A Systemic View of Enterprise: 
Adding Value to Performance

Dale M. Brethower

ABSTRACT. Uniqueness of person, organization, and environmental situation is a fact of life. Imitating practices that occurred in a different unique environment does not work well. Improving organizational performance requires managing within the constraints of two sets of variables that are specific to each organization: variables that connect the organization to the environment and variables that support individual human performances. Organizational variables include those relevant to two specific categories of value-adding outputs (the financial marketplace and the consumer service marketplace), and four specific categories of costly but necessary inputs (money, technology, materials and labor). The paper specifies ten guidelines for understanding and managing the interplay between the organizational variables and psychological variables. The guidelines permit systemic organizational and performance management which enables organizational improvement. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <http://www.HaworthPress.com>]

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individual performer to the organization. Knowledge of organizational variables alone is not enough and knowledge of performer variables alone is not enough. Both sets of variables are necessary and both sets involve interactions between the performer (the organization or the person) and an environment.

Successful organizational performance is a function of interactions between the organization and the economic and social environment. Similarly, psychologists agree that a person’s behavior is a function of interactions between what the person brings to a specific situation and what is provided by the environment in which he or she lives. Some psychologists emphasize overt behavior (i.e., behavior that is observed) and other psychologists emphasize covert behavior (i.e., cognitions, emotions, perceptions, attitudes, and the like). Regardless of emphasis or theoretical orientation, psychologists agree that each person brings a unique genetic history and a unique history of person-environment interactions to any situation. Each person is also in contact with a specific and unique set of environmental variables. Every person is unique and every situation is unique. Uniqueness is the context for understanding general principles of human performance and organizational performance.

Uniqueness of person, organization, and environmental situation is a fact of life. Imitating practices that occurred in a different unique environment does not work well. Those seeking to improve human performance in the workplace must deal with uniqueness while attending to both sets of variables, that is, the variables that connect the organization to the environment and the variables that connect the individual to the organization. This paper describes the fundamental variables that affect organizations and individuals. It describes organizations as systems that have two specific categories of value-adding outputs and four specific categories of costly but necessary inputs. It also specifies 10 guidelines or rules of thumb for understanding the interplay between organizational and psychological variables. Each simple guideline is based upon a complex and interacting set of variables.

UNDERSTANDING WORKPLACE VARIABLES

Enterprises Add Value in Two Marketplaces: Two Examples

Terri and Mark are owners and employees of a small accounting firm. Each is a manager/supervisor/doer-of-whatever-has-to-be-done.
The accounting firm Terri and Mark operate is one of a kind and, like other firms, it must add value in the following two marketplace areas to be successful:

1. Financial Marketplace—They must manage their financial resources prudently, adding value to themselves as owners, to those who lend money to the firm, to potential investors or lenders, and to suppliers (including employees).

2. Client Service Marketplace—They must provide high quality accounting services to customers, adding value to their clients.

Terri and Mark’s firm is an economic enterprise that must generate economic value. The firm’s revenue is earned by providing accounting services that are valued in the service marketplace. Poor performance in either the financial marketplace or the service marketplace will be harmful to the firm.

The same is true for Western Michigan University (WMU). Poor financial performance—generating too little funding from tuition, grants, and state appropriations—weakens WMU’s ability to serve students; in turn, serving students poorly weakens WMU’s ability to obtain funding. Whether a for-profit organization like Terri and Mark’s accounting firm or a not-for-profit organization like a university, organizations are financially fueled enterprises. This fact leads to an important guideline for managing organizational performance: Follow the money, the economic value added! The guideline is important for the same reason that a physician’s assistant takes a patient’s temperature: It is an indicator of important bodily functions. Just as the physician’s assistant doesn’t believe that the patient is “just about temperature,” the organizational psychologist does not believe that an organization is “just about money.” Money, like temperature, is an important indicator that should be monitored. Money, like temperature, is linked to survival; necessary but not sufficient. Having about the right amount does not assure survival; having the wrong amount threatens survival; having the right amount requires interactions with an environment.

What must organizations do to serve and survive in the financial marketplace and in the consumer marketplace? The answer is clear: Both marketplaces are driven by value exchanges. The firm must add value! Add value to consumers. Add value to those supplying the organization with money, materials, and labor. Terri and Mark’s cus-
tomers want added economic value; they want Terri and Mark to help them achieve prudent management of their capital and cash, thereby avoiding waste, costly problems with the Internal Revenue Service, and difficulties with bankers. University students want value for their money. For many students a significant value is economic: higher paying work upon graduation. (Enrollments and state funding would almost certainly drop if studies were to show that university graduates typically earn less rather than more than high school or two-year college graduates.)

For Terri and Mark’s firm and for Western Michigan University, success requires serving two markets, the financial market and the consumer market. Putting too much emphasis on the financial market—or too little—is a prescription for failure, as is putting too much emphasis—or too little—on the consumer market. Both are necessary, neither is sufficient. Value, it should be remembered, is both value as perceived through a financial lens and value as perceived through a consumer or client or third party satisfaction lens. Another guideline for managing organizational performance: Make sure “changes” are connected to adding value in both the financial and consumer markets! Add both kinds of value; one is not sufficient. Get a clear line of sight between what you see as value and value as perceived by those who pay for the benefits and those who receive the benefits of the work of the enterprise.

**Enterprises Require Four Types of Resources**

Terri and Mark knew before they started that they must manage the firm effectively to serve the two markets. But they began as accountants, not managers. They had to learn an enormous amount. They had to learn how to manage the four classic categories of inputs to enterprises: money, know-how, materials, and labor. They had to build a financial subsystem in their firm to manage the capital and cash, to pay the bills and receive the revenue and budget financial resources to return a profit. They had to build a service delivery subsystem to recruit clients and serve them well. They had to buy the material goods necessary to operate the firm: office equipment, electricity, office supplies, and all the other items that are a cost of doing business. (They think of the financial subsystem and the purchasing activities as “office management” but in a bigger firm these would be separate
Western Michigan University (and any large organization) has the same four categories of inputs: money, technology, materials, and labor, as indicated below.

1. The money comes from the state, from students, and from grants and contracts. (The Vice President of Finance operates a large subsystem to deal with it all.)

2. The technology is applied to recruiting students, teaching classes, operating teaching and research laboratories, and operating specific degree programs. (The hard technology comes from developments in academic disciplines, especially the sciences and engineering; the soft technology comes from many academic disciplines and enduring academic traditions.)

3. The materials are essential. There is a large operation that deals with acquiring the materials including tons of paper, an enormous amount of energy for heating and lighting, communications services, and many other items: paper clips, white board markers, computers, airplanes, cars, trucks, buildings. (The financial/accounting people make sure that the operations people keep track of which of these are “capital” items and which are “expenses”.)

4. The labor is supplied by a large and costly operation that recruits, trains, compensates, manages and, we hope, develops all the people who operate the plant, the administration, and the academic programs. (The labor expenditures comprise a major budget item that the administrators struggle to control, with little hope of doing so effectively. At the same time, we faculty members find it difficult to think of ourselves as “labor,” even though we belong to a union and perform the primary work of the university.)
FIGURE 1. Inputs, outputs and subsystems.

Product/Service subsystem uses Terri and Mark’s accounting knowledge to provide value adding services to their clients. The two subsystems related to the material and human resources are grouped under the Internal Processes label. The diagram is modified from materials initially developed by the author and Geary Rummler at the University of Michigan approximately 30 years ago and used extensively since then (see Brethower, 1982; Dean & Ripley, 1997; Dickinson, 1995; Rummler & Brache, 1995).

The accounting firm and the university must manage all four inputs effectively. Each of the four classic inputs to enterprises is classic for the reasons presented below:

1. **Financial Inputs.** It is essential to follow the money. Enterprises are money machines: There are economic costs to operate them and the outputs have economic value, whether the Internal Revenue Service calls the enterprise “profit” or “not-for-profit.”

2. **Technological Inputs.** Enterprises require a means of doing work. The work is supported by complex tools—labor saving devices—such as locomotives, airplanes, computers, and robots. We have moved into a technological age and are moving into an information age; much of the technology is hardware and all hardware requires ”software” to operate. Special information management mechanisms are required.
3. **Material Inputs.** Enterprises require energy and materials to do the work. Materials and energy get consumed or used up by the enterprise. A continuing supply is essential.

4. **Human Labor.** All the work of an enterprise is performed by humans: Employees and temporary employees, outside contractors and consultants.

The original money (capital) for the accounting firm was primarily from Terri and Mark's pockets. Labor was “free” as they worked long hours for no pay in starting the business. The production technology was carefully prescribed by their profession: they must use generally accepted accounting principles. (Their computers must be carefully programmed to implement accepted accounting principles; Terri and Mark must assure that the employees perform in accord with accounting standards.) The material inputs are essential but not very costly. Other people's labor is also essential if Terri and Mark are to serve their customers cost-effectively. Terri and Mark have too few hands to do all the work necessary and are “over-qualified” (too costly) to do many of the tasks customers must have done for them.

Terri and Mark know that managing all areas well is essential for the survival and prosperity of their firm. They knew before they started that the firm is a financial enterprise, though the amount of time it takes to operate that part of the business was a bit of a surprise. The same is true for managing material resources; they knew they had it to do and it takes a surprising amount of time to do it well. They knew that employees had to be hired and fired and trained and supervised. They knew that “personnel problems” could be time consuming; however, managing and improving employee performance wasn’t foremost in their thoughts. Their training, however, did not include a strong and constructive understanding of the human resource subsystem. They would prefer to focus on “doing accounting” which is what they love.

The mission of the human resource subsystem is to assure that there are people on the job who perform competently. That is the mission for now and it is the mission for the future when very different performance is required. It is a mission critical to the success of the enterprise, as critical as financial management and as critical as the know-how to perform the core business processes. The human resource subsystem, always necessary, is now mission critical for the organiz-
tion. Terri and Mark discovered the importance of the human resource system rather quickly as their firm grew rapidly in its early years. Western Michigan University and many other large organizations have yet to discover it, partly because these organizations have been successful in the past in spite of suboptimal human resource management. Their “traditional” successes have been built on “traditional” practices. Perhaps future successes will continue to accrue in some organizations using traditional human resource practices. I suspect that will not be the case for most organizations unless they deal with the serious human resource problems that are on the horizon if not already here. (This suspicion is based, in part, on the number of Fortune 500 firms of the 70s and 80s that are disappearing in the 90s and, in part, on the escalation in cost and dissatisfaction among customers and suppliers of funding to universities.)

The design requirements for the “new” human resource management subsystem are clear. If every employee’s job is to add value, does it not seem like a good idea for management and the employee to know:

1. What value the employee should add?
2. How to add that value?
3. How to identify the extent to which the value is, in fact, being added?
4. What tools, materials, incentives, feedback, and guidance are necessary to support the value-adding performance?

A human resource subsystem audit can readily be done for any organization. Just ask each employee (and “management”) the four questions above. When the four questions are asked for people in Terri and Mark’s accounting firm, some gaps appear. Employees (and Terri and Mark) can identify many of the tasks they are to perform. But there are bits of haziness about just how value is added, how well the tasks are (or should be) performed and so on. Terri and Mark became aware of the haziness through not very subtle cues: turnover, customer complaints, and poor work products. Aware, they are taking steps to improve the situation. Major organizations, including Western Michigan University, might do well to follow Terri and Mark’s lead.
TOTAL SYSTEM MANAGEMENT

It is a well-known fact of business life that employees are performers of work and producers of outputs. Adding value to human performance should always be a significant enterprise goal. The idea is not new but the practice could be revolutionary. Another guideline for managing, then: Make sure “changes” are connected to adding value to suppliers! Added to the second guideline, this means that value should be added to all stakeholders. There are two types of stakeholders: receivers of outputs and suppliers of inputs. Value should be added to customers and financial stakeholders. Value should be added to suppliers. To understand why that is so, consider the question, ‘‘What is likely to happen to the organization if value is not added to:

1. Suppliers of money, i.e., customers and investors?
2. Suppliers of other resources, i.e., materials and labor?’’

Suppliers matter. Investors matter. Customers matter. Human resources matter. The organization adds value to suppliers, customers, and investors. Failing to supply each stakeholder with value risks failure of the enterprise. That includes adding value to employees through pay, additional knowledge, etc.

Why Old Practices Fail New Challenges

“Old” personnel and management practices were developed during a time when raw materials were plentiful, very little skilled labor was required, unskilled labor was plentiful, and consumers lacked many of the products and services we consider necessary today. We are now at a point in history in which social and marketplace demands have changed all that, at least in the United States and other highly developed countries. We are now at a point in history in which some of the common practices of the past, practiced now, will lead to failure. Examples are in energy consumption (too high), waste disposal (too environmentally destructive), quality standards (too low), profit margins (too high to be sustainable), and human resource development (done ineffectively). We are at a time in history in which the competition in the financial and consumer marketplaces is keener and requirements for proper treatment of wastes and employees are more stringent than ever before. We are entering a time in history in which the
management of enterprises requires attention, not only to the financial
and consumer marketplaces, but also to social and economic forces
that demand better utilization of technology, materials, and people. We
are entering a time in history when past sub-optimizations (i.e., short
term profit goals overriding long term market share goals, quantity
goals overriding quality goals, mass-production overriding specialized
production, sales goals overriding customer service goals, personnel
cost goals overriding human resource development goals, tactical is-
issues overriding strategic issues, productivity improvements through
technology overriding productivity improvements by working smart-
er) are no longer good enough.

We are entering a period in history in which Terri and Mark must
manage their firm as a total system, balancing the development and
utilization of all four classic inputs in service of marketplace success.
We are entering a period in history in which not-for-profit organiza-
tions such as Western Michigan University, the City of Kalamazoo,
and Kalamazoo County and for-profit organizations such as Wells
Fargo Bank, Hewlett Packard, Motorola, and Lucent Technologies
must operate as balanced rather than sub-optimized systems.

Many “old” personnel and management functions have to be per-
formed in “new” ways. Why? Because the old ways have never
worked well enough to meet the kinds of challenges Terri and Mark
(and other business owners) face today. The time when ineffective
management and personnel practices are “good enough” is passing.
Effective practices are now available and, when practiced, become a
competitive advantage. Another guideline for managing enterprises:
*Know the difference between effective and ineffective management
and personnel practices.* Search for connections to effective manage-
ment and personnel practices and ways to create distance from ineffec-
tive management and personnel practices.

Fortunately for Terri and Mark, it is now possible to devise effective
training and development and performance support systems. The
know-how is available. It is possible to develop training and develop-
ment systems that enable everyone to learn her or his job, keep up with
new developments (even when it means a major overhaul of knowl-
edge, skills, and attitudes), and continuously improve her or his per-
formance. We have the know-how to develop performance support
systems that provide people with the tools, incentives, feedback, and
guidance necessary to perform competently.
Unfortunately, like Terri and Mark, the managers of large organizations have not been educated or trained in managing organizations as total systems. Western Michigan University, for example, has an excellent College of Business, according to employers of graduates. The Management Department is progressive in that it teaches and advocates a systems approach to business. Nevertheless, students—especially at the MBA level—take courses in sub-optimization. That, of course, is not the intent at WMU and other leading MBA programs, but it is an inevitable effect of building a curriculum from courses in finance, in accounting, in management, in materials handling, in quality assurance, in compensation, etc. Each course in the curriculum, if taught effectively and “with enthusiasm,” is a course that teaches the knowledge, skills, and attitudes that support sub-optimization. It does not teach the knowledge, skills, and attitudes necessary for optimization. Many curricula, including WMU’s business curriculum, attempt to solve the problem by requiring a capstone experience. The faculty hopes, fervently and in vain, that the capstone experience will enable the students to do what the faculty has not been able to do, i.e., “put it all together.” A corollary to the previous guideline: Don’t expect managers and human resource people to know the difference between effective and ineffective practices. (They do a combination of what they learned in school and what they learned by trial and error.) For example, human resource people know that there are pitfalls in implementing pay-for-performance systems. But they are less likely to notice that the alternative to pay-for-performance is to pay for non-performance. They do not necessarily know how to avoid the pitfalls of paying for performance and of paying for non-performance. They could benefit from help in that area.

**Managing Total System Performance**

Terri and Mark, like other certified public accountants (CPAs), were trained as accountants, not as total system managers. They know all about how to record all of the possible economic transactions of and in an organization. But how to assure that all those transactions add up to added value in the financial marketplace and in the consumer market place and how they add up to added value to the “most important asset” is just beyond the scope of their training. Not far beyond, but far enough beyond that they have much to learn to manage their firm.
That is not their fault, nor is it the fault of the accountancy programs from which they graduated, it is just an accident of history.

MBAs are a product of that same history (and have taken some of the same courses). MBAs are trained to think strategically and to manage key aspects of an enterprise. Words such as “total systems” and “systems thinking” have come into the business lexicon (though not into prominence in the curriculum). But, typically, MBAs are hired to do a job that does not involve managing the total enterprise as a system. Rather, they are hired to do a job which, done well, is much more likely to result in suboptimizations than in optimizations. Getting alignment among the two primary subsystems (serving the financial marketplace and the consumer marketplace) and the two classic support subsystems (managing materials and managing labor) is simply not a job they are hired to do. If their MBA program had a good course in Strategy Implementation, they might know in a general way what they would have to do to achieve optimizations. But even those who learn quantitative techniques for computing optimizations do not learn how to actually achieve optimizations in the workplace. (Some say the failure to achieve optimizations is due to “organizational politics” or because people “aren’t rational.” That might be true but it is not helpful.) Another guideline for managing systemically: Beware of glib excuses for failure.

MBAs and managers in general, like CPAs Terri and Mark, must learn by trial and error on the job. It is a reasonable hypothesis that the failure to understand how to operate an enterprise as a total system is a major factor in the failure of the majority of new enterprises and many old enterprises. Perhaps, one day soon, management professors will do the research to confirm or disconfirm that hypothesis.

But, suppose Terri and Mark (or owner/managers of other firms) want to manage their firm as a total system. How can they do so? One answer is that they can muddle through as best they can, taking bits and pieces of knowledge and fitting them together. Organization theory, information theory, organizational development, process improvement, quality management, finance, accountancy, etc., are areas of knowledge that contain some of what they must know. Terri and Mark, having read widely and thought clearly, know much of what is required but lack a coherent framework for putting it all together.

To say it another way, they would benefit from a framework for understanding how their firm functions as a system, how the two
primary subsystems function, how the two support systems function, what the processes are within all four subsystems, and how to link each person to the processes so that all people add value in the two marketplaces. With the framework to align their actions, they would benefit from practical ways of managing the firm to achieve the optimizations that comprise a highly effective accounting firm.

Figure 1 provides some of the framework, as can be seen in Figure 2 which is labeled to represent the accounting firm. Figure 2 adds a special box for Terri and Mark, labeled Organization Management. An internal feedback loop, represented by the dashed arrows going to Organization Management from Marketplace Processes and Internal processes, is important for organization management. It represents “what is happening in the firm” and, in conjunction with the External Feedback loop (which represents “what is happening in the marketplace”), is essential to manage the firm. Figure 2 also shows some of the context within which the firm functions.

The context is very important for Organization Management (Terri and Mark). They must keep an eye on changes in accounting standards, tax laws, the business climate, the economy, their competition, and so on. When they detect changes in what is happening externally they must adjust internally, changing their plans, goals, strategies, tactics, and practices. Terri and Mark are aware of everything that Figure 2 shows; the picture gets it down on paper in an organized way to support acting on what they know.

Figure 2 is a systemic view. It shows how Terri and Mark’s firm is the same as other firms. The picture could be a picture of some other accounting firm. Showing the similarity is an important aspect of the systemic view. Uniqueness emerges when Terri and Mark establish specific goals and strategies for their firm. The Organization Management box is common to all firms but what goes on there is unique to each firm. It symbolizes one of Terri and Mark’s most important responsibilities as owner/managers: differentiating the firm from others with respect to their market niche, competitive advantages, proprietary procedures, people policies, financial policies, etc. They must answer the consumer question: Why should I buy from you rather than someone else?

The Organization Management function sets (or should set) the direction and tone for the organization and then assure that the subsystems are all aligned. Two more guidelines for managing systemically:
Get good at describing an organization as a system, i.e., describing the whole and how the major parts fit together. (Figures 1, 2, and 3 show one way to describe the whole and the major parts.) Get good at describing how each firm is unique, especially in terms of marketplace differentiation.

Figure 3 shows a systemic view of Western Michigan University. The view looks just like Terri and Mark’s little accounting firm, except for the changes in some of the labels. That is what makes the view a systemic view: it shows similarity of function. Every for-profit and not-for-profit organization:

1. Serves economic functions,
2. Provides goods or services to customers or clients (beneficiaries),
3. Consumes resources, and
4. Is operated by people.

FIGURE 2. The accounting firm: A systemic view.
In addition, every for-profit and not-for-profit organization functions:

1. Within the constraints of a larger environment, and
2. With the aid of resources from the larger environment.

Consequently, every for-profit and not-for-profit organization must maintain mutually beneficial relationships:

1. With external suppliers of resources (money, technology, materials, and labor)
2. With and among the people who operate the organization.

The implications of these systemic similarities are profound. They define essential functions and responsibilities for organization management. The responsibilities are the same whether the organization is
large or small, for-profit or not-for-profit, in Kansas or in a far-off land. Managers are aware that form follows function—but if they don’t know the function they tend to imitate form.

Adapting to Change

Since the social, professional, economic, and legal environment is always changing, so too are the requirements of external suppliers and internal performers. We should understand that the boxes and arrows of the systemic view represent a complex and dynamic organization that is adapting to a constantly changing external environment. Management cannot “get it right” and then live happily ever after. As Rummler (Rummler & Brache, 1995) says it, the rule is: adapt or die.

Historically, most have died. But we can learn from the failures. One lesson that has been very difficult to learn is that change is necessary and a steady state is deadly. Fortunately, the systemic view of organizations illustrates mechanisms for continuous change. The people in charge of the Organization Management box must be looking ahead and scanning the environment to predict external changes (threats and opportunities) and identifying the internal changes will be necessary to adapt to the external changes. Most of the arrows in the systemic view represent flow of “intelligence,” that is, information that can be used to guide current operations and to adapt to changes.

Change is a continuous, demanding, and—if the organization survives—a never ending process. That observation yields another guideline for managing systemically: Get good at helping people perform in the midst of change.

The people who perform the functions symbolized by the Organization Management box for Western Michigan University have much tradition to guide them. Universities, like churches, are among the most hardy of organization types. Why? Perhaps because the rest of society has valued their services for a much longer period than society has valued the services of accounting firms and fast food emporiums. Perhaps the markets within which they operate are not changing as rapidly as the environments for profit and loss statements and burgers. Perhaps the markets within which universities operate are not as competitive. Be that as it may, WMU administrators must keep an eye on the external environment in order to fulfill the teaching, research, and service missions of the university.

The winds of change are blowing for universities, perhaps as fierce-
ly as the winds of change for accounting firms. Universities face threats and have opportunities to improve their organizational performance. Tradition, not to be abandoned, is also not to be relied on as a sure guide to the future. For example, the Internet (originally developed by and for educational and research institutions) is now both an opportunity and threat for WMU. Dormitory rooms, classrooms, and offices are hardwired. Students can access online commerce, including courses offered by other institutions. Faculty are encouraged to get courses online. Taxpayers and parents and prospective students, aware of the opportunities, can no longer be counted on to send their dollars to WMU when they see better buys elsewhere. Neither Terri and Mark nor WMU can rely on practices that evolved a few centuries ago to meet the challenges present in this and coming centuries. Another guideline for managing systemically: Beware of (current and past) best practices.

Western Michigan University is an economic enterprise. My colleagues in the Business College, the College of Engineering, and the Economics Department tend to know and understand that and wish everyone else did. My colleagues, the College of Education, the College of Health and Human Services, the College of Fine Arts, and many academic departments within the College of Arts and Sciences wish that they had more money but believe the university should not be about money; it should be about teaching, research, and service, not greed and avarice. In their view, WMU is an educational enterprise, not an economic enterprise. Some of my colleagues argue that WMU’s fundamental mission is teaching and fear that emphasis on research will serve as a distraction and dilution. Others argue that the service mission is largely ignored and that teaching and research would be much more valuable if it were connected to and supported the service mission. Others argue that the research mission is the fountain of the knowledge that is taught or applied. Administrators sometimes wish that the faculty would stop bickering, resolve some of their disagreements, and get down to work but don’t know how to get that to happen.

All three faculty perspectives are, of course, correct. The Organization Management task is to assure that all three parts of the teaching/research/service trilogy flourish. WMU is an economic enterprise. Money (for capital expenditures, materials, and meeting the payroll) is essential and not to be wasted. WMU is also an educational enterprise,
taking in knowledge selectively and offering it to students, signifying the transfer of knowledge with a diploma (knowledge in, students out). It is also a research enterprise, taking in research funding and generating new knowledge (funding in, publications out). It is also a service enterprise (contracts in, services out). In short, WMU is both an economic and an educational enterprise that adds value to students and the larger society by selecting, creating, configuring, and transmitting knowledge. That is the value chain for our enterprise. Each part is necessary, no part is sufficient. The Organization Management task at WMU is to achieve optimizations across all three, not maximization of one.

Western Michigan University operates as a system that uses resources—the four classic inputs—to provide two value-adding outputs: financial and service. Financial value added from a publicly funded not-for-profit enterprise? Of course. The financial goal is not to make a specific economic return on investment during the current accounting period but rather to add economic value in the long run. The financial goal is not to add dollars to the Western Michigan economy but WMU does so: the few thousands of employees, the several thousands of students, and WMU itself spend millions of dollars per year that fuel the local economy. The graduates add additional economic value by their performance in new enterprises or existing organizations in Michigan. They also consume more goods and services and pay more in taxes than do less educated age mates. Educational services (creating, organizing, transmitting, and applying knowledge) are the means of adding value. The services, in the long run, enrich both the intellectual and financial lives of graduates. At least that is what many taxpayers, state officials, administrators, faculty members, and students believe.

WMU operates as a system, whether or not administrators and faculty members are aware that it does so. WMU has done very well in spite of lack of shared knowledge about systemic functioning. Is the money used as well as possible? No. Is there general agreement about priorities? No. Are the educational services as good as they can possibly be? No. Is modern educational technology used optimally? No. Are faculty members as effective as they could possibly be as teachers, researchers, and service providers? No. Are administrators as wise and effective as they could possibly be? No. There is room for improvement.
Faculty bickering (articulately) about priorities, for all of its inefficiency, serves an important systemic function. It is one of the very few means WMU has of achieving optimizations in the absence of systemic management. Similarly, deans and department chairpersons bickering (articulately) about budgets is another means of achieving optimizations. Perhaps these are not elegant means but they have stood the test of time within educational institutions. Perhaps universities that find better ways of optimizing will adapt. Perhaps those that do not find better ways will die. Another guideline for managing systemically: *It is a good idea to discover the means used to achieve optimizations regarding priorities (and how resources are allocated).*

Terri and Mark sometimes think of their work days as juggling acts, trying to juggle competing demands. Do they achieve a balance among the competing demands? Yes. The firm is adapting; it has not died. Terri and Mark are happy and proud about their successes to date but are seeking better ways of managing the work of the firm.

**Managing Human Performance in Systems**

Terri and Mark know that each person’s performance should help achieve success in the financial and accounting service marketplaces. Similarly, the President and the Provost of Western Michigan University know that my performance (and everyone’s) should help achieve success in this economic and educational enterprise. The President and Provost have a more difficult task than Terri and Mark, not because the two enterprises are fundamentally different but because there is more confusion within the university. There are more people whose performance must be aligned with the purposes and goals; there are more differences of opinion about purposes and ways of achieving success. There are more opportunities for performance to become disconnected from purpose. The history of confusion—as well as the tradition of success—is longer in the university than in the accounting firm.

But once Terri and Mark begin to think that the performance of each individual should contribute to success in the financial and accounting service marketplace, what do they do? How do they improve human performance? The way is shown by looking at the firm, at Terri, at Mark, and other employees from the perspective of human performance improvement.
The Performance Improvement Perspective

Terri has three things in common with butchers, bakers, candlestick makers, cartographers, engineers, physicians, grocers, gardeners, clerks, managers, bottle makers, pilots, truck drivers, tailors, physiologists, chemists, anthropologists, hairstylists, copywriters, direct marketers, cooks, economists, bartenders, soldiers, sportscasters, professional athletes, encyclopedia salespersons, and painters:

1. They are humans,
2. They perform, and
3. Their performance should add more value than it costs.

The key point is the third one. Even though there are many thousands of job titles, every employee has the same major job responsibility: adding value. Anyone who consistently fails in that responsibility is adding cost to the enterprise and decreasing net value added for customers and financial stakeholders such as investors and taxpayers.

Terri and Mark know how to add value to customers; they help them keep proper records, pay only their fair share of taxes, and make prudent financial decisions. One of the accounting firm’s employees adds value by keeping records for clients. Terri and Mark would like to believe that, if they serve customers well, the financial side of the business will take care of itself. They are partly right; serving customers well is necessary (but not sufficient). They also would like to believe that treating employees well will take care of the people side of the business. They are partly right–treating customers and employees badly won’t do. But there is more to managing the finances than generating revenue and more to managing the employees than hiring and firing or being nice. Obviously, two things must be done to assure competent human performance:

1. Assure that there are people available who know how to perform well, and
2. Assure that people use what they know and, thereby, perform well.

These two things can be accomplished effectively in the enterprises of today only by performing many personnel and management activities differently than in the past. Assuring that people are on the job

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The text is a discussion about the performance improvement perspective in organizations, focusing on the responsibilities of employees to add value and the importance of managing personnel and management activities differently from the past. The examples given include Terri and Mark from an accounting firm, who understand the importance of adding value to customers and the challenges of managing employees and finances simultaneously. The text emphasizes the need for both hiring qualified people and ensuring they use their knowledge to perform well.
who know how to perform well requires a combination of hiring and training and continuous development. Assuring that people actually perform well requires providing the necessary tools, incentives, and feedback. (It also requires the absence of practices and behaviors that interfere with performance, e.g., treating employees as expendable commodities unworthy of respect, consideration, or development.)

Neither Terri nor Mark learned in accountancy school that “human performance improvement” is a critical business competency. But they are learning that lesson, expensively, in the school of hard knocks as they try to assure that the firm is successful. Employee performance, including Terri and Mark’s, must continue to improve over time. Employee turnover has serious business implications. (Terri helps clients produce buy/sell agreements and other tools that come into play to minimize effects of turnover among their key people.) Loss of a key office support person or an accountant who handles the work for several clients (or deficiencies in these persons’ performances) is a serious matter for Terri and Mark.

Managing human resources effectively at Western Michigan University is also an essential function that is not foremost in the thoughts of administrators. The importance of the human resource is, at least, acknowledged by changing the name of the old “Personnel Department” to the new “Human Resources Department.” However, managing human resources effectively takes much more than changing the name of the personnel department. Many personnel functions in typical organizations were “fringe” activities (including processing the payroll and the fringe benefits paperwork). For example, contrary to what they were called, performance appraisal systems were not systems and did not appraise performance. Changing the name from “performance appraisal” to “performance management” without changing the practices adds no value, especially when the practices do not match either name: the practices still do not “manage performance.”

Managing human performance and developing human resources takes a lot more know-how and diligence than processing paperwork and devising rating scales. It also takes, I believe, a total change in perspective. Instead of thinking of people as costly items and costs as something to be controlled (and using business practices that have yielded discontent, bloodshed, and unions) it make sense to consider human resources as organizational assets. Many organizations do so in
their talk ("our people are our most important asset") but vanishingly few do so in their accounting practices or their management practices. An enterprise seeks to add to or at least maintain the value of financial assets and other resources. It is not a great leap of faith to believe that organizations should seek to add value to the human resources. Indeed, universities and businesses attempt to do so by recruiting high potential people, providing development incentives or opportunities, and firing people who do not "measure up" after some time period.

**GENERAL GUIDELINES**

In addition to the specific and technical guidelines for performance improvement, and there are many in the literature (e.g., Abernathy, 1990; Brethower & Smalley, 1998; Daniels, 1989; Dean, 1994; Dean & Ripley, 1997; Eickhoff, 1991; Gilbert, 1996; Hupp, Polak, & Westgaard, 1995; Kaufman, Thiagarajan, and MacGillis, 1997; Kopelman, 1986; LaFleur & Brethower, 1998; Langdon, 1999; Lincoln, 1951; Marr & Roessler, 1994; McSween, 1995; O’Brien, Dickinson & Rosow, 1982; Rummler & Brache, 1995; Stolovitch & Keeps, 1999), the homespun guidelines already mentioned apply to the university and the accounting firm:

1. Follow the money, the economic value added!
2. Make sure "changes" are connected to adding value in the financial and consumer markets!
3. Make sure "changes" are connected to adding value to suppliers!
4. Know the difference between effective and ineffective management and personnel practices. (Don’t expect managers and human resource people to know the difference between effective and ineffective practices.)
5. Beware of glib excuses for failure.
6. Get good at describing an organization as a system, i.e., describing the whole and how the major parts fit together.
7. Get good at describing how each firm is unique, especially in terms of marketplace differentiation.
8. Get good at helping people perform in the midst of change.
10. Discover the means used to achieve optimizations regarding priorities and allocating resources.

These 10 guidelines are not equal in importance. Guideline 6, “describe an organization as a system,” is a guideline from which all the other guidelines could flow. As a system, an organization is dependent upon (mutually beneficial) interactions with an environment. The organization’s external environment is, after all, the source of all inputs and the receiver of all outputs. Balancing inputs and outputs is required for long term organizational survival. The first, third, and seventh guideline relate to achieving appropriate balances.

Guidelines 2 and 3 are extremely important for any long term view of management. It is necessary, in the long haul, to add value to all stakeholders. (Unions came about as a result of failures by management to add value to employees.) Failure to add value to all stakeholders results, eventually, in an unbalanced system. Perhaps a tactical improvement might emphasize one area but strategic improvements must add value to all stakeholders. Were that not so, managing would be much easier.

Guideline 8 is also important and powerful, especially in concert with Guideline 6. If an organization is dependent upon a changing environment (and all human organizations are), then getting good at helping people perform well in the midst of change is the major task of management. Competence in performing well in the context of change is essential but not something that is emphasized in most management literature. In that literature, there are numerous “solutions of the day,” rather than management practices that are intended to be responsive to change. Even “change management,” a current fad, is a topic or emphasis rather than an attempt at a comprehensive, comprehensible, and practical means of managing an organization as a system. “Change management” is about managing change initiatives rather than about managing an organization.

Managing an organization as a system requires, at minimum, managing the variable sets shown in Figures 1, 2, and 3. Each figure shows the same basic sets of variables: the two types of outputs, the four types of inputs, the two types of feedback loops, and a unifying mission that (a) differentiates the organization from others and, at the same time, (b) focuses all the organizational activities. Absent the focusing/differentiating/integrating mission, the standards cannot be
set for the two feedback loops and for the inputs and outputs. Absent the mission and feedback, there is no way to minimize internal conflicts, optimize internal activities, and achieve (except accidentally) synergistic effects. Absent the mission and feedback, it is not possible (except accidentally) to achieve alignment.

The diagram shown in the figures has been called the “Total Performance System” diagram because the organizational functions symbolized by the parts of the diagram are all required for performance to be intelligent: For people in the organization to function intelligently and in concert, the organization must have mechanisms for adapting to a changing environment. The diagram is scaleable. That is, it can apply to small organizations such as the accounting firm and large organizations such as a university. Similarly, the diagram can apply to a specific function or job. For example, I can use the diagram to describe my job as a professor in the Psychology Department, the departmental programs within which I teach, the Psychology Department as a whole, the College of Arts and Sciences, WMU, the educational systems in Michigan, and the State of Michigan. In fact, that is what I do whenever I attempt to design and gather support for an educational program that will benefit the Department, College, University, and State by serving specific students in specific ways. The way the university works, all those “systems” must approve the program; if I cannot align it with the interests of each system it is less likely that the program will be approved and, of course, much less likely that it should be approved.

Merely drawing the picture of a performance system is at best a small step toward managing a program, department, accounting firm or university as a system. The utility of the diagram is reducing unnecessary effort and guiding necessary effort. For example, Terri and Mark know, sort of, how satisfied their clients are and what their competitors are doing. Western Michigan University knows, sort of, how satisfied their students and other stakeholders are and what competing universities are doing. Even without a conscious effort by management, the accounting firm and the university function as systems. But getting better information about how well the system as a whole and the internal subsystems are functioning can improve management and improve organizational and individual performance. Brethower (1970) showed that to be true in two educational settings, an elementary school and a student service agency in a university. There were two
research questions: (1) Can the settings be described in terms of the total performance system diagram? (2) Does doing so support improvements in performance? Eickhoff (1991) showed similar effects in a high technology, for-profit company in the plastics industry.

In both sets of studies, Brethower’s (1970) and Eickhoff’s (1991), drawing the diagram was a minor part of the work. The major work was in establishing or clarifying goals, outputs, output standards, and feedback loops. In Brethower’s work, individual students, teachers, and managers (the school principal, the agency director) were provided with and monitored feedback about performance. The students and teachers were coached in how to use the information fed back to them to guide specific performance. Similarly, in Eickhoff’s work, individual workers, managers, and senior managers were provided with and monitored performance feedback. The feedback supported “managing as a system.” The diagram has been used in these studies (and others) to guide managing an organization as a system. Technology and management practices that support and make the diagrammed functions operational have been developed over the years.

We now have powerful technology to offer small business, like Terri and Mark’s accounting firm (see LaFleur & Brethower, 1998) and large firms such as Western Michigan University. We teach the use of the diagram and supporting technology within the Human Performance Technology Graduate Certificate Program, the Industrial/Organizational Psychology MA program, and the Applied Behavior Analysis Ph.D. program at Western Michigan University. In addition, Western Michigan University is nearing the end of a curriculum design project that will result in such material being taught in interdisciplinary programs: A Graduate Certificate Program in Human Resource Management and an MA program with a concentration in Learning and Performance Systems. We are establishing the foundations for an approach to organizational and individual performance improvement that is well-grounded in theory, research, and practice.

REFERENCES


