

How to Create a Safety Culture

by Ronald J. Schenk, CUSP

Introduction

Culture is a word we often associate with the society of a nation or a region of the world. However, culture is also a concept that can be applied to a single company or even a department within a company. Every utility has a company culture. Each department within that utility is likely to have its own culture, as well. That departmental culture can mirror the culture of the larger organization or be at odds with broader culture of the company.

Often, cultural differences within the various departments of an electric utility are the greatest when it comes to safety. For example, safe work practices may be enforced in the office or the generating plant but may be relaxed during field operations involving transmission and distribution crews. Ironically it is the T&D Operations Department of a utility that is frequently exposed to the greatest risk. Crews are expected to repair lines and equipment at night or during storms. But, even during routine maintenance of the system, high-voltage electricity is unforgiving, allowing no mistakes without serious consequences. The lack of safe work practices are often life threatening hazards to lineworkers.

The safety culture of the utility's T&D Operations Department, as we will see, is a key performance driver that determines how the employee internalizes safety as part of his or her job.

Safety as a cost of doing business

In the early part of the 20th century the industrial world was building at a break-neck speed. Construction projects often included high-rise buildings, something new to cities. One such project, in 1932, was the construction of the Empire State Building in New York City. It was an ambitious project of 102 floors and would employ thousands of workers to build. Worker safety, at that time, was not generally the concern of the employer. Workers looked out for their own safety. Past experience told construction cost estimators that a certain number of workers on a high-rise construction project would likely be killed and injured. This loss was expected and with the Empire State Building, estimators actually added the projected cost of fatalities into the figures: one fatality per floor was expected and became part of the total estimated construction cost. Injuries and fatalities were just another cost of doing business, like the steel and concrete. Nothing unusual about that practice. It was the culture of the times. As many as 102 fatalities were expected and accepted as a cost of doing business.

Fortunately, only 5 fatalities actually occurred by the time the Empire State Building was completed. It sounds odd to us now to be saying only 5 people were killed, but in the culture of the times, this was good news indeed. Only 5. We can imagine the owners celebrating. They didn't have to pay for 97 lives. They saved lots of money.

Are injuries and fatalities an accepted cost of doing business at your utility or is safety a corporate strategy in your organization and an integral part of your culture?

Safety as a corporate strategy

Thankfully, over the past 80 years, attitudes about worker safety have significantly changed, although many organizations still have much work to do.

There is a new paradigm in safety performance that is emerging within the best managed utilities: safety as a corporate strategy. Could safety policies, procedures and practices actually become part of a utility's strategy to succeed in the marketplace? Are zero injuries and fatalities actually achievable? Could better results in safety give us a strategic advantage? Yes, yes, and yes.

A few years ago, the Institute for Safety in Powerline Construction (ISPC) conducted a survey on the proposition that '*Safety is Good Business.*' The electric utilities participating were those in which 'safety' was included in their Mission Statement. ISPC asked these senior managers to list the reasons why they felt safety was good business for their companies. The top 6 reasons given are shown in exhibit 1.

Exhibit 1

Top Reasons for Safety given by CEOs of Electric Utilities

- Employee Health/Moral Obligation
- Legal/Compliance Requirements
- Cost Effectiveness
- Worker Productivity
- Employer of Choice
- Customer/Public Expectations

In each case the utility managers felt that significant benefits accrued to their organizations because of their culture of safety. Safety is quickly becoming a strategic advantage for the best performing electric utilities throughout the world today, though to gain this change in culture, paradigms must shift.

Shifting paradigms in safety cultures

Changing the way one person thinks takes time. Changing the way all employees of a department think takes even more time. For an entire organization to change a safety mindset is a daunting challenge. But there are areas within successful organizations that can be observed and identified as paradigm shifts from the safety culture of old to the strategic safety culture of today. Here are ten areas within high performing electric utilities where we find paradigm shifts relating to safety.

1) From government regulations to corporate responsibilities

The U.S., in response to poor worker safety, created the Occupational Safety and Health Administration (OSHA) in 1972. Regulations, enforceable by law, began to govern the workplace and over the past 40 years, worker fatalities have fallen from 55,000 per year to 5,500 last year. That's good, but not good enough. The new paradigm says that government regulations must now be supplemented by a strong sense of corporate responsibility, to achieve the next level of performance: zero workplace fatalities or injuries. The underlying assumption that must be part of the new culture is that no one should get hurt doing their job. Period. When zero workplace fatalities are expected and managed for, the top performing utilities are top performers in safety, too.

2) From failure-oriented to achievement-oriented

Most electric utilities measure their safety performance by tracking and measuring their failures – incidents that occur, including severity and cost. These are called ‘outcome’ measurements and will always be important, but these types of measurements are lagging indicators for us. We know about these incidents after the fact and now cannot prevent them. The new paradigm says we must focus our energies upon defining what success means and how to achieve it. Success, to these top performing utilities, means preventing the incident in the first place. Prevention is what must be achieved. This change in focus means now we look at process measurements to ensure that we have the correct policies, procedures, and practices to help avoid incidents. Process measurements are leading indicators for us, and they include things like pre-job meetings for T&D crews, safety meetings, training, near-miss analysis, and the wearing of personal protective equipment. As these things taper off in their routine use or when workers ignore them, incidents increase. By measuring these leading indicators and pushing to keep them an important part of the culture, we *achieve* success: preventing incidents.

3) From outcome-focused to behavior-focused

Effective safety management is all about systems, processes, and behaviors. It’s easy to think that the Safety Manager’s job is to create a safety manual, set back, record the infractions, and then meter out punishment. When we manage this way, we are just focusing on the outcomes. Again, as stated earlier, we must always understand what happened in an incident and why, but working safely requires a series of correct behaviors in any given job task. We know, or can know, what those correct behaviors should be by doing a Job Safety Analysis (JSA). See exhibit 2 on next page. For example, a lineman, working on an energized line should always work slightly below the conductor, reaching up. This is a best practice working position. If the lineman is positioned above the conductor and loses consciousness he won’t fall or slump into the energized line – most likely a fatal act. By compiling a JSA for performing job tasks while working on energized lines from a bucket, this hazard would be identified. Mitigating this particular hazard includes a procedure for working position. Observation of crews doing this type of work then allows us to document behavior compliance. Safe and unsafe behaviors can be observed and should be. The new paradigm includes Behavior Based Safety practices, and every Safety Manager should be well schooled in BBS.

4) From ‘top down’ to ‘bottom up’ involvement

The old adage that safety starts at the top is still true. If management is not involved and committing the resources required to create a culture of safety, the message is clear to workers – safety doesn’t really matter. But the ‘buck’ doesn’t stop with management anymore. The rank and file must be involved and committed. As a matter of fact, the bulk of what we do in safety and how we do it, should truly come from the workers. Management is still responsible for committing the resources, but as far as possible, it is the workers who should be calling the shots. The new paradigm says that safety is part of everyone’s job – literally. The requirement to work safe is spelled out in the Position Description and should be part of how every employee performance appraisal is conducted. Workers being judged on safety performance are more likely to focus on those performance measures. And today’s workers increasingly want to be involved in the decision making, helping to create policies, procedures and practices that affect them. Increased involvement means increased commitment.

Exhibit 2
Job Safety Analysis

JOB SAFETY ANALYSIS T&D Operations Department Any Electric Utility, Inc.	JOB TITLE: Working energized lines from a bucket JSA No. 123 Page 1 of 1		DATE: 10/10/2022	NEW: × REVISED:
	TITLE OF PERSON WHO DOES JOB: Journeyman Lineman	SUPERVISOR: Crew Foreman	ANALYSIS PERFORMED BY: Safety Manager and Joint Safety Committee Members	
	LOCATION: Field	DEPARTMENT: T&D Ops.	REVIEWED BY: Operations Mngr	
<u>SEQUENCE OF BASIC JOB STEPS</u> 1. XXXXXXXXX	<u>POTENTIAL HAZARDS</u> XXXXXXXXXXXXXXXXXX	<u>RECOMMENDED ACTION OR PROCEDURE</u> XXXXXXXXXXXXXXXXXXXX		
2. XXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		
3. Maneuver Bucket into position to work on energized lines.	Contact with energized lines	Ground the bucket truck, full insulating PPE for the lineman, maintain minimum approach distances, <i>maneuver bucket to working position below the energized lines and/or equipment to be accessed</i> , apply insulating cover gear while ascending to any energized system within reaching or falling distance.		
4. XXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		

5) From rugged individualism to professional teamwork

Powerline workers have often been referred to as the ‘last of the cowboys.’ They work outside, in all kinds of weather, do dangerous jobs, are highly skilled and essentially come to our rescue when the lights are out. Linemen are somewhat of a special breed. Always have been. There is a kind of mystic about linework. This mystic, however, works against powerline worker safety. It assumes that only a special few can really know how to work on high-voltage lines and that you never ask for help – you charge ahead. Oh, and yes, safety is for sissies. No self-respecting cowboy would have a safety manual in his back pocket. That attitude has gotten many a lineworker killed. The new paradigm says that powerline construction and maintenance is a profession, and the workers are professionals. Being a profession means there are standards of training, competencies, and safe work practices. A professional is subject to continuing education and training, as well. The lead lineman may still be a hard charging individual making difficult things happen in the field, but now it’s his team that will determine his success or failure: the crew, the safety department, the dispatcher, the SCADA manager, the training department, the shop ... and supervision. The smart lineman draws heavily on his team to bring his level of performance up to that of a true professional – and to stay safe.

6) From a piecemeal to a systems approach

Managers of safety must recognize the new paradigm that says any organization is composed of interacting systems. Operations, administration, management, engineering, and each department within these groups, all have definable systems and processes that allow them to function the way they currently do. The dynamic interrelationship of these systems means that nothing really occurs in a vacuum. Any given incident has many things affecting it. The new paradigm says that effective safety management must:

- Take into account the dynamics of systems that interact with the overall safety program
- Conclude that incidents are considered defects in the system
- Accept that people are only part of the complex system, which itself is composed of many processes
- Acknowledge that incidents are results of multiple causes or defects in the system, rarely can one cause be attributed to an incident
- Resolve that to prevent incidents, the systems must work more safely

7) From fault-finding to fact-finding

One of the more difficult paradigms to change is the need to find someone to blame. The old thinking goes like this: ‘if we can determine whose fault this is and punish the worker, it won’t happen again.’ The new thinking says the fault lies within the system or systems that allowed the incident to happen. What then needs to change within our systems? With that paradigm, the first things we need to establish are the facts: what, specifically, within our systems failed? That requires an investigation – one that is truly objective. The best performing utilities use one of the ‘Root Cause Analysis’ programs. Now, from our investigation, it could well be that one of the facts found illustrates that a worker willfully ignored a safety rule and should be disciplined. However, as we examine the broader system, we may conclude that the worker had never been trained in the application of that rule. Thus, it was the training part of our Operations system that failed, not the worker. Two very different conclusions that warrant two very different fixes. If we don’t fix the right thing, this incident will happen again.

8) From reactive to proactive

We are all busy. We're often so busy that our day is made up of reacting to one thing after the other, safety related incidents included. This old paradigm has often made matters worse, because we react to what we think we know about what went wrong. Paradigm shift number 7 explained why we should not jump to conclusions. Paradigm shift number 8 says we need to take that a step further and become more proactive in safety management. As we have seen, the T&D lineworker doing his job in the field is subject to a number of systems that impact his safe job performance. The Safety Manager must take into account how all of these management-made systems relate to an individual worker and ensure that each component of each system reinforces, rather than compromises, safe work practices. Take system engineering design, for example. If the design calls for the system neutral to be above the energized phases rather than below, the lineworker may have to maneuver the bucket around energized phases to get to the neutral. This requires more care and more personal protective equipment. The chance for an incident will increase. Engineering designs, and other management practices, can unintentionally compromise safety for our lineworkers. Proactive management means we are aware of how our decisions affect worker safety performance.

9) From a 'quick fix' to continuous improvement

Reactive management often results in quick fixes, 'fixing' the wrong things in the process. When a similar incident happens again, we are puzzled. We thought we fixed that. The old paradigm of quick fixes says that maybe we'll get lucky in determining what truly was the cause of an incident. The new paradigm knows that luck should be no part of worker safety. The new paradigm also says that any 'fix' may not be the last one and we need to evaluate our performance on a routine and continuous basis. By observing and tweaking our systems to truly re-enforce safe work practices, we aren't waiting for something to break to have an excuse to look at it. Continuous improvement requires the proactive involvement of the worker. They are the ones constantly in touch with our processes, procedures, and practices. Who better to advise us on what improvements can be made to our safe work practices? The best performing electric utilities integrate an attitude of continuous improvement in everything they do.

10) From a priority mindset to a value mindset

Priorities are things that need to get done now, but once completed, we move on. A value is something that permeates our organization in everything we do. We are never 'done' with a value. The old paradigm placed safety as a priority within the organization. That was good – until the priority changed. They always do. The new paradigm says safety is a value, right along with other values that we place in our mission statement, or statement of values, for the world to see. When safety is internalized as a value, just like good customer service, profitability, productivity, or good corporate citizenship, both our employees and our customers know we are serious about safety. As managers we track how we are performing relative to those values. We talk to our people about our values routinely, and we measure our worker's performance by our values. What gets re-enforced, gets done. The best managed electric utilities include safety as a value in their mission statement and when that value is internalized and part of everything they do, they reap the rewards with fewer fatalities and injuries.

Conclusion

Creating a culture of safety within an electric utility is an important part of a comprehensive, effective safety management program. Today's safety culture requires shifting away from the paradigms of yesterday that told us accidents are a cost of doing business; that we must accept workers will get hurt or killed doing their job. The new paradigms, practiced by the most successful utilities, tell us that safety must be a corporate strategy and a value within the organization on par all the corporate values. The new success formula must include safety and a culture of zero accidents and injuries. If your electric utility is not yet at zero accidents, maybe it is time to see how you stack up against the 10 new paradigms listed here. It won't hurt!

About the Author: Ronald J. Schenk, CUSP, is the President of the Institute for Safety in Powerline Construction (ISPC) and T&D PowerSkills, LLC. Ron has conducted seminars and training sessions for Utilities and Contractors around the U.S. and Caribbean on Safety in the Electric Utility Industry. For more information, call 318-767-5802 or email Ron at ron@ispconline.com.