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# **1. BACKGROUND**

## **1.1. INTRODUCTION**

### **1.1.25. PERFORMANCE AND SUCCESS CRITERIA**

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### **1.1.25.1. ALTERNATIVE SETS OF CRITERIA FOR PERFORMANCE IN THE MANAGEMENT PROCESS FRAMEWORK.**

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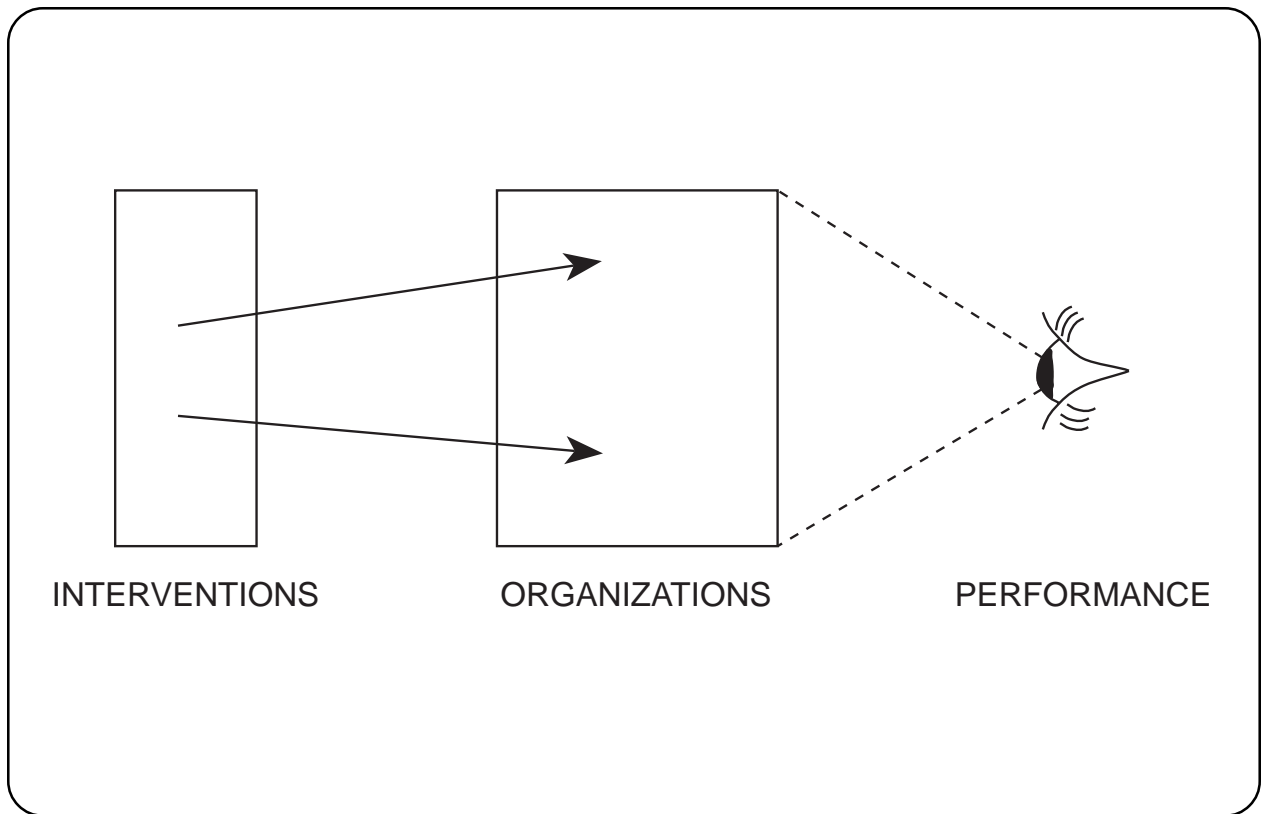
**In addition to the ABC Model, you need useful alternative sets of criteria for performance to use in the management process framework as we work to improve performance, morale, and other measures of how well we're doing.**

What are performance criteria for an organization? Status. Progress. Success. Morale. Competence. Satisfaction. Productivity. These and more. The criteria you're interested in depends on what you're looking for. Also, you'll need to match the criteria with your choice of organizational models. Better put, you need to choose a combination of organizational models and performance criteria that help you trace the effect of an intervention through the organization into the results of the organization's work. For example, if your domain is clearly a project, Sink's seven fronts model was designed to model the organization doing projects. I'll soon describe the project management pyramid for the success criteria in projects. The criteria of the project management pyramid apply to more than just projects. And the ABC Model applies to projects as well as other pursuits of the organization. The seven fronts model applies to more than just projects and the 14 functions of the management process framework apply to projects too. The bottom line is that you should consider the various models and sets of criteria for figuring out how to make interventions to improve the performance of the organization.

As we review alternate sets of performance criteria, we'll think about looking at the orga-

nization, as shown in Figure 1.1.25.1. We must link the things we see to the things we do. The organizational models reflect the things we do in an organization. The performance criteria reflect the things we see as we do things in the organization. If you have visibility, for everything you do in the organization, there's something you see. Some of the performance criteria highlight this situation. Critical success factors are things we do in an organization and critical success criteria are things we see. As a manager, if you do something, you want to be able to see what you did and the consequences of what you did. Obviously, the issue of visibility and our ability to identify what to watch and how to capture the data will be critical to building and using management tools.

Figure 1.1.25.1. is a slightly different version of the framework we started discussing in Modules 1.1.11.1. and 1.1.11.4. In those modules, the flow went from the organization to the performance criteria. In Figure 1.1.25.1., we're looking back at the organization. We haven't changed what happens. Instead of positioning ourselves outside the boxes as we did in Figure 1.1.11.4., we're positioning ourselves in the performance box looking for performance criteria in the organization.



**Figure 1.1.25.1.** *We can use a number of sets of criteria for observing the organization to determine its performance.*

### **1.1.25.2. ABC FUNDAMENTALS**

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**[For now, see Section 1.3. on the ABC Model.]**



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### 1.1.25.3. PROJECT MANAGEMENT PYRAMID

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**A new management approach recognizes the relationships of critics to the classical success criteria: cost, schedule, and quality.**

Successful project management has been defined as balancing the triangle of the cost, schedule, and quality criteria. For example, if the project manager must meet a tighter schedule, he or she must know the effect on the specifications and/or the cost. Except in cases of greater efficiency, the specifications must relax and/or the cost must increase. This classical triangle applies to all levels of management, including program management.

For classical project management, cost, schedule, and quality are success criteria. Success criteria fit well within our performance criteria alternatives in Figure 1.1.11.4. A new management approach introduces a new criterion outside the classical triangle, a qualitative criterion I term *critics*. Cost, schedule, quality, and critics are interdependent. Not only will managers have to include critics along with cost, schedule, and quality; but cost, schedule, and quality will be more affected by critics than vice versa. Success in the critics criterion can buy latitude in cost, schedule, and quality that these three criteria can't buy without it. Critics criteria variables are dynamic, making success even more complex. Managers must recognize and be able to see, real-time, the resulting dynamic relationship among all four success criteria.

Compared to the critics criterion, the cost, schedule, and quality criteria are relatively static. Since the criteria are so interdependent, introducing such a dynamic criterion as critics tends to make the entire system more dynamic.

I've highlighted the importance and complexity of recognizing critics by putting it on the same level as the classical criteria. It's hard

enough to succeed under the classical criteria alone—management failures in the past have occurred when critics didn't play such a big role in the manager's responsibilities. The problem then, and the problem will continue to be—only even more so—that all the criteria are interrelated and that a successful manager must be good at integrating them well. The new criterion makes integration more difficult because 1) we don't understand the critics criterion well yet, 2) we don't recognize or understand its relationships with the other criteria, 3) we're not good at showing the cumulative result of the changes in criteria over time and throughout organization levels, and 4) we don't have the tools with their guides and the people who know how to use them to set up, monitor, and affect the success criteria and their relationships.

As a success criterion, critics should include ideas like satisfaction of critics or “delight” of critics. The term critics includes two ideas: 1) the critics are people who not only are interested in receiving information about what's managed but want to have a say about what they know and most often want involvement in what's managed in such a way their involvement affects what's managed during planning as well as executing and verifying activities, and 2) critics include all stakeholders (customers, staff, neighbors, suppliers, and stockholders).

The new management approach makes the two-dimensional problem (represented by the triangle showing the interaction among the cost, schedule, and quality criteria) into a three-dimensional problem represented by the pyramid shown in Figure 1.1.25.3. The pyramid

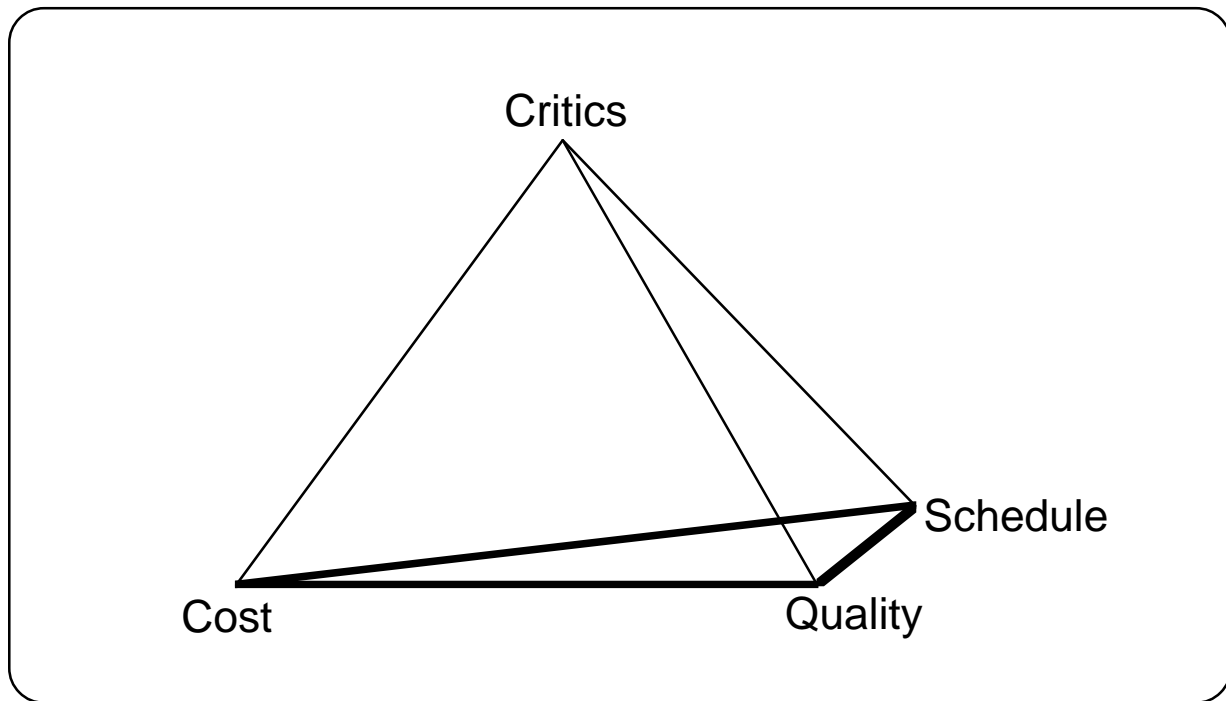
shows not only that the critics criterion must be factored into managers' thinking just like cost, schedule, and quality, but also that this new criterion is inextricably tied to the other three.

The importance of factoring in the new criterion goes beyond the simple relationships with the classical criteria shown in Figure 1.1.25.3. All four success criteria must work together holistically. There is the opportunity for synergy (and the danger of compartmentalism) among the four success criteria, and the new approach to management must take advantage of that synergy (or fail for the lack of it).

Today, qualitative issues dominate our top-management resources. The manager isn't going to get the qualitative issues to go away. But he or she can get some of them under control by predicting the issues and delegating the lower-priority ones. Predicting issues relating to all four criteria requires good information about the states of all criteria and

knowledge of the relationships among the criteria. Delegating issues of lower priority requires knowing what the priorities are among issues of all four success criteria. The manager must be able to distinguish the important or difficult issues and intelligently allocate resources and delegate responsibility. The new approach to management requires looking at all issues (qualitative and quantitative) together equally, so intelligent priorities can be discerned.

Since we can't make the qualitative issues go away, we must manage them better. We need not only to get the right information to set priorities and delegate responsibilities but also to automate the more-routine effort so we have time to deal with uncertainty and surprises. Until we understand the critics criterion and how to deal with it better, this criterion will hold the greatest uncertainty and by default be the highest priority.



**Figure 1.1.25.3.** *The complexity of new management challenges is exemplified by the additional dimension of management success shown in the pyramid. The critics criterion is tied inextricably with the classical three success criteria: cost, schedule, and quality.*

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### 1.1.25.4. ORIGINS OF THE PROJECT MANAGEMENT PYRAMID

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#### **A new criterion has entered the equation for successful management.**

Traditional project management training centers on the tug of war among schedule, resources, and quality illustrated in Figure 1.1.25.4.1. The idea is that if you tug hard on (change) any one of the criteria, the others are necessarily affected. We were able to transfer this training and these success criteria to other types of management. The conventional wisdom was that if you met specifications, within budget, and on time, you were guaranteed success. For decades, we lived by these criteria and were rewarded according to the guarantee. Lately, however, we find something missing. Often we meet specifications, within budget, and on time and fail. Even the idea of simply meeting specifications is in question. What then is the difference? Has a new criterion entered the equation?

As I've worked with environmental issues and projects, clearly, stakeholders have entered the equation in a big way. Management Systems Laboratories received a grant to study consensus. In performing that grant, the idea of critics playing a crucial role in managing projects came out—especially in the public sector. At first, I thought the criterion should be audience because of the need to communicate with stakeholders. Later, however, I discovered the criterion had to include involvement (both listening, responding, and initiating) of the stakeholders; and thus I chose the term critics.

Harold Kerzner, in his book *Project Management: A Systems Approach to Planning, Scheduling, and Controlling* (Van Nostrand Reinhold, 1984) shows the classical project management triangle (p. 5.) surrounding “re-

sources” and surrounded by “within good customer relations.” Kerzner says, “The objective of the figure is to show that project management is designated to manage or control company resources on a given activity, within time, within cost, and within performance. Time, cost, and performance are the constraints on the project. If the project is to be accomplished for an outside customer, then the project has a fourth constraint: good customer relations. The reader should immediately realize that it is possible to manage a project internally within time, cost, and performance and then alienate the customer to such a degree that no further business will be forthcoming.” (pp. 5-6.) Kerzner’s figure is shown in Figure 1.1.25.4.2.

Figure 1.1.25.3. goes beyond Kerzner’s figure. Critics include not only the customer, but also other stakeholders. Later, I’ll discuss stakeholder at length. For now consider a stakeholder, or critic, to be anyone who has a stake in the activity, project, or organization under consideration. Stakeholders include customers, staff, owners, neighbors, and vendors. As opposed to “good customer relations” surrounding the classical triangle, Figure 1.1.25.3. emphasizes the tight linkage of critics to the other criteria.

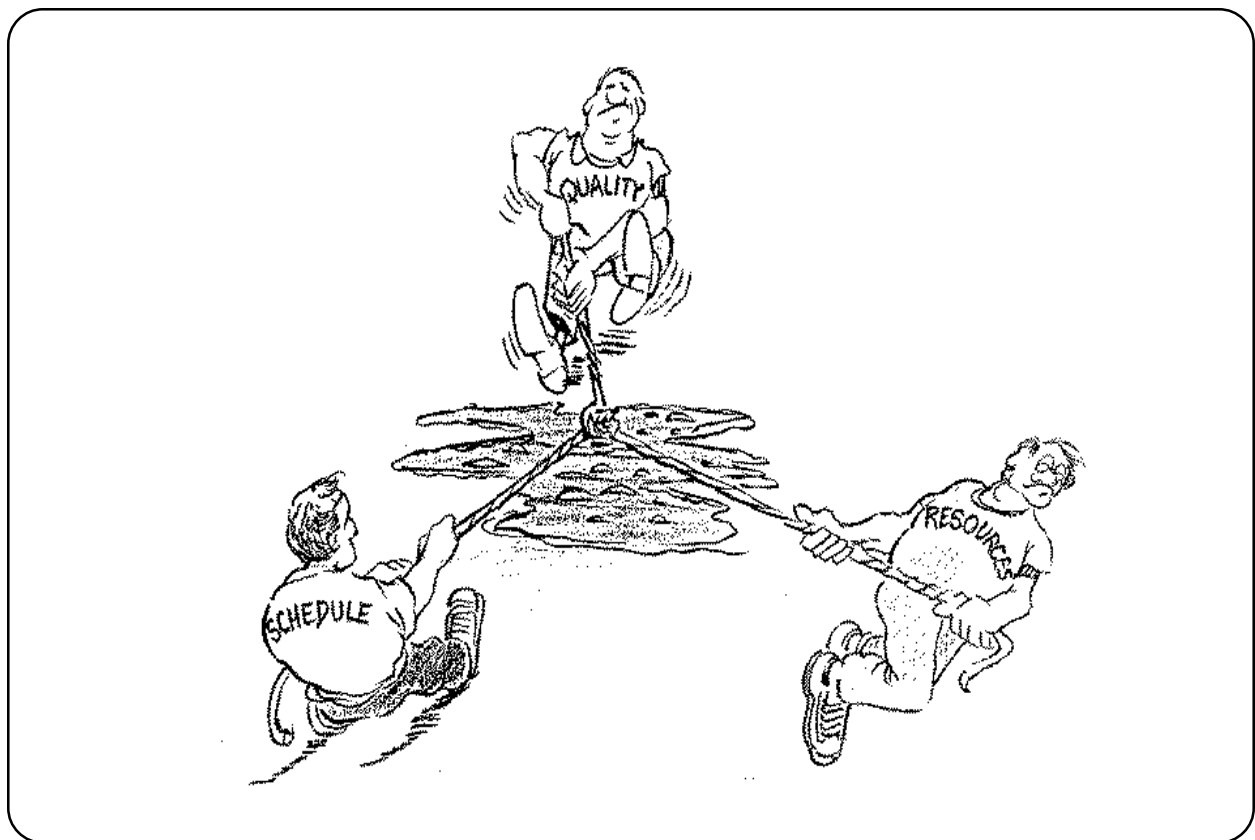
Ashley, et. al. give six criteria to measure success of a project. The six criteria are: budget performance, schedule adherence, client satisfaction, functionality, contractor satisfaction, and project manager satisfaction. (Ashley, D. B., Jaselskis, E. J., and Lurie, C.B. (1987). “The Determinants of Construction Project Success.” *Project Management Jour-*

nal, V. 28, No. 2, pp. 69-79.)

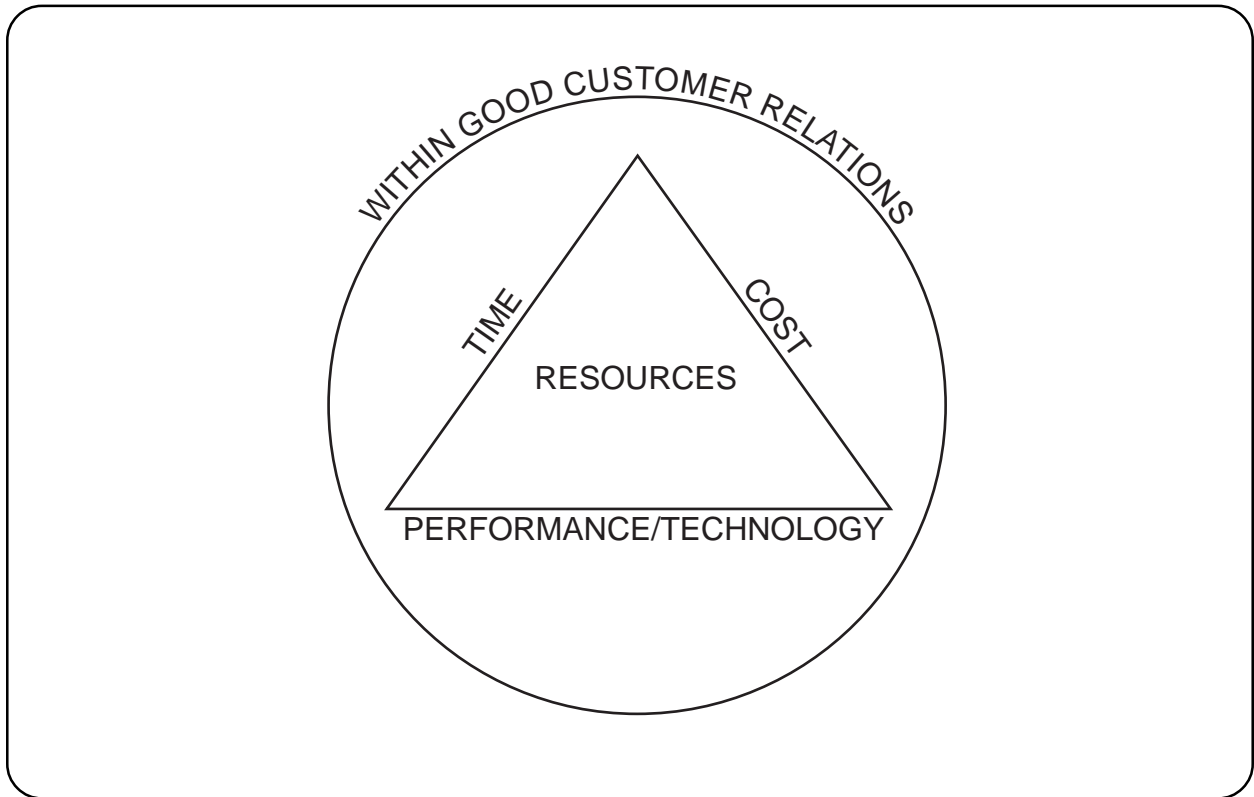
The contribution of the project management pyramid is the raising of the idea “good customer relations” from Kerzner and “client satisfaction, contractor satisfaction, and project manager satisfaction” from Ashley, et. al. to a level equal with time, cost, and quality. The idea of critics includes all stakeholders who might want to know about and participate in decisions about what’s being managed. The

pyramid brings all the traditional concepts of robustness, strength, and internal bonding described in Module 1.1.23.4. The point is that as a success criterion, critics are at least as influential as the other three.

You’ll find a number of terms used for the different apexes of the pyramid. Cost can be resources of all kinds. Quality can be performance or meeting specifications.



**Figure 1.1.25.4.1.** “Who’s going to win?”



**Figure 1.1.25.4.2.** *The overview of project mangement shows constraints on the project. (taken from Kerzner, p. 4)*



### 1.1.25.5. SINK'S SEVEN PERFORMANCE CRITERIA

**We can use seven criteria to measure an organization's performance; but we have to weight and combine the measures with a measure of art to feedback the results for improving the organization.**

In his book, *Productivity Management: Planning, Measurement and Evaluation, Control and Improvement*, (Wiley, 1985) D. Scott Sink calls his performance criteria "distinct, although not necessarily mutually exclusive, measures of 'organizational system' performance." (p. 41.) As corroborated in discussions with Sink, I find that in terms of the Management System Model (MSM) the criteria apply to the what is managed component rather than the management system. From Module 1.1.18.5., we found that organizational performance in terms of the MSM would include management tool performance and the performance of the decision maker. Later, I'll discuss similar criteria for measuring the performance of management tools. Here, I'll discuss Sink's criteria for measuring the performance of the operation.

Sink's seven criteria are: 1) effectiveness, 2) efficiency, 3) quality, 4) profitability, 5) productivity, 6) quality of work life, and 7) innovation. He says, "Every organization in one way or another has systems designed to monitor, evaluate, control, and manage functions utilizing one or more of these seven measures of system performance. Note that productivity is only one measure of performance for a system, and not necessarily the most important one. We might consider these measures of system performance as a multi-attribute or multi-criterion measurement system." (p. 41.)

I'll quote the definitions of the criteria directly from pages 42-45 of his book. "**Effectiveness** is the degree to which the system accomplishes what it set out to accomplish. It is the degree to which the 'right' things were com-

pleted. At least three criteria need to be used to evaluate degree of effectiveness: 1. *Quality*: Did we do the 'right' things according to predetermined specifications? 2. *Quantity*: Did we get all of the 'right' things done? 3) *Timeliness*: Did we get the 'right' things done on time?" Peter Drucker defines effective in his book *The Effective Executive* (Harper and Row, 1966) as "get the right things done." (p. 1.)

Gery Patzak defines effectiveness as actual output divided by intended output. Webster defines effectiveness as "the power to produce the intended result."

Sink says, "**Efficiency** is the degree to which the system utilized the 'right' things. It can be represented by the following equation:

$$\frac{\text{Resources expected to be consumed}}{\text{Resources actually consumed}}$$

From this equation, we can see that efficiency is simply the comparison between resources we expected or intended to consume in accomplishing specific goals, objectives, and activities and resources actually consumed." Peter Drucker in his book defines efficient as "the ability to do things right." (p. 2.)

Sink says, "**Quality** is the degree to which the system conforms to requirements, specifications, or expectations. Traditional definitions of quality incorporate the conformity to specifications and a timeliness criterion, which could be considered simply as a kind of specification. The key element of quality that distinguishes it from effectiveness is the concept of

*quality attributes.* A quality attribute is a specific quality characteristic for which a product is designed, built, and tested. Quality attributes can be subjective or objective.” You can find any number of definitions of quality and I’ll discuss those much later in this book. However, Philip Crosby uses a similar definition in his book *Quality without Tears* (McGraw-Hill, 1984) “The definition of quality is conformance to requirements.” (p. 59.) The idea of quality as conformance to requirements is also in a book published before 1960 on industrial quality control by Schaafzma and Williamze who worked for Philips Anthoven.

Sink says, “**Profitability** is a relationship between total revenues (or in some cases, budget) and total costs (or in some cases, actual expenses):

$$\frac{\text{Total revenues}}{\text{Total costs}}$$

Profitability can be measured in a number of ways. Typical financial measures of performance are called ‘operating ratios’ or ‘financial ratios.’” Over the years, profitability is the best defined of all the criteria. After the publication of his book, Sink has come to call this criterion “profitability/budgetability” in deference to government agencies as organizations.

I don’t like either profitability or budgetability for the government because the government manager doesn’t manipulate either profit or the budget like a private sector manager does. I prefer the term for this criterion to be **stewardship of funds**. The private sector manager must be a good steward of available funds to live up to his or her responsibility to the owners of the business. The public sector manager must be a good steward of funds to live up to his or her responsibility to the public represented by the government agency. A good steward of funds gets the most out of the

funds available to him or her. The private sector manager has more flexibility in the amount of funds available.

Sink says, “**Productivity** is a relationship between quantities of outputs from a system and quantities of inputs into that same system.” Sink goes on to say that if we make a ratio of the definition then the numerator contains an aspect of effectiveness and the denominator contains an aspect of efficiency. Productivity is another well-defined parameter of many years standing.

Sink says, “**Quality of work life** is the way participants in a system respond to sociotechnical aspects of that system.” Weisbord asked Fred Emery, the father of quality of work life, to define the term. According to Weisbord, “Said he with a snort, ‘It means get the foreman out of the system!’” (p. 165.)

Sink says, “**Innovation** can be defined as applied creativity. It is the process by which we come up with new, better, more functional products and services.” Peters and Waterman in their book *In Search of Excellence* (Warner Books, 1984) quote Theodore Levitt as saying “Creativity is thinking up new things. Innovation is doing new things.” (p. 206.)

Sink talks about how to use the criteria. “..... one important job of a manager is to determine

1. What the appropriate priorities or relative weights are for each performance measure
2. How to measure, operationally, each performance measure
3. How to link the measurement system to improvement

In other words, managers must determine how to most effectively use the control system to

cause appropriate changes or improvements. It is clear that the priorities or weightings for each of these performance criteria will vary according to several factors (size of the system; function of the system—marketing, manufacturing, research and development, etc.; type of system—job shop, assembly line, service, process industry, etc.; and maturity of the system in terms of employees, management, technology, organizational structure and processes, etc.).” (p. 46.)

Sink likens a manager’s using these criteria to a pilot’s using the gauges in an airplane. You can’t weight them and combine them into one

indication of how to fly the plane or the organization. Part of the problem is that we can’t operationally define and measure all these factors in an operation, which would be easier than for the entire organization. There are too many different types of inputs and outputs and some of them are qualitative. Later, I’ll show that for management tools we have a somewhat easier time. The input and output to management tools are data and information, respectively. When we can quantify a datum and a bit of information, criteria similar to Sink’s criteria can be quantified. We still have trouble getting one overall factor.



### 1.1.25.6. CRITICAL SUCCESS CRITERIA

**Critical success criteria come out of the process for determining Critical Success Factors, a concept for improving information systems to help managers focus on the important rather than the urgent.**

I extract the idea of critical success criteria from Rockart's critical success factors. Simply stated, each manager can look at his or her domain of responsibility and figure out those factors, and herewith the criteria, that spell success. Being success criteria, we'd expect overlap with the project management pyramid. The primary differences between the sets of criteria are that critical success criteria are more specific and operationalized and the process for getting critical success criteria is a participative evolutionary process.

Rockart defines critical success factors (CSFs) as "CSFs are the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization. CSFs are the few key areas where 'things must go right' for the business to flourish and for the manager's goals to be attained." (*The Rise of Managerial Computing*, John Rockart and Christine V. Bullen, Dow Jones Irwin, 1986, p. 385.) Rockart developed CSFs to improve information systems by reducing DRIP.

The idea of DRIP came from an article on CSFs (*INDICATIONS*, A Publication of Index Systems, Inc., Vol 1, No 2, Winter 1983) in which the authors say, "Senior executives are frustrated and incapacitated by systems which leave them 'data rich but information poor.'" (See Figure 1.1.16.9.) The authors continue, "The effectiveness of managers is being seriously impeded by systems which merely produce a glut of unfiltered information. We have begun to hear a common refrain from senior executives who feel bound by the constraints of ineffective information systems: 'We no

longer know how to interpret the information we are getting. We're frustrated by systems which provide too much financial data, unfiltered data, irrelevant operational data, and no external environmental data. We need information about what really counts; just because data is easily generated doesn't mean it's important.'" "

Rockart developed CSFs as an interview technique for consultants to help managers find out what information they need in information systems. The technique is supposed to distinguish between objectives and the activities the organization should focus on to meet the objectives. Once you know the CSFs, you can communicate the important issues in the organization. Rockart says, "Critical success factors are the relatively small number of truly important matters on which a manager should focus her attention. For this reason, the term 'critical success factors' is aptly chosen. They represent the few 'factors' which are 'critical' to the 'success' of the manager concerned. There are, in every manager's life, an incredible number of things to which her attention can be diverted. The key to success for most managers is to focus their most limited resource (their time) on those things which really make the difference between success and failure." (388-389.)

Rockart's interview technique can be extended into a participative planning technique. With the CSFs, managers can distinguish between the urgent and the important. The critical success factors process starts with the organization's goals and objectives. Then the consultant or participative group uses the ob-

jectives to determine the specific factors most influential on meeting the objectives. These factors are the CSFs. Given the CSFs, the next step is to determine the indicators that reflect the CSFs. Then we know what information systems to build to convert the data from measuring the indicators into information managers can use to manage what's important in their organization.

When reflecting on this process, we can see that *the critical success criteria are the indicators that reflect the CSFs.*

The Index publication reports a study they made on CSFs. They report, "Recently, Index conducted a study to determine the factors which are most commonly cited by executives as being crucial to the success of their businesses. The study produced some surprising results. Using a sampling of managers from a wide cross-section of industries, the study revealed five general categories on which most executives believe attention should be focused:

- Cost structure
- Product quality and innovation
- Customer satisfaction
- Management development
- Change in corporate culture and attitudes

It is interesting to note that only one of the five factors is 'tangible' and reflects a traditional concern with financial control; the other four are 'softer' elements such as corporate culture and employee development. The CSF process indicates that while executives do focus on the tangible and measurable concerns of cost con-

trol and return on investment, they are at least equally interested in the less tangible issues of attitude and incentive. A complete management system, then, must include both hard and soft data to be useful as a management information system."

As we focus on the indicators reflecting the CSFs and what the organization is doing on activities relating to the CSFs, we're working with what I call critical success criteria. Compare the five categories of the Index study to the project management pyramid. Notice the importance of critics, where critics includes the stakeholders of the company.

When developing critical success criteria, start with the goals and objectives and then the CSFs of the organization. Answer questions like those in Figure 1.1.25.6. To deal with the figure, you'll have to distinguish between outcomes and outputs of the organization. Webster (*Webster's Ninth New Collegiate Dictionary*) defines outcome as "something that follows as a result or consequence" whereas output is "something produced." Sink (*Productivity Management: Planning, Measurement and Evaluation, Control and Improvement*, Wiley, 1985, p. 25.) defines an output variable as "any controllable factor or resource that results from a transformation of the input variable (for example, energy, people, services, and data/information)" and outcome variable as "the result(s) of selling and/or delivering an output variable to persons or organizations in the environment of an organization (This element does *not* affect productivity, by definition.)"

## QUESTIONS LEADING TO CRITICAL SUCCESS CRITERIA REFLECT YOUR STAKEHOLDERS.

- Who is your supervisor?
- Who is your customer?
- Who are your subordinates?
- Who are your neighbors?
- What qualitative outcomes must your domain achieve to be successful in the eyes of your supervisor and/or your customer? Are the outcomes necessary and/or sufficient for success?
- What physical outputs must your domain produce to be successful in the eyes of your supervisor and/or customer? Are the outputs necessary and/or sufficient for success?
- What activities must your domain conduct and what conditions must prevail in your domain for you and your subordinates to feel you're performing at your best and are contributing the most you can to the outcomes and outputs just mentioned?
- What can your domain do to contribute to a better quality of life in the community outside your organization?

**Figure 1.1.25.6.** *Knowing your goals and objectives and thinking about CSFs, these questions will help lead you to your critical success criteria as indicators to measure to improve performance.*



### 1.1.25.7. GOLDRATT'S CRITERIA

**For a manufacturing organization, we can measure our goal of making money in terms of throughput, inventory, and operational expense.**

The book *The Goal* is popular in manufacturing circles. Eliyahu Goldratt and Jeff Cox tell a story in novel form of how to figure out the goal for a manufacturing organization. I should tell you that at the end of the novel, the exchange between the hero, Alex, and the guru, Jonah, goes like this: “‘Making money is the goal for a *manufacturing organization*,’ he says. ‘But it isn’t mine, and I don’t think it’s yours.’

‘Then what is our goal?’ I ask.

‘What do you think should be the goal?’ he asks.

And I say, ‘Well . . . ah, I don’t know.’

‘This is good-bye for now, Alex,’ Jonah says. ‘We’ll be in touch. Meanwhile, I have a suggestion for you.’

‘What’s that?’

‘Think about what the goal should be.’” (p. 262.)

In addition to setting up the sequel, the authors ask a question each of us must answer for ourselves. In stretching ourselves to find the answer, we must learn about ourselves and about the world around us.

Performance is a goal when we envision what we want the performance to be. Performance can be goal, status, progress, and more. Performance can relate to continuous success, motivation, and other factors, measures, or criteria of what you’re doing and how well you’re doing it. Later, I’ll discuss functions

for figuring out what you want to do, for doing what you want, for comparing to see if you did what you wanted to do, and for figuring out something better to do based on what you learned. (In short, these activities parallel Deming’s Plan-Do-Study-Act Cycle.) For now, I’ll discuss different ways of looking at performance. Goldratt’s way is for manufacturing organizations.

If you use and manage Goldratt’s measurements, or criteria, experience has shown that at the shop floor level, you get spectacular results. But when you extend the criteria to other parts of a manufacturing organization, like sales, you don’t get the same results. However, viewing the manufacturing organization as a total system, we sell the product that takes the most value from the bottlenecks. Bottlenecks are capacity constrictions on the manufacturing floor. Bottlenecks apply in any organization. Bottlenecks are one of the most important factors to look for and manage in your domain of responsibility.

From a general perspective, I might argue that the goal is to have a process for continuous improvement—a goal a management systems engineer should be helpful in reaching.

In Goldratt’s story, the goal of a manufacturing organization is to make money. Everything else is a means to get to that goal. You can express the goal in a number of ways, but the goal stays the same. Goldratt uses three measures to express the goal. You can use the measures to develop operational rules for running a manufacturing plant.

The measures are throughput, inventory, and

operational expense. “Throughput [is] the rate at which the system generates money through sales. .... Through sales—not through production. If you produce something, but don’t sell it, it’s not throughput.” (p. 59.)

“Inventory is all the money that the system has invested in purchasing things which it intends to sell. .... Operational expense is all the money the system spends in order to turn inventory into throughput.” (p. 60.) All employee time, regardless of direct or indirect charge, is operational expense.

Goldratt summarizes the measures. “Throughput is the money coming in. Inventory is the money currently in the system. And operational expense is the money we have to pay out to make throughput happen. One measurement for the incoming money, one for the money still stuck inside, and one for the money going out.” (pp. 72-73.)

Operational rules based on the measures can be condensed into “Increase throughput while

simultaneously reducing both inventory and operating expense.” (p. 66.) From this generalization, we can develop any number of rules. Sell more product. Decrease inventories. Reduce staff (or the cost of staff). How does increased efficiency affect the measures? Depending on your answer, we can make a rule about efficiency—or at least some particular efficiency.

Obviously, if your domain of responsibility is a manufacturing plant, you should consider using Goldratt’s criteria as the performance measures in the management process framework of Figure 1.1.11.4. Goldratt argues that the measures must be applied to the organization as a whole—not the manufacturing department or one plant or one department in a plant. He wants to optimize at the global level not the local level. Indeed, the measures are easier to use at the global level than at the local level. For example, we can see the throughput of the organization, but can we identify the contribution of each person in the organization to throughput?

**GOAL = MAKING MONEY**

- Increase throughput
- Reduce inventories
- Reduce operational expense

**Figure 1.1.25.7.** Goldratt’s measures for a manufacturing organization work toward making money.

**1.1.25.8. HUMAN SUCCESS CRITERIA**

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**1.1.25.9. RELATIONSHIPS TO INDICATORS, REFERENCE POINTS, STANDARDS,  
AND MEASUREMENTS**

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### 1.1.25.10. EXERCISE ON PERFORMANCE CRITERIA

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**Performance criteria need to be comprehensive, measurable, and important.**

#### **Explanation**

Finding criteria you want to measure your organization (and yourself) against is a difficult task. What's important? What's measurable? Deming says the important things are unknown and unknowable. However, to improve you need to measure something.

#### **Situation Description**

Sally and Bob graduated from Virginia Tech together five years ago. Sally, an engineering graduate, has been successful in technical sales for a major chemical company. Bob, a business graduate, has been an administrative officer for a small company.

Based on their success in working for others, they both wanted to go into business for themselves. They bought a small shoe store in Blacksburg, Virginia, close to their alma mater.

Bob and Sally agreed that Bob would invest 10% more than Sally and thus be the control-

ling partner in the business.

Sally does the inventory and customer end of the business and Bob does the purchasing and financial end of the business. Sally hired John to carry much of the day-in-day-out customer service. John has a flair for decorating and advertising.

Sally and Bob want to get their management started right. You've been hired as a management consultant to advise them.

#### **Exercise**

Identify what performance criteria might be good for the shoe store to use for continuous improvement. For this list, disregard how difficult it might be to measure the criteria. Which of your criteria are process-oriented as opposed to results-oriented? Which criteria are for the organization as opposed to a person? Which criteria are most important for the success of the organization? Compare the most important to the most easily measured.

