

The **ARCHITECTURE** of Safety Excellence

By LARRY L. HANSEN

For the past 70 years, American business has focused almost exclusively on the “E” in the safety equation—engineering, education and enforcement. In large part, safety professionals have mastered these areas. Now it is time to work on the building blocks of culture, organizational strategy, performance leadership and organizational behavior—the true accident sources.

A current of dissension is pulsing throughout the ranks of the safety profession. Left unchecked, this unrest will impede the true objectives of the safety profession. One need only read letters to the editor in leading professional journals to fully appreciate the extent of this polarization. The various factions (e.g., compliance vs. programs, education vs. engineering, technical vs. management, behavioral vs. cultural) steadfastly defend their "one best way" of attaining safety excellence and, at times, exchange pointed criticism.

These actions lead one to believe that little agreement exists regarding what must be done to achieve safety excellence. What is the result of these clashes? A growing state of confusion and frustration within the profession. As safety professionals face increased demands for greater results, the pathways to success have become less clear. In the author's opinion, to succeed, safety professionals must broaden their understanding and soften their resistance to change.

NO BEST WAY EXISTS

In *The 59-Second Employee: How to Keep One Second Ahead of Your One-Minute Manager*, Andre and Ward share the anecdotal tale of an isolated civilization that toiled for decades to discover the ideal form of social government and self-rule. After much debate and many failures, the elders cease their efforts and adopt "the law of the TANOBWAY"—a universal recognition that "There Ain't No One Best WAY" (Andre).

Safety practitioners must recognize that success is not an "or" issue (one strategy or another), but rather an "and" issue—one strategy and another and another and another. . . . Safety excellence is not the result of a singular strategy. One cannot cite generic solutions or universal answers because no one best way exists.

Peak safety performance is the result of multiple strategies designed and applied across a broad spectrum of issues and risk factors within an organization. Safety excellence is the outcome of a strategy continuum—one that addresses a company's regulatory, technical, engineering, organizational, behavioral, managerial and cultural loss sources.

To help readers put safety excellence into perspective, this article:

1) Constructs an architecture of safety excellence (what excellence looks like).

2) Identifies strategies of safety excellence (the building blocks of success).

3) Defines the process of attaining safety excellence (key steps, sequence and linkages).

The first step in the pursuit of safety excellence is to address the most-critical question of the safety profession: "Why do accidents occur in the workplace?"

In the author's opinion, the answer is at-risk behaviors—what people do. Behavior is not the next level of safety strategy, it is the ultimate level. Behavior is that critical element of performance that must be addressed in order to achieve safety excellence. More than 70 years of research and observation—from Heinrich's 1930 hypothesis to DuPont's time-tested success—confirm that unsafe behaviors are involved in most accidents. Note the distinction—*involved in*, not *the cause of*. Therefore, the core question remains, "Why do people act unsafely and have accidents?"

Many managers fail to seek true answers to this question. Instead, they rely on some all-too-common excuses: employee carelessness, inattentiveness, disregard for procedure and laziness. In other words, employees are the problem. Such thinking (or lack of it) is the greatest obstacle to success. "An organization will never improve its process if it believes its people are the problem" (Manuele).

In safety, the reality is that poor performance has "good reasons," most of which are inherent in the planning, design, implementation, maintenance, administration and modification of the process—not in the individual. Only by eliminating these process causes can an organization attain safety excellence.

Identifying and addressing these "good reasons" requires a comprehensive change strategy—one that addresses both process and people. Smith, co-author of the QS-9000 quality standards, identifies three levels of change, each having a progressively greater impact on operational results:

Level 1: Corrective Change: Fix what is broken—the most-common type of change.

Level 2: Continuous Change: Improve what is—the most-accepted type of change.

Level 3: Creative (Innovative) Change: Do something totally different—the most-profitable type of change (Paton).

When implementing the strategies outlined here to create an architecture of excellence, one must keep these change levels in mind: Assess an organization's current position, then define the change level and target strategies needed to achieve greater success.

SAFETY PROGRAM (TRAINING) STRATEGY "THINK SAFE . . . BECAUSE IT'S GOOD FOR YOU."

The first foundational strategy is the safety program. Its premise: Safety results will improve by changing employee attitudes. This strategy attempts to improve employee safety awareness through policies, procedures, meetings, training and disciplinary policies.

Common tactics include development of manuals, orientation programs, remedial training/retraining and progressive disciplinary programs. Research on the effectiveness of training has reported limited impact on accident rates and costs; a comprehensive study by the Dept. of Energy on selected sites actually confirmed an inverse relationship (Crites 28+).

COMPLIANCE STRATEGY "YOU WILL BE SAFE . . . OR ELSE."

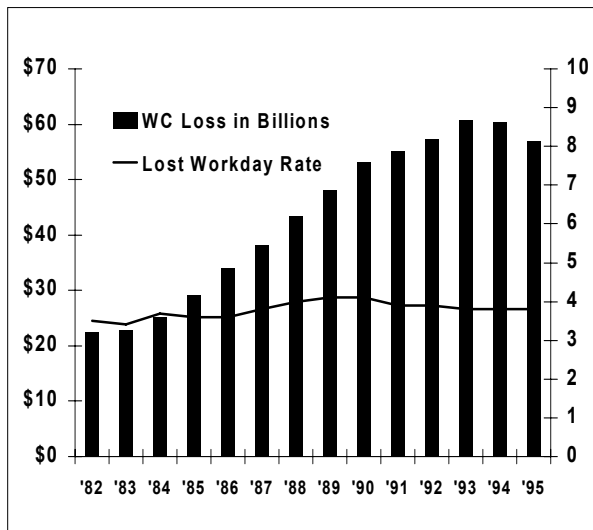
The second (and legally required) strategy is regulatory compliance. Its premise: Safety results will improve by changing a company's level of statutory compliance. The focus is on improving conditions, facilities, equipment and the work environment in accordance with minimum regulatory mandates. Common tactics include facility inspections, compliance audits, walkthroughs, and programs that address minimum requirements and action levels subject to citations, fines and penalties.

TECHNICAL STRATEGY "IT'S CHEAPER TO BEND STEEL THAN BACKS."

Engineering strategy is the third foundational element. Its premise: Safety results will improve by raising the level of safety engineering and physical safeguarding in the workplace. It emphasizes automation, ergonomics, work methods, work flow, worker/machine interfaces, mechanical advantage, safeguarding and process design. Some common tactics include ergonomic task assessments, workstation redesign, work flow analysis, ergonomic devices, tool design, and engineering safety into new processes or retrofit safeguarding.

Combined, these three strategies form

FIGURE 1 Incident Rate & Workers' Comp Costs



what is called “traditional safety”—the three “Es” of safety: education, enforcement, engineering. *Industrial Safety & Hygiene News’* “1998 Readers’ Poll White Paper” confirms the continued dominance of these strategies throughout industry:

STRATEGY	USAGE
Program	81 percent (education)
Compliance	74 percent (enforcement)
Technical	75 percent (engineering)

Unfortunately, continued reliance on traditional strategy has not had a significant impact on national incident rates or workers’ compensation (WC) costs. Safety programs (training) educate workers, yet may have minimal impact on safe work behaviors. Compliance strategies keep an organization legal, yet may not lower loss-related costs. Technical strategies, although based on sound engineering principles, are often limited due to retrofit obstacles. Despite these problems, these strategies represent the current state of the art of safety in many organizations, where emphasis on training, enforcement and engineering has produced flat incident rates and escalating WC costs (Figure 1).

Although these are certainly not the wrong activities, in the author’s opinion, they are simply not the activities needed to achieve better results and lower costs. As the ISHN research confirmed, safety professionals are highly efficient (doing things right), but minimally effective (doing the right things).

Peak-performance organizations have recognized the need to pursue Level 3 change in safety—they are pursuing totally different activities. They have shifted from staff-administered, antecedent-driven regulations and safety programs to line-owned, consequence-driven management processes.

Such companies have embraced the truth concerning safety excellence—as revealed by Weaver in the 1960s: “Excellent organizations frequently achieve exceptional safety results in the absence of any visible safety program. . . . Excellent safety performance cannot be attained in a generally poorly managed organization.” In the author’s opinion, Weaver’s premise that “safety really is nothing more than a by-product of doing right things right” has come of age. In other words, safety must be embedded in the business process.

World-class organizations bridge the safety performance gap by creating a second critical foundational strategy—one of values and safety culture. Building from this foundation, progressive organizations construct the additional building blocks critical to success: organizational strategy, performance leadership, and behavioral strategies that link with and support traditional strategies.

SAFETY CULTURE:

“YOU CAN’T DO SAFETY UNTIL YOU ‘BE’ SAFETY.”

The fourth foundational strategy is that of safety culture. Its premise: Safety results will improve if an organization changes its values, vision and executive leadership of safety. As Andrew Carnegie once said, “As I grow older, I pay less attention to what men say. I just watch what they do” (*Mr. Quotes*).

Safety culture deals with the “unwritten rules” that determine whether safety is valued by an organization. It is forged more by what executives do (actions) than by what they say (proclamations). Tactics designed to strengthen safety culture include vision and mission building, values clarification and commitment to high-visibility executive involvement in the process.

In *Values-Driven Safety*, Eckenfelder emphasizes that one’s actions are a moving picture of one’s beliefs. In this book and in “It’s the Culture, Stupid,” he presents a convincing case that culture predicts results. He contends that a company’s basic beliefs and values (its culture) impact its decisions, which, in turn, define its systems and structures, which influence manager practices, which shape employee behaviors and ultimately determine results achieved. If executive values are weak, downstream organizational behaviors will compromise safety, and accidents, injuries, claims and losses will be the predictable outcomes.

**ORGANIZATIONAL STRATEGY
“SAFE BY DESIGN—ORGANIZATIONAL DESIGN.”**

Organizational strategy—also known as safety management—is the fifth safety strategy. Its premise: Safety results will improve if a firm changes the management systems and structures that integrate (or isolate) safety within its operations. This strategy addresses the “written rules.” Tactics include creating policy and procedure; defining responsibilities and authorities; implementing budgeting processes; setting goals; developing action plans; and measuring and creating accountability for results.

In work to relate safety strategy to TQM principles, Carder emphasizes the critical relationship between organizational structure and operational results. “By focusing only on individual behavior, the system potentially ignores at least 85 percent of the factors controlling safety” (23+).

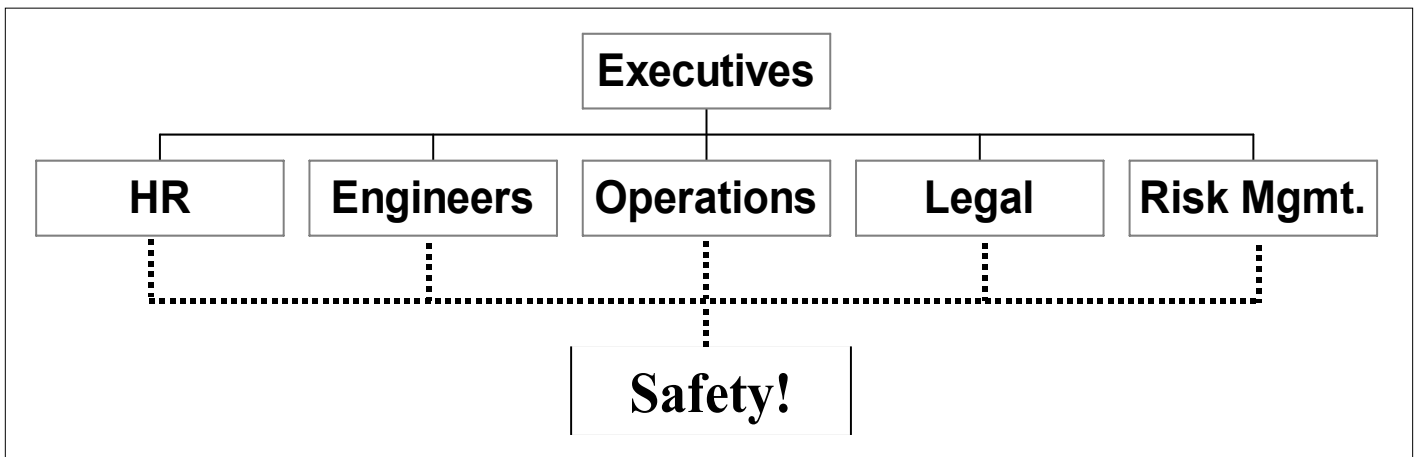
Based on this premise, a company that effectively builds safety into its systems and structures through organizational design, job descriptions, defined responsibilities, communications, performance measurements and reward systems will positively impact manager practices, employee behaviors and the safety results they produce.

**PERFORMANCE LEADERSHIP
“SAFETY FOLLOWS THE LEADER.”**

The sixth safety strategy is performance leadership, also known as performance management. Its premise: Safety results will improve if an organization changes its management practices from punitive to reinforcing. This strategy addresses the inherent deficiencies of hierarchical command-and-control management. It recognizes that how employees act (safe or unsafe) is heavily influenced by how managers manage (positive or negative).

To maximize safe behavior, managers must create a work environment that encourages and rewards “safe” performance. This means moving from autocratic to participative styles; from hierarchical to team environments; from manager control to employee empowerment; from punitive policies to reinforcing practices. In other words, “Managers must act employees into thinking differently” (Geller).

FIGURE 2 Safe Organizational Behavior



BEHAVIORAL SAFETY
“SAFE IS HOW WE DO BUSINESS.”

The seventh—and, in the author’s opinion, perhaps the most-critical—safety strategy is behavioral safety. This is the “keystone” strategy, in that it locks all others into a high-performance architecture which, when stressed, stiffens rather than weakens. Its premise: A company will improve safety by changing organizational behaviors—what people do.

True behavioral strategy addresses the actions of *all people* within an organization—not merely those of front-line employees. In the author’s opinion, this is the ultimate safety excellence strategy in that it encompasses:

- Safety education and training—what human resource personnel do.
- Statutory compliance—what legal and regulatory affairs personnel do.
- Safeguarding and process design—what engineers do.
- Values and visible leadership—what executives do.
- Systems and structures—what managers do.
- Management practices and motivation—what supervisors do.
- Safe behavior—what all workers do.

Safety excellence is a function of individual and organizational behavior, both of which are a function of organizational culture—that force which determines what everyone does to drive safety through the process.

As Figure 2 illustrates, safety cannot be positioned in any one place within an organization; rather, it must be fully integrated and assumed by all functions. To be effective, the safety function must report to a senior line executive and be positioned to support all functional operations within the organization.

This is the “critical success factor” discovered and embraced by DuPont Corp. in its journey to world-class safety leadership. “Safety responsibility (command authority) must always be a line management responsibility. The safety function

must always be a support, never a decision-making authority” (Thomen).

As the architecture developed here illustrates, the formula for safety success combines multiple strategies: Safety success = CEO^u, where C = culture; E = elements of safety; O = organization (how safety is designed); and u = you (the ultimate power of success).

For the past 70 years, American business has focused almost exclusively on the “E” in this equation—engineering, education and enforcement. In large part, safety professionals have mastered these areas. Now it is time to work on the building blocks of culture, organizational strategy, performance leadership and organizational behavior—the true accident sources.

Safety professionals are the ultimate power of success—the architects of safety excellence—within their organizations. They must identify which strategies will shape the behaviors needed to succeed in the quest for safety excellence. ■

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