How Healthy Are Your RISK MANAGEMENT PROGRAMS?

By Peter T. Susca

The capacity to prevent and predict risk has its center of mass in processes and organizational culture. These two aspects of an organization are indicative of the future decisions of leaders and workers.

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Successful business management is predicated on the effective use of processes (programs and systems) to manage performance. To ensure that risks threatening performance can be predicted, prevented or effectively managed, the essence of what it takes to sustain effective programs and systems must be well understood. Because all processes are similar in their design, every gap or opportunity to improve the effectiveness of programs and systems is applicable to all elements of the business. This article outlines principles that OSH professionals can use to evaluate the health of programs and management systems in their organization.

Risk-Based Programs

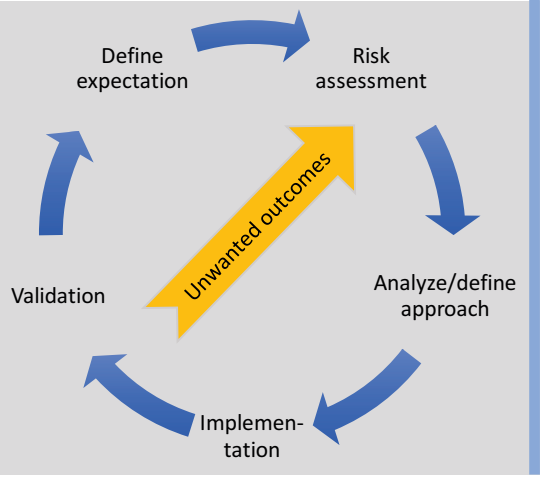
Programs should be thought of as formal processes designed to manage a particular aspect or risk (e.g., falling from height). A common example of a program is the format that OSHA uses to design regulatory standards. Starting in the 1980s, OSHA has been designing regulatory requirements in a programmatic fashion to ensure that workplace risks are managed in an appropriate and sustainable manner. The core elements of these standards require the employer to assess and control risk, train, keep records and evaluate its approach. OSHA's standard on process safety management for highly hazardous chemicals outlines a program that incorporates many elements of an effective management system.

Programs are more than just procedures; they include a series of elements that work together to control risk. Because programs are processes, they should be built and evaluated against the guidance outlined in the Process Health Checklist (*PS*, August 2018, p. 20). Programs typically include elements such as purpose, scope and applicability, roles and responsibilities, risk assessment, risk prevention and control (e.g., equipment, procedures, plans, permits), training, communication, data management, validation (i.e., assessments of conformance and effectiveness) and program review. For programs to be effective and sustainable at risk management, they must have the capacity to self diagnose their own shortcomings. These self-diagnostic elements include inspections, observations/conversations, training, auditing and program review.

Organizations with high-order safety expectations (e.g., no injuries or harm) need high-performance programs designed within a continual improvement cycle (e.g., plan-do-check-act or define-measure-analyze-improve-control) to achieve and sustain a specific standard of care (Figure 1). To have any chance of achieving a high standard of safety performance, safety programs must be designed to achieve a defined level of acceptable residual risk (i.e., risk remaining after controls are implemented). Therefore, if the expectation is zero harm, then safety programs calibrated to OSHA compliance may not offer enough risk reduction to meet that goal.

For example, programs that rely on the good day control triad of work procedures, training and PPE may be insufficient when changes/distractions (e.g., jammed machine, end of the month production push, problems at home, etc.) impact worker attention and focus. (For a discussion of good day controls and bad day controls, see *PS* March 2018, pp. 18-21.) OSHA's Control of Hazardous Energy (lockout/tagout) standard is a great example of a thorough programmatic approach to manage specific fatality

FIGURE 1
THE CYCLIC ELEMENTS OF A SAFETY PROGRAM



Business Class Article Series

This article series chronicles the principles and techniques that readers can apply to transition safety and the safety profession closer to the core of what organizational leaders value. The foundational philosophy is that safety challenges stem from larger organizational issues. By understanding the core business values, OSH professionals can begin to work from the inside out to engage business leaders, rather than the typical outside-in approach to integrating safety with business. If leaders can tap into this information, they can use it to improve the organization as a whole, and move safety from a purely moral imperative to an indicator and facilitator of organizational health.

risks. While most of the plan-do-check-act elements are contained in this approach, its weakness is that worker safety is dependent upon good day controls, which count on workers being 100% reliable every day. When workers do not follow the energy control procedures, it leads to excessive fatality risk. Quite often these people work alone and, because the auditing aspect of the standard is not always deployed in a robust manner, many organizations never witness this risk in play. Over time, these workers become accustomed to excessive risk, creating an opportunity for one distracting event to facilitate a bad day.

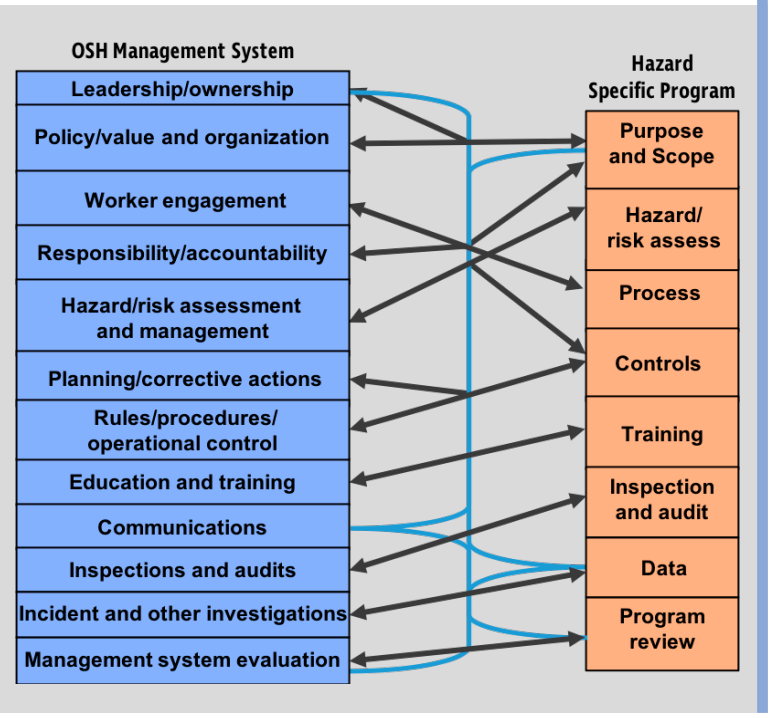
The controls defined in programs should match the performance expectation of the organization. Organizations can only obtain the level of risk that they build into their approach. If an organization expects zero harm to its workers, then it needs to implement zero-harm-based hazard decisions and controls. At lower control levels, the assurance and validation elements of the program become much more critical. Risk potential increases as organizations grow, change and diversify. Attempting to manage risk within these organizational dynamics requires a more robust approach than a series of risk-based programs, especially those dependent on low order controls. Many organizations that manage OSH by programs alone stall at a plateau of safety performance. Many even slide backward. Forward progress through this plateau necessitates an overarching, integrating and strategic mechanism such as a management system.

The Connection Between Programs & Management Systems

Management systems are the strategic arm of any effective risk management approach. They create the overarching methodology to which all actions are tied and data is processed. Management systems are made up of a series of interconnected elements that drive the continual improvement of a particular discipline or aspect of an organization (e.g., safety, quality, environment). Over the past 30 years, management systems have increased in notoriety based on the creation of consensus standards from organizations such as ISO, BSI, ANSI and OSHA. Whether they are designed to manage quality, OSH, environment or energy, the foundational elements and principles are the same. While these standards represent tremendous value, management systems should not be thought of only in the context of standard conformance and certification.

The foundational elements of a management system closely match the elements of a robust program. For a series of risk-based programs (OSH or otherwise) to be sustainably effective in a dynamic organization, they need to be hard-wired to a management system, not just included in the system as a reference to operational controls, rather connected element by element. Figure 2 illustrates some connections for the common transmitters and receptors between programs that manage tactical risk and management systems that manage strategic risk. This alignment and cross talk between common and related elements is critical to a healthy predictive approach to risk management.

FIGURE 2
PROGRAM & MANAGEMENT SYSTEM WIRING DIAGRAM



The elements in the management system should be used as the master design and operating standards for similar elements in the programs. This provides for a consistent approach and, if done right, it is more cost effective to deploy and continually improve. The training element of an OSH management system provides a great example of this relationship. Training (e.g., education, knowledge, skill building, competency) as an element should be interconnected with other system elements such as risk assessment; operational control; standards, rules and procedures; and inspections and audits. The training element defines the learning management approach for OSH, which includes subelements such as needs assessment, learning objective development and course design. If the management system element (training in this case) is the design standard for all training requirements in each risk-based program, then, accordingly, the attributes (good and bad) will be carried to all of the programs.

If no management system is in place or if the programs are not well connected to the system elements, a certain amount of variation will be created. Some variation will be trivial in nature and some may be significant. When programs are not connected to a management system, the identification of serious gaps in processes and their application requires an immense amount of inspections, observations and auditing using individuals who thoroughly understand process effectiveness. The capacity to do this well from a resources and skills perspective is beyond most organizations' ability, thereby leaving many to learn from events.

The Root-Cause Test

One way to evaluate the effectiveness of an organization's risk control approach is to understand and evaluate what it believes are root causes. When an in-

cident or nonconformity is reported and investigated, a causal analysis approach (e.g., five-why, fishbone) is typically used to determine the reasons for the event. What an organization commonly believes are its root causes indicates its capacity to understand the interrelatedness of programs and management systems to predict future events.

Because incidents offer the worst way to learn, when they occur an organization must make the most of the opportunity to understand and prevent the reasons. This is not always the case in many organizations. Root causes are typically identified and addressed as program gaps. Since the names of program elements are similar to those of a management system, organizations often fix the program symptoms and never recognize or resolve the bigger systemic issues.

Although training is rarely a sole root cause, we can use the training element described earlier as an example. When a shortcoming is identified as a result of an incident, often the corrective action is to fix the person and/or the training.

A case in point comes from an organization that offers hundreds of safety training hours to its workers on an annual basis. My team reviewed the following incident (along with many others) to determine the organization's capacity to identify and correct its systemic issues. As a result of an electrical shock incident involving a maintenance worker, an incident investigation was conducted. The investigation identified that the worker had received the requisite training, but did not follow the company's electrical safety procedure when verifying zero energy. The company held the worker accountable for not following the procedure and required him to retake training before resuming work.

Upon review of the information gathered, many questions needed to be asked to evaluate the health of the program and the management system. A few examples specific to training are:

1) What were the learning objectives for the training?

2) Are the learning objectives appropriate for the performance expectations of this task?

3) How was the performance to the training expectations (learning objectives) validated for this worker?

Because the control for this fatality hazard was managed using the good day control triad, the validation of knowledge, skills and decision making is vital to the survival of a worker on his/her best day. The question is, was the worker set up to succeed?

The following information was revealed after asking the three questions noted:

- No measurable learning objectives were associated with the training.
- Various qualified senior electricians taught the classes resulting in different learnings by the participants.
- No evaluation of learning, skills or decision making took place as part of the training. However, it was unclear how this would be performed considering the absence of learning objectives.
- No evaluation of competence was performed for this worker after the training.

CORE PRINCIPLES OF EFFECTIVE PROGRAMS

- **Because programs are processes they should be built and evaluated against the guidance outlined in the Process Health Checklist (*PS*, August 2018, p. 20).**
- **If an organization expects zero harm to its workers, then it needs to implement zero-harm-based hazard decisions and controls.**
- **Organizations with high order safety expectations (e.g., no injuries or harm) need high-performance programs designed within a continual improvement cycle.**
- **Management system elements should be used as the master design and operating standards for similar elements in the programs.**
- **Common system and program elements must be hard-wired together.**
- **An organization's capacity to predict risk and uncover gaps in programs and management systems is evident by what it refers to as root causes.**
- **Many organizations find and fix programmatic symptoms but fail to identify their systemic origins.**

These facts should lead an organization to question the health of the electrical safety program but, more importantly, the health of its management system. Organizations that gather this level of information will often fix the training aspect of the program and never examine the bigger question, is this a systemic issue? In this case, because there was no organized learning management approach, similar gaps existed in 80% of the organization's OSH programs. The company was living with a significant amount of risk without knowledge of its existence. The management system shortcomings led to programmatic shortcomings. Unfortunately, the organization did not have the capacity to find these gaps before or after an incident.

Conclusion

OSH professionals should apply the principles outlined herein to the evaluation of their risk-based programs. Every principle that applies to OSH program and system health is equally valid for the other business values and processes. OSH staff should compare notes with peers in quality, environment or human resources to help understand and see the indicators of poor process (program and system) health. The result should be good business solutions, not just good OSH solutions. Focus on these main principles:

- Where a management system exists, program elements should follow the design standard set by the master management system elements.
- Work processes, risk-based programs and management systems should all meet the healthy process criteria (see Process Health Checklist, *PS* August 2018, p. 20).
- All risk-based programs should be designed to and in sync with the organization's safety performance expectations.
- Test the organization's capacity to predict risk and uncover gaps in programs and management system by evaluating the root causes that are typically identified.
- Ask system health questions when outcomes from incidents, near-hits and nonconformities are identified. **PSJ**