

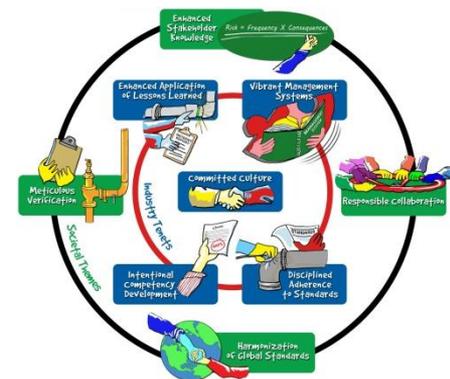
# VISION 20/20

## OUR CALL FOR ACTION

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**Shakeel H. Kadri**  
**CCPS Executive Director**

**28 September 2015**  
**Process Safety Workshop**  
**Nice, France**



# About Center of Chemical Process Safety

## CCPS

- Not for profit organization supported by Corporate Members globally, started following the Bhopal incident
- It is an Industrial Technology Alliance that was founded by – and is part of – American Institute of Chemical Engineers [AIChE]
- It's mission is the elimination of catastrophic process safety incidents.
- It is a global organization has over 180 plus Corporate members, 60% in the Americas and 40% in the rest of the world
- It's headquarter is in New York City, with offices in Frankfurt, Mumbai, Singapore, Ningbo [China] and Houston



# Our call to action...

**Vision 20/20** looks into the not-too-distant future to describe how great process safety is delivered when it is collectively and fervently supported by industry, regulators, academia, and the community worldwide.



# What is Vision 20/20?

- Many best in class companies have achieved great process safety performance
- The goal is -- how other companies can imitate to achieve such best in class performance?
- CCPS Vision 20/20 describes the characteristics of companies with great process safety performance.
- It also identifies societal themes that are necessary for industry to achieve great process safety performance.



# Why Vision 20/20?

- Our common goal - Reduce incidents
  - Make a step change in management of process safety
  - Improve process safety performance globally
  - We want to reach the goal faster
  - Leverage our collective strength
  - Help CCPS and other organizations identify projects/initiatives to help us reach the goal



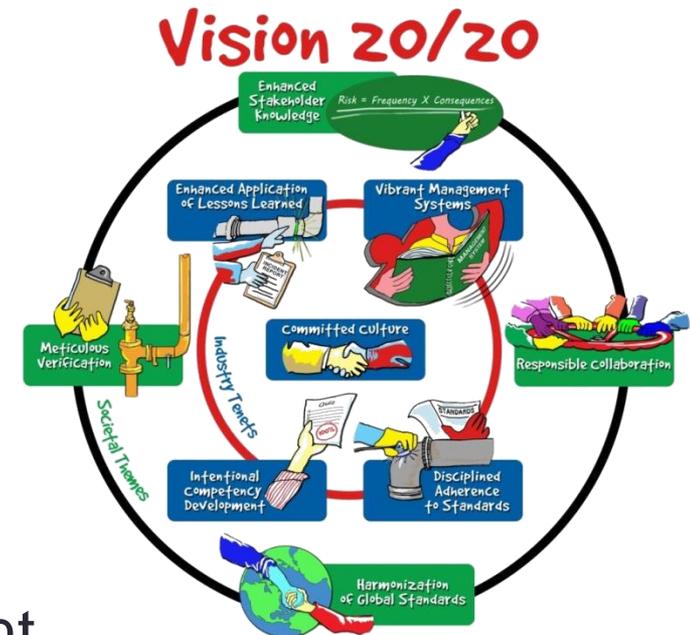
# Vision 20/20 Focus

## Industry Tenets

- Committed Culture
- Vibrant Management Systems
- Disciplined Adherence to Standards
- Intentional Competency Development
- Enhanced Application & Sharing of Lessons Learned

## Societal Themes

- Enhanced Stakeholder Knowledge
- Responsible Collaboration
- Harmonization of Standards
- Meticulous Verification



# INDUSTRY TENET & SOCIETAL THEME HIGHLIGHTS

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# Committed Culture

- Felt leadership from senior executives through plant personnel
- Leadership instills disciplined adherence to the policies and procedures
- Strong sense of vulnerability
- What can you do?
  - ☑ Perform all tasks, correctly, every time.
  - ☑ Support your leadership in demonstrating a commitment to process safety.
  - ☑ Recognize that “it could happen here...”



# Vibrant Management Systems

- Structure that clearly defines expectations for all systems that impact process safety performance
- Promotes principles of inherently safer design
- Promotes principles of *Guidelines for Risk Based Process Safety* including fit-for-purpose policies and procedures
- What can you do?
  - ☑ Do your part as a member of the team - use the system!
  - ☑ Share your learnings and suggested improvements to the system



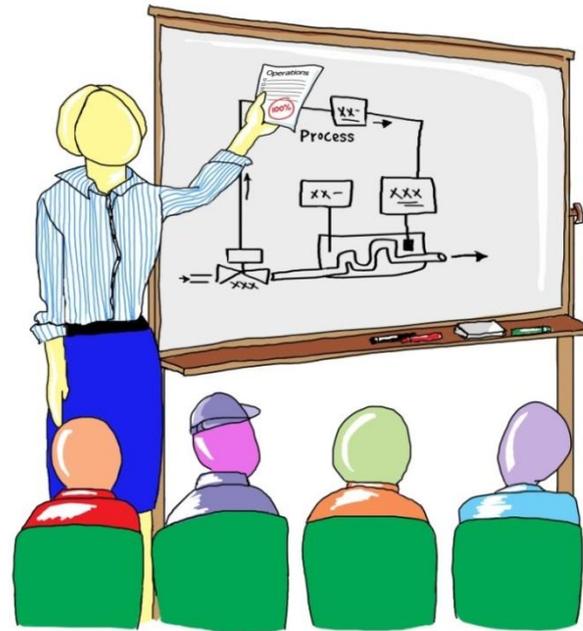
# Disciplined Adherence to Standards

- Company and/or industry standards rigorously followed
- System to ensure that existing equipment meets company minimum expectations
- Risk decision making is used when applicable standards do not exist
- What can you do?
  - ☑ Ensure a system exists to effectively use industry and company standards.
  - ☑ Make sure that the system applies to existing equipment.
  - ☑ As a leader, assure standards are followed and respond accordingly.



# Intentional Competency Development

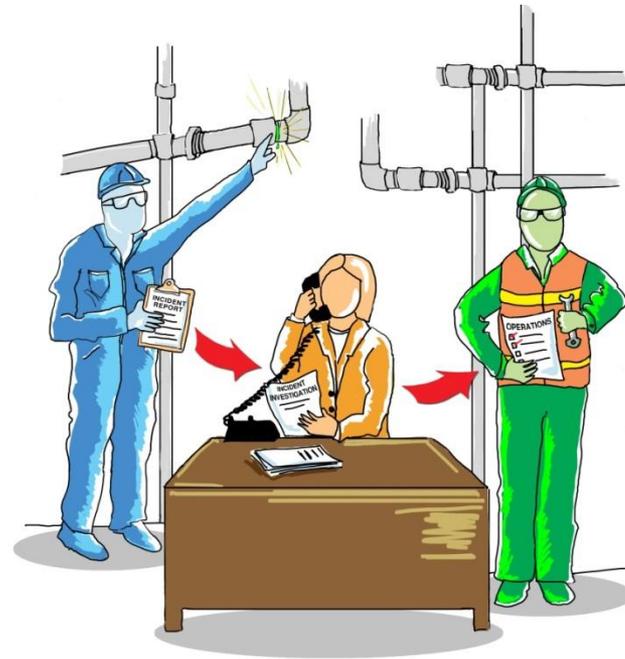
- Ensures that employees who impact process safety performance are meeting the technical and cultural requirements of their job
- It is given that companies provide sufficient numbers of employees
- What can you do?
  - ☑ Develop a plan to fill your competency gaps.
  - ☑ When you're outside your area of competency, contact an expert that can help.
  - ☑ As a leader, build and recognize team member competence.



# Enhanced Application of Lessons Learned

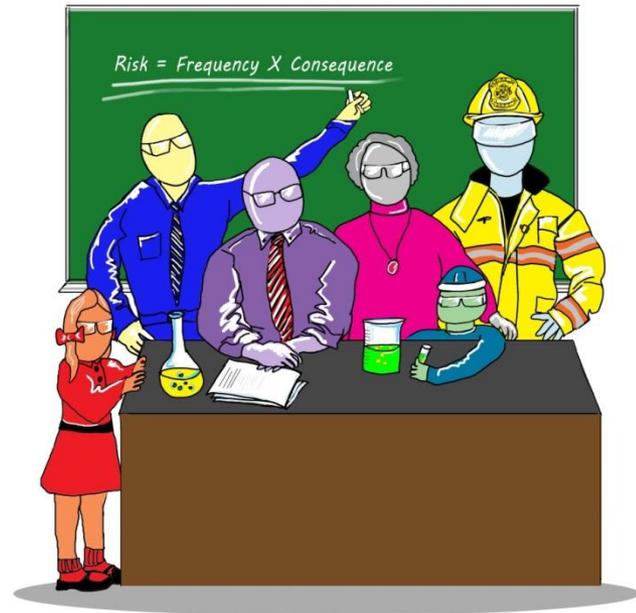
- Thirst for learning from
  - Incidents
  - Near misses
  - Benchmarking
  - Jobs done well
- Changes are implemented based on the Lessons Learned
- What can you do?
  - ☑ Use a significant incident or near miss as an opportunity to encourage and embed learnings.
  - ☑ Take a personal action, or make a change, as a result of the learning.

Sharing only makes you feel good, learning makes a difference.



# Enhanced Stakeholder Knowledge

- Risk literacy
  - Public
  - Government
  - Industry decision makers
- Process safety fundamentals
  - Chemical engineering students
  - Employees
- What can you do?
  - ☑ Support local STEM education, both in high school and university.
  - ☑ Have a conversation about risk with students and other stakeholders within your community.
  - ☑ Continue to build knowledge throughout your career.



# Responsible Collaboration

- Technical, government, labor, community, scientific, academic, and industrial organizations work together
- Remove barriers
- What can you do?
  - ☑ Recognize the value that others bring to the table and commit to working together toward the common process safety goal.
  - ☑ Be open-minded and focus on that common goal.
  - ☑ Actively participate in or lead joint industry projects.



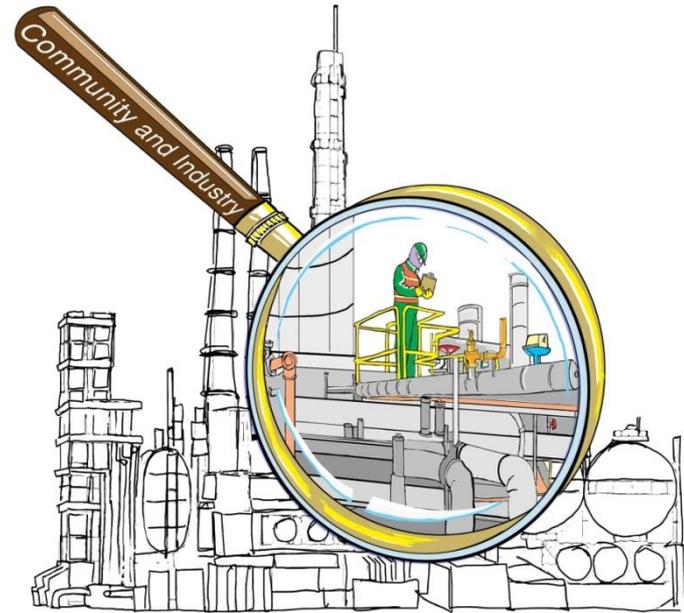
# Harmonization of Global Standards

- Standards can come from many sources
- Standards can be confusing and conflicting
- In the future, work jointly to streamline practices, eliminate redundancy, and cooperatively address emerging issues.
- What can you do?
  - ☑ Recognize the diversity in standards, be open-minded, and work towards harmonization of standards.
  - ☑ Promote harmonization through active participation in standard and practice writing groups.



# Meticulous Verification

- Third parties including
  - Public
  - Non-Governmental Organizations
- Evaluate implementation of process safety programs
- What can you do?
  - ☑ Identify opportunities where third-party verification could add value.
  - ☑ Personally support external verification in your area when it occurs.



# VISION 20/20 DEVELOPMENT/TOOLS

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# Vision 20/20 Sub-committee [2011]

- Cheryl Grounds, BP (Chair)
- Jack McCavit (CCPS Consultant)
- Dave Jones, Chevron
- Jeff Fox, Dow Corning
- Joe Allaben, Flint Hill Resources
- Karen Tancredi, Chevron
- Louisa Nara, CCPS
- Mike Broadribb, BakerRisk
- Pete Lodal, Eastman Chemical Co
- Samantha Scruggs, BP
- Scott Berger, AcuTech
- Steve Arendt, ABS Consulting
- Todd Aukerman, LanXess
- Walt Frank, CCPS Emeritus

Nearly 500 years of experience!

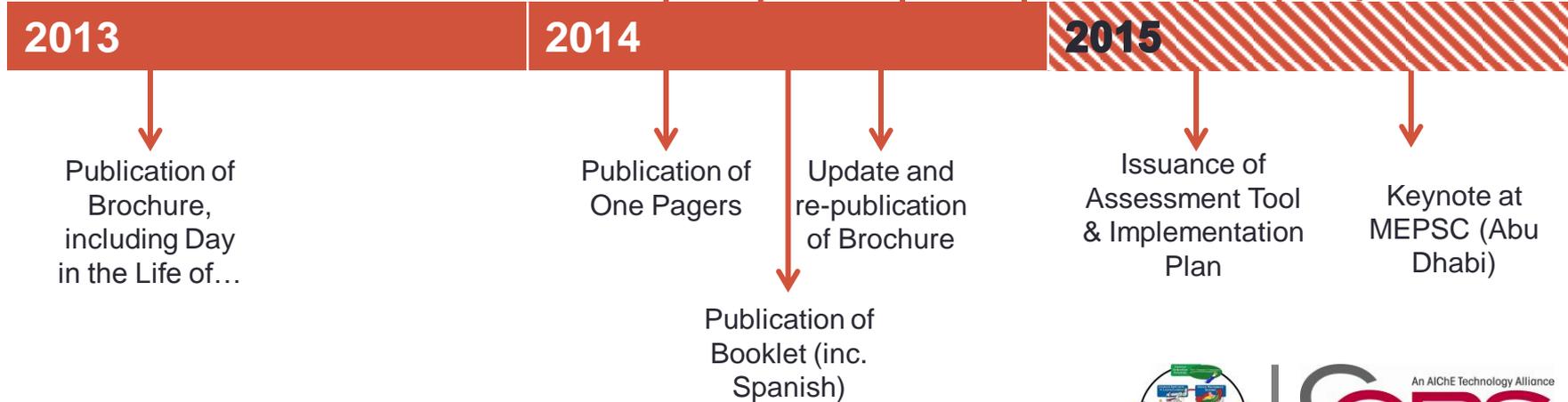


# Vision 20/20 Evolution

Committee work initiated in 2011

Presentations

Products



# A call to action...

*It's time to leverage our resources, knowledge and skills to all strive for a common goal of great process safety performance.*

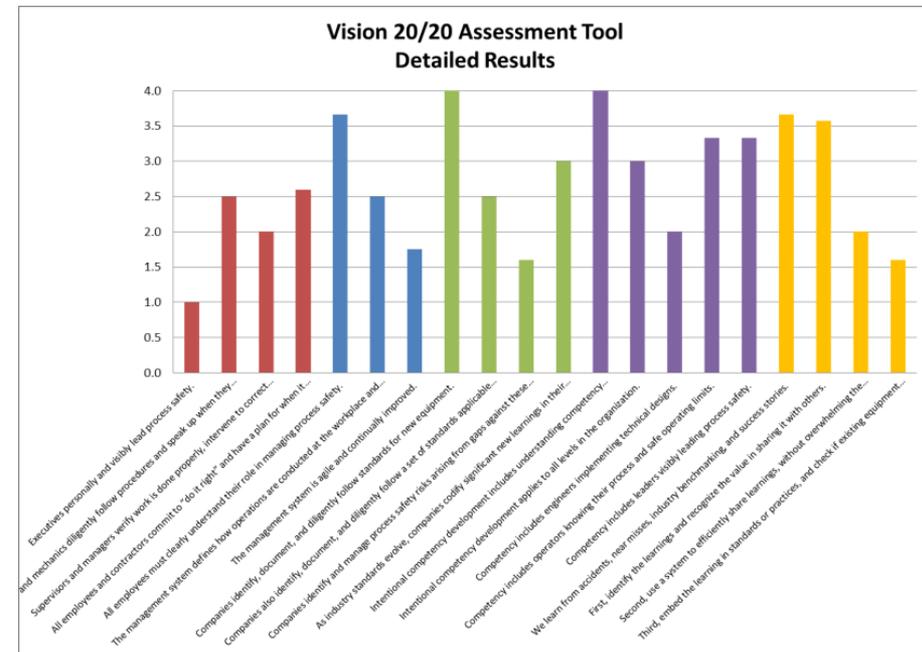
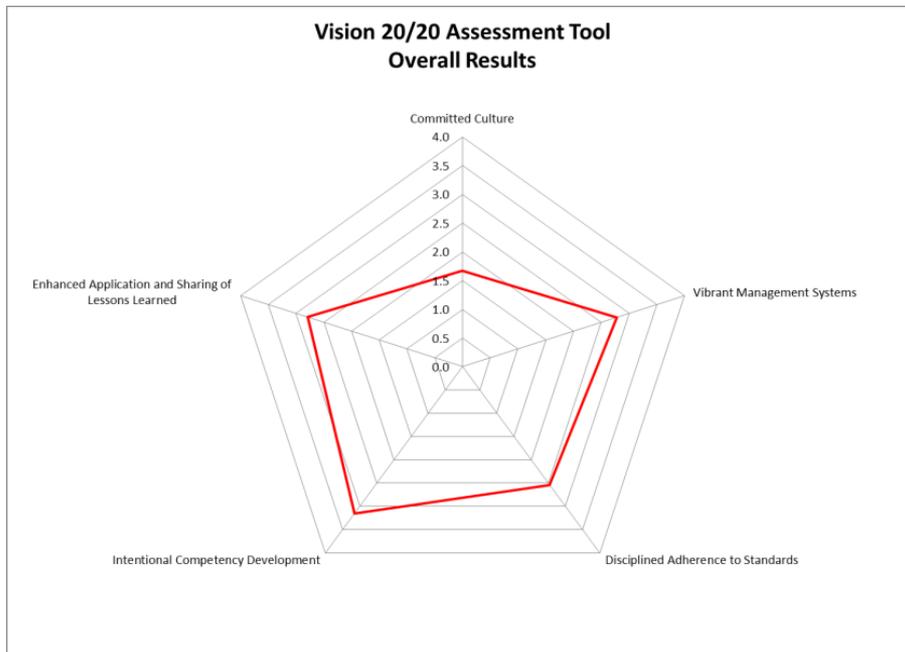
*CCPS's Vision 20/20 describes that vision.*

- Understand and communicate the tenets and themes
- Evaluate your contribution
  - within your company, across your discipline industry colleagues, and with your regulatory, academic, and local communities.
- **Evaluate performance**, seek collaboration and take action



# Assessment Tool

- Self assessment by representative team
- Addresses each industry tenet
- Intended to be easy to use and differentiating



# Assessment Tool Interface

<b>Vibrant Management Systems</b>				
<b>All employees must clearly understand their role in managing process safety.</b>	<b>Always</b>	<b>Most of Time</b>	<b>Some of Time</b>	<b>Infrequent or Never</b>
All employees can describe their site barriers (what they are, what they are for, how they work) that control major accident hazards and risks.	x			
All employees can describe their roles and responsibilities in maintaining barriers to prevent major accidents.	x			
The management system is documented, readily accessible by all employees, and easily used to access process safety content.	x			
Management system includes all 20 elements of CCPS's Guidelines for Risk Based Process Safety.	x			
Management system includes all process safety elements required by local regulations.		x		
Management system is not solely at the company level; rather, it cascades from a corporate system to regional requirements to site activities.		x		
<b>Average score</b>	<b>3.67</b>			
<b>The management system defines how operations are conducted at the workplace and promotes safety in design, operations, and maintenance.</b>	<b>Always</b>	<b>Most of Time</b>	<b>Some of Time</b>	<b>Infrequent or Never</b>
The management system defines the process safety-related activities that are conducted (e.g. hazard identification, MOCs, incident investigation, and action item tracking).	x			
The management system refers to specific tools used to perform process safety related activities (e.g. hazard identification, MOCs, incident investigation, and action item tracking).		x		
Managers have a structured management review process (see CCPS's Guidelines for Risk Based Process Safety) for process safety elements and generate actions to address identified issues.			x	
The management system ensures employees are assigned to roles based on their competency to perform the tasks expected of that role.				x
<b>Average score</b>	<b>2.50</b>			

Vision 20/20

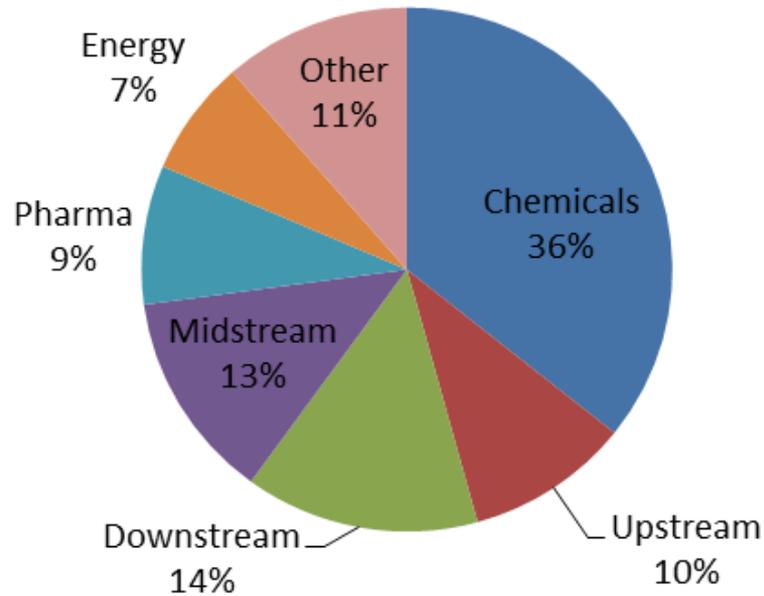
11<sup>TH</sup> GCPS BENCHMARKING  
RESULTS [30 APRIL 2015]

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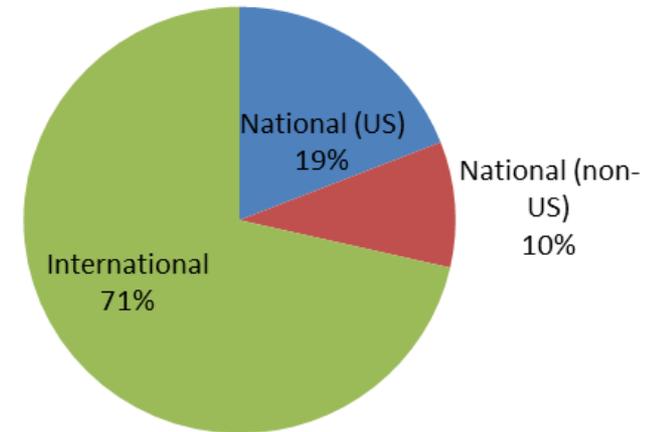
# Metadata

Number of Surveys Completed: 68

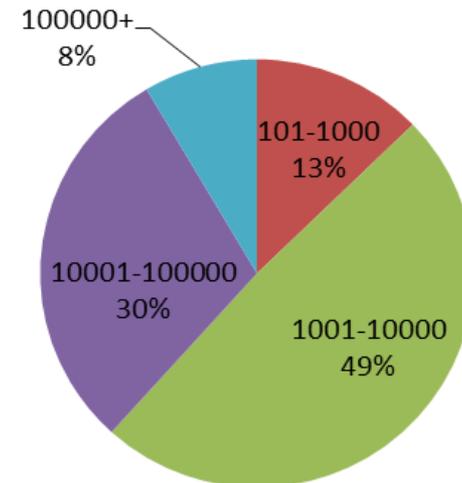
## Responses: Company Type



## Responses: Company Location



## Responses: Company Size



# Benchmarking Results

Name (if you would like to be put in a drawing for a free CCPS book): \_\_\_\_\_



## Assessment Tool

This selected excerpt of the Vision 20/20 Assessment Tool will be used to 1) test the appropriateness/phrasing of the included indicators (statements) and 2) as an anonymous form of industry feedback to be presented during the final session of the CCPS International Symposium Track on Wednesday, April 29 at 10:15 am.

- Company type:  Chemicals  Upstream (E&P)  Downstream  Midstream  
 Pharmaceuticals  Energy  Consulting  Other  
 Company size:  1-100  101-1,000  1,001-10,000  10,001-100,000  100,000+  
 Company location:  National (US)  National (non-US)  International

## Committed Culture

	Always	Most of Time	Some of Time	Inrequent or Never
<b>Executives personally and visibly lead process safety.</b>				
Executives review industry and company incidents and review their own operations for similar hazards.				
Process Safety topics are regular agenda items at board/executive meetings.				
Executives have personal Process Safety performance goals and objectives (beyond stating metric goals).				
Process safety lagging metrics are tracked at the site and company level.				
Process safety leading metrics are tracked at the site and company level.				
Executives commit a meaningful amount of time personally involved in process safety activities (e.g. risk mitigation planning, discussing incident investigations, and actively monitoring action item tracking).				
Executives and senior managers respond to poor process safety performance with the intent to identify and address root causes.				
Executives and senior managers reward good process safety performance and identify learnings to leverage across the site/company.				
Executives and senior managers talk knowledgeably about the major hazards and risks at each site (as applicable) and the associated critical barriers.				
Process safety activities are included in annual operating plans and budgets.				
Process safety metrics directly impact executive compensation.				
The annual report discusses process safety activities and leading process safety metrics.				
Executive leadership routinely visits production units and have meaningful discussions regarding process safety related issues with operations and maintenance personnel.				
Executives personally follow-up with site operations and technical personnel regarding potentially significant process safety incidents.				
Executives and leadership positively recognize individuals for raising concerns regarding process safety.				
<b>Operators and mechanics diligently follow procedures and speak up when they suspect a problem or see an opportunity for improvement.</b>				

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## Lessons Learned

Most of Time Some of Time Inrequent or Never

and success stories.


with others.


Name (if you would like to be put in a drawing for a free CCPS book): \_\_\_\_\_



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## Support

Most of Time Some of Time Inrequent or Never

empirical expectations, build competency


## Standards

Most of Time Some of Time Inrequent or Never

of new equipment.


## Standards applicable to


## gaps against these


Name (if you would like to be put in a drawing for a free CCPS book): \_\_\_\_\_



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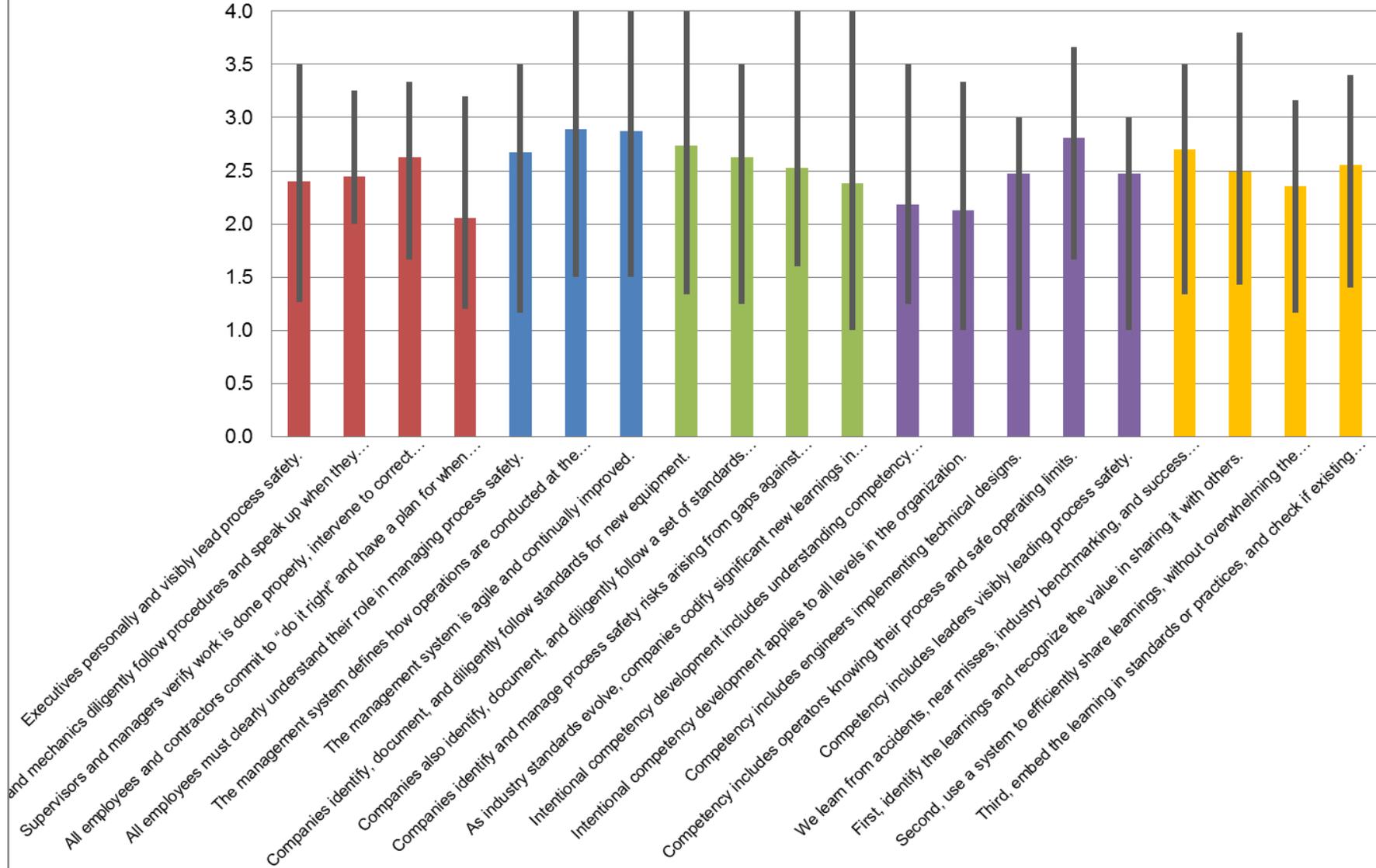
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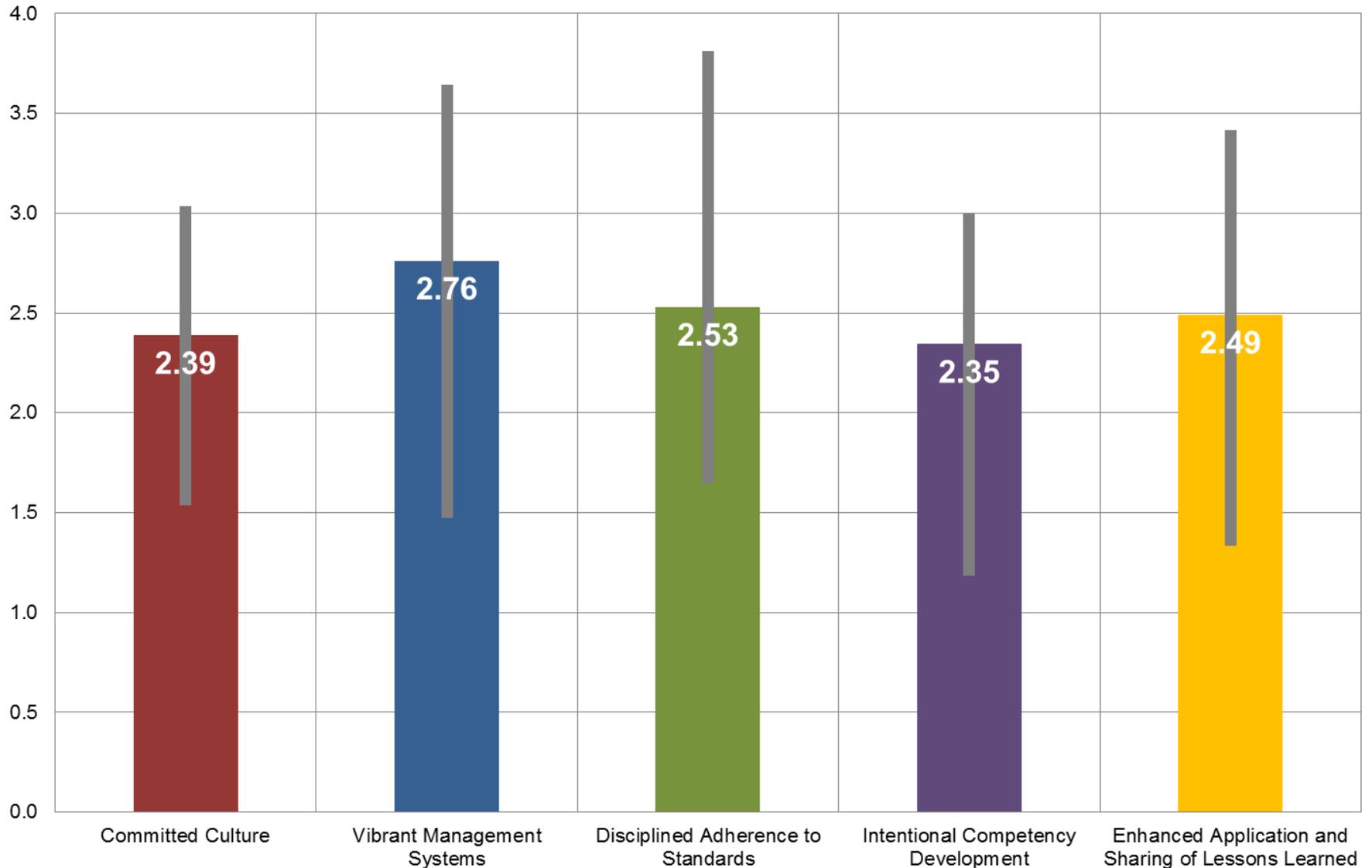
# VISION 20/20

## Assessment Tool Detailed Results



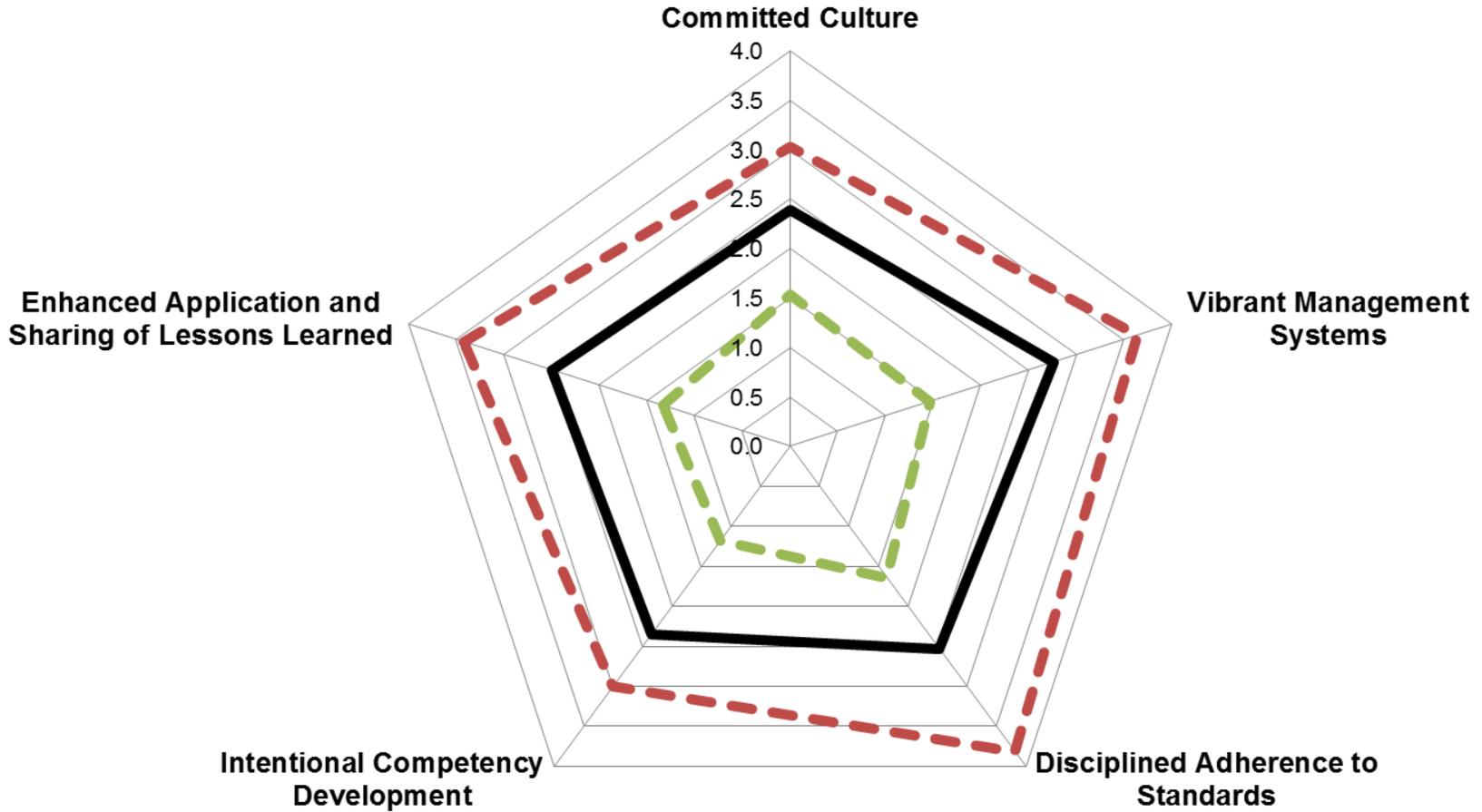
# VISION20/20

## Assessment Tool Overall Results



# VISION20/20

## Assessment Tool Overall Results



# Questions?

## Vision 20/20

