) / 1000 = 37.

A product's December Customer Survey Score is developed using marketing's "4 P's" —

1. Product
2. Price
3. Promotion
4. Place

Product and Price
The Survey evaluates the product against the buying criteria. A perfect score of 100 results when the product:

a. Is priced at the bottom of the expected range.

b. Is positioned at the Ideal Spot. (Because the segment moves each month, this can occur only once each year.)

c. Has an MTBF specification at the top of the expected range.

d. Has the ideal age for that segment. (Because the product ages each month, it can only have the segment ideal once each year.)

Promotion
Promotion, driven by your promo budget, creates product awareness before customers shop. If

customers are not aware of the product, they are less likely to buy, and that drags down the Survey score.

Think of it this way. Suppose you had a perfect product – a perfect design at a rock bottom price. Further, customers have no trouble finding your product when they shop, meaning that its accessibility is 100%. In this perfect world, you do no promotion at all. awareness is zero. What would happen to demand? On the one hand, some customers will stumble across your product when they shop, take the time to discover that it is perfect, and decide to buy it. On the other hand, some customers will pass over your product on their way to products they know about.

The simulation deals with the problem as follows. The customers that know about your product always consider it. Of the customers that are not aware of your product, half discover it, and half miss it. Mathematically it looks like this. Your perfect product (with perfect awareness) would start with a Survey score of 100. If its awareness were 60%, then 40% of your customers would not know about it. Of these, half (20%) would stumble across it. Instead of having the Survey score fall all the way to 60, it would fall halfway between 100 and 60, ending at 80.

Once you see that the score falls "halfway", it is relatively easy to estimate the result. For example:

I estimate my product's design and price are worth:	Its awareness is:	So it will fall halfway to its estimated score times its awareness, or halfway to:	Ending up with a Survey score halfway in between, or about:
100	0%	0, because 100 * 0% = 0	50
60	70%	42, because 60 * 70% = 42	51
20	40%	8, because 20 * 40% = 8	14

To be precise, multiply the score you think your product deserves based upon its mix of price and product design by (1- (100%-awareness)/2). In the examples above:

100 * (1 – (100% – 0%)/2) = 100 * (1 – (50%)) = 100 * 50% = 50
60 * (1 – (100% – 70%)/2) = 60 * (1 – (15%)) = 60 * 85% = 51
20 * (1 – (100% – 40%)/2) = 20 * (1 – (30%)) = 20 * 70% = 14

Place Place is driven by your Sales budget. It examines the question, "How easy is it for customers to work with you during and after the sale?" We measure this with the segment's accessibility rating. An accessibility of 80% means that only 80% of customers have an easy time finding a product, talking to a sales person, taking delivery, etc. If the accessibility is below 100%, it drags down a product's Survey score.

The method is identical to awareness. After considering Product, Price, and Promotion, we arrive at an estimated Survey score. The Survey score falls halfway to the estimated score times its accessibility.

Let’s continue the examples from above:

After considering my product's price, design, and awareness, I think my product would score about:	Its accessibility is:	So it will fall halfway to its estimated score times its accessibility, or halfway to:	Ending up with a Survey score halfway in between, or about:
50	0%	0, because 50 * 0% = 0	25
51	60%	31, because 51 * 60% = 31	41
14	30%	4, because 14 * 30% = 4	9

To be precise, multiply the score you think your product deserves based upon its mix of price, product design, and promotion by (1- (100%-accessibility)/2). In the examples above:
50 * (1 – (100% – 0%)/2) = 50 * (1 – (50%)) = 50 * 50% = 25
51 * (1 – (100% – 60%)/2) = 51 * (1 – (20%)) = 51 * 80% = 41
14 * (1 – (100% – 30%)/2) = 14 * (1 – (35%)) = 14 * 65% = 9

The Survey Score
Together, Product, Price, Promotion and Place drive most of the Survey score. For example, if the product had a great price and design worth 80, but awareness of 60% and accessibility of 80%, customers might say, "The design is great and we like the price, but only 60% of us ever heard of it, and of those, only 80% could easily take delivery." The net score would be:

80 * (1 – (100% - 60%)/2) * (1 – (100% - 80%)/2) = 80 * (1 – 20%) * (1 – 10%) = 80 * 80% * 90% = 58.

However, several remaining factors could cause the score to fall further.

a. The Rough Cut factors (pricing outside the range, positioning outside the inner black segment circle, or MTBF below the expected range) can cause the score to fall to zero.

b. The Accounts Receivable Policy could cause the score to fall. At zero days (that is, you expect customers to pay cash on delivery) the score falls to 60% of its former value. At 30 days it falls to 95%. At 90 days it keeps 100%.

Two factors could cause the score to increase.

a. "Salesmanship" or sales time. Your Sales Budget drives two factors, accessibility and Salesmanship. Accessibility examines infrastructure, is subject to diminishing returns, and is remembered from round to round. Salesmanship applies only to this year. The more you spend, the more sales time you allocate to the product. Salesmanship could increase your product's score by up to 15%.

b. If the TQM module is enabled, three TQM initiatives can collectively increase the product score by up to 10%. The initiatives include Channel Support Systems, Quality Function Deployment Effort, and CCE 6 Sigma.

Note that Customer Satisfaction is often at odds with other goals. High scores imply high costs, and that could imply low margins. From a competitive standpoint, your demand is driven by the spread between your score and your competitors' scores. If everyone scores the same, whether at 10 or 50, they sell the same number of units.