The Organizational SCAN: A Periodic Table for Organizational Change

Donald Tosti

The Periodic Table of Elements brought great advancement to the field of chemistry. It provided a way to order the millions of potential chemical reactions. It provided greater predictability and control through understanding the relationship among elements. The breakthrough that created the Table model was ordering the elements of chemistry according to the underlying atomic system.

In a similar way the Organization **SCAN** (**S**ystem **C**entered **AN**alysis) has the potential to advance organizational "chemistry." It provides a way to order the million or so things that can affect organizational results. It provides greater predictability and control through understanding the interdependent relationship among organizational elements. The SCAN model was created by ordering organizational influences according to the underlying human performance system.

The SCAN identifies 17 critical system elements. Changes in any one of these can affect results. But it is just as important to realize that changes in any element can affect and, in turn, be affected by any of the other elements. Not recognizing the inherent interdependence of the organizational elements is a fatal flaw in many organizational change efforts.

There are three main environmental elements – the preexisting conditions:

- **The physical environment** – the tools, equipment, plant or store, raw materials to be worked, goods to be sold, etc.
- **The social environment** – The behaviors and conduct of the people. They are the cultural, collaborative, leadership, followership practices, etc.
- **The organizational environment** – the structure, reporting relations, policies, regulations, decision-making, distribution, etc

There are three principle receiver systems for which results are important:

- **Investors** – the people that supply capital- primarily owners and bankers
- **Customers** – the people that supply revenue
- **Employees** – the people that supply labor

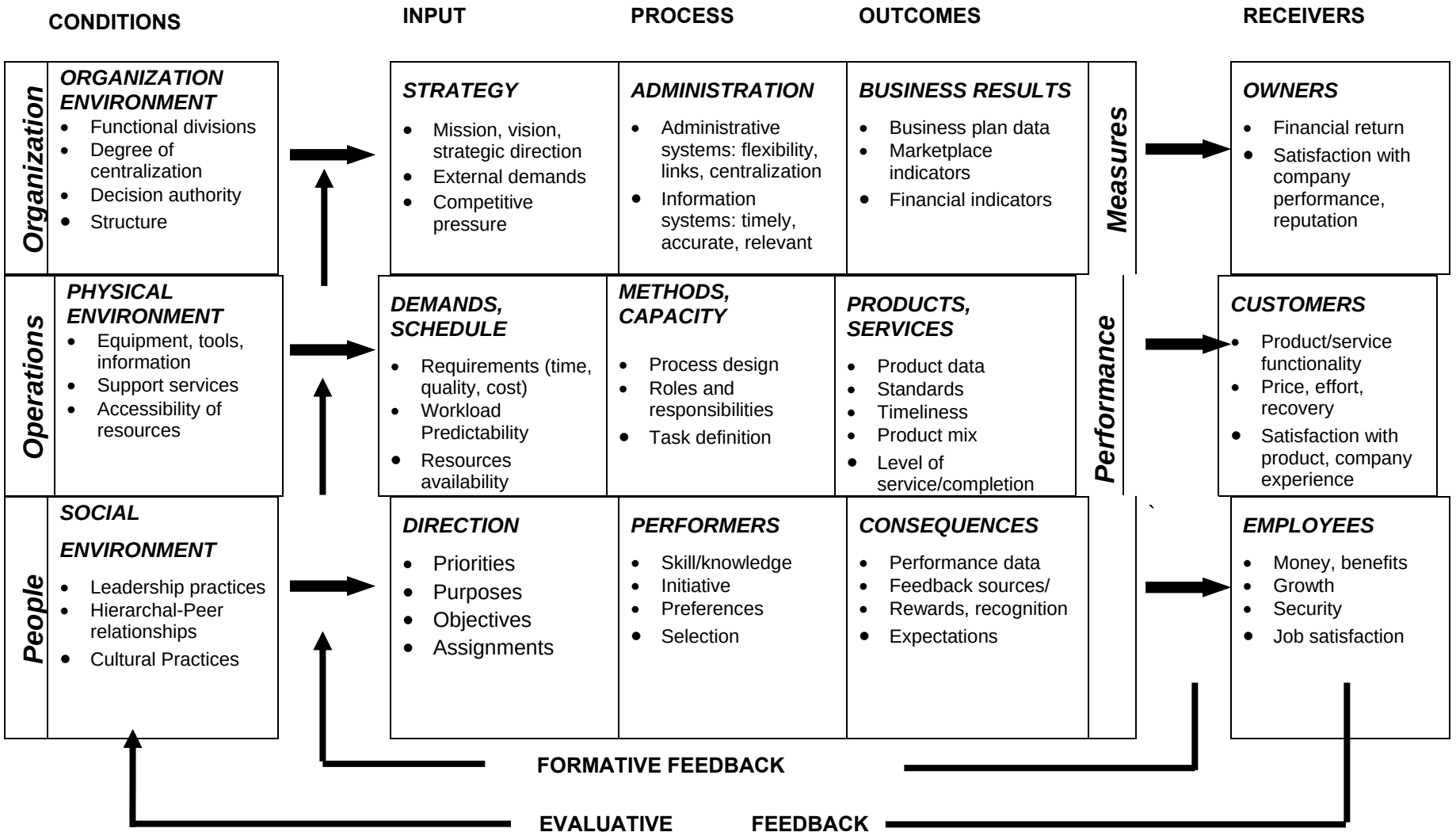
The next nine elements reflect an **input-process-output** system flow that can be defined at three levels:

- **Organizational level**
- **Operational level**
- **People level**

Finally there are two forms of feedback:

- **Formative** or corrective – information or consequences intended to change the form of an action – to correct or regulate future action
- **Evaluative** or motivational – information or consequences intended to increase or decrease the likelihood of repeating action

The Organizational SCAN



Change and the Organizational System

Deciding what to change in order to improve organizational performance is rarely simple. Why? Because you are dealing with a complex system – the organization. Just like the human body, organizations have built-in ways of adapting to or nullifying the effects of change efforts. But, as in medicine, it helps to understand the "anatomy" of the organization before we attempt to make any changes.

The SCAN model reflects an organization's "systems anatomy," providing a way to organize the huge number of variables that affect organizational results. This helps to

1. Find areas where our organizational performance efforts can have the greatest impact on desired results
2. Identify other elements that may facilitate or inhibit an organizational performance effort
3. Act as a guideline for designing an effective organizational performance effort
4. Provide an overall framework so people can see where a particular organizational performance initiative fits in the larger picture of things

The major advantages of using a systems model to do this are two:

1. First, they do not just identify variables but they also provide insight into the interdependent relationships among the variables.
2. Second, systems models are scalable. That is, "systems logic" can be applied to individuals, to operations, to the administration of the whole organization and to the organization's interactions with its marketplace and community.

This provides those involved in improving organizational performance with the opportunity to apply their knowledge to virtually every aspect of an organization's functioning. And that is exactly what is happening. Using the SCAN, managers and their consultants have successfully re-engineered whole companies, changed organizational cultures, created new brand support programs to increase customer retention, provided effective training programs that ensure mastery and fluency, installed better quality assurance programs, smoothed the transition in mergers, developed ways to accelerate new product development and helped customer relationship software developers provide more effective implementation.

In almost all these cases, the people in charge of the organizational performance effort did not do it alone. Instead, they worked with many other disciplines, sometimes taking the lead – and sometimes not. The power of SCAN is that it allows one to integrate many different approaches into a focused solution.

Change Management vs. Change Analysis: There are many models that address HOW to implement a change initiative – that is, the steps you must take when you have decided on a particular change. The SCAN is not a model for HOW, but for WHAT to change. It allows us to consider a variety of alternatives and aids in selecting the best targets for having a positive influence on results. Issues around *how* to implement change, once decisions have been made about the appropriate intervention, are addressed later in this program.

We believe that the next logical development in the technology of organization improvement is the use of comprehensive system models like the SCAN. The power of this approach stems from the fact that the basic principles operate at all levels. Whether an organizational performance analyst is working with issues within an individual job, a business unit, or the entire organization in its environment /marketplace, ***the principles that apply are consistent***. ***The differences are largely a matter of scale.***

The Basic Performance System

Just as the periodic table for chemist is based on a "scaling" up of the underlying atomic system so the organizational scan is based on expansion of the underlying human performance system.

That system, derived from work in the laboratories of behavioral scientists, may be diagrammed as follows.

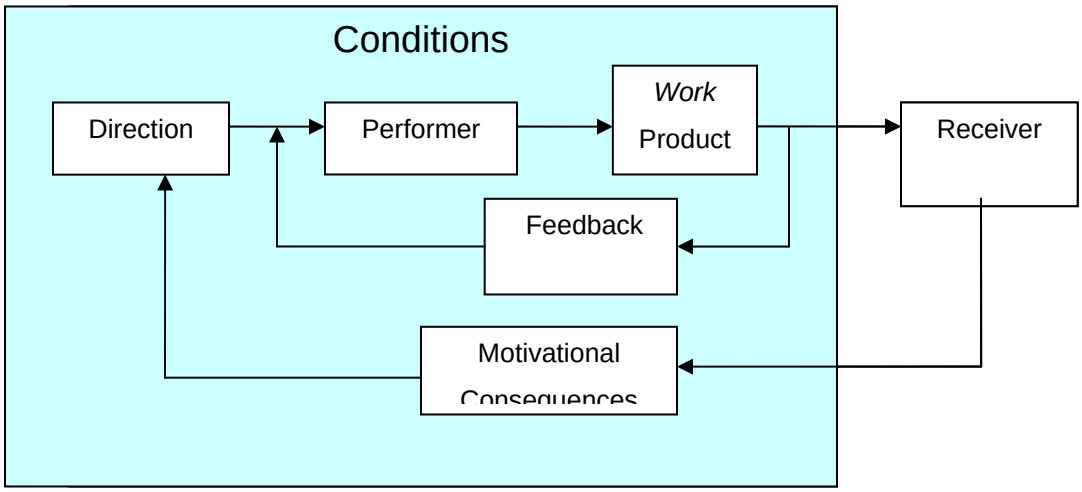


Figure 1. The Basic Performance System Model

The simple performance systems model above provides a comprehensive framework for examining performance of people. For purposes of change analysis, it is common to find the seven components condensed into five and relabeled to reflect the way they are perceived by the performer – Conditions, Direction, Performers, Consequences, and Feedback. This is because the performers often don't "see" the receiving system or distinguish between operational or value feedback. Typically, their awareness is limited to the feedback and consequences they receive as a result of work products and how they are measured or used by the receiving system.

This moving back and forth between a "big picture" systems view of performance and language that reflects a "performer's view" can be very helpful to those involved in planning and executing a change. It enables us to consider the whole performance system

Looking For Change Opportunities At The Job Level By Trouble Shooting The Individual Performer System

-- Analysis Questions --

The questions below were derived from the components of the individual performer system. Taken as a whole, these questions will help change planners to locate factors that may be supporting or hindering effective individual performance on the job – or that may be creating positive or negative consequences for simply being in the workplace if the factors are widespread.

CONDITIONS: Do people get support that contributes to effective performance?

- Do people have the **tools** they need to do the job well? Are they in good condition, easy to use?
- Are **resources** readily available and accessible when performers need them?
- Are managers **leading** in such a way that they support their people in delivering the business?

DIRECTION: Do people get effective direction?

- Are appropriate **expectations** set with performers? Do standards exist? Are expectations reasonable? Clear? Are they presented in a way that is positive and respectful?
- Is **information** about how to perform clear? Accurate? Logical? Given when people need it?
- Are people provided with information about **priorities** for their work?

PERFORMERS: Are people able to perform well?

- Do they have the right **repertoire** – the skills, knowledge, and experience they need?
- Do they have the **capacity** to perform the job well – the physical strength, manual dexterity, and intellectual ability?
- Does the work fit with the performer's **psychological**, emotional, and working style characteristics?

CONSEQUENCES: Are there appropriate consequences for good performance?

- Do people view the **balance of consequences** for good performance as positive?
- Are **contingencies** clear – are consequences clearly linked to good performance, from the performer's viewpoint?
- Are consequences **timed** to come as soon as feasible following good performance?

FORMATIVE FEEDBACK: Do people get helpful feedback about their performance?

- Does feedback **fit** performer's needs – appropriate amount of detail, given in a way people can understand?
- Is feedback clearly **focused** on improving performance – on how to improve, rather than what went wrong: on improving the work, rather than criticizing the person?
- Is feedback given at a **time** when people can best use it to improve?

One of the most important conclusions that one can take away from a view of the individual performance system is that most problems are not with the performers themselves. Poor conditions, inadequate leadership, unclear directions, lack of feedback, and so on, are more likely to be at the root of most "on the job" problems. It is so easy, however, to blame the employees when things are not working according to plan

Scaling up from the performer system

Thinking systemically – viewing performance as the result of a system – is fundamental for selecting, designing, and implementing change initiatives. Performance that leads to desired results is a function of **all** the system variables. Some focus their change efforts on performers (the common focus of training and organizational development interventions). Others concentrate primarily on processes like reengineering; most quality efforts focus on trying to reduce variance in process to the lowest possible level. Some organizations only peruse change at the organizational level through such efforts as reorganizing or establishing a new strategy or introducing balanced scorecards. Focusing on process or on scorecards or on performers and their actions should not be the sole centers of scrutiny. Each of these should be viewed as but **one** class of the variables that can significantly impact results.

The importance of the receiver systems

Every organization in the world has the same purpose – that is **to provide value to its stakeholders**. It is therefore critical that the receivers are considered to be part of the system. Any change activity should have as its focus its impact on the stakeholders. The SCAN model recognizes this fact. This has a twofold effect: First, any change must be evaluated it terms of its

impact on results. Secondly, when it is positioned in terms of its benefit to the company then it becomes easier for people to support. It is something we need to do to ensure our success as a community

Element Experts

There are many people who specialize in one or more of the system elements. For example, there are strategy experts, leadership experts, process improvement experts, and so on.

This has its advantage in that it permits them to know a great deal about the impact of a particular element and how to affect it. But it also can blind them to appreciating the interaction of that element with others. It also tends to bias these experts to consider their element as most important in a change effort. For example there are those that believe that culture is the most important area for change, while others insist that it is process that is most important. Some claim that the main people problem is the lack of appropriate incentives; others attribute it to the lack of clear direction; **and they are all right...and all wrong**

T**he major failing of almost all the experts is that they generally do not take a full systems view of the organization.** Whether it is Organizational Development, Business Process Improvement, Six Sigma Black Belt Quality Improvement, Strategic Planning, or Customer Value Analysis. Each of these disciplines tends to stress only one or two elements and largely ignore or give lip service to any interdependencies. Without a system view you can never determine if a given change represents a “best opportunity” or is just the most loudly touted flavor of the month: We have seen so many “hot” change opportunities explode on the scene and fade, like TQM, empowerment, balanced score cards, business process management, emotional intelligence, 360 feedback, the delighted customers, and many more have at some time been promoted as the answer to virtually everything,

What is lacking is a way to compare these or any other change initiative. But expert advocates can shout very loudly and write best selling books crammed full of interesting anecdotes that support their particular change initiatives.

Clearly, we need a balanced systems view of change. Yet the problem arises that no one can know the degree to which all the elements can be effective in any implementation. There are two possible solutions to this situation. First, we can pair a Performance System expert who has a comprehensive understanding of SCAN with the appropriate element experts to form a change partnership. This has been done quite successfully. Or, secondly, we can train the element experts in understanding SCAN technology (Unfortunately, there is still residual element bias that tends to remain with the experts). This second alternative has great promise, but it is hard for many element experts to acknowledge their need for such training. Expertise too often breeds arrogance.

Probing the System

We have devised a series of probes for each of the elements of the organizational system. Above, we scanned the people subsystem by taking a horizontal slice. We can also look vertically, for example, going down conditions, a series of probes is as follows:

Organizational Scan: Sample Probes

Environments

Performance System Factor	*Questions*
ORGANIZATIONAL ENVIRONMENT	**Is the organization structured in a way that contributes to effective and efficient performance of the work?**
Functional divisions	• Are organizational functions set up to produce clear outcomes that are useful to other units or the organization as a whole? • Do people typically know what other functional groups do and how it is related to their own work or that of the organization?
Degree of centralization	• Are support functions sufficiently decentralized so that geographically or functionally separate groups can easily obtain support that matches their situation and needs? • Are support functions sufficiently centralized so that they can provide support cost-effectively?
Reporting relationships	• Do people who do similar or closely related work typically report to the same manager or management group? • Do managers in the organization have a reasonable span of control?
Decision authority	• Is decision-making authority placed at the lowest feasible level? • Do groups have the authority to make most of the decisions that directly affect their work?
PHYSICAL WORK ENVIRONMENT	**Is the work environment set up to make it as easy as possible to work efficiently and effectively?**
Equipment, tools, information	• Are necessary equipment, tools, and information available? • Are they designed to be easily used and to effectively support the work? • Are they cost-effective?
Support services	• Are necessary support services available? • Are they designed to be easily used and to effectively support the work? • Are they cost-effective?
Accessibility of resources	• Are equipment, tools, and information readily accessible when and where they are needed? • Are support services easily accessed when needed? • Are supplies and raw materials readily accessible when needed?
Physical environment	• Are space, light, and temperature adequate to work effectively? • Is the environment free of physical obstacles that get in the way of doing the work?
SOCIAL WORK ENVIRONMENT	**Do people throughout the organization typically behave in a way that supports effective performance?**

Performance System Factor	*Questions*
Leadership practices	Do organizational leaders typically . . . • Provide people with clear direction about goals? • Create a compelling vision about purposes and what the future could be like? • Provide advice and coaching when needed? • Demonstrate through their own behavior what they expect of others? • Offer recognition/rewards for improved or excellent performance? • Encourage initiative?
Hierarchical relationships	• Do people accept and even encourage information, opinions, and ideas from people who are below them in the organizational hierarchy? • Do people readily provide relevant information, ideas, and opinions to people who are both above and below them in the organizational hierarchy?
Peer relationships	Do organizational peers or colleagues typically . . . • Share relevant information with each other as well as encourage/accept suggestions and feedback from each other? • Treat each other with respect? • Share the risk and responsibility for mutual efforts?
Business values	• Has the organization defined and communicated its business values to people within the organization – and to suppliers and customers as well? • Do people in the organization typically behave in a way that reflects those values? • Are the values compatible with the organization's strategy and goals? • Are the values compatible with the needs and expectations of the organization's customers?

Table 2. Organizational Scan: Sample Probes

Using the SCAN as a organizational performance planning tool

When a company makes the decision to implement a new strategy it usually requires some significant change in the organization. Too often, such changes are not fully thought through. Changes are made, but the implications of how that change will affect the rest of the organization and how the other elements of the organization, in turn, affect the organizational performance are not always considered.

Some years ago, we had an opportunity to work with an Italian bank. They had decided to expand their financial offerings to include insurance, financial advice, and additional related services. They felt this was necessary to stay competitive. The major organizational change involved having branch managers take on the duties of a sales manager. The bank had been working steadily for more than a year to implement this change without much success so they called us in to find out what the problem was. Talking to branch managers provided the first clues. They saw the changed role as a reduction in status. They preferred to view themselves as bankers, not salesmen. But that was only one problem. Branch employees also resisted the change. They felt the branch manager had less time for them, and they suffered from lack of clear direction.

We went to the group in charge of the organizational performance change and gave our report. We asked them to use the SCAN model to rethink and re-plan the organizational performance effort. With that, they reviewed the branch managers' new role in light of the other 16 elements of the performance system to see what affect the change might have on those elements and, in

turn, how those elements might affect their proposed change. After only 45 minutes, they had developed a comprehensive plan that they then implemented with great success.

Garry Doyle, an Australian consultant has used the SCAN model extensively in his change workshops. Here is his description of how he uses it:

> I describe the SCAN framework with examples of how I have used it in different organizations and attempt to develop an understanding of how it might work. I then use a case study for practice. I use the video on The Morgan Motor Car Company from the BBC on the Trouble Shooters series with Sir John Harvey Jones. I show the video and have small groups watch and take notes using the SCAN model as a guide. I ask them to reflect on the changes that are needed and they observe quickly that Sir John failed in his attempts to make the necessary change happen.
>
> Each group then gives feedback to me (acting as Sir John) in an attempt to firstly change me and my approach following the SCAN model and then to suggest ways of changing Morgan. I then ask them to use the SCAN framework and apply it to their own change effort. Usually there is little shared understanding of what the deliverables are for the receivers. This is the first point of disconnection. We spend some time strategizing and developing a list of outcomes that have specific measures. I then ask them in small groups to look at their organization as they did with Morgan and develop some actions to ensure the change effort is likely to succeed. I often get strategies that affect all cells on the matrix so there's a need to prioritize these. This exercise has the ability to align the top team. It also gets some very practical strategies together that will be the hallmark of the real change effort they now can embark on."

SCAN Case Examples

Below are examples of a wide range of applications of the Organizational SCAN.

Recently, we worked with a group of senior executives from a large service organization. They had announced a major change and had begun a restructuring effort across all divisions aimed at improving the level of service provided in key areas. Customer expectations had changed, and the company had placed extra demands on the cost-savings that managers were expected to deliver. The only organizational performance initiative to date was the restructuring. Previous efforts had involved downsizing and outsourcing services.

When asked to describe the specific outcomes required for each of the organization's receivers, there was silence. They had little shared understanding as to what outcomes were really important. Their total focus had been on the mechanics of the restructuring, and they were about to put a process in motion to implement it. What they lacked was any clarity around the business purpose of the change. They needed to get it focused on results and do so quickly before they lost the entire group below them.

They used the SCAN framework to identify desired results for the receivers and then used it as a roadmap to indicate what actions needed to be taken to move forward and ensure the change was sustainable.

This effort resulted in two strategies, to be implemented within the two weeks following their meeting. The first strategy was to agree on the key measures for each receiver group and communicate that to all managers. The second strategy involved the restructuring process making it very clear about how that was going to help them achieve their strategic goals.

This example illustrates the value of "**starting at the end**" – that is, being clear about desired results. This is often best done best accomplished by looking at how to improve stakeholder value, e.g., more profit, better service to customers, etc

A few years back we worked with **British Airways** during their transition from a government-owned to a privately-owned business. Our SCAN indicated that the best opportunity for improvement lay in changing the leadership and cultural practices to better support stakeholder value. BA had been very strongly focused on operations. They had developed very effective processes for handling aircraft, but their people and customer handling performances were lacking. When we started to work with them they were losing money and were about the same size as Air France. When we finished our final project ten years later they were five time the size of Air France. They were also the most profitable airline in the world, while Air France needed a four billion dollars infusion of government funds.

Shortly thereafter, a group of our colleagues began working with the **London Underground.** Here the need was for cost savings, and organizational performance efforts focused on operations. By reworking and better defining processes, we produced a documented savings of over 150 million pounds.

- **Alliant Tech Systems,** a major defense contractor, was suffering from a cutback in military spending and wanted to reduce their reliance on government contracts by moving into the commercial market. The SCAN revealed that they needed to exhibit greater agility and innovation. Here our organizational performance efforts focused on leadership and administrative systems. They had adopted a military-style bureaucracy that required multiple levels of approval for virtually every decision. We streamlined the administrative control systems and modified many approval points, turning them into reviews instead.
- **SITA,** an international telecoms company, wanted to improve its business-to-business customer relations. A SCAN found that the marketing department collected lots of information about customer satisfaction for its own purposes, but never shared that data with the operations folks. (It's confidential, they said). Our solution here was to establish a new formative feedback system by creating a Department of Marketplace Performance, reporting to the CEO, with the role of collecting customer data and making it available and understandable to operations.
- **General Motors** brought us in to fix a communication problem, but our SCAN indicated the best choice would be to focus on leadership so we developed a performance-based leadership program that was given to over 65,000 managers world-wide with a reported return on investment of eleven to one.

The above examples indicate the power and versatility of SCAN . We have used it to identify Culture change, Process change, Administrative system change, Structural feedback change, and Leadership change. The SCAN provides us with an unbiased approach to determine what best to change

Summary

Recognizing that every organization is a performance system is critical to the success of virtually any attempt to improve or maintain performance. It is as important for every manager and consultant concerned with organizational performance to grasp this reality as it is for a medical doctor to recognize that the human body is, at its basic level, a biological system. Too many so-called "change efforts" have either failed or are short-lived because they failed to adequately address the "systems" issues.

Using a scaleable systems approach, we can develop a broad-based logic that allows us to accommodate every performance element and to identify the interdependency among those elements. It also allows us to integrate our analytical methods with our organizational performance interventions.

Problems are rarely effectively resolved by addressing only people or processes or management, or any single element of the system. Virtually every element of the system must be taken into consideration when planning an organizational performance, including the interaction among the elements, and the SCAN provides a framework for doing just that. Just as the Periodic Table does, the SCAN framework supports an assessment of the interrelationship of the elements. Its

rows represent the various "system flows" of the organization, and its columns assist in creating the required "vertical" alignment of the organization, integrating the whole in terms of each sub-system's contributions to results. This integrated framework enables us to test new organizational performance applications against an existing understanding of organization systems and the need for alignment focused on results.

Organizations are complex systems, and no single person can be expert in all aspects of the system. The SCAN framework has the potential to serve as a base that will provide any organizational improvement expert or organizational performance agent with a comprehensive foundation for selecting and managing all forms of organizational change. The future is unlimited.

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Author

Dr. Donald Tosti is the managing partner of Vanguard Consulting in San Rafael, California, which specializes in the alignment of organizational processes and people with the stated strategy of the organization. Donald would be glad to share more information on the SCAN model and its applications. He can be reached at change111@aol.com.

