

Will Safety Be Ready for Workplace 2000?

Re-visiting and updating an article By Thomas A. Smith
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Prologue

2000 has come and gone but I find most of the commentary in this article written in 1996 was fairly prescient. The safety profession seems to be fading from prominence to a lesser role in management. Most safety managers now report to the Human Resource Department. Safety is still handled more as an afterthought as demonstrated by the many industrial disasters in the U.S and the fact we still injure over 4,000,000 and kill over 4,000 people at work every year! Some emphasis is now on culture but little progress has been achieved in that area.

Lean manufacturing and re-engineering has certainly taken its toll on how many people are employed as management eliminates employees to satisfy the numbers. Unfortunately, the reduction of safety managers and staff is not a response to a change of philosophy of empowering workers to improve safety in operations, but merely to reduce overhead.

There has been a huge loss of manufacturing jobs in the US. Consider this, in the preceding decade, from January of 2000 to December of 2009, the U.S. lost 5,836,000 manufacturing jobs, an average of 54,000 per month. And there has been a seemingly unstoppable decline in manufacturing's overall economic influence. Manufacturing's contribution to gross domestic product — roughly equivalent to national income — has declined to just 11.7 percent last year from as much as 28 percent in the 1950s, according to the Bureau of Economic Analysis.

Sadly, I don't see the change in safety management I advocated back in 1996. It doesn't take a rocket scientist to figure out traditional middle management jobs such as safety manager or director are no longer high priorities in the boardroom. Deep down inside top management believes it can and should delegate its responsibility for safety directly to the workers and hold them accountable. They go so far as to label this as empowerment of workers! They honestly believe this is the best way to manage safety. Dr. Deming warned about the dangers of this approach to management in his seminal book, Out of the Crisis predicting it would lead to the demise of American competitiveness.

Incredible as it may seem companies considered to be well-managed who apply "lean manufacturing" methods still rely heavily on command and control to manage their safety programs. Contradicting the basic principles of Dr. Deming they focus primarily on fixing the behavior of workers rather than improving the system. Management in these companies still does not understand, nor care to learn, how common causes in the system are responsible for most employee injuries. It is content with fixing symptoms instead of causes when it comes to safety, a common mistake of non-system thinking.

Imagine doing this for quality. Believing the main reason for defects or poor customer satisfaction is the fault of the workers. Management has not been able to make the connection or see the relationship

between safety and quality I was trying to make clear in this article. Safety, like quality is an outcome of the system of management. How a company hires, trains and treats employees determines its safety performance to a much greater degree than meeting OSHA and ISO regulations, internal company safety audits or winning a safety award. In my opinion just “meeting specifications” is not “good enough” when it comes to safety. Safety professionals must learn how to manage so safety outcomes are “on target with minimum variation from the target.” The whole point of comparing Kim, the mythical safety director, to Joe was to show how safety managers would work if they operationalize Dr. Deming’s 14 Points and the System of Profound Knowledge.

Not much has changed since I started in safety management in the early 1970’s. Most safety managers I meet still spend the majority of their time on non-value added or after-the-fact compliance methods such as safety audits and inspections, accident investigations, safety incentive programs or trying to modify the behavior of workers through observation and positive re-enforcement. They also believe certification of their programs and all the extra time and effort spent getting ready for re-certification is of utmost importance. If you suggest these well-intentioned activities are not about continual improvement of safety they become defensive. The fact is at best they can only put things back the way they were. At worst they give managers the false impression they are applying continual improvement to safety (I can only assume they think continual improvement means doing what they already do only doing it better. i.e. better inspections and accident investigations.) They lack profound knowledge.

Unfortunately, I see little or no progress in safety management to serve its real customers – the people who do the work. I still meet “Joe” or a variation of him at every company I work with. I have only found a few safety managers who work like “Kim” since I first penned this article. It’s an honor and most enjoyable experience to work with them.

The original article (with some updating)

Many safety professionals talk about using the principles of continual improvement to manage safety. However, close examination of what they are actually doing reveals that safety management is missing the point. The second wave of the industrial revolution is here and has changed safety management methods and personnel.

In early 1993, for the first time since records have been kept, more white-collar employees were unemployed than blue-collar workers. Quality methods have allowed companies to increase quality and productivity with less supervision. Companies have learned how to make products and provide services without multiple layers of middle managers. In fact, middle management jobs are disappearing forever.

The bureaucracy and hierarchy of centralized management is being attacked and dismantled. The new management system exists not to ensure that managements’ orders are executed, but to help employees and remove barriers that prevent them from doing their jobs.

Some organizations have learned that bigger is not always better with respect to management. Extra layers often create an organization that is slow to act and change. One can think of many large companies that have lost market share to smaller competitors who were better prepared to satisfy

customers. Companies are learning how to be lean and still produce higher quality and quantity. How will safety fit into these organizations?

Management's job has changed

Employees' jobs used to be broken down into the smallest task – no thinking necessary. Instead, management did all of the thinking. This is not a “continual improvement” approach. Production problems are so vast and complex that everyone within the organization is needed to study and improve the system. What is true for production management is also true for safety management.

Companies are flattening their organizational structure, often by eliminating middle management. Technology is playing a key role in this evolution. Upper managers no longer need staff to gather, tabulate, analyze and summarize information about operations – they use computers instead. The endangered species list now includes middle managers who advise workers. Safety managers are on this list, as many companies are reducing safety staff along with other middle management departments.

Traditional safety management

Consider how one company's safety program is run by Joe, a safety manager trained in the traditional safety management methods taught in colleges and used in most organizations today. Influenced by managers such as Jack Welch, Joe's goal is to run an efficient, effective department. To do this he sets up activities to monitor and control employees and supervisors and ensure compliance with company safety rules and regulations.

Much of his time is spent providing government-mandated safety training and conducting safety inspections and audits. He negotiates next year's safety goals with top management. He sets safety standards for employees and tracks their performance, conducts accident investigations and recommends corrective action to prevent future incidents.

As demands on his time increase, Joe adds staff to help complete training, safety inspections, accident investigations and data collection. He recruits other managers for the safety committee, which establishes goals via management by objectives. He teaches this process to supervisors, and a mutually agreed upon goal for accident reduction is set (typically between 5 and 10 per cent.)

Joe implements a sophisticated program to collect accident data. Each department is monitored and compared, and changes in monthly rates must be explained. Managers are held accountable for accidents; they in turn hold their employees accountable. If an operation's safety results are “below average” Joe reminds its managers of the consequences they will face such as audits and bad reviews in performance appraisals. Safety bonuses might be withheld.

Joe's idea of working upstream is changing employee behavior. To ensure that he is motivating employees to work safely, Joe establishes safety incentive programs, which reward employees or departments that achieve pre-set safety goals. He will also use behavior-based safety programs where workers monitor other workers. Workers are constantly being reminded to work safe. Typically, the goals are zero accidents for a certain length of time. If goals are reached, gifts or monetary awards are

presented at a banquet. If goals are not met, no awards are given, and the program is restarted or replaced.

In short, Joe's idea of a good safety manager is one who establishes an efficient, effective safety management system. His main responsibilities are:

- Monitoring managers and employees to ensure they follow his directives correctly
- Setting safety goals for employees
- Rating managers and workers for their ability to follow safety instructions
- Evaluating employees to see whether they demonstrate safe behaviors
- Re-educating workers after an accident and returning them to work. If an employee frequently has accidents, Joe informs management, and that employee is reassigned or replaced if necessary.
- Providing numbers to show improvement. He explains poor results by identifying those who are ruining the program: this ferrets out the truly poor performers.

Continual improvement safety management

Contrast Joe's approach with that of Kim, a safety manager who uses continual improvement methods for safety. Because Kim is guided by Dr. Deming's 14 Points and the system of profound knowledge she believes her job is to facilitate a constant effort – safety does not start and stop depending on the most recent performance. Kim knows that as a manager, she works *on* the system and the employees work *in* it. To improve the system's safety performance, Kim knows she needs their knowledge and input.

Kim provides leadership; helping everyone – top management and employees – understand why the company must improve its safety performance. To manage safety using continual improvement methods, she abandons the traditional approach of just working to ensure compliance with safety specifications, knowing that meeting safety specifications merely guarantees the goal will not be reached. (She doesn't ignore or violate safety rules or regulations but using continual improvement methods she has found ways to get them taken care of faster and more efficiently. This gives her more time to work on the safety problems in the system.)

Kim's management methods focus on underlying causal factors that create the interdependent activities, which cause injuries. She works on critical behaviors of management, realizing that managers control the processes that lead to employee injuries. They create the culture people work in. If something goes wrong rather than replace employees, she strives to change the management-controlled safety system so employees can perform their jobs without fear of injury.

To do this, Kim applies the customer principle to safety – she considers the employees as her most important customers. She constantly tries to get their voice into the process, which improves safety and productivity. She believes employees know best where safety improvements should be made. Her job is to provide leadership so creative improvements developed by teams can be tested and installed.

To Kim, employee injuries are the worst form of scrap. When an employee is hurt there is nothing “lean” in the operation. Not only do quality and productivity decline, so does employee respect for

management. She sees safety as an outcome of the system. She understands events that cause accidents occur randomly, that variation exists in everything – including safety. Each job is different; also each employee is unique, making it impossible to design a job for the “average” employee.

To enable management and employees to work together, Kim helps them take a systems view of safety and uses the common language of statistics. Instead of a mechanistic view of accident causation, they look at accidents as a system outcome. Statistical process control charts provide a new way of looking at accident rates and a common language between management and workers. All employees learn the philosophy of statistical process control and can chart their safety performance. These charts show whether accidents are out of control due to special causes or are affected only by random variation of common causes. They also help supervisors stop blaming employees for accidents and focus efforts on system problems.

Kim establishes real teams she has trained so they can identify, rank, and dissolve production safety problems. These teams do not merely make suggestions about safety improvements, they use the Plan, Do, Study and Act” cycle for safety. They have authority to make changes and spend money:

- They use problem-solving tools such as process flow charts and cause and effect diagrams to develop and implement system changes.
- They study these changes and evaluate their effectiveness.
- If ineffective, the team sticks with the problem and makes improvements until its causes are eliminated.
- They know safety should be designed into a process but all processes are subject to variation and entropy so over time safety issues will develop no matter how “safe” they were designed.

Kim’s most important activity is to remove barriers that prevent employees from doing their jobs safely. She does not try to change their behavior through extrinsic motivators, but relies on intrinsic motivation she believes all people possess such as pride in their work and self-preservation to keep safety foremost in their minds.

She knows extrinsic motivators can destroy intrinsic motivation so she does not use safety incentive or behavior modification programs. She knows about the research that proves extrinsic motivation works if a job only requires manual labor with no thinking involved. But if work requires cognitive skills extrinsic motivational methods are of no value. She knows it’s important for employees to be thinking all the time so she is vigilant about removing de-motivating methods that would prevent them from doing so. She believes her time is best spent making certain real accident causes (poor management, variation) are eliminated. As employees work with Kim they view a safety goal of 5 to 10 per cent reduction as “dumb” because it prevents them from improving the system. As customers, they want 100 per cent reduction.

Kim does not think of employees as faceless numbers. She knows they think and are creative human beings. She needs and respects their opinions and ideas. Therefore, she does not name a “safe employee of the month award” or display “motivational” safety posters. Employees are empowered to measure their safety performance and use safety teams to make continual improvements they develop in their PDSA cycles. She does sponsor celebrations with workers to show management’s appreciation for their efforts to improve safety in the system.

She convinces all supervisors time spent on safety adds value to the company – it not only improves safety, it also increases productivity and quality. It also instills pride and joy in work. Kim cannot produce numbers for pride and joy, they are unknown and unknowable. Management doesn't ask her for them either. They see results in many different ways in the form of low injury rates, lower absenteeism and tardiness and improved processes in the shop. She teaches everyone you can't have high quality and high productivity (Lean) unless you have high safety. Consequently management responds to safety problems in the same way it does to quality and lean production problems. Employees are trained on problem solving techniques and given time to apply the PDSA cycle to fix the system. Safety is serious business and is always a win-win situation.

Conclusion

Traditional safety managers accept the system as it is and try to get the most out of it. They strive to have people do things right. In contrast, safety managers who use continual improvement methods understand reminding employees they are not complying with the rules provides no solution and often de-motivates people. The goal is to do the right thing. As a result, they create trust between management and employees. Employees learn that their jobs involve more than just showing up and collecting a paycheck. In addition to normal production responsibilities, they study the system and help management solve safety problems within that system.

Safety professionals must decide between managing safety to “meet specifications” or using continual improvement theory and methods to satisfy safety customers so safety outcomes are “on target with minimum variation from the target.” The two approaches have nothing in common. You can't reconcile them. You must use one or the other for either to be effective. Managing to meet safety specifications does not result in continual improvement. At its absolute best it maintains the status quo. Management spends a great deal of time and effort making workers do what they are told to do. Managing to produce outcomes with minimal variation from the target requires trust between management and all workers. Together they spend most of their time learning how to make the system do what it has to: produce products and services to delight customers.

Managing safety for continual improvement requires a new level of thinking. Employees are viewed as safety problem solvers, not the reason accidents occur. Safety management must continue evolving to meet customer demands. Methods created to monitor and control employees are not needed, they are a distraction, in new management model.

However, someone must manage the safety system. The new safety management model gives joint not shared responsibility to those who work in it. That means hourly people help gather and analyze data and make decisions that directly impact safety performance. Managers remove the barriers that prevent these activities. Associates that participate will become experts at working in teams; using profound knowledge; and applying the Plan, Do, Study and Act cycle to safety problems in the system.

This new approach will help companies achieve a level of safety performance once thought impossible. The question for today's safety professional: Which theory will you use?



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