CREATING A TOLERANCE FOR FAILURE
(by Avoiding Excellence)

Contents

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Years ago, I attended the quality conference of a major manufacturing company. I was in a room with over 1,000 company executives and managers, and the CEO was speaking. He proudly announced that, for the first time in the company's history, they had reached their goal of six-sigma quality control. The room erupted in thunderous applause that lasted till the CEO had to quiet the crowd. He then said, "Isn't that great?" and applause thundered again.

After the crowd began to quiet and take their seats, the CEO leaned into the microphone and quietly added "…Unless you were one of the over 2,000 customers who opened our product and it was defective right out of the box!" The room fell silent and contemplative. The CEO went on to make the point that developing a tolerance for ANY level of failure would ensure that the company never reached zero defects.

At an executive meeting for another company, the quality consultant in the room was W. Edwards Deming. Deming was the brilliant mathematician who became a leading spokesperson for quality after WWII and was invited to Japan by General Douglas McArthur to help rebuild Japanese industries. Deming was preaching "zero defects" when a young engineer in the room challenged him. The engineer suggested that "zero" was perfectionistic and therefore possibly unrealistic and demoralizing to workers who were trying their best.

Deming responded by saying, "You have missed the point, young man! You may never be perfect, but you can't quit trying to be. If you accept any level of imperfection as okay, you will always have it!"

If you wonder why I am about to talk about safety in an article about quality, it is because they are almost identical issues. If your organization's goal is to provide a product or service, then you develop a process to accomplish that. If your process produces that product or service effectively and efficiently, you don't have a problem. If your process produces a defect, you have a quality problem. If your process produces an injury, you have a safety problem. Either way, the problem is that your process is not doing what you want it to do or it is doing it while also producing unwanted outcomes.
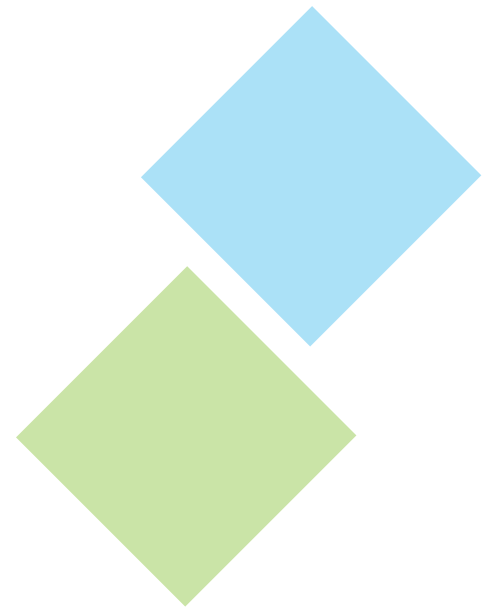
Processes are made up of a combination of people, equipment, work environment design, materials and procedures. Without an accurate analysis of these elements and their functioning, you may not address the real issues that are causing the problems with your process. The following are common examples of problems we often find in each of these areas:

People – This area often is the last to be addressed since the others are more common and less complex. Psychology, sociology, performance management and the behavioral sciences all take different approaches to explain what shapes and reinforces human behavior, and few safety professionals or organizational executives are expert in more than one of them. But on a basic level, when people do not perform adequately it is because of one of four basic reasons: They are not capable; They are not held accountable; They are not willing; They are not motivated. All these can be influenced by leadership or by company culture.

Capability – All too many organizations do a poor job of assessing ability in new hires. Likewise, they have poor or no measures of expertise. As baby-boomers retire, there often is a significant gap between their tenure and the tenure of those replacing them. The lack of metrics for competency creates a void of knowledge about whether workers are capable of doing their jobs. First-line supervisors can assess capabilities through daily contact, but supervisor levels are being reduced in most organizations. Many workers have minimal contact with their supervisors and their capabilities are unmeasured and unknown.
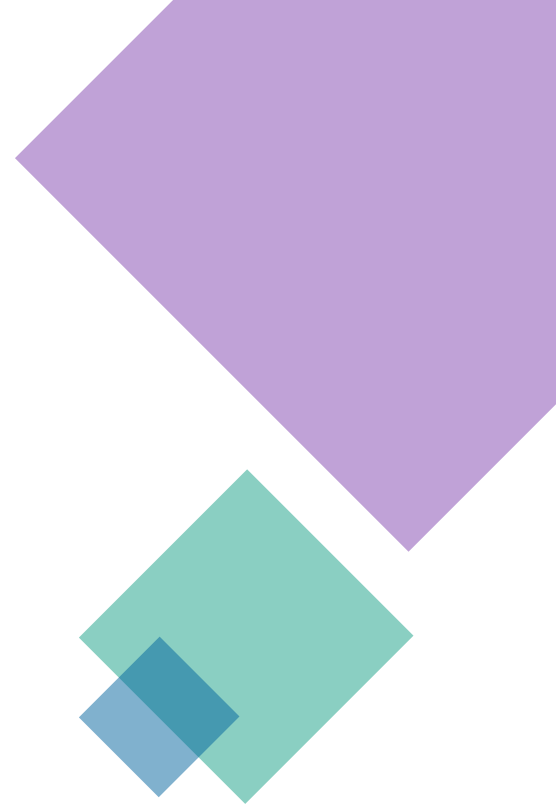
Accountability – The reduction in first-line supervisors also results in less regular accountability. Workers do their jobs with minimal oversight and yearly performance appraisals are almost totally unreliable and useless. Job descriptions usually are a list of duties and lack definition of the role to be played and the results to be accomplished. It is appalling to ask workers what happens when they perform well and what happens when they perform poorly and have them respond that usually nothing happens in either case. Why perform well if the consequences for either good or poor performance are the same? Very few organizations meticulously control the consequences for performance. Doing so is the soul of accountability.

Willingness – It often is assumed that if a worker accepts a job or assignment, they are willing to do it. That is not always the case. Workers who must work to survive often do things they do not like and would not do if given a choice. There is a great difference between grudging compliance and willing cooperation, which leads to the next topic: motivation.

Motivation – This very term is in disuse and viewed as obsolete by many, and the new terminology on the block is "engagement." This is, in part, due to the misguided school of thought that prompted the proliferation of "motivational speakers," who pumped up enthusiasm that tended to diminish as quickly as it arose. There is a cliché formula in motivational philosophy which is P=AM (Performance = Ability x Motivation). It is difficult to increase ability but easier to increase motivation. Increased motivation multiplies performance. But few organizational strategically work to increase motivation, and the few who do really know how. Failing to recognize, address and measure motivation is an excellent way to accept a level of failure as inevitable.

Tools and Equipment – If your processes are dependent on equipment, the equipment can cause your processes to fail. Determine if the equipment is in good working condition and properly maintained. Are similar pieces of equipment operated in the same way? Is operation of the equipment intuitive or counter intuitive? Are portable pieces of equipment available, conveniently located and in good condition, and are workers properly trained in their use? Are adequate numbers of workers cross trained so that no one is required to operate equipment for which they were not trained when certain workers are absent?

> EXAMPLE: On a military base, a group of aircraft mechanics were using a make-shift piece of equipment instead of the equipment designated for the job. When asked, the shop NCO did not know that the practice was in place or the reason for it. When we interviewed a few of the mechanics, we discovered that the prescribed equipment had to be checked out of a tool cage and the cage only had two such devices when over 40 mechanics needed them at about the same time. The shop had never operated at maximum capacity, but leaders accepted the level of performance as the best they could do without ever examining why.
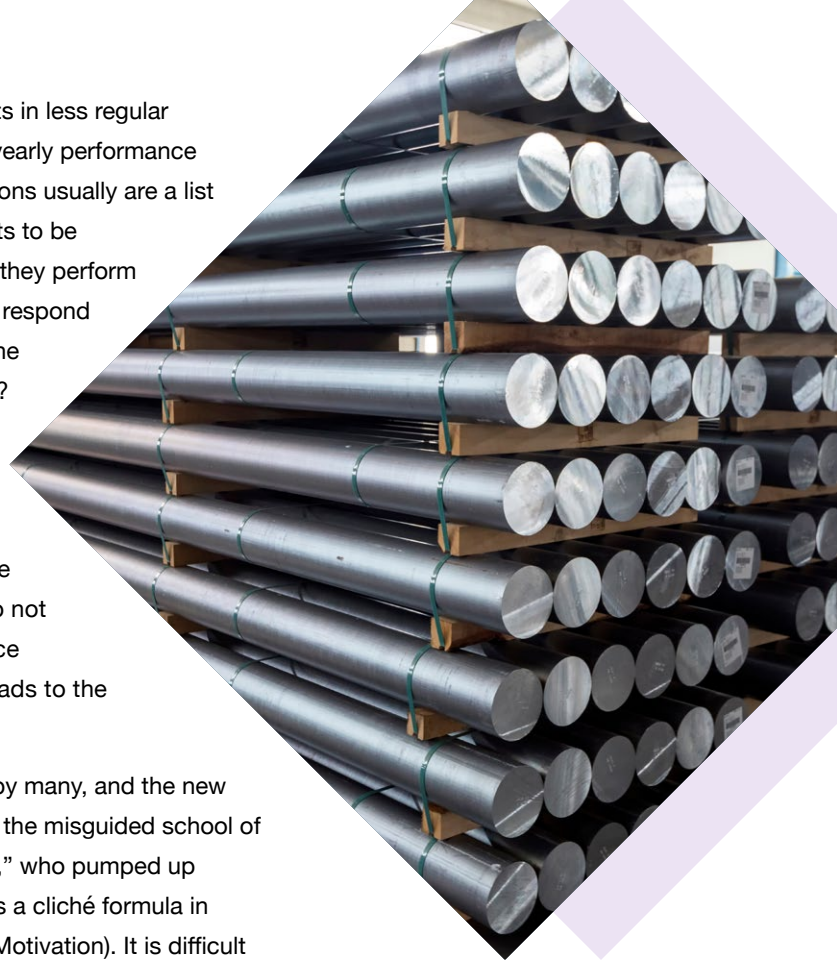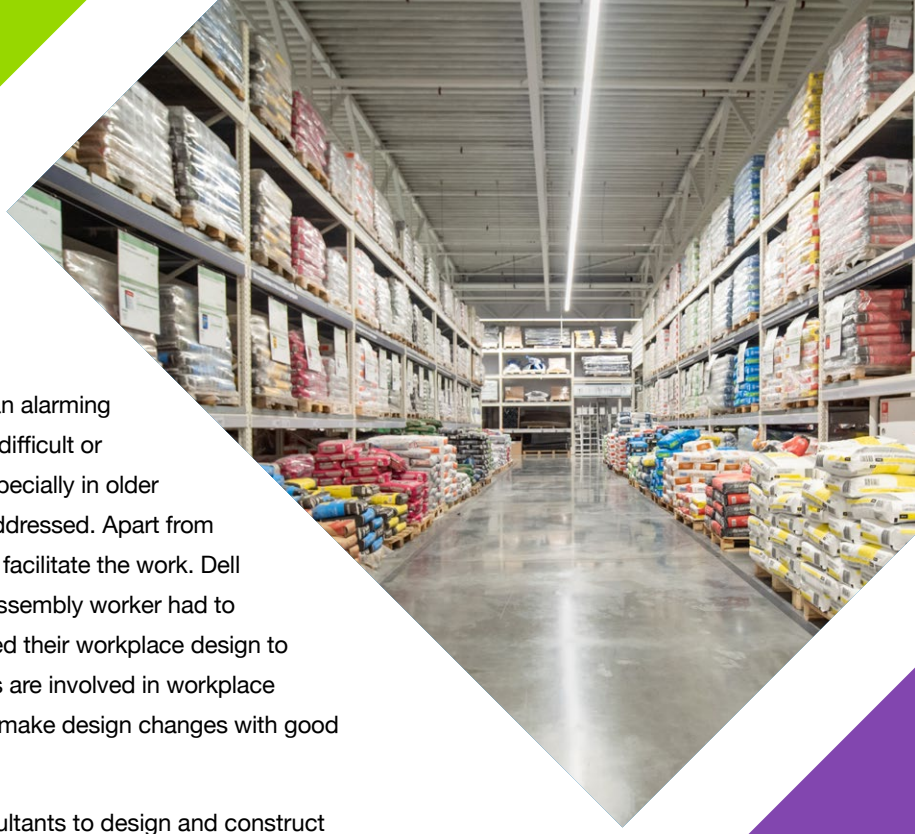
Work Environment Design – Our audits have discovered an alarming number of workplace designs that make good ergonomics difficult or impossible. Seasonal issues can impact the workplace, especially in older facilities where temperature extremes are not adequately addressed. Apart from the obvious, many workstations are simply not designed to facilitate the work. Dell Computer Corp. started counting the number of times an assembly worker had to touch a part to build a customized computer. They innovated their workplace design to minimize "touches." It can be useful to determine if workers are involved in workplace design decisions. We often find supervisors and managers make design changes with good intentions that workers perceive as worse instead of better.

> EXAMPLE: A refinery site brought in engineering consultants to design and construct a new unit to produce a related product useful to the refining process. After a year and a half, they invited key personnel to tour the new facility. Everyone gathered on a walkway beside a large pipeline to hear a short speech about the goals of the project and how they had been met. The speaker from the consulting firm then looked around with a confused look and then asked how the group could get past the pipeline to the new unit. The refinery manager said, "You designed the thing. You tell us!" During the ensuing months, the refinery discovered over 12 ergonomic barriers that made good body mechanics impossible in some workstations.

Materials – Variations in raw materials can greatly impact product quality and material handling safety. Deming urged companies to forge strong relationships with vendors and stay with them rather than constantly shopping around for a little lower price. By doing so, you have a better chance of getting stability in your supply chain. Having materials available and conveniently located also can help maintenance workers complete their jobs more safely, which can impact quality, productivity and safety.

> EXAMPLE: A beverage company bought containers from three different vendors. They constantly pressured the vendors to lower the price and changed vendors when they got a lower bid. They told the plant managers that the containers were identical, and that price was the main consideration. When interviewed, the plant managers said that it took weeks to readjust their machinery to a change of containers and they lost hours of productivity time making the adjustments. The company even propped up a failing producer of the containers just to have three competing bids. The company was accepting a lower level of performance without examining what was causing it.

Procedures – The sequencing of work either can facilitate or hamper productivity. Beware of heritage practices ("Because we have always done it that way."). Procedures are developed for a reason but the reason for them can change. Be sure that the way you ask workers to work and the safety precautions you require of them are a good fit for the current reality. Some of the best-performing organizations review procedures with multi-level teams on a regular basis to make sure they are doing things the best and safest way they know.

> EXAMPLE: The petrochemical industry is known for making procedures for operating similar equipment both standardized and intuitive, but there are exceptions. An international oil company, which had been entirely offshore, decided to expand operations and bought a number of onshore assets and combined them under their corporate umbrella. The assets had been designed by different companies and were largely designed to be sold rather than operated long term. They were all different and operating them was challenging for anyone traveling among various sites. The differences resulted in several mistakes that produced worker injuries and equipment damage. The costs to convert the various sites to a common operating pattern was painful but necessary.

As these examples suggest, many organizations don't know what their true failure rate is or their potential for excellence. Leaders tend to measure success against past performance and how current performance trends with it. A certain amount of failure somehow becomes acceptable.

While all these aspects of performance can help avoid failure, make sure your main goal is to achieve success, not simply to fail less. On the surface, these sound like the same thing but they are not. Zero defects or zero accidental injuries are only one of several indicators of success. Zero can come from luck or normal variation as well as from excellent performance. Make sure when you get these good lagging indicators you know exactly HOW you got them and develop the confidence you can achieve them again next year.

Success lies in not just what happens, but why it happens. Developing the right process indicators will help you develop a definition of excellence. A tolerance for failure is just a lack of excellence.

About the Author

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Terry Mathis, founder and CEO of ProAct Safety, has served as a consultant and advisor for top organizations the world over. A respected strategist and thought leader in the industry, Terry has authored five books, numerous articles and blogs, and is known for his dynamic and engaging presentations. EHS Today has named him one of the '50 People Who Most Influenced EHS' four consecutive times. Business leaders and safety professionals seek Terry's practical insight and unique ability to introduce new perspectives that lead to real change. Terry can be reached at info@proactsafety.com or 800-395-1347.

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