



CHAPTER FIVE



Systemic Issues

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This chapter supports a thesis: systemic issues are important, fundamental, and defining for the effective practice of human performance technology (HPT).

Here are two examples of systemic issues:

Example 1: My reading clinic colleagues and I taught a child to read. We were good reading teachers but not good human performance technologists at that moment. Our mistake was in thinking that a little girl's performance in school would be improved by teaching her to read. Good assumption, right? Wrong! She was not given the opportunity to read in school. Her very caring teacher knew she could not read and could not believe that she could have learned to read so quickly. She did not ask the child to read, believing that it would subject the child to further humiliation. Should we blame a teacher for preventing a child from being humiliated?

Example 2: Doug Meade successfully taught repair technicians how to make repairs. He was a good trainer but not a good human performance technologist at that moment: he had analyzed the skills necessary to make repairs, developed a course in which technicians learned the content, told supervisors what was in the course, and invited them to send people to the course. His mistake was in thinking that having the skills would improve performance on the job. It did not and for good reason: few of the people sent to the course ever performed the repairs they learned to make. The supervisors might have believed that having more skills was a good thing. Perhaps they wanted to develop their people. Should we blame supervisors for developing their people?

Nothing was wrong, per se, with the teacher's thinking or the supervisors' thinking. What was wrong was that neither Doug nor I were using human performance technology competently. We overlooked an important fact: *Performance occurs in a systemic context that supports performance, or not, and defines the meaning and value of performance.* If I scream "Fire!" it means one thing in a crowded theater and another thing if I am commanding a mock military battle. Context determines meaning and value.

Doug and I thought we understood the systemic context. Children must read to be successful in school, right? Repair technicians must have the knowledge and skill necessary to make common repairs, right? Fixing the knowledge and skill deficit will lead to improved performance, right? Wrong! We did not investigate systemic issues. Will they have the opportunity to perform? "Yes," we thought. "No" was the answer. What would also have to be changed to support the performance or make it valuable? We did not ask.

I made inquiries about other situations and learned systemic information about schools in Michigan. For example, schools lose special education funding if a special education student is successful enough to be placed in a regular classroom. Doug discovered an array of systemic issues related to work assignments: supervisors being evaluated on whether they support development of their people, compensation issues and safety issues that are relevant, and a whole lot more.

RELEVANCE OF SYSTEMIC ISSUES TO HPT CERTIFICATION STANDARDS

The importance of systemic issues has long been recognized, considered, talked about, and, too often, ignored by opinion leaders in our field. But now concern for systemic issues is written into the HPT Certification Standards. Systemic issues are a defining standard for our profession.

Here are the standards, as downloaded from the International Society for Performance Technology (2004). Emphasis is added to highlight four defining principles of HPT.

The ten standards are based on ISPI's four principles, following a systematic process, and agreeing to a code of ethics. They are summarized as follows:

1. *Focus on results* and help clients focus on results.
2. *Look at situations systemically*, taking into consideration the larger context, including competing pressures, resource constraints, and anticipated change.
3. *Add value* in how you do the work and through the work itself.
4. *Utilize partnerships or collaborate* with clients and other experts as required.

5. Be systematic in all aspects of the process, including the assessment of the need or opportunity.
6. Be systematic in all aspects of the process, including the analysis of the work and workplace to identify the cause or factors that limit performance.
7. Be systematic in all aspects of the process, including the design of the solution or specification of the requirements of the solution.
8. Be systematic in all aspects of the process, including the development of all or some of the solution and its elements.
9. Be systematic in all aspects of the process, including the implementation of the solution.
10. Be systematic in all aspects of the process, including the evaluation of the process and the results.

The first four standards capture ISPI's four principles: focus on results, work systemically, add value, and collaborate with others. They describe the essence of our work in HPT. The four standards, considered together, recognize that it is possible to do a performance-improvement project that is considered a success in one area of an organization even though it makes performance worse in another area or makes performance worse for the total organization. That is not what human performance technologists should be doing. The four principles must work together; it is necessary to meet all four to ensure that meeting any one of them is possible or worth the effort.

We in ISPI are proud of the remaining six standards because they were invented by and for our colleagues, but they have been invented elsewhere as well. Standards 5 through 10 are generic problem-solving standards written in language that connects them to our world. Together, these six "being systematic" standards, when combined with the first four standards, mean working within and addressing the systemic context of organizations, not simply working in a lockstep or systematic fashion.

Allow me to repeat, for emphasis, and then explain further: *if any one of the first four standards is not met, one is not doing human performance technology.*

1. Our first standard is to focus on results. Other professional standards often focus on means, such as using standard accounting procedures. The focus on results is an uncommon standard for professions, but an essential one for HPT.
2. The second standard requires attention to systemic issues. Much more will be said about it in what follows, as systemic issues are the focus of this chapter.

3. The third standard emphasizes adding value. Adding value requires focusing on a result that is worth more than it costs to attain. The standard is very basic and very powerful, but it is easier to provide lip service to it than to meet it.
4. The fourth standard specifies collaboration with clients and other experts. The standard is a necessary companion to a systemic approach. HPT is not something we do *to* clients but something we do *with* clients.

A systemic approach cannot be carried out within the confines of one narrowly defined organizational specialty or academic discipline. It cannot be carried out by one person or one champion or one small segment of an organization. Collaboration is necessary.

Here is an image to capture the meaning of the collaboration standard. Imagine the client for your project not as one person or executive, even a CEO or COO, or one division, but as a steering committee that represents the organization as a whole, including marketing, production and delivery, finance, human resources, and other key functions. The steering committee would have members that represent the formal and informal power structures and organizational structures.

It would be nice to have a powerful steering committee backing your every project, but it does not happen that way. It is not practical to put together a high-powered steering committee for every project. Now alter the image of client-as-powerful-steering-committee to make it more realistic.

Imagine that you create a de facto steering committee by interacting with the people who would be appropriate for a steering committee. Just ask for and listen to their views and integrate the views into the project work. For example, in my performance-improvement work within a university, improving the performance of a graduate program, I did not have an open invitation to drop into the president's office, the Vice-President for Research's office, the Graduate College Dean's office, the Arts and Sciences College Dean's office, the Psychology Department Chair's office, and the offices of the chairs of three or four relevant curriculum committees and three or four relevant budget committees whenever I wanted. Nor was I naive enough to ask the president to appoint a representative steering committee to support my efforts. No one gets the enthusiastic support of everyone at the top, not even the people at the top.

Acting as if the steering committee were real is more important than having the committee. Knowing who the key players are, one can work systemically by occasional interviews or chats, reading things the committee members write, listening to and checking out rumors, and making intelligent guesses. It is possible to be influenced by them simply by actively listening to them. It was easy for me, for example, to know what the president wanted. He was working to

develop and communicate a strategic plan. Similarly, each of the other players was busy doing an important job that included formulating an agenda and pushing it. Listening works.

My point here is simple: one cannot work systemically by staying inside one's organizational box. Getting out of one's box is a choice, even though making the choice can bring internal political sniping and other nastiness down upon you and does not, by itself, ensure that you get value-adding results.

The next section shows an orderly way to work systemically to implement the first four HPT standards. It begins with a fictional story and moves on to a careful look at systemic issues within the framework of an actual organization as a system. The two stories are offered to illustrate the meaning and fundamental importance of systemic issues.

ORGANIZATIONS ARE SYSTEMS

Humans throughout the ages have communicated important concepts through stories. Two stories illustrate the concept of system, providing a context to articulate important systemic issues and to identify tactics that work, and those that do not work, in dealing with systemic issues.

Organizations as Systems in the Fictional World

In the Mesh is the title of a story and a fact of life that is emphasized in author John-Paul Sartre's existential philosophy. Sartre's 1954 story, or scenario, as he called it, begins by showing scenes of fighting, a revolution in progress. Jean Aguerra, a hated dictator, and his troops are outnumbered and surrounded. He orders a ceasefire and surrenders. He is escorted to a tribunal, then a firing squad. As the firing squad prepares to execute him, Aguerra smiles, fleetingly, sadly. *In the Mesh* is about the events that brought about the dictator's execution and his smile.

Flash back to another scene, about five years before. Jean Aguerra is in the scene, this time as the leader of the *revolutionaries*. He and his fellow revolutionaries burst in upon a dictator. They take him into custody, to a tribunal, and to a firing squad. Five years previous, Aguerra was the leader of the revolutionaries overthrowing a hated dictator. Now, five years later, he is executed as a hated dictator.

The scenario is set. How did the idealistic revolutionary of five years ago become transformed into a hated dictator? As the scenario unfolds we learn that Aguerra was not corrupted by personal power and greed as the revolutionaries believed. Aguerra was caught in a systemic mesh of realities, the realities one encounters in trying to implement ideals.

The plan: Nationalize the oil fields and turn over the profits to the people.

The reality: Who would develop the oil fields, pump the oil, pipe it to the sea, and transport it to market? Who would buy the oil and at what price? What would happen if other oil producers in other nations reduced their prices? Or pumped more oil?

The revolutionaries knew how to destroy. They could shout and shoot. But they did not know how to run an oil industry. Even had they known, they did not have the capital, the cash, and the connections. The oil industry operates in a value chain, in a mesh of connections. It operates within an infrastructure that the revolutionaries did not know existed. Aguerra found out about the infrastructure quickly. The former owners of the nationalized industry explained the situation. They could leave the country to Aguerra and his revolutionaries or they could stay and run the oil fields, under contracts that resulted in some, but not all, of the profits flowing to the people.

Perhaps Aguerra could train and develop his constituents to take over more and more responsibility for running the oil fields. But it would take time. Aguerra's revolutionary friends were not happy nor patient when their dreams of immediate oil profits were not realized.

There were, to Aguerra's dismay, similar problems with land reform. The people knew how to grow things and could do so in little plots of land, but could they work together to maintain the irrigation systems and the machinery and the markets? Or would there be disputes over who was to get which piece of land, who could travel across another person's land, who used the most water, who got what machinery? How could such disputes be resolved? The new landowners had guns and the will and skill to use them, but could Aguerra and the revolutionary council allow civil strife? Should they allow the carnage to ignite and spread, or should they send in the central police to throw shooters-of-neighbors in jail: and then what? Establish a judicial system, respected and known to be fair, and do it within a few weeks?

You can see the problems; there are systemic issues involved. One does not move swiftly and easily from governance by an oppressive dictator to a smoothly running government and economy. Just as it is easier to kill a goose than to raise a child, it is easier to overthrow a government than it is to govern. Aguerra discovered that a government operates in the mesh of many realities, the realities of people's hopes and dreams, the realities of an economic infrastructure, and the realities of an infrastructure for governance. That is true whether we are talking about one company or one country.

The former revolutionary found himself in the mesh of systemic realities. He ran out of political capital before he could wriggle out of the mesh enough to create the country he dreamed of. Why the smile as he was executed? Perhaps it symbolized understanding, knowing that the executioners would be caught in the mesh and follow him in his role as the star at an execution.

The lack of effective infrastructure and the competing interests that grew within the country had generated other systemic issues that Aguerra had to deal with or die. He could not do the job without the cooperation of others internally and without satisfying external interests. He could not succeed by using power; he lost it even as he tried to exercise it. He was functioning within a mesh of systemic issues. The systemic issues were captured in fiction, significant and interesting because the art mimics systemic reality.

Organizations as Systems in the Real World

This is the story of General Motors (GM) from 1918 to 1964 and its subsequent decline. The GM story is important to HPT for two fundamental reasons:

1. GM served as the laboratory for development of management consulting and organizational theory. GM built vehicles; observers such as Peter Drucker (Drucker, 1946) built organizational theory.
2. The GM story provides a case study that showcases systemic issues: key systemic features were put in place one by one, then removed.

The early history of General Motors is the history of a failed dream, the dream of a man named William C. Durant, who wanted to create a company that could build a car. He pulled together a number of companies that had a car to build, such as Buick and Chevrolet, and companies such as Hyatt Roller Bearings, Remy Electric, and ACDelco that built parts that went into cars like Oldsmobile, Cadillac, or Pontiac. Durant, good at making deals, created General Motors. Durant, not good at managing, twice ran GM nearly into bankruptcy before losing control of the company.

Durant lost control because General Motors was caught in a mesh of systemic issues.

Internal Systemic Issues. Three major internal issues faced General Motors:

1. The companies that Durant had acquired were headed by executives strong enough to build a company and strong-willed enough to want to continue doing things the way that had produced the successes.
2. The companies were part of GM on paper, but there was no internal infrastructure to support working together.
3. The companies within General Motors had a history of competing with one another and very little incentive for cooperating.

External Systemic Issues. Four major external issues faced General Motors:

1. There was no clear direction for how the company was to compete in the marketplace.

2. The cars from one GM division were competing with cars from another division as well as with cars manufactured by competitors.
3. GM was nearly bankrupt and had lost the confidence of investors who supplied capital and banks who supplied operating funds.
4. GM was facing a post-World War I economic slump; car sales were low all around the country.

General Motors brought in a new leader, Pierre duPont. The financial community knew duPont and trusted him. They would listen to plans for financial restructuring rather than just shut GM down and cut their losses. The leadership change was necessary to stay in business, but it did not solve the systemic problems: internal chaos and external economic downturn.

Enter Alfred P. Sloan, Jr., who had headed Hyatt Roller Bearing and then a collection of GM companies called United Motors. He had ideas about how General Motors might become a functioning organization (Sloan, 1963). Sloan, working with others, did several important things. Each has a complex story, but the critical business issue driving each was simple: GM had to adapt or die.

The Bonus Plan. Part of adapting was to give the executives an incentive for working together within GM instead of pulling out. Walter Chrysler and others had already left and formed competing companies. The bonus plan was carefully structured. If GM did well financially, there would be a substantial amount of money available for bonuses. If GM did not do well, there would be little or no money for bonuses. Each executive was paid a bonus according to the profitability of his division. An executive who maximized his division at the expense of others would get a larger share of a smaller amount. If GM did well and the division did poorly, the executive would get a small share of a larger amount. The plan was set up to ensure that each executive had a financial stake in how well GM did as a whole and in how well the division performed. In addition, the bonus was typically paid in GM stock rather than cash, another incentive for the executive to work to increase the value of GM stock. The bonus plan was an effective motivational device but it was not the solution; it could work if and only if a number of other things were done to fix GM so that it worked as a company.

The Organizational Structure. A major item was to introduce an actual organizational structure that ensured form would support function.

Sloan knew that any organizational plan would be met with great resistance, since GM executives had been competitors all their lives, and each would be looking to seize an advantage. Consequently, he articulated two principles, criteria that any structure must meet and, if met, would be acceptable to the executives. The principles were

1. Complete operating autonomy of the divisions
2. Central coordination of certain essential resources

The division executives liked the first principle. Pierre duPont, accustomed to centralization, and the Finance Committee, which believed in controlling the purse strings, liked the second principle. Both principles are essential. Together they achieve a systemic balance between centralization and decentralization.

When the organizational structure was drawn up it depicted each of the former companies as a division of GM. They were the core of GM and were shown as the largest and central part of the organization chart. Above the divisions was an operations committee that reported to the president. The operations committee's job was to help the divisions operate, not dictate to them. The division heads would have it no other way.

On one side of the organization chart were financial services, including the General Motors Acceptance Corporation, to make sure that people could get help financing their new car purchases. That looked good to the operating divisions. On the other side of the organization chart were several advisory groups. The advisory groups could advise the divisions. *That is all they could do.* The advisory group on engineering could not order the engineers to do anything. They held seminars to keep the engineers informed as to the latest in engineering and as to what was going on in other divisions. Attendance at the seminars was voluntary and the costs were charged back to the divisions. The advisory groups had to perform well to survive.

The organizational structure ensured a decentralized operation of GM. The divisional executives could run their divisions, benefiting from advice and financial services and within the constraints of the money available. The scheme provided freedom within a structure and the information necessary for making intelligent operating decisions.

The core of GM was making cars. The advisory groups and financial services were about making that possible. *Managing money well and managing knowledge well were and are essential for successful operation and innovation.* The operating divisions could, working together, get much better information about financial matters than each could have working separately. The organization structure was put in place to ensure that GM as a whole could be mightier than the sum of its parts. It ensured that it *could* but there was more to be done to ensure that it *would*.

How could the divisions be sure that each was being treated fairly in financial resource allocations? How could each divisional executive know that he was being treated fairly in bonus decisions? How could everyone know that each division was doing better as part of GM than it could independently? There were serious questions that required serious and credible answers. A system for

measuring divisional performance and the performance of GM as a whole was required. GM needed a scorecard.

Keeping Score. Enter Judson Brown with a tool he brought with him from the duPont company: the duPont Return on Investment (ROI) formula. The tool supported reasonably precise calculations about how each division was doing as a commercial enterprise. But it took the support of the company president, Pierre duPont, the chair of the Executive Committee, Alfred Sloan, the chair of the Finance Committee, and a lot of work, to get the formula used. There were several legacy accounting systems in use and different ways of collecting numbers. Brown's task of getting credible numbers to plug into the ROI formula was an arduous one, but he succeeded.

GM now had a bonus plan to encourage cooperation and discourage subsystem maximizing, an organizational structure to get the parts working as a whole, and a yardstick for measuring financial performance. Missing was a strategic marketing plan to ensure that GM could succeed in the marketplace, earning the revenue to keep the whole thing going.

The Theory of the Business and Marketing Plan. Sloan called the marketing plan a theory of the business because it dealt with how one does business with respect to the two key elements of a marketplace: (1) customers and (2) competitors. The plan was simple, though it took time and deliberation to develop and even more time and deliberation to implement.

The plan: look at the buying power and wants of potential customers. Divide the market, arbitrarily, into bands from the lowest-priced cars to the highest-priced cars and make sure that GM had a car in each band. Ford, with its basic black, simple, and inexpensive cars, dominated the low end, so price the lowest-priced GM car just above them. Compete with Ford not on price but by appealing to customers to step up to a Chevrolet, with a slightly higher price and many more features. The overall GM plan was as follows:

- Put only one GM car in every price range to avoid competing with other GM cars
- Challenge competitors below the range with features
- Challenge competitors above the range with price

GM now had a response to the major systemic challenges. As Sloan put it, GM had the three requisites for success:

1. A theory of the business, the marketing plan
2. An organizational structure, including balancing centralization and decentralization to support the business

3. A yardstick, the duPont Return on Investment formula, to measure success

The theory of the business aligned GM's products with the marketplace. The organizational structure aligned GM's operation with its products and the marketplace. The advisory structure supported continuing innovation in the marketplace and continuous improvement of operations to keep the alignment. The yardstick enabled everyone to keep score regarding the financial health of the organization.

Unlike Jean Aguerre, who failed to establish the three requisites for success, Alfred P. Sloan, Jr., was kept on. He was a leader at GM from the crisis years just before and after 1920, through the Great Depression of the 1930s, and through the crisis of World War II. He served as president for several years, establishing the technical and informational infrastructure that supported informed and intelligent decision making by managers. He then served as chairman of the board, where he supported the operational leaders and stood in the way of efforts to make management decisions on the basis of favoritism or self-promotion. He relied on the yardstick, applying it to promoting executives based on yardstick performance, not on whether they exuded the charisma of leadership and not dependent upon their ability to get Sloan to like them.

From the post-World War I crisis years until Sloan retired in the early 1960s, GM rose from near bankruptcy and trailing Ford for market share to a position of dominance. General Motors had a 65 percent market share and a new strategic challenge, that is, avoiding being broken apart by running afoul of anti-trust laws.

The post-Sloan GM story is one in which key systemic features of GM were gradually dismantled. We have, from the position of hindsight, a remarkable opportunity to observe the reversal of fortunes as the systemic features were tampered with in the late 1960s and beyond. Success and the systemic features went together, supporting but not proving the notion that managing the systemic features caused the success.

The Dismantling and Decline. General Motors declined in market share and revenue as the marketing plan was undercut, the bonus plan undercut, the organizational structure compromised, and the yardstick ignored. The marketing plan was ignored by default as GM companies started competing directly with other GM companies. Chevrolet and Pontiac, the poorer cousins on the price and prestige ladder, each led the charge by attempting to transfer brand loyalty from GM loyalty to Chevrolet or Pontiac loyalty (Wright, 1979). Both divisions did so by building a wider range of cars so that Chevrolet and Pontiac competed head on with one another and also with Oldsmobile and Buick.

The bonus plan was undercut by the paying out of huge sums to executives when GM as a whole was not making much money, an activity that had the side

effect of strengthening the anger of employees and their loyalty to the United Auto Workers. Without the bonuses, they opined, the cuts in employee wages could have been smaller and would have been more palatable. The organizational structure was compromised as people at headquarters stopped being advisers and started attempting to be controllers, by beginning to micromanage the job of the persons reporting to them. Many GM executives stopped being externally focused and became focused on internal politics.

Part of GM's decline had to do with increases in international competition. But part of the success of the international competition, in turn, had to do with GM alienating GM dealers across the land. Sloan had seen the dealers as an essential component of the marketing strategy and a source of intelligence about what was happening in the marketplace. He established policies to ensure that dealers were supported. He spent vacations in dealerships selling cars and keeping in touch with the marketplace and issues facing the dealerships. As GM policies changed from *support* the dealers to "squeeze the dealers," the alienated dealers became a great resource in the distribution of Toyotas, Nissans, BMWs, Volkswagens, and so on. The competitors did not have to build a distribution network, they only had to accept the one GM handed them by heavy-handed treatment of dealers. By the mid-1980s GM no longer had the market share to be concerned with anti-trust laws. They were now downsizing and worrying about economic survival.

No one thing produced GM's increasing success from 1920 through the 1960s. In my view, the success required attention to systemic issues. No one thing produced the decline. The decline of GM occurred, however, as systemic issues were ignored.

My points here are that, whatever else was going on,

1. Key systemic issues were not effectively addressed at GM around 1920 and GM was near bankruptcy: the baseline period.
2. When the systemic issues were addressed, GM prospered for more than forty years: the intervention period.
3. As the same systemic matters were ignored or addressed much differently, GM's fortunes declined: the reversal period.

In the Mesh and the GM story highlight systemic issues that I believe are vital for the successful, value-adding application of HPT. They are issues that anyone who attempts to practice HPT competently will experience sooner or later, usually sooner. In the next section I will enumerate some of the systemic issues and show specific connections between HPT concepts and systemic issues. As I do that, I will show some of the ways that systemic issues can be dealt with constructively.

POINTS OF THEORY AND SYSTEM PRINCIPLES IN THE STORIES

A major theme in each of the earlier stories is that we operate in a mesh of systemic variables. Jean Aguerra did not know how to deal with systemic issues and paid the price of ignorance. Neither the fictional Jean Aguerra nor the real Alfred P. Sloan, Jr., could escape that mesh. The mesh is there whether we know it or not.

The stories illustrate interconnectedness. In a system, everything is connected to everything else. Many things are necessary but none, by itself, is sufficient to ensure that the system works.

- Managing internal operations is necessary but not sufficient.
- Managing external relationships is necessary but not sufficient.
- Providing value to customers and other stakeholders, including employees and suppliers, is necessary but not sufficient.
- Managing money effectively is necessary but not sufficient.

Many things are necessary; no one thing is sufficient. Viewing organizations systemically requires looking at the interconnections among variables.

Points of Theory: The System

Consider this definition: *A system is a whole, its elements, and the interrelationships among the elements, between each element and the whole, and between the whole system and other systems with which it interacts.* That definition, and each of the others similar to it, is not a bad definition, just too densely packed to be very meaningful. Allow me to unpack it a bit.

Consider an airplane as a system. It is a whole. You can see it in a hangar, on a runway, or in the air. The elements are a million or so parts, clustered into subsystems for power, guidance, and the like. To understand the parts, we must understand the interrelationships among them, the interrelationships that make the airplane into a whole thing that flies. But if we want to understand the airplane-as-system, we must understand what makes the thing fly and a whole array of other things that determine how the airplane relates to its environment. The airplane, as system, is not just the complicated and expensive device. *A system is not only the elements, it is also the relationships.*

The essence of an airplane-as-system includes how well it flies and lands and carries cargo and how easy it is to repair and how it is perceived by the public and how many people buy tickets to fly on it. Thinking about the airplane-as-system we must consider the value of the airplane to an airline, the company that built it, the passengers, the crew, the ground crew, the gate crew, the competition, the local economy, and the company balance sheet.

Attempting to consider all the elements and relationships in a typical company could lead to a severe case of analysis paralysis and incapacitate the performance system analyst. What can we do instead? Only a few things:

1. Collaborate with others to ensure that important information is available.
2. Coordinate the work, by ourselves and others, through theory and knowledge of basic concepts and principles of systems.
3. Coordinate the work, by ourselves and others, through selective information about the system being considered.
4. Attempt to ignore systemic issues until the ignorance causes serious problems.
5. Attempt to know all about it.

While the last two techniques are common, so too is failure. A combination of the first three is more likely to be successful. To describe how to do them I must articulate six key points of theory, then three principles that help focus on the right selective information about the system.

Six Key Points of Theory

Six key points of theory describe and define the type of system that HPT deals with most, the adaptive system. An adaptive system is one that can *adapt* to changing circumstances in order to fulfill its purpose and one that can change its purpose to *adapt* to a changing world.

Theory Point 1: Definition. A system is a collection of elements and relationships, held together by a purpose in common.

- An airplane is a collection of elements and relationships constructed to achieve a small number of specific purposes. The relationships with external elements are part of the system; relationships with pilots who might fly it, mechanics who might maintain it, and customers who might benefit from services that can be provided by using it are all parts of the system. The external relationships are part of the system in the sense that they define the value and purpose.
- I am a collection of elements, body parts and skills, mostly, and relationships with family, friends, enemies, and employers that function to achieve a small number of specific purposes such as health and happiness. Who I am is defined in significant ways by the relationships with people external to me. I would not be who I am without the relationships with family, friends, colleagues, former students, and business contacts.

- General Motors is a collection of operating and support divisions plus many internal and external relationships, held together by a small number of specific purposes such as making cars and making money. The external relationships are captured, roughly, by business concepts such as brand image and market share.

Theory Point 2: Value Added. External relationships define the value added by the system.

- An airplane adds value only if it reliably and safely carries people and property to specific destinations.
- No matter how many good products GM builds, it adds no value if no one values the products.
- All the parts of an airplane have to work and have to be supported by many people to keep the machine operating reliably and safely.

Theory Point 3: Adding Value. Internal relationships are essential in providing the value to be added.

- Neither cars nor airplanes can be produced unless the parts of the manufacturing plant work together effectively.
- The parts of a manufacturing plant will not work together effectively without an appropriate internal infrastructure, including a management system and an appropriate pay system.
- The staff of a manufacturing plant or a human service agency will not work together effectively without an infrastructure, including a specific culture, that supports cooperation.

Theory Point 4: Alignment. Maintaining two interconnected sets of relationships, internal relationships and external relationships, is necessary for survival.

- If my heart and liver and stomach, and so on, do not work together, I am unhealthy or dead; if I do not maintain good external relationships, I will not survive very long.
- If the staff members of a human service agency do not work well together, the quality or efficiency of service will suffer.
- If each division of General Motors does not maintain good relationships with its customers and community and with other divisions of General Motors, the quality or efficiency of work will suffer.

Theory Point 5: Interconnectedness. Systemic variables are interconnected; systemic performance is multiply caused; there is no such thing as an independent variable in a living system. If the parts are *not* connected, they are not parts of the system.

- Interconnectedness was illustrated in the opening stories about learners: they had knowledge but lacked opportunity to perform. Instructional variables were connected to workplace variables only after we began working systemically.
- Interconnectedness was also illustrated in the *In the Mesh* and General Motors stories.

Theory Point 6: Adapting Through Feedback. The actions required to maintain each set of relationships cannot be predicted in advance, but must be guided by feedback.

- A consequence of *not* adapting through feedback was illustrated in *In the Mesh*.
- Adapting through feedback was illustrated in the General Motors story.

Adapting through feedback is something we experience every day of our lives. We live in a complex, changing, and only partly predictable world. Following a prescriptive plan when new information is available would be dangerously foolish. But it is possible to plan and anticipate and make contingency plans and alter them when new information is available. We manage effectively or at least muddle through reasonably well only by responding to and adapting through feedback.

Three principles can help us perform the inordinately complex task of managing all the variables necessary to improve or maintain the performance of a complex system. The first principle is obvious from Point 6.

Three System Principles

System Principle 1: Feedback. Feedback is information about performance that is used to guide performance.

Guide it to where? We hope toward worthy goals, but the principle operates even while guiding a system toward destruction. Furthermore, information about performance will guide performance only if it gets to the right person, at the right time, in the right form, and only if it is related to one or more specific goals. Data dumps are not feedback; neither are offering advice, criticism, or suggestions that are ignored. Attempting to punish or reward someone might be feedback if it guides performance, but it is not feedback if it does not guide performance.

Intelligent value-adding performance is possible only with adequate feedback; defective feedback yields defective performance, always.

System Principle 2: Value Set. There is a small set of interconnected variables that must remain within a narrow range of values if a living system is to survive or remain healthy.

The value set principle is exemplified in the health checks that occur each time a patient enters an emergency room or appears for treatment. Temperature, heart rate, blood pressure, and blood sugar levels must all be maintained within narrow ranges. There are a huge number of variables that affect value set variables, but if the value set variables are in range we can check out the linked variables in a more leisurely fashion.

The value set principle is also exemplified in the checking of financial statements that potential lenders and shareholders do before putting money into a company. Business managers and executives also monitor cash flow, profit margin, return on equity, and the like. Experts disagree on which variables constitute the best value set variables to monitor but agree that monitoring a few key variables is the way to go.

Value set variables must be maintained even as we adapt; if they are not, we die.

System Principle 3: Subsystem Maximization. It is impossible to maximize the functioning of a subsystem and the total system at the same time.

This principle is so vexing that it took me years to believe it, even though I knew that there are mathematical proofs of the principle. It took a long time and many examples to convince me that the principle works in the real world. The subsystem maximization principle is a root cause of all those so-called personality clashes that commonly occur between leaders or between departments, such as marketing and production, production and human resources, or accounting and everybody else. It is also a root cause of problems of governance and society that result from ideological and partisan efforts, but that is another story that is beyond the scope of this chapter. It might be that personalities are clashing, but the subsystem maximization principle suggests a fundamental reason why they clash: if each player is doing his or her best to do the job, there will be many clashes. Marketing has a different job than production, and neither, by itself, can add value to the total organization. There must be a product to market. Even if there is a product, if it is not purchased it adds no value to the producer or to a customer.

The subsystem maximization principle is one of the major, perhaps *the* major, sources of conflict in organizations. We each experience it on a daily basis in our own lives: we have several things that we simply must do; if we do any one of them as best we can, one or more or all of the others will not get done as well. When a child is ill, parenting maximizes for a time and interferes with performance at work or in maintaining other relationships. When there is a crisis at work, work demands maximize and interfere with all else that we should do. Much of the resistance we encounter when doing a change project is a manifestation of the subsystem maximization principle. We encounter resistance whenever what we do threatens a subsystem, that is, requires a change in routine operation.

For example, advertising a new product threatens the sales of existing products; however, if the new product is not advertised, sales projections will not be

met, and, perhaps, the loan for new product development will be lost. Similarly, selling the product that generates the best commission for the salesperson will sometimes, if not always, interfere with selling the product that generates more revenue or a better profit margin for the organization or the product that establishes the organization's leadership in the marketplace.

The subsystem maximization principle means that doing the best work possible from the perspective of one part of an organization will make the organization as a whole do worse, guaranteed. Additional examples can be found every day by watching, reading, and listening to the daily news. It takes only a little practice to identify them and notice the enormous impact on our lives of well-intentioned attempts at maximization around one issue or one value.

LINKING THEORY, PRINCIPLE, AND PRACTICE

The six points of theory and the three system principles are not the only ones there are. I selected these nine because, taken together, they are comprehensive enough to be quite powerful. I also selected them because each principle and most or all of the points of theory connect to experiences each of us has every day; with practice, they can become intuitive.

Looking back, it is clear that these six points of theory and three principles were operating in every performance-improvement project I have been involved in during the past forty-plus years. In addition, the six points of theory and the three principles of systems seem to have been operating in nearly every one of the performance-improvement projects I have read about during that same forty years. At the beginning of the projects feedback has been defective, many people involved did not know the value set variables, the variables they knew about and tracked were not closely linked to value set variables, and they did not take into account the implications of the subsystem maximization principle. It was more common for people to attribute the effects of the subsystem maximization principle to personality conflicts or unspecified communications problems.

I do not see any way to collaborate effectively, consistently, and successfully with others in an organization without either an incredible amount of luck or without taking into account the six points of theory and the three systemic principles.

Dealing with Systemic Issues: Fundamental Questions

Acting as if we are attempting to achieve a result is an approach to selling as well as an approach to improving performance. Perhaps we should model by asking intelligent and systemic questions and allowing the intelligence, knowledge, and expertise of the client to persuade the client that systemic variables are worth attending to.

How to Take Systemic Issues into Account. I have included fundamental systemic questions in this section, in their generic form. They should not be used in that form. They can easily be modified to fit specific situations with a little practice (See Rummier, 2004, for examples). Tailoring the questions to the client language, beliefs, practices, and so on is quite important, so I will begin by showing the thinking behind the questions.

Regarding Theory Point 1, Definition, in any analysis, I want to know the purpose-in-common that holds the system together. If there is a mission statement or vision statement, I want to see it and find out if they are widely ignored words on paper or living documents. I want to know if the mission and vision are connected to value set measures, and if everyone is clear about the connections. I almost always find disconnects.

Regarding Theory Points 2, Value Added, and 3, Adding Value, I want to know who the customers and investors and suppliers are and how the organization adds value to them. I want to know if the people in the organization, suppliers of knowledge and the behavior that yields results, know how their performance adds value and to whom. I want to know if there are people who are unaware of how they add value and whether people generally believe that others in the organization really care about adding value.

Regarding Theory Point 4, Alignment, I want to know the plans and practices that are in place to know the status of, and improve, external relationships. I want to know the plans and practices that are in place and to know the status of internal relationships, such as the relationships between production or service delivery and support functions, or the relationships between leadership and management and between any person I meet and everyone else. I can find out a lot about all of this by asking a few questions and observing carefully on a tour of the organization.

Regarding Theory Point 5, Interconnectedness, I want to know the interconnections. How do people attempt to manage the interconnected value set variables? Do they see them as a set or do they pursue them as separated goals, perhaps assigned to different leaders or parts of the organization? An especially important set of connections is the set that relates specifically to Theory Point 2, Value Added. For example, if a company makes plastic penguins for amusement parks, the connections to the suppliers of plastic and suppliers of penguin molds and their designs are very important, as are the connections to plastic penguin distributors and to amusement parks and ultimately to the people who visit amusement parks. It is very important to understand the interconnections among the parts of the value chain that ensure that it is possible to make plastic penguins and supply them to the marketplace.

Regarding Theory Point 6, Adapting Through Feedback, I want to know how the executives know whether the organization is prospering, stagnating, or faltering. What value set numbers do they have and look at? I want to know how

each person I encounter can tell whether or not they are doing a good job and whether or not they can tell if anyone cares about that.

It is clear how System Principle 1, Feedback, ties in: I go in guessing that many people get too little feedback, get the wrong feedback, or get the feedback at the wrong times. It is clear how System Principle 2, Value Set, ties in: I go in guessing that the feedback executives and everyone else gets is not well connected to value set variables. I know that is my bias going in so I look very diligently and explicitly for disconfirming evidence; I am very happy whenever I find it.

It might not be obvious how System Principle 3, Subsystem Maximization, fits in. Allow me to attempt to make it clear. I am always looking for conflict in the organization. First, I look for conflict between goals. In what ways do the goals conflict and how are the conflicts balanced? Goals conflict whenever those seeking to achieve them strive mightily for only one of the goals or supporting subgoals.

Second, I look for conflict between parts of the organization. In what ways do people believe they are misunderstood by almost everyone else in the organization or that others are just out for themselves?

Third, I look for conflict and cooperation between individuals. Who seems to get in their way when they try to do a good job? Who do they go to when they want to be sure something gets done? Do they understand that the variables required for success are interconnected, not manageable independently?

The six points of theory and the three system principles guide my observations and informal conversations. They guide what I talk about, ask about, and look for in an organization. They orient me as I learn about the people and the organization. They help in making the case for doing an analysis. They help in describing the tools I use in doing the analysis. I use specific tools for the analysis, then discuss the results, guiding conversations by the points of theory and system principles.

That said, here are some of the systemic questions I ask in doing an analysis. I ask the questions in casual conversations, and I ask them using specific HPT tools. I am very likely to use one or more of five tools, my Total Performance System Diagram (Brethower and Smalley, 1998; Brethower and Wittkopp, 1987; Lafleur and Brethower, 1998), Rummmler's Supersystem Diagram (Rummmler, 2004), Kaufman's Organization Elements Model (Kaufman, Oakley-Browne, Watkins, and Leigh, 2003), Gilbert's Performance Engineering Matrix (Gilbert, 1978), and Carleton and Lineberry's analyses of cultural issues (Carleton and Lineberry, 2004). I am also likely to use some form of cross-functional process maps (Rummmler and Brache, 1995). I merely list the questions here with very little elaboration; explicating each would make this chapter far too long. However, the chapter in this book by Geary Rummmler shows a practical and proven way to get them answered.

The Systemic Questions. This section discusses five systemic questions. Together, answers to the questions will help you to flesh out the most important attributes of a system. You will understand this list of questions and the importance of answering them more thoroughly after reading Rummeler's chapter or Rummeler (2004).

Systemic Question 1: What is the system performance?

System performance always involves use of scarce resources to generate products or services that, we hope, add value. Referring to the resources as "inputs" and the products or services as "outputs," we can ask about system performance as follows:

What are key inputs? The key inputs will be orders for goods or services, materials or supplies required to fulfill them, the money budgeted for the purpose, and the people assigned to the work.

What are the key outputs and how does each add value? The key outputs will be the goods or services provided to clients or customers.

Systemic Question 2: How does the system fit into the environment?

The inputs and outputs connect to the external environment. That is why they are so important, why we must know a lot about them if we are to understand the system and figure out how to improve its performance. The following set of questions helps us do that.

1. How does the system relate to closely linked systems?
2. How does the system add value to stakeholders?
3. How does the system relate to competitors?
4. How does the system relate to regulators?
5. What variables or indicators show how well the system is functioning to add net value?

Systemic Question 3: What are the parts of the system?

Systems have far too many parts to look at them one at a time. When I seek advice regarding an illness or about how to support health, I do not want the adviser to examine each cell in my body to determine if it is healthy, sick, well-nourished, or starving. I want advice organized around the major subsystems that compose my body and the value set variables connected to them. How is the cardiovascular subsystem working, and what should be done to make it work better? How about digestion and breathing and temperature regulation?

How do the primary processes function? A simple, useful, and reasonably accurate way to think of primary processes is that they are the processes that produce the goods and services offered for sale.

- How are inputs acquired and at what costs?
- How are outputs monitored?
- How are the processes monitored?

How do the support processes function? Support processes are those that support the primary processes. Human resources, quality assurance, accounting, maintenance, purchasing, data processing, and marketing are examples.

- How are inputs acquired and at what costs?
- How are outputs monitored?
- How are the support processes monitored?

Systemic Question 4: How are value set variables maintained?

This is a very important question but one that is often not asked and often not part of the formal analysis. I want to know the answer, always, so I talk with people about it. For example, I might ask questions about how good relations are with key suppliers of financial resources and about relationships with key customers. If the company has an investor relations department or a customer relations department, it might be worth asking how they maintain those relations. But where I get most of the information about value set variables is in asking the question, How do you know how well things are going?

Systemic Question 5: How do the governance processes function?

Governance processes are the policies and procedures and rules for governing what people do in an organization. Hiring, promotion, compensation, and budgeting are part of the governance infrastructure. They are a special category of support processes and are an extremely important aspect of governance in management. So a key question is, How do the management processes function?

Management processes are about establishing strategies and goals, allocating resources, providing feedback, providing tools and materials, and taking supporting and corrective action to support performance. Management processes are also about ensuring that primary processes achieve operational and strategic goals and that support processes support primary processes, and result only in constraints that are necessary to implement policies.

- *How are planning and resource allocation managed?* Once strategic and operational goals are in place at the organizational level, how do they cascade downward in the organization? How does information flow upward to show that goals are cascading downward or to show that changes in organizational goals are necessary, based on the constraints within which each part of the organization operates? How are money and people allocated to support goal attainment in each part of the organization? What are the data that are necessary to make the business case that resources should be allocated in specific ways?

- *How are corrective actions managed?* This is an extremely important area. Are corrective actions coercive or collaborative? What are the code words, such as does being “accountable” mean that you will lose your job if you do not make your numbers? Is it dangerous for a manager to identify problems and ask for help? Is it the manager’s job to hold people accountable or to ensure that people have what they require in order to perform well?

- *How are sustaining actions managed?* This question is about success criteria and rewards, recognition, promotion, and the items that go into keeping up the good work for each part of the organization, each manager, and each worker.

THE HPT CERTIFICATION STANDARDS

Understanding systemic issues is essential before we recommend any course of action. Failure to do so is a failure to apply HPT as it is defined through the certification standards.

How Working Systemically Generates Documentation for the Standards

Suppose that we ask ourselves questions about the organization as a whole, about each part of the organization, about each initiative, and about each program. If we do that tenaciously, we will be off to a very good start in working systemically. By tenaciously, I mean asking questions such as, What are our goals? How do we add value and for whom? Who do we do harm to or who do we compete with? Where are we going if we do nothing? What must we stop doing if we are to meet future challenges? What must we do that we are not doing? How can we tell if we are getting better? How can we tell if we are doing worse? Additionally, we need follow up questions such as, Who agrees? Who disagrees? What evidence do we have? What evidence must we have to ensure that we know how things are going?

Obviously, if we ask questions tenaciously we will get answers and have a sense of how much we can trust the answers. But there is more to do to work systemically. We must model collaboration and systemic thinking and focusing on results and on adding value. How do we model systemic thinking? We do it by how we frame the questions and how we frame the answers.

Framing the Questions. We ask the questions in the client’s language and about systemic issues. What are the company’s outputs? How do the outputs add value and to whom? What are the closely linked systems such as the suppliers, the customers, the investors, the company’s friends and enemies in the industry, the company’s competitors, the people who refer clients, and so on?

We are asking the right questions if we are asking about matters that clarify for us the six points of theory, as they apply to the organization, and the three system principles.

We are asking the right questions if we are asking about inputs, outputs, feedback, primary processes, support processes, governance, and management practices. We know we are asking the right questions if we are asking about planning, resource allocation, corrective action, and sustaining excellent performance through feedback; incentives; and development of people, processes, and organizational support structures.

Framing the questions helps ensure that we get data relevant to systemic issues. But how can we be sure that we and our clients can cope with all that data to make informed decisions? We do it through two-way communications, active and reflective listening, appreciative inquiry, and every other way we know how based on what we know about human learning and about instructional design. And one thing we know about learning complex material is that we must find ways to make the apparently complex and disconnected appear straightforward and connected. We must construct pictures that convey at least a thousand words, and we must help people throughout the organization develop the same frame of reference so they can communicate efficiently and effectively. How do we do that? By the way we frame the answers.

Framing the Answers. Instructional designers have discovered time and again that a good graphic helps people understand complex concepts. We include two-by-two tables, Venn Diagrams, labeled circles, labeled boxes, and so on liberally in our instructional materials. We have developed the notion of reusable instructional objects to help us do so more efficiently.

The tools and templates that many of us use in doing analyses of systems are, in effect, reusable instructional objects. They are reusable templates for capturing reality. Our problem, in HPT, is not a lack of models or templates; it is having too many and having a tendency to develop more all the time.

The tools were invented, in the heat of the moment, in real projects to capture something that was systemically important so that clients would understand. I got better at doing so after explicit instruction from Rodger Stotz (personal communication, n.d.). Rodger said to me once at an ISPI conference, “Dale, here is how to do it. I collect the information from people, then organize it on the template. The first time they see the template, it contains their information. We talk about the insights they get from having their information there in an organized way. We talk about their issues.” As soon as Rodger told me that, it was clear. When the information is introduced that way, the clients do not merely see the features of the template; they experience the benefits of using it!

A system, by definition, is the elements and relationships among them. Using the right template captures some of the elements and some of the key relationships

and captures them in a way that enables people to discuss them intelligently. For example, one of the major reasons for inventing the total performance system diagram was to call attention to the fact that a specific company or work unit exists in a specific context. The diagram captures some of the context and raises the questions, What feedback do you get that tells you how satisfied your customers are? What feedback do you get that tells you how well you are meeting your production or service goals?

The answers are framed to link to results, systemic issues, and added value. The answers are developed collaboratively with the client. The documentation of that work provides documentation that is useful in keeping track of progress and in demonstrating that the HPT and certified performance technologist standards are being used in the project.

How Working Systemically Is Fundamental to HPT

Let me call your attention again to the wording of HPT standard number 3: Add value in how you do the work and through the work itself.

Adding value in how you do the work is modeling. Modeling is arguably the most powerful instructional technique in the HPT instructional toolkit. If we model systemic thinking, collaboration, focusing on results, or adding value, we are instructing. Think of it this way: every HPT project we do is an ongoing lesson in system thinking. Or, it is not.

How Failure to Work Systemically Produces Suboptimal Results

Sartre's fictional account, *In the Mesh*, showed clearly how failure to work systemically produces suboptimal results; in that example, not only for Jean Aguerre but also for the revolutionaries whose dreams were not fulfilled and for the nation. The story about teaching the girl to read without making sure she would have an opportunity to read, and about teaching people how to make repairs without ensuring that the people trained would be people who could use the skills, illustrate suboptimal results through failure to work systemically. The long rise and the slow decline in the fortunes of General Motors illustrate the difference between working systemically and not working systemically. Every failure of instructional impact illustrates how failure to work systemically produces suboptimal results. The management books about successes now that turn into failures later illustrate how failure to work systemically produces suboptimal results.

We discover additional examples of the effects of failure to work systemically almost every time we do a system analysis, an analysis to find the causes of and cures for performance problems *in that system*. If we find a knowledge deficit and correct it, we have done one part of our job. We must also help ensure that the other necessary performance supports are in place. If we find a defective process and correct it we have done one part of our job.

We must find the causes of that defective process; was it always defective? If not, what change in the organization, what deficiency in management, what other events brought about the defective process? How can we make sure that the new process has the management and budgetary support to continue to be effective?

How does failure to work systemically lead to suboptimal results? The answer is simple: it makes it very likely that we will miss one or more of the many interconnected variables that are necessary to support optimal results.

CONCLUSION

In each situation I have been in during my entire professional career, the choice has always been between working incompetently and working systemically.

I have, reluctantly, come to believe we have to make that choice in HPT. Working systemically gets us out of our box and rocks the boat; not working systemically keeps us locked in our box, helping to sink the boat or at least allow it to drift or take on water.

References

- Brethower, D. M., and Smalley, K. (1998). *Performance-based instruction: Linking training to business results* (Chap. 9). San Francisco: Jossey-Bass.
- Brethower, D. M., and Wittkopp, C. J. (1987). Performance engineering: SPC and the total performance system. *Journal of Organizational Behavior Management*, 9(1), 83–103.
- Carleton, J. R., and Lineberry, C. S. (2004). *Achieving post-merger success: A stakeholder's guide to cultural due diligence, assessment, and integration*. San Francisco: Jossey-Bass/Pfeiffer.
- Drucker, P. (1946). *The concept of the corporation*. New York: New American Library.
- Gilbert, T. F. (1978). Human competence: Engineering worthy performance. New York: McGraw-Hill.
- International Society for Performance Improvement. (2004). *Performance improvement standards*. Retrieved from www.certifiedpt.org/index.cfm?section=standards.
- Kaufman, R., Oakley-Browne, H., Watkins, R., and Leigh, D. (2003). *Strategic planning for success: Aligning people, performance, and payoffs* (Chap. 4). San Francisco: Jossey-Bass/Pfeiffer.
- LaFleur, D., and Brethower, D. (1998). *The transformation: Business strategies for the 21st century*. Grand Rapids, MI: Impact Groupworks.
- Rummler, G. A. (2004). *Serious performance consulting: According to Rummler* (Chap. 2). Silver Spring, MD: International Society for Performance Improvement.

- Rummler, G. A., and Brache, A. P. (1995). *Improving performance: How to manage the white space on the organization chart* (2nd ed.). San Francisco: Jossey-Bass.
- Sartre, J. P. (1954). *In the mesh*. London, U.K.: Andrew Dakers.
- Sloan, A. P., Jr. (1963). *My years with General Motors*. New York: Macfadden-Bartell.
- Wright, J. P. (1979). *On a clear day you can see general motors*. Grosse Pointe, MI: Wright Enterprises.



Mega Planning and Thinking

Defining and Achieving Measurable Success

Roger Kaufman

Defining and then achieving sustained organizational success is possible. Doing so simply extends many of the concepts and tools that are applicable to human performance improvement. Defining and achieving organizational success by aligning what every organization uses, does, produces, and delivers with external value added is rational, practical, and vital. Doing so relies on three basic essentials, some of which are not yet in the conventional wisdom or conventional practice of human performance technology (HPT). But they should be and will be. These three essentials are

1. *A societal value-added frame of mind:* All people and all organizations are means to societal ends, and this approach to defining sustained success formalizes this commitment.
2. *A shared determination and agreement on where to head and why:* All people who can and might be affected by performance objectives must agree on purposes and the results criteria.
3. *Use and consistent application of pragmatic and basic tools:* Tools that are applicable to carrying out essentials 1 and 2 should be utilized.

WHAT IS THE SOCIETAL VALUE-ADDED PERSPECTIVE AND FRAME OF MIND?

The required frame of mind for defining and delivering success, the basic guiding paradigm for organizations, is simple, straightforward, and sensible. It involves seeing one's organization as the vehicle for adding measurable value for external clients and society. Within this shared societal value-added frame, everything one uses, does, produces, and delivers is linked to achieve shared and agreed upon positive societal results.¹ I call this societal frame of reference the "Mega" level of planning. Why is this vital? If you are not adding value to our shared society, what assurance do you have that you are not subtracting value? Beginning the planning process with Mega-level planning, in which the primary client and beneficiary of everything that is used, done, produced, and delivered by an organization is societal value, is the central focus in "strategic thinking." A central question that each and every organization should ask and answer is, *If your organization is the solution, what is the societal problem that you are addressing?*

This fundamental proposition is central to strategic thinking and planning, that is, Mega planning. It represents a shift from the usual focus only on one's self, individual performance improvement, or one's organization, to making certain that one also adds value to external clients and society. This basic question, directly or indirectly, should reappear throughout your thinking and work, for it keeps ends and means in perspective. Mega planning better ensures that you will be successful by making a useful contribution outside of the organization where you and your clients live and work.

It is this shared definition and commitment to where the organization should head, why it should go there, and how to tell when it is successful that is essential to this approach. Agreement on purpose is vital, and was identified as essential to successful organizational behavior by Peter Drucker (1993).

AN OVERVIEW OF THE BASIC CONCEPTS AND TOOLS FOR MEGA PLANNING

There are three basic tools, guides, or templates that will be helpful as you define and seek to achieve organizational success. Each is described in much greater detail in several books or articles I have authored or coauthored, several of which are listed in a special section at the end of this chapter. For our entry into Mega planning and strategic thinking, short descriptions of these three guides follow.

Guide One: Defining and Aligning Everything an Organization Uses, Does, Produces, and Delivers, and the Resulting Measurable Value Added

The Organizational Elements Model (OEM) defines, links, and aligns what any organization uses, does, produces, and delivers with external client and societal value added, that is, the Mega level. For each organizational element, there is an associated level of planning. Given that each and every organization has external clients to whom it must add measurable value, successful planning links, aligns, and relates all of the organizational elements.

Table 6.1 names and explains the organizational elements and the level of planning to which each element relates. It also provides examples for each. These elements are also useful for defining the basic questions every organization must ask and answer, as provided in Figure 6.1.

Table 6.1. The Five Levels of Results and Levels of Planning.

<i>Name of the Organizational Element</i>	<i>Name of the Level of Planning and Focus</i>	<i>Brief Description</i>	<i>Example</i>
Outcomes	Mega	Results and their consequences for external clients and society (shared vision)	Zero losses of life or permanent disabilities
Outputs	Macro	The results an organization can or does deliver outside of itself	Market share increased to at least 33 percent
Products	Micro	The building-block results that are produced within the organization	Each associate having and using the competencies required to meet performance requirements
Processes	Process	The ways, means, activities, procedures, and methods used internally	Training, applying Six Sigma
Inputs	Input	The human, physical, and financial resources an organization has available or uses	Budget, buildings, equipment, staff

QUESTIONS	Self-Assessment		Organizational Partners	
	NO	YES	NO	YES
1. Do you commit to deliver organizational results that add value to all external clients and society? (Mega/Outcomes)				
2. Do you commit to deliver organizational results that have the measurable quality and acceptance required by your external clients? (Macro/Outputs)				
3. Do you commit to produce internal results that have the measurable quality required by your internal partners? (Micro/Products)				
4. Do you commit to having efficient internal processes?				
5. Do you commit to acquire quality human capital, information capital, and physical resources? (inputs)				
6. Do you commit to evaluate and determine the following: A. How well you deliver products, activities, methods, and procedures that have positive value and worth? (process performance) B. Whether the results defined by your objectives in measurable terms are achieved? (evaluation and continuous improvement)				

Figure 6.1. Basic Questions Every Organization Must Ask and Answer.

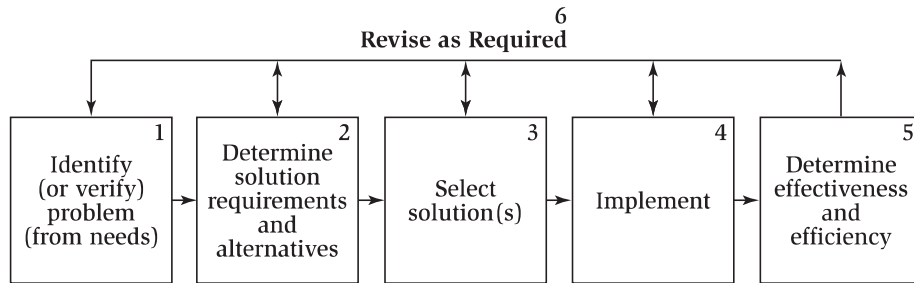


Figure 6.2. The Six-Step Problem-Solving Process.

Guide Two: Defining, Justifying, and Resolving Problems

Figure 6.2 depicts a six-step problem-solving model that includes step 1, identifying problems based on needs; step 2, determining detailed solution requirements and identifying, but not yet selecting, solution alternatives; step 3, selecting solutions from among alternatives; step 4, implementation; step 5, evaluation; and step 6, continuous improvement that involves revisions as required at each of the prior five steps. This is a process for identifying and resolving problems as well as identifying and actualizing opportunities.

Each time you want to identify problems and opportunities and systematically get from current to desired results and consequences, follow the six-step process. This process shows the functions, or building-block steps, and the order in which they are usually carried out. Following the process will get you from identified needs to ascertaining requirements for closing the gaps in results and will help you to identify possible ways and means to close the gaps.

Guide Three: Six Critical Success Factors of Strategic Thinking and Planning

Displayed in Figure 6.3 is an essential framework for this approach and for Mega planning and thinking regardless of the type of organization.² Unlike conventional “critical success factors,” these are factors critical to successful planning and that go beyond those things an organization must get done to meet its mission.

These six critical success factors (CSFs) for Mega planning are not targeted for any one organizational business but only for the planning process and concerns as detailed in Figure 6.3. The six CSFs provide ongoing guidance for anything you and your organization decide to use, do, produce, and deliver in order to ensure the provision of external value added. You use the CSFs to make sure that you are maintaining integrity of both *Mega* planning and *Mega* thinking.

To be successful, that is, to do and to apply Mega planning, you have to realize that yesterday’s methods and results often are not appropriate for tomorrow.

CRITICAL SUCCESS FACTOR 1 Move out of your comfort zone and today's paradigms, and use new and wider boundaries for thinking, planning, doing, evaluating, and continuous improvement.
CRITICAL SUCCESS FACTOR 2 Differentiate between ends (what) and means (how).
CRITICAL SUCCESS FACTOR 3 Use, link, and align all three levels of planning and results: • Mega/Outcomes • Macro/Outputs • Micro/Products
CRITICAL SUCCESS FACTOR 4 Prepare all objectives, including the ideal vision and mission, to contain precise indicators of both where you are headed and the criteria for measuring when you have arrived.
CRITICAL SUCCESS FACTOR 5 Define "need" as a gap between current and desired results, not as insufficient levels of resources, means, or methods.
CRITICAL SUCCESS FACTOR 6 Use an ideal vision as the underlying basis for all planning and continuous improvement, stating what kind of world, in measurable performance terms, you want for tomorrow's children.

Figure 6.3. The Six Critical Success Factors for Mega-Level Strategic Planning and Strategic Thinking.

Most planning experts agree that the past is only a prologue to today and tomorrow, and tomorrow must be crafted through new patterns of perspectives, tools, and results.³ The tools and concepts for meeting the new realities of society, organizations, and people are linked to each of the six CSFs.

Additional details and the "how-tos" for each of the three guides are provided in the referenced sources at the end of the chapter. The three basic guides or templates should be considered as forming an integrated set of tools, much like a piece of fabric, rather than each guideline being used on its own. Each

resource is valuable in obtaining and understanding the critical success factors. Together the resources paint a full picture.

Mega Planning: Getting Agreement

When doing Mega planning, you and your associates will ask and answer the questions shown in Figure 6.1. Interestingly, commitments to the questions in Figure 6.1 are important but not always automatic. Formalizing an agreement clears the strategic planning and thinking “air” and ensures agreement on direction. If there is nonagreement, which is sometimes the case, this requires that the differences must first be resolved. Then conversations about the costs of delivering on the answers to all of the questions compared with the costs of not delivering on all of them must be moved to resolution.

An answer of “yes” to all of the questions will lead you toward Mega planning and allow you to prove that you have added value, a proof that is becoming increasingly required for both public- and private-sector organizations. These questions relate to Guide One. They define each organizational element in terms of its label and the question each addresses.

Mega Planning Is Proactive

Many approaches to organizational improvement involve waiting for problems to happen and then scrambling to respond. Of course, like true love, the course of organizational success hardly ever runs smoothly. But there is a temptation to react to problems and to never take the time to plan so that surprises are fewer and successes are defined and systematically achieved before problems spring up. Figure 6.4 provides a job aid to consider any time you begin organizational planning.

THE SIX CRITICAL SUCCESS FACTORS IN BRIEF

As indicated earlier, Guide Three entails six critical success factors for strategic thinking and planning.

CSF 1: Use New and Wider Boundaries for Thinking, Planning, Doing, Evaluating, and Continuous Improvement

Move out of today’s comfort zones. Look around our world. There is evidence just about everywhere we look that tomorrow is not a linear projection or straight-line function of yesterday and today. Thinking otherwise is what led, in part, some U.S. car manufacturers to squander their dominant client base by shoving unacceptable vehicles into the marketplace and some U.S. airlines to focus on shareholder value and ignore customer value. An increasing number of credible authors have told us and continue to tell us that the past is a

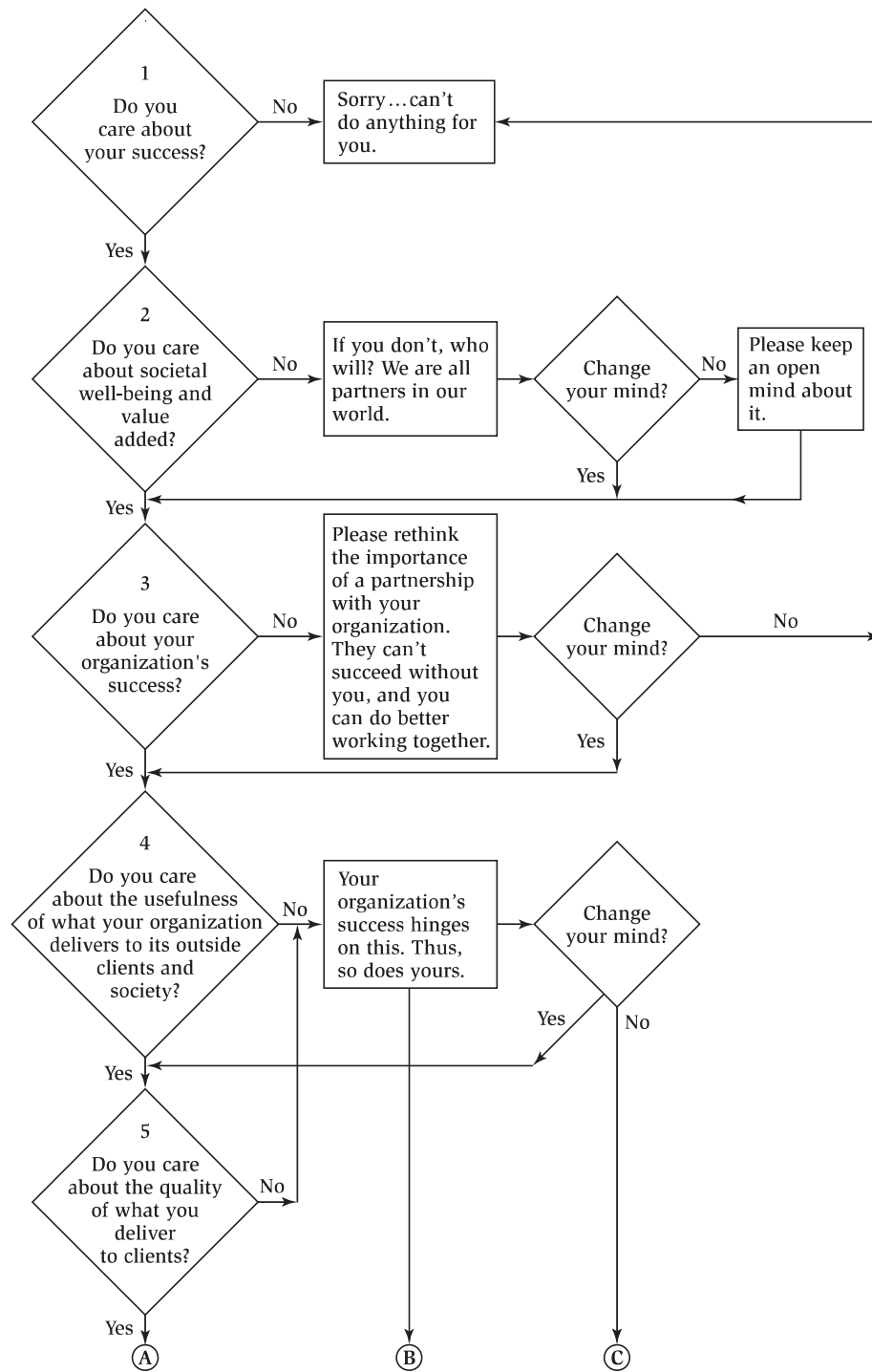


Figure 6.4. A Job Aid for Choosing What to Accomplish Before Attempting to Make Things Better.

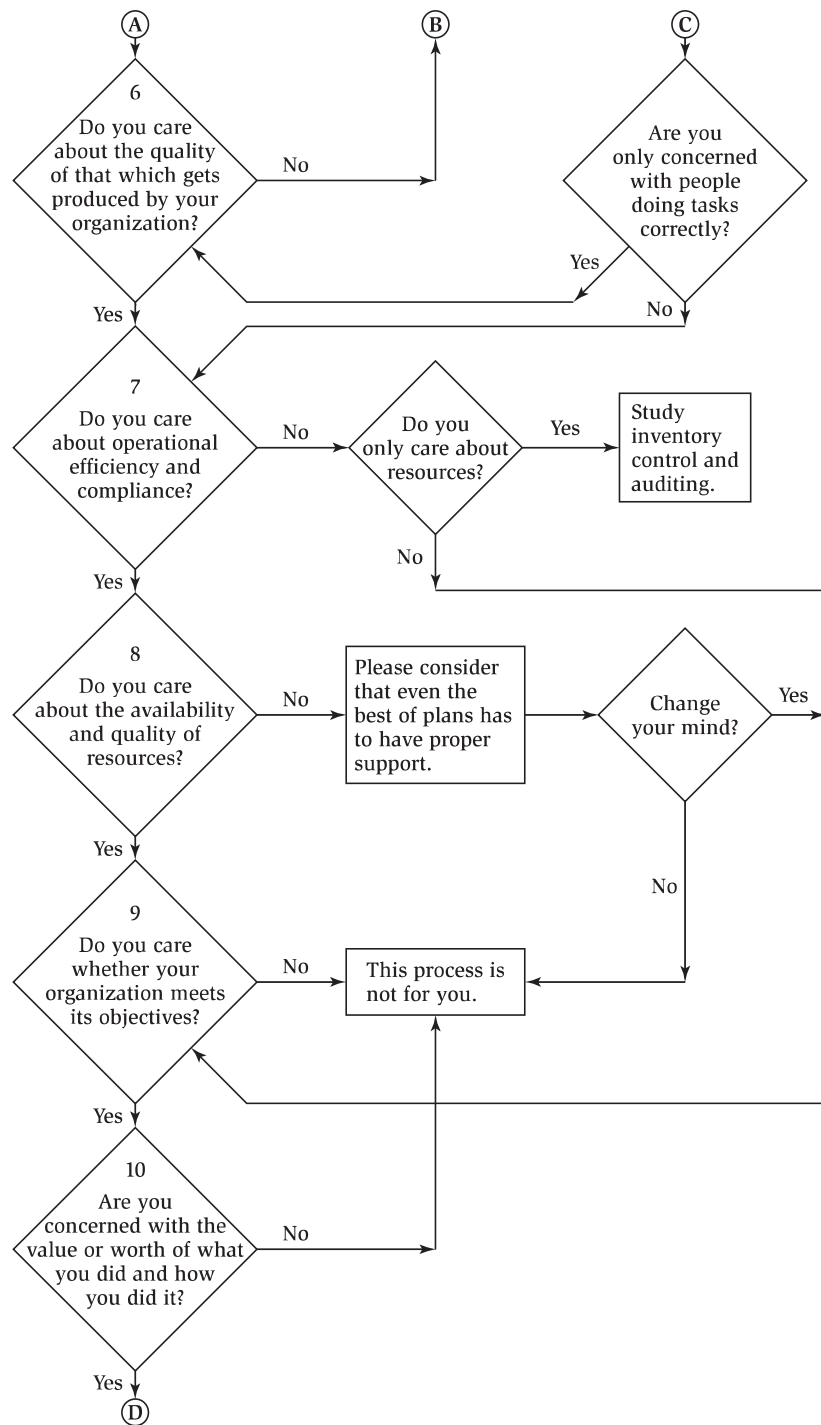


Figure 6.4. (Continued)

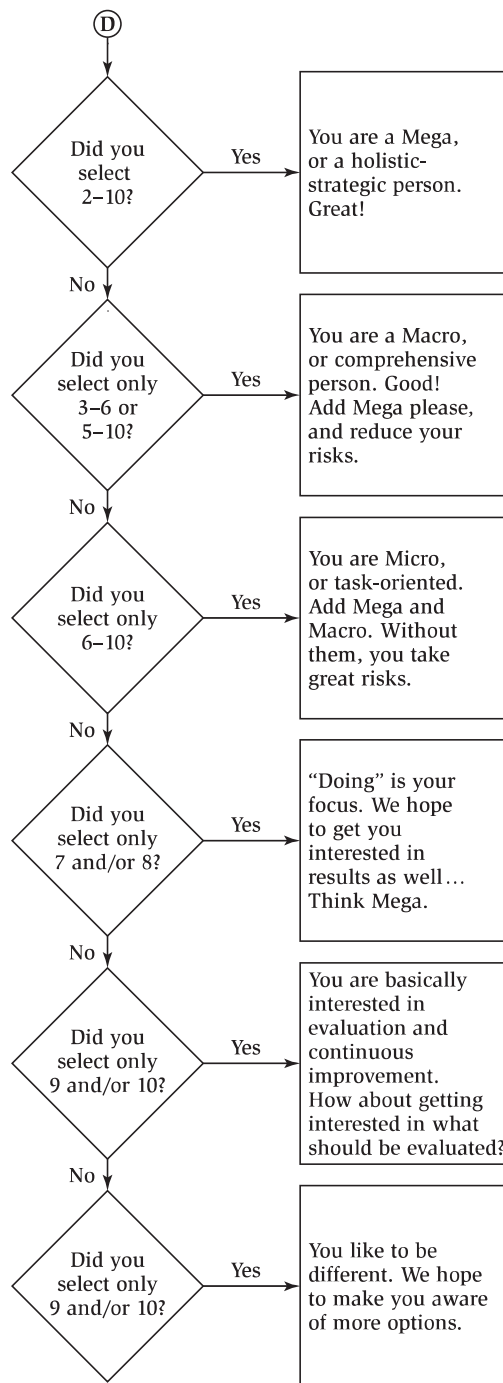


Figure 6.4. (Continued)

prologue and not a predictor of what the future will be like. In fact, old paradigms can be so deceptive that Tom Peters (1987) suggests that “organizational forgetting” must become conventional culture.

Times have changed, and anyone who does not also change is risking failure. It is vital to use new and wider boundaries for thinking, planning, doing, and delivering. Doing so will require getting out of current comfort zones. Not doing so will likely deliver failure.⁴

CSF 2: Differentiate Between Ends and Means by Focusing on “What” Before “How”

People tend to be action-oriented. We want to get going. In this dash to doing, we often jump right into *solutions* or *means* before we know the *results* or *ends* we must deliver. The importance of writing and using measurable performance objectives is something upon which most performance-improvement specialists agree. Objectives correctly focus on ends and not methods, means, or resources.⁵ Ends, or the “what,” sensibly should be identified and defined before we select the “how” of getting from where we are to our destination. If we do not base our solutions, methods, resources, and interventions on the basis of the results we are to achieve, what do we have in mind when we make the selections of means, resources, or activities?

Focusing on means, processes, and activities is usually more comfortable as a starting place for conventional performance-improvement initiatives. Doing so, though, can be seductive and dangerous. For example, imagine that you are in an unknown area and then are provided with a new automobile, keys in the ignition and fully fueled . . . but there are no maps for navigation and no guides for your journey as you start out. Similar is the situation if, for a performance-improvement initiative, you are provided process tools and techniques without a clear map that includes a definite identified destination along with a statement of why you want to get to the destination in the first place. Also, a risk for starting a performance-improvement journey with means and processes alone is the idea that there is no way of knowing whether your trip is taking you toward a useful destination. Furthermore, there are no criteria for telling you if you are making progress.⁶

It is vital that successful planning focuses first on results; that is, useful performance in measurable terms. By establishing purposes, measuring progress, and providing for continuous improvement toward the important results, the performance technologist can determine what to keep, what to fix, and what to abandon.

It is vital to focus on useful ends before deciding “how” to get things done. It also sets the stage for CSF 3, “use, link, and align all three levels of results” through application of the Organizational Elements Model (OEM) and for CSF 4, “prepare objectives to include indicators of how you will know when you have arrived.” The OEM relies on a results focus because it defines what every

Table 6.2. The Levels of Planning and Results That Should Be Targeted and Linked.

<i>Primary Client and Beneficiary</i>	<i>Name for the Level of Planning</i>	<i>Name for the Level of Result</i>	<i>Type of Planning</i>
Society and external clients	Mega	Outcomes	Strategic
The organization itself	Macro	Outputs	Tactical
Individuals and small groups	Micro	Products	Operational

organization uses, does, produces, and delivers, and the consequences of those activities for external clients and society.

CSF 3: Use, Link, and Align All Three Levels of Planning and Results

As was noted in CSF 2, it is vital to prepare objectives that focus only on ends . . . never just on means or resources. There are three levels of results shown in Table 6.2 that are important to target and link.

There are three levels of planning and results, based on who is to be the primary client and beneficiary of what gets planned, designed, and delivered. For each level of planning there are three associated levels of results: Outcomes, Outputs, and Products.⁷

Using the three levels of planning, Mega, Macro, and Micro, and the three levels of results, Outcomes, Outputs, and Products, ensures that there is strategic, tactical, and operational alignment among what you and your organization use, do, produce, and deliver, and the value added for external clients. Strategic planning and thinking starts at the Mega level, tactical planning starts at the Macro level, and operational planning is at the Micro level.

CSF 4: Prepare Objectives, Including Those for the Ideal Vision and Mission, to Contain Precise Indicators of Where You Are Headed and How You Will Know When You Have Arrived

It is vital to state the *mission statement* plus *success criteria* precisely and rigorously, so that they clearly state where you are headed and tell how to know when you have arrived.⁸ Statements of objectives must be in performance terms, so that one can plan how best to get there and how to measure progress toward the end.

Objectives, at all levels of planning, activity, and results, are absolutely vital. Everything is measurable, so do not kid yourself into thinking you can dismiss important results as being “intangible” or “nonmeasurable.” It is only sensible and

rational to make a commitment to measurable purposes and destinations. Increasingly, organizations throughout the world are focusing on Mega-level results.⁹

CSF 5: Define “Need” as a Gap Between Current and Desired Results and Not as Insufficient Levels of Resources, Means, or Methods

Conventional English language usage would have us employ the common word *need* as a verb or in a verb sense . . . to identify means, methods, activities, actions, and resources we desire or intend to use (Kaufman, Watkins, Triner, and Stith, 1998). Terms such as *need to*, *need for*, *needing*, and *needed* are common, conventional, and destructive to useful planning. Is this semantic quibbling? The answer is, absolutely not.

As difficult as it is to change our own behavior, and most of us who want others to change seem to resist change ourselves, it is central to useful planning to distinguish between “ends” and “means.” We have already noted this in CSF 2. To do reasonable and justifiable planning we have to first focus on ends and not means, and second, use the term *need* as a noun. *Need* as used in conjunction with useful and successful planning is only used as a noun that describes a gap between current and desired results.

If we use *need* as a noun, not only will we be able to justify useful objectives, but we will also be able to justify what we do and deliver on the basis of costs and consequences analysis. We will be able to justify everything we use, do, produce, and deliver. By using need as a gap in results we get a triple bonus:

1. The “what should be” criteria become the objectives to be obtained.
2. Evaluation criteria are thus “built in” because one only has to track the progress made from “what is” to “what should be.”
3. By using this approach, one may price both the cost to meet the need (that is, to close the gaps in results) and also the cost to ignore the need. Doing this shifts responsibility for nonfunding to the person denying the funding.

This is the only sensible way we can demonstrate value added.

CSF 6: Use an Ideal Vision as the Underlying Basis for All Planning and Continuous Improvement

This is another area that requires some change from the conventional ways of doing planning. Again, we have to resist conventional wisdom.

An “ideal vision” is never prepared for an organization, but rather identifies the kind of world we want to help create for tomorrow’s children. From this societal-linked ideal vision, each organization can identify what part or parts of

the vision it commits to deliver and move ever closer toward achieving. If we base all planning and doing on an ideal vision of the type of society we want for future generations, we can achieve “strategic alignment” for what we use, do, produce, and deliver, as well as the external payoffs for our Outputs.

To do this we have to change some paradigms, change some old habits, and forget how things used to be done. We must abandon our current comfort zones.

CONCLUSION

To sum up, *Mega* thinking and planning is about defining a shared success, achieving it, and being able to prove it. It is not a focus on one’s organization alone, but a focus on society now and in the future. It is about adding value to all stakeholders. It is responsible, responsive, and ethical to add value for all.

Notes

1. Many planning experts now agree with this perspective. I first proposed using a societal frame of reference as the primary focus for individuals and organizations in 1968 and 1969. This brought alarm and suspicion on the part of many “old paradigm thinkers.” Some people are still concerned (Schneider, 2003; Winiecki, 2004). Such concerns seem not to be easily supported, as brilliantly pointed out by Brethower (2005). Thus, I have recently been joined in this call for such new paradigms by many future-oriented thinkers, including, but not limited to, those cited in the chapter and included in the references. These shifts in thinking to new paradigms or frames of reference that are radically different from the conventional wisdom are sprouting, as Joel Barker (2001) suggested they would when seen by the “paradigm pioneers” of our world.
2. Please realize that unlike many other presentations of critical success factors, these relate to and can be generalized to any organization, public or private. Most “critical success factors” discussed in the management literature refer to organization-specific factors related to a unique business. In contrast, these apply to any organization and are “above” any organization-specific factors.
3. Please note the differences between Mega results—actual societal value added—and Macro results, client satisfaction and payoffs for the organization such as market share or quarterly profits.
4. Interestingly, Peters (1987) states that it is easier to kill an organization than it is to change it.
5. Robert Mager (1997) set the original standard for measurable objectives. Later, Tom Gilbert (1978) made the important distinction between behavior and performance, that is, between actions and consequences. Recently, some “constructivists” have had objections to writing and using objectives because they claim

that objectives can cut down on creativity and impose the planner's values on the clients. This view, I believe, is not useful. For a detailed discussion on the topic of constructivism, please see the analysis by philosophy professor David Gruender (1996).

6. Jan Kaufman, my partner, provided this insight.
7. It is interesting and curious that in the popular literature, *all* results tend to be called "outcomes." This failure to distinguish among three levels of results blurs the importance of identifying and linking all three levels in planning, doing, and evaluating as well as in continuous improvement.
8. An important contribution of strategic planning at the Mega level is that objectives can be linked to justifiable purpose. Not only should one have objectives that state "where you are headed and how you will know when you have arrived," the objectives should also be justified on the basis of "why you want to get to where you are headed." While it is true that objectives only deal with measurable destinations, useful strategic planning adds the reasons why objectives should be attained.
9. For a more extensive explanation of these phenomena, see Kaufman, Watkins, Triner, and Stith (1998).

References

- Barker, J. A. (2001). *The new business of paradigms* [Videocassette]. (Classic Ed.). St. Paul, MN: Star Thrower Distribution.
- Brethower, D. M. (2005, February). Yes we can: A rejoinder to Don Winiecki's rejoinder about saving the world with HPT. *Performance Improvement*, 44(2), 19–24.
- Drucker, P. F. (1993). *Management: Tasks, responsibilities, practices*. New York: Harper & Row.
- Gilbert, T. F. (1978). *Human competence: Engineering worthy performance*. New York: McGraw-Hill.
- Gruender, C. D. (1996, May–June). Constructivism and learning: A philosophical appraisal. *Educational Technology*, 36(3), 21–29.
- Kaufman, R., Watkins, R., Triner, D., and Stith, M. (1998). The changing corporate mind: Organizations, visions, mission, purposes, and indicators on the move toward societal payoffs. *Performance Improvement Quarterly*, 11(3), 32–44.
- Mager, R. F. (1997). *Preparing instructional objectives: A critical tool in the development of effective instruction* (3rd ed.). Atlanta: Center for Effective Performance. (First edition published 1969 as *Preparing Objectives for Programmed Instruction*.)
- Peters, T. (1987). *Thriving on chaos: Handbook for a management revolution*. New York: Alfred A. Knopf.
- Schneider, E. W. (2003, April). Applying human performance technology while staying out of trouble. *Performance Improvement*, 42(4), 16–22.

- Winiecki, D. J. (2004, September). Rejoinder to “saving the world with HPT”:
A critical, scientific and consultative reflection. *Performance Improvement*, 43(8),
30–34.

Additional Resources

Following are a number of references authored by Roger Kaufman or written by him with colleagues that provide details and in-depth rationale for mega planning and mega thinking.

- Andrews, J., Farrington, J., Packer, T., and Kaufman, R. (2004, February). Saving the world with HPT: Expanding beyond the workplace and beyond the business case. *Performance Improvement*, 43(2), 44–47.
- Kaufman, R. (1998). *Strategic thinking: A guide to identifying and solving problems* (Rev. ed.). Arlington, VA, and Washington, DC: American Society for Training and Development and the International Society for Performance Improvement. (Also published in Spanish: *El pensamiento estrategico: Una guía para identificar y resolver los problemas*. Madrid: Editorial Centros de Estudios Ramon Areces.)
- Kaufman, R. (2000). *Mega planning: Practical tools for organizational success*. Thousand Oaks, CA: Sage.
- Kaufman, R. (2002, May–June). What trainers and performance improvement specialists can learn from tragedy: Lessons from September 11, 2001. *Educational Technology*, 42(3), 63.
- Kaufman, R. (2003, February). Value, value, where is the value? *Performance Improvement*, 43(2), 36–38.
- Kaufman, R. (2004). Creating your own future: You are only thirty seconds away. In A. Shostak (Ed.), *America moving ahead* (Vol. 2). Tackling tomorrow today series. Langhorne, PA: Chelsea House Publishers.
- Kaufman, R. (2004, October). Mega as the basis for useful planning and thinking. *Performance Improvement*, 43(9), 35–39.
- Kaufman, R. (2004, January). *Performance improvement: On vital signs and active ingredients*. Retrieved October 4, 2005, from the American Society for Training and Development's ASTD Links Website: http://www.astd.org/astd/Publications/ASTD_Links/January2004/InPractice-HPI-Kaufman.htm.
- Kaufman, R. (2004). War, peace, and connecting the dots: Observations about wars, missed opportunities, and what we can do about it matters. In A. Shostak (Ed.), *Making war/making peace: defeating terrorism/developing dreams: Beyond 9/11 and the Iraq war* (Vol. 3). Langhorne, PA: Chelsea House Publishers.
- Kaufman, R. (2005). *Seven deadly sins of strategic planning: How to get it right*. Retrieved October 4, 2005, from <http://www.ispigoldcoast.org/Seven%20Deadly%20Sins%20of%20Strategic%20Planning-Ft%20%20Lauderdale%202005.pdf>.

- Kaufman, R., and Forbes, R. (2002). Does your organization contribute to society? In M. Silberman (Ed.), *The team and organization development sourcebook* (pp. 213–224). New York: McGraw-Hill.
- Kaufman, R., Oakley-Browne, H., Watkins, R., and Leigh, D. (2003). *Practical strategic planning: Aligning people, performance, and payoffs*. San Francisco: Jossey-Bass/Pfeiffer.
- Kaufman, R., Thiagarajan, S., and MacGillis, P. (Eds.). (1997). *The guidebook for performance improvement*. San Francisco: Jossey-Bass/Pfeiffer.
- Kaufman, R., and Unger, Z. (2003, August). Evaluation plus: Beyond conventional evaluation. *Performance Improvement*, 42(7), 5–8.
- Kaufman, R., Watkins, R., and Leigh, D. (2001). *Useful educational results: Defining, prioritizing, accomplishing*. Lancaster, PA: Proactive Press.