



ESSENTIALS

Process Thinking

No part of this material may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SOS Consulting, LLC.

Managing the White Spaces

We tend to think of organizations as they are depicted in the organizational chart – a hierarchy of vertical functions that come together at the top. The real work to fulfill a customer need, however, crosses multiple functions and must be managed as a process across the white spaces on the organization chart.

All work is a process. A process is a series of steps/activities that transform inputs into outputs; raw material, information, energy, using labor, machines/tools and methods are transformed into products/services. Processes are the guts of how organizations make and deliver value (product/service) to the market –from supplier to customer. Functional thinking results in people thinking more about what is best for their department than what creates value for the customer/community. If any of the functions is focused on anything other than that clarified and communicated by leadership, there will be a disconnect: productivity/quality problems, confusion, turf wars, and disengaged employees will exist.

Let's explore the impact of process thinking in a food company with a simple manufacturing process– the raw ingredients are added to a large tank and mixed for a specified amount of time and then dropped through a filling machine into metal cans, plastic jugs, and large totes with unique labelling. If R&D does not develop the recipe for the product taking into account the availability of the raw materials, material specifications, and/or operation of the equipment, the product may not be mixed or filled properly or at the scheduled time. If marketing does not get the labels with unique marketing information designed in time for the print vendor to print and deliver them, the product cannot be filled and delivered to the market per schedule. Typically everyone blames manufacturing for these failures; they do not understand that manufacturing is only one element of the **product fulfillment process**; manufacturing is dependent on the output of other functions. The company has a functional versus process view of delivering value to the market. This lack of process thinking creates an environment of mistrust and conflict that undermines cohesive leadership.

Managing an organization with process thinking includes three elements:

- 1) Process performance goals (versus functional goals)
- 2) Managing the interfaces or handoffs between functions (the “white spaces”)
- 3) Troubleshooting organization problems as process problems versus functional problems (i.e., look at the entire product fulfillment process versus blaming the manufacturing function); this is process management

Process Management

How does an organization implement process management? With three components:

- 1) Identify the key processes within the organization by creating a relationship map to visualize the processes across the organization. Use the relationship map to select the process(es) with the greatest impact on the strategic objectives to create competitive advantage.

- 2) Improve the process(es) to close the gap between current performance and the strategic objectives. Document the process using a process map (simple flowchart or cross-functional flowchart) to identify disconnects in the process (hand-offs not happening/working, incomplete, mismatched, etc.). Make changes to eliminate the disconnects by rearranging the order of the steps, reassigning/redefining responsibility, adding standards, job aids and/or training to improve individual steps, or removing/adding steps.
- 3) Manage the process on a day-to-day basis by monitoring performance versus customer-driven process measures, appointing a process owner, ensuring each process has plans and budget for daily operation and improvement, executing the plan and rewarding individual and functional performance that contributes to process effectiveness.

See the SOS Consulting website for examples of our work with diverse organizations to implement process management: <http://execute2compete.com/results>.

Good Process

What makes a good process? Jason Piatt defines Six criteria of a good process.

1. **Simple** – Unnecessary complexity makes processes difficult to follow and more difficult to control.
2. **Robust** – Robust to various conditions and circumstances. Unlikely inputs or environmental conditions should be accounted for and considered in process design.
3. **Documented** – Without documentation, a process is ‘tribal knowledge;’ tribal knowledge is dependent on communication style and technique, revised from one telling to the next, incorporating bad behaviors and incorrect process understanding. Documentation can be used for process control over time.
4. **Controlled** – Control enables the process to be the same each and every time. A controlled process can be improved.
5. **Communicated** – Communicated to those in the process, those who receive the outputs of the process (customers) and those who provide the inputs to the process (suppliers). Communication enables expectations to be understood and process to be managed.
6. **Error-proofed** – little room for error in execution. Visual indicators, poke yoke, error proofing techniques safe guard against poor process execution.

Extending Process Management to the Human Performance System to Unlock the Potential of People

In the history of mankind, the 21st century will likely be known for the efforts of men and women to minimize their dependence on people to achieve gains in business and organization performance. Whether this is part of an overall effort to scale back costs, counter ballooning salaries and benefits costs, or a desire to take advantage of technology, the tendency to avoid or minimize using people to get work done has never been more prevalent than it is today. Many managers and IT professionals view minimizing the use of people as a standing objective if only to decrease resistance to change and variability. Instead of taking this “the glass is half empty”

perspective, we would like to offer a “the glass is (at least) half full” and suggest that we devote time and energy to unlocking the potential of people.

Despite all the sales promises and business case calculations that suggested more efficient operations stemming from the use of more technology and less people the largest barrier to change in most organizations is the increasing cost of maintaining and replacing aging technology. It turns out that people are infinitely more flexible and adaptable because they have the ability to operate on intent and partial input whereas technology solutions cannot. All that’s required is an understanding of people, and viewing the potential for human performance differently.

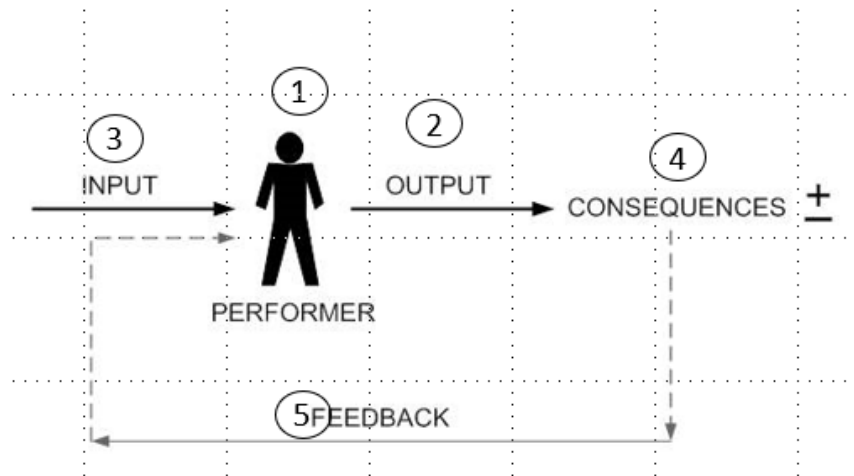
Our tool for understanding, analyzing, designing and improving performance is the Human Performance System. See the figure below. The human performance system (HPS) is a model that describes the variables influencing the behavior of a person in a work system. The HPS has been used by performance analysts and others for some 40 years to diagnose and even predict the likely behavior of human beings in given performance situations. The earliest version of this model was created in the 1960’s by Geary Rummler and Dale Brethower. Today, there are any number of versions of this model, but the original is still powerful and relevant to anyone interested in understanding or improving performance.

The model is based on several important tenets:

- Every organization is a complex system designed to transform inputs into valued outputs for customers.
- Every performer, from CEO to line worker, inside any organization is also part of a unique personal performance system.
- When an individual fails to produce a desired outcome in an organization, it is due to the failure of one or more components of that person’s HPS.

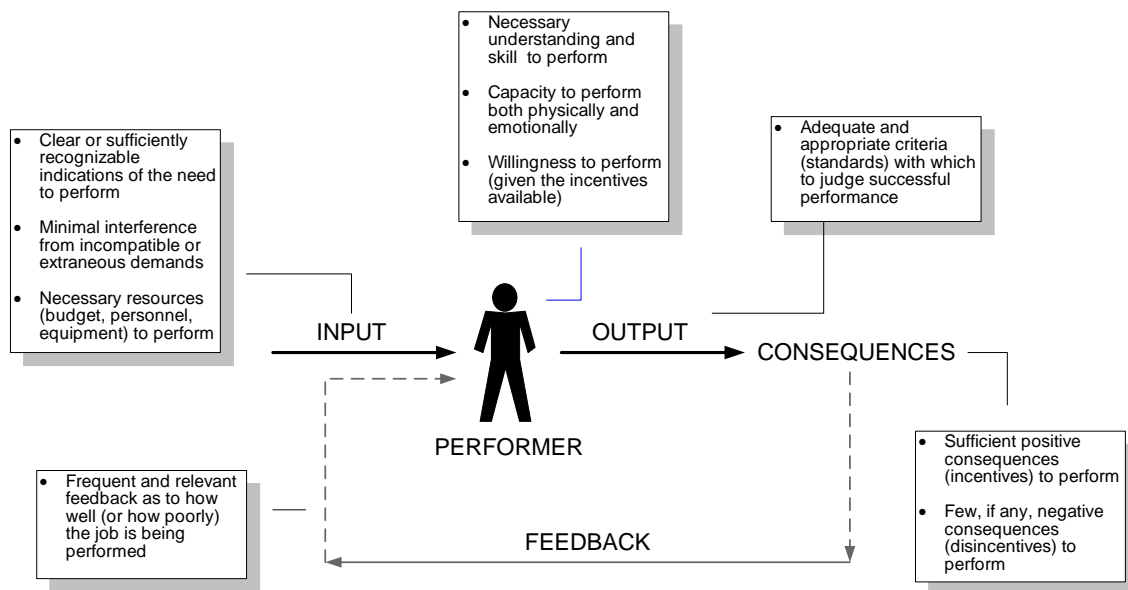
The components of any HPS are as follows:

The performer (1) is expected to produce some set of outputs (2). For each output there is a set of inputs (3). For every output produced (as well as for the action it took to make the output), there is a resulting set of consequences (4)—something that happens to the performer, which in turn is interpreted by the performer as either positive or negative. This interpretation is the key to understanding the performer’s future behavior, because the HPS is governed by the behavioral law that people’s behavior is affected by consequences, meaning they are likely to repeat behaviors that bring them positive consequences and also likely to avoid behaviors whose payoff is negative. The final element of the HPS is feedback (5) to the performer about the output.



The Human Performance System

This template of human performance can be used to diagnose any performance problem, and perhaps even more important, it can be used to design better jobs. The ideal HPS, with descriptions of each component in its ideal state is shown below:



Ideal Human Performance System

In its usage over past years, some patterns of performance have become apparent. For example, 90% of the time, performance deficiencies that might appear to be caused by a human performer, or a class of performers all doing a given job, are actually the result of other things being wrong in their HPS such as:

- Missing materials

- No clear direction or expected output
- Interference while trying to do their work
- Lack of any meaningful feedback
- Strong negative consequences for trying to do the job
- No positive consequences for succeeding
- Broken, unavailable, or obsolete equipment
- Lack of training or other preparation

It is sometimes stunning to find out the circumstances in which average performers keep on grinding away in their duties in spite of a dreadful lack of support. HPS analysis and synthesis can help bring this kind of situation dramatically to light.

Organizational and process goals can be achieved only by achieving performance goals by the people involved. Rather than hiring good people and hoping for efficient, high quality performance, effective managers use the Human Performance System to manage the factors that enable those good people to perform at an exemplary level. The environmental factors under a manager's control, offer by far, the greatest opportunities for performance improvement.

Operational Discipline

Competitive results cannot be achieved without operational discipline. Operational discipline is "the deeply rooted dedication and commitment by every member of the organization to carry out each task right every time."

Simply stated, operational discipline is consistently following a set of well-designed and defined processes.

Such discipline provides an organized way to accomplish tasks and implement changes using standard work, where the work has been designed with knowledge of the interrelationships of functions and the human performance system to meet customer needs. The positive benefits of operational discipline are numerous:

- Increased confidence
- Lower risk of failure
- Less variability
- Alignment with organization strategies
- Clear communication – everyone knows the score

All of which lead to achieving the organization's productivity and profitability goals.

Operational discipline in manufacturing is most often found in safety management systems to ensure an incident-free work environment.

Discipline, however, often has a negative connotation. It is sometimes interpreted as punishment or a way to keep workers in line with externally imposed norms. Others believe discipline imposes rigid, inflexible regimens that stifle creativity.

Standardization of work is critical for operational discipline. It reduces variations in a process that can lead to inefficiencies or even hazards. It also makes process improvement quicker as root causes or sources of variation in the process are easier to identify when everyone is using the same techniques. Standardization also contributes a sense of collaboration within a process, at all levels. This collaboration results in higher levels of trust and transparency within the organization, all of which reinforce the essentials of cohesive leadership team, clarity, strategic decisions, communication and statistical thinking.

The journey to operational discipline can be challenging, however, as those negative perceptions of discipline and standardization are hard to break. In addition, most teams must move from externally applied discipline (from senior leaders, government regulations, industry standards, etc.) to a state of interdependency in which the team members hold one another accountable to the standards. Accountability is one of the hardest behaviors for a team to adopt – human beings are hesitant to give one another critical feedback that might risk the work environment that currently exists. Even if it is a poor environment, it is known.

Leadership is therefore key to empower work teams to assume responsibility for identifying obstacles to achieving team objectives and then implementing effective solutions and establishing operational discipline around the new process design (way of work).

Operational discipline takes practice. Consider a marathon runner; s/he would never attempt to run a full marathon without first embarking on a rigorous training regimen, practicing the course repeatedly to build strength and endurance. In *Outliers* by Malcolm Gladwell, we learn that one must do something the equivalent of 10,000 hours to get really good at it.

The essentials of cohesive leadership, obtaining clarity and alignment, making strategic decisions, communication and process design and management all focus on determining the “right thing.” As challenging as that is, the more difficult task is once you have determined these “right things” for your organization, is continuing to do them long enough to get good at it.

The key to understanding ourselves and the universe we live in is realizing that people know what to do and don't do it.

- C.S. Lewis

-

DuPont Sustainable Solutions has developed a model for operational discipline in safety that consists of 11 characteristics:

- 1) Leadership by example
- 2) Sufficient and capable resources
- 3) Employee involvement
- 4) Active lines of communication

- 5) Strong team work
- 6) Shared values
- 7) Up-to-date documentation
- 8) Practices consistent with documentation (standardization)
- 9) Absence of shortcuts
- 10) Housekeeping
- 11) Pride in the organization

which they have simplified into four key factors (See end of the paper for the assessment tool):

- A. Leadership - leaders are passionate for safety and model the behavior they expect from others.
- B. Employee Involvement - employees are active and enthusiastic about participating in safety activities.
- C. Practice consistent with documented procedures - work is completed as planned, following authorized and current procedures.
- D. Excellent housekeeping - employees are proud of their workplace and maintain consistently high levels of housekeeping.

These four factors can be evaluated and extended to other management systems (such as quality). Extending operational discipline beyond safety, Gary Harpst in *Six Discipline for Excellence* offers us a method for developing operational discipline in any process team (in Phase IV, Work the Plan):

- Each individual prepares a quarterly plan aligned with the organization's and work team objectives
- Manage and monitor progress daily against the individual plan and other measures relevant to the job.
- Prepare a weekly status report and review with the team leader; receive feedback and coaching
- Rate the plan at the end of the quarter to learn what can do better.
- Create a new plan and repeat the process.

Over time, individuals and teams develop not only the discipline for their job, but learn how to improve their work and receive feedback – they become empowered to improve their work and become good at it.

Everyone has two jobs: 1) doing our work as it is currently designed and 2) improving how we do our work.

- Ronald Snee

Without operational discipline, implementation of the six essentials will not result in long lasting productivity and profitability improvements. The organization will not do it long enough to get good at it. For this reason, SOS programs work to embed improvements into daily work in a way that is robust to changes in personnel over time.

Operational Discipline Assessment

Operational Discipline General Assessment - Organizational	Score
Leadership Focus - Leaders model the behavior they expect from others.	
Leaders visibly demonstrate personal priority for core values in their decisions	
Leaders clearly document, maintain up-to-date, and communicate goals, standards, and systems	
Leaders monitor performance via metrics, audits and personal involvement to drive continuous improvement	
Leaders provide sufficient and capable resources to sustain performance.	
Leaders develop and support processes to facilitate employee involvement and effective teams	
Practice Consistent with Procedures – Work is completed as planned, following authorized and current procedures.	
Procedures are documented and readily available for all appropriate activities.	
Clear expectations exist for following procedures and for not taking shortcuts.	
Procedures are periodically reviewed and authorized to keep them current, including employee participation.	
All changes, tests, and deviations are reviewed and authorized before use.	
Training and field audits are conducted to ensure procedures are understood and followed.	
Employee Involvement – Employees are active and enthusiastic about participating in improvement activities	
Employees know and share the organization’s core values and goals.	
Employees volunteer and are active in improvement activities and teams.	
Employees provide feedback and suggestions for improvement.	
Employees show pride in being part of the organization.	
Excellent Housekeeping – Employees are proud of their workplace and maintain consistently high levels of housekeeping.	
Clear expectations are established for maintaining good housekeeping	
Standards for equipment and area housekeeping are documented and clearly communicated.	
Audits are conducted to monitor and help improve housekeeping.	

Score: 1= Not being done; 2= significant gaps in performance; 3 = opportunities to improve; 4 = minor opportunities to improve; 5 = excellent performance

References

- Daniels, Aubrey C. and Theodore A. Rosen. *Performance Management: Improving Quality and Productivity Through Positive Reinforcement*. Tucker, GA: Performance Management Publications, Inc., 1988.
- Gladwell, Malcolm. *Outliers: The Story of Success*. New York: Little, Brown and Company, 2008.
- Harpst, Gary. *Six Disciplines Execution Revolution*. Findlay, OH: Six Disciplines Publishing, 2008.
- Labovitz, George and Victor Rosansky. *The Power of Alignment: How Great Companies Stay Centered and Accomplish Extraordinary Things*. New York: John Wiley & Sons, Inc., 1997.
- Bains, Brian. "The Path to Operational Excellence Through Operational Discipline." *Industry Week*, May 20, 2014.
- Kein, James A. and Bruce K. Vaughen. "A Revised Program for Operational Discipline," *Process Safety Process*, Vol. 27, No. 1.
- Piatt, Jason. "Six Easy Criteria for Targeting a Good Process." *Industry Week*, August 21, 2012.
- Rummler, Geary A. and Alan P. Brache. *Improving Performance: How to Manage the White Space on the Organization Chart, 2nd Edition*. San Francisco: Jossey-Bass Publishers, 1995.



Transforming small US
Manufacturing workplaces into
places that work for all and
COMPETE today and tomorrow