

Vibrant Management Systems

The Center for Chemical Process Safety's (CCPS) Vision 20/20 program provides a comprehensive view of what great process safety looks like. The first installment of the Process Safety Visions (PSV) column (*CEP*, Nov. 2016, p. 22) introduced Vision 20/20 and discussed its first industry tenet, committed culture. While a committed culture is vital to establish and sustain a progressive safety culture, it alone is not enough to foster great process safety.

Building on the need for employees to understand senior management's expectations and for those expectations to be documented and shared, Vision 20/20's second tenet is vibrant management systems. A vibrant management system has a structure that clearly defines and documents expectations and roles for anything that can affect process safety.

Vibrant management systems are ingrained throughout the organization, and readily adapt to its varying operations and risks. For vibrant management systems to be effective, all employees must have a clear understanding of their role in managing process safety. The management systems promote inherently safer design principles and the principles of risk-based process safety. The word *vibrant* emphasizes that the management system must be flexible and adaptable to meet ever-changing needs and must work well with facilities of all sizes in the organization. Companies with great process safety performance do not impose the most complex systems on their facilities; instead, they require systems that are fit-for-purpose.

What Does It Mean?

For vibrant management systems to be effective, all employees must clearly understand their role in managing process safety. This means the management system must:

- be documented, accessible, and user-friendly
- define how operations are conducted at the workplace
- promote safety in design, operations, and maintenance
- be agile and continuously improved.

What Is the Value?

- Vibrant management systems support both safe *and* reliable operations.
- Everyone in the organization consistently works together toward the same goal of great process safety performance.

What Can I Do?

- Share your learnings and suggestions for improving the system.
- Do your part as a member of the team — use the system!



What Does It Look Like?

A vibrant management system is documented, readily accessible by all employees, and easily used to access process safety content. If the management system is not user-friendly, it will be of little value. Most importantly, make sure it is written down and convenient, and the details will work themselves out over time. Because a vibrant system adapts to the work environment, employees see it as relevant to their work. Be sure that duplicate or obsolete elements and requirements are eliminated to avoid potential confusion.

It includes all 20 elements of CCPS's Guidelines for Risk Based Process Safety and all process safety elements required by local regulations. The 20 elements are based on collective industry knowledge and experience. They can serve as a good foundation for customizing a management system that meets the needs of your company. You can start by making sure that your system includes at least basic content about each of the elements. It's also important that your management system references applicable regulatory requirements.

It defines the process safety-related activities used at the site and/or company, such as hazard identification, incident investigation, and action-item tracking. Although this could become quite intensive, you can start small by simply defining some of the core requirements for these activities, and adding more details later. It is important to be clear about which activities are required and what questions they are answering, as well as how these various activities interrelate.

The requirements defined in the management system are commensurate with the complexity and significance of the activity. Make sure your requirements are not overwhelming, and ensure that they are appropriate for the level of risk. A management of change (MOC) review for replacing a water line may not need the same detail as one for adding a hydrocarbon storage vessel.