

Workshop for Evaluating and Improving Operational Discipline

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Outline

- OD Workshop
- CCPS Conduct of Operations Team

James A. Klein, Operational Discipline in the Workplace
Process Safety Progress, Vol. 24, No. 4, p. 228-35, December, 2005

James A. Klein & Bruce K. Vaughen, A Revised Model for Operational Discipline
Process Safety Progress, Vol. 27, No. 1, p. 58-65, March, 2008

James A. Klein & Bruce K. Vaughen, Evaluating and Improving Operational Discipline
Process Plant Safety Symposium, Houston, TX, April 22-26, 2007

Why Have A Workshop?

- Once excellent PSM systems have been implemented and are strongly supported by management, the greatest factor affecting performance is OD.
- Improving OD improves EHS performance
 - Injuries, incidents, environmental emissions, etc.
- Improving OD improves operating excellence
 - Quality, waste, productivity, cost, etc.
- Achieving world class EHS and manufacturing is difficult without excellent OD.

Improving OD Lowers Risk

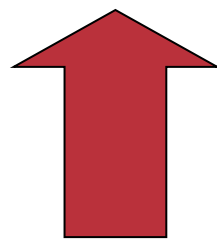
$$\text{Risk} = \frac{(\text{Frequency}) (\text{Consequence})}{(\text{Operational Discipline})^X}$$

$$X \geq 1$$

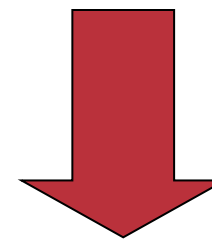
Frequency – Quality of systems / safeguards

Consequence – Intrinsic substance / process hazards

OD – How well systems / safeguards are maintained and operated



OD



Risk

Workshop Goals

- Build value for why OD is important
- Introduce revised OD program
- Review methods for evaluating and improving OD
- Develop a path forward for improving OD

This program is recommended for helping to improve site OD performance and is meant to be flexible, based on site-specific needs and interests.

"Pull" vs. "Push"

Workshop Pre-Work

- Site leadership involvement
- Provide site-specific focus for breakout sessions to evaluate current site OD performance and issues
 - Site OD metrics
 - OD self-assessment survey

Site OD Metrics

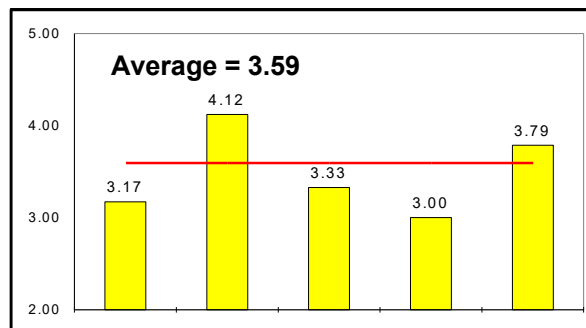
- Injuries with OD key factor (specific examples)
- Incidents with OD key factor (specific examples)
- Audit results (PSM OD score, specific findings)
- Overdue activities and follow-up (vs. system requirements)
- Etc.

OD Self-Assessment Survey

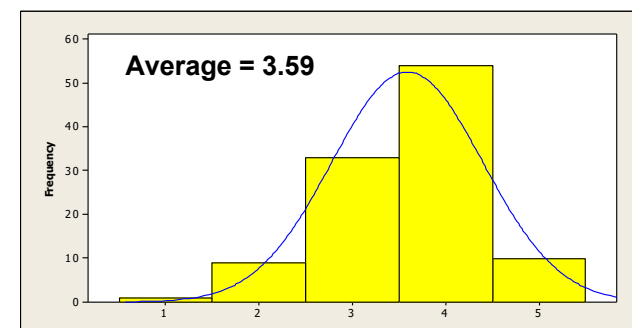
- Evaluate both organizational and individual OD
 - Scored questions and distribution
 - Identify specific issues
 - Free-form comments for suggestions or successes

22. Does site leadership periodically schedule and/or require use of management of change systems to review and authorize equipment or procedure changes prior to use? Are site employees involved in the review and revision of site procedures? Is there a way for employees to suggest when new procedures are necessary or existing procedures should be modified?

	Response Percent	Response Total
5 = excellent performance	48.5%	16
4 = minor opportunities to improve	42.4%	14
3 = many opportunities to improve	9.1%	3
2 = significant gaps in performance	0%	0
1 = not being done	0%	0



Group responses



Distribution of all responses

*** 2. Do I understand how to do a task safely and correctly, based on procedures and training?**

	Not at all (< 50%)	Not really (50- 69%)	Some of the time (70- 89%)	Most of the time (90- 99%)	All of the time (100%)
(a) Do I have the necessary knowledge to complete my job tasks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Do I understand what the procedures are and the reasons for them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) Do I feel adequately trained to safely complete my job tasks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Do I ensure that my equipment, tools, and PPE are in good condition?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Do I make sure that my co-workers know how to do their job tasks safely?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Please select any of the statements below that you think should be improved (multiple selections OK - you can also add other suggestions in the next question):

- I only do certain tasks occasionally, so it's difficult to remember them.
- I don't have enough training.
- I think training quality needs to be improved.
- It's been too long since I had training.
- There are no procedures or the procedures are not easily available.
- I don't think the procedures are clear or they aren't current.
- I don't have equipment, tools, and PPE provided/maintained in good condition.

4. Please provide any specific suggestions for improvement or observations of things currently being done well for KNOWLEDGE:

Workshop Agenda

- Introduction
- 1. Build value for why OD is important
- 2. Introduce the OD program
- 3. Review methods for evaluating and improving OD
- 4. Develop a path forward for improving OD

Introduction

- **Introduce OD definition**
 - I am committed to work safely by doing every task, the right way, every time.
- **Consider possible causes of catastrophic incident if one occurred today**
 - OD underlies most causes
- **Review corporate metrics for a typical week**
 - Improving OD can improve current actual performance
- **Introduce workshop goals and agenda**
 - Stress active participation required; not a lecture
 - Goal is site-specific OD improvement plan

1. Build Value for OD

Sustained great results depend upon building a culture of self-disciplined people who take disciplined action...

Jim Collins, Good to Great, 2001



- Video example

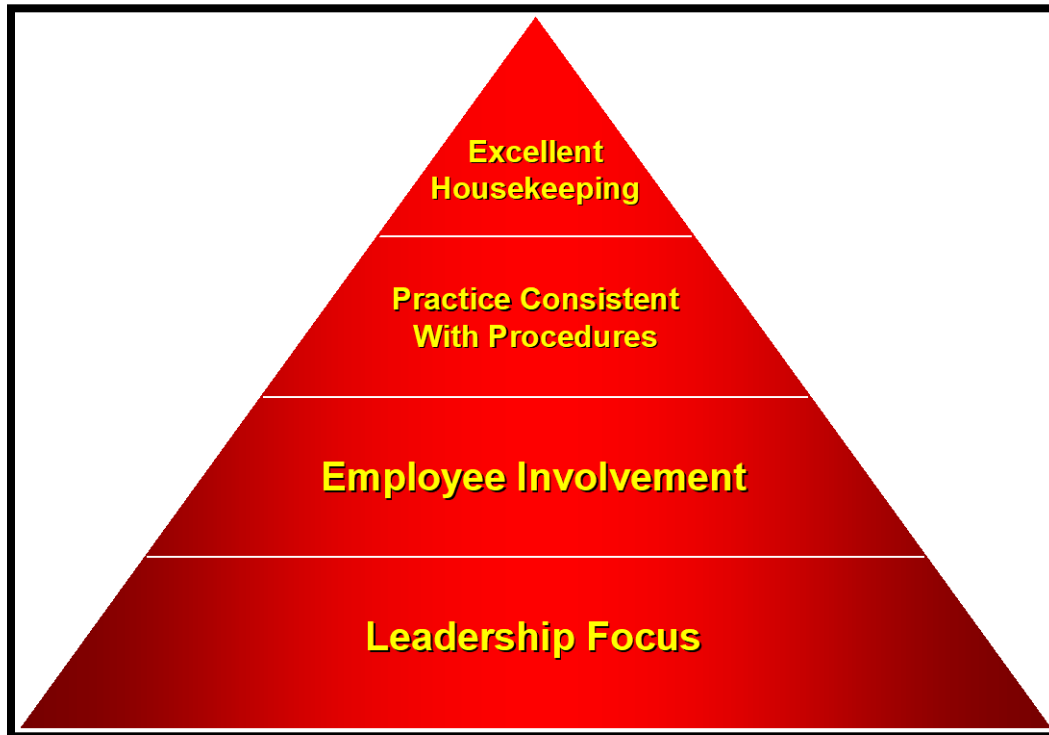
Key Themes

- OD is not a method for disciplining people
- OD is fundamental to operational excellence
- OD prevents injuries and incidents
 - Examples: Bhopal, Texas City
 - Examples: DuPont internal incidents
 - Examples: DuPont audit metrics and findings
- Breakout: Site OD Metrics

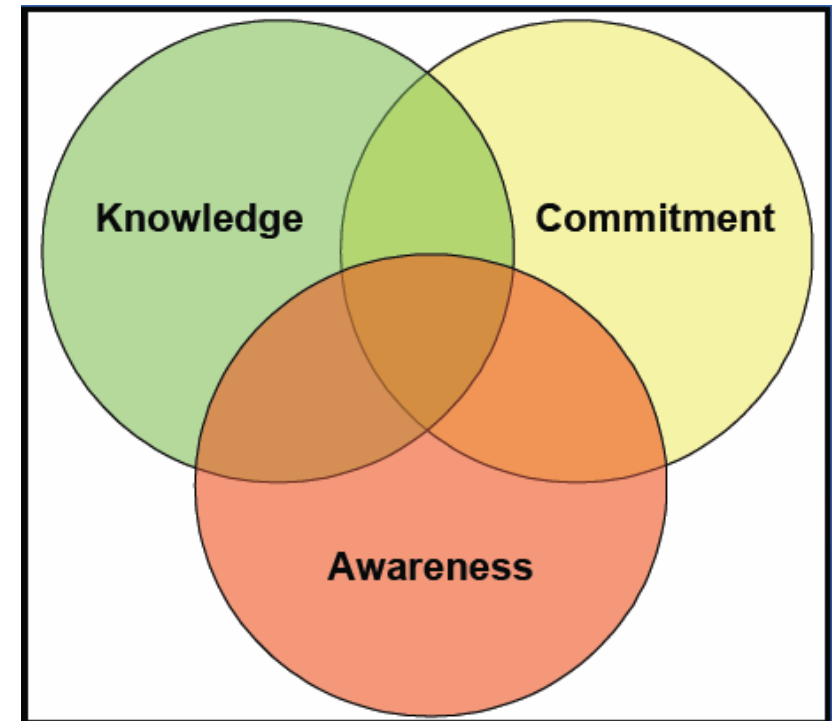
2. Introduce the OD Program

To become an Operational Powerhouse and achieve/sustain our Goal of “ZERO,” we must achieve/sustain a high level of OD.

DuPont OD Task Team, 2001



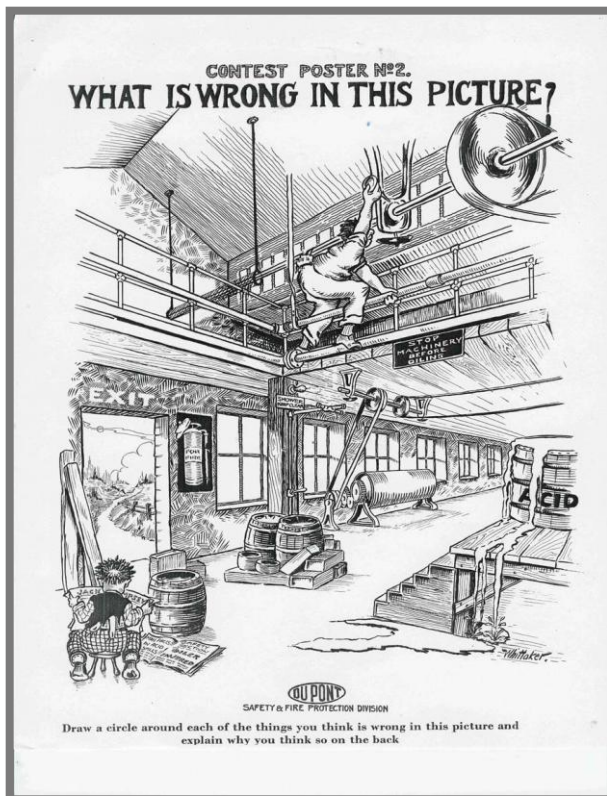
Organizational



Individual

Key Themes

- History of OD at DuPont
- OD Program framework
- Application of OD Program
- Breakout: Organizational OD Self-Assessment Survey

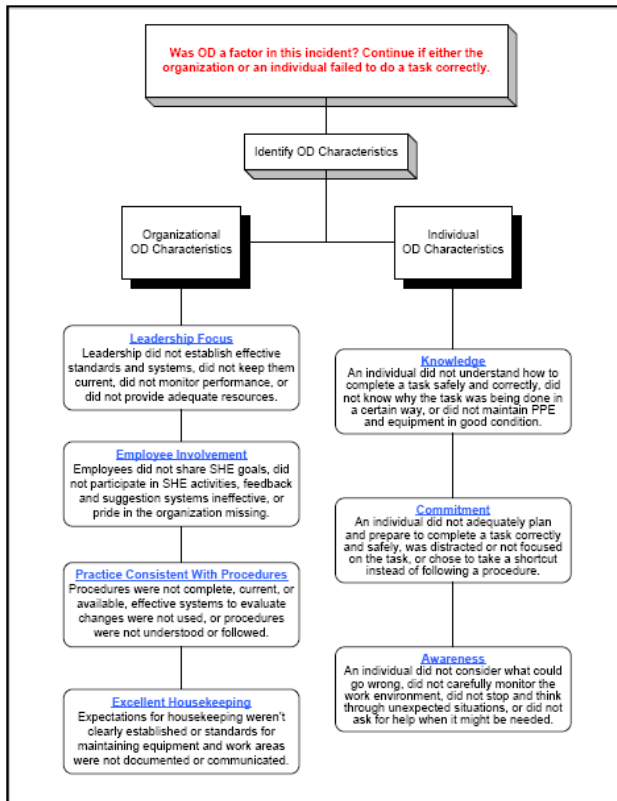


The safety of our family, the safety of the farmers in our neighborhood, has imposed upon us the absolute duty of making choice of steady, sober men and of establishing the most rigid **discipline** among our workmen. E. I. du Pont, 1808

3. Review Methods for Evaluating and Improving OD

Great achievements may easily be accomplished by starting with small actions.

Lao Zi, Dao De Jing



Incident Investigation Team Guidance



Critical Moment
Ted Parker



Key Themes

- **Evaluating OD**
 - Metrics
 - Audits (OD specific and PSM audits)
 - Self-assessment surveys
 - Incident investigations
- **Improving OD**
 - Site feedback
 - Self-assessment surveys
 - OD improvement toolbox
- **Breakout: Individual OD Self-assessment survey**

OD Improvement Toolbox

Operational Discipline Homepage

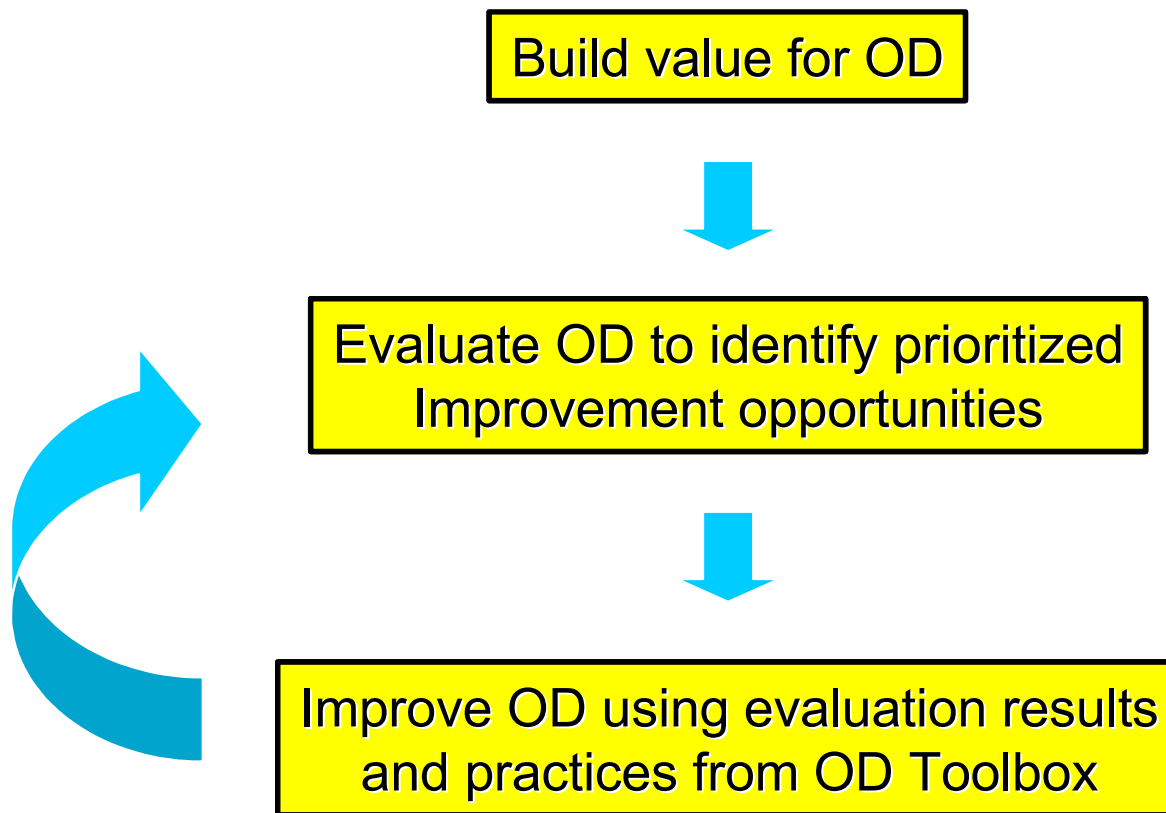
Committed to working safely by doing every task, the right way, every time.

OD Resources and References	OD Evaluation
<u>OD Program Overview</u>	<u>General/Metrics</u>
<u>Introduction and Request for Feedback</u>	<u>OD Spot Assessments (Draft)</u>
<u>OD at DuPont (4-05)</u> External Paper	<u>OD Self-Assessments</u>
<u>Next Generation OD at DuPont</u> External Paper	<u>PSM Audit OD Checklist (Draft)</u>
<u>Evaluating and Improving OD</u> External Paper	<u>Incident Guidance (Draft)</u>
<u>Other Resources</u>	
	OD Improvement Toolbox
OD Training	<u>Leadership Focus</u>
<u>OD Leadership Workshop Information</u>	<u>Employee Involvement</u>
<u>FOCUS ON Operational Discipline</u>	<u>Practice Consistent With Procedure</u>
<u>OD Virtual Training</u>	<u>Excellent Housekeeping</u>
<u>OD Safety Meeting</u>	<u>Individual Knowledge</u>
	<u>Individual Commitment</u>
Other Links	<u>Individual Awareness</u>
<u>Global SHE OD Webpage</u>	<u>General / Other</u>

4. Develop a Path Forward for Improving OD

... [the improvement] process resembled relentlessly pushing a giant heavy flywheel in one direction, turn upon turn, building momentum until a point of breakthrough...

Jim Collins, Good to Great, 2001



Key Themes

- Site experience
- Developing a plan
- Key considerations of a good plan
- Breakout: Site OD improvement path forward



Example Path Forward Areas

- **Provide site OD training**
 - Train site to build OD value and understanding
 - Conduct additional OD self-assessment surveys
 - Evaluate feedback to drive continuous improvement

- **Target specific improvements**
 - Management leadership by example
 - Training quality and effectiveness
 - Procedure quality and availability
 - Site housekeeping
 - Site communications
 - Site "pride in the organization"