

# Energize your EHS program



Focus: Management Support and Effective  
Employee Engagement



imagination at work

# WHY VEEP?

## Structure. Network. Improvement.



# Interactive Exercise

Go to [menti.com](https://www.menti.com) and enter code 421576

Type in a word that comes to mind when you think about behaviors & actions from others that make you come back to a place or service when you are the customer

# Outline

- Why VEEP?
- Interactive Exercise
- Getting upper management support
- Maintaining enthusiasm
- Recognition
- Human & Organizational Performance



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# Getting Upper Management Support

# Talk in their language



# Talk in their language?

Not everything has a cost benefit.....or does it?

1. Use calculators on loss prevention websites and reference them

<https://safetymanagementgroup.com/resources/injury-cost-calculator/>

2. Don't attempt to sell it without a cost benefit

3. Even small projects will get approved with this approach

# Getting Upper Management Support

Some managers have things they care about personally....

**TAP INTO THAT AND USE IT**

# Maintaining Enthusiasm

1. Set up employee recognition events
2. Change the events
3. Match rewards to financial impact
4. Leave everything in the hands of your employees – give them the keys to the car
5. Have Fun!

# Earth Day

## Tomato Plant Giveaway with Hands-on gardening tips

Solar vendor partner



# Recognition: Example

In order to have sustainable success, you must promote an open reporting culture that reinforces positive behaviors



# Recognition Example

1. A theme of “Passing the Olympic Torch” was set as a motto for the site
2. Hard hat stickers (torches) were earned for certain activities
3. Stickers were turned in each quarter to win great prizes: TVs, iPads, etc.
4. The more stickers you turned in, the better your chances to win
5. The employees took pride in having lots of stickers on their hard hat (i.e. Ohio St. Football)

# Recognition Example



# Human & Organizational Performance

Safer. Smarter. Better.



# Old vs. New

## Old View

- \* Human error is a cause of accidents
- \* To explain failure, investigations must seek failures of parts of systems
- \* These investigations must find inaccurate assessments and bad decisions

## New View

- \* Human error is a symptom of trouble deeper inside a system
- \* To explain failure, do not try to find out where people went wrong
- \* Instead, find out **HOW** peoples' actions and assessments made sense at the time given the circumstances that surrounded them.

\* **How We See Events**

# Let's Have Some Fun

1. Pick a number between 1-10
2. Multiply it by 9
3. Add the integers together
4. Subtract five from that new number
5. 1=A, 2=B, 3=C, 4=D, 5=E, 6=F and so on...
6. Now you have your letter, come up with:
  - a **country** that starts with that letter,
  - take the last letter of the country and come up with an **animal** that starts with that letter,
  - take the last letter of your animal and come up with a **fruit** that starts with that letter

# Was this your answer?

1. Denmark
2. Kangaroo
3. Orange

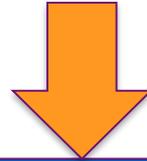
Human behavior is quite predictable b/c of the systems we have created.

# Hazard Heat Map and Strength of Defenses



imagination at work

List Major  
Environmental Risks



Develop a Heat  
Map

Implement  
Risk  
Reduction  
Activities

Create a  
Strength of  
Defenses  
Matrix



Test Your  
Defenses

# Heat Maps

# Fixed Facility – Facility Hazard Heat Map

Sample Data Only



## Level A Catastrophic

## Level A

## Level B

## Level C or D

Frequency

Non Routine  
Routine

<ul style="list-style-type: none"> <li>Material Handling (cuts/strains/sprains)</li> <li>Ergonomics – manufacturing/office</li> <li>Working/walking surfaces</li> <li>Assembly operations (cuts/strains/sprains)</li> <li>Hand tools</li> <li>Wave Solder Operations</li> <li>Hand soldering operations</li> <li>Noise exposure</li> <li>Hot equipment/surfaces</li> <li>Paint System Operation – exposure to paint chemicals</li> <li>Sand blasting operations</li> <li>UV light (Dymax Adhesive and light Curing System)</li> </ul>	<ul style="list-style-type: none"> <li>Punch presses</li> <li>Rotating Equipment</li> <li>Diesel fuel</li> <li>Evaporator/Process Wastewater</li> <li>Hazardous Waste Storage</li> <li>Air particulate/lead emissions</li> <li>Vacuum Impregnation (explosion)</li> <li>Personnel Changes (new/inter-department changes)</li> <li>Air compressor (explosion)</li> </ul>	<ul style="list-style-type: none"> <li>Crane/Hoist Operations</li> <li>Electrical Testing (up to 480V)</li> <li>Electrical Maintenance Work</li> <li>Forklift/pallet jacks operations</li> <li>Elevated work – ladders/scissor lifts</li> </ul>	<ul style="list-style-type: none"> <li>Propane (explosion)</li> <li>Chemical release/explosion from Neighbor (Edwards LifeSciences – Ethylene Oxide)</li> <li>Integra Neuroscience release/explosion</li> </ul>
<ul style="list-style-type: none"> <li>Blood borne Pathogens</li> <li>Spill Cleanup/ERT activities</li> </ul>	<ul style="list-style-type: none"> <li>Equipment installation/movement</li> <li>Process changes/layouts</li> <li>Chemical/supplier changes</li> </ul>	<ul style="list-style-type: none"> <li>Heat Stress</li> <li>Hot Work</li> <li>Confined Space Entry</li> <li>Roof work (fall)</li> <li>Construction/Demolition Activities</li> </ul>	<ul style="list-style-type: none"> <li>Hurricane</li> <li>Tsunami</li> <li>Earthquake</li> </ul>



VDEQ P2 Webinar

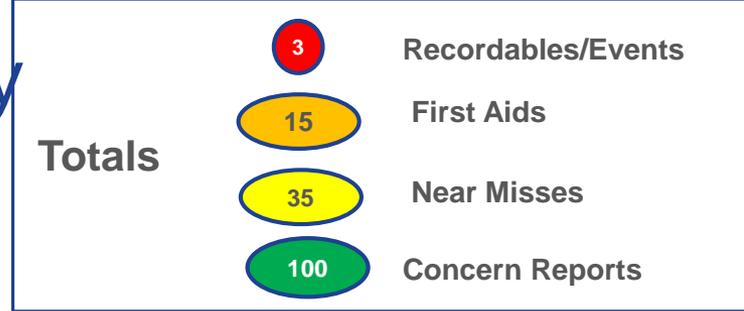
Low

Potential Consequence (without defenses)

High

# Event Overlay

Sample Data Only



## Level A Catastrophic

## Level C or D

## Level B

## Level A

Frequency

Non Routine  
Routine

<p>Uneven walking/working surfaces</p> <p><span style="background-color: red; color: white; border-radius: 50%; padding: 2px 5px;">3</span> <span style="background-color: orange; border-radius: 50%; padding: 2px 5px;">9</span> <span style="background-color: yellow; border-radius: 50%; padding: 2px 5px;">17</span> <span style="background-color: green; border-radius: 50%; padding: 2px 5px;">22</span></p> <p>Glass handling (daily)</p> <p><span style="background-color: orange; border-radius: 50%; padding: 2px 5px;">3</span> <span style="background-color: yellow; border-radius: 50%; padding: 2px 5px;">3</span> <span style="background-color: green; border-radius: 50%; padding: 2px 5px;">19</span></p> <p>Laser Class I Systems</p>	<p>Ionizing Radiation</p> <p><span style="background-color: orange; border-radius: 50%; padding: 2px 5px;">3</span> <span style="background-color: yellow; border-radius: 50%; padding: 2px 5px;">10</span> <span style="background-color: green; border-radius: 50%; padding: 2px 5px;">35</span></p>	<p>Toxic/Flammable/ Pyrophoric gas usage (continuous)</p> <p><span style="background-color: green; border-radius: 50%; padding: 2px 5px;">3</span></p> <p>Wastewater Panel Line (F, Mo, pH) (Continuous)</p>	<p>Propane storage fire / explosion</p> <p>Powder paint booth fire</p>
	<p>Hot Work (monthly)</p> <p><span style="background-color: yellow; border-radius: 50%; padding: 2px 5px;">3</span> <span style="background-color: green; border-radius: 50%; padding: 2px 5px;">10</span></p> <p>Hoist Operation</p> <p><span style="background-color: green; border-radius: 50%; padding: 2px 5px;">3</span></p> <p>Maintenance of Laser (annual)</p>	<p>Confined Space Entry (monthly)</p> <p><span style="background-color: yellow; border-radius: 50%; padding: 2px 5px;">2</span> <span style="background-color: green; border-radius: 50%; padding: 2px 5px;">8</span></p>	<p>Substantial storage of flammables in warehouse</p>

# Strength of Defenses

# Strength of Defense Matrix

## Which Defense Type is Most Important?

	Engineered Defenses	Admin Defenses	Management Oversight Defenses	Personal Protective Equipment	Cultural Defenses
Eliminate (substitute)	<p>Modify process design:</p> <ul style="list-style-type: none"> <li>• Guards</li> <li>• Alarms</li> <li>• Interlocks</li> <li>• Venting</li> </ul>	<p>Establishing:</p> <ul style="list-style-type: none"> <li>• Policies</li> <li>• Procedures</li> <li>• Work practices</li> <li>• Training</li> </ul> <p>To reduce a worker's exposure to risk.</p>	<p>Third party actions intended to reduce employee exposure to risk:</p> <ul style="list-style-type: none"> <li>• Permit to work</li> <li>• Walk around</li> <li>• Audits</li> </ul>	<p>Covering and protecting a worker's body from hazards.</p>	<p>The defenses that arise out of the attitudes, customs, and beliefs that have developed over a period of time.</p> <p>“cardinal” or “golden rules</p>
Prevent					
Catch					
Detect					
Mitigate					

# Testing Defenses

# 3 Concurrent Methods

- 1. Observations
- 2. Interviews
- 3. Documentation



# Defense Testing Results

Sample Data Only

Passed – Green

Needs Improvement - Yellow

Doesn't Exist/Not Working – Red

Newly Recommended Defense - Blue

	Engineered Defenses	Admin Defenses	Management Oversight Defenses	Personal Protective Equipment	Cultural Defenses
<b>Eliminate (substitute)</b>	Eliminate need for permit confined space entry		Supervisor verify daily checklist inspection to confirm critical controls operating correctly		Employee EXPECTATION to stop unsafe work; consistent management style reinforcing H&S
<b>Prevent</b>	Machine guard, local exhaust ventilation, or interlock		Permit to Work before proceed with high risk task		
<b>Catch</b>		Peer check at critical step		Cut resistant gloves	Stop when unsure
<b>Detect</b>		Ex: pre-job checklist inspection			Active use of Concern Reports
<b>Mitigate</b>			Supervisory verification that only qualified personnel allowed where HRO is performed		

# After Testing Defenses, Return to your Heat Map

# Fixed Facility – Facility Hazard Heat Map



## Level A Catastrophic

**Green = assessed and under control**

**Orange = assessed and needs improvement**

**Gray = not yet assessed**

### Level C or D

### Level B

### Level A

**Frequency**

**Non Routine  
Routine**

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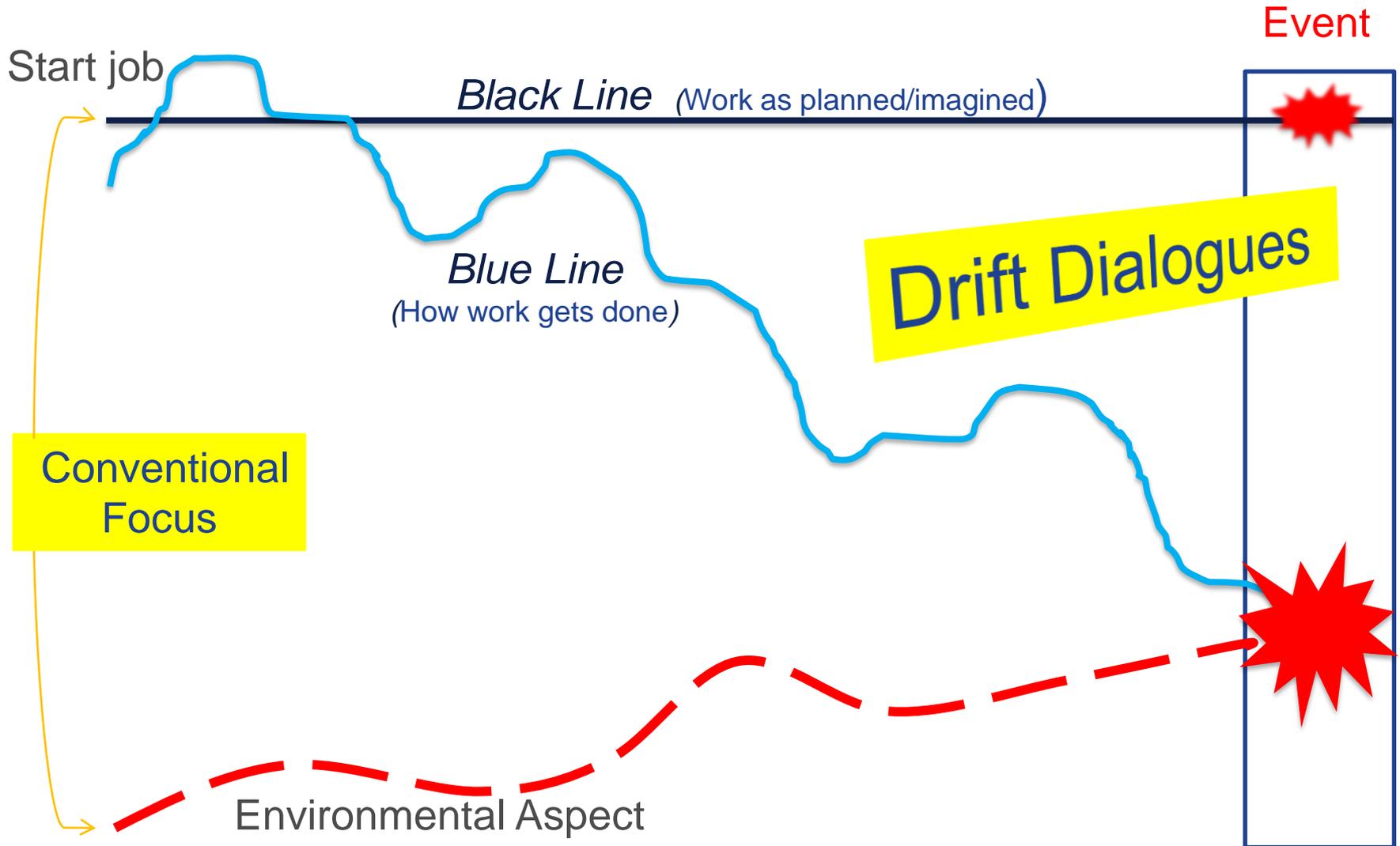
**Potential Consequence (without defenses)**

Low

High



# Drift Dialogues... "Unlocking" the Black & Blue Line Gaps



# How can I help you win?

