SECTION 13
STRATEGIC DEPLOYMENT

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INTRODUCTION

Strategic Planning (SP) is a systematic approach to defining long-term business goals and identifying the means to achieve them. Once an organization has established its long-term goals, effective strategic planning enables it, year by year, to create an annual business plan which includes the necessary annual goals, resources, and actions needed to move toward that future.

To institute organization-wide change efforts of any kind (a program of annual quality improvement, for example), an organization must incorporate the effort into the strategic planning process and into the annual business plan. This will ensure that the effort will become part of the plan and not compete with the well-established priorities for resources. Otherwise, the best-intended change effort will fail.

In recent years, total quality management (TQM) has become a pervasive change process and a natural candidate for inclusion in the strategic plan of many organizations. The integration of TQM and strategic planning is so natural, in fact, that the combination of TQM and strategic planning has become known by its own separate term. Unfortunately, different organizations have chosen different terms for this process. Some have used a Japanese term, "hoshin kanri." Others have partially translated the term and called it "hoshin planning." Still others have used a rough translation of the terms and called it "policy deployment." In an earlier version of the Malcolm Baldrige National Quality Award, this process was called "strategic quality planning." Later this award criterion was renamed "strategic planning." Although the criteria in the Award guidelines clearly define the

deployment nature of the concept, the term strategic planning is often misunderstood to be the creation of the strategic plan and not the careful deployment of strategic goals, subgoals, and annual goals and the assignment of the resources and actions to achieve them. We will try to highlight this difference and use the term strategic deployment throughout this section. Many organizations have overcome failures of change programs and have achieved long-lasting results through strategic deployment.

This section describes the strategic deployment process and explains how it is managed within organizations. It addresses such important issues as: how to align strategic goals with the organization's vision and mission; how to deploy those goals throughout the organization; and how to derive the benefits of Strategic Deployment.

To this end, this section

1. Defines strategic quality deployment
2. Describes the benefits of strategic quality deployment
3. Describes the systematic approach to strategic quality deployment
4. Describes some of the issues surrounding the introduction of strategic quality deployment into an organization
5. Explains the specific roles of senior management in implementing and ensuring the success of strategic quality deployment

What Is Strategic Deployment? Strategic deployment is a systematic approach to integrating customer-focused organization-wide improvement efforts with the strategic plan of an organization. More specifically, strategic deployment is a systematic process by which an organization defines its long-term goals with respect to quality, and integrates them—on an equal basis—with financial, human resources, marketing, and research and development goals into one cohesive business plan. The plan is then deployed throughout the entire organization.

As a component of a total quality management system, strategic deployment enables an organization to plan and execute strategic organizational breakthroughs. Over the long term, the intended collective effect of such breakthroughs is to achieve competitive advantage.

Strategic deployment has evolved during the 1990s as an integral part of many organizational change processes, especially total quality management. Strategic deployment is part of the foundation that supports the broader system of managing total quality throughout an organization. The relationship between strategic quality deployment and the broader system is shown in Figure 13.1.

Strategic deployment also is a key element of the Malcolm Baldrige National Quality Award (see Section 4) and the European Foundation for Quality Management (EFQM) Award, as well as other international and state awards. The criteria for these awards stress that customer-driven quality and operational performance excellence are key strategic business issues which need to be an integral part of overall business planning. A critical assessment of the Malcolm Baldrige National Quality Award winners demonstrates that those companies which won the Award out-performed those that did not (Figure 13.2). For the fourth year quality paid off—and big. The "Baldrige Index" outperformed the Standard & Poor's 500 stock index by almost 3 to 1. The index shows the composite growth of companies that have won the U.S. Malcolm Baldrige National Quality Award since 1988.

Godfrey (1997) has observed that to be effective strategic deployment should be used as a tool, a means to an end, not as the goal itself. It should be an endeavor that involves people throughout the organization. It must capture existing activities, not just add to already overflowing plates. It must help senior managers face difficult decisions, set priorities, and not just start new initiatives but eliminate many current activities which add no value.

History

Strategic Planning: The Past. Until recently, strategic plans typically consisted only of financial goals or market goals. The approach can be described as "organization-wide financial planning" and

FIGURE 13.1 Strategic Quality Planning management relationship. (*Juran Institute, Wilton, CT.*)

	1988–1996 Investments	Value on 12/1/97	Percent change
All recipients	$7496.54	$33,185.69	362
Standard & Poor's 500	$7496.54	$18,613.28	148

Data: National Institute of Standards and Technology.

FIGURE 13.2 Malcolm Baldrige National Quality Award winner performance. (*Business Week 1998, March 16, p. 60.*)

it formed the basis of most strategic planning. This approach consisted of: establishing financial goals, developing plans to meet the goals, providing the needed resources, establishing measures of actual performance, reviewing performance against goals, and providing rewards based on results. It resulted in the annual business plan and the budget. This plan became the driver of all activity within the organization. Where such a plan covered a period of 5 or more years it was usually referred to as a "strategic business plan." The results of this effort enabled an organization to focus all employees on the financial goals and the means to achieve them.

The major components of this strategic planning process are

A hierarchy of goals: This includes but is not limited to financial goals supported by financial goals at lower levels such as divisional and departmental budgets, sales quotas, cost standards, project cost estimates, etc.

A formalized methodology: A methodology for establishing the goals (an annual budgeting process) and for providing the needed resources to achieve the strategic plan and annual business plan.

An infrastructure: The infrastructure (usually) includes a Finance Committee; a full-time Controller and supporting personnel; and all top management, meeting regularly to review and adjust the plans when needed.

A control process: The control process includes organization-wide financial metrics; systems for data collection and analysis; financial reports; reviews of financial performance against goals; and adjustment, when needed, of the plan itself.

Provision of rewards: Performance against financial goals is given substantial weight in the system of employee performance management and recognition and reward of key employees.

Universal participation: The financial goals, reports, reviews, etc., are designed hierarchically to parallel the company's organization hierarchy. These hierarchically deployed goals make it possible for managers at all levels to support the upper managers' goals.

A common language: The planning process typically focuses on major, common metrics—revenues and profits—expressed in a common unit of measure—a currency unit, such as the U.S. dollar. There are also other common metrics which are widely used; ratios such as return on investment and return on sales are examples. In addition, such key words as "budget," "expense," "profit," etc., acquire standardized meanings, so that communication becomes more and more precise. Hence, the organization creates a language it can understand.

Training: In successful organizations, it is common for employees at all levels to undergo training in various financial concepts, processes, methods, tools, etc.—in other words—to learn to speak and understand the same language. Companies which have so trained their employees in all functions and at all levels are well poised to outperform companies in which such training is confined to the finance department.

Strategic Planning: Today. The approach used to establish organization-wide financial goals has evolved into a more robust strategic plan. To be effective at achieving rapid change in a global environment, many organizations incorporated establishment of organization-wide change efforts, such as total quality management, into the strategic plan. The generic steps and features inherent in managing for the annual business plan are likewise applicable to managing for quality. It also makes it easier to incorporate organization-wide improvement programs into one cohesive plan. In earlier versions of the Malcolm Baldrige National Quality Award this was referred to as the *strategic* quality plan (SQP). The strategic quality plan should include:

Quality goals: The major quality goals get incorporated and are supported by a hierarchy of goals at lower levels: subgoals, projects, etc. Improvement goals are goals aimed at creating a breakthrough in performance of a product, serving process, or people by focusing on the needs of customers, suppliers, and shareholders. The strategic quality plan incorporates the voice of the customer with quality goals and integrates them throughout the plan. This integration enables the goals to be legitimate and balance the financial goals (which are important to shareholders) with those of importance to the customers. It also eliminates the concern that there are two plans, one for finance and one for quality.

A formalized methodology: A systematic, structured process for establishing improvement goals and providing resources:

- *A new infrastructure* is created which includes the establishment of an upper-management team or "Executive Council," a quality office and supporting personnel to review all goals.
- *A review and control process* which includes systems for collection and analysis of customer data, reports of key quality performance indicators, and reviews to monitor performance against goals.

Provision of rewards: Performance against improvement goals is given substantial weight in the system of merit rating and recognition. A change in the structure that includes rewarding the right behaviors is required.

Universal participation: The goals, reports, reviews, etc., are designed to gain participation from within the organization's hierarchy. This participation involves every employee at every level, providing support for the change initiative and helping achieve the desired results.

A common language: Key terms, such as quality, benchmarking, and strategic quality deployment, acquire standard meanings so that communication becomes more and more precise.

Training: It is common for all employees to undergo training in various change concepts, processes, methods, tools, etc. Companies which have so trained their workforce, in all functions, at all levels, and at the right time, are well poised to outperform companies in which such training has been confined to the quality department or managers.

These required changes seem numerous and extensive. Prior to the 1980s the asserted benefits of establishing improvement goals were generally not persuasive to upper managers. Most of the reasons are implied in that same list of changes:

- Going into total quality management or expanding strategic planning is a lot of work.
- It adds to the workload of upper managers as well as managers at lower levels.
- It is quite disturbing to the established cultural pattern.
- "We've already tried it and it failed."

However, to compete globally, organizations have needed to get the most out of their assets and resources. Strategic deployment provides the means to accomplish this.

Why Do Strategic Deployment? The Benefits. The first question that often arises in the beginning stages of strategic deployment in an organization is: Why do it? Can it help us become a global competitor? To answer these questions requires a look at the benefits that other organizations have realized from strategic deployment. They report that strategic deployment

1. Focuses the organization's resources on the activities that are essential to increasing customer satisfaction, lowering costs, and increasing shareholder value (see Figure 13.2).
2. Creates a planning and implementation system that is responsive, flexible, and disciplined.
3. Encourages interdepartmental cooperation.
4. Provides a process to execute breakthroughs year after year.
5. Empowers managers and employees by providing them with the authority to carry out the planned activities.
6. Eliminates unnecessary and wasteful team activities that are not in the plan.
7. Eliminates the existence of many potentially conflicting plans—the finance plan, the marketing plan, the technology plan, and the improvement plan.
8. Focuses resources to ensure financial plans are achievable.

Different organizations have tried to implement total quality management systems as well as other change management systems. Some organizations have achieved stunning results; others have been disappointed by their results, often achieving little in the way of bottom-line savings or increased customer satisfaction. Some of these efforts have been classified as failures. One of the primary causes of these disappointments has been the inability to incorporate these "quality programs" into the business plans of the organization. Other reasons for failure were that

1. Strategic planning was assigned to planning departments, not to the upper managers themselves. These planners lacked training in concepts and methods and were not among the decision makers in the organization. This led to a strategic plan which did not include improvement goals aimed at customer satisfaction, process improvement, etc.

2. Individual departments had been pursuing their own departmental goals, failing to integrate them with the overall organizational goals.

3. New products or services continued to be designed with failures from prior designs that were carried over into new models, year after year. The new designs were not evaluated or improved and hence were not customer-driven.

4. Multifunctional "re-engineering" projects have suffered delays and waste due to inadequate participation and to lack of early warnings by upper management, and have ended before positive business results were achieved.

5. There has been no clear responsibility for reducing cycle times or waste associated with major business processes. Clear responsibilities were limited to local (intradepartmental) processes.

6. Improvement goals were assumed to apply only to manufactured goods and manufacturing processes. Customers became irritated not only by receipt of defective goods; they were also irritated by receiving incorrect invoices and late deliveries. The business processes which produce invoices and deliveries were not subject to modern quality planning and improvement because there were no such goals in the annual plan to do so.

The deficiencies of the past strategic planning processes had their origin in the lack of a systematic, structured approach to integrate programs into one plan. As more companies became familiar with strategic quality deployment, many adopted its techniques which treat managing for change on the same organization-wide basis as managing for finance. The remedy is what we call strategic quality deployment.

LAUNCHING STRATEGIC DEPLOYMENT

Creating a strategic plan that is customer-focused requires that leaders become coaches and teachers, personally involved, consistent, eliminate the atmosphere of blame, and make their decisions on the best available data. Juran (1988) has stated:

> You need participation by the people that are going to be impacted, not just in the execution of the plan but in the planning itself. You have to be able to go slow, no surprises, use test sites in order to get an understanding of what are some things that are damaging and correct them.

The Strategic Deployment Process. The strategic quality deployment process requires that an organization incorporate customer focus into the organization's vision, mission, values, policies, strategies, and long- and short-term goals and projects. Projects are the day-to-day, month-to-month activities that link quality improvement activities, re-engineering efforts, and quality planning teams to the organization's business objectives.

The elements needed to establish strategic deployment are generally alike for all organizations. However, each organization's uniqueness will determine the sequence and pace of application and the extent to which additional elements must be provided.

There exists an abundance of jargon used to communicate the strategic deployment process. Depending on the organization, one may use different terms to describe similar concepts. For example, what one organization calls a vision, another organization may call a mission (see Figure 13.3).

The following definitions are in widespread use and are used in this section:

Vision: A desired future state of the organization. Imagination and inspiration are important components of a vision. Typically, a vision can be viewed as the ultimate goal of the organization, one that may take 5 or even 10 years to achieve.

Mission: The purpose or reason for the organization's existence, i.e., what we do and whom we serve.

Selected definitions

Mission:	What business we are in
Vision:	Desired future state of organization
Values:	Principles to be observed to meet vision or Principle to be served by meeting vision
Policy:	Commitment to customer

FIGURE 13.3 Organizational vision/mission. (*Juran Institute, Wilton, CT.*)

Strategies: Means to achieve the vision. Strategies are few and define the key success factors such as price, value, technology, market share, and culture that the organization must pursue. Strategies are sometimes referred to as "key objectives" or "long-term goals."

Goals: What the organization must achieve over a 1- to 3-year period; the aim or end to which work effort is directed. Goals are referred to as "long term" (2 to 3 years) and "short term" (1 to 2 years). Achievement of goals signals the successful execution of a strategy.

Values: What the organization stands for and believes in.

Policies: A guide to managerial action. An organization may have policies in a number of areas: quality, environment, safety, human resources, etc. These policies guide day-to-day decision making.

Project: An activity of duration as long as 3 to 9 months that addresses a deployed goal, and whose successful completion contributes to assurance that the strategic goals are achieved. A project most usually implies assignment of selected individuals to a team which is given the responsibility and authority to achieve the specific goal.

Deployment plan: To turn a vision into action, the vision must be broken apart and translated into successively smaller and more specific parts—key strategies, strategic goals, etc.—to the level of projects and even departmental actions. The detailed plan for decomposition and distribution throughout the organization is called the "deployment plan." It includes the assignment of roles and responsibilities and identification of resources needed to implement and achieve the project goals (Figure 13.4).

Key performance indicators: Measurements that are visible throughout the organization for evaluating the degree to which the strategic plan is being achieved.

THE ELEMENTS OF STRATEGIC DEPLOYMENT

Establish the Vision. Strategic deployment begins with a vision that is customer-focused:

> In the companies we know that are successfully making the transition to a more collaborative organization, the key to success is developing and living by a common strategic vision. When you agree on an overall direction, you can be flexible about the means to achieve it… (Tregoe and Tobia 1990)

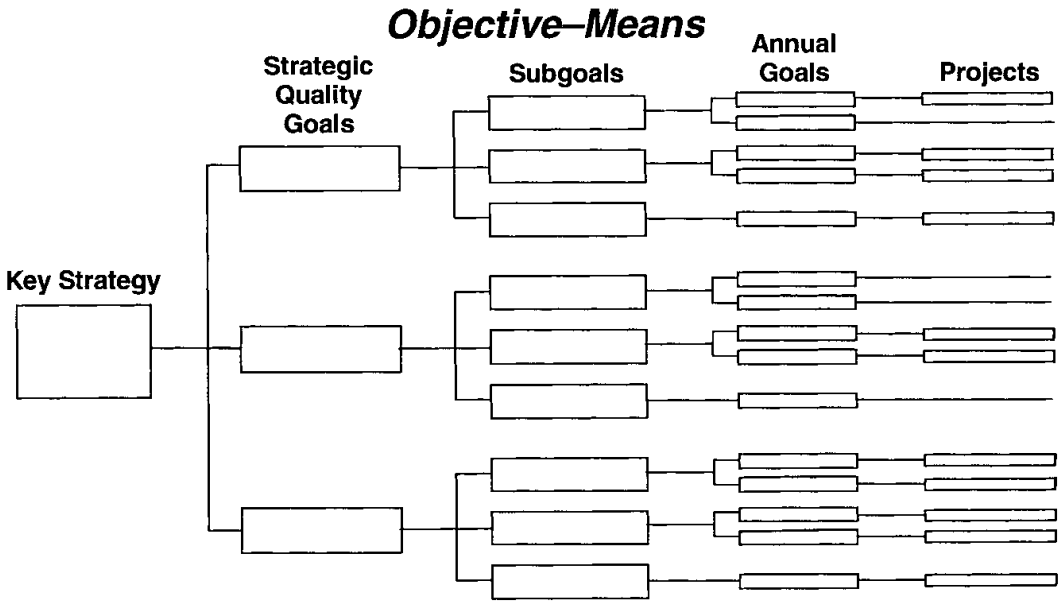

FIGURE 13.4 Deploying the vision. (*Juran Institute, Wilton, CT.*)

> Really powerful visions are simply told. The Ten Commandments, the Declaration of Independence, a Winston Churchill World War II speech—all present messages that are so simple and direct you can almost touch them. Our corporate strategies should be equally compelling. (Roberts 1987)

A vision should define the benefits a customer, an employee, a shareholder, or society at large can expect from the organization:

> We will lead in delivering affordable, quality health care that exceeds the service and value of our customers' expectations. (Kaiser-Permanente)
> To be the leading consumer battery company in the world. (Duracell International)
> To engineer, produce, and market the world's finest automobiles. (Cadillac Motor Car Division)
> To be the best producers of manufactured housing and the easiest to do business with. (Schult Homes)
> To be the number one provider of orthopaedic medical devices in the world. (Howmedica)

Each of the preceding visions offers a very different view of the direction and character of the organization. Each conveys a general image to customers and employees of where the organization is headed. For the organization, the vision provides, often for the first time in its history, a clear picture of where it is headed and why it is going there.

Good vision statements should also be compelling and shared throughout the organization. It is often a good idea to make the vision a stretch for the organization but possible of achievement within 3 to 5 years, and to state a measurable achievement (e.g., being the best). In creating the vision, organizations should take into account its customers, the markets in which it wants to compete, the environment within which the organization operates, and the current state of the organization's culture.

Vision statements, by themselves, are little more than words. Publication of such a statement does not inform the members of an organization what they should do differently from what they have done in the past. The strategic deployment process and the strategic plan become the basis for making the vision a reality. The words of the vision are just a reminder of what the organization is pursuing. The vision must be carried out through deeds and action.

Some common pitfalls in forming a vision are

1. Focusing the vision exclusively on shareholders as customers.
2. Thinking that once a strategic plan is written it will be carried out with no further work.
3. Failing to explain the vision as a benefit to customers, employees, suppliers, and other stakeholders.
4. Creating a vision that is either too easy or too difficult to achieve.
5. Failing to consider the effects that the rapid changes taking place in the global economy will have 3 to 5 years in the future.
6. Failing to involve key employees at all levels in creating the vision.
7. Failing to benchmark competitors or to consider all possible sources of information on future needs, internal capabilities, and external trends.

Agree on a Mission. Most organizations also have a mission statement. A mission statement is designed to address the question, "What business(es) are we in?" A mission is often confused with a vision and even published as one. A mission statement should clarify the organization's purpose or reason for existence. That's all.

The following are some examples:

> The Ritz-Carlton Hotel is a place where the genuine care and comfort of our guests is our highest mission. (Ritz-Carlton Hotel)

> We exist to create, make, and market useful products and services to satisfy the needs of our customers throughout the world. (Texas Instruments)
>
> Our mission is to be a leader in meeting the present and future health care needs of the people of our communities through a network of high-quality services, teaching and research programs which share common goals and values. (Sentara Health System)

In the Sentara example, the references to leadership and the future may lead the reader to confuse this mission statement (what business we are in) with a vision statement (what we aim to become). Only the organization itself can decide whether these words belong in its mission statement. It is in debating such points that an organization comes to consensus on its vision and mission.

Together, a vision and a mission provide a common agreed-upon direction for the entire organization. This direction can be used as a basis for daily decision making.

Develop Key Strategies. The first step in converting the vision into an achievable plan is to break the vision into a small number (usually four or five) key strategies. Key strategies represent the most fundamental choices that the organization will make about how it will go about reaching its vision. Each strategy must contribute significantly to the overall vision. For example:

> Supporting leadership through quality platforms: customer orientation, employee involvement, benchmarking, use of quality tools, planning for quality, and customer focus. (Xerox)
>
> Three critical strategies implemented to transform Cadillac: A cultural change where teamwork and employee involvement are considered a competitive advantage, a focus on the customer with customer satisfaction in the master plan, and a more disciplined approach to planning that focuses all employees on the quality objectives. (Cadillac Motor Car Division)

Responsibility for executing these key strategies is distributed (or deployed) to key executives within the organization, the first step in a succession of subdivisions and deployments by which the vision is converted to action.

In order to determine what the key strategies should be, one needs to assess five areas of the organization and obtain the necessary data on

1. Customer loyalty, customer satisfaction
2. Costs related to poor quality
3. Organization culture (satisfaction)
4. Internal business process (including suppliers)
5. Competitive benchmarking

Each of these assessments can form the basis for a balanced business scorecard (see The Scorecard later in this section). Setting key strategies requires specific data on the quality position and environment. These data must be analyzed to discover specific strengths, weaknesses, opportunities, and threats as they relate to customers, quality, and costs. Once complete, the key strategies can be created or modified to reflect measurable and observable long-term goals.

Develop Strategic Goals

The Nature of Strategic Goals. Next an organization sets specific, measurable strategic goals that must be achieved for the broad strategy to be a success. These quantitative goals will guide the organization's efforts toward achieving each strategy. As used here, a goal is an aimed-at target. A goal must be specific. It must be quantifiable (measurable) and is to be met within a specific period of time. At first, an organization may not know how specific the goal should be. Over time the measurement systems will improve and the goal setting will become more specific and more measurable.

Despite the uniqueness of specific industries and organizations, certain subjects for goals are widely applicable. There are seven areas that are minimally required to assure that the proper goals are established. They are

Product performance: Goals in this area relate to product features which determine response to customer needs, e.g., promptness of service, fuel consumption, mean time between failures, and courteousness. These product features directly influence product salability and impact revenues when they are met.

Competitive performance: This has always been a goal in market-based economies, but seldom a part of the business plan. The trend to make competitive performance a long-term business goal is recent but irreversible. It differs from other goals in that it sets the target relative to the competition, which, in a global economy, is a rapidly moving target. For example: All of our products will be considered the "best in class" within 1 year of introduction as compared to products of the top five competitors.

Quality improvement: Goals in this area may be aimed at improving product deficiencies or process failures or reducing the cost-of-poor-quality waste in the system. Improvement goals are deployed through a formal structure of quality improvement projects with assignment of associated responsibilities. Collectively, these projects focus on reducing deficiencies in the organization, thereby leading to improved performance.

Cost of poor quality: Goals related to quality improvement usually include a goal of reducing the costs due to poor quality or waste in the processes. These costs are not known with precision, though they are estimated to be very high. Nevertheless, it is feasible, through estimates, to bring this goal into the business plan and to deploy it successfully to lower levels. A typical cost-of-poor-quality goal is to reduce the cost of poor quality 50 percent each year for 3 years.

Performance of business processes: Goals in this area have only recently entered the strategic business plan. The goals relate to the performance of major processes which are multifunctional in nature, e.g., new product development, supply-chain management, and information technology, and subprocesses such as accounts receivable and purchasing. For such macroprocesses, a special problem is to decide who should have the responsibility for meeting the goal? We discuss this later under Deployment to Whom?

Customer satisfaction: Setting specific goals for customer satisfaction helps keep the organization focused on the customer. Clearly, deployment of these goals requires a good deal of sound data on the current level of satisfaction/dissatisfaction and what factors will contribute to increasing satisfaction and removing dissatisfaction. If the customers' most important needs are known, the organization's strategies can be altered to meet those needs most effectively.

Customer loyalty and retention: Beyond direct measurement of customer satisfaction, it is even more useful to understand the concept of customer loyalty. Customer loyalty is a measure of customer purchasing behavior vis a vis a given supplier. A customer whose needs for product offered by supplier A who buys solely from that supplier is said to display a loyalty with respect to A of 100 percent. A study of loyalty opens the organization to a better understanding of product salability from the customer's viewpoint and provides the incentive to determine how to better satisfy customer needs. The organization can benchmark to discover the competition's performance, then set goals to exceed that performance (see Figure 13.5).

The goals selected for the annual business plan are chosen from a list of nominations made by all levels of the hierarchy. Only a few of these nominations will survive the screening process and end up as part of the organization-wide business plan. Other nominations may instead enter the business plans at lower levels in the organization. Many nominations will be deferred because they fail to attract the necessary priority and therefore will get no organization resources.

Upper managers should become an important source of nominations for strategic goals, since they receive important inputs from sources such as membership on the executive council, contacts with customers, periodic reviews of business performance, contacts with upper managers in other organizations, shareholders, and employee complaints.

Product performance (*customer focus*): This relates to performance features which determine response to customer needs such as promptness of service, fuel consumption, MTBF, and courtesy. (Product includes goods and services.)

Competitive performance: Meeting or exceeding competitive performance has always been a goal. What is new is putting it into the business plan.

Quality improvement: This is a new goal. It is mandated by the fact that the rate of quality improvement decides who will be the quality leader of the future.

Reducing the cost of poor quality: The goal here relates to being competitive as to costs. The measures of cost of poor quality must be based on estimates.

Performance of macroprocesses: This relates to the performance of major multifunctional processes such as billing, purchasing, and launching new products.

FIGURE 13.5 Quality goals in the business plan. (*Juran Institute, Wilton, CT.*)

Goals which affect product salability and revenue generation should be based primarily on meeting or exceeding marketplace quality. Some of these goals relate to projects which have a long lead time, e.g., a new product development involving a cycle time of several years, computerizing a major business process, a large construction project which will not be commissioned for several years. In such cases the goal should be set so as to meet the competition estimated to be prevailing when these projects are completed, thereby "leapfrogging" the competition.

In industries which are natural monopolies (e.g., certain utilities) the organizations often are able to make comparisons through use of industry data banks. In some organizations there is internal competition as well—the performances of regional branches are compared with each other.

Some internal departments may also be internal monopolies. However, most internal monopolies have potential competitors—outside suppliers who offer the same services. The performance of the internal supplier can be compared with the proposals offered by an outside supplier.

A third and widely used basis for setting goals has been historical performance. For some products and processes the historical basis is an aid to needed stability. For other cases, notably those involving high chronic costs of poor quality, the historical basis has done a lot of damage by helping to perpetuate a chronically wasteful performance. During the goal-setting process, upper managers should be on the alert for such misuse of the historical data. Goals for chronically high cost of poor quality should be based on planned breakthroughs using the quality improvement process described in Section 5.

Establish Values. Some organizations create value statements to further define themselves. Values are what an organization stands for and believes in. A list of values must be supported with actions and deeds from management, lest its publication create cynicism in the organization. Training and communication of values for all employees becomes a prerequisite to participation in the planning process. Organization policies must be changed to support the values of the organization. Some examples of published values are:

> Constant respect for people, uncompromising integrity. (Motorola)
>
> Living the values we have established, a culture that supports customer focus, positive morale, empowerment, and job satisfaction. Values that guide us are: customer delight, commitment, teamwork, continuous improvement, trust and integrity, and mutual respect. (AT&T)

Value statements are gaining popularity in many organizations. They provide a reminder of what is important when carrying out the strategic plan.

Communicate Company Policies. "Policy" as used here is a guide to managerial action. Published policy statements are the result of a good deal of deliberation by management, followed by approval at the highest level. The senior executive team or quality council plays a prominent role in this process.

Policy declarations are a necessity during a period of major change, and organizations have acted accordingly. Since the 1980s we have seen an unprecedented surge of activity in publishing "quality policies." While the details vary, the published policies have much in common from company to company. For instance, most published quality policies declare the intention to meet the needs of customers. The wording often includes identification of specific needs to be met, e.g., "The company's products should provide customer satisfaction."

Most published policies include language relative to competitiveness in quality, e.g., "Our company's products shall equal or exceed the competition."

A third frequent area of published quality policy relates to quality improvement, declaring, for example, the intention to conduct improvement annually.

Some quality policy statements include specific reference to internal customers or indicate that the improvement effort should extend to all phases of the business. For example:

> Reilly Industries is dedicated to meeting and exceeding the requirements of all our customers—both internal and external—with our products and services. To achieve customer satisfaction through continuous improvement in the quality or our products, processes, and services requires the total commitment of all our employees. We shall ensure that the necessary environment, training, and tools are available to support this commitment.

The quality policy of Chrysler Corporation is

> To be the best. This policy requires that every individual and operating unit fully understand the requirements of their customers, and deliver products and services that satisfy these requirements at a defect-free level. (Chrysler Corporation)

Enforcement of policies is a new problem due to the relative newness of documented quality policies. In some organizations provision is made for independent review of adherence to policies. ISO 9000, the international standard for quality assurance, requires a quality policy as a declaration of intent to meet needs of customers. An audit process is mandated to ensure the policy is carried out.

Upper Management Leadership. A fundamental step in the establishment of any strategic plan is the participation of upper management acting as an executive council. Membership typically consists of the key executives. Top-level management must come together as a team to determine and agree upon the strategic direction of the organization. The council is formed to oversee and coordinate all strategic activities aimed at achieving the strategic plan. The council is responsible for executing the strategic business plan and monitoring the key performance indicators. At the highest level of the organization, an executive council should meet monthly or quarterly.

The executive council is also responsible for ensuring that other business units have a similar council at the subordinate levels of the organization. In such cases the councils are interlocked, i.e., members of upper-level councils serve as chairpersons for lower-level councils (see Figure 13.6).

If a council or something similar to it is not in place, the organization will have to create one. In a global organization processes are too complex to be managed functionally. A council ensures a multifunctional team working together to maximize process efficiency and effectiveness. Although this may sound easy, in practice it is not. The senior management team members may not want to give up the monopolies they have enjoyed in the past. For instance, the manager of sales and marketing is accustomed to defining customer needs, the manager of engineering is accustomed to sole responsibility for creating products, and the manager of manufacturing has enjoyed free rein in producing products. In the short run, these managers may not easily give up their monopolies to become team players.

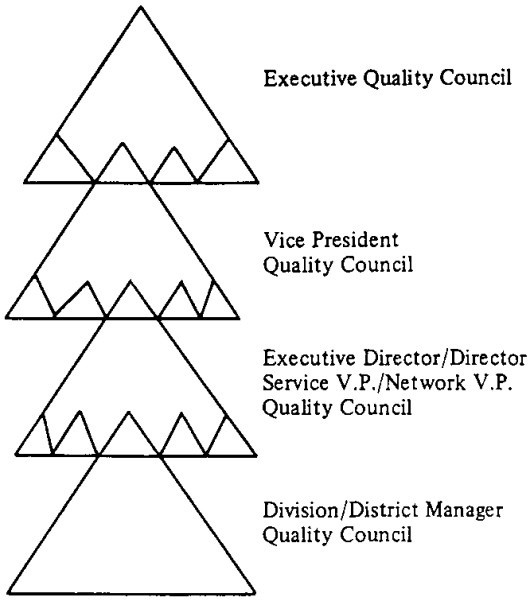

FIGURE 13.6 Interlocking councils. (*Juran Institute, Wilton, CT.*)

Deploy Goals. The deployment of long- and short-term goals is the conversion of goals into operational plans and projects. "Deployment" as used here means subdividing the goals and allocating the subgoals to lower levels. This conversion requires careful attention to such details as the actions needed to meet these goals, who is to take these actions, the resources needed, and the planned timetables and milestones. Successful deployment requires establishment of an infrastructure for managing the plan. Goals are deployed to multifunctional teams, functions, and individuals (see Figure 13.7).

Subdividing the Goals. Once the strategic goals have been agreed to, they must be subdivided and communicated to lower levels. The deployment process also includes dividing up broad goals into manageable pieces (short-term goals or projects). For example:

1. An airline goal of attaining 95 percent on-time arrivals may require specific short-term (8 to 12 months) projects to deal with such matters as
   - The policy of delaying departures in order to accommodate delayed connecting flights
   - The organization for decision making at departure gates
   - The availability of equipment to clean the plane
   - The need for revisions in departmental procedures
   - The state of employee behavior and awareness
2. A hospital's goal of improving the health status of the communities they serve may require projects that
   - Reduce incidence of preventable disease and illness
   - Improve patient access to care
   - Improve the management of chronic conditions
   - Develop new services and programs in response to community needs

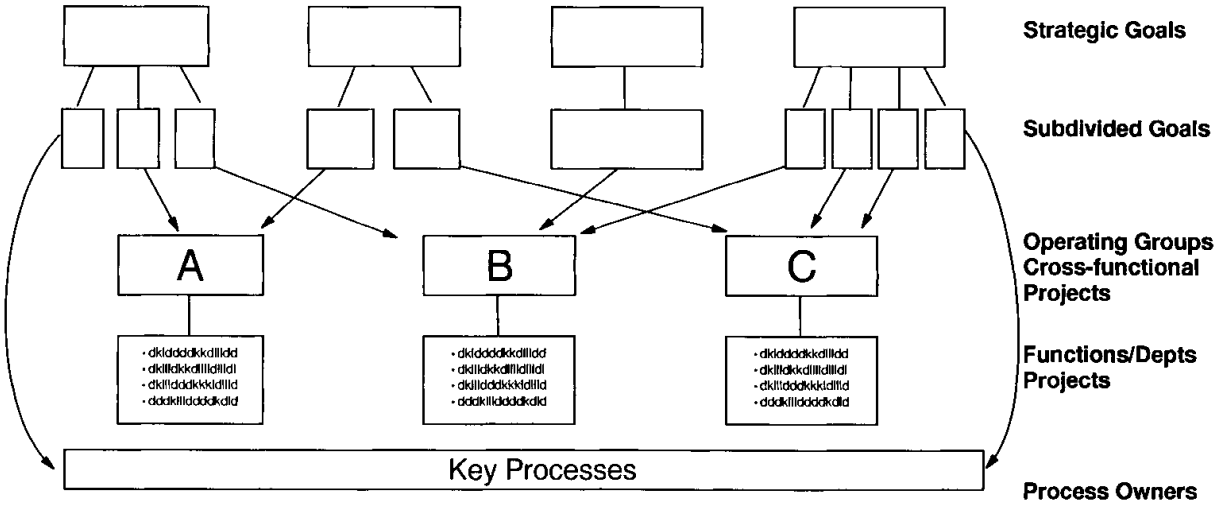

FIGURE 13.7 Deployment of strategic goals. (*Juran Institute, Wilton, CT.*)

Such deployment accomplishes some essential purposes:

- The subdivision continues until it identifies specific deeds to be done.
- The allocation continues until it assigns specific responsibility for doing the specific deeds.

Those who are assigned responsibility respond by determining the resources needed and communicating this to higher levels. Many times the council must define specific projects, complete with team charters and team members, to ensure goals are met (see Figure 13.8). (For more on the improvement process, see Section 5, The Quality Improvement Process.)

Deployment to Whom? The deployment process starts with the identification of needs of the organization and the upper managers. Those needs determine what deeds are required. The deployment process leads to an optimum set of goals through consideration of the resources required. The specific projects to be carried out address the subdivided goals. For example: In the early 1980s, the newly designed Ford Taurus/Sable goal of becoming "Best in Class" was divided into more than 400 specific subgoals, each related to a specific product feature. The total planning effort was enormous and required over 1500 project teams.

To some degree, deployment can follow hierarchical lines, such as corporate to division and division to function. However, this simple arrangement fails when goals relate to cross-functional business processes and problems that affect customers.

Major activities of organizations are carried out by use of interconnecting networks of business processes. Each business process is a multifunctional system consisting of a series of sequential operations. Since it is multifunctional, the process has no single "owner," hence no obvious answer to the question: Deployment to whom? Deployment is thus made to multifunctional teams. At the conclusion of the team project an owner is identified. The owner (who may be more than one person) then monitors and maintains this business process. (See Section 6, Process Management.)

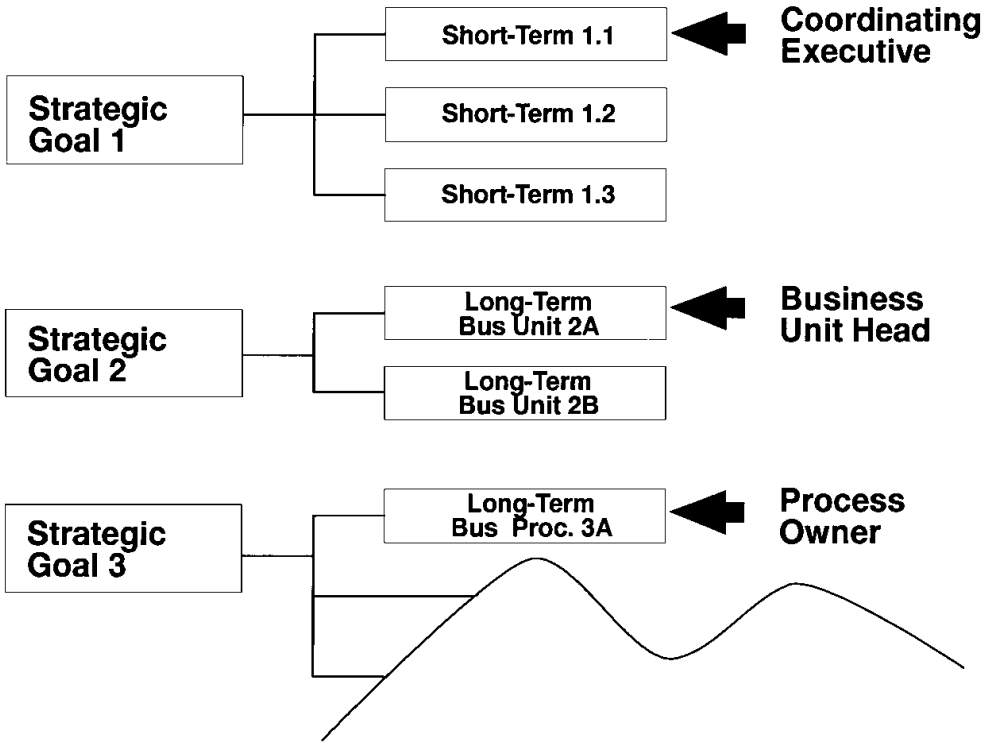

FIGURE 13.8 Subgoals. (*Juran Institute, Wilton, CT.*)

Communicating the Plan: "Catch Ball." Once the goals have been established, the goals are communicated to the appropriate organization units. In effect, the executive leadership asks their top management, "What do you need to support this goal?" The next level managers discuss the goal and ask their subordinates a similar question, and so on. The responses are summarized and passed back up to the executives. This process may be repeated several times until there is general satisfaction with the final plan.

This two-way communication process is called "catch ball," a term coined by the Japanese. Catch ball includes the following:

1. Clear communication of what top management proposes as the key focus areas of the strategic plan for the coming business year
2. Identification and nomination by managers at various lower levels of other areas for organization attention
3. Decisions as to what departments and functions should do about the areas that have been identified in the plan

This two-way communication requires that the recipients be trained in how to respond. The most useful training is prior experience in quality improvement. Feedback from organizations using catch ball suggests that it outperforms the process of unilateral goal setting by upper managers. For example: Fannie Mae, a financial services company, has been very successful in introducing its strategic quality plan. During a 6- to 9-month period, Fannie Mae developed its strategic quality plan, with its mission, vision, key strategies, and strategic goals. They used catch ball as a team-building exercise and as an opportunity for the senior management to state clearly what they wanted as direction and goals for Fannie Mae. After the senior executives drafted the original vision, mission, and key strategies, they asked the directors and middle-level managers to provide comments during highly interactive working-group sessions. They also developed draft strategic goals during these sessions. The almost 100 directors and managers created a wealth of ideas. Next, the senior executives refined these strategic goals and incorporated many of the comments about vision, mission, and key strategies into the next plan. They next involved over 600 managers and supervisors in more interactive work sessions to gain further comments and ideas for deploying the goals to subgoals and specific projects. In the end, senior management came up with a final version of the key strategies and goals for the next 5 years. This vision was then presented to everyone who was involved to agree to and sign.

Union Electric Company (UE) formed lead teams in each department in order to effectively deploy objectives down to the lowest organizational level. (At UE this is the department level.) This allowed more people than ever before at these lower levels to be involved in the business planning process (Weigel 1990).

A Useful Tool for Deployment. The tree diagram is a graphic tool that aids in the deployment process (see Figure 13.4). It displays the hierarchical relationship of the vision, key strategies, strategic goals, long-term goals, short-term goals, and projects, and indicates where each is assigned in the organization. A tree diagram is useful in visualizing the relationship between goals and objectives or teams and goals. It also provides a visual way to determine if all strategies are supported.

Measure Progress with Key Performance Indicators

Why Is Measurement Necessary? There are several reasons why measurement of performance is necessary and why there should be an organized approach to it:

1. Performance measures indicate the degree of accomplishment of objectives and, therefore, quantify progress toward the attainment of goals.
2. Performance measures are needed to monitor the continuous improvement process, which is central to the changes required to become competitive.

3. Measures of individual, team, and business unit performance are required for periodic performance reviews by management.

Once goals have been set and broken down into subgoals, key measures (performance indicators) need to be established. A measurement system that clearly monitors performance against plans has the following properties:

1. Indicators that link strongly to strategic goals and to the vision and mission of the organization
2. Indicators that include customer concerns; that is, the measures focus on the needs and requirements of internal and external customers
3. A small number of key measures of key processes that can be easily obtained on a timely basis for executive decision making
4. The identification of chronic waste or cost of poor quality

For example: MetPath, Inc. established measures of their processes early in the implementation of their business plan and were able to monitor and quantify the following:

1. A tenfold reduction of the process errors responsible for a patient's specimen being lost or broken before it can be tested
2. Significant cost savings due to decreased errors in proficiency testing
3. An eightfold reduction in turnaround time, the time it takes to deliver a specific health care service

The best measures of the implementation of the strategic planning process are simple, quantitative, and graphical. A basic spread sheet which describes the key measures and how they will be implemented is shown in Figure 13.9. It is simply a method to monitor the measures.

As goals are set and deployed, the means to achieve them at each level must be analyzed to ensure that they satisfy the objective that they support. Then the proposed resource expenditure must be compared with the proposed result and the benefit/cost ratio assessed. Examples of such measures are

- Financial results:

  Gains

  Investment

  Return on investment

- Human resources:

  Trained

  Active on project teams

- Number of projects:

  Undertaken

  In process

  Completed

  Aborted

- New product development:

  Number or percentage of successful product launches

  Return on investment of new product development effort

  Cost of developing a product versus the cost of the product it replaces

  Percent of revenue attributable to new products

Annual quality goals	Specific measurements	Frequency	Format	Data source	Name

FIGURE 13.9 Measurement of quality goals. (*Juran Institute, Wilton, CT.*)

Percent of market share gain attributable to products launched during the last 2 years

Percent of on-time product launches

Cost of poor quality associated with new product development

Number of engineering changes in the first 12 months of introduction

- Supply-chain management:

  Manufacturing lead times—fill rates

  Inventory turnover

  Percent on-time delivery

  First-pass yield

  Cost of poor quality

The following is an example of measures that one bank used to monitor teller quality:

- Speed:
  1. Number of customers in the queue
  2. Amount of time in the queue
- Timeliness:
  1. Time per transaction
  2. Turnaround time for no-wait or mail transactions
- Accuracy:
  1. Teller differences
  2. Amount charged off/amount handled

Once the measurement system is in place, it must be reviewed periodically to ensure goals are being met.

Reviewing Progress. A formal, efficient review process will increase the probability of reaching the goals. When planning actions, an organization should look at the gaps between measurement of the current state and the target it is seeking. The review process looks at gaps between what has been achieved and the target (see Figure 13.10).

Frequent measurements of strategic deployment progress displayed in graphic form help identify the gaps in need of attention. Success in closing those gaps depends on a formal feedback loop with clear responsibility and authority for acting on those differences. In addition to the review of results, progress reviews are need for projects under way to identify potential problems before it is too late to take effective action. Every project should have specific, planned review points, much like those in Figure 13.11.

Organizations today include key performance indicators on the following:

Product Performance. A product's features may be very numerous. For the great majority of product features, there exist performance metrics and technological sensors to provide objective product evaluation.

Competitive Quality. These metrics relate to those qualities which influence product salability, e.g., promptness of service, responsiveness, courtesy of pre-sale and after-sale service, and order fulfillment accuracy. For automobiles, qualities include top-speed, acceleration, braking distance, and safety. For some product features, the needed data must be acquired from customers, through negotiation, persuasion, or purchase. For other product features, it is feasible to secure the data through laboratory tests. In still other cases, it is necessary to conduct market research.

Trends must now be studied so that goals for new products can be set to correspond to the state of competition anticipated at the time of launch.

Some organizations operate as natural monopolies, e.g, regional public utilities. In certain of such cases, the industry association gathers and publishes performance data. In the case of internal monopolies, (e.g., payroll preparation, transportation) it is sometimes feasible to secure competitive information from organizations which offer similar services for sale.

Performance on Quality Improvement. This evaluation is important to organizations which go into quality improvement on a project-by-project basis. Due to lack of commonality among the projects, collective evaluation is limited to the summary of such features as

- *Number of projects:* Undertaken, in-process, completed, aborted.
- *Financial results:* Amounts gained, amounts invested, returns on investment.
- *Persons involved as project team members:* Note that a key measure is the proportion of the organization's management team which is actually involved in improvement projects. Ideally, this proportion should be over 90 percent. In the great majority of organizations the actual proportion has been less than 10 percent.

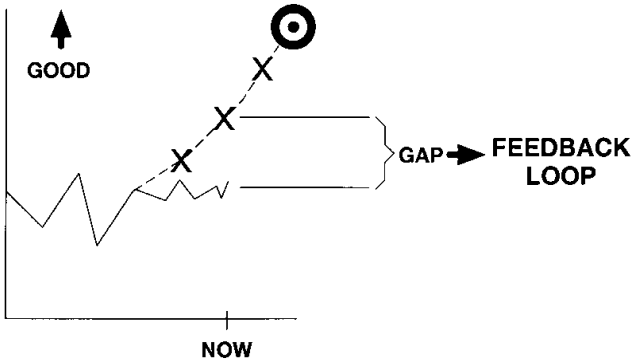

FIGURE 13.10 Review. (*Juran Institute, Wilton, CT.*)

Projects	Project leaders	Baseline measurements	Targets	Initial plan	Review points				Review leader
					Resources	Analysis	Plan	Results	

FIGURE 13.11 Progress review plan. (*Juran Institute, Wilton, CT.*)

Cost of Poor Quality. We define "cost of poor quality" as those costs which would disappear if our products and processes were perfect and generated no waste. Those costs are huge. As of the 1980s, about a third of the work in the economy of the United States consisted of redoing prior work because products and processes were not perfect.

The costs are not known with precision. In most organizations the accounting system provides only a minority of the information needed to quantify this cost of poor quality. It takes a great deal of time and effort to extend the accounting system so as to provide full coverage. Most organizations have concluded that such effort is not cost effective.

What can be done is to fill the gap by estimates which provide upper managers with approximate information as to the total cost of poor quality and as to which are the major areas of concentration. These areas of concentration then become the target for quality improvement projects. Thereafter the completed projects provide fairly precise figures on quality costs before and after the improvements.

Product and Process Deficiencies. Even though the accounting system does not provide for evaluating the cost of poor quality, much evaluation is available through measures of product and process deficiencies, either in natural units of measure or in money equivalents; for example, cost of poor quality per dollar of sales, dollar of cost of sales, hour of work, or unit shipped. Most measures lend themselves to summation at progressively higher levels. This feature enables goals in identical units of measure to be set at multiple levels: corporate, division, department.

Performance of Business Processes. Despite the wide prevalence and importance of business processes, they have been only recently controlled as to performance. A contributing factor is their multifunctional nature. There is no obvious owner and hence no clear, sole responsibility for their performance. Responsibility is clear only for the subordinate microprocesses. The system of upper management controls must include control of the macroprocesses. That requires establishing goals in terms of cycle times, deficiencies, etc., and means for evaluating performances against those goals.

The Scorecard. To enable upper managers to "know the score" relative to achieving strategic quality deployment, it is necessary to design a report package, or scorecard. In effect, the strategic plan dictates the choice of subjects and identifies the measures needed on the upper management scorecard.

The scorecard should consist of several conventional components:

- Key performance indicators (at the highest levels of the organization)
- Quantitative reports on performance, based on data
- Narrative reports on such matters as threats, opportunities, pertinent events
- Audits conducted (see Business Audits later in this section)

These conventional components are supplemented as required to deal with the fact that each organization is different. The end result should be a report package which assists upper managers to meet the quality goals in much the same way as the financial report package assists the upper managers to meet the financial goals.

The council has the ultimate responsibility for design of such a scorecard. In large organizations, design of such a report package requires inputs from the corporate offices and divisional offices alike. At the division level the inputs should be from multifunctional sources.

The report package should be specially designed to be read at a glance and to permit easy concentration on those exceptional matters which call for attention and action. Reports in tabular form should present the three essentials: goals, actual performances, and variances. Reports in graphic form should, at the least, show the trends of performances against goals. The choice of format should be made only after learning what are the preferences of the customers, i.e., the upper managers.

Managerial reports are usually published monthly or quarterly. The schedule is established to coincide with the meetings schedule of the council or other key reviewing body. The editor of the scorecard is usually the Director of Quality (Quality Manager, etc.), who is usually also the secretary of the council.

At Texas Instruments, Inc., the scorecard is a quality report package (the "Quality Blue Book"), deliberately designed to parallel the company's financial reporting system, down to the color of the cover (blue). The report is organized into

1. Leading indicators, e.g., quality of purchased components
2. Concurrent indicators, e.g., product test results, process conditions, and service to customers
3. Lagging indicators, e.g., data feedback from customers and returns
4. Data on cost of poor quality

The report is issued monthly and is the basis for annual performance appraisal of managers' contributions to quality (Onnias 1985).

The scorecard should be reviewed formally on a regular schedule. Formality adds legitimacy and status to the reports. Scheduling the reviews adds visibility. The fact that upper managers personally participate in the reviews indicates to the rest of the organization that the reviews are of great importance.

In the past few years many organizations have combined their measurements from financial, customer, operational, and human resource areas into "instrument panels" or "balanced business scorecards." [See Kaplan and Norton (1992) or Godfrey (1998) for more details.]

Business Audits. An essential tool for upper managers is the audit. By "audit," we mean an independent review of performance. "Independent" signifies that the auditors have no direct responsibility for the adequacy of the performance being audited.

The purpose of the audit is to provide independent, unbiased information to the operating managers and others who have a need to know. For certain aspects of performance, those who have a need to know include the upper managers.

To ensure quality, upper management must confirm that

1. The systems are in place and operating properly
2. The desired results are being achieved

Duracell International, Inc. performed what they called a "worldwide quality audit" to review the progress they had made toward realizing the vision to be the best. According to C.R. Kidder, Duracell's former chairman and CEO, the idea was to test Duracell products that had been bought anonymously from retail outlets around the world against competitor products acquired in the same way. Buying the Duracell product at retail instead of simply gathering samples from Duracell manufacturing facilities ensured that the product tested was representative of product purchased by consumers and ensured comparability with the competitive products. The products were tested and the results shared with Duracell executives, in the expectation that doing so would raise the visibility of the competitive status of the product and create pressure to make improvements necessary to close any competitive gaps revealed in the testing. The test information was organized to compare Duracell product against competitive product on two dimensions: quality (leakage, labeling, size, etc.) and performance (number of service hours). In 1985, the audit showed Duracell was about even with its competitors. By 1993, Duracell had the longest-lasting, highest-quality product in the world.

These audits may be based on externally developed criteria, on specific internal objectives, or on some combination of both. Three well-known external sets of criteria to audit company performance are those of the United States' Malcolm Baldrige National Quality Award (MBNQA), the European Quality Award (EQA), and Japan's Deming Prize. All provide similar criteria for assessing business excellence throughout the entire organization.

Traditionally, quality audits have been used to provide assurance that products conform to specifications and that operations conform to procedures. At upper-management levels, the subject matter of quality audits expands to provide answers to such questions as

- Are our policies and goals appropriate to our company's mission?
- Does our quality provide product satisfaction to our clients?
- Is our quality competitive with the moving target of the marketplace?
- Are we making progress in reducing the cost of poor quality?
- Is the collaboration among our functional departments adequate to ensure optimizing company performance?
- Are we meeting our responsibilities to society?

Questions such as these are not answered by conventional technological audits. Moreover, the auditors who conduct technological audits seldom have the managerial experience and training needed to conduct business-oriented quality audits. As a consequence, organizations that wish to carry out quality audits oriented to business matters usually do so by using upper managers or outside consultants as auditors.

Juran (1998) has stated:

> One of the things the upper managers should do is maintain an audit of how the processes of managing for achieving the plan is being carried out. Now, when you go into an audit, you have three things to do. One is to identify what are the questions to which we need answers. That's non-delegable, the upper managers have to participate in identifying these questions. Then you have to put together the information that's needed to give the answers to those questions. That can be delegated and that's most of the work, collecting and analyzing the data. And there's the decisions of what to do in light of those answers, that's non-delegable. That's something the upper managers must participate in.

Audits conducted by executives at the highest levels of the organization where the president personally participates are usually called "The President's Audit" (Kondo 1988). Such audits can have major impacts throughout the organization. The subject matter is so fundamental in nature that the audits reach into every major function. The personal participation of the upper managers simplifies the problem of communicating to the upper levels, and increases the likelihood that action will be forthcoming. (See Section 41 under Company-Wide Quality Control Education and Training.) The very fact that the upper managers participate in person sends a message to the entire organization

relative to the priority placed on quality and to the kind of leadership being provided by the upper managers—leading, not cheerleading (Shimoyamada 1987). (For elaboration on quality audits, see Section 14, Total Quality Management.)

STRATEGIC DEPLOYMENT OR NOT: THE DECISIVE ELEMENT

Benefits of Implementing Strategic Deployment. Whether the upper managers should adopt strategic deployment is a decision unique to each organization. What is decisive is the importance of integrating major change initiatives or quality programs into the strategic plan. The potential benefits of strategic deployment are clear:

1. The goals become clear—the planning process forces clarification of any vagueness.
2. The planning process then makes the goals achievable.
3. The control process helps to ensure that the goals are reached.
4. Chronic wastes are reduced through the quality improvement process.
5. Creation of new wastes is reduced through revision of the business planning process.

Strategic Deployment Implementation: Risks and Lessons Learned. There are also some important lessons learned about the risks in implementing strategic deployment.

1. Pursuing too many objectives, long term and short term, at the same time will dilute the results and blur the focus of the organization.
2. Excessive planning and paper work will drive out the needed activities and demotivate managers.
3. Trying to plan strategically without adequate data about customers, competitors, and internal employees can create an unachievable plan or a plan with targets so easy to achieve that the financial improvements are not significant enough.
4. If the executive leadership delegates too much of the responsibility, there will be a real and perceived loss of leadership and direction.
5. For an organization to elevate quality and customer focus to top priority creates the impression that it is reducing the importance of finance, which formerly occupied that priority. This perceived downgrading is particularly disruptive to those who have been associated with the former top-priority financial goals.

EMBARKING ON STRATEGIC DEPLOYMENT

Probably the biggest disruption is created by imposing a structured approach on those who prefer not to have it. Resistance to the structured approach is evident at the very outset.

> The single most important prerequisite for embarking on a long-term, effective company-wide quality improvement effort is the creation of an environment conducive to the many changes that are necessary for success. We've aggressively sought to eliminate barriers that have taken years or decades to establish. The process of change takes time, however, and change will occur only as an evolutionary process. (Delaplane 1987)

(See Figure 13.12.)

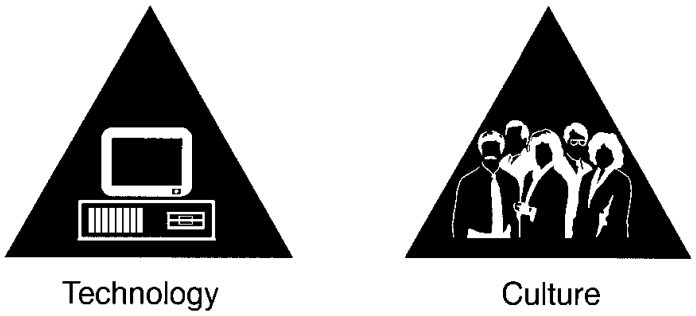

FIGURE 13.12 Cultural changes. (*Juran Institute, Wilton, CT.*)

HIGHLIGHTS

Strategic deployment is a systematic approach for integrating customer focus and company-wide change programs (such as quality improvement) with the strategic plans throughout the entire organization. The strategic deployment process provides focus and enables organizations to align improvement goals and actions with their vision, mission, and key strategies. Strategic deployment provides the basis for senior management to make sound strategic choices and prioritize the organization's improvement and other change activities. Activities not aligned with the organization's strategic goals should be terminated or eliminated.

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