

Intentional Competency Development

The Process Safety Visions (PSV) column takes an in-depth look at the Center for Chemical Process Safety's (CCPS) Vision 20/20 industry tenets and societal themes. This month we discuss the tenet of intentional competency development.

Competency development means ensuring that all employees meet the technical, behavioral, and cultural requirements of their jobs. It is critical to process safety performance, because no matter how committed the culture (Nov. 2016, p. 22), how vibrant the management system (Jan. 2017, p. 55), or how disciplined the company's adherence to standards (March 2017, p. 21), highly competent employees are necessary to implement those systems.

Competency development is more than just a check-the-box exercise during the annual performance appraisal cycle. It involves nurturing experience — individuals should not be rotated out of jobs before they can contribute effectively.

Companies with great process safety performance employ many forms of competency development, including continuing education, seminars and symposia in their field, mentoring, job rotation, and participation on industry committees.

What Does It Mean?

- Intentional competency development needs to be a corporate priority.
- Competency development applies to all levels in the organization. Executives should have a basic understanding of process safety and risk management.
- Competency development requires understanding competency expectations, providing educational resources, and allowing time for people to build competency.

What Is the Value?

- Highly competent personnel drive great process safety performance and enhance reliability in design and operation.
- Intentional competency development supports both safe and reliable operations.

What Can I Do?

- Develop a plan to fill your competency gaps.
- When you're outside your area of competency, contact an expert who can help.
- As a leader, build and recognize the competence of your team members.

What Does It Look Like?

At the start of a new assignment, personnel receive training on the process hazards and barriers/safeguards that they will be responsible to manage. A simple way to start enhancing overall competency is to provide basic training in the process hazards and safeguards to new unit managers, operators, and engineers assigned to a unit. This training does not need to be complicated or lengthy, but should be detailed enough to provide a solid foundation. It needs to clearly explain the hazards, the potential consequences, and the barriers/safeguards in place to control the hazards. And, it should reinforce the message that the managers and technical staff, not just operators and maintenance technicians, are responsible for the reliability of those barriers and safeguards.

Employees routinely access technical resources, such as subject matter experts, documented guidance, and coursework. Dedicated employees want to learn and want to do a good job. Give them the tools they need to succeed! Purchase relevant codes and standards, starting with the most critical. Encourage employees to sign up for a class or attend a technical symposium and apply their learnings on the job. This usually is not a major expense. Set up a plan — one course per year is better than no courses at all. If you have several people who need the same training, consider bringing in experts to conduct training in-house.

Operators demonstrate an understanding of safe operating limits and steps to correct or avoid excursions. Few things may be more important than your operators taking the correct action during a process upset. Operating procedures define the safe limits and response actions, but do the operators really know them? Create quizzes or tests that confirm employee competency. Conduct "what-if" training for operators on various scenarios and document and review the answers. If an operator is struggling, take action to improve their understanding.

Managers verify that procedures and plans are developed with input from appropriate technical experts. This does not necessarily require resources, just a commitment and understanding from management. Consider adding questions or statements to procedures and work plans to prompt managers to verify that technical experts were involved in developing the procedure.

