

Beyond the Quality Revolution: Linking Quality to Corporate Strategy

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Victor Hugo once wrote that „there is nothing like dream to create the future,“ and history supports his claim. Hugo’s own countryman and contemporary, Jules Verne, imagined a time when rockets might carry passengers bound for the moon. Centuries earlier, Leonardo da Vinci sketched a helicopter that would prove remarkably similar to the first flying machines built more than 400 years later and a bicycle nearly identical to those in use today. But despite the brilliance of their vision, both Verne and da Vinci were unable to realize their dreams because many essential tools and technologies were unavailable during their lifetimes.

For many corporations, the concept of vision preceding reality finds parallels in their own struggles to achieve competitive success through Total Quality Management (TQM).

The problem is not a lack of vision. By now, the visions of quality articulated by Deming, Juran, Crosby, and others are widely known. We are familiar with tools to help build quality-improvement programs, and we have seen isolated examples of success. Nonetheless, the task of turning the vision into broad-based reality has proved difficult and frustrating. If quality management is to be more than a dream for many corporations, new understanding is necessary.

The Relationship Between Quality and Value

Business cares so much about quality because quality – however defined – can be clearly linked to some measures of economic value and business success.

For example, many corporations have applied quality-improvement principles to cost-reduction efforts. In a recent study of two farm equipment manufacturers, Arthur D. Little determined that the company undertaking quality-improvement efforts was able to lower the cost of waste dramatically in such internal functions as inventory, rework, and inspection. While the competing firm spent 12 percent of its sales revenues on those areas, the manufacturer concerned with quality improvement was able to reduce that amount to 3 percent.

In a study of research and development in the automotive industry, one of my colleagues determined that if it were possible to lower the cost of product R&D by 2.5 percent without affecting results, net present value (NPV) would increase for this firm by about \$70 million. Even more significant, if the car maker were able to reduce R&D lead time by 20 percent without affecting product cost or quality, NPV would be increased by almost \$350 million.

Quality improvement can also mean significantly higher revenues. In one case, two car manufacturers produce similar luxury cars with base prices that are nearly identical. One car, because of its perceived higher quality, is sold at a premium of \$2,300 above the list price. The other, because it is perceived to be of lower quality, is sold at a discount of \$1,800.

Even something as intangible as a corporation’s reputation for quality can be linked to a measurable unit of economic value. Work conducted over the past decade by Opinion Research Corporation has shown that corporations ranking below average on nine key dimensions of perceived quality tend to have far lower price-to-earnings ratios than firms with strong reputations in those areas.

Turning the Vision into Reality

Given the relationship between quality – once achieved – and value, corporations have good reasons for remaining committed to the quality vision. But many firms are having a hard time applying quality principles throughout their operations.

Typically, firms train managers and employees in quality principles. They form internal quality institutes dedicated to spreading the principles. They tell themselves and their customers that quality is a top priority – and then they are not quite sure what to do next. At this point, frustration levels begin to rise.

A recent story in *The Wall Street Journal* reported a significant disparity between the promises and the results of corporate quality-improvement programs. Employees interviewed for the article noted that, while their companies were quick to express a strong commitment to quality improvement, they were not particularly good at turning the rhetoric into reality.

Many of the TQM projects tackled by corporations thus far have focused on „natural“ processes. In the manufacturing area, for example, most processes comprise easily identifiable tasks, the customers are known, and the success or failure of efforts aimed at quality improvements are fairly easily measured. Many companies are now

struggling to extend the application of TQM tools to areas outside manufacturing. They are discovering that the key principles of quality improvement are often difficult to implement in the nonmanufacturing world.

Perhaps most important, the art of managing a corporation – and in particular setting its strategic direction – is not typically thought of as a process. Again and again, in working with clients on their quality-improvement efforts, my colleagues and I are asked two questions: „How can we apply quality-improvement principles to service functions and to activities – such as R&D – that are not thought of as processes?“ and „How can we get real support from top management?“

Our answer to both questions is, in part, strategy. The way to make quality-improvement effective in such areas as customer service, marketing, and R&D is by having a clearly articulated strategy that ties all those efforts together and focuses the corporation – including top management – on strategic quality improvement. The way to ensure top management’s commitment to quality is to embed quality in areas of unquestionable top management priority – the fundamental goals and priorities of the corporation.

Linking Quality to Corporate Strategy

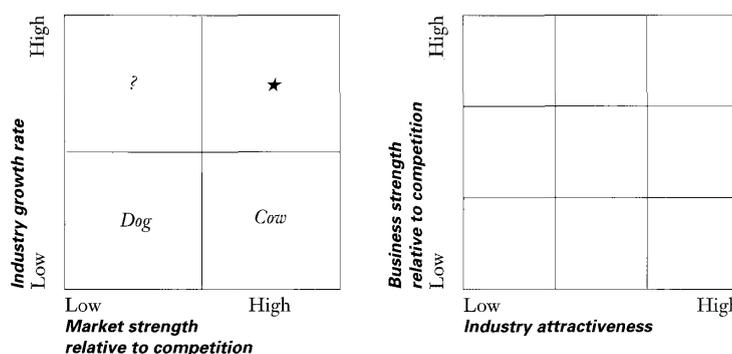
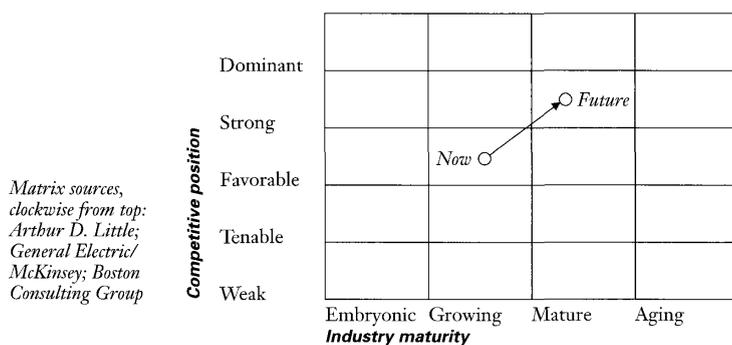
In the 1950s and 1960s, businesses addressed the future by developing plans. They had budgets. They talked about inputs and outputs. They determined the level of resources required for programs planned during the year. In the business journals of the decade, there is little reference to strategy.

That changed in the late 1960s and 1970s, when people realized the importance of focusing on the competition. That significant advance in management theory – the advent of assessing a corporation’s actions relative to others in the industry, pioneered at General Electric and by my colleagues at Arthur D. Little several decades ago – provided the fundamental baseline for the past 20 years of strategic business management. (The word „strategy,“ in fact, is drawn from war terminology and refers to plans developed to deal with hostile competition.)

Today, most corporations plot their corporate strategies using a planning matrix that has as its two axes some variant of industry maturity and competitive position (Exhibit 1). Because industry maturity (or growth rate, or attractiveness) is by definition not influenceable, corporate strategy has been plotted relative to competition (or competitive position, or market share).

Exhibit 1

Strategy is Formulated Relative to Competition

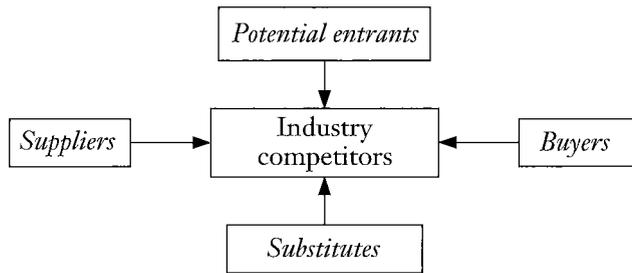


Throughout the 1980s, although the fundamental approach to strategy remained unchanged, methodologies were refined to include the concepts of competitive intensity and competitive advantage. These newer frameworks (Exhibit 2) provided important new insights into understanding the competition, but kept management attention riveted on one primary variable.

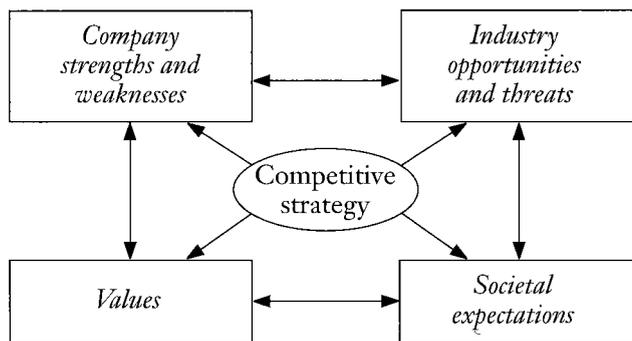
Exhibit 2

Frameworks From the 1980s Extend Competitive Analysis in Important Ways

Competitive intensity



Competitive advantage



Now on to the 1990s. The dilemma posed earlier – how to make quality an integral part of strategy – is readily solved in the reverse. The key is to plot corporate strategies relative to quality – or at least its key principle, customer satisfaction.

Today, management needs to move beyond „strategy“ to develop a „strategic response“ that charts actions in relation to the new parameters. Therefore, the planning matrix used today and in the next decade should allow organizations to articulate their objectives against the level of customer satisfaction that they strive to achieve, as well as relative to how their competitors respond to similar challenges (Exhibit 3). Management must set goals and focus investments on the basis of where they want to position themselves within this strategic response matrix.

By using this new planning framework, management can integrate quality-improvement principles more fully into corporate strategy.

Understanding the Matrix

This strategic response matrix permits a company to plot important attributes of its total offering. These attributes fall into three general types: threshold attributes, performance attributes, and excitement attributes (Exhibit 4). A threshold attribute is one in which additional improvement results in little added customer satisfaction and thus minimal economic value. For instance, for a taxi company that bases its strategy on picking up its passengers on time, arriving more than a few minutes early does little to enhance customer satisfaction. There is a threshold of performance beyond which the potential for adding value is limited.

An airline, however, might determine that arriving at its destinations early more often than competitors would add value by increasing customer satisfaction – and that the earlier, the better. In this example, early arrival at the destination gate is what we at Arthur D. Little call a performance attribute – i.e., an aspect of a service or product that results in greater customer satisfaction and greater value. An automobile’s top speed or the cleaning power of a laundry detergent are classic examples of performance attributes.

Exhibit 3

A Quality-Driven Planning Matrix:

Strategic Response

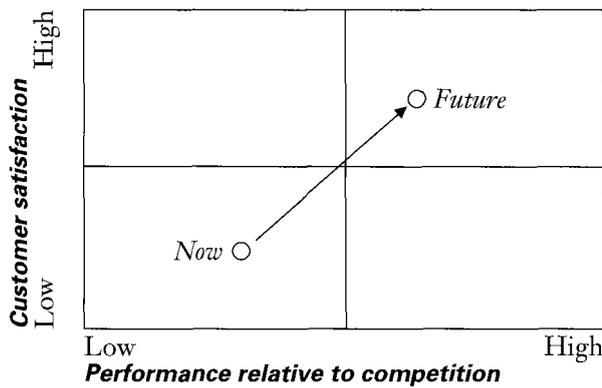
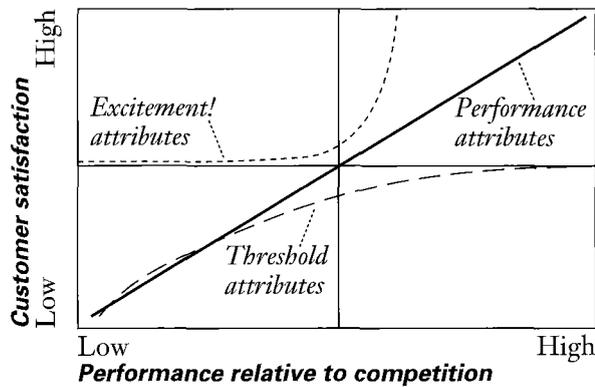


Exhibit 4

Product Attributes’ Effects on Strategic Response



We call the third category excitement attributes – features of a service or product that consumers don’t expect and in which a modest improvement above the competitive norm can provide significantly enhanced customer satisfaction and economic benefit. In buying a car, most consumers are concerned with both threshold and performance attributes. They want certain basic features and are interested in how a particular model outperforms its competition. Additional, unexpected features, such as Honda’s cup holders and coin holders in the late 1970s or Lexus’s three-dimensional projected analog displays and enhanced dealership experience, fall into the realm of excitement. Excitement attributes can generate not only extremely high customer satisfaction but also purchase decisions.

A few years ago, environmentally sound products would have fallen into this category. Consumers didn’t walk into stores expecting to find them, but when they noticed them on the shelves, they tended to be impressed and to change their purchase patterns as a result. Today, however, consumers are no longer surprised to find these products on the

shelves; they look for them and expect to find them. An excitement attribute has shifted to a performance one.

At some point, certain of these attributes may shift to the threshold category. The products in question might simply be expected to meet environmentally sound standards. The manufacturer would gain little, if any, competitive advantage by focusing additional resources on making the product even more environmentally sound.

In using the strategic response matrix to plot strategy, companies must consider not only where on the axes they want to be positioned at a given time, but also how a product or service can move across the matrix in the years ahead. Companies must also identify, articulate, and manipulate attributes that will affect future success.

The trick in plotting a strategy that recognizes these various kinds of attributes is to lead the shift from one level to another, as the Japanese have classically done in cars. Attributes that excited us when they were first introduced, such as good product quality or good fuel economy, have long since made the transition into expected performance features.

If a firm focuses only on the competition, it will always be trying to produce its products at a cost comparable to the competition. If, on the other hand, it focuses on the customer and thereby identifies new features before the competition does, it is in a position to win a larger market share and increase customer satisfaction at a relatively noncompetitive point in a particular attribute's life cycle.

Using Quality Tools to Implement Strategy

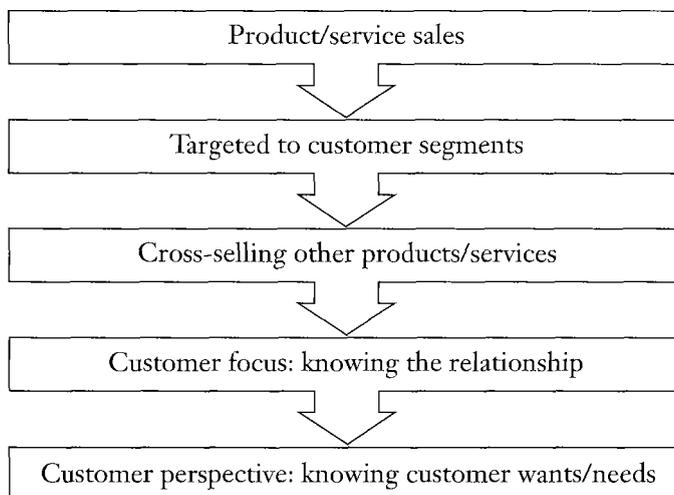
To use this matrix to develop and implement a specific strategic response based on customer needs and competitive performance, a company needs sophisticated measurement techniques, a creative understanding of customers, and quality-improvement tools.

As Diane Schmalensee notes elsewhere in this issue of *Prism*, TQM measurement tools have become increasingly sensitive in recent years. Properly used, they can help companies achieve new levels of customer satisfaction by determining unmet needs and opportunities. Sophisticated understandings make it possible to identify and assign priorities to those features of your services or products that need to be improved in order to achieve greater value.

A company's attitude toward customers has a major influence on the creativity and perceptivity with which new attributes are developed. Over the past 20 years, leading companies have evolved from an internal focus on sales of their own products or services, through a solid understanding of specific customer and market segments, to an interest in cross-selling multiple products through each segment channel (Exhibit 5). Today, foresighted companies are doing much more: They are charting both the buying patterns and the buying potential of each of their customers. For example, Staples, an office supply store, uses „frequent buyer cards“ to track individual customers' preferences and practices. This information provides the basis for Staples to effectively put themselves in their customers' shoes – i.e., to identify new opportunities and attributes to meet customer needs.

Exhibit 5

Evolution of Focus in Leading Companies

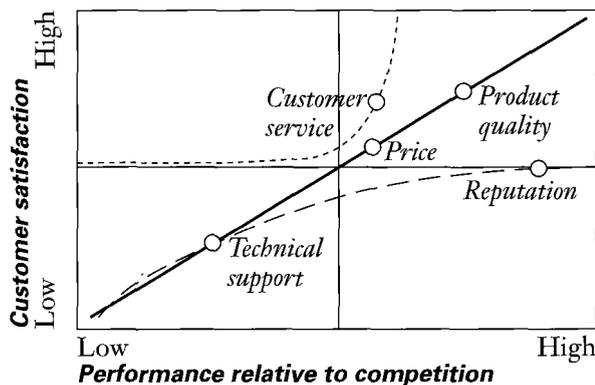


Quality-improvement tools can play a critical role in helping a firm enhance performance, lower the cost of a product, reduce lead time, and even identify new attributes and opportunities to satisfy the customer, as well as to set priorities.

Take, for example, a company eager to improve its position in the market. It begins by identifying the attributes of its service offerings and plotting them, using current measurement techniques, on the strategic response matrix (Exhibit 6). It finds – in the opinion of its customers – that its product quality (a performance attribute) is very good, and that, understandably, its price is somewhat higher than the competition’s. Focusing quality-

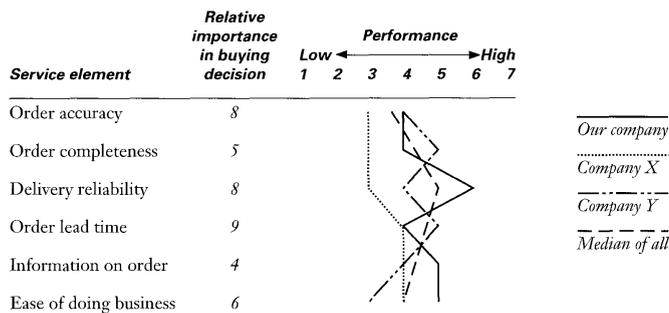
improvement efforts on either of these areas probably would not result in a significant gain in value for the firm. Reputation, a threshold attribute, is also not cause for concern; it is as good as it needs to be to influence customer satisfaction. Customer service and technical support, however, offer the firm real opportunities to improve customer satisfaction and competitive position. Customer service – an excitement attribute – is reasonably high already. But because of this attribute’s very steep curve, the firm could increase customer satisfaction significantly by making a minimal improvement over the existing performance level in this area. And by focusing on technical support, a performance attribute currently poorly rated, the company could help ensure that its customers remain satisfied over time.

Exhibit 6
Using Customer Ratings of Attributes to Set Priorities



With this analysis, the firm decides to focus its strategy for the year on improved customer service. That decision made, the firm employs a standard quality tool – quality function deployment (QFD) – to identify the various components of its customer service and set priorities (Exhibit 7). The company selects order lead time as the first area needing attention. Using yet another quality tool, this time a fishbone diagram (Exhibit 8), the company identifies the various tasks that affect order lead time and designs a quality-improvement project for each of them.

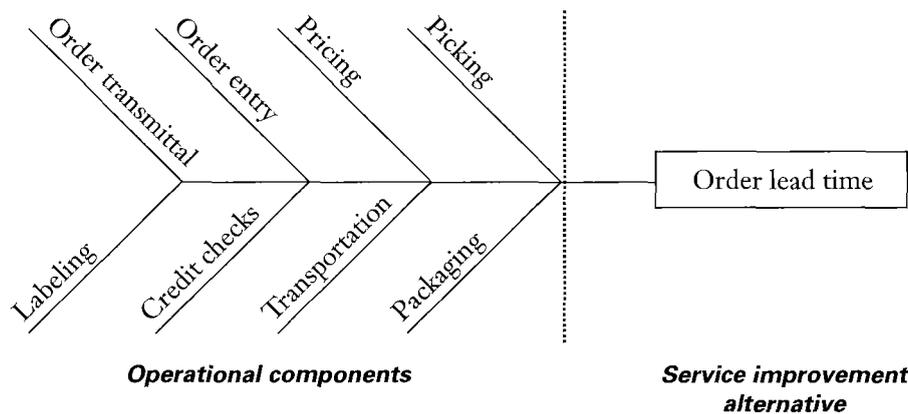
Exhibit 7
Using Quality Function Deployment (QFD) to Unbundle Priority Areas



Because each task is essential to achieving the firm's strategic goals, quality-improvement projects focused on those particular tasks begin to have meaning for those who execute them. By clearly linking quality improvement with corporate strategy, a firm also provides a direct link between employee and customer. It

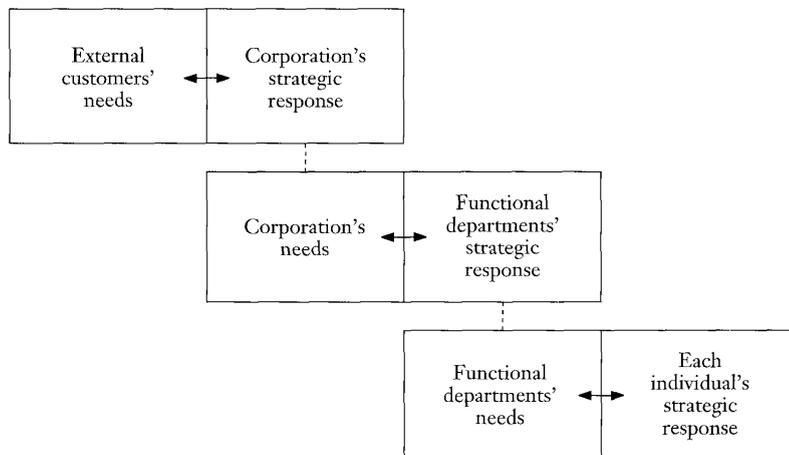
dramatically reduces the frustration and cynicism that surround much quality-improvement work. That breakthrough cannot occur, however, unless corporate strategy very clearly links the customer's needs with everything that happens in the corporation.

Exhibit 8
Using a Fishbone Diagram to Quantify Contributing Factors



Viewing planning as a process supports the second important goal of embedding quality principles throughout the corporation: obtaining real top management commitment as well as in-the-trenches focus and understanding. By treating successive layers in the corporation as a series of customer/supplier relationships, the planning process helps every individual see how his or her goals contribute to the corporation's objectives (Exhibit 9). In effect, each level in the corporate hierarchy serves as the „customer“ for the planning process in the directly reporting level. Top management is committed to quality – and that commitment is seen throughout the corporation – when individuals in the most isolated departments can describe how their TQM projects link back to the corporation's overall plans for its strategic response.

Exhibit 9
The Unbundling Process – Throughout the Corporation – Represents a Series of Customer/Supplier Relationships



Customer satisfaction and efficient operations: These are important goals, worthy of our efforts. But, in the end, Victor Hugo's belief that „there is nothing like dream to create the future“ was only partly right. Dream alone is not enough. Just as Leonardo da Vinci and Jules Verne lacked the proper tools and understandings to turn their dreams into reality, we, too, will be frustrated in our efforts to improve quality and value unless we link our vision with the proper tools and strategies.

Charles Wiseman has written that „what you see is what you believe.“ When early European astronomers looked to the skies, what they saw was determined by what they believed: that earth and man were the center of the universe, and that all celestial orbits rotated in perfect symmetry around the earth. Imperfections and exceptions that might have undermined such a world view were simply not seen.

The Chinese, on the other hand, looking to the skies at the same time, saw something different: a cosmos that had no end and no bounds, one that fit perfectly with the mystical components of Chinese philosophy.

Managers often run the risk of failing to fully realize the potential of their organizations to achieve quality. To paraphrase Wiseman: What you see is what you get. Managers who view quality improvement as an end unto itself, divorced from corporate strategy and consisting of one-time, piecemeal projects, will continue to be frustrated in their quests to achieve it. For those, on the other hand, who link their quality-improvement efforts clearly and decisively to corporate strategy, TQM becomes the chain drive propelling the company forward toward genuine long-term improvements in value.

And if that is how you view quality improvement, then the sky truly is the limit.

Tamara J. Erickson is a vice president of Arthur D. Little, Inc., and managing director of the firm's Industry Management Section. She is co-author of the book, Third-Generation R&D: Managing the Link to Corporate Strategy, to be published this spring by Harvard Business School Press. This article is based on a presentation by Ms. Erickson at an ongoing series of executive seminars on the theme „Beyond the Quality Revolution,“ sponsored by Arthur D. Little, ODI, and Opinion Research Corporation.