SafetyInfo

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Lessons in Advanced Safety Management

Become a Culture Change Advocate

These lessons are being taught by a safety professional who has a lifetime of experience in safety management across several industry sectors in various countries around the globe.

“Safety is culture-driven,” this professional says. “Everything that occurs or doesn’t occur that relates to safety is a reflection of an organization’s culture.”

Because of the influence of culture on safety, many safety professionals will find themselves in the important role of cultural change advocate. While he emphasizes that changing a culture is not easy and requires the active participation of leaders and teams throughout your organization, He provides several tips for safety professionals to positively impact culture:

- Get top management buy-in for your objectives, ensuring adequate resources are applied and that safety and health are integrated with other organizational goals.
- In communicating objectives to employees, link the objectives to actual environmental improvements, giving them something tangible to work toward.
- Communicate your progress in achieving objectives and targets across the organization.
- To learn from stakeholders, hold an open house or establish a focus group with people in the organization.
- Start with a limited number of culture objectives, then expand the list over time.

Use System Safety Concepts in the Design Phase

Hazards are most effectively anticipated, avoided or controlled in the initial design and redesign process, according to him.. In other words, “safety is achieved by doing things right the first time, every time.”

In applied system safety, the emphasis is on having acceptable risk levels designed into systems before their actual production or operation. But if you can’t start fresh, he recommends using system safety concepts to guide “an orderly examination of an established system or subsystem to identify, analyze, avoid, eliminate, reduce or control hazards” within less-complex situations and without using elaborate analytical methods.

Improve Incident Investigations With the Five Whys

He believes that the "quality of incident investigations, even in some very large organizations, is significantly less than stellar." As a first step to improve this vital element of an operational risk management system, he promotes the adoption of the "Five Why" problem-solving technique.

The technique is simple: Ask "why" five times to determine what caused a problem so you can identify root causal factors and implement effective countermeasures.

He believes the simplicity of this technique is part of its charm — and effectiveness. It does not require extensive and costly training, the use of advanced math or complex models, yet it can mark "a major step forward" in improving the quality of investigations.

Use What-If Analyses to Improve Risk Assessments

Risk assessments are essential components of your risk management system. There are several techniques you may use to assess risks and hazards, with each complementing the other. For instance, it may be useful to conduct a checklist analysis, a failure modes and effects analysis and/or a fault tree analysis. A what-if analysis is one such tool he recommends understanding and using with your team.

When conducting a what-if analysis, a group of people takes a brainstorming approach to identify hazards, hazard scenarios, how incidents can occur and what their probable consequences might be.

All of the questions are recorded and assigned for investigation. Each subject of concern is then addressed by one or more team members, considering the "potential of the hazardous situation and the adequacy or inadequacy of risk controls in effect, suggesting additional risk reduction measures if appropriate."

Prepare for a Successful Safety Management System Audit

Continually auditing your occupational safety and health management system supports improvement by ensuring that your processes and controls are reducing risks. Audit systems fail if they "are not looked upon as assisting management in attaining their operational goals. Safety auditors will not be perceived favorably if their work is not considered an asset to managements who seek to improve their safety and health management systems and their safety culture," he says.

To avoid this outcome, auditors or the audit team should effectively prepare to present their findings during an exit interview. That means being objective in their evaluations of management systems, having good justifications for all findings and being able to support the prioritization of management system improvements.

Auditors should prepare answers to the following questions, according to him:

- What are the most significant risks?
- What improvements in our management systems do we need to make?
- In what priority order should I approach what you propose?
- Are there alternative risk reduction solutions that we can consider?
- Will you work with me to determine that the actions we take and the money we spend attain sufficient risk reduction?

Think Critically When Using Risk Scoring Systems

He understands why safety professionals (especially engineers) like to quantify things. It is a product of education, temperament and the widespread belief that until you can measure something numerically, you don't understand the situation at hand. But he believes there is reason to use caution when scoring risk.

"Numerical risk scores carry an image of preciseness and that can influence decision-making and priority setting. But in reality, they should not be the sole or absolute determinant," he says.

Considering the many different systems he's seen, he offers his own three-dimensional numerical risk scoring system which aims to 1) serve the need of those who are more comfortable with statistics, 2) address the strong beliefs of those who want the frequency of exposure given separate consideration in the risk assessment process and 3) maintain credibility and efficacy.

"Risk assessment is still as much art as science," he says.

Start Participating in Design Reviews by Focusing on Ergonomics

Safety professionals are often asked to participate on design review teams early in design process, and with good reason. In an advisory note, the writers of the Z10 safety management standard say, "An effective design review considers all aspects. . . . The life cycle phases should integrate quality, health and safety, production, procurement, and consider potential impacts."

But if you have never had the opportunity to participate in design at your organization, it's not too late to advocate for safety and health. He recommends starting with ergonomics.

"It is well established that successfully applied ergonomics initiatives may result not only in risk reduction but also in improved productivity, lower costs, and waste reduction. Furthermore, musculoskeletal injuries are a large segment of the spectrum of injuries and illnesses in all organizations. Since they are costly, reducing their frequency and severity will show notable results," he says.

Understand the Management Oversight and Risk Tree (MORT)

New to this edition, he discusses MORT, the Management Oversight and Risk Tree, which he writes is valuable because of the thought base it provides on how incidents happen and what is needed for their prevention.

Developing skills for the application of MORT requires study and continuous application, and he recognizes that becoming skilled at it takes time and effort. However, he believes it's worth being aware of MORT because:

- It specifically promotes inquiry into management's upstream decision-making for the identification of sources of causal factors in much greater detail than most other incident investigation models.
- MORT's premise is that where there are deficiencies in operating controls there will be related deficiencies in management decision-making.
- He recommends downloading U.S. Department of Energy and Noordwijk Risk Initiative Foundation (NRI) manuals for further research.

Adopt Systems/Macro Thinking

To achieve broad adoption of systems/macro thinking in operational risk management, you must switch your perspective from a narrow/micro view, which focuses on the "unsafe acts of workers being the principal causal factors for incidents and illnesses," to a macro, bigger picture view focusing primarily "on the work of systems and work methods as the principal sources for causal factors."
While systems thinking is gaining more popularity among safety professionals, in reviewing 1,950 incident investigation reports, he found that a large proportion of safety professionals often take that narrow view, primarily blaming the worker for injury and illness.

To adopt this systems/macro thinking perspective, you must break with this status quo and become a proponent of a major culture change within your organization. This is easier said than done, however he says that awareness is a critical first step.
"Safety professionals should be well informed on how change initiatives succeed and fail and how success and failure are measured."

Protect Your Team With Safety Management Systems

Learn how to implement safety management systems such as ISO 45001 that have elevated the landscape of safety with goal setting, planning and measuring performance.

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