Achieving Excellence in PSM Through Competency

AcuTech

CCPS
MIDDLE EAST
PROCESS SAFETY
CONFERENCE

David A. Moore, PE, CSP, CPSA
President & CEO
And
Cara Hamel
PSM Engineer
AcuTech Group, Inc.
Vienna, Virginia, USA 22182
www.acutech-consulting.com

October 9-11, 2017
Bahrain International Exhibition and Convention Centre

1

Overview

- What is Process Safety Competency?

- Importance of Strong Competency

  - CCPS Guidelines for Risk Based Process Safety

  - CCPS Vision 20/20

- Key Principles of PSM Competency
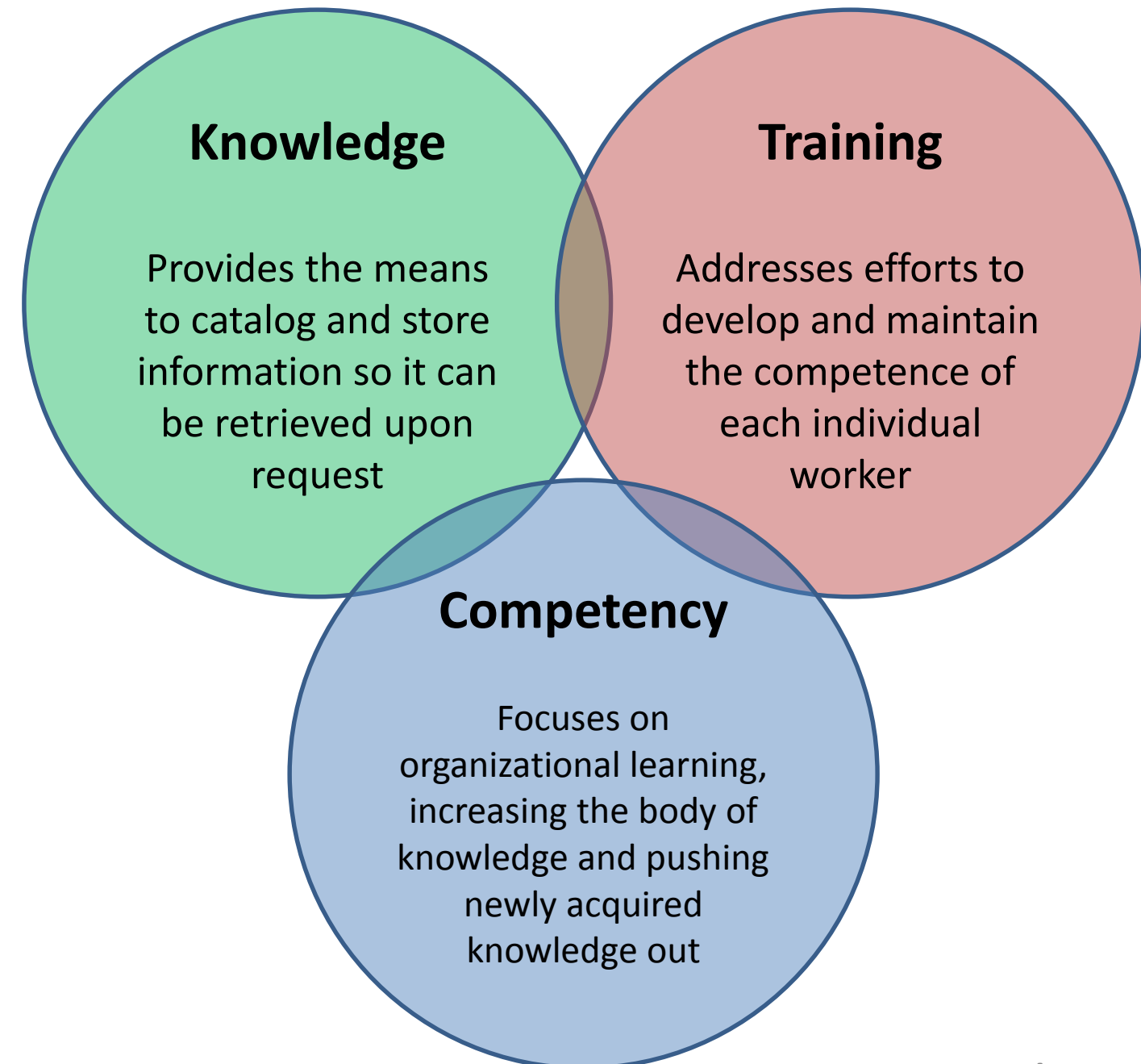
- PSM Competency and Culture

What is Process Safety Competency?

- Under the RBPS pillar of *Committing to Process Safety*, one of the five elements is "developing, sustaining, and enhancing the organization's process safety competency"

- *CCPS Guidelines for Risk Based Process Safety* states that developing and maintaining process safety competency encompasses three interrelated actions:
    - Continuously improving knowledge and competence
    - Ensuring that the appropriate information is available to those in the organization who need it
    - Consistently applying what has been learned
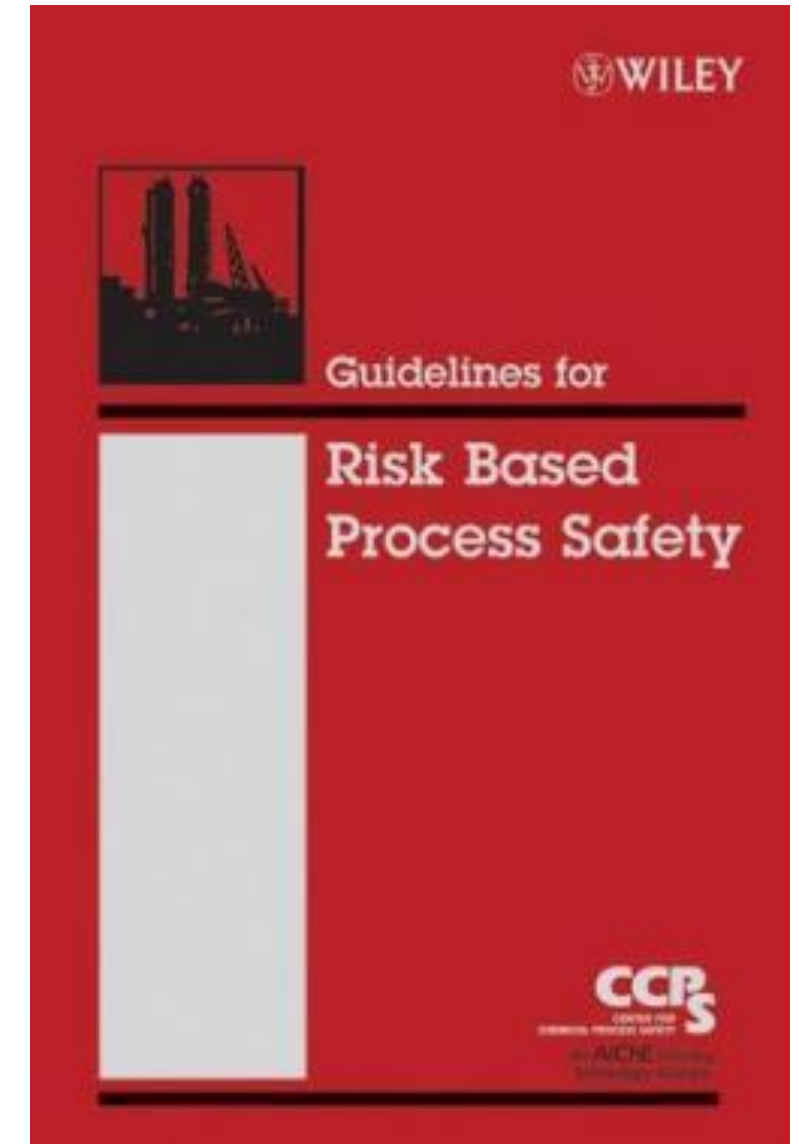
What is Process Safety Competency?

- Process safety competency is closely related to the "knowledge" and "training" elements of the RBPS system.

- The competence of each individual in an organization is developed and maintained through *training.*

- The competence of an organization depends on the body of *knowledge* increasing, and the application of the body of process knowledge to situations that manage risk and improve plant performance and safety.
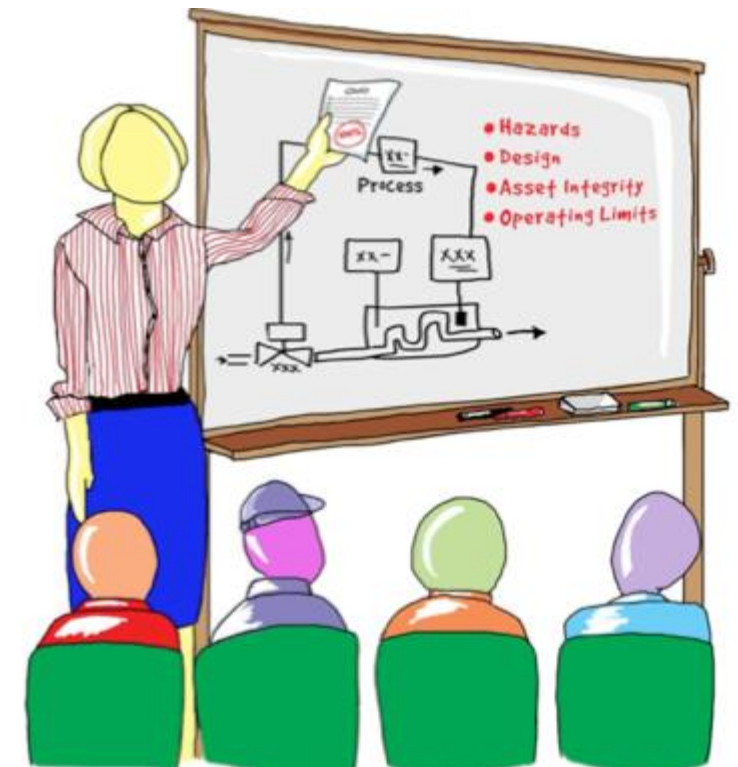
Knowledge

Provides the means to catalog and store information so it can be retrieved upon request

Training

Addresses efforts to develop and maintain the competence of each individual worker

Competency

Focuses on organizational learning, increasing the body of knowledge and pushing newly acquired knowledge out

Importance of Strong Competency

CCPS VISION 20/20
An AIChE Technology Alliance
Center for Chemical Process Safety

- CCPS recognized "Intentional Competency Development" as one of the five tenets of their Vision 20/20

- Competency contributes to Vision 20/20 because:
  - No matter how strong the company culture or management system is, or how well standards are followed, it requires **competent employees** to implement those systems and standard
  - *Intentional competency development is required*, including setting and understanding competency expectations, providing educational resources, and allowing time for people to build competency
  - *Intentional competency development applies to all levels in the organization*. It starts with leaders visibly leading process safety, and then engineers implementing technical designs and operators knowing their processes and safe operating limits

https://www.aiche.org/ccps/resources/vision-2020/five-industry-tenets/intentional-competency-development

Importance of Strong Competency

- Excellence in PSM is not possible to achieve nor sustain without a competent workforce

- "Only competent people can transform information into knowledge" (*CCPS Guidelines for RBPS*)

- Knowledge management, rather than information management, helps organizations understand and manage risk

Considerations for PSM Competency

- In order to form a competent workforce and to facilitate the PSM culture, there must be a short and long-term plan in place

Recruiting → Internal Development → Placement → Training → Supervision → Assessment → Career Development

Key Principles of PSM Competency

Maintain a Dependable Practice
- Establish objectives and set a plan to achieve these objectives
- Appoint a champion
- Identify corollary benefits
- Promote a learning organization

1.Execute activities that help maintain and enhance process safety competency
- Appoint technology stewards
- Document knowledge and ensure that information is accessible, and provide structure
- Push knowledge to appropriate personnel, update information
- Promote person-to-person contact and plan personnel transitions

Evaluate and share results
- Evaluate the utility of existing efforts
- Solicit needs from operating units

Adjust plans
- Periodically review the status of process safety competency efforts
- Revise the plans as needed to more closely align with the perceived needs

PSM Competency and PSM Culture

- "Unleashing" the workforce to achieve best performance under the right PSM culture is a key challenge

- Competency of the workforce has to be an integral part of the process safety management system to be effective and to have a breakthrough to the next level of performance

- This requires the right culture where managers are encouraged to develop a proper mentoring culture and to bring out excellence in their workforce

PSM Competency and PSM Culture

- Core Principles of PSM Culture:
  1. Establish an Imperative for Safety
  2. Provide Strong Leadership
  3. Maintain a Sense of Vulnerability
  4. Understand and Act Upon Hazards/Risks
  5. Empower Individuals to Successfully Fulfill their Safety Responsibilities
  6. Defer to Expertise
  7. Ensure Open and Frank Communications
  8. Foster Mutual Trust
  9. Combat the Normalization of Deviance
  10. Learn to Assess and Advance the Culture

- A PSM initiative depends on competency in the workforce

- This must be planned, nurtured, monitored, and improved as required

- Human capital is the most valuable investment.