

# Deep Water Horizon Case Study and Industry Comparison

**As a leader, how deep are you willing to drill down to find the right RISK Threshold.....?**



**April 20, 2010**

**What happened from a survivor's perspective**



# The Eleven Souls who shall never be forgotten





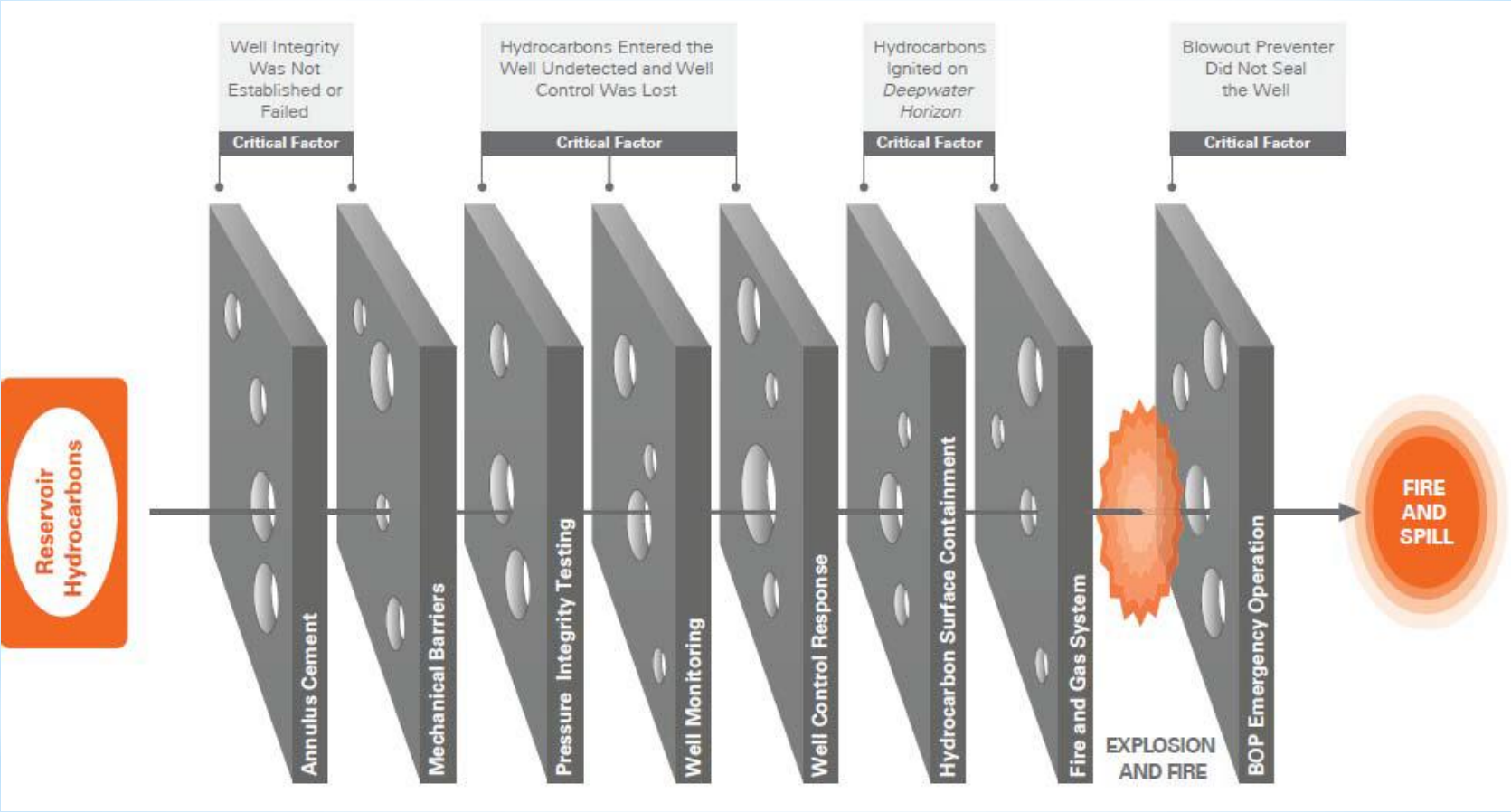
# The worst environmental disaster in U.S. History



# **Human And Organizational Failures of the Deep Water Horizon Event**



# Simplified “Swiss Cheese” Model for Deep Water Horizon





# World Industry Operating Experience from the past:



**Three  
Mile  
Island  
1979**

**Piper  
Alpha  
1988**



© Getty Images



**Texas  
City  
2005**

**NASA  
Challenger  
1986**



**Southwest  
Blackout  
2011**

**Bhopal  
India  
1984**



# **Lessons Learned from BP Texas City Fire and the Deep Water Horizon Fire.....**

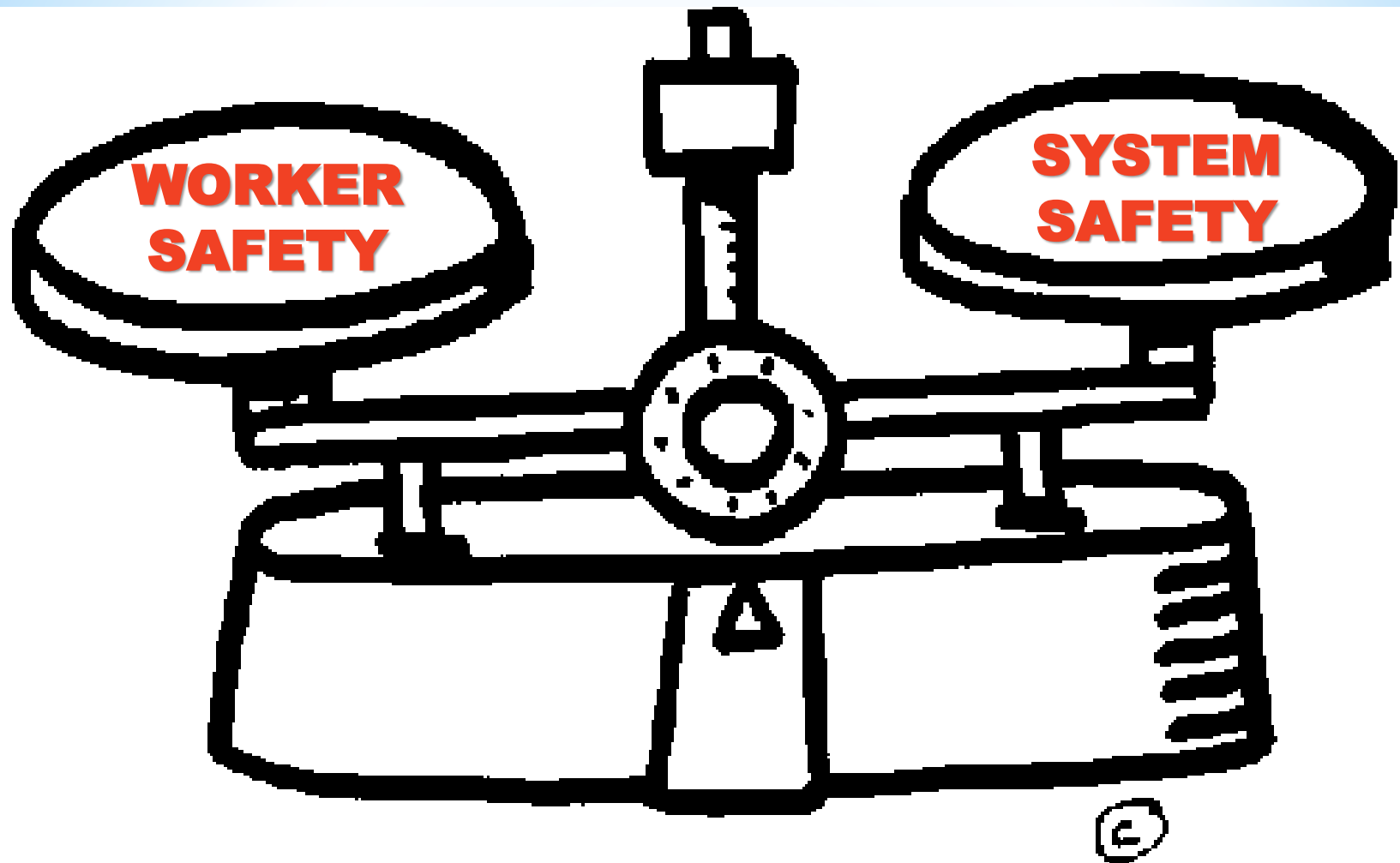
**“ Both of these disasters have shown us the clear differences between WORKER SAFETY and SYSTEM SAFETY,**

**One does not assure the other.....”**





# Organizational Balance



# The Human Performance PDC Model

## Prevention

- Organizational Culture
- Training and Use of HP Tools
- Clear Definition of Behaviors
- Communication

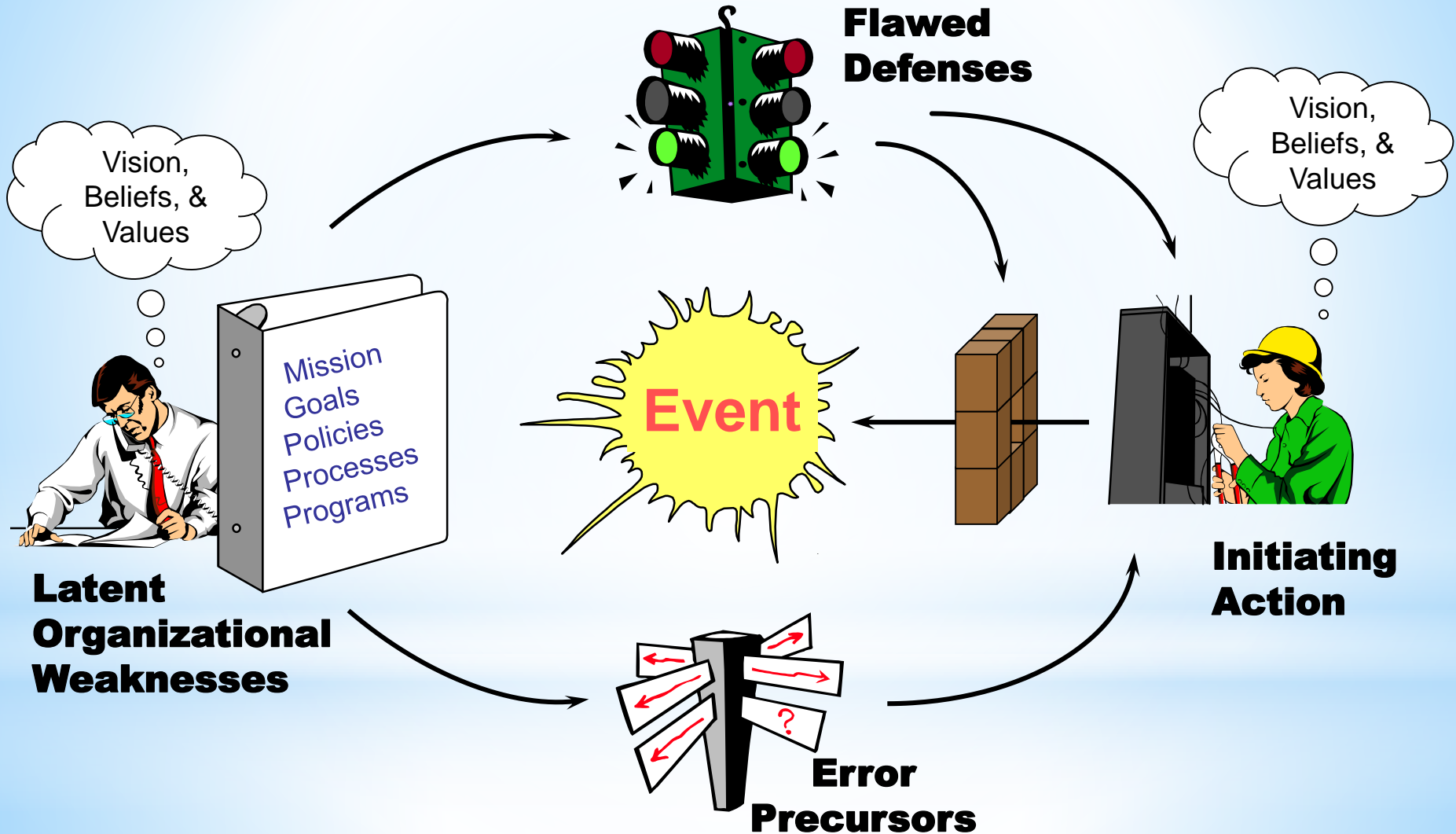
## Detection

- Observations
- Event Entry – Self Reporting
- Trends and Common Cause Assessments

## Correction

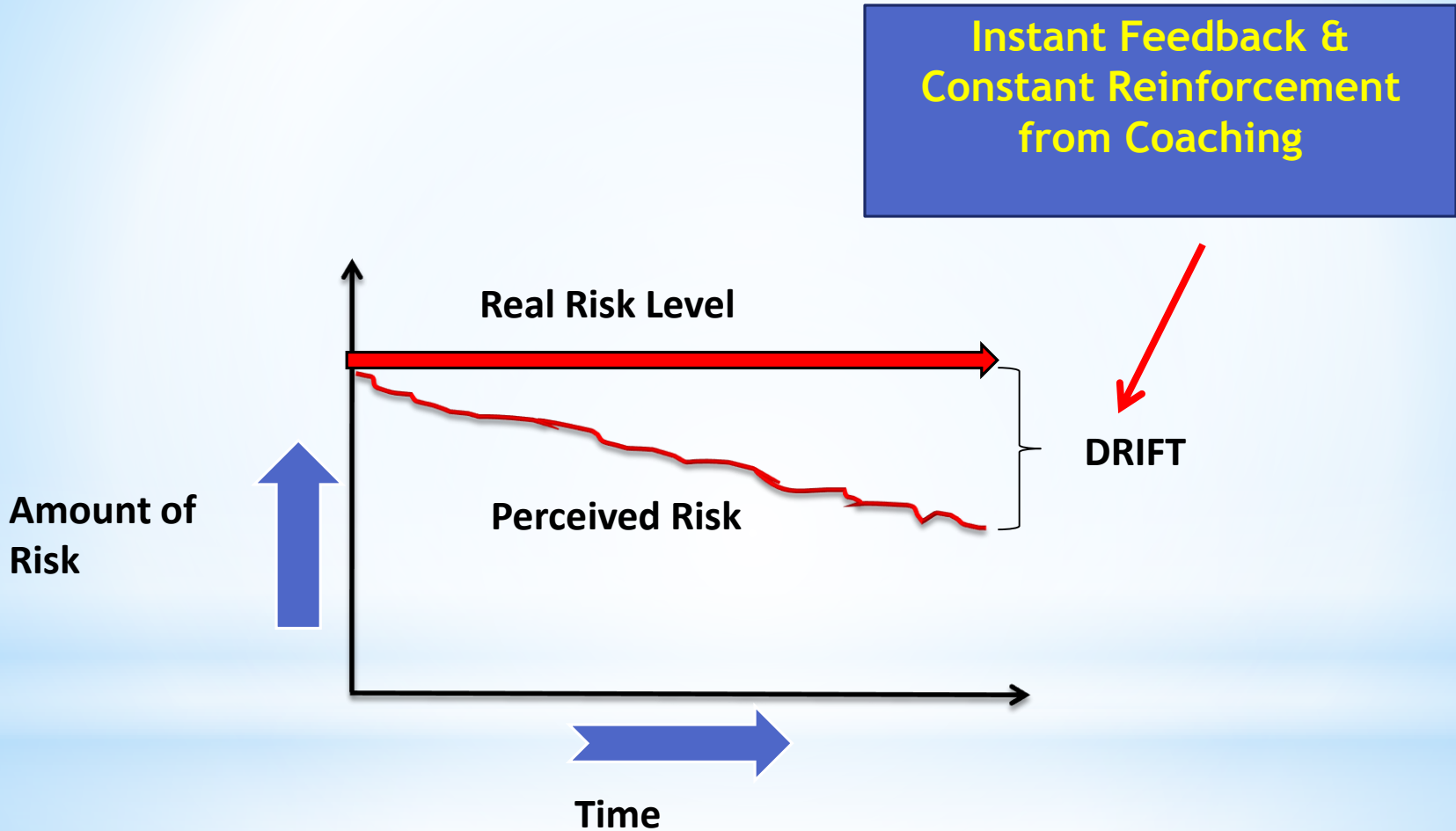
- Incident Investigation
- Corrective Action Program
- Effectiveness Reviews

# Anatomy of an Event





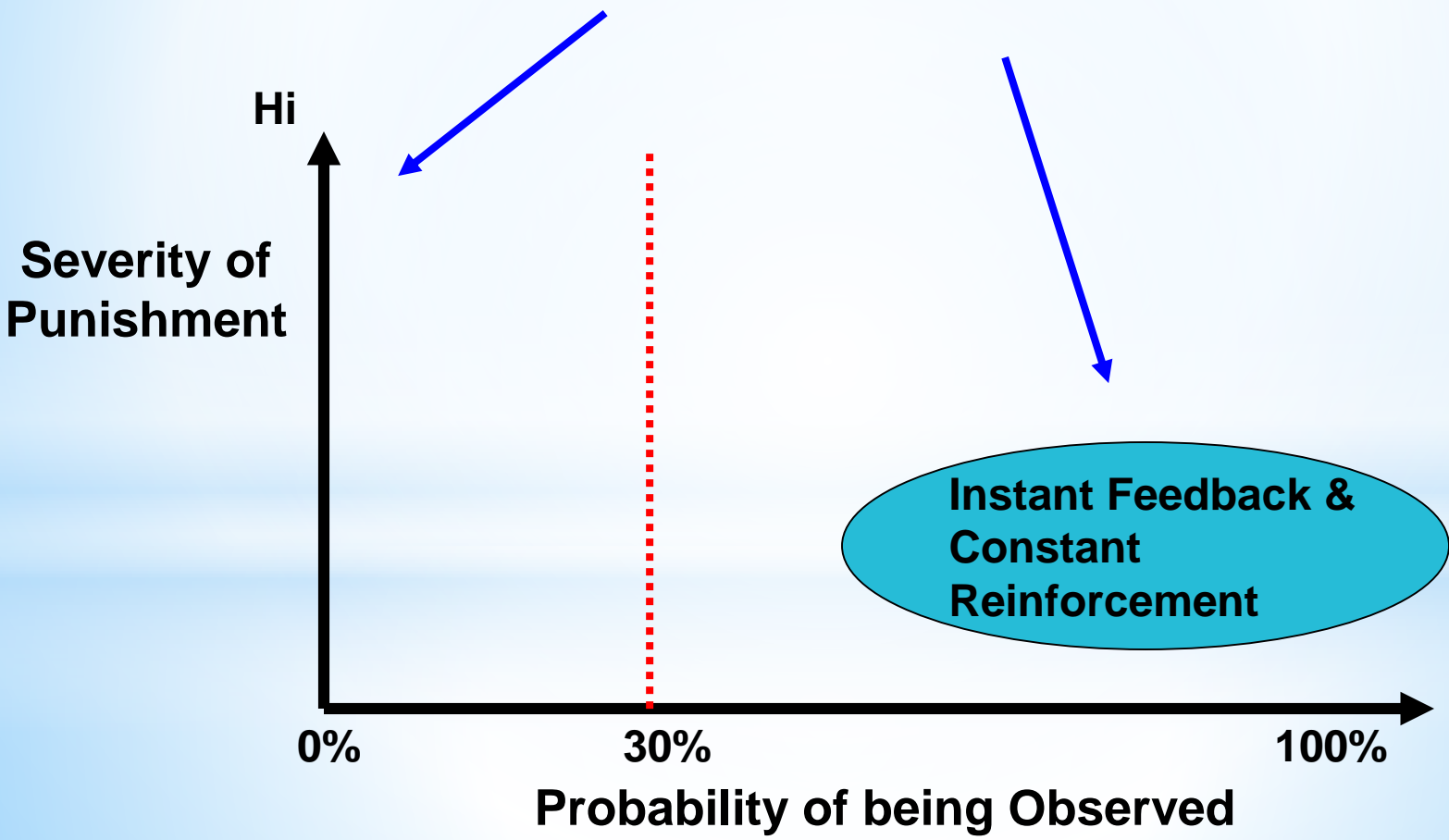
# How we become OVER CONFIDENT



# Administrative Procedure Non-Compliance

## Model

$$\text{APNC} = \frac{\text{Burden (Mental/Physical)}}{\text{Risk} + \text{Coaching Culture}}$$

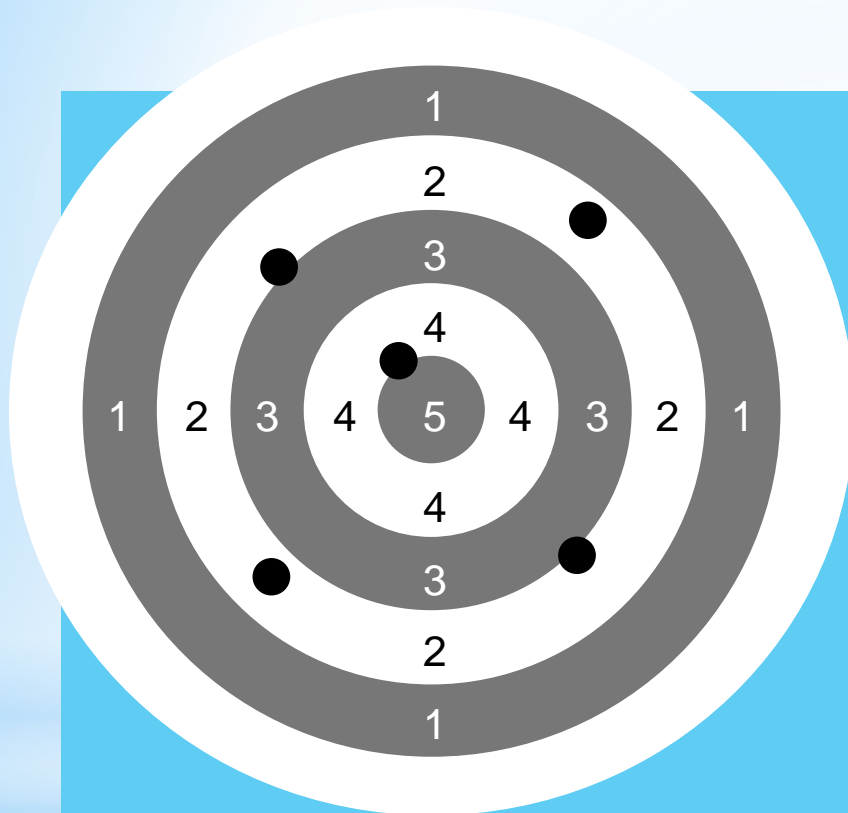


**Operational Excellence =**

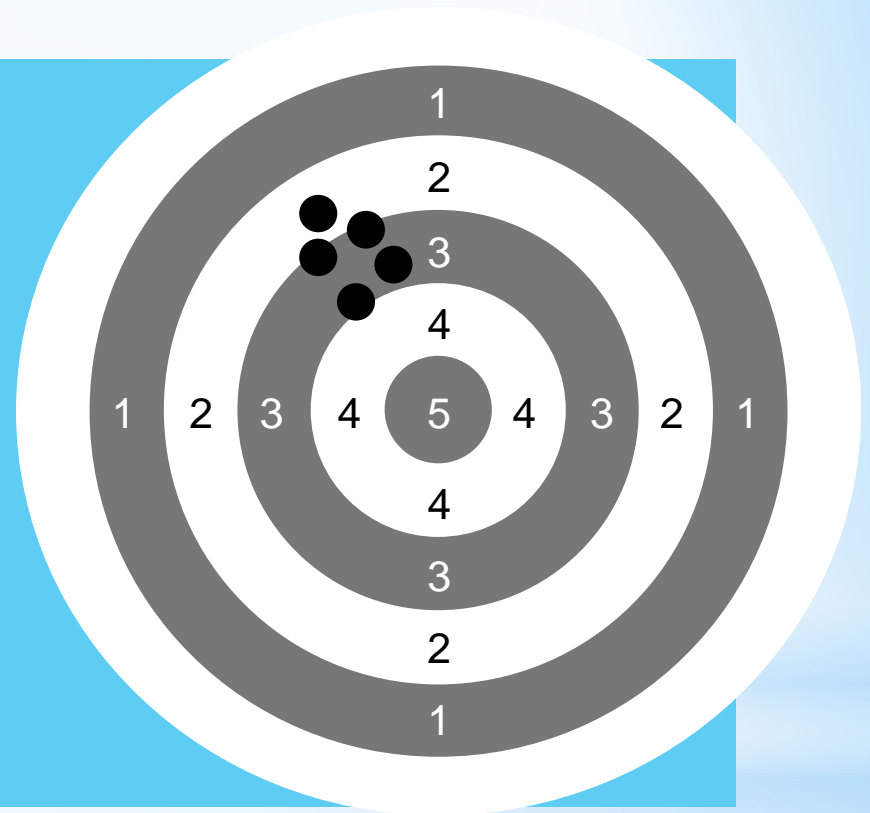
**Results + Operational Discipline**



# Operational Excellence



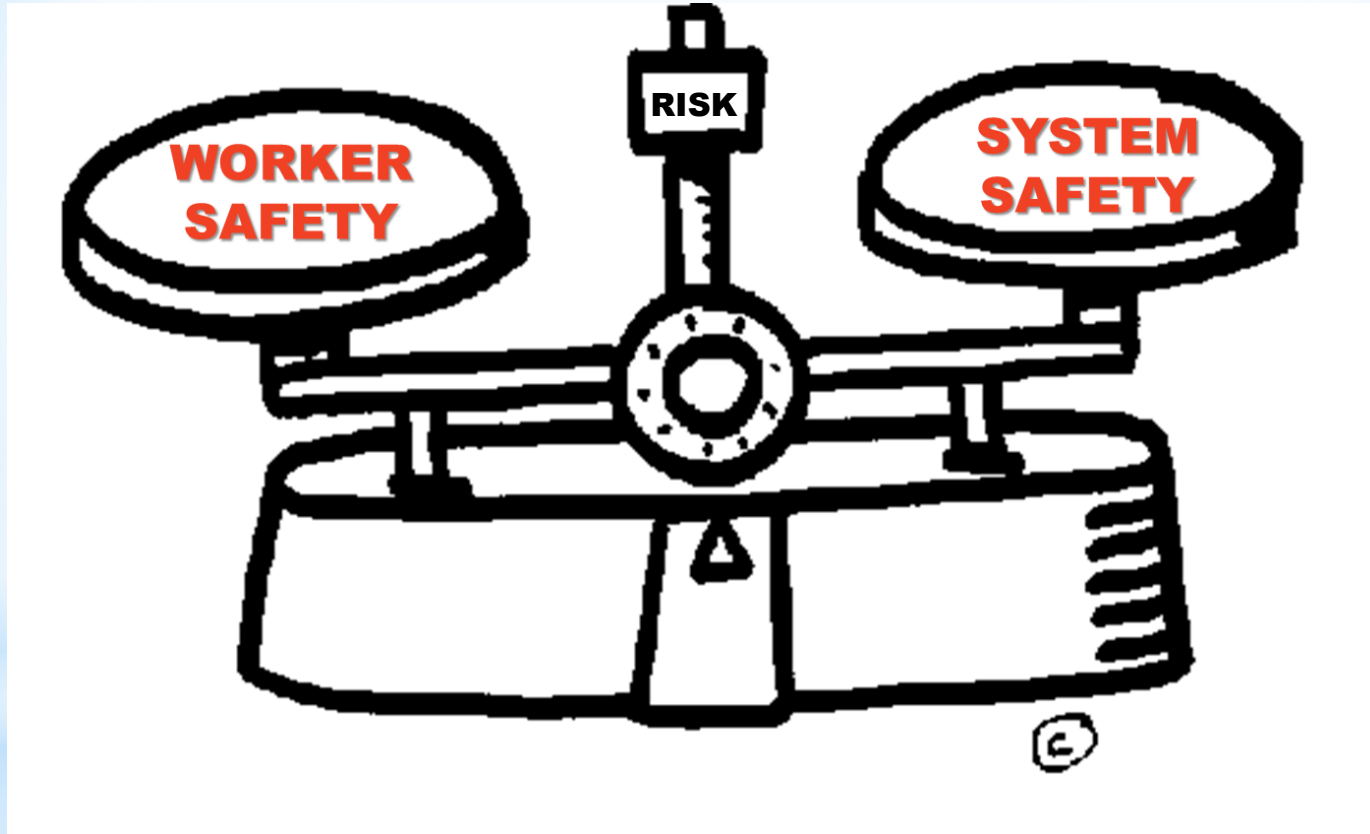
**Target No.1**



**Target No.2**

# Summary

## Duke Energy Leadership's Closing Thoughts



**P D C**

**As a leader, how deep are you willing to drill down to find the right RISK Threshold.....?**





# **Breakout Session Guidance**

- **Divide Group into equal breakout numbers**
- **Group elects Team Facilitator**
- **Team Facilitator selects group spokes person**
- **Spokesperson reports out on 4 key Questions from Case Study**





## Table Top Breakout Session Questions



Think About It

- \* **Are we effectively striking the balance between the emphasis on worker safety behaviors and System Safety Processes ?**
- \* **Are we so focused on personal safety that there is erosion in safety system discipline ?**
- \* **Do we see signs of complacency /drift in our safety systems?**
- \* **As a leader, what is my risk threshold, and what is the risk threshold for my work group ?**
- \* **How much drift is occurring day to day, what are some examples you've seen, and how do we address the drift effectively ?**

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**KARL KLEPPINGER**

**DEWEY REVETTE**

**ADAM WEISE**

**STEPHEN CURTIS**

**SHANE ROSHTO**

**DONALD CLARK**

**WYATT KEMP**

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**GORDON JONES**

**BLAIR MANUEL**